LYNNWOOD LINK EXTENSION

FINAL ENVIRONMENTAL IMPACT STATEMENT

SOUNDTRANSIT

U.S. Department of Transportation
Federal Transit Administration

APRIL 2015

SOUNDTRANSIT

April 1, 2015

Dear Recipient:

The U.S. Department of Transportation Federal Transit Administration (FTA) and Sound Transit (the Central Puget Sound Regional Transit Authority) have prepared this Final Environmental Impact Statement (Final EIS) on the proposed Lynnwood Link Extension light rail transit project. This project is part of Sound Transit 2, the Regional Transit System Plan for Central Puget Sound. Sound Transit is the project proponent.

The Final EIS has been prepared pursuant to the National Environmental Policy Act (42 U.S.C 4321 to 4370e) and the State Environmental Policy Act (Ch 43.21C RCW). It has been prepared to inform the public, agencies and decision makers about the environmental consequences of building and operating the Lynnwood Link extension of the light rail system from Northgate in Seattle to Mountlake Terrace, Shoreline, and Lynnwood along the Interstate 5 corridor. The Final EIS examines project route and station alternatives, including the preferred alternative identified by the Sound Transit Board.

The major choices for the project involve the route and profile of the light rail line and station locations. The Sound Transit Board will consider the alternatives evaluated in the Final EIS, public and agency comments on the Draft EIS, and other information before selecting the route and station locations to be built. After the Board selects the project to be built, FTA will issue a Record of Decision, which will state FTA's decision on the project and list mitigation commitments to reduce or avoid impacts.

The Final EIS includes a separately bound Summary, appendices, conceptual design drawings, technical reports, background materials, and responses to comments on the Draft EIS. Please see the Fact Sheet of this Final EIS regarding how to obtain these documents and who to contact for further information about the Final EIS.

Sincerely,

Steve Kennedy
Environmental Manager, Lynnwood Link Extension
Office of Environmental Affairs and Sustainability

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LYNNWOOD LINK EXTENSION
KING AND SNOHOMISH COUNTIES, WASHINGTON
FINAL ENVIRONMENTAL IMPACT STATEMENT

Submitted pursuant to
the National Environmental Policy Act (NEPA) (42 USC 4322(2)(c))
and the State Environmental Policy Act (SEPA) (Ch. 43.21C RCW)
by the
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION
and
CENTRAL PUGET SOUND REGIONAL TRANSIT AUTHORITY
(Sound Transit)
In cooperation with
FEDERAL HIGHWAY ADMINISTRATION
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
U.S. ARMY CORPS OF ENGINEERS
CITY OF EDMONDS
CITY OF LYNNWOOD
CITY OF MOUNTLAKE TERRACE
CITY OF SEATTLE
CITY OF SHORELINE
KING COUNTY
SNOHOMISH COUNTY

3/16/15
Date of Approval

R. F. Krochalis
Regional Administrator
NEPA Responsible Official
For Federal Transit Administration, Region 10

3/16/15
Date of Approval

Perry Weinberg
Director, Office of Environmental Affairs and Sustainability
SEPA Responsible Official
For Central Puget Sound Regional Transit Authority

Fact Sheet

Proposed Action

The Central Puget Sound Regional Transit Authority (Sound Transit) is proposing to expand the regional light rail system north from Seattle to Lynnwood, Washington. The proposed light rail extension, called the Lynnwood Link Extension (formerly known as the North Corridor Transit Project), would be within the cities of Seattle and Shoreline in King County and in Mountlake Terrace and Lynnwood in Snohomish County. The financing for the proposed project was approved by voters as part of the Sound Transit 2 (ST2) Plan in 2008 (Sound Transit, July 2008).

The proposed project, which is part of a larger regional network of light rail proposed under the ST2 program, would begin at Northgate in north Seattle and end at the Lynnwood Transit Center. The 8.5-mile-long project corridor generally follows Interstate 5 (I-5), which is the major north-south route through the state and serves a large commuter market traveling between Snohomish and King counties. The transportation corridor I-5 serves is bounded by Puget Sound to the west and Lake Washington to the east.

This Final Environmental Impact Statement (EIS) evaluates a No Build Alternative, a Preferred Alternative for light rail, and several other light rail alternatives. The alternatives are arranged in three geographic segments: Segment A—Seattle to Shoreline, Segment B—Shoreline to Mountlake Terrace, and Segment C—Mountlake Terrace to Lynnwood. The Preferred Alternative has both at-grade and elevated sections, with stations at NE 145th Street and NE 185th Street in Shoreline, at 236th Street SW in Mountlake Terrace, and at the Lynnwood Transit Center in Lynnwood. The other light rail alternatives include both at-grade and elevated alignments with different station locations and configurations. In total, seven alternatives are evaluated in Segment A, four alternatives are evaluated in Segment B, and four alternatives are evaluated in Segment C.

Project Proponent

Central Puget Sound Regional Transit Authority (Sound Transit)
401 South Jackson Street
Seattle, Washington 98104-2826
www.soundtransit.org

Dates of Construction and Opening

Sound Transit plans to begin construction of the Lynnwood Link Extension by 2018, and the light rail line is expected to open in 2023.

National Environmental Policy Act (NEPA) Lead Agency

Federal Transit Administration
915 Second Avenue, Suite 3142
Seattle, Washington 98174-1002
www.fta.dot.gov/about/region10

Responsible NEPA Official

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Seattle, Washington 98174-1002

State Environmental Policy Act (SEPA) Lead Agency

Sound Transit
401 South Jackson Street
Seattle, Washington 98104-2826

Responsible SEPA Official

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Federal Transit Administration

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Anticipated Permits and Approvals

Federal Agency	Permits/Approvals
Federal Highway Administration (FHWA)	Interstate Air Space Leases Design Documentation Package Interchange Justification Reports Interstate Design Deviations Interstate Transportation System Interchange Access Modification Requests Limited Access Breaks Monitoring Well Agreements Operations and Maintenance Agreement Record of Decision or other National Environmental Policy Act environmental determination
Federal Transit Administration	National Environmental Policy Act Final Environmental Impact Statement and Record of Decision Section 106 (National Historic Preservation Act) Review; Section 4(f) Review
U.S. Army Corps of Engineers	Clean Water Act, Section 404 Wetlands Approval
U.S. Fish and Wildlife Service and National Oceanic Atmospheric Administration Fisheries	Federal Endangered Species Act Review
State, County, and Regional Agency	
Sound Transit	State Environmental Policy Act Final Environmental Impact Statement and Project Approval
Washington Department of Fish and Wildlife	Hydraulic Project Approval
Washington State Department of Archaeology and Historic Preservation	Section 106 (National Historic Preservation Act) Review
Washington State Department of Ecology	Coastal Zone Management Consistency Certification National Pollutant Discharge Elimination System Stormwater Discharge Permit, Clean Water Act Section 402 Underground Storage Tank (UST) 30-Day Notice Wastewater Discharge Permit Water Quality Certification: Clean Water Act Section 401
Washington State Department of Ecology and Puget Sound Clean Air Agency	Notice of Construction (Air Quality)
Washington State Department of Transportation	Air Space Lease: State Transportation Routes Air Space Lease: Interstate (with FHWA) Construction Oversight Agreement Design Documentation Package (with FHWA) General Permits Interchange Justification Report (with FHWA) Interstate Design Deviation (with FHWA) Interstate Transportation System Interchange Access Modification Request (with FHWA) Limited Access Breaks (with FHWA) Monitoring Well Agreements (with FHWA) Operations and Maintenance Agreement (with FHWA) Survey Permits
Cities	
Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood	Administrative Conditional Use and/or Design Review Approvals Binding Lot Adjustments and Site Plan Approvals Building Permits: Mechanical, Plumbing, Electrical, Signs, Fences, and Awnings Comprehensive Plan or Development Code Amendments, Special Use Permits, and/or Zoning Revision Applications Construction Permits: Clearing and Grading, Demolition, Drainage, Driveways, Haul Routes, Landscape and Irrigation, Parking, Sanitary Sewers, Side Sewers, Street Use, Tree Protection, Use of City Right-of-Way, and Walls Conveyance (Elevators and/or Escalators) Environmental Critical Areas/Sensitive Areas Review including Wetlands, Streams, Rivers, Lakes, Steep Slopes, Flood Zones, Critical Habitat, and Buffers

	Fire Protection and Hydrant Use Permits Inspection Record Approval and Occupancy Permits Noise Variances Reviews and Approvals: Planning, Design, and Arts Commissions; Right-of-Way Permit or Franchise (Utilities) Shoreline Substantial Development Permit (if required) Street and Alley Vacations Permanent, Interim, or Temporary Street Use Permits Access or Use Easements for City-owned Properties Removal/Abandonment of Residential USTs or Underground Heating Oil Tanks Traffic, Transportation, and Parking Approvals Use of City Right-of-Way (for construction) Water Meter and Water Main Permits and Approvals
City of Lynnwood	Floodplain Development License
City of Seattle	Greenfactor and Greenhouse Gas Emissions Calculations Master Use Permit Seattle Landmark Preservation Board—Landmark Eligibility Review
City of Shoreline	Master Development Plan Approval
Other	
Utility Providers	Pipeline and Utility Crossing: Permits Utility Approvals: Easements and Use Agreements

Principal Contributors

Appendix E, List of Preparers, identifies the principal contributors. North Corridor Transit Partners (a joint venture of Parametrix, Inc. and Parsons Brinckerhoff) was the lead consultant in preparing this Final EIS.

Date of Issue of Final Environmental Impact Statement under SEPA

April 1, 2015

Date of Issue of Final Environmental Impact Statement under NEPA

April 3, 2015

Next Actions

Following publication of this Final EIS, the Sound Transit Board of Directors will make a final decision on the route and station locations to be built for the project. The Federal Transit Administration also is expected to issue its Record of Decision (ROD) on the project.

Related Documents

- North Corridor Transit Project Alternatives Analysis Report and SEPA Addendum (Sound Transit, September 2011)
- Transportation 2040: Metropolitan Transportation Plan for the Central Puget Sound Region, 2014 Update (Puget Sound Regional Council, March 2010, amended May 2014)

- North Link SEPA Addendum to the Final Supplemental EIS (Sound Transit, March 2012)
- North Link Final Supplemental EIS (Sound Transit, April 2006)
- Sound Transit 2: A Mass Transit Guide, The Regional Transit System Plan for Central Puget Sound (Sound Transit, July 2008)
- Regional Transit Long-Range Plan and Final Supplemental EIS (Sound Transit, July 2005)
- Lynnwood Link Extension Draft EIS (Sound Transit, July 2013)
- Regional Transit Long-Range Plan Update and Supplemental Draft and Final EIS (Sound Transit, 2014)
- Link Operations and Maintenance Satellite Facility, Draft EIS (Sound Transit, 2014)

All the above Sound Transit and PSRC documents are available on each agency's respective Web site. The Table of Contents provides a list of other relevant documents that are included with this Final EIS.

Cost of Document and Availability for Review and/or Purchase

This Final EIS is available to the public in a variety of formats and locations. It is available on the Sound Transit Web site (www.soundtransit.org/lle) and on compact disk (CD) at no cost. The CD includes all Final EIS appendices and technical reports. Paper copies are available for the cost listed below, which does not exceed the cost of reproduction:

- Summary – FREE
- Final EIS – $25.00
- Technical Reports – $15.00 each

Paper copies of these documents are available for review or purchase at the offices of Sound Transit, Union Station, 401 South Jackson Street, Seattle, Washington 98104. To request any of the documents, please contact Lauren Swift at (206) 398-5301. To review them, please call the Sound Transit librarian at (206) 398-5344 weekdays from 8:00 am to 5:00 pm to arrange an appointment.

Paper and CD copies of the Final EIS documents are also available for review at the following public places:

Seattle Public Library branches

- Central Library: 1000 Fourth Avenue, Seattle
- Northgate Branch: 10548 Fifth Avenue NE, Seattle

King County Library System

- Shoreline Library: 345 NE 175th Street, Shoreline

Sno-Isle Libraries

- Edmonds Library: 650 Main Street, Edmonds
- Mountlake Terrace Library: 23300 58th Avenue West, Mountlake Terrace
- Lynnwood Library: 19200 44th Avenue West, Lynnwood

University of Washington Libraries

Washington State Library: Point Plaza East, 6880 Capitol Boulevard SE, Tumwater

Appeals

Washington State Environmental Policy Act (SEPA) challenges to this Final EIS are governed by Sound Transit Resolution R7-1 and the SEPA rules and regulations (Ch. 43.21C RCW and WAC 197-11-680). Sound Transit Resolution R7-1 is available online at: http://www.soundtransit.org/About-Sound-Transit/Board-of-Directors/Board-archives/Resolutions-archive.xml (1994-1997 Resolutions).

As provided in Resolution R7-1, appeals of SEPA determinations must be made in writing by filing a letter of appeal and paying the required fee within 14 days following the date the environmental document is issued under SEPA. Letters of appeal should be addressed to Joni Earl, Chief Executive Officer, Sound Transit, Union Station, 401 South Jackson Street, Seattle, Washington 98104-2826.

For this Final EIS, appeals must be received by Sound Transit on or before 5:00 p.m. on April 15, 2015. Additional details about the appeals process and requirements are set out in Resolution R7-1 and in the SEPA rules and regulations.

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J. References

K. Supporting Documents*

Alternatives Analysis Report

Scoping Summary Report

2012 Final Board Briefing Book

L. Public Involvement and Agency Coordination*

M. Distribution List

N. Mitigation Plan

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P. Draft EIS Public Comments and Responses*

Q. Northgate to Lynnwood Light Rail and I-5 Compatibility Report*

R. Link Operations and Maintenance Satellite Facility Analysis

Technical Reports*

Cultural, Archaeological, and Historic Resources

Ecosystem Resources

Noise and Vibration

Transportation

* Provided on CD with the Final EIS and available on the project website at www.soundtransit.org/lle. Printed versions are available on request for the cost of reproduction.

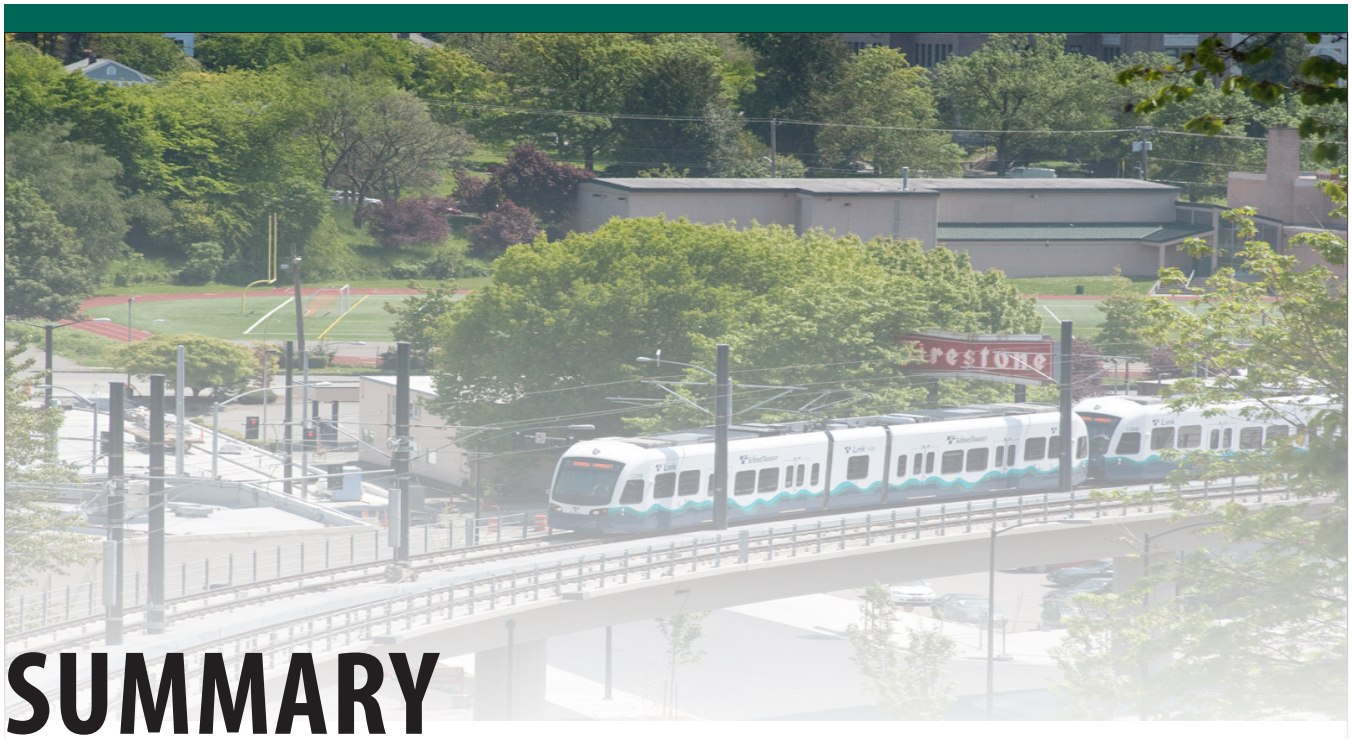
ACRONYMS AND ABBREVIATIONS

ADA	Americans with Disabilities Act
APE	Area of Potential Effects
BMP	best management practice
BTEX	benzene, toluene, ethylbenzene, and xylenes
Btu	British thermal unit
CAA	Clean Air Act
CALs	collision analysis locations
Caltrans	California Department of Transportation
CCTV	closed circuit television
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CO_{2e}	carbon dioxide equivalent
DAHP	Washington State Department of Archaeology and Historic Preservation
dB	decibel
dBA	A-weighted decibel
dbh	diameter at breast height
Ecology	Washington State Department of Ecology
EDR ID	Environmental Data Resources identification number
EIS	environmental impact statement
EMF	electromagnetic field
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
EVP	Emergency Vehicle Preemption
FGTS	Freight and Goods Transportation System
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gas
GIS	geographic information system

GMA	Growth Management Act
HOV	high-occupancy vehicle
HPA	Hydraulic Project Approval
HSS	Highways of Statewide Significance
Hz	Hertz
I-5	Interstate 5
kV	kilovolt
Ldn	day-night sound level
Leq	equivalent sound level
LID	low impact development
Lmax	maximum sound level
LOS	level of service
LUST	leaking underground storage tank
LWCF	Land and Water Conservation Fund
MAP-21	Moving Ahead for Progress in the 21st Century
MOA	Memorandum of Agreement
MOVES	Motor Vehicle Emission Simulator
MP	milepost
mph	miles per hour
MSAT	mobile source air toxic (pollutants)
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOAA Fisheries	National Oceanic and Atmospheric Administration Fisheries
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPGIS	non-pollution-generating impervious surface
NRHP	National Register of Historic Places

O_3	ozone
OMF	Operations and Maintenance Facility
OMSF	Operations and Maintenance Satellite Facility
Pb	lead
PCB	polychlorinated biphenyl
PGIS	pollution-generating impervious surface
PM	particulate matter
PM_{10}	particulate matter (10 microns or less in size)
$PM_{2.5}$	particulate matter (2.5 microns or less in size)
POM	polycyclic organic matter
ppm	parts per million
PSCAA	Puget Sound Clean Air Agency
PSE	Puget Sound Energy
PSRC	Puget Sound Regional Council
PUD	Public Utility District
RCW	Revised Code of Washington
ROD	Record of Decision
RTIP	regional transportation improvement plan
RTP	regional transportation plan
SCL	Seattle City Light
Sea-Tac Airport	Seattle-Tacoma International Airport
SEPA	State Environmental Policy Act
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO_2	sulfur dioxide
Sound Transit	Central Puget Sound Regional Transit Authority
SR	State Route
ST2	Sound Transit 2
SWPPP	stormwater pollution prevention plan
TCP	traditional cultural property

TESC	temporary erosion and sediment control
TSP	total suspended particulates
USC	United States Code
USDOT	U.S. Department of Transportation
UST	underground storage tank
v/c ratio	volume-to-capacity ratio
VdB	vibration decibels
VHT	vehicle hours of travel
VMT	vehicle miles of travel
VOC	volatile organic compound
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation



SUMMARY

S.1 LYNNWOOD LINK EXTENSION

The Central Puget Sound Regional Transit Authority (Sound Transit) is proposing to build and operate the Lynnwood Link Extension, which would expand the regional light rail system from Seattle north to Lynnwood in Washington State. The proposed project would be in the cities of Seattle and Shoreline in King County and in Mountlake Terrace and Lynnwood in Snohomish County.

The Lynnwood Link Extension is a step in implementing the Puget Sound Regional Council's (PSRC) VISION 2040 (PSRC 2009) and the Sound Transit Regional Transit Long-Range Plan (Sound Transit Long-Range Plan) (Sound Transit 2005a, updated 2014), both of which call for the eventual extension of mass transit service beyond Lynnwood to Everett. The project would implement the Sound Transit 2 (ST2) Plan of regional transit investments. The ST2 projects included light rail from the Northgate Transit Center to the Lynnwood Transit Center, with intermediate stations serving north Seattle, Shoreline, and Mountlake Terrace.

Sound Transit and the Federal Transit Administration (FTA) have prepared this Final Environmental Impact Statement (EIS) in compliance with the National Environmental Policy Act (NEPA) and the Washington State Environmental Policy Act (SEPA). FTA is the federal lead agency under NEPA, and Sound Transit is the state lead agency under SEPA. The Draft EIS was released in July 2013, followed by a 60-day public comment period. After considering the Draft EIS, along with public and agency comments, the Sound Transit Board of Directors identified a Preferred Alternative. The Final EIS describes the Preferred Alternative for the proposed project, updates the analysis of environmental impacts for the Preferred Alternative and all other alternatives, describes proposed mitigation measures, and responds to comments Sound Transit and FTA received on the Draft EIS.

S.1.1 Project Area

The proposed Lynnwood Link Extension would begin at Northgate in north Seattle and end at the Lynnwood Transit Center (Figure S-1). The project would be about 8.5 miles long, generally following Interstate 5 (I-5), the major north-south route through the state. This corridor is in one of the most densely developed urban areas in the Pacific Northwest and is part of a longer north-south commuter corridor connecting Tacoma, Seattle, and Everett. Roadways in this corridor are heavily congested during peak travel periods. Congestion is expected to worsen as the region accommodates 20 percent more people and nearly 40 percent more jobs through 2040.

The Lynnwood Link Extension would connect to Central Link, the spine of the regional light rail system. The initial sections of Central Link are already operating between downtown Seattle and Seattle-Tacoma International Airport. Light rail sections from downtown Seattle to the north are under construction. Sound Transit expects University Link from downtown Seattle to the University of Washington to open in 2016 and the extension to Northgate in 2021. Overall, the projects in the ST2 program include nearly 36 new miles of service to the north, south, and east, resulting in 55 miles of light rail.

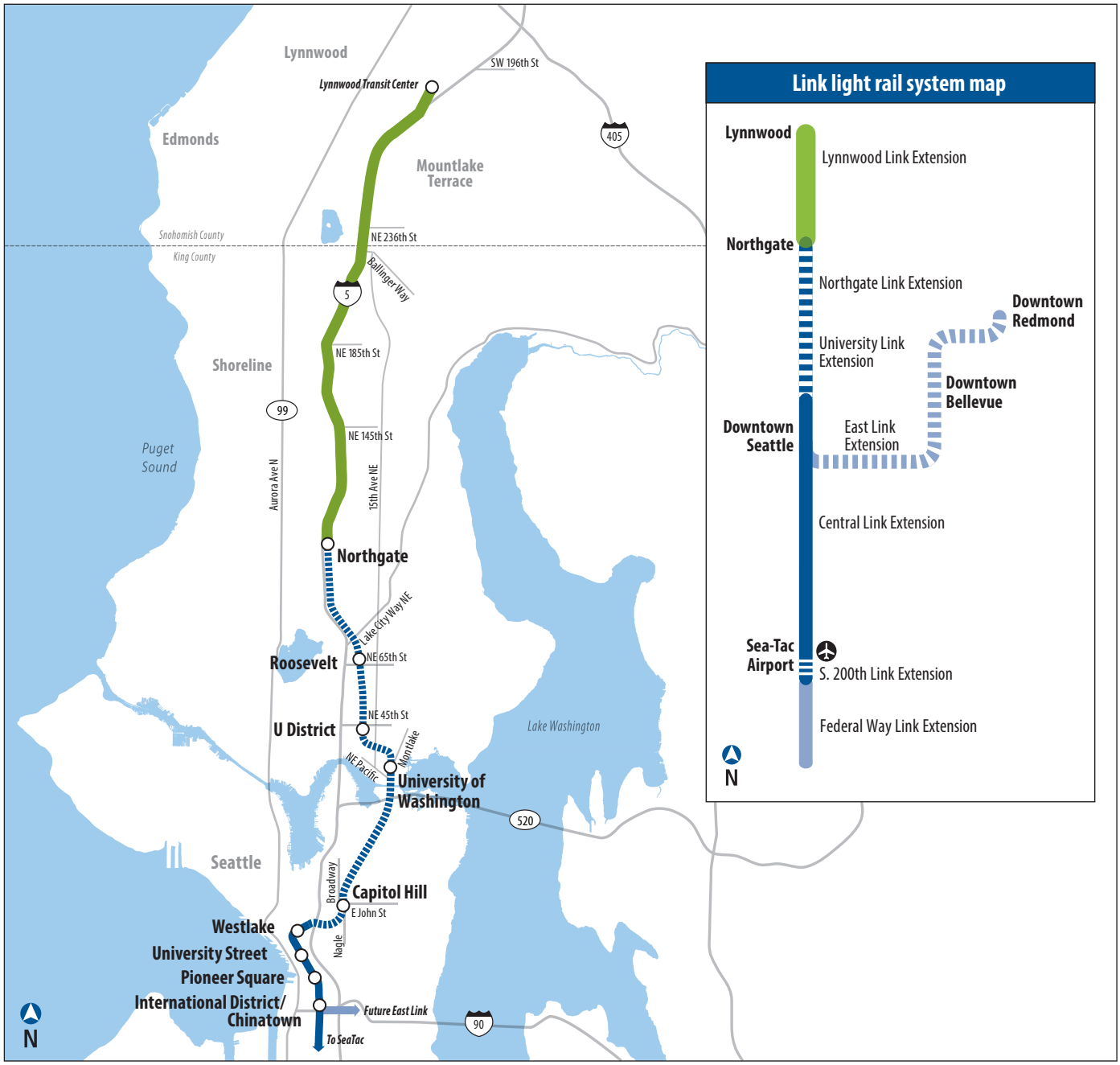
S.2 PURPOSE AND NEED FOR THE LYNNWOOD LINK EXTENSION

The purpose of the Lynnwood Link Extension is to expand the Sound Transit Link light rail system from Northgate in Seattle north into Shoreline, Mountlake Terrace, and Lynnwood in Snohomish County in order to:

- Provide reliable, rapid, and efficient peak and off-peak two-way transit service of sufficient capacity to meet the existing and projected demand for travel to and from the corridor communities and other urban centers in the central Puget Sound area.
- Create an alternative to travel on congested roadways and improve regional multimodal transportation connections.
- Support the adopted land use, transportation, and economic development plans of the region and the corridor communities.
- Advance the long-range vision, goals, and objectives for transit service established by the Sound Transit Long-Range Plan for high-quality regional transit service connecting major activity centers in King, Pierce, and Snohomish counties.
- Implement a financially feasible system that seeks to preserve and promote a healthy environment.

The project is needed to:

- Address increasingly unreliable travel times for transit trips that now rely on the corridor's highly congested roadways.
- Address overcrowding caused by insufficient transit capacity.
- Create a reliable alternative to automobile trips on I-5 and State Route (SR) 99, the two primary highways serving the project corridor, which are unreliable and over capacity throughout large portions of the day.
- Increase mobility, access, and transportation capacity for the 20 percent growth in population and 40 percent growth in employment projected in the regional growth and activity centers in the corridor and the region, consistent with PSRC's VISION 2040 and Transportation 2040, as well as related county and city comprehensive plans.
- Create the transit infrastructure needed to support the development of Northgate and Lynnwood—the corridor's two designated regional growth centers.



DATA SOURCES: (Sound Transit)

Legend

- Lynnwood Link Extension
- Link in service
- Under construction
- In planning
- In design

Figure S-1. Regional Setting

- Advance the long-range vision of the Sound Transit Long-Range Plan for a future extension of mass transit north to Everett.
- Ensure long-term regional mobility, multimodal connectivity, and convenience for the corridor's citizens and communities, which include travel-disadvantaged residents and low-income and minority populations.
- Help the state and region reduce transportation-related energy consumption and decrease harmful greenhouse gas emissions in the atmosphere.

S.3 ALTERNATIVES

This section describes the alternatives evaluated in the Lynnwood Link Extension Final EIS. The alternatives are a No Build Alternative, the Preferred Alternative, and several other light rail alternatives, presented by project segment.

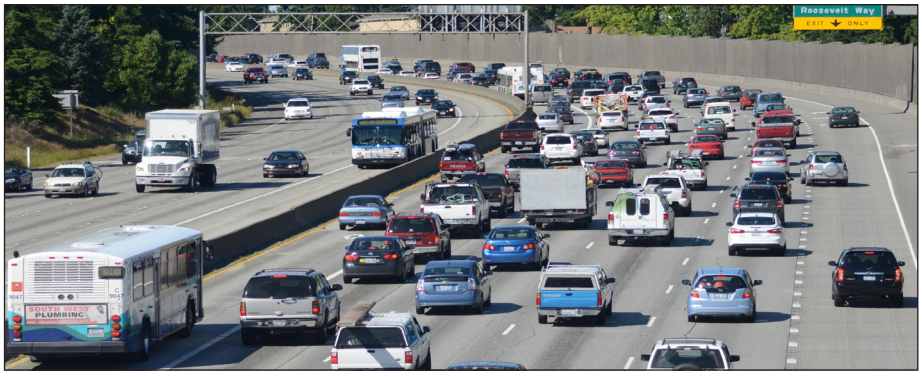
S.3.1 No Build Alternative

The No Build Alternative represents the anticipated transportation system without the Lynnwood Link Extension. It includes other committed transportation projects identified in the Metropolitan Transportation Plan adopted by PSRC in 2010 (Transportation 2040). It also assumes growth in regional population and employment through 2035. Under the No Build Alternative, Sound Transit would still build and operate the Northgate Link Extension, East Link Extension to Overlake in Redmond, South 200th Link Extension, Federal Way Link Extension to approximately Highline Community College, and the Link Operations and Maintenance Satellite Facility (OMSF), as authorized in the ST2 program.

S.3.2 Light Rail Alternatives

The light rail alternatives are grouped in three geographic segments—A, B, and C—as shown in Figure S-2, which also highlights the Preferred Alternative. The alternatives generally follow the I-5 corridor from the Northgate Transit Center in Seattle to the Lynnwood Transit Center. Figures S-3 through S-10, included later in this section, depict the alignments and stations for each segment.

The Preferred Alternative identified by the Sound Transit Board in November 2013 has a mix of at-grade and elevated sections that run along the east side of I-5 from the Northgate Transit Center to the Mountlake Terrace Transit Center. It then crosses to the west side of I-5, where it runs at-grade until 220th Street SW in Mountlake Terrace. It is then elevated along the west side of I-5 until it approaches the Lynnwood Transit Center and park-and-ride, where it angles northeast to a station adjacent to the Lynnwood Transit Center. The four stations for the Preferred Alternative would be at NE 145th Street, NE 185th Street, the Mountlake Terrace Transit Center, and the Lynnwood Transit Center. (The Final EIS also reviews options for additional stations at NE 130th Street and at 220th Street SW.) About 1,500 new park-and-ride spaces are planned, with about 500 spaces added at each of the stations except at the Mountlake Terrace Transit Center, which would maintain its current level of parking.



I-5 north of Northgate in Seattle

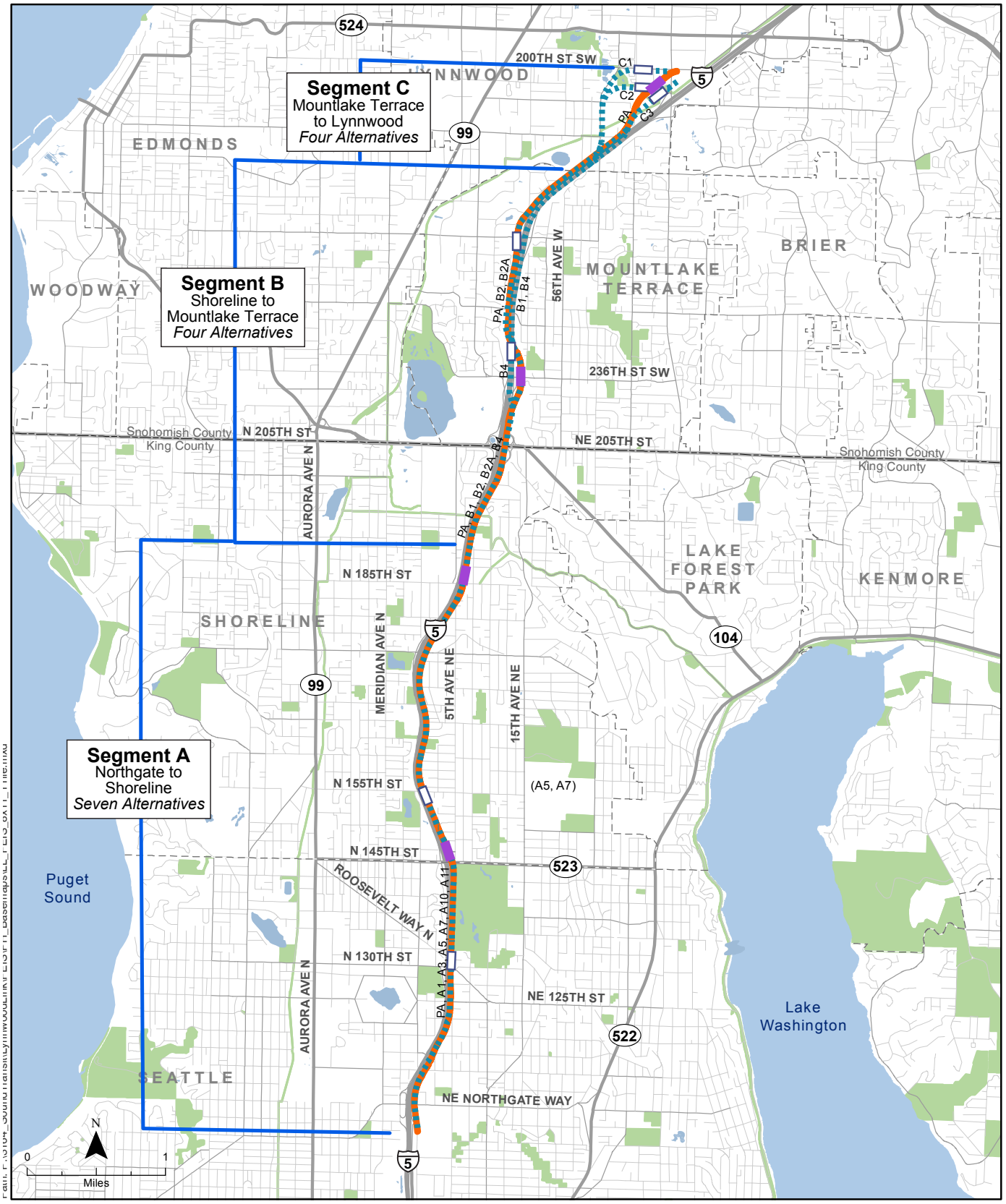


Figure S-2. Alternatives by Segments

Common features of the alternatives Sound Transit is evaluating are described below. Light rail trains would operate revenue service (carry passengers) weekdays between 5:00 am and 1:00 am daily, running as often as every 4 minutes each way during peak periods, and every 7.5 minutes in the early morning or late at night.

The alternatives present a variety of ways Sound Transit could approach the design, construction, and operation of the proposed project. They show how light rail could be developed mostly adjacent to I-5 and how the profile for light rail might vary based on existing conditions, such as bridges, interchanges, and other infrastructure and environmental or community features. They reflect how topography and various station choices affect alignment decisions, and they illustrate different ways light rail could cross I-5 to ultimately reach the project's terminus station in Lynnwood.

At-grade or Elevated Profiles: While all of the alternatives would have light rail in an exclusive right-of-way (separated from other traffic), some are mostly at-grade and others are mostly elevated. These choices are largely related to existing transit facilities, topography, right-of-way, and freeway features such as interchanges and bridges. At-grade alternatives can have the advantage of lower construction and operating costs compared with elevated alternatives, but they can require rebuilding bridges, ramps, or interchanges, which can increase costs and impacts. At-grade alternatives can also result in some property or environmental impacts

At-grade Light Rail Train

Elevated Light Rail Train with Overhead Catenary Wires

that could be reduced or avoided by an elevated alternative. However, elevated alternatives can cause more noise and visual impacts than at-grade alternatives.

Number and Location of Stations: The alternatives offer choices in station locations and profile (at-grade or elevated), and in parking and access. At-grade stations are generally less expensive to construct and operate, while elevated stations can have a smaller footprint and other elements beneath them.

Parking Facilities: The alternatives present several ways for the proposed project to address the need for parking. The approach varies by station location along the proposed project's length; at each station, the parking facilities and supply reflect factors such as expected demand, street and freeway access, urban settings, site constraints, and local plans. The project would increase corridor parking capacity by 1,500 to 1,900 spaces.

SEGMENT A: SEATTLE TO SHORELINE

Segment A has seven alternatives connecting Northgate in Seattle to NE 185th Street in Shoreline, all on the east side of I-5. These alternatives differ from each other in three key ways: the extent to which they are at-grade or elevated, the number of

stations (two versus three), and the locations of stations. Some stations also feature park-and-rides with different parking options. Figures S-3 through S-6 show the alignments and stations for each of the Segment A alternatives.

Key Characteristics of the Segment A Alternatives

	PA	A1	A3	A5	A7	A10	A11
Profile							
Mostly At-grade	•	•		•		•	
Mostly Elevated			•		•		•
Stations*							
130th				G	E	G	E
145th	E	E	E			E	E
155th				E	E		
185th	G	G	E	G	E	G	E

*E = Elevated; G = At-grade

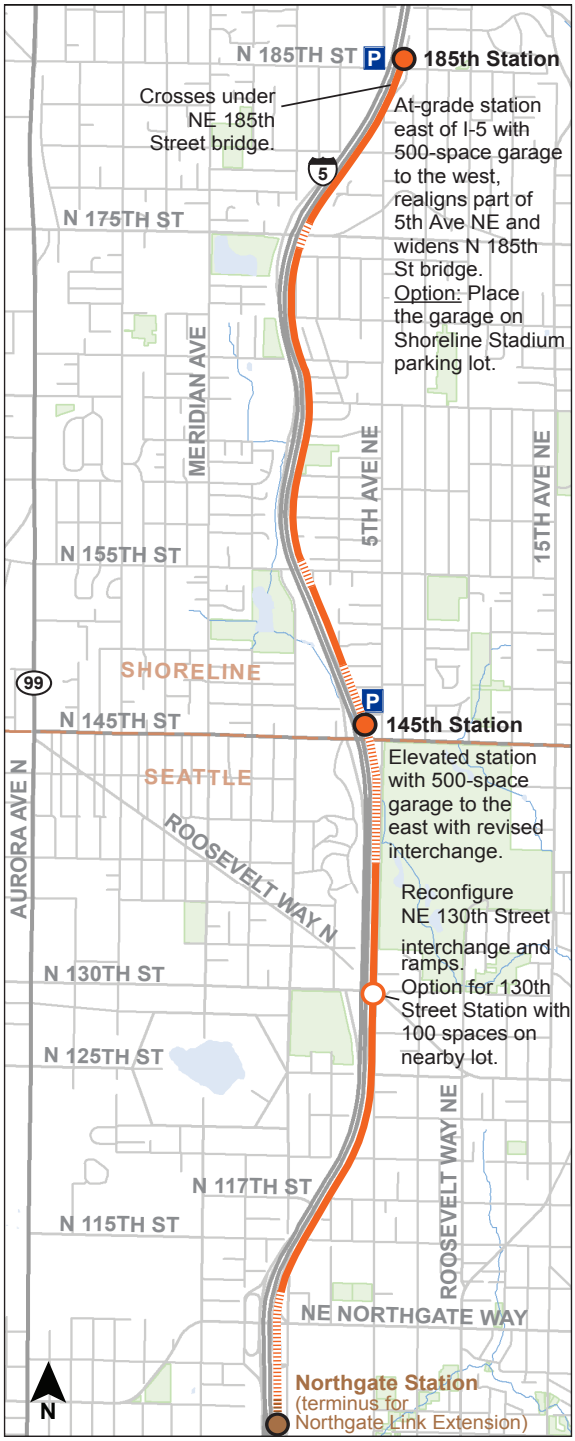
Preferred Alternative (At-grade/Elevated with NE 145th and NE 185th Stations). The Preferred Alternative (Figure S-3) combines at-grade and elevated sections, with stations at NE 145th Street and NE 185th Street. It is based largely on Alternative A1 from the Draft EIS, but incorporates several of the more effective design approaches explored in other Draft EIS alternatives. It is elevated from the Northgate Station to about NE 115th Street, and then stays mostly at-grade except for sections between NE 130th Street through NE 145th Street, and at NE 155th Street and NE 175th Street. The design also includes measures to maintain access for the Seattle Latvian Evangelical Lutheran Church. (Access to the church has been maintained in revisions to other alternatives as well.) Other key elements include a shift east around the NE 117th Street bridge at I-5; reconstruction of the NE 130th Street interchange, overpass, and 5th Avenue NE; a revised ramp at the NE 145th Street interchange; realignments for sections of 1st Avenue NE in Seattle and Shoreline; realignments of sections of 5th Avenue NE and 7th Avenue NE in Shoreline, and modification of the NE 185th Street overpass. The Preferred Alternative in Segment A also relocates existing traffic noise walls, generally to the east of the light rail guideway. The Final EIS also evaluates two options: a station at 130th Street NE, and a parking garage for the NE 185th Street Station on a parking lot at Shoreline Stadium.

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Stations. Alternative A1 (Figure S-3) connects to the light rail guideway of the Northgate Link Extension near NE 104th Street. It is elevated from Northgate until about NE 115th Street, and then stays mostly at-grade except for sections between NE 130th Street and NE 145th Street, and at NE 155th Street and NE 175th Street. In addition to the stations shown on Figure S-3, key features include a replaced NE 117th Street bridge over I-5; a reconfigured NE 130th Street interchange; realignments for parts of 1st Avenue NE, 5th Avenue NE, and 7th Avenue NE in Shoreline; and a replaced NE 185th Street bridge over I-5.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Stations. Alternative A3 is similar to Alternative A1, but the alignment is mostly elevated, except from about NE 150th Street to about NE 173rd Street. This alternative features different station configurations at its NE 145th Street and NE 185th Street Stations (see Figure S-4). It avoids the NE 117th Street bridge by crossing over the road and to the east, and it modifies the ramps at the NE 145th Street interchange.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Stations. Alternative A5 is largely based on Alternative A1, except that it has stations at NE 130th and NE 155th Streets (instead of a station at NE 145th Street), and with a different option for a NE 185th Street Station (see Figure S-4). Other key elements include a shift east around the NE 117th Street bridge at I-5, changes at the NE 130th Street interchange, and realignments for parts of 1st Avenue NE and 7th Avenue NE in Shoreline.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Stations. Alternative A7 combines station choices similar to Alternative

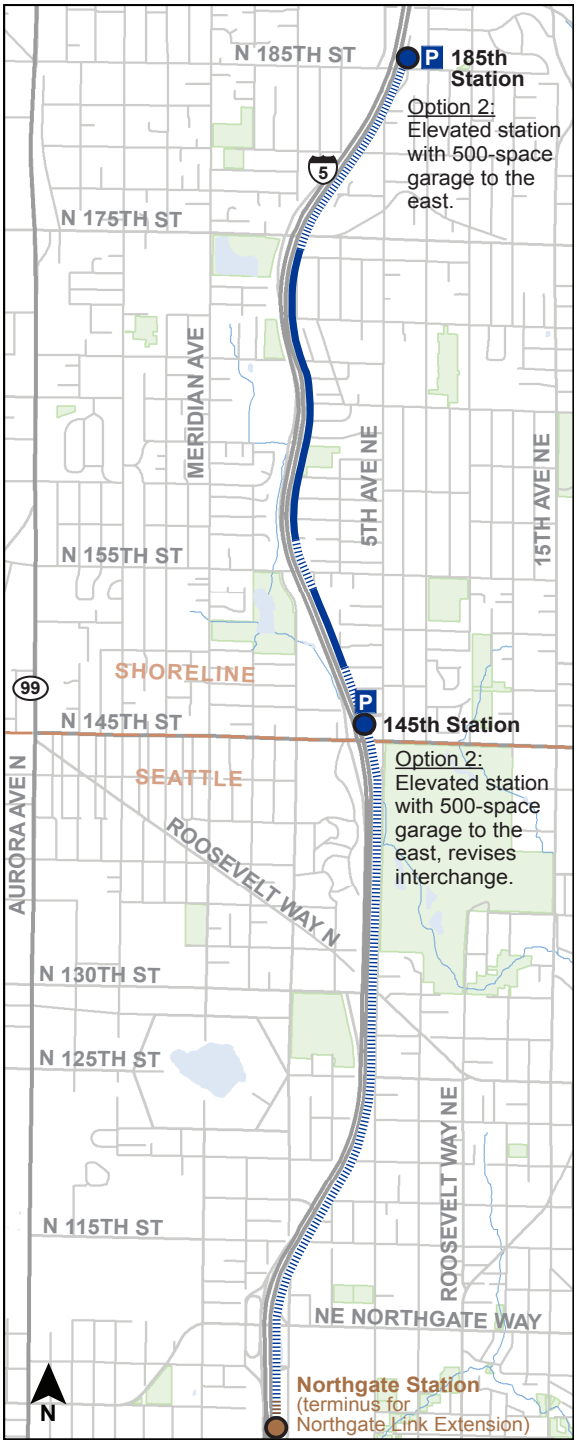


PREFERRED ALTERNATIVE SEGMENT A: AT-GRADE/ELEVATED WITH NE 145th AND NE 185th STATIONS

A1: AT-GRADE/ELEVATED WITH NE 145th AND NE 185th STATIONS

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure S-3. Preferred Alternative and Alternative A1

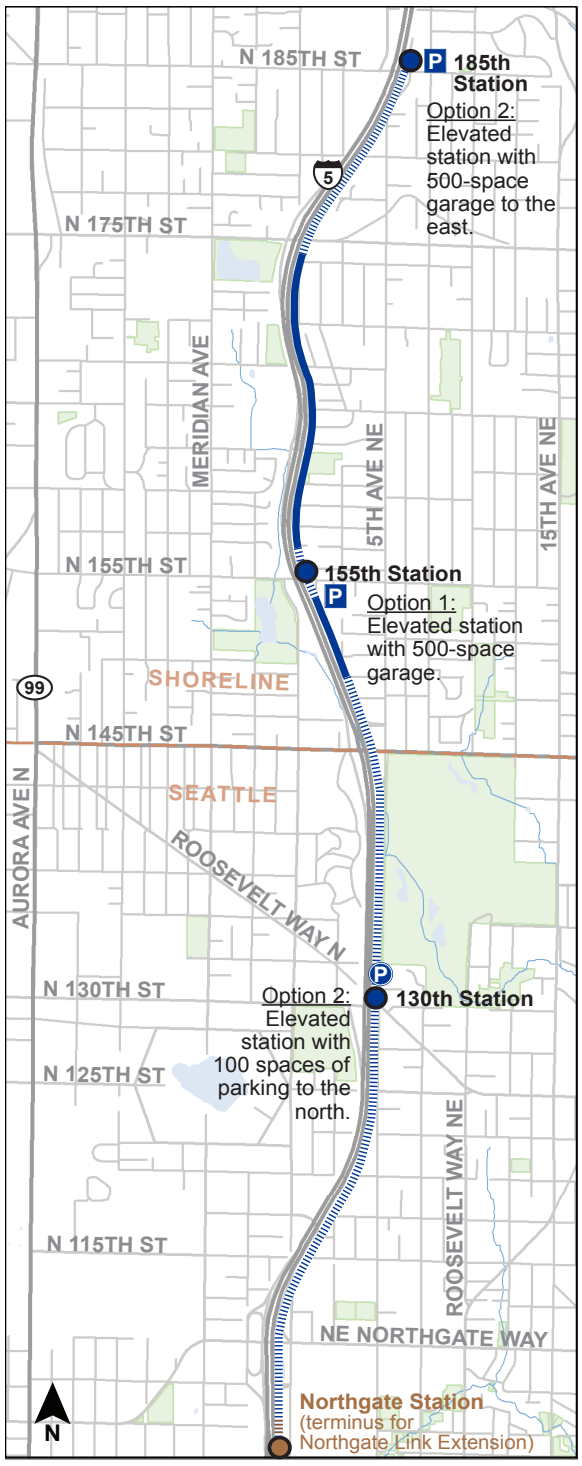


A3: MOSTLY ELEVATED WITH NE 145th AND NE 185th STATIONS

A5: AT-GRADE/ELEVATED WITH NE 130th, NE 155th AND NE 185th STATIONS

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure S-4. Alternatives A3 and A5



A7: MOSTLY ELEVATED WITH NE 130th, NE 155th AND NE 185th STATIONS

A10: AT-GRADE/ELEVATED WITH NE 130th, NE 145th AND NE 185th STATIONS

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure S-5. Alternatives A7 and A10

A5, with Alternative A3's elevated sections over the NE 117th Street overpass and the NE 130th Street off-ramp and bridge (see Figure S-5).

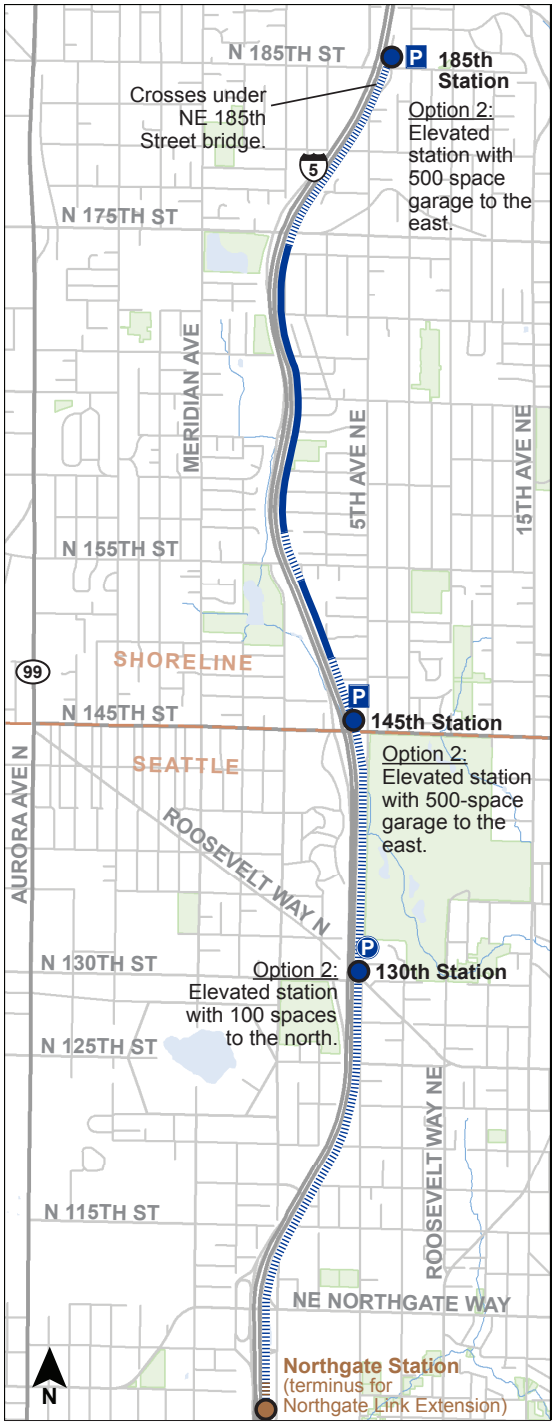
Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Stations. Alternative A10 is based on Alternative A1 but with three stations, and different station configurations and parking options, as shown on Figure S-5.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Stations. Alternative A11 is based on Alternative A3 but adds the NE 130th Street Station (see Figure S-6).

SEGMENT B: SHORELINE TO MOUNTLAKE TERRACE

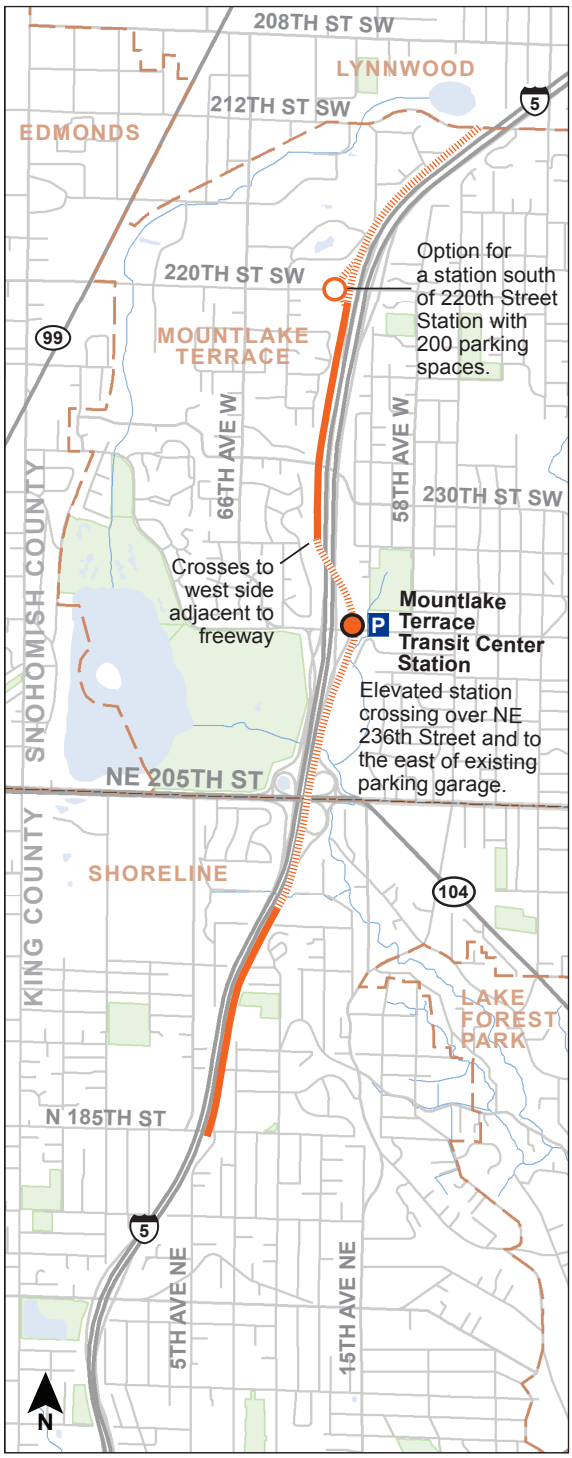
Four alternatives are proposed for Segment B from NE 185th Street in Shoreline to 212th Street SW in Mountlake Terrace. All alternatives begin on the east side of I-5 and end either in the I-5 median or on the west side of I-5. These alternatives have at-grade and elevated sections along their alignment, but all are elevated as they enter Mountlake Terrace. After that, the median alignments are generally at-grade while the west side alignments are both at-grade and elevated. Three of the alternatives feature a station at the existing Mountlake Terrace Transit Center and park-and-ride (NE 236th Street), while one places a station at the Mountlake Terrace Freeway Station in the I-5 median. One alternative also features an additional station at 220th Street SW. Figures S-7 and S-8 show the Segment B alternatives.

Preferred Alternative: East Side to Mountlake Terrace Transit Center to West Side. The Preferred Alternative begins north of the NE 185th Street Station and proceeds in a retained cut along the east side of I-5 (see Figure S-7). It crosses below a replaced NE 195th Street pedestrian bridge and then becomes elevated as it enters the valley that includes the SR 104/NE 205th Street/Ballinger Way interchange, and it continues elevated to a station on the east side of the Mountlake Terrace Transit Center. North of the station, it crosses over all I-5 lanes to the west side of I-5 (refining Alternative B2 in the Draft EIS), where it continues north until it

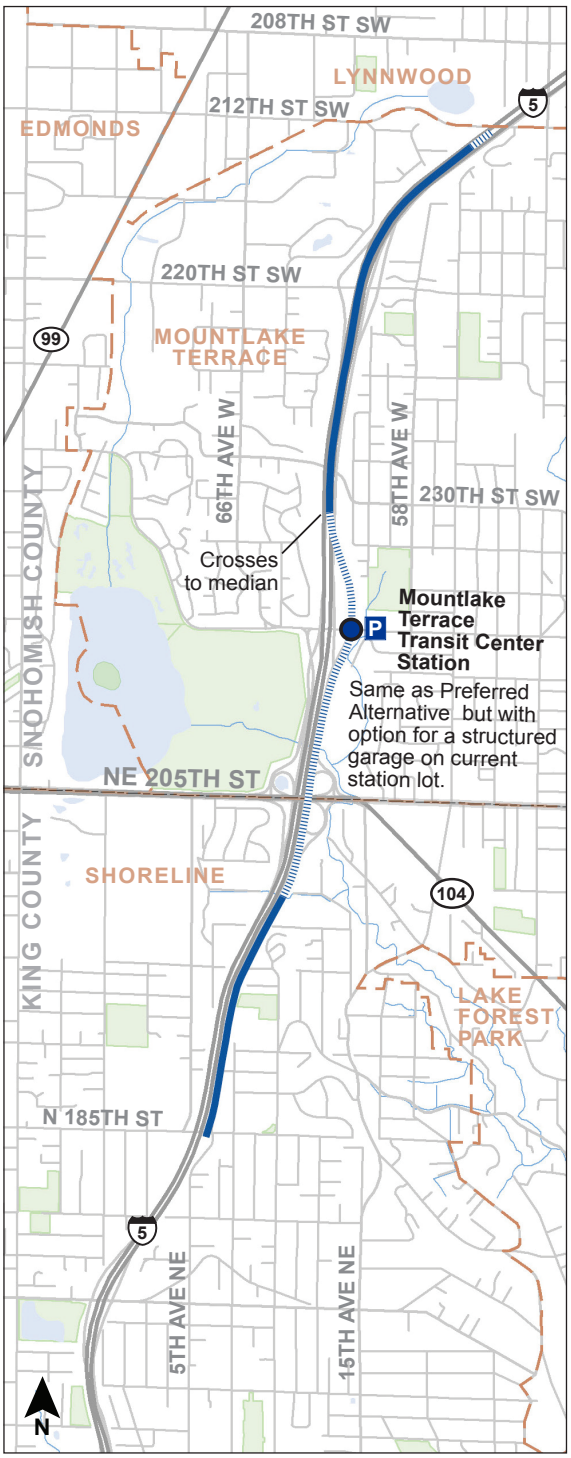


A11: MOSTLY ELEVATED WITH NE 130th, NE 145th AND NE 185th STATIONS

Figure S-6. Alternative A11



PREFERRED ALTERNATIVE SEGMENT B: EAST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO WEST SIDE



B1: EAST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO MEDIAN

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure S-7. Preferred Alternative and Alternative B1

crosses over 220th Street SW and the I-5 freeway ramps, which would be modified. It then descends to follow the east side of 60th Avenue West, and runs mostly on retained cut and fill structures along the west side of I-5 before finishing with an elevated guideway over 212th Street SW. The Preferred Alternative has an optional elevated station with a 200-space park-and-ride south of 220th Street SW. This would shift the alignment slightly west and avoid modifying the I-5 on-ramps and off-ramps at 220th Street SW.

Key Characteristics of the Segment B Alternatives				
	PA	B1	B2A	B4
Mountlake Terrace Station				
Transit Center	•	•	•	
Freeway Station				•
Alignment North of Mountlake Terrace Station				
Freeway Median		•		•
West side	•		•	
Additional Station at 220th Street SW			•	

Alternative B1: East Side to Mountlake Terrace Transit Center to Median. Alternative B1 begins north of the NE 185th Street Station and would be either in a retained cut or elevated guideway along the east side of I-5, depending on its Segment A connection (see Figure S-7). It crosses below a replaced NE 195th Street pedestrian bridge and then is largely elevated to a station on the east side of the Mountlake Terrace Transit Center. It then crosses over the northbound lanes of I-5, enters the freeway median, and drops to at-grade. The alignment continues at-grade in the median of I-5, generally at the level of the southbound I-5 lanes, north to approximately 212th Street SW.

Alternative B2A: East Side to Mountlake Terrace Transit Center to West Side with 220th Street SW Station. Alternative B2A is similar to the Preferred Alternative, except it includes a station with a park-and-ride at 220th Street SW, as shown on Figure S-8. This configuration also would require modifying the on-ramps and off-ramps for I-5. The initial section of Alternative B2A from Segment A could also be either elevated or at-grade..

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median. Alternative B4 (see Figure S-8) is the same as Alternative B1 from the NE 185th Street Station to about the Lake Ballinger Way/SR 104 interchange, where it crosses over to the I-5 median and under the 236th Street SW overpass to reach the Mountlake Terrace Freeway Station. North of the Mountlake Terrace Freeway Station, the Alternative B4 alignment is similar to Alternative B1.

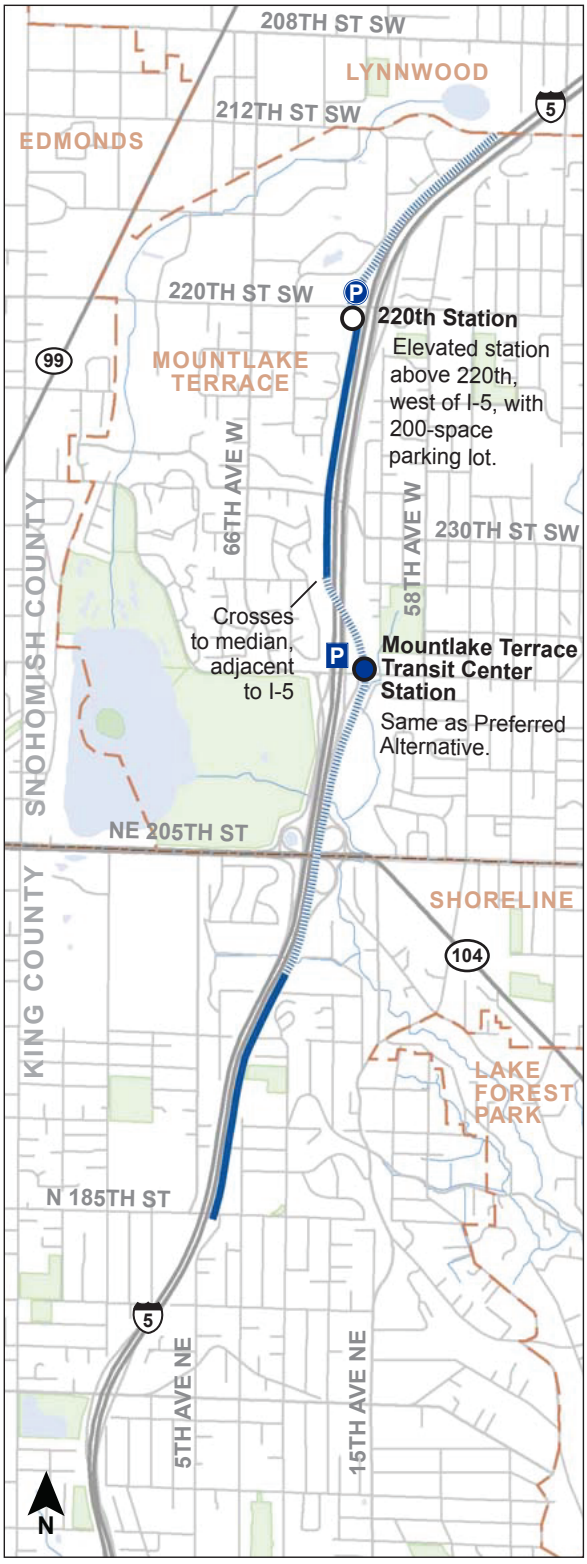
SEGMENT C: MOUNTLAKE TERRACE TO LYNNWOOD

In Segment C, all alternatives depart from I-5 but use different alignments to reach the Lynnwood Transit Center, with different stations and park-and-ride options at the project's north terminus. Figures S-9 and S-10 show the Segment C alternatives, which are all elevated.

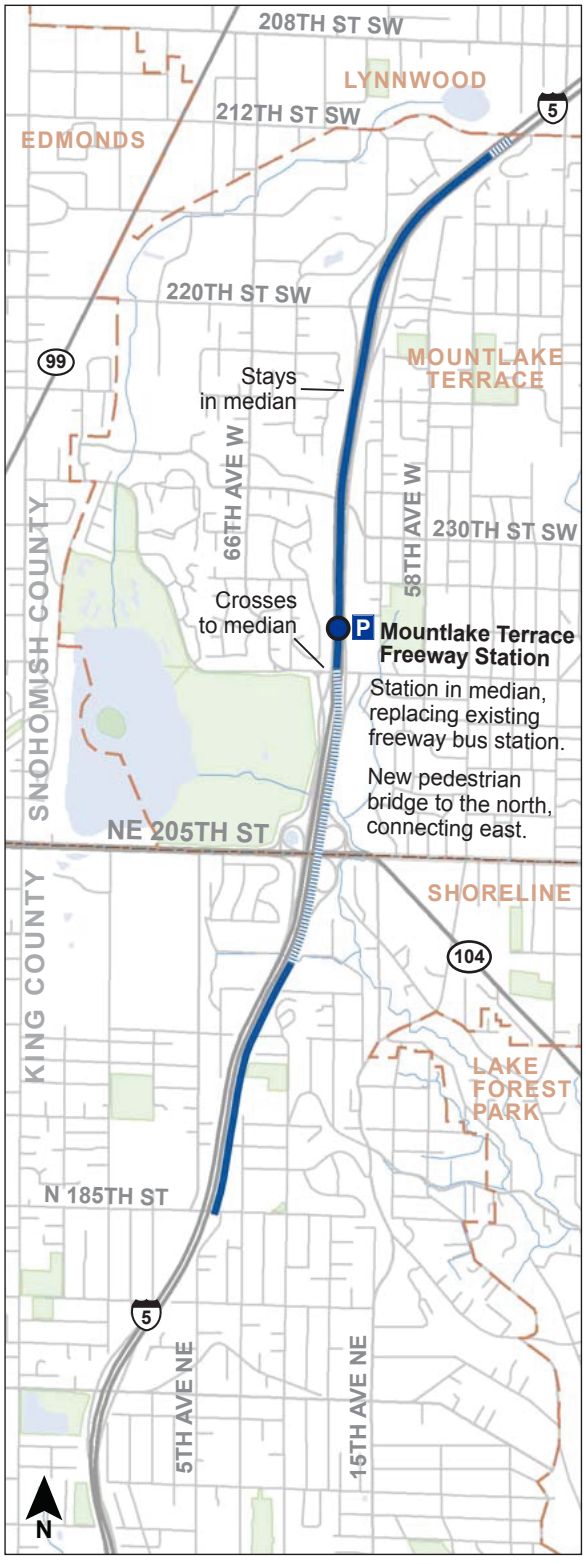
Key Characteristics of the Segment C Alternatives				
	PA	C1	C2	C3
Station Location				
200th Street SW		•		
Lynnwood Transit Center	•		•	
Lynnwood Park-and-Ride				•

Mountlake Terrace Transit Center

Lynnwood Transit Center

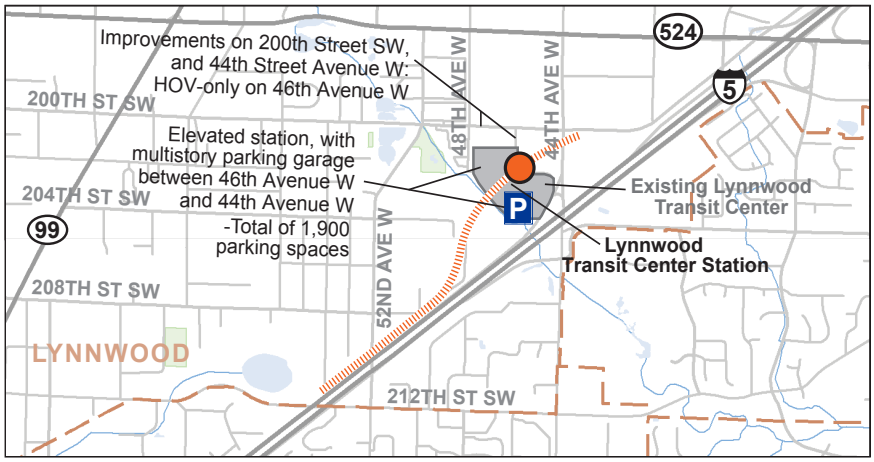


B2A: EAST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO WEST SIDE WITH 220TH STATION NORTH OPTION

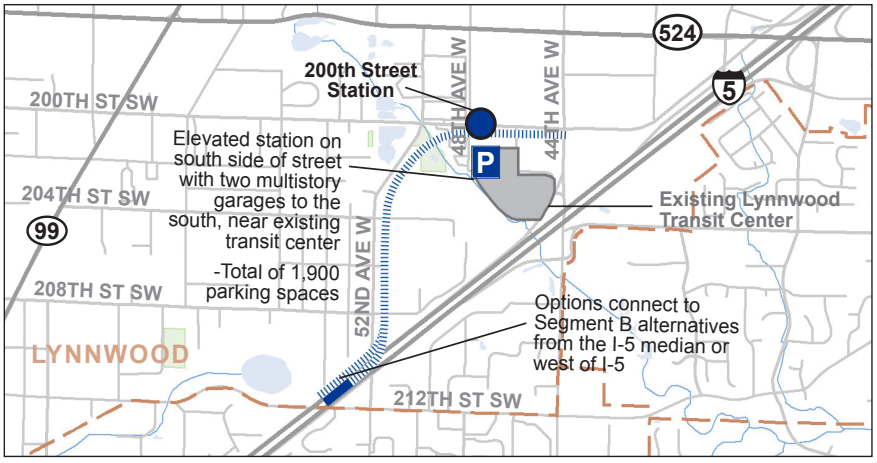


B4: EAST SIDE TO MOUNTLAKE TERRACE FWY STATION TO MEDIAN

Figure S-8. Alternatives B2A anB4



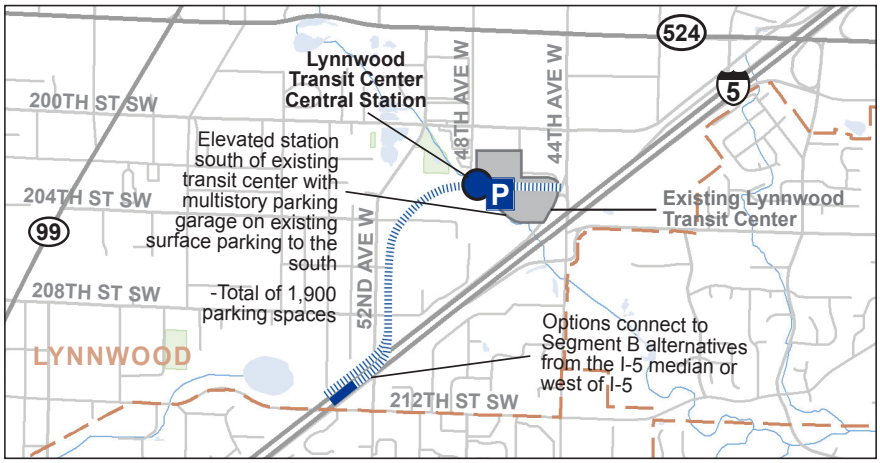
PREFERRED ALTERNATIVE SEGMENT C:
WEST SIDE TO LYNNWOOD TRANSIT CENTER STATION



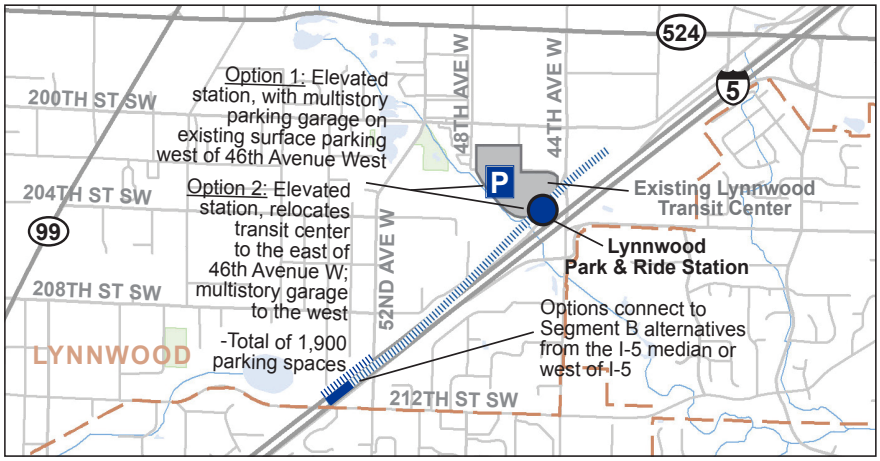
C1: 52ND AVE WEST TO 200TH STREET STATION

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure S-9. Preferred Alternative and Alternative C1



C2: 52ND AVE WEST TO LYNNWOOD TRANSIT CENTER STATION



C3: ALONG I-5 TO LYNNWOOD PARK & RIDE STATION

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure S-10. Alternatives C2 and C3

Preferred Alternative: West Side to Lynnwood Transit Center Station. The Preferred Alternative is based on Alternative C3 with route and station modifications suggested by the City of Lynnwood and others during the Draft EIS comment period. From the end of Segment B at about 212th Street SW, the Preferred Alternative (see Figure S-9) continues elevated along the west side of I-5 until it passes over 52nd Avenue West. It leaves the side of I-5 and heads northeast at about 208th Street SW, crossing over the Interurban Trail right-of-way and Scriber Creek to reach a station straddling 48th Avenue West on the east side of the Lynnwood Transit Center. Past the station, tail tracks would extend over 44th Avenue West to the south side of 200th Street SW. Several streets serving the transit center would also be improved. The Preferred Alternative also has an option to develop a second garage with an additional 400 net spaces.

Alternative C1: 52nd Avenue West to 200th Street SW Station. Alternative C1 (see Figure S-9) begins with two alignment options to connect with Segment B alternatives. Option 1 transitions from at-grade in the I-5 median (connecting to Alternative B1 or B4), and Option 2 continues elevated on the west side of I-5 (when connecting to the Preferred Alternative or Alternative B2A). Both are elevated along the east side of 52nd Avenue West and Cedar Valley Road. Alternative C1 turns east over the corner of Scriber Creek Park and runs along the south side of 200th Street SW to its elevated 200th Street SW Station, with tail tracks near 48th Avenue West.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center Station. Alternative C2 and its options from I-5 are the same as Alternative C1 to 52nd Avenue West, but it turns northeast to cross south of Scriber Creek Park to a station south of the existing Lynnwood Transit Center (see Figure S-10). Tail tracks would extend beyond the station.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride Station. Alternative C3 also features two options for connections to Segment B alternatives. At 208th Street SW, it crosses the Interurban Trail right-of-way and parallels I-5 to the Lynnwood Park-and-Ride Station south of 48th Avenue SW, east of the Lynnwood direct access ramp. Tail tracks would extend across 44th Avenue West. As shown in Figure S-10, the Lynnwood Station has two design options: one leaves the existing transit center as it is, and the other moves it next to the light rail station.

S.3.3 Construction

Sound Transit plans to start construction in 2018 and open the line for service by 2023. The light rail project would be built in sections, with major construction activities typically lasting approximately 2 years in any given area, although more complex elements such as stations, major structures, and systems would take longer. In addition to the right-of-way needed to build the alignments and stations, Sound Transit would also need areas to stage construction activities. Where possible, Sound Transit would locate construction staging areas on available right-of-way or on properties it would need to acquire for permanent facilities; however, other sites along the corridor would also be needed.

Elevated guideways, station areas, and retaining wall construction usually have the most intense construction activities because they are more complex and need greater volumes of materials, equipment, and workers. Some streets would be partially or fully closed to through traffic, but local access would be maintained. Short-term I-5 lane closures would be needed for bridging structures across I-5 or to set up barriers bordering construction areas. Trucks and heavy equipment would be used throughout much of the construction period. See Construction Impacts in Section S.5.1 below for more details about construction activities. Appendix F, Conceptual Plans, shows anticipated construction staging areas

S.4 ALTERNATIVES DEVELOPMENT

Sound Transit has built on several decades of previous planning and environmental review to define the alternatives described above. A light rail

connection between King County and Snohomish County was part of the 1996 Regional Transit System Plan and EIS (Sound Transit 1996), which resulted in Sound Transit's first system plan, the Sound Move program. The Sound Transit Long-Range Plan (adopted July 7, 2005) and its Final Supplemental EIS on the Long-Range Plan (June 2005) formed the basis for the ST2 Plan. The ST2 Plan identified the project that is now the Lynnwood Link Extension (Sound Transit 2005a, 2005b, 2008).

In 2010, Sound Transit conducted early scoping and an Alternatives Analysis that considered a broad range of alternatives for the project, including light rail and bus rapid transit alignments along I-5, SR 99, and other arterials in the project area. The September 2011 Alternatives Analysis Report and SEPA Addendum identified the most promising alternatives for further study in this EIS.

Sound Transit and FTA conducted environmental scoping for the EIS from September 30 through October 31, 2011. In December 2011, the Sound Transit Board approved Motion M2011-87, which directed Sound Transit to study light rail alternatives along I-5. The motion also removed from further consideration previously studied alternatives such as bus rapid transit and light rail alignments along SR 99 and 15th Avenue NE. Sound Transit then performed additional planning and analysis of light rail alternatives with station sites and alignments along I-5. In April 2012, the Board approved Motion M2012-17, which identified the alignment and station alternatives to be evaluated in the Draft EIS.

After considering the contents of the Draft EIS and public and agency comments, the Sound Transit Board identified the Preferred Alternative to be evaluated in the Final EIS along with other alternatives (Motion M2013-96, November 2013). The Preferred Alternative is largely based on Alternative A1, Alternative B2, and Alternative C3 as described in the Draft EIS, with modifications to improve benefits, lower costs, or reduce environmental impacts. Motion M2013-96 also directed Sound Transit to consider modifications and options for the Preferred Alternative and other alternatives, including maintaining access to the Seattle Latvian Evangelical Lutheran Church in Segment A; further studying the option for a station at 220th Street SW in Segment B; and realigning Alternative C3 to better connect with the Lynnwood Transit Center, preserve more redevelopable area, and minimize wetland and stream impacts.

In Segment C, all alternatives would cross an Edmonds School District property that is to be developed as a bus base and district operations center. The District's comment letter on the Draft EIS stated concerns about potential conflicts with its development plans for the property, but also supported a City of Lynnwood proposal to modify Alternative C3. The Preferred Alternative now features several elements of that proposal.

Chapter 2, Alternatives Considered, of the Final EIS describes the alternatives development process, including the alternatives Sound Transit previously removed from further consideration, the Sound Transit Board's directions for the Preferred Alternative, and other modifications and analyses incorporated within the Final EIS.

S.5 TRANSPORTATION EFFECTS

This section compares transportation conditions anticipated for the year 2035 with and without the light rail alternatives. For context, the project corridor is already highly congested. Travel on I-5 through the corridor currently takes up to three times longer during peak hours than at some other times. Average speeds during peak periods along I-5 now range from 18 miles per hour (mph) to 58 mph, which makes travel times highly variable and unpredictable. Vehicles in the HOV lanes move somewhat better, but HOV lanes are not continuous and peak period travel times for HOV lane users are still double those of the free-flow travel times (see Figure 3-2 in Chapter 3 of the Final EIS). By 2035, conditions on I-5 are

expected to worsen as more vehicles attempt to use the corridor during peak hours, which is already at 98 percent or more of its capacity. When demand is over capacity, operations break down even more.

Over 19,000 transit riders travel daily north and south on the I-5 corridor between Seattle and Lynnwood. Buses can use HOV lanes in some but not all sections. Travel times are not reliable, which is a major problem for both riders and transit operators.

S.5.1 TRANSIT RIDERSHIP, TRAVEL TIMES, AND SERVICE QUALITY

By 2035, between 63,000 and 74,000 transit trips are expected on the Lynnwood Link Extension each day, compared to about 34,000 bus trips under the No Build Alternative.

Transit travel times to regional destinations would be shorter and much more reliable with the Preferred Alternative or any of the other light rail alternatives. Trips to Northgate from Lynnwood would be up to 12 minutes faster, and trips to downtown Seattle from Lynnwood would be up to 16 minutes faster, than with the No Build Alternative in the morning peak period. In addition, the light rail alternatives would be safer, have more frequent service provide, more passenger capacity, and operate more reliably because the light rail would be separated from traffic.

The Lynnwood Station would be the busiest of the new light rail line, with approximately 17,000 to 18,000 boardings daily, depending on station options. In general, the different alignments would have similar ridership, but some of the station options would have more riders than others. In Segment A, the potential for three stations rather than two would slightly increase ridership, but forecasts indicate that three stations would generally reshuffle ridership that would otherwise still use the system with only two stations. In Segment B, the alternative using a freeway station at Mountlake Terrace would have fewer riders than the other three. While the median station would serve the same area, it would require longer walks, creating a longer total travel time for riders compared to a station at the transit center and park-and-ride. Adding a station in Segment B at 220th Street SW would slightly increase overall trips. Segment C has negligible differences in ridership among the stations.

REGIONAL TRAVEL

By 2035, ridership on any of the light rail alternatives would help reduce travel on roads in the region by more than 270,000 to 290,000 vehicle miles per day, compared with the No Build Alternative, and riders would save up to 25,000 hours in travel time daily.

AUTOMOBILE TRAVEL THROUGH THE PROJECT CORRIDOR

During the morning and evening peak hours, freeway travel times with the light rail alternatives would be similar to or slightly better than with the No Build Alternative in most locations. Freeway congestion and unreliable travel times would still occur.

FREEWAY OPERATIONS

With the No Build Alternative, freeway operations would worsen from today's already congested conditions. Depending on the location, traffic volumes in 2035 would increase 3 percent to 15 percent during peak periods. The average northbound PM peak period speeds would range from approximately 17 mph to 51 mph and are expected to be 35 mph or slower going southbound during the AM peak period. Demand for travel on the freeway would exceed capacity during the heaviest travel times.

The light rail alternatives would result in similar conditions in most locations, and congested conditions would still remain.

The Segment A light rail alternatives with a station at NE 145th Street (Preferred Alternative, A1, A3, A10, and A11) would slightly increase highway traffic and congestion in that interchange area compared to the No Build Alternative. The Segment A alternatives that would modify the NE 130th Street interchange would improve safety and

traffic flow (Preferred Alternative with or without the NE 130th Street Station Option, A1 and A10). The elevated alternatives with a station at NE 130th Street (A7 and A11) but with no changes to the interchange could result in slightly slower I-5 traffic near NE 130th Street.

Other interchanges and freeway conditions north of NE 145th Street to Lynnwood would likely not be appreciably affected by the light rail alternatives compared to the No Build Alternative.

ARTERIALS AND LOCAL STREETS

With the No Build Alternative in 2035, traffic volumes would increase by about 0.7 percent to 1.3 percent per year, which would cause delays at more of the intersections in the study area than compared to today. The light rail alternatives would draw more trips to station areas, which could increase intersection delays in some locations. However, Sound Transit would mitigate these impacts by adding turn lanes or modifying intersections.

In Segment A, the light rail alternatives would require mitigation to address congestion at two to seven intersections.

In Segment B, none of the light rail alternatives would worsen traffic conditions to levels that require mitigation.

In Segment C, the light rail alternatives would require mitigation to address congestion at three to four intersections.

OTHER TRANSPORTATION EFFECTS

Sound Transit also examined potential impacts on property access and circulation, nonmotorized facilities, parking, freight, and safety and found there would be no substantial impacts from the Lynnwood Link Extension. However, where interchange modifications are being considered at NE 130th Street, NE 145th Street, and 220th Street SW for the Preferred Alternative and several other alternatives, the Washington State Department of Transportation (WSDOT) and the Federal Highway Administration (FHWA) could restrict or modify local access as part of the WSDOT permitting process. Such local access changes could include restricted turn movements, driveway consolidation, alternative access for some properties, or property acquisitions. The potential for property impacts to occur is discussed in Section 4.1.

CONSTRUCTION IMPACTS ON TRANSPORTATION

Project construction would increase congestion and travel delays on I-5 and local streets. Sound Transit would typically have construction sites within the WSDOT right-of-way along I-5 and on local streets or acquired properties adjacent to the project corridor; trucks and equipment would need access to the construction areas. All the light rail alternatives would generate truck trips throughout much of the construction period to haul debris and deliver materials and equipment.

Construction would cause short-term lane closures or restrictions on I-5, particularly when light rail structures are being built over travel lanes or interchanges, or when ramps are being modified; some of the closures, while short term, would increase congestion and delays. For the Preferred Alternative and the other light rail alternatives that would rebuild I-5 overcrossings, closures of the crossing streets during construction would also require detours. The Preferred Alternative and the other alternatives that realign or reconstruct local streets would require closures and detours, some of which could last for several months. Building light rail structures above local streets would require short-term closures and detours.

In Segment A, the alternatives with a NE 130th Street Station (A5, A7, A10, and A11, as well as an option for the Preferred Alternative), or a NE 145th Street Station (the Preferred Alternative and A1, A3, A10, and A11) would have longer construction periods and more short-term I-5 lane or street closures and detours. Alternative A1 would reconstruct the NE 185th Street overpass, and the Preferred Alternative would modify the bridge to expand pedestrian/bicycle access; both

would have some short-term I-5 lane closures. In Segment B, the alternatives cross over part or all of I-5 but at different locations, which would necessitate short-term I-5 lane closures, including some periods with full closures northbound or southbound. In Segment C, all of the alternatives except the Preferred Alternative have an option to cross I-5 lanes from a median alignment, which would require short-term I-5 lane closures.

The alternatives that would place light rail stations or facilities at existing transit centers or park-and-rides would temporarily reduce parking supply and alter access or transit service. This would be expected at the NE 130th Street and NE 145th Street Stations in Segment A where smaller park-and-rides operate today. In Segment B, the Preferred Alternative and Alternatives B1 and B2A would temporarily reduce surface parking east of the existing garage at the Mountlake Terrace Transit Center, but the majority of the transit center's parking would remain available. The Preferred Alternative and Alternatives B1 and B2A would temporarily close the existing Mountlake Terrace freeway transit station during part of the construction period, while Alternative B4's median station construction would permanently close the existing freeway transit station. In Segment C, all the alternatives would temporarily reduce transit parking, but the Lynnwood Transit Center and most of the park-and-ride would still operate throughout project construction.

S.6 ENVIRONMENTAL EFFECTS

This Summary discusses the project's impacts at two levels: the full project from Northgate to Lynnwood, and then by segment, where there would be some localized differences in impacts. Table S-1 compares the overall environmental effects of the No Build Alternative against the light rail alternatives, while Tables S-2 to S-4 show, by segment, the primary differences in environmental impacts among the alternatives. The subsections below briefly summarize the primary types of impacts by environmental topic and note where some alternatives would have different impacts compared with others.

Acquisitions, Displacements, and Relocations. While the alternatives are designed to use I-5 and other public rights-of-way as much as possible, property acquisitions would be required along sections of the entire project corridor. Sound Transit will compensate owners for acquired properties and will offer relocation assistance consistent with the agency's acquisition and relocation policies and federal requirements. The Segment A Preferred Alternative would acquire 80 full properties and parts of 50 properties. The other light rail alternatives would acquire between 66 and 81 full properties, along with parts of 41 to 47 additional properties. Property impacts would be greatest in Segment A, where the I-5 right-of-way is the narrowest. In Segment A, most of the acquisitions would be residential properties.

In Segment B, considerably fewer parcels would be affected, with the Preferred Alternative acquiring four full properties and parts of 11 properties. The other Segment B alternatives would acquire two to seven full properties, and parts of three to 11 properties.

Segment C would require acquisitions of commercial and residential parcels. The Preferred Alternative in Segment C would acquire five full properties, displacing an estimated nine businesses, and acquire parts of 13 properties. The other light rail alternatives would acquire two to six full properties, and parts of 13 to 26 properties. Alternative C1 would have more displacements than the other alternatives, including 77 residences and 31 businesses.

Land Use. Land use would not be adversely affected as a result of any of the light rail alternatives. Acquisitions, both full and partial, in all segments would represent only a small portion of the land available. All alternatives would be generally consistent with regional and local plans and policies. Indirectly, the project could accelerate land use changes in station areas, such as at NE 145th Street or NE 185th Street, the Mountlake

Terrace Transit Center or its freeway station, at 220th Street SW, or at the Lynnwood Station, where local plans or policies allow redevelopment with mixed-use, higher-density, transit-oriented development.

Economics. Business impacts would be minimal in Segments A and B, but property acquisition would displace some businesses in Segment C for all alternatives, and employees could be affected by business disruptions or relocations. Local jurisdictions would have a slight initial reduction in property tax revenue as land is converted to a transportation use. However, the proposed project could provide economic benefits to local economies due to increased activity in station areas. Construction would also temporarily improve economic activity through construction employment as well as the purchase of materials. However, construction activities could also temporarily reduce the visibility and patronage of some businesses nearest to the light rail route, primarily in Segment C.

Neighborhoods. The proposed project would be on the borders of existing neighborhoods and would have minor effects on community facilities or services. The majority of the project's potential residential displacements are in Segment A, where all light rail alignments would affect residential properties bordering I-5 from about NE 117th Street through NE 195th Street; moreover, the stations would remove up to a block of homes. Alternative C1 would displace a condominium complex. There would be no long-term adverse impacts on neighborhood character and cohesion. Temporary construction impacts, including dust, noise, and traffic congestion, would affect the edges of neighborhoods adjacent to the alternative alignments in all segments.

Visual and Aesthetic Resources. Visual impacts would be caused by removing mature trees and dense vegetation that currently screen parts of I-5, by removing homes and other buildings, and by introducing prominent new structures. Some of the alternatives would have light rail guideways, noise walls, stations, and train operations that would be visually prominent for residents, park users, or travelers, particularly when the alternatives are elevated near neighborhoods or public areas with established views. Areas of high impacts are anticipated for portions of the Preferred Alternative and other alternatives in Segment A where vegetation would be removed and in areas where the alternatives would be developed near residential neighborhoods. For the Preferred Alternative and Alternative B2A in Segment B, areas of high impact would occur where trees and vegetation bordering I-5 would be removed for the guideway north of the Mountlake Terrace Transit Center. Alternatives C1 and C2 in Segment C would have areas of high impact where the guideway is elevated near residences and where trees and vegetation would be removed in or near a park. During construction, views would also be affected as Sound Transit clears the right-of-way and constructs the new facilities, and some work areas would be illuminated for nighttime construction.

Simulated View of Light Rail near NE 143rd Street

Air Quality and Greenhouse Gas Emissions. The light rail alternatives would decrease pollutants and greenhouse gases from vehicle emissions compared with the No Build Alternative. The project would be consistent with federal air quality standards at local and regional levels. During construction, there would be increased emissions from construction equipment and trucks, as well as more fugitive dust and particulates associated with grading and excavation.

Table S-1. Summary of Environmental Effects of No Build versus Light Rail Alternatives (All Segments)

Project Resource	Comparison Factor	No Build Alternative	Light Rail Alternatives
Transportation	Daily corridor ridership	32,000 to 34,000 riders on buses	63,000 to 74,000 riders on light rail
	Vehicle Miles of Travel (VMT)	100,600,000	100,310,000 to 100,330,000
	AM peak transit travel time – Lynnwood to Downtown Seattle	43 minutes	27–29 minutes
	Transit travel time savings at AM peak – Lynnwood to Downtown Seattle	0	14–16 minutes
Acquisitions, Displacements, and Relocations	Total property acquisitions (full and partial)	0	127–179
Land Use	Consistency with Regional and Local Growth Management Plans	Low	High
Water Resources	Increase in impervious surfaces	No direct change	40 to 53 acres, mostly non-pollutant generating surfaces
Ecosystem Resources	Total acres of ecosystem resources affected	0	9-24
Air Quality and Greenhouse Gases	Annual carbon dioxide equivalent reduction	No reduction	76,285 metric tons
Energy	Regional daily transportation energy consumption 2035 (per thousand British thermal units)	602,511	600,023
Electromagnetic Fields (EMF)	Potential for EMF exposure impacts	No new sources	No impacts
Geology and Soils	Risk of worsening geologic and soils conditions	None	None to low
Public Services and Utilities	Demand for services	Population growth and development could increase demand	Development could increase demand for services; all alternatives would be similar
	Potential for service disruption during light rail operation	Not applicable	Unlikely

Table S-2. Comparison of Segment A Alternatives

Alternative		PA	A1	A3	A5	A7	A10	A11
Stations		Two: NE 145th and NE 185th Streets	Two: NE 145th and NE 185th Streets	Two: NE 145th and NE 185th Streets	Three: NE 130th, NE 155th, and NE 185th Streets	Three: NE 130th, NE 155th, and NE 185th Streets	Three: NE 130th, NE 145th, and NE 185th Streets	Three: NE 130th, NE 145th, and NE 185th Streets
Profile		Mixed At-Grade and Elevated	Mixed At-Grade and Elevated	Mostly Elevated	Mixed At-Grade and Elevated	Mostly Elevated	Mixed At-Grade and Elevated	Mostly Elevated
Category[a]	Measure							
Capital Cost Range[b]	2014 dollars (in millions)	$730-$840	$760 to $880	$790 to $910	$740 to $850	$830 to $950	$750 to $860	$850 to $970
Ridership	2035 daily boardings (net)[c]	12,600 (13,000[f])	12,600	9,500	13,000	10,900	10,900	10,900
Station Area Transit-Oriented Development	Qualitative rating of potential under existing conditions (limited-moderate-strong)	NE 145th Street: limited NE 185th Street: limited-moderate	NE 145th Street: limited NE 185th Street: limited-moderate	NE 145th Street: limited NE 185th Street: limited-moderate	NE 130th Street: limited NE 155th Street: limited NE 185th Street: limited-moderate	NE 130th Street: limited NE 155th Street: limited NE 185th Street: limited-moderate	NE 130th Street: limited NE 145th Street: limited NE 185th Street: limited-moderate	NE 130th Street: limited NE 155th Street: limited NE 185th Street: limited-moderate
Transportation	Number of intersections requiring mitigation	2 (3[f])	5	6	7	7	4	4
	I-5 bridges rebuilt	NE 130th Street	NE 117th, NE 130th, and NE 185th Streets	---	NE 130th Street	---	NE 130th Street	---
	I-5 ramps relocated	NE 130th Street north off-ramp, NE 145th Street north on-ramp	NE 130th Street north off-ramp	NE 145th Street north on-ramp	NE 130th Street north off-ramp	---	NE 130th Street north off-ramp	NE 145th Street north on-ramp
	Realigned streets	1st Avenue NE 5th Avenue NE 7th Avenue NE	1st Avenue NE 5th Avenue NE 7th Avenue NE	1st Avenue NE	1st Avenue NE 7th Avenue NE	1st Avenue NE	1st Avenue NE 7th Avenue NE	1st Avenue NE
	Number of parking spaces removed[d]	69	69	73	89	77	96	84
Property	Number of full/partial acquisitions	80/50	70/45	66/41	81/47	74/43	77/45	66/41
	Number of residences displaced	121	111	107	123	116	118	107
	Estimated WSDOT right-of-way needed (acres)	19	26	20	20	19	25	20

Alternative		PA	A1	A3	A5	A7	A10	A11
Stations		Two: NE 145th and NE 185th Streets	Two: NE 145th and NE 185th Streets	Two: NE 145th and NE 185th Streets	Three: NE 130th, NE 155th, and NE 185th Streets	Three: NE 130th, NE 155th, and NE 185th Streets	Three: NE 130th, NE 145th, and NE 185th Streets	Three: NE 130th, NE 145th, and NE 185th Streets
Profile		Mixed At-Grade and Elevated	Mixed At-Grade and Elevated	Mostly Elevated	Mixed At-Grade and Elevated	Mostly Elevated	Mixed At-Grade and Elevated	Mostly Elevated
Category[a]	Measure							
Visual and Aesthetic Resources	Low-medium-high impact	Medium	Medium	High	Medium	High	Medium	High
Ecosystem Resources	Wetland/buffer acres affected	0.9/0.3	0.9/0.3	0.9/0.3	0.9/0.8	0.9/0.8	0.9/0.3	0.9/0.3
	Acres of forest vegetation removed	2	2	1	2	1	2	2
Noise	Number of properties affected before/ after mitigation[e,f]	306 (309)/0	234/0	476/0	303/0	493/0	283/0	476/0
Vibration	Number of properties affected before/ after mitigation	27/0	9/0	8/0	16/0	9/0	14/0	8/0
Parks and Recreational Resources	Resources directly affected	Ridgecrest Park, Shoreline Stadium	Ridgecrest Park, Shoreline Stadium	Ridgecrest Park	Ridgecrest Park	Ridgecrest Park	Ridgecrest Park	Ridgecrest Park

a Only categories with notable impacts or differences among alternatives are shown; Chapters 3 and 4 include the full results for all environmental topics.
b Range reflects contingencies for a conceptual level design. Figures rounded to the nearest $10 million.
c The net boardings reflect ridership at all the segment stations, minus the drop in ridership that would occur at the Northgate Station; the more sizeable drop is with a station located at NE 130th Street, which overlaps more with the Northgate Station ridership area than a station at NE 145th Street.
d Includes on-street and off-street parking. Does not include park-and-ride spaces.
e Includes park-and-ride noise impacts.
f Preferred Alternative with optional station (in parenthesis).

Table S-3. Comparison of Segment B Alternatives

Alternative		PA	B1	B2A	B4
Stations		One: Mountlake Terrace Transit Center	One: Mountlake Terrace Transit Center	Two: Mountlake Terrace Transit Center and 220th Street SW	One: Mountlake Terrace Freeway Station
Alignment		I-5 East Side to I-5 West Side	I-5 East Side to I-5 Median	I-5 East Side to I-5 West Side	I-5 East Side to I-5 Median
Category[a]	**Measure**				
Capital Cost[b]	2014 dollars (in millions)	$450 to $510	$390 to $450	$530 to $610	$360 to $410
Ridership	2035 daily boardings (net)[c]	5,100 (5,300)[e]	5,100	5,100	4,300
Station Area Transit-Oriented Development	Qualitative rating of potential under existing conditions (limited-moderate-strong)	Mountlake Terrace Transit Center: moderate-strong	Mountlake Terrace Transit Center: moderate-strong	Mountlake Terrace Transit Center: moderate-strong 220th Street SW: moderate	Mountlake Terrace Freeway Station: moderate
Property	Number of full/partial acquisitions	4 (10)[e]/ 11	2/3	7/11	2/4
	Number of residences displaced	3 (8)[e]	0	5	0
	Estimated WSDOT right-of-way needed (acres)	17	14	16	15
Transportation	Number of parking spaces removed[d]	0	0	11	0
	I-5 bridges rebuilt	NE 195th Street	NE 195th Street	NE 195th Street	NE 195th Street
Ecosystem Resources	Wetland/buffer acres affected	0.8/1.6 (0.5/1.6)[e]	<0.1/0.9	1.6/1.3	0.2/0.7
	Acres of forest vegetation removed	11 (11)[e]	5	11	3
Visual and Aesthetic Resources	Qualitative rating (low-medium-high impact)	High	Low	High	Low
Noise	Number of properties affected before/after mitigation[d]	217 (202)[e]/0	122/0	192/0	110/0

a Only categories with noteworthy information, impacts or differences among alternatives are shown; Chapters 3 and 4 include full results.
b Range reflects contingencies for a conceptual level design. Figures rounded to the nearest $10 million.
c Net boardings within the segment, less any reduction in ridership that could occur in other segments with an additional station. Adding station at 220th Street SW reduces ridership at Lynnwood by 200 daily boardings.
d Includes park-and-ride noise impacts.
e Numbers in parentheses are PA with 220th Street South Option.

Table S-4. Comparison of Segment C Alternatives

Alternative		PA	C1	C2	C3
Stations		At transit center	200th Street SW	At transit center	At park-and-ride
Category[a]	Measure				
Capital Cost[b]	2014 dollars (in millions)	$340 to $380	$330 to $380	$300 to $340	$300 to $390
Ridership	2035 daily boardings (net)[c]	17,900 (17,200)[d]	17,600 to 17,900	17,600 to 17,900	17,600 to 17,900
Station Area Transit-Oriented Development	Qualitative rating of potential under existing conditions (limited-moderate-strong)	Lynnwood Park-and-Ride: moderate-strong	200th Street SW Station: moderate-strong	Lynnwood Transit Center: moderate-strong	Lynnwood Park-and-Ride: moderate-strong
Property	Number of parcels affected (full/partial parcels)	5/13	6/26	5/24	2/13
	Number of residences displaced	0	77	1	0
	Businesses and institutions displaced	9	31	3	1
	Estimated WSDOT right-of-way needed (acres)	2	1	1	3
Transportation	Realigned streets	---	---	---	208th Street SW
	Number of parking spaces removed	27	8	4	0
	Number of intersections requiring mitigation	3 (4[f])	3	3	3
Ecosystem Resources	Wetland/buffer acres affected	0.7/1.0	Less than 0.1 - 0.2/0.7 - 1.1	0.9 - 1.1/0.6 - 1.1	0.2 - 0.3/1.0 - 1.7
	Acres of forest vegetation removed	2	1	1	1-2
Visual and Aesthetic Resources	Qualitative rating (low-medium-high impact)	Medium	High	High	Medium
Noise	Number of properties affected before/after mitigation[e]	115/0	226–234/0	148 - 151/0	29 - 79/0
Vibration	Number of properties affected before/after mitigation	0/0	1-2/0	1-2/0	0/0
Parks and Recreational Resources	Resources directly affected	Interurban Trail, Scriber Creek Trail	Interurban Trail, Scriber Creek Park, Scriber Creek Trail	Interurban Trail, Scriber Creek Trail	Interurban Trail, Scriber Creek Trail
Section 4(f)	Resources involving a Section 4(f) use	None	Scriber Creek Park	None	None

a Only categories with noteworthy information impacts or differences among alternatives are shown; Chapters 3 and 4 include full results.
b Range reflects contingencies for a conceptual level design. Figures rounded to the nearest $10 million.
c Ridership range reflects total boardings at this station, but adjusted to reflect ridership changes caused by additional station(s) in Segment A or B and their effect on ridership in this segment.
d Preferred Alternative, with optional stations in Segments A and B.
e Includes park-and-ride noise impacts.
f Includes option for added parking.

Noise and Vibration. There are residences and other noise- and vibration-sensitive properties along the entire project corridor. Most, but not all, of the properties that would need mitigation from noise impacts are in Segment A. Mitigation for long-term vibration impacts would also be needed in Segments A, B, and C. Potential mitigation measures would include noise walls next to the light rail alignment, noise barriers along elevated guideways, residential sound insulation, and vibration-dampening design measures, and would eliminate long-term impacts. Construction-related noise and vibration would be produced by heavy equipment and construction tools, and most noise would be generated during the early phases of construction. The vibration generated during construction is not anticipated to cause damage to structures.

Ecosystem Resources. There would be no adverse impacts on threatened or endangered species. All light rail alternatives would cross several streams and tributaries in the project corridor, including Thornton Creek, McAleer Creek, and Scriber Creek, and would affect aquatic resources, vegetation, habitat, streams, wetlands, and buffers. The range of impacts from the Preferred Alternative and other light rail alternatives would be similar, and in most locations the impacts would be reduced through further detailed design efforts. In Segment B, the Preferred Alternative and Alternative B2A would relocate I-5 ramps, affecting wetland areas. The Preferred Alternative 220th Street Station option would shift the alignment west and avoid much of these impacts. In Segment C, the Preferred Alternative and Alternatives C2 and C3 would affect Scriber Creek and its wetlands, although impacts could be reduced through more detailed design to minimize fill as well as construction impacts. Stormwater runoff for the project would be managed to minimize effects on aquatic species.

Water Resources. There would be no water quality impacts resulting from stormwater because Sound Transit would comply with local government requirements for stormwater management. However, the project would increase the amount of existing impervious surface areas. In Segment C, the Preferred Alternative and other alternatives would place guideway columns in the Scriber Creek floodplain, but Sound Transit would provide compensatory floodplain storage. Construction impacts would be controlled by adhering to permit requirements and implementing best management practices, and by fulfilling stormwater management commitments described in the project's Biological Assessment (Appendix O).

Energy Impacts. There would be no long-term energy impacts compared with the No Build Alternative because the light rail alternatives would reduce energy consumption regionally. Construction would temporarily increase energy consumption but would not notably alter regional energy supply or demand.

Geology and Soils. The project is in a seismically active area; therefore, localized geologic hazards and risks are possible. However, the use of engineering measures would reduce the risk of harm from seismic events.

Hazardous Materials. Contaminated soil or groundwater is anticipated on four sites that could be acquired in Segment C for the Preferred Alternative. These sites would be remediated before or during light rail construction, which would be a beneficial effect. The other light rail alternatives would require the acquisition of three to six sites in this segment with known or likely contamination.

Wetland Near Scriber Creek in Lynnwood

Table S-5. Potential Section 4(f) Impacts

Section 4(f) Resource	Alternatives	Section 4(f) Use Determination
Ridgecrest Park, City of Shoreline	All Segment A Alternatives	*De minimis*. City of Shoreline has concurred with this determination. Light rail facility would be located on western edge of the park, removing trees that provide an existing visual buffer. Park would experience property and visual impacts but this would not impair park functions.
Shoreline Stadium, Shoreline Public Schools	Preferred Alternative and Alternative A1	*De minimis*. Shoreline School District has concurred with this determination. Minor right-of-way acquisition would affect a parcel and parking near the stadium.
Interurban Trail, Snohomish County Public Utility District, City of Lynnwood	All Segment C Alternatives	Temporary occupancy. Elevated guideway over trail, with temporary trail closures. Visual impacts, but the trail's primary functions, features, and attributes would be retained.
Scriber Creek Trail, City of Lynnwood	All Segment C Alternatives	Temporary occupancy. Elevated guideway over trail, with temporary trail closures. Visual impacts, but the trail's functions, features, or attributes would be retained.
Scriber Creek Park, City of Lynnwood	Alternative C1	Section 4(f) use. Guideway and structures would cross a corner of the park, removing trees and vegetation, and creating visual impacts.

Cultural, Archaeological, and Historic Resources. Four historic resources in the Area of Potential Effects are eligible for listing on the National Register of Historic Places, including Northgate Elementary, the Northgate Plaza Apartments, a former parsonage in Seattle, and a residence in Shoreline. None of the light rail alternatives would physically alter any of the historic structures, acquire historic property, or adversely impact their historic attributes or setting. There would be no adverse impacts on known archaeological sites, and no traditional cultural properties have been identified in the project corridor.

Parks and Recreational Resources. There are numerous parks and recreational resources near the light rail alternative routes. In Segment A, Jackson Park Golf Course would be affected by changed views for all alternatives, but there would be no direct physical impacts on the park. All Segment A alternatives would place light rail along the western edge of Ridgecrest Park, which would change views and remove mature trees. The Preferred Alternative and Alternative A1 would also require a corner of a parcel containing the Shoreline Stadium and its associated parking lot. The Preferred Alternative also has an option to build a parking garage on the current surface parking area south of the stadium. In Segment B, North City Park would have partially changed views but no direct physical impacts. In Segment C, all the light rail alternatives would cross the Interurban Trail and Scriber Creek Trail on elevated guideways. The Preferred Alternative and Alternative C3 would not affect Scriber Creek Park, while Alternative C1 would cross over a corner of Scriber Creek Park, and Alternative C2 would cross near the park. Alternative C1 would convert park land to a transportation use, which is restricted under a U.S. Department of Transportation (USDOT) regulation known as

Section 4(f). Therefore, as described in Section S.6.2, Alternative C1 would require modification before FTA could approve it.

Other Environmental Impacts. There would be no adverse impacts from electromagnetic fields or on public services, safety and security, and utilities.

Indirect and Cumulative Effects. Indirect environmental effects would be primarily related to the potential for increased development in station areas. Several of the jurisdictions either have plans in place encouraging mixed-use and higher-density development, or they may consider such policies depending on the final selection of stations to be built as part of the project. Cumulative effects, which are the effects of this project combined with the effects of other projects and actions, would be mostly focused at the start and end points of the project in the urban centers of Northgate and Lynnwood. At Northgate, the Northgate Link Extension is under construction, and other major development projects are also planned nearby. In a separate EIS process, Sound Transit is evaluating sites for a new OMSF, one of which is in Lynnwood near the project (the other 4 sites, including the Preferred Alternative, are in Bellevue). These other projects, if they are constructed at approximately the same time as the Lynnwood Link Extension, could increase overall construction period impacts. The other types of impacts would remain similar to those of the Lynnwood Link Extension alone.

S.6.1 Mitigation Measures

Sound Transit is committed to meeting the federal, state, and local environmental regulations and permit requirements that would apply to the project. The project would include reasonable mitigation measures to avoid significant adverse impacts. The Final EIS identifies mitigation measures that Sound Transit would apply to avoid or reduce the impacts identified for the project alternatives. The FTA Record of Decision will explicitly make mitigation measures a requirement of project implementation. A number of the mitigation measures would be further detailed through final design and permitting. Several environmental elements analyzed in the EIS would have no adverse impacts requiring mitigation after standard project measures are applied, including cultural, archaeological, and historic resources; electromagnetic fields; geology and soils; energy; and water resources. The following discussion summarizes key areas where mitigation measures are necessary.

Transportation. Sound Transit would mitigate intersections operating below local standards due to the project, or notably below No Build conditions that are already below local standards. Mitigation measures include added turn lanes, intersection/signalization improvements, traffic management, and other improvements as agreed to by the local jurisdiction. The mitigation would improve intersection delay to meet local standards, or to achieve the same level of service or better for intersections that would be below standards with the No Build Alternative.

Acquisitions, Displacements, and Relocations. Sound Transit would compensate and help relocate residents and businesses affected by property acquisitions, consistent with Sound Transit policy and applicable federal regulations.

Simulation of Jackson Park Golf Course with Elevated Alternatives

Noise and Vibration. Sound Transit would implement noise and vibration impact mitigation measures including noise walls (either at-grade

or as part of elevated guideways), insulation for buildings, and special track work.

Visual Quality. Sound Transit would provide mitigation in areas identified as having high visual impacts by using landscaping features or visual treatments to retaining walls and other structures, as practical, based on available land, safety, and maintenance and operational needs. Some changes in views would be unavoidable, and short- to medium-term adverse impacts may remain in locations where tree replacement and landscaping must mature to be effective mitigation.

Ecosystem Resources. During final design and permitting, Sound Transit will first try to avoid and minimize ecosystem impacts through design measures and best management practices. Where impacts are unavoidable, Sound Transit will mitigate them in accordance with applicable federal regulations, local critical area ordinances, and permit requirements. Sound Transit is committed to no net loss of wetland functions and wetland areas on a project-wide basis.

Parks and Recreational Facilities. Sound Transit would implement mitigation measures including compensation or replacement for directly affected properties, restoration or enhancement for any affected features or facilities, and landscaping. For Ridgecrest Park, Sound Transit has identified an area where it would develop replacement park property. For sections of parks or trails affected during construction, Sound Transit would work with local jurisdictions to develop detours, signage, and related measures to minimize the impacts of temporary closures. After construction, affected areas would be restored to existing conditions or better. Alternative C1 would require modifications to adequately mitigate its impacts to Scriber Creek Park.

Hazardous Materials. Sound Transit would investigate hazardous materials sites in the construction area and manage them to avoid the potential for exposure or spread of hazardous materials during construction.

Construction. Sound Transit would apply mitigation to help minimize or avoid construction impacts for each area of the environment. This includes transportation mitigation to reduce delays due to truck traffic, detours, and lane or street closures. To minimize impacts on communities, businesses, and public services, Sound Transit would have a 24-hour construction hotline for the project. Construction period outreach and communication would include notices of key construction activities, such as changes to transportation facilities or routes. Sound Transit would implement best management practices for construction to reduce impacts on air quality and water quality, reduce noise and vibration, and manage hazardous materials.

S.6.2 Section 4(f)

Section 4(f) refers to a USDOT statute that restricts FTA's ability to approve a project that adversely affects significant parks, recreation resources, fish and wildlife refuges, and historic properties. Table S-5 lists the Section 4(f) properties that the project may potentially impact or "use." If the impact would be minor and not alter the resource's functions and characteristics, Section 4(f) procedures allow *de minimis* impact findings, with concurrence from the official with jurisdiction over the Section 4(f) resource. Also, under certain conditions, the regulation exempts short-term construction impacts. Otherwise, the project must consider avoidance alternatives.

For the Preferred Alternative, there would be no Section 4(f) use; therefore, no avoidance alternatives are considered. The FTA made *de minimis* determinations for Ridgecrest Park and the Shoreline Stadium, and the affected jurisdictions have concurred. The impacts on the Interurban Trail and Scriber Creek Trail, where short sections would be closed during construction, meet the requirements for a construction-period exception for temporary occupancy. The FTA has determined that a Section 4(f) use would occur with Alternative C1. If it were to be advanced, Alternative C1 would first need to be modified to avoid Scriber Creek Park, or reduce the impact to the park to *de minimis*.

S.6.3 Environmental Justice

The Lynnwood Link Extension would be in or near some neighborhoods with minority and low-income populations. Presidential Executive Order 12898, Federal Actions to Address Environmental Justice to Minority Populations and Low-Income Populations, and USDOT Order 5610.2 direct Sound Transit and FTA to identify and meaningfully engage low-income and minority populations about the project, and to consider environmental effects that could fall predominantly on those populations.

The project would not result in disproportionately high and adverse effects on minority and low-income populations after all mitigation, enhancements, and offsetting benefits are considered. The project would cause residential and business displacements that could affect low-income or minority populations. Sound Transit's commitment to provide compensation and relocation assistance would mitigate these impacts. Noise impacts would be mitigated to meet FTA requirements. Some visual impacts would be unavoidable, and others could remain until replacement trees and landscaping mature. These impacts would be most apparent to people, including low-income and minority populations who live directly along the corridor. However, minority and low-income populations would also be near transit stations that provide benefits by improving mobility and the overall quality of transit service. Many locations along the corridor would experience reduced noise from I-5 as the project replaces traffic noise walls and updates them to meet current standards. Several locations in the corridor would have revised streets and intersections, improving multimodal access and addressing existing safety issues in several locations, which would be benefits.

Construction and operation impacts would affect areas with minority or low-income populations, but planning and outreach, proposed design measures, mitigation measures, and best management practices would reduce or minimize the effects, avoiding high and adverse environmental impacts.

Table S-6. Consistency with Project Purpose and Need

Purpose and Need	No Build Alternative	Preferred Alternative	Other Light Rail Alternatives
Provide reliable, rapid, and efficient transit service with sufficient capacity to meet current and projected demand	No	Yes	Yes
Forecast year 2035 transit travel times from Lynnwood to Northgate (AM peak period)	26 minutes	14 minutes	14 to 16 minutes
Forecast year 2035 transit travel times from Northgate to Lynnwood (PM peak period)	24 minutes	14 minutes	14 to 16 minutes
Provide a mobility alternative to travel on congested roadways	No	Yes	Yes
Support the region's adopted land use, transportation, and economic development plans	No	Yes	Yes
Extend the regional light rail system in support of the Sound Transit Long-Range Plan	No	Yes	Yes
Implement a financially feasible system that seeks to preserve and promote a healthy environment	No	Yes	Yes

S.6.4 Ability of Alternatives to Meet the Purpose and Need

The project's Purpose and Need, detailed in Chapter 1 of the Final EIS, is summarized in Table S-6, to show how effective the Preferred Alternative and the other light rail alternatives would be in meeting the purpose and need of the project.

S.6.5 Estimated Project Costs

With seven alternatives in Segment A, four in Segment B, and four in Segment C, there are many possible segment combinations that could be linked to create the full 8.5-mile light rail extension from Northgate to Lynnwood. The Preferred Alternative would have total capital costs of $1.5 to $1.7 billion, while other alternative combinations would range from $1.4 to $2.0 billion. The estimated capital cost of each light rail alternative is presented in Tables S-2, S-3, and S-4. All of the light rail alternatives would cost about $16 million per year to operate and maintain, but their costs would vary by several hundred thousand dollars annually, depending on how many stations are included. Chapter 5, Evaluation of Alternatives, provides additional details.

S.7 COMPARISON OF ALTERNATIVES

This section summarizes the primary differences in ridership, environmental impacts, and benefits among the light rail alternatives.

S.7.1 Segment A: Seattle to Shoreline

All Segment A alternatives would displace a similar number of residences through acquisitions, although the elevated alternatives would be better able to avoid impacts in some areas. The primary differences in property impacts are at the stations. Sound Transit modified the Preferred Alternative and other at-grade Segment A alternatives by realigning 3rd Avenue NE, which maintains access for the Seattle Latvian Evangelical Lutheran Church and church hall (also called the cultural center), avoiding their displacement.

All Segment A alternatives would replace some existing noise walls and install new noise walls, barriers, and other mitigation for noise impacts. The mostly elevated alternatives (A3, A7, and A11) would have the most noise impacts. Mitigation for all alternatives would reduce transit noise to levels below FTA thresholds and avoid increases in traffic noise. The project would also meet local regulatory requirements for construction-related noise control.

While all Segment A alternatives would be visible from the Jackson Park Golf Course, the mostly elevated alternatives (A3, A7, and A11) would have more impacts on views. All alternatives would acquire an edge of Ridgecrest Park in Shoreline. The design for the Preferred Alternative includes replacement property as well as other mitigation details to offset the impacts, but other alternatives would develop similar mitigation. The Preferred Alternative and Alternative A1 include a roadway realignment that would affect part of the Shoreline Stadium parking lot.

The NE 130th Street Station (an option for the Preferred Alternative, and part of A5, A7, A10, and A11) would increase costs, but it would have few other environmental effects than an alignment with no station there. It would slightly increase boardings in Segment A, but overall Link system ridership would be about the same because most of the added station riders would be shifting from either the Northgate Station or the NE 145th Street Station.

The NE 145th Street Station alternatives (Preferred Alternative, A1, A3, A10, and A11) would displace residential properties, require street or interchange modifications, and place a multistory parking garage near residences. However, these alternatives would serve several populous neighborhoods in Seattle and north King County and would have direct I-5 access. The NE 155th Street Station (A5 and A7) would also displace residences and add a multistory garage in a mostly residential area, but it would not have direct I-5 access.

All configurations of the NE 185th Street Station would have similar ridership. At-grade alternatives (Preferred Alternative, A1, A5, and A10) would have more street realignments, while the elevated alternatives would have more visually prominent guideways and an elevated station. All of the alternatives would displace about a block of homes. The Preferred Alternative and Alternative A1 would have a parking garage on the west side of I-5 in an area that would otherwise have few changes with the other alternatives.

Alternatives requiring bridge reconstruction or other bridge overpass improvements would require short-term lane closures on I-5. This would occur at NE 117th Street (A1), NE 130th Street (Preferred Alternative and A1), and NE 185th Street (Preferred Alternative and A1).

Alternatives featuring three stations (A5, A7, A10, and A11) rather than two (Preferred Alternative, A1, and A3) would have higher costs. While three stations would slightly increase ridership in Segment A, they would lengthen travel times. If the Preferred Alternative with the option for the NE 130th Street is selected to be built, it would also have longer travel times and a slight increase in ridership.

S.7.2 Segment B: Shoreline to Mountlake Terrace

The Preferred Alternative and B2A would have high visual impacts as a result of crossing over I-5 and removing dense vegetation on the west side of I-5; however, these impacts described in the Draft EIS have been reduced by modifying the alternatives to avoid WSDOT property established for interstate highway beautification. Alternatives B1 and B4 would have lower visual impacts because more of their alignments would be in the I-5 median.

The Preferred Alternative and B2A alignments along the hillside west of I-5 would remove up to 11 acres of forest cover compared with 5 acres with Alternative B1 and 3 acres with Alternative B4. The Preferred Alternative and B2A would affect the most wetlands and wetland buffer because the guideway and modified I-5 ramps would cross a pair of wetlands. The Preferred Alternative's option for a 220th Street SW Station would not need to move the ramps, lowering the impacts on adjacent wetlands.

Alternative B2A, which has a station at 220th Street SW, and the Preferred Alternative with an option for an additional station, would have more impervious surfaces requiring stormwater management measures to protect water resources.

During construction, Alternative B4 would need to permanently close the bus ramps at the current freeway transit stop for the Mountlake Terrace Transit Center. This would affect express transit service to the transit center. There would be short-term closures (3 to 6 months plus nighttime closures) of the direct access ramps to the freeway transit stop with the Preferred Alternative and Alternatives B1 and B2A. Sound Transit would alter its own routes and work with other transit agencies to revise transit services, including temporary services between Mountlake Terrace and destinations in King County, to reduce impacts of a temporary closure of the transit center.

The Segment B alternatives would have different ridership, depending on whether a station is sited at the Mountlake Terrace Transit Center (Preferred Alternative, B1, and B2A) or its nearby freeway transit stop (Alternative B4); a freeway station would take longer for riders to access, which would comparatively reduce ridership. The Preferred Alternative with the 220th Street Station option and Alternative B2A would provide an additional station at 220th Street SW, but the project's overall ridership would not notably increase. The added station would attract riders, but there would then be fewer riders boarding at the Mountlake Terrace Transit Center and Lynnwood. Alternatives with two stations would also have higher costs and longer transit travel times.

The Preferred Alternative and Alternatives B1 and B2A would best support potential transit-oriented developments in Mountlake Terrace's planned town center because their station would be east of

I-5, at the existing park-and-ride, with an entrance south of 236th Street SW. This would be closer to the planned town center than the Alternative B4 freeway station.

All of the Segment B alternatives would likely require temporary nighttime construction-period lane closures and other restrictions on I-5 to install girders and construct guideway bridges to cross to the median or the west side of I-5.

S.7.3 Segment C: Mountlake Terrace to Lynnwood

Although the Preferred Alternative would not displace any residences, it would displace nine businesses, and several other commercial parcels would have partial acquisitions that would affect existing parking spaces. Alternative C1 would acquire a condominium complex and two business parks, displacing up to 77 residences and 31 businesses. In contrast, Alternative C3 would displace one business, and Alternative C2 would displace three businesses and one residence.

Alternatives C1 and C2 would have higher visual impacts than the Preferred Alternative or Alternative C3 because the elevated guideways would be nearer to residential properties and Scriber Creek Park.

Alternative C2 would cross the Scriber Creek wetland complex and affect the largest amount of stream and wetland buffer area. Alternative C1 would cross north of the wetlands with the least amount of impact. The Preferred Alternative and Alternative C3 would cross near the southern end of the Scriber Creek wetland complex, and would have fewer wetland (including wetland buffer) and stream impacts than Alternative C2 but more impacts than Alternative C1.

As for Scriber Creek Park, Alternative C1 would have columns and a section of the elevated guideway within the park along Cedar Valley Road, which would alter this corner of the park and would constitute a Section 4(f) use. Therefore, Alternative C1 could not be built unless it were redesigned to avoid the use of the park or reduce impacts to a de minimis level. Alternative C2 would not be in the park but would have visual impacts, primarily along the Scriber Creek Trail. The Preferred Alternative and Alternative C3 would not affect the park.

All of the Segment C alternatives would serve the same area and have similar opportunities to support transit-oriented developments, but the station site choices would offer different opportunities for developing the area over time. The Preferred Alternative would reconfigure parts of the existing park-and-ride in order to construct the station and a parking garage. It would allow direct access to the transit center and closer access to the Lynnwood city center. It would avoid dividing part of a block (east of 44th Avenue West) that is targeted for higher-density development, which Alternative C3 would affect. The Alternative C1 station at 200th Street SW would be closest to the designated city center for Lynnwood and would avoid impacts to the existing transit center and park-and-ride during construction; however, this station would displace the most businesses and residences, and it would affect Scriber Creek Park. Alternatives C2 and C3 would be farther from the city center, but Alternative C2 would affect the Scriber Creek wetlands the most, as well as having visual effects on Scriber Creek Park. Alternative C3 would have the fewest displacement impacts, but would be farthest from the transit center and from the city center, and its tail track would bisect a large parcel where the City anticipates higher-density development.

S.8 PUBLIC AND AGENCY INVOLVEMENT

Sound Transit and FTA have been engaging the public and agencies since the start of early scoping for the project's Alternatives Analysis in 2010. They initiated the Draft EIS with formal public environmental scoping in September and October of 2011, which included meetings with the public and agencies, as well as a comment period and public notices and advertisements. Sound Transit continued to host public events and meet with

agencies and interested groups as the Draft EIS was being prepared in 2012 and early 2013. The release of the Draft EIS came with a formal public review and comment period, including meetings and hearings, as described in Section S.11, Draft EIS and Public Comments. Chapter 6, Public Involvement and Agency Coordination, of the Final EIS has additional details about the project's public involvement and agency coordination plan, including how Sound Transit and FTA have engaged low-income and minority populations in the project. Chapter 7, Draft EIS Comments and Responses of the Final EIS, summarizes the public comments Sound Transit and FTA received on the Draft EIS, and Appendix P, Draft EIS Public Comments and Responses, provides Sound Transit's and FTA's responses to each substantive comment received during the public comment period.

S.9 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Public and agency comments suggest limited project-related controversy in most areas. However, during the Draft EIS public review and comment period, Sound Transit and FTA received several hundred comments about potential impacts to the Seattle Latvian Evangelical Lutheran Church, which would have been relocated by some of the Segment A alternatives. The church, individuals, community organizations, and representatives of Latvia asked Sound Transit to avoid displacing the church. In response, Sound Transit developed designs to realign a section of 3rd Avenue NE, maintaining access to the church and avoiding the need to relocate it or its community hall. Also in Segment A, two of the alternatives (A5 and A7) feature a station at NE 155th Street, which the City of Shoreline opposed in a comment letter during environmental scoping and in Draft EIS comments. The 155th Street Station is not an element of the Preferred Alternative.

In Segment C, all alternatives cross an Edmonds School District property that is to be developed as a bus base and district operations center. The District's comment letter on the Draft EIS opposed alternatives that would affect their development plans, but supported a City of Lynnwood proposal to modify Alternative C3. The Preferred Alternative features several elements of that proposal, as refined by Sound Transit in coordination with the City and the District.

Public comments on the Draft EIS also highlighted impacts to Scriber Creek Park in Segment C. Alternative C1 was considered by commenters to have the greatest impacts to the park and nearby wetlands, followed by Alternative C2. Alternatives C1 and C2, which have elevated sections near Lynnwood neighborhoods and involve acquisition and relocation of businesses and/or residents, were also frequent comment topics. Alternative C3 primarily had comments of support, although comments noted property impacts, wetland impacts, and station location as concerns.

The City of Lynnwood and the Edmonds School District opposed the Lynnwood site alternative for Sound Transit's Link OMSF, which is a separate project that would support light rail operations and maintenance needs for the ST2 program of projects, including the Lynnwood Link Extension. In July 2014, Sound Transit identified a site in Bellevue as the Preferred Alternative for evaluation in the Final EIS along with the other OMSF alternatives. A final decision on the siting will be made after the Final EIS is issued for that project.

Issues yet to be resolved relate to agreements that Sound Transit must secure from WSDOT and FHWA to use parts of the I-5 right-of-way permanently as well as during construction. In addition to needing approvals for the use of the right-of-way, Sound Transit would need approvals for modifying any I-5 interchange or other parts of the freeway, such as shoulders or existing noise walls; for constructing staging and access; for implementing any lane closures affecting the interstate highway; and for conducting any modifications that could affect highway operations or safety. Most of these approvals would occur during final design. Sound Transit has coordinated with FHWA and WSDOT to develop conceptual

engineering definitions for the alternatives, but as final design progresses, FHWA or WSDOT could request modifications or place other restrictions on the project. Sound Transit has worked successfully with WSDOT and FHWA to obtain approvals for right-of-way use for other Sound Transit projects, but it would affect the project costs, construction impacts, and work schedule if Sound Transit is not able to use the right-of-way as anticipated in the current design of the alternatives.

Project funding also remains an issue to be resolved. Sound Transit is proposing the project as a candidate for FTA's Capital Investment Grant (New Starts) grants program. Recent legislation has changed some of the requirements for the program, and its longer-term funding levels are subject to congressional appropriation.

Potential stations at NE 130th Street, NE 155th Street, and 220th Street SW were not evaluated in the ST2 planning process, which analyzed ridership and cost for each station, and are not currently included in the ST2 Plan. Consistency with the ST2 Plan would need to be further evaluated before any of these stations could be added to the Lynnwood Link Extension.

S.10 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

With the avoidance, mitigation, and minimization measures detailed in Chapter 3, Transportation Impacts and Mitigation, and Chapter 4, Environmental Impacts and Mitigation, of the Final EIS, significant adverse impacts would be avoided for most alternatives. However, some impacts might not be fully mitigated. All alternatives would replace mature vegetation with light rail facilities, and there would be related loss of habitat. This would also result in longer-term visual impacts that would not be immediately mitigated by replacement vegetation or landscaping. Temporary construction impacts, such as freeway lane closures, street closures, or truck traffic, would cause congestion and inconveniences in some locations, and these impacts could be significant.

S.11 DRAFT EIS AND PUBLIC COMMENTS

The Draft EIS was available for an extended comment period of 60 days (July 26 to September 23, 2013) that included four public hearings and other opportunities for the public and agencies to comment in person or in writing. Chapter 7, Draft EIS Comments and Responses, details how the public was able to comment.

The Sound Transit Board of Directors considered the public and agency comments received as well as the information in the Draft EIS. The Board then identified a Preferred Alternative for evaluation in the Final EIS along with the other light rail alternatives.

S.12 NEXT STEPS

The Sound Transit Board will consider the analysis in the Final EIS and will then select the project alternative to be built. After the Board's decision, FTA also is expected to publish its Record of Decision (ROD) for the project, which will document findings by FTA that the project has met the requirements of NEPA and related environmental regulations. It will describe FTA's decision on the project, alternatives considered, the basis for the decision to approve the project, and mitigation measures required.

FTA is directed to issue a combined Final EIS and ROD document pursuant to Public Law 112-141, 126 Stat. 405, Section 1319(b) unless it determines, for statutory criteria or practicability reasons, that separate EIS and ROD documents are appropriate. A joint Final EIS/ROD is not required when a Draft EIS does not identify a Preferred Alternative, which was the case with the Lynnwood Link Extension Draft EIS. The Lynnwood Link Extension EIS is a joint NEPA and SEPA document consistent with 40 Code of Federal Regulations (CFR) 1506.2(c) and it supports decision-making by Sound Transit, FTA, and other agencies, but the timing of their decisions varies. For example, SEPA requires that the Sound Transit

Board's final decision on the project to be built be informed by the Final EIS, and a final decision cannot be made until the Final EIS has been issued. The FTA ROD is required to describe the final project decisions and therefore must be issued after the Sound Transit Board's final decisions on the project. FTA has thus determined it is not practical to issue a combined Final EIS and ROD; these documents are being published separately.

After the Sound Transit Board selects the project to be built and FTA issues a ROD, Sound Transit will initiate final design, begin property acquisition, conduct construction planning, and apply for the other permits and approvals needed to construct and operate the project. This includes the FHWA approvals needed to construct and operate the light rail project within the interstate right-of-way. FHWA is expected to issue its own ROD for the project, and may rely on this Final EIS to help meet other applicable decision requirements. Similarly, the local jurisdictions issuing permits for the project may rely on the Final EIS to help satisfy their SEPA requirements. Final design and permitting is scheduled for 2015 to 2018. Construction of the project is expected to start in 2018 and end in 2023, with service starting in late 2023.

Appendix P Draft EIS Public Comments and Responses

Federal Agency

Item Code	Item Name
F-001	U.S. Army Corps of Engineers
F-002	Department of Interior
F-003	EPA
F-004	Department of Interior 2
F-005	Ambassador of Latvia

Tribe

Item Code	Item Name
T-001	Muckleshoot Indian Tribe

State Agency

Item Code	Item Name
S-001	State of Washington Department of Archaeology & Historic Preservation
S-002	UW Dept of Scandinavian Studies
S-003	WSDOT
S-004	Ecology

Local Agency

Item Code	Item Name
L-001	Shoreline Fire Department
L-002	Alderwood Water & Wastewater District
L-003	City of Lake Forest Park
L-004	City of Lynnwood
L-005	City of Lynnwood2
L-006	City of Lynnwood3
L-007	City of Shoreline
L-008	Mountlake Terrace
L-009	Edmonds School District
L-010	City of Lynnwood 4
L-011	City of Seattle
L-012	Community Transit
L-013	Community Transit 2
L-014	King County
L-015	Puget Sound Regional Council

Business

Item Code	Item Name
B-001	Mayes Testing Engineers, Inc.
B-002	Mortgage Capital Associates
B-003	Cairn_Cross & Hempelmann
B-004	Cascade Trophy
B-005	JC Auto Restoration
B-006	Mullally Development Company
B-007	Simon Property Group
B-008	Raskin, Mike

Community Organization

Item Code	Item Name
C-001	Save Scriber Creek Park
C-002	American Latvian Association
C-003	Bellevue Sister Cities Association
C-004	Thornton Creek Alliance
C-005	Honorary Consul Republic of Estonia
C-006	Latvian Senior's Association
C-007	N King Co Mobility Coalition
C-008	futurewise
C-009	Lithuanian-American Community WA Chapter
C-010	Pilchuck Audubon Society
C-011	Ridgecrest Neighborhood Association
C-012	Latvian Ev. Luth Congreg of Seattle & Latvian Assoc of WA
C-013	Edmonton Latvian Society
C-014	West Coast Latvian Song Festival
C-015	Latvian Sorority Gundega
C-016	Mezotne Latvian Language Camp
C-017	185th Station Citizen Committee
C-018	Seashore Transportation Forum
C-019	World Federation of Free Latvians
C-020	Latvian Evangelical Lutheran Church Abroad
C-021	Seattle Congregation of the Estonian Ev. Lutheran Church
C-022	Seattle Estonian Society
C-023	Parkwood Neighborhood Association
C-024	145th-155th St Station Citizens Committee
C-025	The Latvian Museum
C-026	American Latvian Youth Association
C-027	Cascade Bicycle Club
C-028	Feet First
C-029	Fellowship of American Baltic Spouses
C-030	Latvian Association of WA
C-031	Lettonia WA Alumni Association
C-032	Northgate West Condominiums
C-033	Paramount Park Neighborhood Group
C-034	Seattle Latvian Lutheran Church
C-035	Sigulda
C-036	Walsh, Maryellen
C-037	Senior Services 1
C-038	Thornton Creek Legal Defense Fund
C-039	Transportation Choices
C-040	Seattle Latvian Community Center
C-041	Seattle Latvian School
C-042	Senior Services 2
C-043	Estonian American National Council Inc
C-044	Sound Cities Association
C-045	Friends of Jackson Park Trail
C-046	Thornton Creek Alliance TCA-2

Individual

Item Code	Item Name
I-001	Anonymous 1
I-002	Balanda, Marco
I-003	Baltzell, Sumner
I-004	Bautista, Ariel
I-005	Bess, Samuel 1
I-006	Carlin, John
I-007	Chong, KC
I-008	Cooper
I-009	Davis, William Harley
I-010	Ervin, Kenneth
I-011	Foy, John 1
I-012	Guzman, Karina
I-013	Hanks, Jono
I-014	Harrison, Jeff
I-015	Hausauer, Robert
I-016	Hawkins, Barbara
I-017	Head, Kolleen
I-018	Heath, Ken
I-019	Hines, Carole
I-020	Unknown 1
I-021	Unknown 2
I-022	James, Robert
I-023	Janeway, Jeff
I-024	Jeremiah, Dale
I-025	Jodais, V
I-026	Kelly, Chris
I-027	Kit Ma, Chun
I-028	Lam, Celia
I-029	Lee, Marvin
I-030	Lepo, Charles
I-031	Levinsky, Laurie
I-032	Lo, Anthony
I-033	Mackeel, Cynthia
I-034	Martin-Rudnick, Diane
I-035	McCall, Timothy
I-036	Menchofer, Dale
I-037	Moore, Galinda
I-038	Morgan, Joshua
I-039	Nalis, Peter
I-040	Nikoiaidis, Jeffery
I-041	Pearson, Steve
I-042	Peterson, Dan
I-043	Pinner, Joanne
I-044	Rebstock, Ginger
I-045	Reed, Patricia
I-046	Reedy, Robert 1
I-047	Reikstins, Maija and Janis

I-048	Roberts, Curtis
I-049	Schatnitz, Greg
I-050	Schwantes, Glenn
I-051	Senter, Steve 1
I-052	Silang, Antonio
I-053	Smidchens, Alnis
I-054	Smidchens, Imants
I-055	Smith, Lynn
I-056	Sommers, Cassy
I-057	Sreibers, Peter
I-058	Starr, Cindy
I-059	Summer, Cathy 1
I-060	Trinh, Cuong
I-061	Vilgalys, Justas
I-062	Walgomott, Amy 1
I-063	Wall, Paul
I-064	Way-Rogainis, Marisa 1
I-065	Wells, Chris
I-066	Williams, Bruce
I-067	Abdella, Bill
I-068	Dale, Dan 1
I-069	Berlin, Don
I-070	Raisters, Eric 1
I-071	Sreibers, Gunars 1
I-072	Smidchems, Guntis
I-073	Harvey
I-074	Foy, John 2
I-075	Andrejevs, Markus
I-076	Reedy, Robert 2
I-078	Holmes, Jean
I-079	Holmes, John
I-082	Pedersen, Bill
I-083	Reay-Ellers, Andrew 1
I-084	Spires, Robert
I-085	Unknown, Dee Dee
I-086	Carr, Ron
I-087	Tennisey, Nancy
I-088	Unknown 3
I-089	Horner, Eileen
I-090	Hickey, William
I-091	Anderson, Carolyn
I-092	Anderson, W.R.
I-093	Andreasen, Adam
I-094	Anonymous 2
I-095	Anonymous 3
I-096	Anonymous 4
I-097	Anonymous 5
I-098	Apt, Mark and Arden
I-099	Baughman, Linda
I-100	Basil, Leslie

I-101	Bess, Samuel 2
I-102	Brierley, M
I-103	Bupp, Erick
I-104	Bupp, Kathleen
I-105	Circenis, Edvins 1
I-106	Clausen, Linden
I-107	Collins, Deirdre
I-108	Dailey, David
I-109	Dolan, Chuck 1
I-110	Donohue, Joanne
I-111	Egan, Kathryn
I-112	Gendreau, Stefanie
I-113	Gladstone, Judi
I-114	Griffith_Karen&Troy
I-115	Gubaekowski, Ann
I-116	Harris, Shanon
I-117	Hope, Shane 1
I-118	Johnson, Diana M
I-119	Johnson, Kristina
I-120	Kaplan, Cecily
I-121	Kelly, Chris 2
I-122	Kelly, Michael
I-123	Kelly, Teresa
I-124	Klinker, Cheryl
I-125	Knoke, Mark
I-126	Lancaster, Brad
I-127	Lo, Catherine
I-128	Martin-Vegue, Doug
I-129	Mearns, Josie
I-130	Mifflin, Ryan
I-131	Monroe, James
I-132	Murphy, Craig
I-133	Orr, Mike 1
I-134	Orr, Mike 2
I-135	Palms, Christopher
I-136	Petersons, Diana
I-137	Petersons, Modris
I-138	Petersons, Nikol 1
I-139	Petersons, Nikol 2
I-140	Piere, Ravin & Yurova, Polina
I-141	Raisters, Aldis
I-142	Raisters, Eric 3
I-143	Rauda, Vija
I-144	Ray, Wyvonne
I-145	Renes, Mike
I-146	Feuerborn, Sonja
I-147	Rhynard, Michael & Wen-Mei
I-148	Riekstins, Valdis
I-149	Riekstins, Valdis 2
I-150	Rihemis, John

I-151	Roberts, C.L.
I-152	Roberts, R.M.
I-153	Rozum, Pam and Ric
I-154	Sanchez, Mike
I-155	Scarpelli, Mike
I-156	Schneider, Roben
I-157	Scott, Ian
I-158	Sobarzo, Luis
I-159	Strom, Sigrid
I-160	Summer, Cathy 2
I-161	Thompsen, Will
I-162	Tronsen, Kara
I-163	Turner, Janelle
I-164	Virsnieks, Andris
I-165	Virsnieks, Egils 1
I-166	Way-Rogainis, Marisa 2
I-167	Way-Rogainis, Marisa 3
I-168	Williamson, David C 1
I-169	Winnick, Ken
I-170	Wong, Miu Sam
I-171	Woolley, Beth
I-172	Zamelis, Andy
I-173	Zepeda, Barbara 1
I-174	Zommers, Karlis
I-175	Altman, Jeff
I-176	Howell, Gavin
I-177	Johnson, David
I-178	Kampen, Garry
I-179	Lockeman, George
I-180	Manderscheid, Michael
I-181	Ness, Dave
I-182	Ostrer, Allison
I-183	Phillips, Kyle
I-184	Summers, Karen
I-185	Unruh, Sharla
I-186	Weyer, Shelley
I-187	Willemarck, Linda 1
I-188	Zopfi, Melinda
I-189	Cameron, Michael 1
I-190	Circenis, Edvins 2
I-191	Faulds, Phoebe
I-192	Jacoby, Dan
I-193	Petersons, Lukas 1
I-194	Raisters, Eric 2
I-195	Ralston, Kenneth
I-196	Sreibers, Gunars 2
I-197	Wiest, Inte 1
I-198	Dolan, Chuck
I-199	Holmquist, Imants 1
I-200	Jaundalderis, Charlene

I-201	Kirsis, Lori
I-202	Orr, Michael 3
I-203	Petersons, Lukas 2
I-204	Petersons, Nikol
I-205	Raisters, Eric 4
I-206	Raisters, Inese 1
I-207	Screibers, Gunars 3
I-208	Upatts, Dzidra
I-209	Vetter, Sandra
I-210	Zepeda, Barbara 2
I-211	Bartholet, David 1
I-212	Escamilla, Derica 1
I-213	Escamilla, Derica 2
I-214	Goodman, Eric 1
I-215	Kinman, Karen 1
I-216	Lovitt, Douglas
I-217	Mayes, Mike
I-218	McDonald, Kevin
I-219	Monahan, Mary 1
I-220	Riekstins, Valdis 3
I-221	Shannon, Jeff
I-222	Shein, Gleb 1
I-223	Sreibers, Gunars 4
I-224	Walker, James
I-225	Walker, Janice
I-226	Walsh, Maryellen 1
I-227	Whittall, Corey
I-228	Willemarck, Linda 2
I-229	Williamson, David 2
I-230	Williamson, David 3
I-231	Bess, Samuel & Gwen
I-232	Cameron, Michael 2
I-233	Terence, Christopher
I-234	Farrand, Becky
I-235	King, Greg & Lauri
I-236	Lehman, Judy
I-237	Sismaet, Dennis
I-238	Spani, Martin
I-239	Unknown, David
I-240	Bates, Steven
I-241	Cho, Taetuk
I-242	Blombah, DL
I-243	Dougall, John
I-244	Engseth, Dianna
I-245	Fischbach, Max 1
I-246	Graube, Marita
I-247	Gustafson, Sharon
I-248	Jefferds, Liga & Peter 1
I-249	Ken, Kil You and Soon Ae Shin
I-250	Kim Lee Sun & Jong Dook

I-251	Lewtz, Eugene
I-252	Lull, Otis
I-253	Maculans, Andra
I-254	McClain, Kevin
I-255	Molnar, Lauren
I-256	Pade, Gerry
I-257	Pedecis, Dace
I-258	Plavins, Maris
I-259	Raisters, Inese 2
I-260	Rogainis, Andris
I-261	Russel, Jill
I-262	Schott, Marshall
I-263	Senter, Steve 2
I-264	Thompson, Jon
I-265	Victor, Robert
I-266	Walsh, Maryellen 2
I-267	Williams, Joel
I-268	Ziema, Ieva
I-269	Anderson, David
I-270	Abolins, Andrew
I-271	Fischbach, Max 2
I-272	Kirkpatrick, Dan
I-273	Klavins, Janis
I-274	Kukainis, Roberts
I-275	Lidacis, Mara
I-276	Musteikis, Danute
I-277	Schmidt, Corine
I-278	Abermanis, Rolands
I-279	Andrejevs Markus, Aldis
I-280	Andrejevs, Osha
I-281	Annas, Kathy
I-282	Apsitis, Mara
I-283	Banionis, Arunas
I-284	Birnbaums, Andrejs 1
I-285	Birnbaums, Andrejs 2
I-286	Blubaugh, Jonathan
I-287	Buck, Jonas
I-288	Cilnis, Juris
I-289	Copeland, Douglas&Silvija
I-290	Cotton, Ian
I-291	Dermanis, Paul
I-292	Drougas, Andrea
I-293	Gaigalaite, Ausra
I-294	Galins, Peteris
I-295	Gilkerson, Mona
I-296	Graus, Melita
I-297	Grendze, Karl
I-298	Haynes, Monica
I-299	Horner, Roger&Eileen
I-300	Jansevics, Janina

I-301	Jefferds, Peter&Liga 2
I-302	Johnson, Amy
I-303	Johnson, Steven
I-304	Kapa-Mauerman, Sylvia
I-305	Kulits, Zinta
I-306	Kusins, Daina
I-307	Leesment, Krista
I-308	Loeding, Danielle
I-309	Lorbergs, Aina Katrine
I-310	Lusis, Arnie
I-311	Matas, Saul
I-312	Miksys, Donna
I-313	Muehlenbachs, Lelde&Karlis
I-314	Ohaks, Ieva 1
I-315	Overby, Aleksa
I-316	Overby, Nathan
I-317	Basile, Ryan 1
I-318	Petersons, Angela
I-319	Beinikis, Linda
I-320	Beitlers, Juris & Grikis, Olga
I-321	Benson, Velta & Andris
I-322	Paegle, Sasha
I-323	Racenis, Marcis
I-324	Raize, Andrejs
I-325	Raize, Laima
I-326	Randa, Evan
I-327	Sankalis, Lilija
I-328	Schott, Laura
I-329	Sinclair, James & Barbara
I-330	Smith, Elaine
I-331	St. Hilaire, Ruth
I-332	Tierney, Caitlin
I-333	Totoraitis, Anne
I-334	Virsniers, Egils 2
I-335	Westfall, John
I-336	Young, Ieva & Donald
I-337	Ziema, Andris and Helena 1
I-338	Rauda, Eriks
I-339	Rekevics, Liz
I-340	Vitols, Jana
I-341	Anonymous 6
I-342	Stratins, Bruno
I-343	Jewell, Emily
I-344	Nelson, Wendy & Ken
I-345	Berkholtz, Karina
I-346	Harris, Ginny
I-347	Glover, Mary
I-348	Freimanis, Brianna
I-349	Landau, Henry
I-350	Maxwell, Matthew

I-351	Rice, Jerry & Carol
I-352	Poitras, Tom
I-353	Niedermeyer, Darcy
I-354	Johnson, Dagnija Valdmanis
I-355	Laigo, Renee
I-356	Iles, Tija
I-357	Rusis, Erik
I-358	Saheki, Yoshiko
I-359	Sandler, Julia Deak
I-360	Valle, Shane
I-361	Vetter, Sandi
I-362	Guthrie, Barbara
I-363	Onat, Astrida Blukis
I-364	Raisters, Eduard
I-365	Zommers, Dzintra
I-366	Kancs, Dina
I-367	Gill, Kathy et al
I-368	Wiest, Richard
I-369	Vitous, Rolf
I-370	Hanley, Monika
I-371	Anderson, Daira
I-372	Rusis, Maira
I-373	Reay-Ellers, Andrew
I-374	Zommers, Pauls
I-375	Paskovskis, Ed
I-376	Leitis, Edmunds
I-377	Monaghan, Mary 2
I-378	Holmquist, Imants
I-379	Sulcs, Aina
I-380	Blums, Martins
I-381	Bray, Ina
I-382	Cole, Willis
I-383	Valanciauskiewe, Ausra
I-384	Wiest, Inta 2
I-385	Willemarck, Linda 3
I-386	Willemarck, Linda 4
I-387	Willemarck, Linda 5
I-388	Ekmanis, Indra
I-389	Apsitis, Ilma
I-390	Ahlquist-Niemi, Jan
I-391	Andra, Allen
I-392	Anderson, Cheryl&Serila
I-393	Miksys, Rimas
I-394	Ikauniece, Ruta
I-395	Willemarck, Linda 6
I-396	Sulcs, Larisa
I-397	Vastaska, Ausra
I-398	Vastakas, Audrius
I-399	Basile, Ryan 2
I-400	Ziema, Andris & Helena 2

I-401	Razevska, Daidra
I-402	Floria, Tanya Nicole
I-403	Birnbaums, Vija
I-404	Teras, Mai
I-405	Kondrats, Sandis
I-406	Strautins, Bruno 2
I-407	Birnbaums, Daina
I-408	Cunha, Anne
I-409	DiPeso, Wendy
I-410	Forsyth, Terry
I-411	Hill, Viktorija
I-412	Iles, Anita
I-413	Lunde, Sarmite
I-414	Luters, Ints
I-415	Virsnieks, Imants
I-416	Hope, Shane 2
I-417	Dambrauskas, Daiva 1
I-418	Andvik, Nancy
I-419	Dambrauskas, Daiva 2
I-420	Dubman, Jonathan 1
I-421	Orrico, Geni
I-422	Breitlers, Didzis
I-423	Rauda, Gunars
I-424	Beland, Steve
I-425	MacKrell, Meghan
I-426	MacMurray, Armand
I-427	Shein, Gleb 2
I-428	Aboltina, Gundega
I-429	Anderson, Devv
I-430	Anonymous 7
I-431	Barrett, Dennis
I-432	Basile, Ryan 3
I-433	Berzin, Martin
I-434	Berzina, Sandra
I-435	Biteman, Jim
I-436	Brandon, Wes
I-437	Buck, Steve
I-438	Celms, Nancy
I-439	Celms, Sara
I-440	Chandler, Bridgett
I-441	Christopher, Michael
I-442	Dale, Dan 2
I-443	De Bonte, Austina
I-444	De Temmerman, Pieter
I-445	Dubman, Jonathan 2
I-446	Elder, Justin
I-447	Freet, Andra
I-448	Fulford-Foster, Jeremiah 1
I-449	Fulford-Foster, Jeremiah 2
I-450	Garzon, Roxanne

I-451	Goodman, Eric 2
I-452	Graffis, Bill
I-453	Grauds, Valdis
I-454	Heine, Julija
I-455	Ho, Joanne 1
I-456	Ho, Joanne 2
I-457	Janssen, Jeff
I-458	Johnson, Matthew
I-459	Kask, Linda
I-460	Kelertas, Violeta
I-461	Kenney, Pat
I-462	Key, Harold
I-463	Kinman, Karen 2
I-464	Knedlik, Will
I-465	Kulikauskas, Rima
I-466	Kulits, Paul
I-467	Luters, Katrina
I-468	Marcy, Tanya
I-469	Mohseni, Imants
I-470	Oborn, Roger
I-471	Ohaks, Ieva 2
I-472	Osvalds, Aivars
I-473	Pelekis, Jana
I-474	Petkus, Joseph
I-475	Phillips, Cynthia
I-476	Phillips, Sandy
I-477	Pittman, Kirk
I-478	Poitras, Liz
I-479	Priidik, Albert 1
I-480	Priidik, Albert 2
I-481	Pruzinskis, Andris
I-482	Pruzinskis, Krisjanis
I-483	Pukite, Brigita
I-484	Pukite, Ilze
I-486	Resnick, Douglas
I-487	Roberts, Sid
I-488	Rusis, Ed
I-489	Sankalis-Biteman, Ruta
I-490	Seglins, Andy
I-491	Shein, Gleb 3
I-492	Sils, Aleks
I-493	Sils, William
I-494	Stapars, Aija
I-495	Stephen, Zachary
I-496	Stinson, June
I-497	Stradling, Rebecca
I-498	Strickland, Scott
I-499	Stutman, TJ
I-500	Sulcs, John
I-501	Taht, Karl

I-502	Thomas, Martha
I-503	Tralmaks, Astrida
I-504	Walgamott, Amy 2
I-505	Walgamott, Andy
I-506	Willemarck, Linda 7
I-507	Willemarck, Linda 8
I-508	Willemarck, Linda 9
I-509	Willemarck, Linda 10
I-510	Zahn, Joe
I-511	Grant, Anna et. al.
I-512	Gray, Ingrida
I-513	Johnson, Mara
I-514	Pelekis, Janis
I-515	Pelekis, Mary
I-516	Pelekis, Vija
I-517	Petkus, Zita
I-518	Wilson, Tex & Ausma
I-519	York, Ruta
I-520	Monaghan, Tricia
I-521	Cutter, Jane
I-522	Everett, Karin
I-523	Harbaugh, David 2
I-524	Ho, Joanne 3
I-525	Norris, Jeanette
I-526	Raisters, Eriks 5
I-527	Sreibers, Gayle
I-528	Sreibers, Lara
I-529	Massaro, Frank
I-530	Willemarck, Linda 11
I-532	Andersen, Sherri
I-533	Anonymous 8
I-534	Anonymous 9
I-535	Bartholet, David 2
I-536	Boudrissa, Zohra
I-537	Buitenveld, David
I-539	Chism, Diana
I-540	Dale, Dan 3
I-541	Graudins, Ivars
I-542	Herauf, Dale
I-543	Jodais, Valdis
I-544	Johnson, Lara
I-545	Knoll, Mary
I-546	Macs, Dina
I-547	McFarlane, Madara
I-548	Moore, Carolyn
I-549	Ozolnieks, Indra
I-550	Petri, Janis
I-551	Petersons, Selga
I-552	Poukens, Oskars
I-553	Ilze, Pukite_2

I-554	Purs, Lilja
I-555	Randich, Lisa_Macs
I-556	Randich_Rachel
I-557	Seglins, Ilze
I-559	Williamson_David_C_2
I-560	Zommers, Juris
I-561	Zopfi_Melinda_2
I-562	Tochihara_Minda

1 PURPOSE AND NEED

1.1 Lynnwood Link Extension

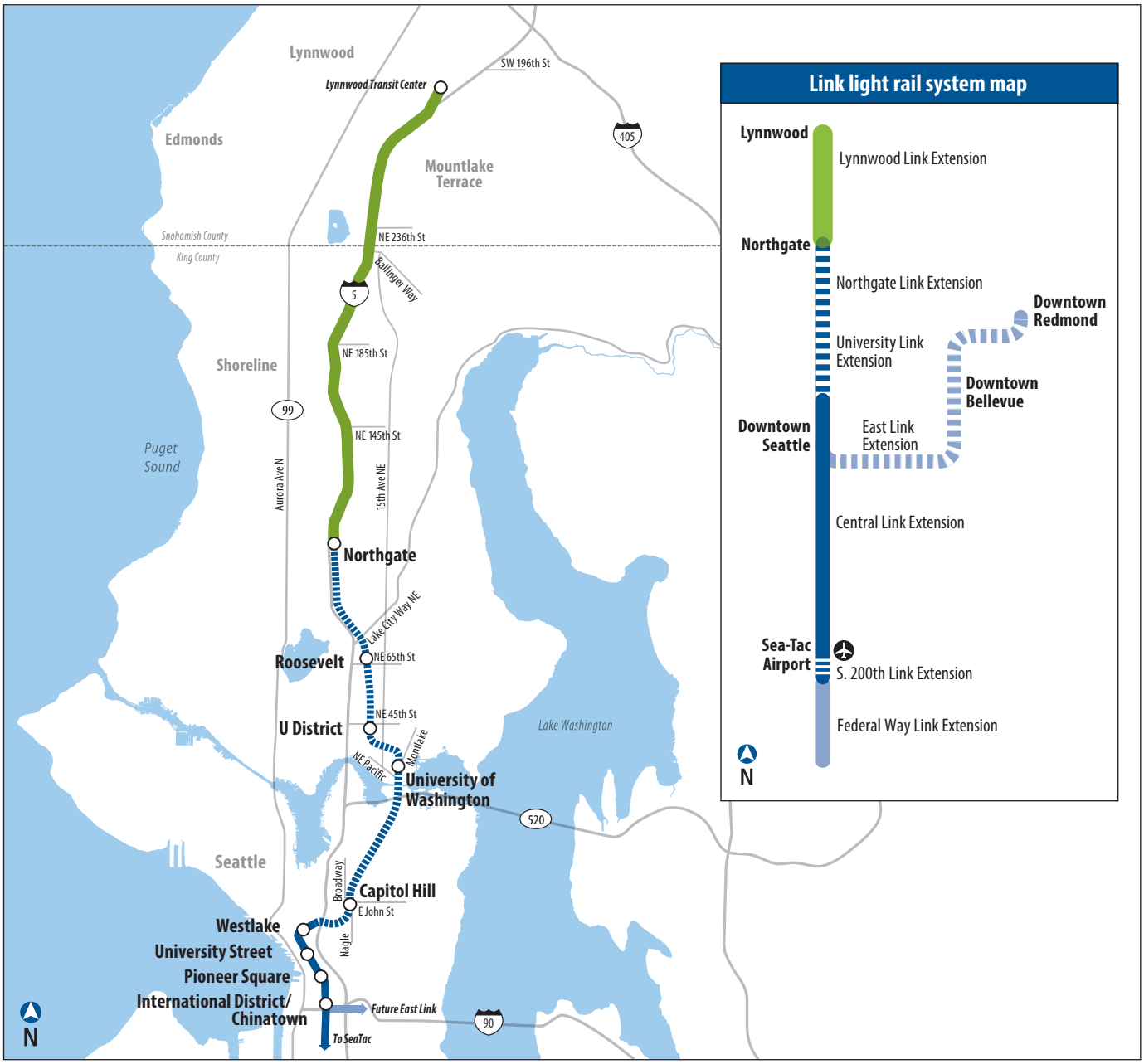
The Central Puget Sound Regional Transit Authority (Sound Transit) is proposing the Lynnwood Link Extension to expand the regional light rail system north from Northgate in Seattle to Shoreline, Mountlake Terrace, and Lynnwood in Washington State. This project was previously known as the North Corridor Transit Project, and is part of the Sound Transit 2 (ST2) program of projects.

The Lynnwood Link Extension would help implement the strategic vision for regional growth management and transportation established by the Puget Sound Regional Council's (PSRC) *VISION 2040* (PSRC 2009), *Transportation 2040* (PSRC 2010), and the *Regional Transit Long-Range Plan* (Sound Transit 2005a, 2014), all of which anticipate the eventual extension of light rail north of the city of Lynnwood to the city of Everett in Snohomish County.

Sound Transit and the Federal Transit Administration (FTA) are preparing this environmental impact statement (EIS) for the project in compliance with the National Environmental Policy Act (NEPA) and the Washington State Environmental Policy Act (SEPA). FTA is the federal lead agency for the NEPA EIS process, and Sound Transit is the state lead agency for SEPA. This chapter describes the proposed project's setting and why the project is being proposed.

1.1.1 Project Area

The proposed Lynnwood Link Extension would begin at Northgate in north Seattle and end at the Lynnwood Transit Center (Figure 1-1). The 8.5-mile project corridor generally follows Interstate 5 (I-5), the major north-south freeway through the state, and the primary route serving a large commuter market traveling between Snohomish and King counties. The project corridor travels through the cities of Seattle and Shoreline in King County, and Mountlake Terrace and Lynnwood in Snohomish County. This is one of the most densely developed urbanized areas in the Pacific Northwest and is part of a longer north-south corridor connecting Olympia, Tacoma, Seattle, and Everett. Each year population and employment grow in these corridor communities. Roadways in this corridor experience high levels of congestion throughout large portions of the day, which degrades mobility and reliability. The corridor is one of the region's most productive markets for transit, and there have been major investments in public transit infrastructure and service over the past 40 years.



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DATA SOURCES: (Sound Transit)

Legend

- Lynnwood Link Extension
- Link in service
- Under construction
- In planning
- In design

Figure 1-1
Regional Setting for
the Lynnwood Link Extension

With *Sound Move*, the first set of required mass transit investments, Sound Transit began light rail service in 2009 with Central Link, which launched a system that now runs 13.9 miles between downtown Seattle and Seattle-Tacoma International Airport (Sea-Tac Airport). Construction currently underway will extend light rail by 3 miles from downtown Seattle to the University of Washington by 2016, and another 4.3 miles from the University of Washington to Northgate by 2021 (Figure 1-1). With the Lynnwood Link Extension and the other projects in the ST2 program, Sound Transit is developing nearly 36 miles of new service to the north, south, and east. The combined *Sound Move* and ST2 programs will complete nearly 55 miles of light rail to serve the Puget Sound region. The ST2 program defined the Lynnwood Link Extension as light rail extending from the Northgate Transit Center to the Lynnwood Transit Center, with intermediate stations serving north Seattle, Shoreline, and Mountlake Terrace.

1.1.2 Corridor Communities

The project corridor is home to established communities that are redeveloping and increasing in density. The compact nature of these communities is reinforced by the geographic constraints of Puget Sound and Lake Washington on either side of the corridor. Everett is to the north, and Seattle, the state's largest population and employment center, is to the south. Land use in the project corridor is largely residential but is anchored by major regional commercial centers at Northgate and Lynnwood, with town centers and other activity centers located in between. As of the 2010 United States Census, nearly 126,000 people lived within 0.5 mile of the project corridor in Seattle, Shoreline, Mountlake Terrace, and Lynnwood; for the same period, PSRC estimated nearly 60,000 jobs were within the corridor. The total population and employment in each of these cities is even higher: 720,000 people and 565,000 jobs as of 2010.

Regional and local plans anticipate high levels of growth in the corridor communities through 2040. Population during this period is predicted to grow 20 percent and employment 40 percent by 2040. While the number of jobs will grow in the corridor, mostly at the Northgate and Lynnwood urban centers, many residents in the corridor will also commute to jobs in other rapidly growing urban centers to the south in Seattle and in east King County cities such as Bellevue and Redmond.

1.2 Purpose and Need for the Lynnwood Link Extension

In 2010, Sound Transit developed a preliminary Purpose and Need Statement as part of an Alternatives Analysis and early scoping process for the proposed project. Following public and agency review, the preliminary statement was revised based on comments received. When this EIS was initiated with environmental scoping and another public comment period in September and October 2011, Sound Transit again invited public comment on the Purpose and Need Statement. Finally, the

Draft EIS issued on July 26, 2013, gave another opportunity for review and comment on the Purpose and Need. The resulting Purpose and Need Statement reflects public and agency comments and is consistent with the direction of the Sound Transit Board of Directors in late 2011 and early 2012. This included the Board's adoption of Motion M2011-87, which incorporated the results of the Alternatives Analysis, and confirmed light rail as the high-capacity transit mode for the Lynnwood Link Extension. As Chapter 2, Alternatives Considered, further describes, the Alternatives Analysis concluded that light rail in an exclusive right-of-way is the only mode that can address the corridor's growing mobility, access, and capacity needs.

1.2.1 Purpose of the Project

The purpose of the Lynnwood Link Extension is to expand the Sound Transit Link light rail system from Northgate in Seattle north into Shoreline, Mountlake Terrace, and Lynnwood in Snohomish County in order to:

- Provide reliable, rapid, and efficient peak and off-peak two-way transit service of sufficient capacity to meet the existing and projected demand for travel to and from the corridor communities and other urban centers in the Central Puget Sound area.
- Create an alternative to travel on congested roadways, and improve connections to the regional multimodal transportation system.
- Support the adopted land use, transportation, and economic development plans of the region and the corridor communities.
- Advance the long-range vision, goals, and objectives for transit service established by the Sound Transit Long-Range Plan for high-quality regional transit service connecting major activity centers in King, Pierce, and Snohomish counties.
- Implement a financially feasible system that seeks to preserve and promote a healthy environment.

1.2.2 Need for the Project

The project is needed to:

- Address increasingly unreliable travel times for transit trips that now rely on the corridor's highly congested roadways and high-occupancy vehicle (HOV) lanes.
- Address overcrowding caused by insufficient transit capacity.

- Create a reliable alternative to automobile trips on I-5 and State Route (SR) 99, the two primary highways serving the project corridor, which are unreliable and over capacity throughout large portions of the day.
- Increase mobility, access, and transportation capacity for the 20 percent growth in population and 40 percent growth in employment projected in the regional growth and activity centers in the corridor and the region, consistent with PSRC's *VISION 2040* and *Transportation 2040*, as well as related county and city comprehensive plans.
- Create the transit infrastructure needed to support the development of Northgate and Lynnwood—the corridor's two designated regional growth centers.
- Advance the Sound Transit Long-Range Plan for a future extension of mass transit north to Everett.
- Ensure long-term regional mobility, multimodal connectivity, and convenience for the corridor's citizens and communities, which include travel-disadvantaged residents and low-income and minority populations.
- Help the state and region reduce transportation-related energy consumption and reduce harmful greenhouse gas emissions in the atmosphere, in accordance with state laws.

1.3 Planning History for Lynnwood Link Extension

Many years of planning and past investments have focused on the need for effective regional transit serving this corridor's communities. Transit shaped the original development of the communities beginning in 1910, when the Interurban railway began operating between Seattle and Everett. However, transit service faltered in the 1950s when the Interurban stopped running. The "Forward Thrust" regional transit system proposals of the late 1960s and early 1970s included fixed guideway transit along the I-5 corridor in King County, but funding was defeated at the polls. Since then, a largely commuter-oriented transit system comprising express bus infrastructure and services has developed to serve rapid population and employment growth along the I-5 corridor, helping to connect Snohomish County suburban residents to jobs in Seattle. Express bus investments have included HOV lanes, park-and-ride facilities, transit centers, direct access ramps, and freeway transit stations.

The region renewed its efforts to develop mass transit service connecting Seattle and Snohomish County in the 1990s. In 1993, the Central Puget Sound Regional Transit Authority (Sound Transit) was created, and in 1995 the Lynnwood Link Extension project corridor was part of a large proposal for developing regional light rail connecting King, Pierce, and Snohomish counties; however, the voters did not

approve that program. The following year, voters approved financing for a scaled-back program known as *Sound Move* that included light rail in King County, improved regional express bus services, commuter rail, and related facilities. Sound Transit defined a second phase of investments after completing a Long-Range Plan Update in 2005, and the resulting ST2 program was approved by voters in 2008.

Chapter 2, Alternatives Considered, describes the more recent steps in this project's planning, including an Alternatives Analysis Sound Transit conducted starting in 2010, and the agency's continued planning and design efforts for this EIS.

1.3.1 Regional Plans for Managing Growth and Transportation

The Puget Sound region, which encompasses urbanized King, Pierce, Snohomish, and Kitsap counties, has a coordinated series of regional, county, and local plans and policies that guide how the region is managing its growth. Many of these plans have directly shaped the development of the Lynnwood Link Extension.

Federal legislation for federal transportation programs strongly emphasizes the importance of linking regional and related transportation planning decisions with individual project decisions. The Moving Ahead for Progress in the 21st Century Act (MAP-21) re-emphasized the need for local agencies to integrate their local plans into the NEPA process.

The primary regional land use and transportation plans relevant to the Lynnwood Link Extension are PSRC's *VISION 2040* (PSRC 2008) and *Transportation 2040* (PSRC 2010a). The Sound Transit Long-Range Plan serves as the regional transit element of *Transportation 2040*. These plans share land use, growth management, and transportation policies that call for an effective regional transit system to link the urban centers where the region's growth will be focused. County and local city comprehensive plan policies in the project corridor and throughout the region reinforce the need for high-capacity transit investments to support new population and employment developments, as well as to provide for vibrant urban communities that offer alternatives to automobiles.

VISION 2040

VISION 2040, which PSRC amended in 2009, is the region's integrated, long-range vision for accommodating the approximately 5 million people expected to live in the Puget Sound region by 2040. Its goals are to maintain a healthy region, promote the well-being of people and communities, ensure economic vitality, and preserve a healthy environment. Northgate and Lynnwood are both designated as regional growth centers in *VISION 2040*, and the Lynnwood Link Extension would connect these growth centers.

Transportation 2040

Transportation 2040, which was adopted by PSRC in May 2010 and amended in 2012 and 2014 with new forecasts and projects, is the region's metropolitan transportation plan and one of the key action plans to implement the *VISION 2040* strategy over the next 30 years. The region's growth in jobs and population is expected to boost demand for travel within and through the region by about 40 percent. *Transportation 2040* outlines a long-term program for regional transportation investments, including the Lynnwood Link Extension, to address rising travel demand.

Regional Transit Long-Range Plan and ST2

The Regional Transit Long-Range Plan outlines Sound Transit's vision for a high-capacity transit system serving the urban areas of Snohomish, King, and Pierce counties. The plan identifies corridors for light rail, commuter rail, regional express bus, and bus rapid transit services. The Lynnwood Link Extension is part of the Seattle-to-Everett corridor for high-capacity transit. The 2005 plan update led to the ST2 program of projects, which included a light rail extension from Northgate to Lynnwood. The Lynnwood Link Extension is also included in the 2014 update to the Regional Transit Long-Range Plan.

1.3.2 Regional and Local Transportation Systems

Regional Highways

The project corridor encompasses I-5—one of the two primary north-south highways between Lake Washington and Puget Sound. I-5 is the most heavily traveled highway in the state, serving regional and interstate movements of both people and goods, carrying from 159,000 to 196,000 vehicles in the project corridor on an average day (WSDOT 2011). In addition to I-5, SR 99 provides a north-south connection; several other state highways, including SR 104 and SR 523, provide important east-west connections.

The Washington State Department of Transportation (WSDOT) time-reliability calculator[1] indicates that a trip from Lynnwood to Seattle at free-flow speeds should take about 15 minutes on I-5. Because of the high levels of congestion and unpredictable delays, a commuter must allow up to 55 minutes for the trip during the AM peak period to ensure arriving on time 95 percent of the time. Physical and environmental constraints limit the addition of more highway capacity in the project corridor. Regional transportation planners expect the current high levels of travel demand to continue growing, and congestion and unreliability for travelers on I-5 to increase through 2040 (PSRC 2014).

[1] WSDOT 95% Reliable Travel Times calculator: http://www.wsdot.com/traffic/Seattle/TravelTimes/reliability/default.aspx

Transit

The project corridor has an extensive network of bus routes, most of which run generally north and south. Much of the project corridor's transit demand is fueled by commuters from north King County and south Snohomish County heading for downtown Seattle and the University District—two major employment centers in the region. Thirty-six weekday bus routes provided by three transit agencies operate through the project corridor along I-5. Most are peak-period, peak-direction, point-to-point routes linking south Snohomish County, north King County neighborhoods, and park-and-ride lots to major employment centers in King County. The project corridor carries the second highest bus ridership volumes in the region, with over 19,000 daily riders in 2011.

Delays on I-5 affect travel times and reliability because HOV lanes are not continuous south of Northgate. Slow traffic in the general purpose lanes slows travel in the HOV lanes as well. This makes transit travel particularly unreliable and lengthy during the morning and evening peak periods when most transit use occurs. The I-5 HOV lanes in the project corridor do not meet the WSDOT policy standard for average HOV lane speeds of 45 miles per hour (mph) or greater at least 90 percent of the time during the morning and afternoon rush hours (WSDOT 2014).

1.4 Applying the Purpose and Need to the Project

The Purpose and Need Statement helped Sound Transit identify the EIS alternatives described in Chapter 2, Alternatives Considered. Chapter 5, Evaluation of Alternatives, describes how Sound Transit and FTA have measured the alternatives' ability to serve the purpose and need, along with comparisons of other factors such as environmental impacts, costs, and constructability.

2 ALTERNATIVES CONSIDERED

This Final EIS evaluates a Preferred Alternative for the Lynnwood Link Extension, other light rail alternatives, and a No Build Alternative. The light rail project would be 8.5 miles long, starting at the Northgate neighborhood of Seattle and continuing north to the cities of Shoreline, Mountlake Terrace, and Lynnwood.

The Lynnwood Link Extension would directly connect to the northern terminus of the Link light rail system at Northgate. From there, riders could continue south on the Link system to the University of Washington, Capitol Hill, downtown Seattle, Rainier Valley, Tukwila, SeaTac, and Sea-Tac Airport. Separate projects to extend light rail to the south and east will allow direct connections to Bellevue, Redmond, and Federal Way.

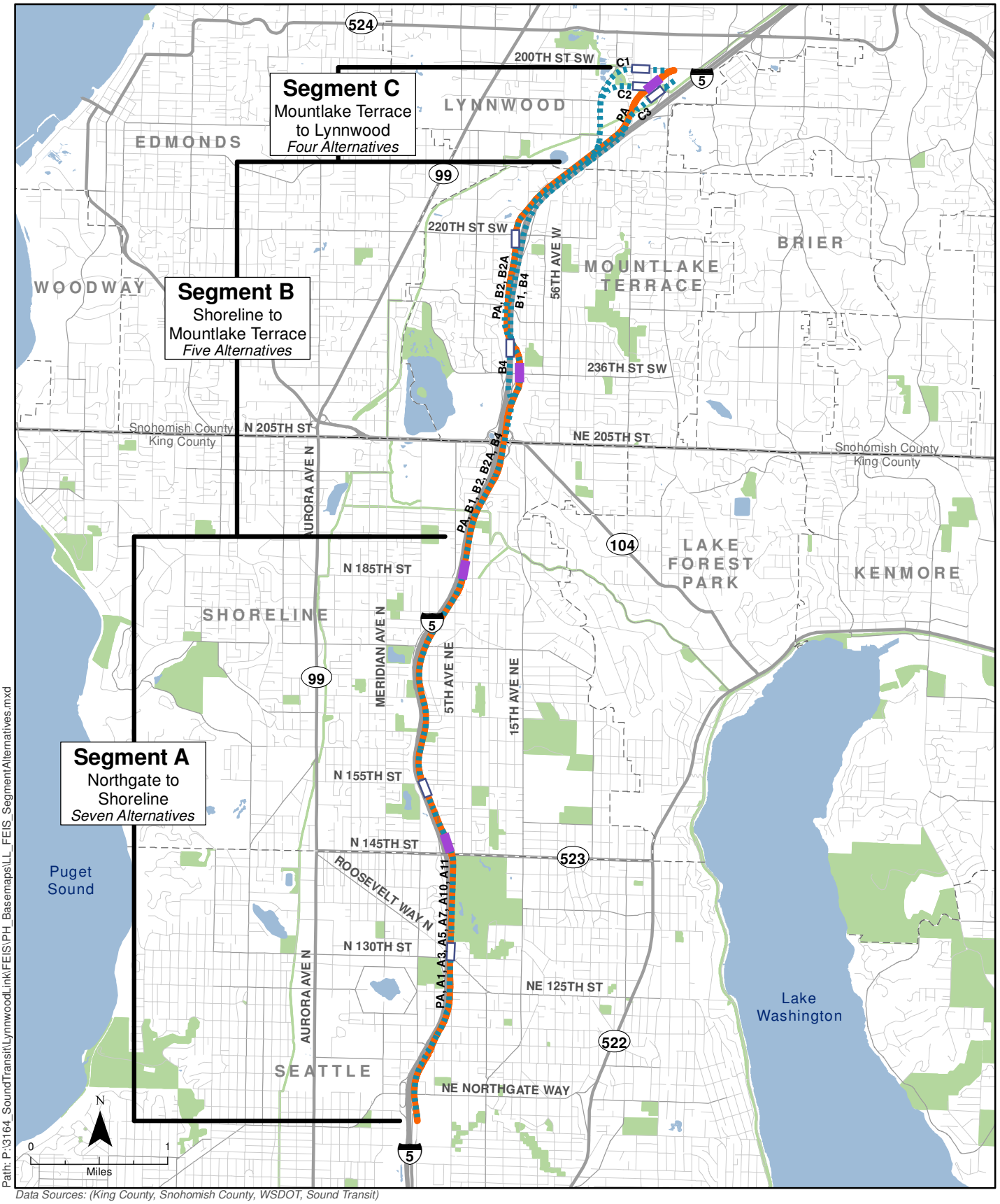
In 2010, Sound Transit started detailed project-level planning to produce the alternatives considered in this EIS. Section 2.6, Alternatives Development, describes the steps Sound Transit and FTA took to work with the public, tribes, and agencies to consider the range of alternatives during the Alternatives Analysis process. A comparative evaluation of the alternatives is in Chapter 5, Evaluation of Alternatives.

Sound Transit and FTA published a Draft EIS for the project, followed by a 60-day comment period. The Sound Transit Board then reviewed the alternatives, the Draft EIS, and the public comments before approving Motion M2013-96, identifying a Preferred Alternative, and directing staff to further evaluate potential modifications and options for the Preferred Alternative and other alternatives in the Final EIS.

2.1 Light Rail Alternatives

This Final EIS evaluates a range of light rail alignments and stations generally following I-5 from the Northgate Transit Center in Seattle to the Lynnwood Transit Center. The Preferred Alternative and the other alternatives are analyzed in three geographic segments, as shown in Figure 2-1.

Segment A: Northgate to Shoreline. There are seven Segment A alternatives between Northgate in Seattle and NE 185th Street in Shoreline, all on the east side of I-5. They include at-grade and elevated alignments, each with two or three stations, some of which would include park-and-ride facilities. The potential station sites are at NE 130th Street, NE 145th Street, NE 155th Street, and NE 185th Street.



Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_Basemaps\LL_FEIS_SegmentAlternatives.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Roadway
- Local Street
- City Boundary
- County Boundary
- Park
- Waterbody

Note:
Each segment alternative can be matched to any adjacent segment alternative.

Figure 2-1
Alternatives by Segment

Lynnwood Link Extension

Segment B: Shoreline to Mountlake Terrace. There are four Segment B alternatives between NE 185th Street in Shoreline and 212th Street SW in Mountlake Terrace. Each alternative begins on the east side of I-5 and ends either in the I-5 median or on the west side of I-5. These alternatives feature one or two stations with park-and-ride facilities, including a station serving the existing Mountlake Terrace Transit Center (236th Street SW) and potentially an additional station at 220th Street SW.

Segment C: Mountlake Terrace to Lynnwood. Segment C has four alternative routes for departing from the I-5 median or west side of I-5 to end at a northern terminus station, with park-and-ride facilities at or near the existing Lynnwood Transit Center at 200th Street SW.

2.2 The Preferred Alternative

With Motion M2013-96, the Sound Transit Board identified the Preferred Alternative for evaluation in the Final EIS, based on the analysis in the Draft EIS and public and agency comments.

2.2.1 Segment A

The Preferred Alternative identified for Segment A is similar to Alternative A1, which is an at-grade/elevated alignment with NE 145th and NE 185th Street Stations, but modified by shifting the guideway east of 1st Avenue NE and the NE 117th Street bridge (as in Alternative A5); maintaining access to the Seattle Latvian Evangelical Lutheran Church; including the NE 145th Street Station based on Alternative A3, Station Option 2; and moving the guideway east of the NE 185th Street bridge (as in Alternative A5).

The project team also evaluated two potential modifications to the Preferred Alternative, including a retained cut station at NE 130th Street or a design that would allow its future addition, as well as pedestrian improvements on the NE 185th Street bridge over I-5.

2.2.2 Segment B

The Preferred Alternative is Alternative B2, East Side to Mountlake Terrace Transit Center to West Side, but with modifications moving the alignment closer to I-5 in some locations. It has the option for a station at 220th Street SW.

2.2.3 Segment C

The Preferred Alternative is similar to Alternative C3, along I-5 to Lynnwood Park-and-Ride, and maintains the existing transit center but is modified to better connect

to the Lynnwood Transit Center, preserve re-developable areas, and minimize wetland and stream impacts.

2.3 No Build Alternative

The No Build Alternative provides a basis for comparing impacts among alternatives, as required under NEPA and SEPA. It represents the transportation system and environment as they would exist without the proposed project. The No Build Alternative assumes other committed highway, transit, and nonmotorized projects identified in PSRC's *Transportation 2040* as amended in 2013, but without a major transit investment between Northgate and Lynnwood. The No Build Alternative also assumes population and employment growth as estimated by PSRC through 2035. For this Final EIS, the No Build Alternative and other alternatives incorporate recent population and growth estimates from PSRC's update in 2014; these updated assumptions are generally similar to those used for the Draft EIS.

The planned Sound Transit improvements that are included in Transportation 2040, and which are funded under ST2, comprise the Northgate Link Extension; the East Link Extension to Overlake in Redmond; the Federal Way Link Extension, which ST2 funds to the vicinity of Highline Community College in Des Moines; and service and access enhancements to the Sound Transit Express regional bus and Sounder commuter rail systems. *Transportation 2040* and ST2 also include a new operations and maintenance satellite facility for the expanded light rail system.

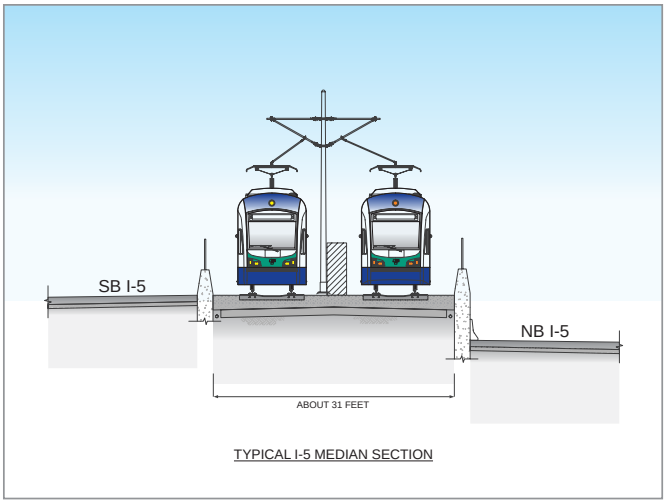
Minor local bus service additions by both King County Metro and Community Transit are also expected; however, the overall bus network and its service levels are assumed to remain similar to today.

Other projects identified in *Transportation 2040* and assumed in the No Build Alternative include the SR 520 Bridge Replacement and HOV program, and the SR 99 Alaskan Way Viaduct Replacement Program.

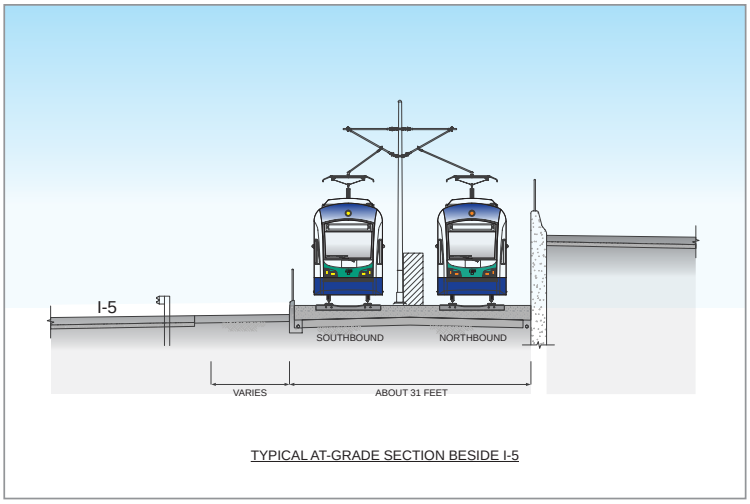
2.4 Typical Features of the Light Rail Alternatives

All light rail alternatives would operate in exclusive rights-of-way. This would also allow the fast and frequent service needed to serve the project corridor, with trains as often as every 4 minutes and track speeds of up to 55 mph.

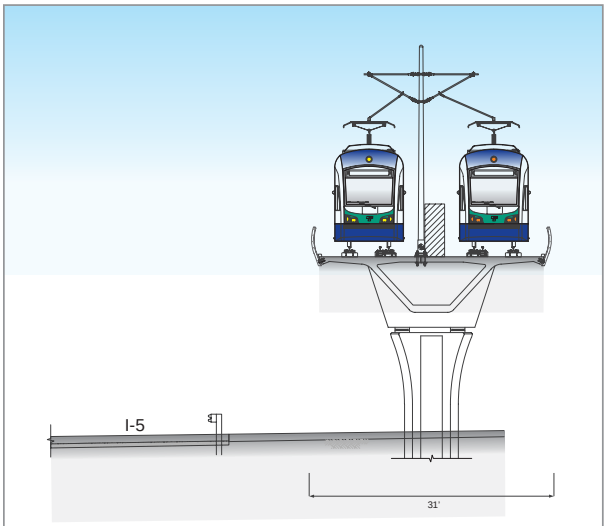
Light rail would operate in a mix of surface (at-grade) and elevated configurations to address the project corridor's rolling terrain. In many locations, the alternative routes follow the general grade of I-5, with different profiles to allow the light rail guideway to cross over or under highway bridges, streets, or other physical obstacles. Figure 2-2 shows the typical features of at-grade and elevated guideways and stations.



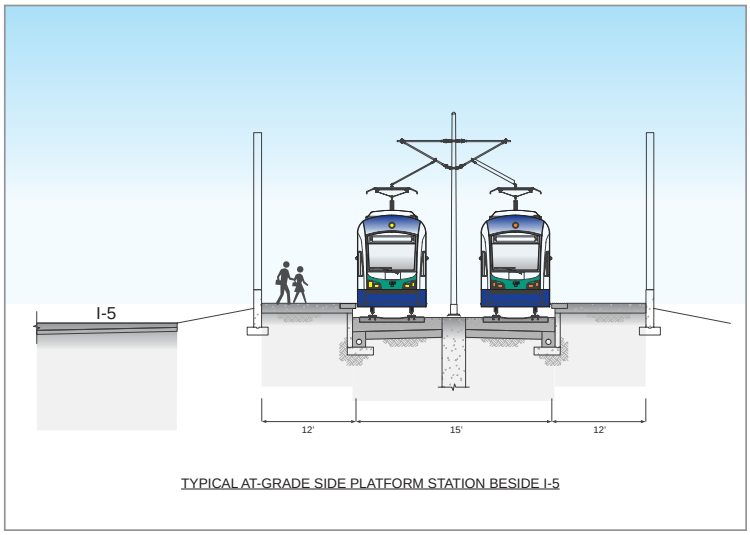
TYPICAL I-5 MEDIAN SECTION



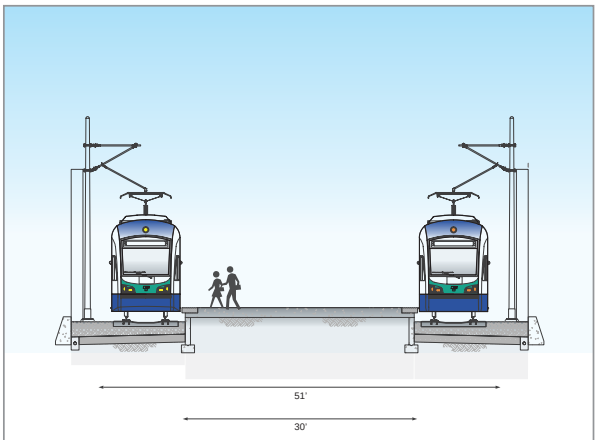
TYPICAL AT-GRADE SECTION BESIDE I-5



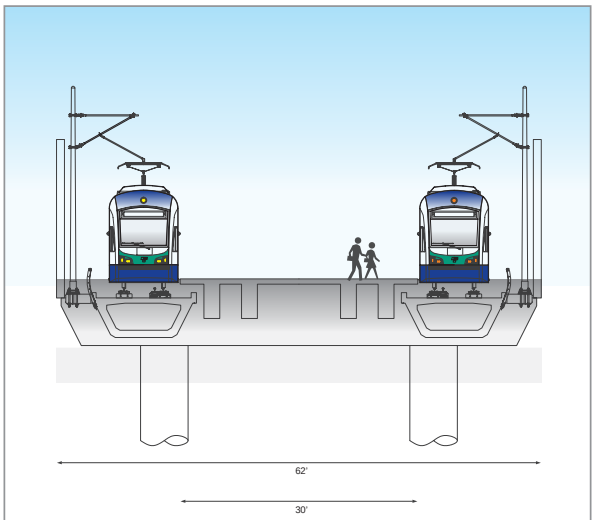
TYPICAL ELEVATED SECTION BESIDE I-5



TYPICAL AT-GRADE SIDE PLATFORM STATION BESIDE I-5



TYPICAL AT-GRADE CENTER PLATFORM STATION BESIDE I-5



TYPICAL ELEVATED CENTER PLATFORM STATION

Figure 2-2
Typical Light Rail Guideways and Stations

To help define where at-grade or elevated guideways would be appropriate (and also to evaluate other profile choices such as tunnels or street-running light rail), Sound Transit has developed criteria that consider (1) topography, (2) physical barriers, (3) available surface right-of-way, (4) operating needs, (5) development density, and (6) cost. Environmental impacts and safety are also considered. Where an alignment is in the interstate right-of-way, Sound Transit must comply with highway design standards and Federal Highway Administration (FHWA) regulations.

At-grade guideways are best suited for areas where the grade is 5 or 6 percent or less and where sufficient right-of-way is available. While "at-grade guideway" typically refers to ground level, it also includes retained cut-and-fill structures that are used to maintain a consistent grade.

Elevated structures are appropriate where the topography varies more widely or creates barriers, where the light rail system must cross over other physical barriers such as cross streets and freeway lanes, where the available right-of-way is limited, or where grade separation is required for high-frequency train service. Tunnels may be options in areas with slopes of more than 5 or 6 percent; where physical barriers must be crossed; where the right-of-way is inadequate; in areas of high building density; or in areas of high train frequency. Tunnels may also be appropriate where major ridership centers cannot be served in any other way.

For the Lynnwood Link Extension, the frequent train service needed to accommodate the line's high ridership levels requires a guideway within an exclusive right-of-way. In addition, because of terrain, limited right-of-way, frequent cross streets, or other barriers, both at-grade and elevated sections are needed.

Whether elevated or at-grade, the light rail guideways are typically 30 to 40 feet wide, with room for two sets of tracks. This width also includes room for the poles and overhead catenary (contact wire) needed to power the trains. Many sections also contain space for emergency access as well as walls or barriers that restrict unauthorized access.

Because light rail would operate mostly in the I-5 right-of-way, the choice of alignments reflects highway maintenance and operation needs, as well as potential future improvements. To develop the proposed alignment alternatives, Sound Transit consulted with FHWA and WSDOT, which have jurisdiction over any project developed within the I-5 right-of-way.

Light Rail Stations

This Final EIS evaluates the potential for the proposed project to develop four to six light rail stations to serve the major transit markets in the project corridor. The Preferred Alternative has four stations, with two other optional stations. The stations would be either elevated or at-grade according to their site conditions and

the design needs for the connecting guideway; however, the station designs have common features.

Boarding platforms would be approximately 380 feet long to serve four-car trains, and located either on the outer side of the tracks or in the center with tracks on both sides. Escalators, elevators, and stairs would be provided to access the platforms. All stations would meet the standards of the Americans with Disabilities Act (ADA). They would include pedestrian and bicycle access to and from feeder bus lines, park-and-ride facilities, and surrounding streets, and would satisfy all applicable public access, fire, and life-safety requirements. For safety purposes, the trains would sound warning bells when they enter or leave a station. Each station would have at least one bicycle storage area with space for expansion.

Most of the stations would have parking areas for transit patrons in either a structure or a surface lot, including some surface lots leased from other parties. At several station locations, the existing transit facilities already include park-and-ride lots that would be expanded or reconfigured, including surface lots that would be converted to parking garages. Some stations or garages could also be built to allow commercial spaces or other transit-oriented developments, as long as these non-transportation elements are not in the I-5 right-of-way.

Example of a Traction Power Substation

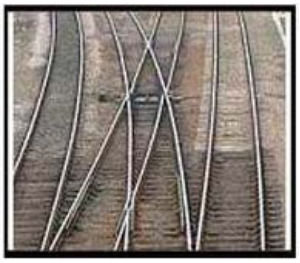
Other Facilities and Structures

Traction power substations along the project alignment would provide power to the overhead catenary (wire suspended above the light rail that provides electricity to the trains). These one-story structures are generally screened by a wall or fence, and sited at stations or along or beneath the light rail guideway.

Light Rail Train with Overhead Catenary Wires in Tukwila, WA

Other structures would be required. Noise walls would be needed to avoid transit noise impacts. Much of the elevated guideway would have short (3 to 4 feet) noise walls incorporated into the guideway structure itself, although some locations would require higher noise walls built between the guideway and the noise receivers (homes or other buildings). At-grade guideways in areas with slopes would have retaining walls where the route cuts into an adjacent hillside. These retaining walls would also hold fill for the guideway. In a number of locations, noise walls would be placed on top of retaining walls. In other locations, Sound Transit would relocate existing WSDOT highway walls.

Some sections of the guideway would feature crossover tracks with switches to allow trains to safely pass from one set of tracks to the other during track maintenance, to bypass a stalled train, to turn the opposite direction, or to operate in the event of emergencies. At the terminus station, tail tracks would extend beyond the station platform to store trains that are leaving service or waiting to enter service.



Crossover Tracks

The project also includes stormwater management facilities such as detention or infiltration ponds, vaults, swales, or other bioretention facilities, or vegetated embankments along the corridor. Detention ponds vary in size, but could be 200 feet wide, and often require fencing.

Other structural features would include retaining walls in areas with steeper slopes, or where the walls are needed to hold fill.

2.5 Descriptions of Light Rail Alternatives by Segment

The following subsections describe key features of the light rail alternatives based on conceptual design information. Appendix F, Conceptual Plans, includes conceptual design drawings that show the key elements assumed for each light rail alternative's alignment and stations. The conceptual designs include the primary elements required to develop and operate a light rail alternative; landscaping, screening, and other design elements would be further detailed in later stages of project design. In addition, further design, mitigation planning, permitting, and construction-stage planning might identify other features needed for construction staging, construction access, utility work, and other infrastructure connections.

Finally, the alternatives described below reflect different combinations of key features for the project. The individual alternatives have some features, such as stations or localized design elements, which could work for other alternatives in a segment. This is particularly true in Segment A, where the alignments all remain along the east side of I-5, but there are different ways to approach the station design, profile, or structures for light rail; street modifications; parking areas; or other features. When it ultimately defines the project to be built, the Sound Transit Board could choose a combination of these elements different than those presented in this EIS.

Tables 2-1a, 2-1b, and 2-1c summarize the key features and options of each alternative; Figures 2-3 through 2-10 illustrate them.

Table 2-1a. Summary of Design Features for Segment A Alternatives

Cross Streets	Preferred Alternative At-grade/ elevated with NE 145th and NE 185th Stations	Alternative A1 At-grade/Elevated with NE 145th and NE 185th Stations	A3 Mostly Elevated with NE 145th and NE 185th Stations	A5 At-grade/Elevated with NE 130th, NE 155th, and NE 185th Stations	A7 Mostly Elevated with NE 130th, NE 155th, and NE 185th Stations	A10 At-grade/Elevated with NE 130th, NE 145th, and NE 185th Stations	A11 Mostly Elevated with NE 130th, NE 145th, and NE 185th Stations
NE 104th Street to Northgate Way	• Elevated guideway from NE 104th Street at Northgate, crossing over 1st Avenue NE	• Similar to Preferred Alternative	• Similar to Preferred Alternative	• Similar to Preferred Alternative	• Similar to Preferred Alternative	• Similar to Preferred Alternative	• Similar to Preferred Alternative
NE 117th Street overpass	• At-grade/elevated east of NE 117th Street overpass	• Crosses west of a rebuilt NE 117th Street overpass	• Crosses over existing overpass	• Similar to Preferred Alternative	• Same as Alternative A3	• Similar to Preferred Alternative	• Same as Alternative A3
NE 117th Street to NE 130th Street	• At-grade with sections of retained cut or fill (aligned between I-5 and 5th Avenue NE)	• Similar to Preferred Alternative	• Elevated	• Similar to Preferred Alternative	• Same as Alternative A3	• Similar to Preferred Alternative	• Same as Alternative A3
NE 130th Street	• Crosses under NE 130th Street off-ramp and NE 130th Street overpass (both rebuilt) • Rebuilds 5th Avenue NE and reconstructs NE 130th Street off-ramp as grade-separated	• Similar to Preferred Alternative	• Crosses over existing overpass	• NE 130th Street Station Option 1: At-grade (center platform) • NE 130th Street overcrossing re-aligned • 5th Avenue NE and NE 130th Street off-ramp grade-separated rebuild • 100 off-site parking spaces	• NE 130th Street Station Option 2: elevated • 100 parking spaces to the north	• Same as Alternative A5, but with no parking at NE 130th Street Station	• Same as Alternative A7
NE 130th Street to NE 145th Street	• Along 5th Avenue NE, at-grade to NE 137th Street, elevated to NE 145th Street	• Similar to Preferred Alternative	• Elevated to NE 145th Street	• Similar to Preferred Alternative	• Same as Alternative A3	• Similar to Preferred Alternative	• Same as Alternative A3

Table 2-1a. Summary of Design Features for Segment A Alternatives

Cross Streets	Preferred Alternative At-grade/ elevated with NE 145th and NE 185th Stations	Alternative A1 At-grade/Elevated with NE 145th and NE 185th Stations	A3 Mostly Elevated with NE 145th and NE 185th Stations	A5 At-grade/Elevated with NE 130th, NE 155th, and NE 185th Stations	A7 Mostly Elevated with NE 130th, NE 155th, and NE 185th Stations	A10 At-grade/Elevated with NE 130th, NE 145th, and NE 185th Stations	A11 Mostly Elevated with NE 130th, NE 145th, and NE 185th Stations
NE 145th Street	• NE 145th Street station moves I-5 northbound on-ramp • 500-car garage	• NE 145th Street Station Option 1: • 500-car garage north of I-5 on-ramp	• NE 145th Street Station Option 2: Moves I-5 on-ramp farther north • 500-car garage south of new I-5 on-ramp	• Elevated crossing – no station	•Same as Alternative A5	• NE 145th Street Station Option 1: Keeps existing northbound on-ramp • 650 parking spaces	• Similar to Preferred Alternative
NE 145th Street to NE 175th Street	• Elevated to NE 150th Street • At-grade to NE 154th Street • Elevated to NE 157th Street • At-grade to NE 174th Street • Realigns 1st Avenue NE south of NE 161st Street and south of NE 175th Street • Elevated guideway adjacent to I-5 overpass at NE 175th Street	• Similar to Preferred Alternative	• Elevated to NE 157th Street • At-grade to NE 174th Street; realigns sections of 1st Avenue NE	• Alignment similar to Preferred Alternative • Elevated station at NE 155th Street • 500-car parking garage south side of street	• Elevated to NE 148th Street • At-grade to NE 154th Street • Elevated to NE 156th Street • At-grade to NE 174th Street; realigns parts of 1st Avenue NE	• Similar to Preferred Alternative	• Similar to Preferred Alternative
NE 175th Street to NE 185th Street	• NE 178th Street to NE 185th Street at-grade • Realigns 5th Avenue NE near NE 185th Street	• Similar to Preferred Alternative	• NE 174th Street to NE 185th Street: elevated • Realigns 1st Avenue NE near NE 175th Street	• Similar to Preferred Alternative	• Same as Alternative A3	• Similar to Preferred Alternative	• Same as Alternative A3

Table 2-1a. Summary of Design Features for Segment A Alternatives

Cross Streets	Preferred Alternative At-grade/ elevated with NE 145th and NE 185th Stations	Alternative A1 At-grade/Elevated with NE 145th and NE 185th Stations	A3 Mostly Elevated with NE 145th and NE 185th Stations	A5 At-grade/Elevated with NE 130th, NE 155th, and NE 185th Stations	A7 Mostly Elevated with NE 130th, NE 155th, and NE 185th Stations	A10 At-grade/Elevated with NE 130th, NE 145th, and NE 185th Stations	A11 Mostly Elevated with NE 130th, NE 145th, and NE 185th Stations
NE 185th Street	• Crosses in underpass east of NE 185th Street bridge, and realigns 5th Avenue NE (south of NE 185th Street) • NE 185th Street preferred station: at-grade • 500-car parking garage west of I-5, and realigns 5th Avenue NE (north of NE 185th Street) • Expands overpass for pedestrians	• At-grade station east of I-5, 500-car parking garage west of I-5 • Realigns 5th Avenue NE • Rebuilds NE 185th Street bridge	• NE 185th Street Station Option 2: elevated • 500-car park-and-ride east of I-5, east of station; either in surface garage or below grade with a surface-level bus plaza	• NE 185th Street Station Option 3: at-grade • Surface parking for up to 350 cars	• Same as Alternative A3	• Same as Alternative A5	• Same as Alternative A3
Preferred Alternative Options	• NE 130th Street Station Option • Shoreline Stadium parking garage at NE 185th Street						

Table 2-1b. Summary of Design Features for Segment B Alternatives

Cross Streets	Preferred Alternative East Side to Mountlake Terrace Transit Center to West Side	B1 East Side to Mountlake Terrace Transit Center to Median	B2A East Side to Mountlake Terrace Transit Center to West Side with 220th Station North Option	B4 East Side to Mountlake Terrace Freeway Station to Median
NE 185th Street to NE 195th Street	• Retained cut on east side • NE 195th Street pedestrian bridge reconstructed	• Retained cut or elevated east side (depends on Segment An alternative) • NE 195th Street pedestrian bridge reconstructed	• Similar to Preferred Alternative	• Same as Alternative B1
NE 195th Street to Ballinger Way/SR 104 overpass	• Elevated on east side of I-5	• Similar to Preferred Alternative	• Similar to Preferred Alternative	• Similar to Preferred Alternative
Ballinger Way/SR 104 overpass	• Elevated • Crosses over Ballinger Way/SR 104 interchange	• Similar to Preferred Alternative	• Similar to Preferred Alternative	• Similar to Preferred Alternative but more to the west
Ballinger Way/SR 104 overpass to 236th Street SW	• Elevated east side	• Similar to Preferred Alternative	• Similar to Preferred Alternative	• Crosses over 236th Street SW northbound I-5 off-ramp and northbound I-5 lanes • Drops to median at-grade and crosses under 236th Street SW overpass
236th Street SW overpass	• Mountlake Terrace Transit Center Station: elevated • Station straddles 236th Street SW • Existing surface lot reconfigured	• Similar to Preferred Alternative	• Similar to Preferred Alternative	• Crosses under 236th Street SW overpass • Mountlake Terrace Freeway Station: reconstructs and extends current bus station • New north end station pedestrian bridge

Table 2-1b. Summary of Design Features for Segment B Alternatives

Cross Streets	Preferred Alternative East Side to Mountlake Terrace Transit Center to West Side	B1 East Side to Mountlake Terrace Transit Center to Median	B2A East Side to Mountlake Terrace Transit Center to West Side with 220th Station North Option	B4 East Side to Mountlake Terrace Freeway Station to Median
236th Street SW to 220th Street SW overpass	• Continues north elevated • Crosses I-5 lanes to west side and descends to near freeway grade, crossing under 228th Street SW • Transitions to elevated south of 220th Street SW • Elevated over 220th Street SW, reconstructs southbound I-5 ramps	• Continues north elevated • Short section retained cut in hillside north of Mountlake Terrace Transit Center • Crosses over northbound I-5 lanes • Enters freeway median, drops to grade near 232nd Street SW • At-grade in median under 220th Street SW overpass	• Similar to Preferred Alternative to south of 220th Street SW • Elevated with 220th Street SW Station elevated over the street • 200-space parking garage north of 220th Street SW	• Drops to median and runs at-grade north of the freeway station • Continues at-grade in median under 220th Street SW
220th Street SW to 212th Street SW	• Curves to east side of 60th Avenue West • Elevated along west side of I-5 with at-grade retained cut/fill section • Crossover tracks south of 212th Street SW • Crosses over 212th Street SW	• At-grade in median • Crossover tracks south of 212th Street SW	• Similar to Preferred Alternative but with differences in alignment for station configuration	• Same as Alternative B1
Options	• 220th Street Station South Option, south of street with 200-car surface lot, with alignment shifting west to the station; no modification to I-5 ramps	• Parking garage on existing surface lot at Mountlake Terrace Transit Center, adding about 280 spaces		

Table 2-1c. Summary of Design Features for Segment C Alternatives

Cross Streets	Preferred Alternative West Side to Lynnwood Transit Center Station	C1 52nd Avenue West to 200th Street SW Station	C2 52nd Avenue West to Lynnwood Transit Center Station	C3 Along I-5 to Lynnwood Park-and-Ride Station
Option 1: From I-5 median	• Continues at-grade in median • At about 208th Street SW, transitions to cross over southbound I-5 • Crosses Interurban Trail	• Transitions from at-grade in median near 210th Street SW; elevated guideway to cross southbound I-5 lanes to 52nd Avenue West • Continues elevated north along east side of 52nd Avenue West	• Same as Alternative C1	• Continues at-grade in median • At about 208th Street SW, transitions to cross elevated over southbound I-5 lanes, and reconstructs a portion of 208th Street SW where alignment crosses over it • Crosses Interurban Trail
Option 2: From west side of I-5	• Elevated west side of I-5 • Alignment gradually shifts away from I-5 after 208th Street SW • Crosses Interurban Trail	• Elevated along west side of I-5 until it approaches 52nd Avenue West • Turns north, elevated along east side of 52nd Avenue West	• Same as Alternative C1	• Similar to Preferred Alternative
52nd Avenue West	• Not applicable	• Elevated along east side of 52nd Avenue West • Turns east over corner of Scriber Creek Park at 200th Street SW • Crosses Interurban Trail	• As elevated guideway approaches 204th Street SW, alignment turns NE and crosses south of Scriber Creek Park • Crosses Interurban Trail	• Not applicable
Lynnwood Transit Center	• Elevated Lynnwood Transit Center station (diagonally across 46th Avenue West) • New garage replaces surface parking and adds 500 spaces, for 1,900 total spaces at the park-and-ride • Existing bus transit center remains • Option to maintain 400 spaces of surface parking, providing 2,300 total spaces • Tail tracks over 44th Avenue West	• Elevated along south side of 200th Street SW • Elevated 200th Street SW Station • 2 garages add 500 spaces to the existing park-and-ride	• Elevated Lynnwood Transit Center station south of 48th Street West and existing transit center • New garage replaces surface parking and adds 500 more spaces	• Lynnwood Park-and-Ride light rail station (south of 48th Avenue West, east of existing direct access ramp): elevated • New garage replaces surface parking and adds 500 spaces • Station Option 1: Existing bus transit center remains • Station Option 2: Existing bus transit center relocated

2.5.1 Segment A: Seattle to Shoreline

The Segment A alternatives reflect choices about the location of stations (at NE 130th Street, NE 145th Street, NE 155th Street, or NE 185th Street) as well as the number of stations (two or three). The station locations and height and location of existing street overcrossings of I-5 also largely influence whether the alignment is at-grade or elevated at a given location.

Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Stations

The Preferred Alternative (Figure 2-3) is an at-grade/elevated alignment with stations at NE 145th Street and NE 185th Street. It is similar to Alternative A1 from the Draft EIS, but in some locations the Preferred Alternative incorporates features from other alternatives, as well as design refinements to help minimize impacts or improve performance. It would begin alongside 1st Avenue NE, south of the I-5 ramps for Northgate, and connect to the tail tracks Sound Transit is constructing for the Northgate Link Extension. The elevated guideway would cross over 1st Avenue NE and stay elevated to about 115th Street NE, where it would descend to pass east of the NE 117th Street overpass and then continue along I-5. The existing pedestrian path connection at NE 116th Street would be reconstructed under the guideway and connected to NE 115th Street. The Preferred Alternative would realign a section of 3rd Avenue NE, which would maintain access for the Seattle Latvian Evangelical Lutheran Church. This alignment would generally run at-grade between 5th Avenue NE and I-5, typically at the same level as I-5, with short sections of retained cut or retained fill structures. It would replace the NE 130th Street off-ramp and the NE 130th Street bridge over I-5, relocating the ramp farther south and grade-separating it from southbound 5th Avenue NE, which would be rebuilt lower to go under the new off-ramp. The Preferred Alternative would rebuild the NE 130th Street and 5th Avenue NE intersection and adjacent street sections, including sidewalks and bicycle facilities.

The guideway would continue along 5th Avenue NE and transition to an elevated structure to reach the elevated NE 145th Street Station on the north side of the street. This center platform station would have a parking structure with up to five levels and approximately 500 spaces. It would relocate the existing northbound on-ramp to I-5 to the north, creating a new signalized intersection on 5th Avenue NE. It would also close the existing transit ramps and freeway station.

The Preferred Alternative would transition to retained fill north of the NE 145th Street Station. It would then cross over NE 155th Street on an elevated guideway, continuing on retained cut-and-fill sections, including a retained fill section along the edge of Ridgecrest Park, with a realignment of a section of 1st Avenue NE south of the park. It would bridge over NE 175th Street and continue in a retained cut to under NE 185th Street. Sections of 1st Avenue NE would also be realigned near

NE 175th Street, and 5th Avenue/7th Avenue NE would be realigned south of NE 185th Street. There would be a center platform station in a retained cut just north of NE 185th Street, with the alignment crossing under the street to reach the platform. A surface plaza would be above the platform, and access driveways would be to the east near 8th Avenue NE. A 500-space park-and-ride garage with about four levels would be west of I-5, which would require realigning 5th Avenue NE north of NE 185th Street. The NE 185th Street overpass would be widened to better serve pedestrian trips between the station and the parking garage.

Options for the Preferred Alternative

NE 130th Street Station Option. This Final EIS also considers, as an option to the Preferred Alternative, a station just north of NE 130th Street that could be built as part of the project, or partly built and then completed for service later. It would be a center platform, retained-cut station, with the platform close to the level of I-5 and a street-level plaza along 5th Avenue NE and NE 130th Street. The station access plan assumes 100 park-and-ride spaces in a nearby existing lot.

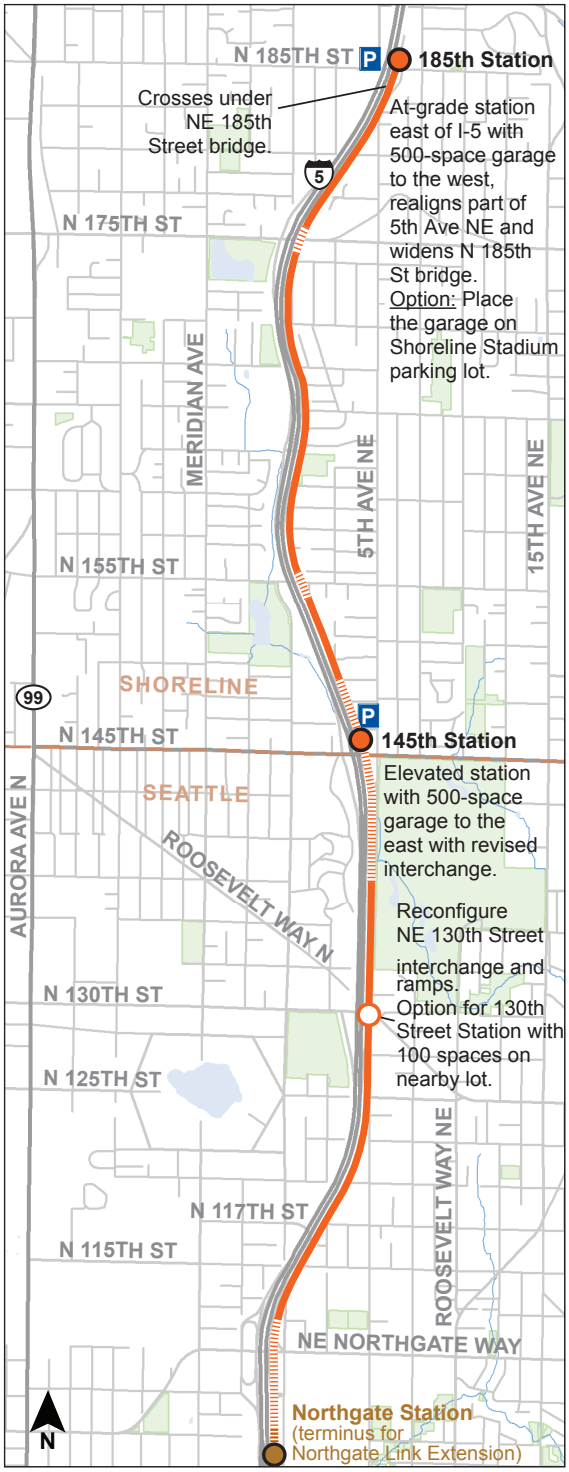
NE 185th Street/Stadium Parking Garage Option. Alternatively, the 500-space parking garage could be built at the existing Shoreline Stadium parking lot, instead of between I-5 and 5th Avenue NE.

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Stations

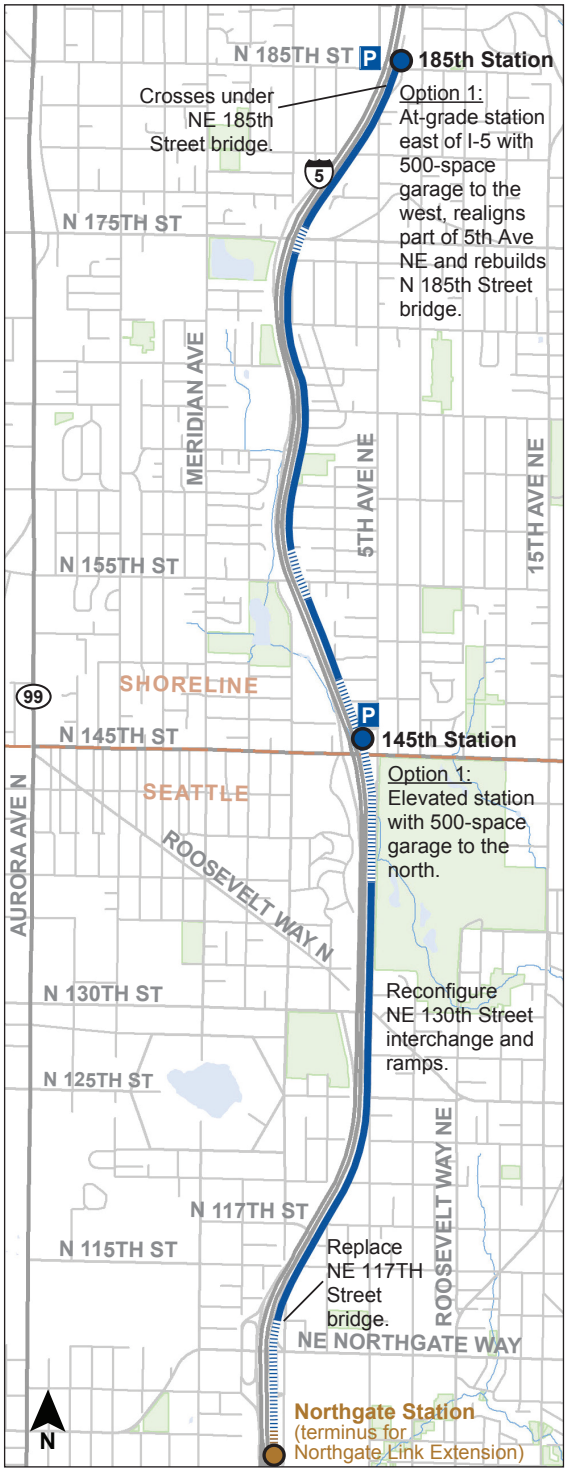
Alternative A1 (Figure 2-3) is similar to the Preferred Alternative, but it has different station options and design features in some locations. North of Northgate Way, it would stay closer to I-5 than the Preferred Alternative, crossing west of the NE 117th Street overpass, which would be realigned and rebuilt. Like the Preferred Alternative, this alternative maintains access for the Seattle Latvian Evangelical Lutheran Church by realigning 3rd Avenue NE. The alignment would then continue north, similar to the Preferred Alternative, up to NE 145th Street.

This alternative includes NE 145th Street Station Option 1, an elevated center-platform station, with a platform above the existing I-5 transit-only off-ramp and northbound on-ramp, and a ground-level plaza on the north side of NE 145th Street. To the north, a parking structure with up to three levels would provide approximately 500 spaces.

Alternative A1 would continue north, similar to the Preferred Alternative, up to just south of NE 185th Street, where it would include the NE 185th Street Station Option 1, which is similar to the Preferred Alternative's station but requires rebuilding the NE 185th Street bridge.



PREFERRED ALTERNATIVE SEGMENT A: AT-GRADE/ELEVATED WITH NE 145th AND NE 185th STATIONS



A1: AT-GRADE/ELEVATED WITH NE 145th AND NE 185th STATIONS

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure 2-3
Preferred Alternative and Alternative A1

Alternative A3: Mostly Elevated with NE 145th and NE 185th Stations

Alternative A3 is similar to Alternative A1, but it would be elevated to the NE 145th Street Station (see Figure 2-4). It would cross over the existing NE 117th Street bridge and the NE 130th Street off-ramp and overpass, thus avoiding the need to rebuild these facilities. The NE 145th Street Station Option 2 is similar to the Preferred Alternative's station.

North of NE 145th Street, Alternative A3 would be similar to the Preferred Alternative until NE 175th Street, but would then continue on an elevated guideway to the NE 185th Street Station. It also would require a realignment of 1st Avenue NE near NE 175th Street and 5th Avenue NE near NE 185th Street. The NE 185th Street Station Option 2 would be elevated, and to the east would be an approximately 500-stall parking garage and an integrated transit center with a circular transit driveway.

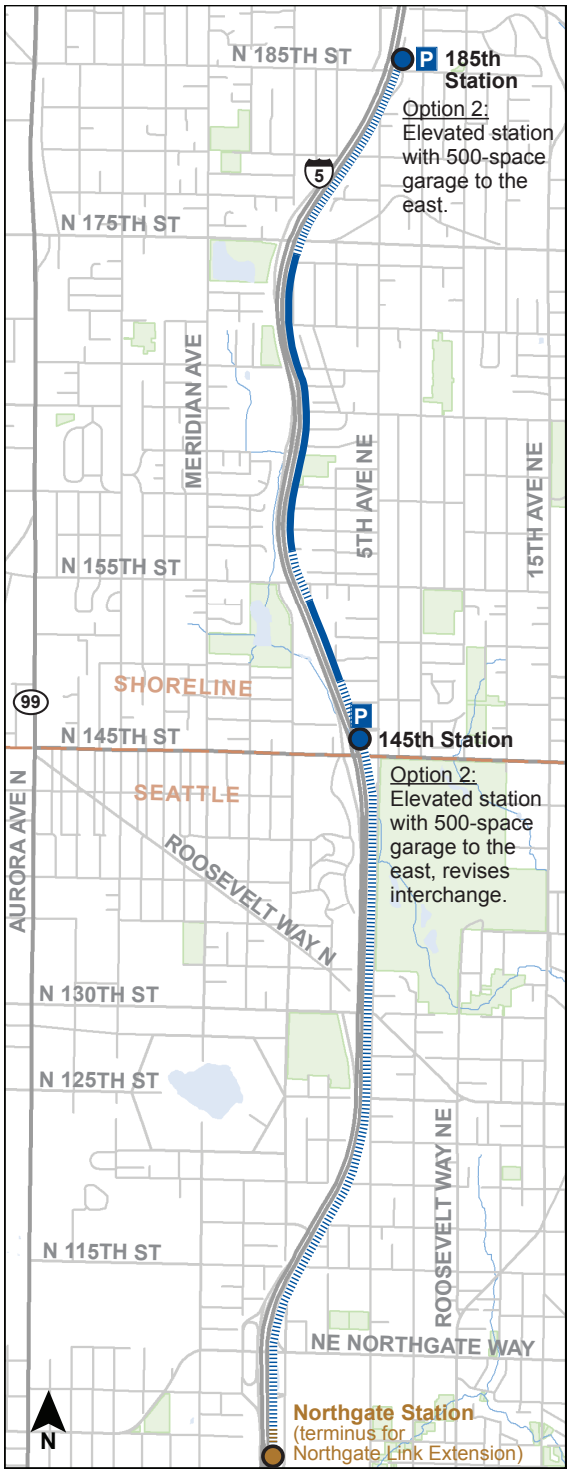
Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Stations

Alternative A5 is largely based on Alternative A1, but would feature stations at NE 130th Street and NE 155th Street (instead of a station at NE 145th Street), and with a third configuration for the NE 185th Street Station (see Figure 2-4). It also would cross at-grade east of the NE 117th Street overpass (similar to the Preferred Alternative), thus avoiding the need for rebuilding the bridge. Like Alternative A1, it would rebuild the NE 130th Street I-5 off-ramp and overcrossing, including the 5th Avenue NE intersection and roadway.

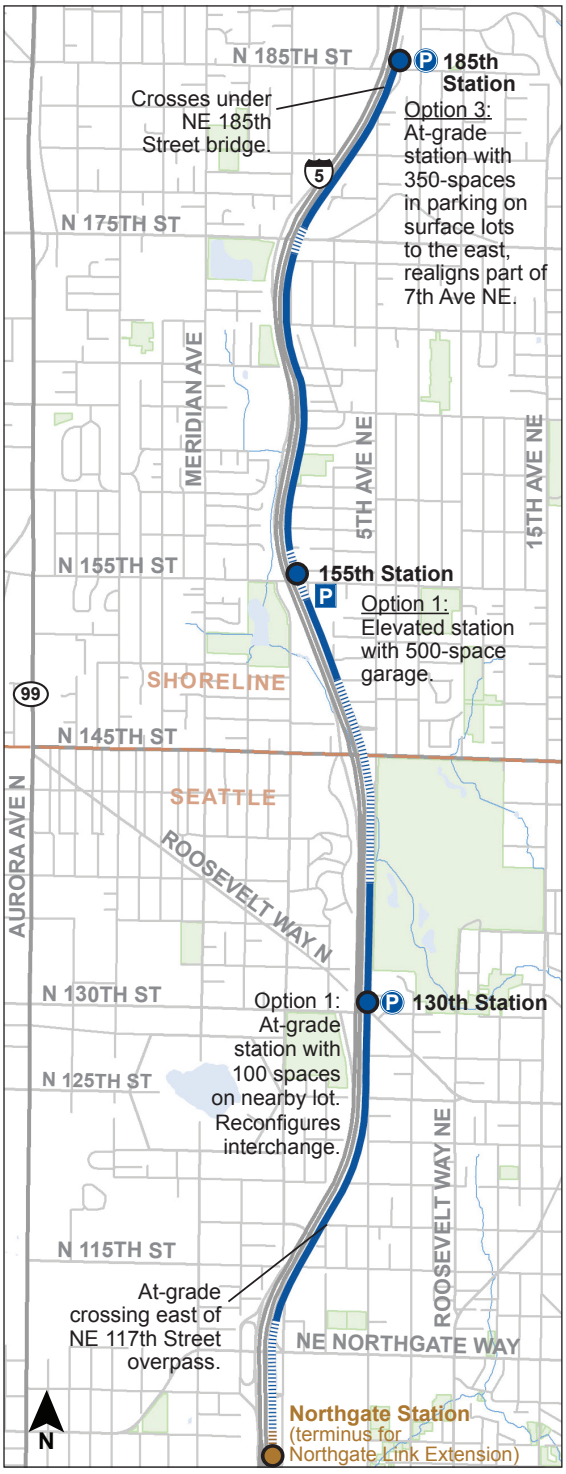
The NE 130th Street Station Option 1 is the same as the option described for the Preferred Alternative.

The route would continue on retained fill, before moving to an elevated section near Jackson Park Golf Course, similar to Alternative A1. Except for a short section in retained fill, it would continue elevated to a NE 155th Street Station, which would be next to the I-5 bridge over NE 155th Street. There would be a 500-space parking garage with up to four levels on the south side of NE 155th street.

This alignment would be the same as Alternative A1 from the NE 155th Street Station to the NE 185th Street Station Option 3, a retained-cut station under the NE 185th Street overpass, similar to Option 1 with Alternative A1, but without rebuilding the NE 185th Street overpass. It would include surface parking for approximately 350 vehicles on two lots east of this station.



A3: MOSTLY ELEVATED WITH NE 145th AND NE 185th STATIONS



A5: AT-GRADE/ELEVATED WITH NE 130th, NE 155th AND NE 185th STATIONS

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure 2-4
Alternatives A3 and A5

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Stations

Alternative A7 begins with the mostly elevated guideway alignment of Alternative A3, including elevated sections over the NE 117th Street overpass and the NE 130th Street off-ramp and bridge (see Figure 2-5). It has the same station locations as Alternative A5, but with the elevated Option 2 at NE 130th Street. There would be parking for approximately 100 vehicles north of the station and under the elevated guideway along 5th Avenue NE.

From NE 130th Street north to the station at NE 155th Street, the alignment would be the same as Alternative A5. From NE 155th Street, it would be the same as Alternative A3.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Stations

Alternative A10 (see Figure 2-5) is similar to the Preferred Alternative and Alternative A5 up to NE 130th Street. It would include the at-grade NE 130th Street Station Option 1, but with no parking. From NE 130th Street north to NE 145th Street, Alternative A10 would be the same as Alternative A1. North of NE 145th Street, Alternative A10 would be the same as Alternative A5.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Stations

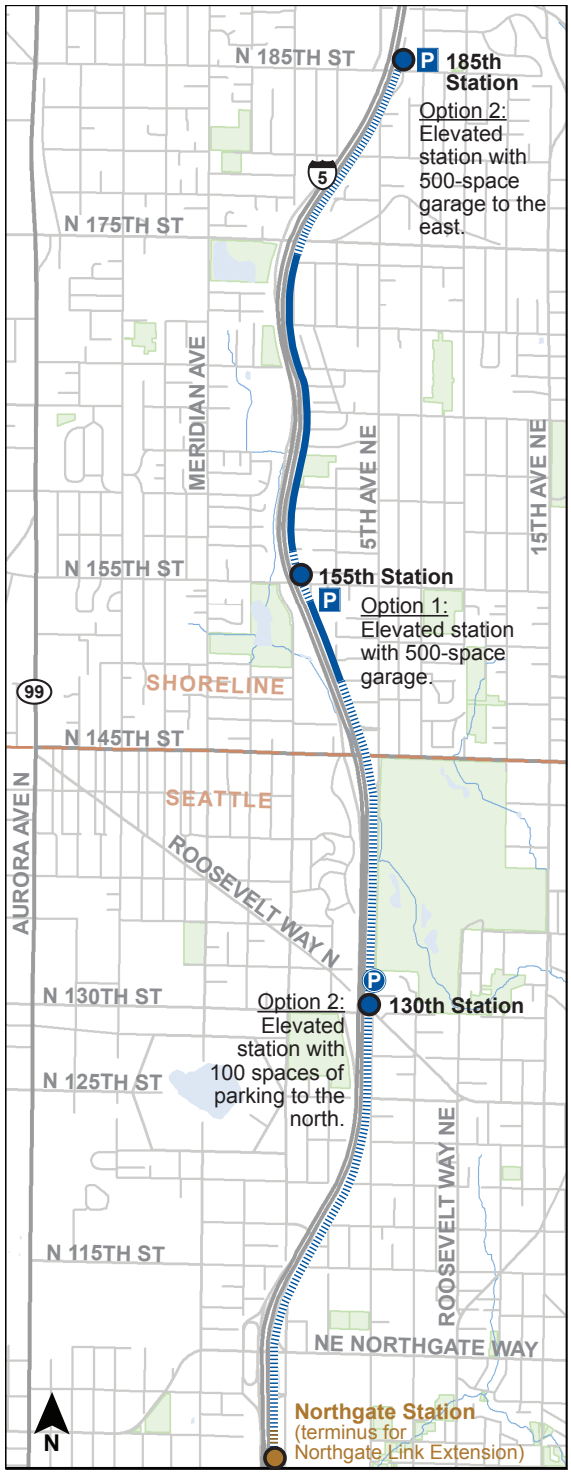
Alternative A11 is the same as Alternative A7, except with an elevated station at NE 145th Street (Station Option 2) instead of a NE 155th Street Station (see Figure 2-6).

2.5.2 Segment B: Shoreline to Mountlake Terrace

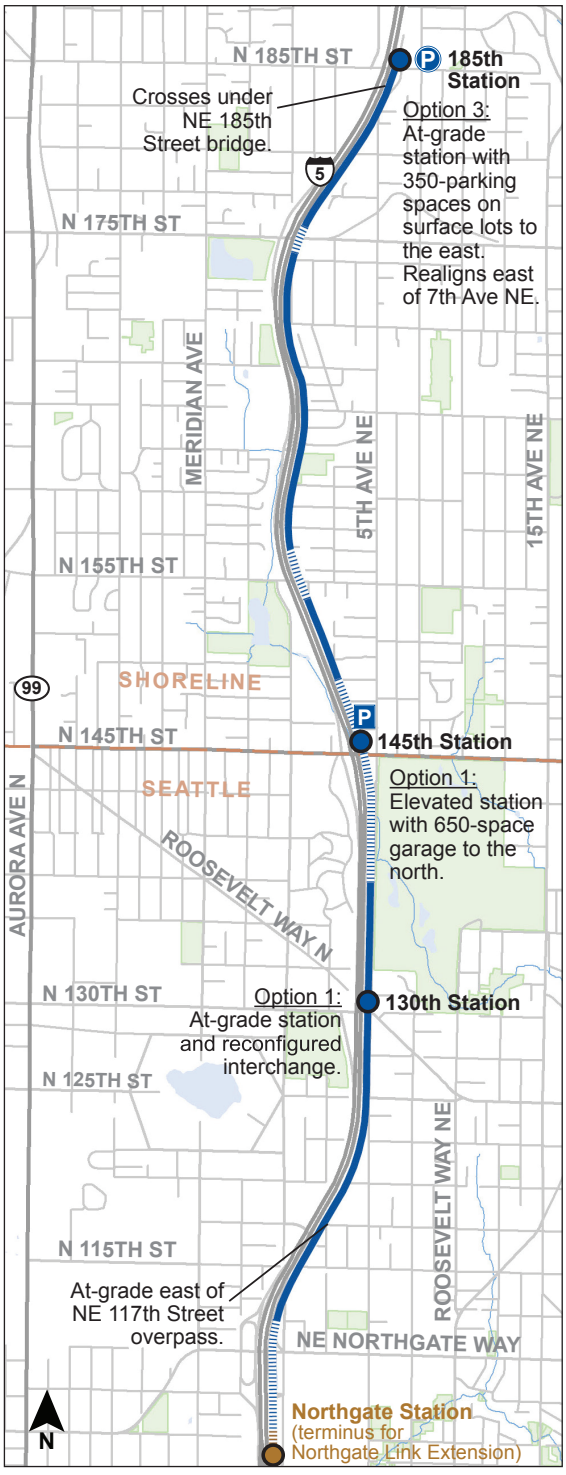
The Segment B alternatives feature a Mountlake Terrace Station location (at the current transit center or at its freeway station) and either use the freeway median or cross over to the west side of I-5. Two of the alternatives feature an additional station choice at 220th Street SW.

Preferred Alternative: East Side to Mountlake Terrace Transit Center to West Side

The Preferred Alternative modifies Alternative B2 from the Draft EIS to minimize impacts and improve operations. It would begin north of the NE 185th Street Station in a retained cut along the east side of I-5 (see Figure 2-7), crossing under the NE 195th Street pedestrian bridge, which would be replaced. It would continue mostly elevated to the north and cross over the Lake Ballinger Way/SR 104 interchange and over 236th Street SW to reach an elevated station at the Mountlake Terrace Transit Center, east of the existing parking garage. The station platform would straddle 236th Street SW. The south entrance would include a new path connecting to existing streets. To provide effective access at this station, including access for bus transit, Sound Transit would reconfigure the existing transit center's surface parking and circulation to the east of the current parking garage, while maintaining its parking capacity. The route would then continue north on an elevated structure, crossing over to the west side of I-5.



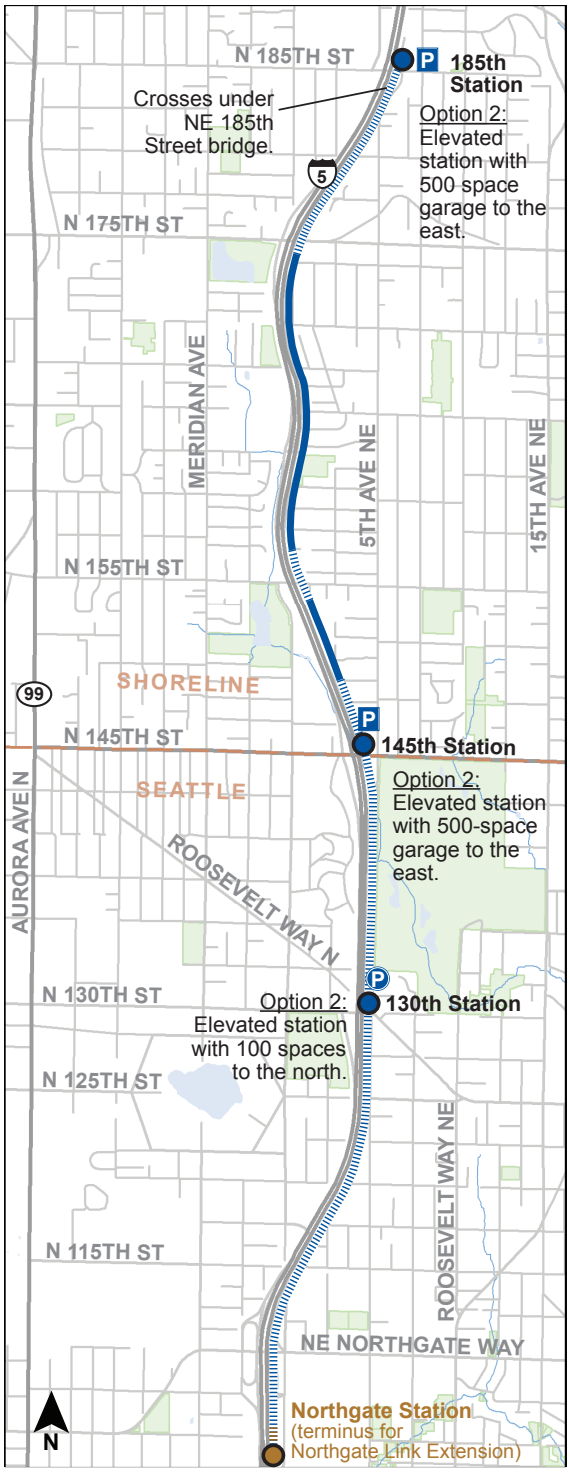
A7: MOSTLY ELEVATED WITH NE 130th, NE 155th AND NE 185th STATIONS



A10: AT-GRADE/ELEVATED WITH NE 130th, NE 145th AND NE 185th STATIONS

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

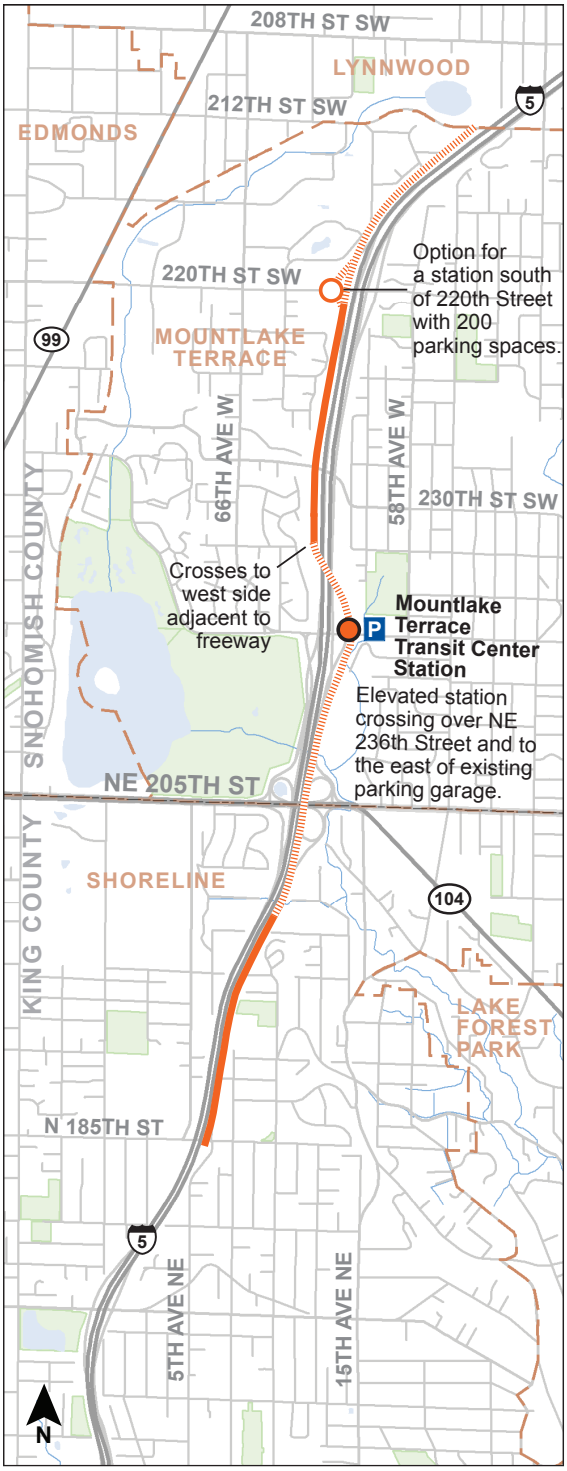
Figure 2-5
Alternatives A7 and A10



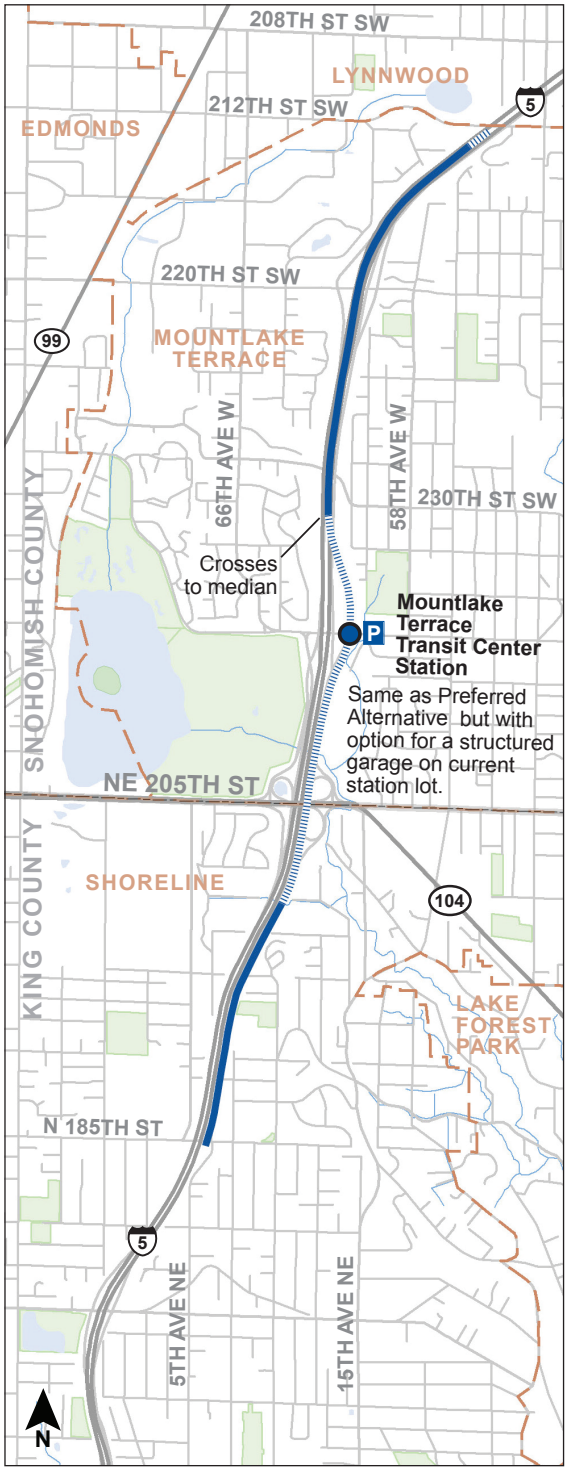
A11: MOSTLY ELEVATED WITH NE 130th, NE 145th AND NE 185th STATIONS

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure 2-6
Alternative A11



PREFERRED ALTERNATIVE SEGMENT B: EAST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO WEST SIDE



B1: EAST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO MEDIAN

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure 2-7
Preferred Alternative and Alternative B1

To reduce impacts on forested areas and a property designated for highway beautification purposes when I-5 was originally developed, Sound Transit has shifted the alignment lower on the hillside, mostly in a retained cut until just south of 220th Street SW. Then it would become elevated, continuing over 220th Street SW and realigning the I-5 southbound on-ramp and off-ramp slightly east. The alignment would then be elevated on the east side of 60th Avenue West, and along the west side of I-5, mostly on retained cut and fill structures, before crossing over 212th Street SW.

Option for the Preferred Alternative

An optional station could be located south of 220th Street SW, on a now-vacant parcel that previously housed an elementary school. The station and its 200-space parking lot could be developed as part of the project, or partially built and completed later. It would require shifting the alignment westward to reach the station and crossing elevated over 220th Street SW slightly west of the alignment for the Preferred Alternative, but would not require realigning the I-5 on-ramp and off-ramp.

Alternative B1: East Side to Mountlake Terrace Transit Center to Median

Alternative B1 is the same as the Preferred Alternative between NE 185th Street and the north side of the Mountlake Terrace Transit Center Station (see Figure 2-7).

From there, it would continue north on an elevated guideway, with a short section cut into the hillside north of the transit center. It would then cross over the northbound lanes of I-5, enter the freeway median, and drop to at-grade. The alignment would continue in the median of I-5 generally at the level of the southbound I-5 lanes, north to approximately 212th Street SW.

This alternative has an optional four-level parking garage on the existing Mountlake Terrace Transit Center surface lot to the east of the current garage, adding 280 stalls to the current 880.

Alternative B2A: East Side to Mountlake Terrace Transit Center to West Side with 220th Station North Option

Alternative B2A has the same alignment as the Preferred Alternative but would have a 220th Street SW Station above the street (see Figure 2-8), with a 200-stall parking garage to the north. It would require realigning the I-5 on-ramp and off-ramp for 220th Street SW.

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median

Alternative B4 (see Figure 2-8) is the same as the Preferred Alternative from NE 185th Street Station north to approximately the overcrossing at the Lake Ballinger Way/SR 104 interchange. It would then transition to cross over the northbound I-5 lanes to the I-5 median and descend to cross under the 236th Street SW overpass and connect to the existing Mountlake Terrace Freeway Station, which would be extended to the north, retrofitted to accommodate light rail trains, and closed to bus

use. This side platform station would have a south entrance served by the existing pedestrian bridge. A new north entry to the station and pedestrian bridge would connect to the east, crossing over northbound lanes of I-5, with a second tower and pedestrian bridge rising in elevation to connect to 232nd Street SW. The other features of the existing transit center and its 880 parking spaces would be the same as today. The alignment would continue at-grade in the I-5 median to approximately 212th Street SW, similar to Alternative B1.

2.5.3 Segment C: Mountlake Terrace to Lynnwood

The Segment C alternatives involve choices for different routes to reach the Lynnwood Transit Center, as well as different station siting and park-and-ride configurations. These alternatives are shown in Figure 2-9 and Figure 2-10.

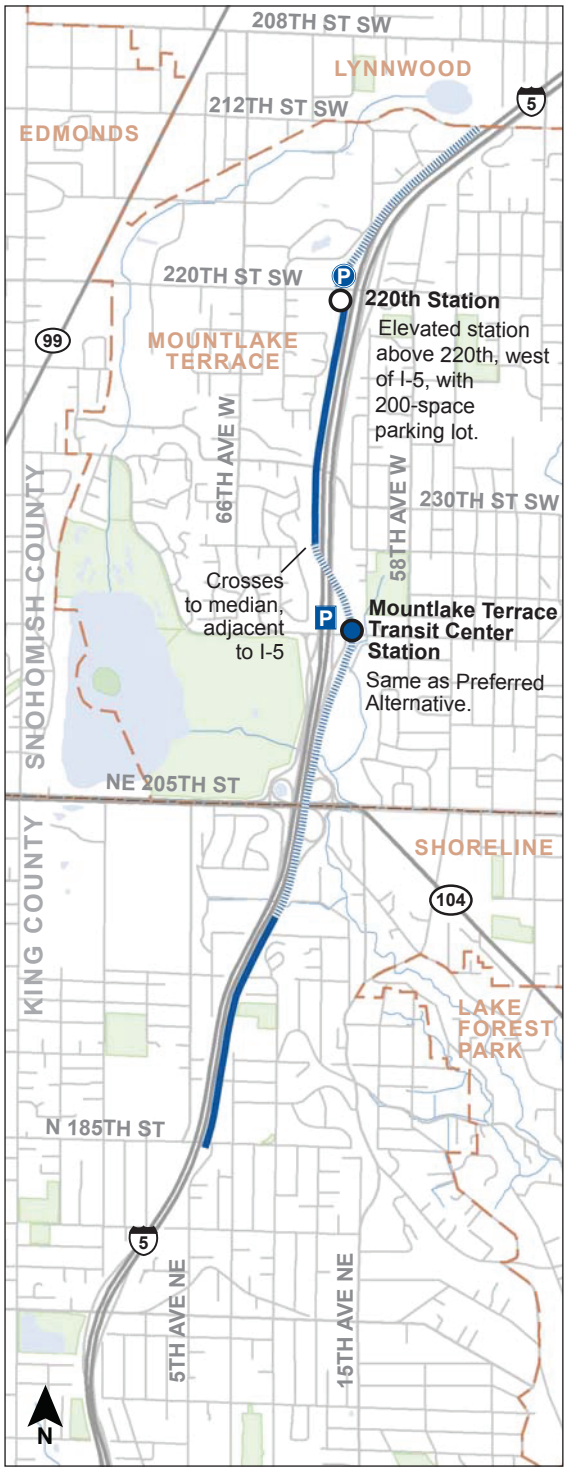
Preferred Alternative: West Side to Lynnwood Transit Center Station

The Preferred Alternative (see Figure 2-9) is a modified version of Alternative C3. It realigns the guideway and station to better connect to the Lynnwood Transit Center, preserve more redevelopable area, and minimize wetland and stream impacts to the extent feasible.

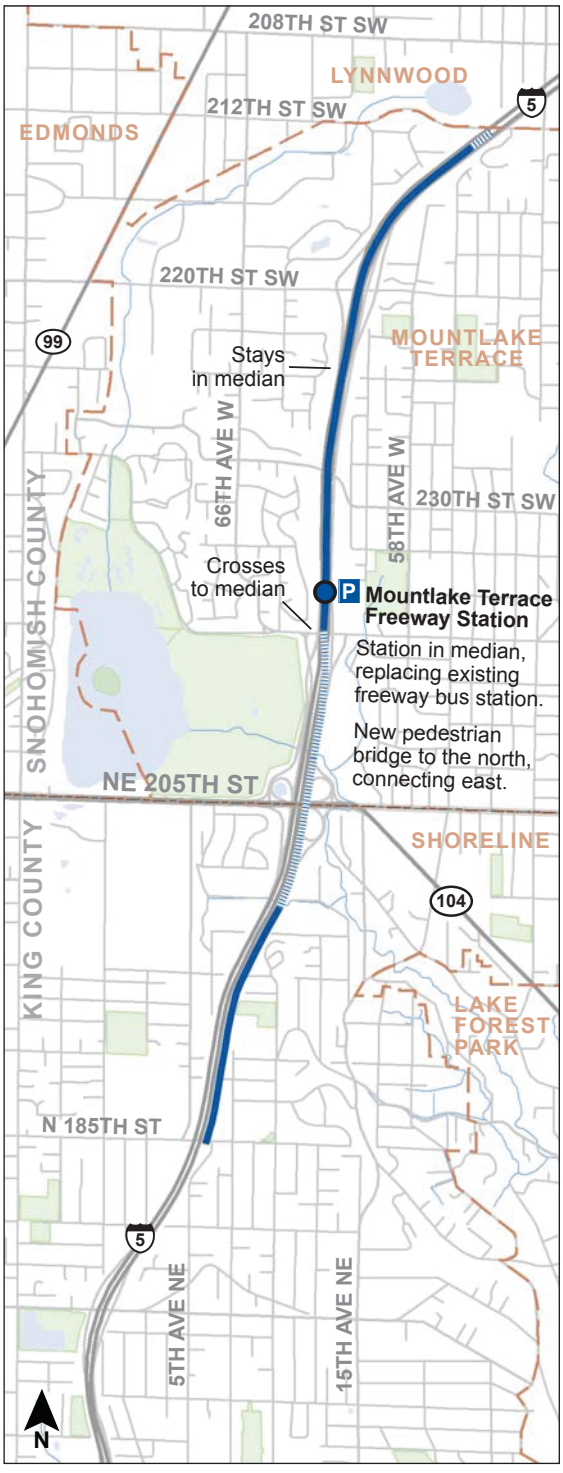
From Segment B, where it would already be elevated on the west side of I-5, it would shift away from I-5 north of 208th Street SW. At about 208th Street SW, the route would cross the Interurban Trail right-of-way and then head generally north toward the south side of the existing transit center. The station would be over 48th Avenue SW, and cross diagonally into the block bounded by 44th Avenue West, 48th Avenue West, and 200th Street SW. Crossover tracks and a trail track would curve eastward to align with 200th Street SW, cross over 44th Avenue West, and end, still elevated, on the south side of Alderwood Mall Boulevard.

A parking garage (up to four levels) would be built partly over an existing park-and-ride lot between the HOV direct access ramps (to the west) and 44th Avenue West (to the east). It would connect to the station as well as the existing bus transit center to the west of 48th Avenue NE. The 1,650-space garage would replace current parking spaces and add approximately 500 new spaces, for a total park-and-ride capacity of about 1,900 spaces. An existing park-and-ride lot north of the current transit center would be repurposed to provide bus layover and circulation. To provide effective access to the station, 200th Street SW and 48th Avenue West would be widened, and 46th Avenue West would have HOV-only restrictions.

An option for the Preferred Alternative would maintain 400 spaces on the existing surface parking lot to the south of the existing transit center, rather than converting the area for bus layover and circulation, for a total of 2,300 parking spaces at the park-and-ride. Bus layover and circulation would instead occur just north of the transit center.



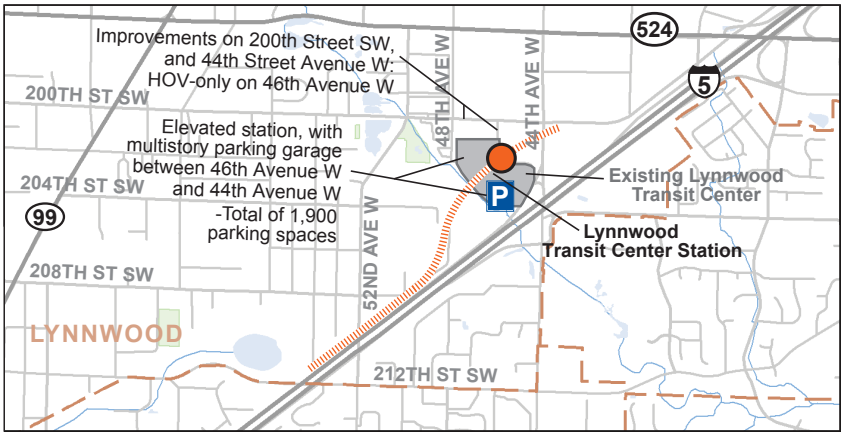
B2A: EAST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO WEST SIDE WITH 220TH STATION NORTH OPTION



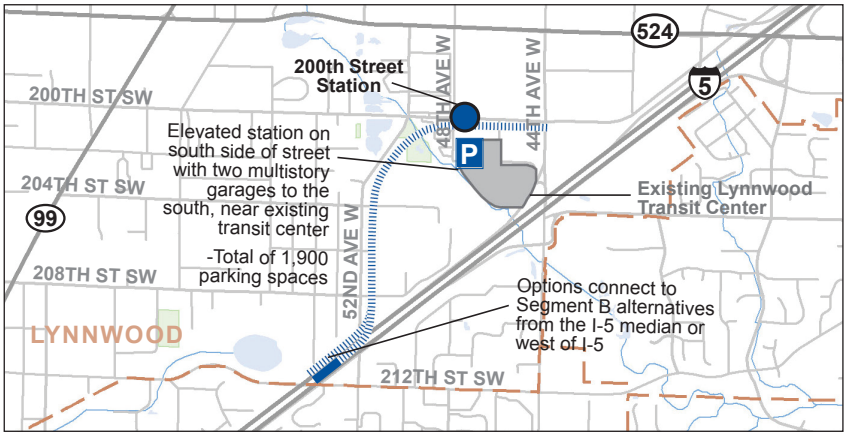
B4: EAST SIDE TO MOUNTLAKE TERRACE FWY STATION TO MEDIAN

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure 2-8
Alternatives B2A and B4



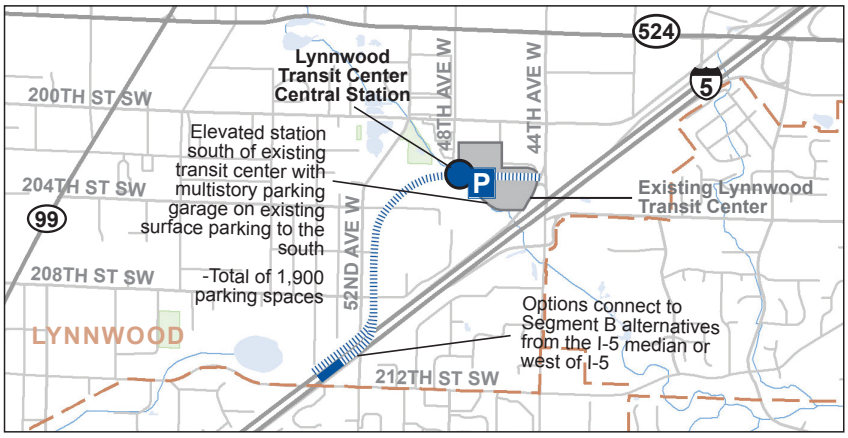
PREFERRED ALTERNATIVE SEGMENT C:
WEST SIDE TO LYNNWOOD TRANSIT CENTER STATION



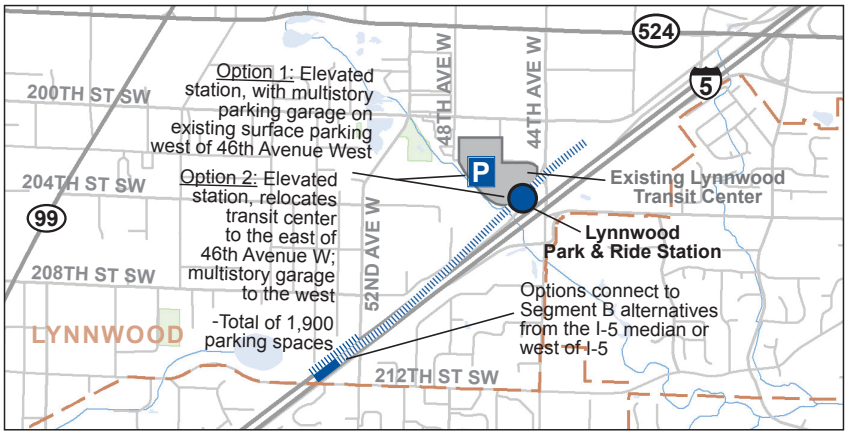
C1: 52ND AVE WEST TO 200TH STREET STATION

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure 2-9
Preferred Alternative and Alternative C1



C2: 52ND AVE WEST TO LYNNWOOD TRANSIT CENTER STATION



C3: ALONG I-5 TO LYNNWOOD PARK & RIDE STATION

Elevated
At-Grade
Station
Station Option
Parking Structure
Surface Parking

Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure 2-10
Alternatives C2 and C3

Alternative C1: 52nd Avenue West to 200th Street Station

Alternative C1 (see Figure 2-9) begins with two alignment options to connect with Segment B alternatives. Alignment Option 1 connects to the I-5 median (to Alternative B1 or B4). After crossing the I-5 southbound lanes, it would remain elevated along the east side of 52nd Avenue West and Cedar Valley Road. Alignment Option 2 would continue elevated on the west side of I-5 (connecting to the Preferred Alternative and B2A) to 52nd Avenue West, before turning north and crossing over the Interurban Trail. Alternative C1 would then turn east over the corner of Scriber Creek Park and along the south side of 200th Street SW and arrive at the elevated 200th Street SW Station, east of 48th Avenue West.

South of the station, two new two-story parking garages would increase the existing parking by 500 spaces for a total of 1900 spaces. Elevated tail tracks would continue approximately 800 feet east to 44th Avenue West.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center Station

Alternative C2 (see Figure 2-10) and its options are the same as Alternative C1 until crossing over the Interurban Trail around 208th Street SW. As Alternative C2 approaches 204th Street SW, it would turn northeast on an elevated guideway and cross south of Scriber Creek Park to the Lynnwood Transit Center Station. This elevated, center platform station would be south of 48th Avenue NW and the existing Lynnwood Transit Center. A new, approximately 1,200-space parking garage (up to four levels) would replace the surface lot spaces displaced by the station and increase the existing park-and-ride capacity by 500 spaces, for a total of about 1,900 spaces. Tail tracks, with a crossover track, would extend 800 feet beyond the station to 44th Avenue West.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride Station

Alternative C3 also features two options for connections to Segment B alternatives (see Figure 2-10). Alignment Option 1 would continue northward along I-5 at-grade in the median (matching Alternative B1 or B4), transition to an elevated guideway at about 208th Street SW, and then cross over the southbound I-5 lanes and angle away from I-5. Alignment Option 2 would already be elevated on the west side of I-5 (matching Alternative B2 or B2A) and more gradually shift away from I-5 north of 208th Street SW. At 208th Street SW, the Alternative C3 route would cross the Interurban right-of-way and parallel I-5 to the Lynnwood Park-and-Ride Station south of 48th Avenue SW and east of the existing Lynnwood direct access ramp.

Two design options are being considered for the Lynnwood Park-and-Ride Station. Both of these options feature an elevated, center platform station west of the Interurban Trail. The station would include a parking garage (up to four levels) to the west, south of the existing transit center, which would replace current spaces and add approximately 500 new spaces, for a total park-and-ride capacity of about 1,900

spaces. Both design options also feature a guideway containing tail tracks extending about 800 feet northeast over 44th Avenue West.

With Station Option 1, the existing transit center would remain at its current location. The elevated, center platform station would have surrounding open spaces, as well as a large plaza area with a pathway to the northwest toward the existing transit center.

Station Option 2 would be the same except that the existing transit center with 20 bus bays would be relocated adjacent to the light rail station, with transit driveways on and off of 48th Avenue NW, which would be converted to transit-only access.

2.5.4 Light Rail Operations

The light rail alternatives would operate consistent with Sound Transit's current long-range Link service plan, which accommodates the Lynnwood Link Extension and other planned light rail expansions through 2030. Sound Transit would run weekday revenue service with four-car trains at the scheduled frequency shown in Table 2-2.

Table 2-2. Operating Plan for Weekday Service[a]

Service Period	Hours	Train Frequency
Early Morning	5:00 am to 6:00 am	7.5 minutes
Morning Peak	6:00 am to 8:30 am	4 minutes
Midday	8:30 am to 3:00 pm	5 minutes
Afternoon Peak	3:00 pm to 6:30 pm	4 minutes
Evening	6:30 pm to 10:00 pm	5 minutes
Evening Late Night	10:00 pm to 1:00 am	7.5 minutes

[a] Sound Transit also runs several non-revenue trains before and after the service day for maintenance and operation purposes.

2.5.5 Construction Approach

Pre-construction investigations during final design would include geotechnical and/or exploratory investigations to detect unmapped utilities, culverts, or other infrastructure. Some advance utility upgrades or relocations would also occur. Project construction and pre-operations testing activities would last approximately 6 years overall, but in many locations the major construction activities would last about 2 years. Although more detail on the specific construction approaches and methods would be developed when the project enters final design, this Final EIS impact analysis covers the most likely major activities, as described below.

Sound Transit would need several sites to stage construction activities. These areas would have a range of activities and uses, such as construction office trailers; temporary storage of demolition materials for salvage, sorting, and recycling; and

excavated soils storage. Staging areas would also be used to load and unload trucks, store equipment and materials, and allow parking for construction workers. Sound Transit would need access routes for construction areas not readily accessible from existing roadways. Where possible, Sound Transit would locate construction activities on staging areas proposed for use by light rail (some of which is WSDOT right-of-way). Some of these sites may require vegetation removal, clearing, and grading, as well as temporary retaining structures or barriers. Appendix F, Conceptual Plans, shows anticipated construction staging areas.

Construction activities and their approach vary by the type of light rail facilities to be built for a given alternative. Different approaches would be required for:

- At-grade guideways
- Retained cut and fill guideways
- Elevated guideway structures, particularly structures spanning I-5
- Passenger stations
- Park-and-ride facilities
- Traction power substations, and communications and signal control facilities
- Other related improvements such as roadways, sidewalks, noise walls, utility relocations, and drainage and stormwater facilities
- Power transmission line relocations

The first phase of any construction work begins with site preparation. This would include erosion, sediment, and stormwater control measures; sensitive-area protection measures; demolition of structures; and re-routing of utilities. Next, construction of the alignment begins, followed by installation of the guideway. Stations and parking facilities can be constructed concurrently with the guideway if those sites are not needed for staging areas.

Construction activity would be highest during the heavy civil construction period of the project. Elevated guideways, station areas, earthwork, and retaining wall construction typically generate the most intense construction activity because they require greater volumes of materials, equipment, and personnel. Station finishes, system installation, and testing, would be less intense, confined to smaller areas, and generally involve fewer workers.

Sound Transit typically constructs guideways and stations in segments in a linear fashion. In any given location, most of the major civil construction activities would be completed in one year, although stations, park-and-rides, and complex sections can take longer. Sound Transit would avoid major construction late at night, early mornings, and on weekends, as practicable, but some locations and types of work might require exceptions. Elevated guideways and bridges over other roadways are

types of construction that would typically require major construction at night or early mornings on the weekends, largely to minimize traffic impacts. Partial or full street closures as well as potential I-5 lane closures are possible. These temporary closures are discussed in more detail in Chapter 3, Transportation Impacts and Mitigation. Throughout construction, Sound Transit would coordinate closely with local jurisdictions, FHWA and WSDOT, affected residents and neighborhoods, affected commercial and industrial businesses, utility providers, institutions, and other affected local and state agencies to help minimize impacts and disruptions or inconveniences.

As construction is completed, control systems would be installed and tested. Once those are tested and commissioned, the transit system opens to riders.

Potentially Deferred Stations

The Preferred Alternative has options for stations at NE 130th Street and 220th Street SW. If these stations were added to the project, they could be completed with initial construction, or they could be deferred and completed in the future. A deferred station would require some initial station construction activities prior to the opening of the line, followed later by the construction of the balance of the station. Elevated stations have the largest percentage of work that could be deferred to a future stage. In all cases, enough of the station structure must be completed initially so that future construction to complete the station can proceed without interfering with normal operation of the light rail line. Construction activities and impacts would be split into two periods in this case.

2.6 Alternatives Development

Sound Transit developed the alternatives being considered in this Final EIS through a public planning process that dates back many years. The ST2 Plan, financing for which was approved by voters in 2008, was a major step in defining the general scope for a project connecting Northgate to Lynnwood. ST2 defined the project as part of a larger program to expand the regional mass transit system in Snohomish, King, and Pierce counties.

The start of the EIS phase for the Lynnwood Link Extension was built on ST2 planning and the results of an Alternatives Analysis Sound Transit performed in 2010 and 2011 that included early public and agency scoping, which began in October 2010. The Alternatives Analysis considered a broad range of alternatives in order to comply with the federal regulations and guidelines then in place for projects seeking funding from FTA's New Starts program. It resulted in the September 2011 North Corridor Transit Project *Alternatives Analysis Report and SEPA Addendum* (Sound Transit 2011a) (attached as Appendix K to this Final EIS) that identified the most promising alternatives for further study, as well as serving as an addendum to Sound Transit's 2005 *Supplemental EIS on the Regional Transit Long-Range Plan*. The

Alternatives Analysis Report and SEPA Addendum reviewed the project corridor's long planning history and considered in detail a wide range of alternatives and their performance. The North Corridor Transit Project *Environmental Scoping Information Report* summarized the process and its conclusions. Both documents were available during public scoping for the Draft EIS.

Through several stages of detailed study in the Alternatives Analysis, Sound Transit evaluated light rail, bus rapid transit, and transportation systems management alternatives. Sound Transit weighed each alternative's ability to meet the project's purpose and need, considering factors such as ridership and transportation performance, land use, community equity, environmental effects, total cost, cost effectiveness, and constructability. The final set of alternatives considered in the Alternatives Analysis featured an I-5 light rail alternative, two SR 99 alternatives (one with at-grade sections and one fully elevated), and a three-prong bus rapid transit alternative running on I-5, SR 99, and 15th Avenue NE. The final evaluation showed the light rail alternatives would have nearly twice the ridership of the bus rapid transit alternative. Light rail had higher capital costs than bus rapid transit, but would perform better in terms of cost per rider and annual operating costs. Finally, the bus rapid transit alternative had less capacity, and gaps in the HOV system from Northgate to downtown Seattle made it less reliable. The SR 99 alternatives produced more severe impacts and less transportation benefit, and had more constructability issues.

Figure 2-11 charts the alternatives evaluation and screening process and identifies the alternative concepts that were not advanced from the Alternatives Analysis through the start of the Draft EIS. Table 2-3 describes why specific alternatives considered for the Draft EIS were eliminated from consideration.

The Alternatives Analysis found that light rail must operate in an exclusive right-of-way with full separation from other traffic in order to provide the capacity, reliability, and travel time savings needed to address the growing demand for mass transit in the project corridor.

As a result, Sound Transit concluded that light rail along the I-5 corridor would offer the best overall performance across the broad set of evaluation criteria, including ridership and transportation performance, consistency with regional land use plans, and cost-effectiveness.

After the public scoping comment period, the Sound Transit Board reviewed the comments received and the *Alternatives Analysis Report and SEPA Addendum*. In December 2011, the Sound Transit Board approved Motion M2011-87, which directs Sound Transit to study light rail alternatives along I-5 in the EIS and removed the other modes and corridors considered in the Alternatives Analysis from further study. This included routes and stations along SR 99 and 15th Avenue NE, bus

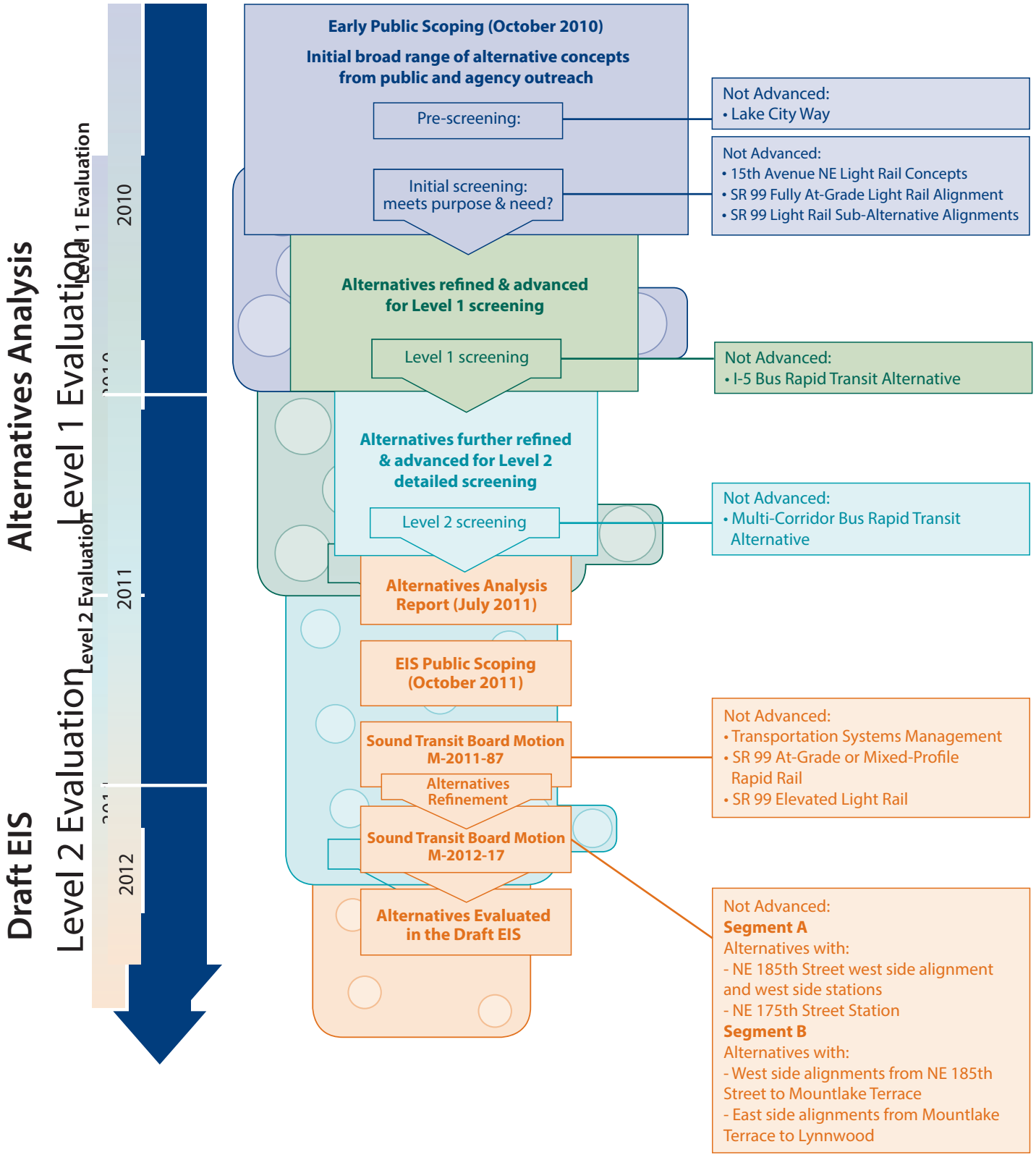


Figure 2-11
Alternative Evaluation and Screening Summary

Table 2-3. Alternatives Eliminated by Sound Transit Board

Alternative	Areas of Poor Performance
A2: At-Grade/Elevated to NE 145th East Side and NE 185th West Side Stations	**Environmental Effects:** Higher potential for visual and historic impacts; west side alignment increases impacts into Segment B **Constructability:** Substantially more difficult due to staging constraints and traffic impacts related to crossing I-5; adds another I-5 crossing in Segment B
A4: Mostly Elevated to NE 145th East Side and NE 185th West Side Stations	**Environmental Effects:** Higher potential for visual and natural resources impacts; west side alignment increases impacts into Segment B **Constructability:** Substantially more difficult due to staging constraints and traffic impacts related to crossing I-5; adds another I-5 crossing in Segment B
A6: At-Grade/Elevated to NE 130th and NE 155th East Side and NE 185th West Side Stations	**Environmental Effects:** Higher potential for historic and visual impacts; west side alignment increases impacts into Segment B **Constructability:** Substantially more difficult due to staging constraints and traffic impacts related to crossing I-5; adds another I-5 crossing in Segment B
A8: Mostly Elevated to NE 130th and NE 155th East Side and NE 185th West Side Stations	**Environmental Effects:** Higher potential for noise, historic, and visual impacts; west side alignment increases impacts into Segment B **Constructability:** Substantially more difficult due to staging constraints and traffic impacts related to crossing I-5; adds another I-5 crossing in Segment B
A9: At-Grade/Elevated to 145th and 175th East Side Stations	**Transportation Performance:** Slower bus and auto travel times due to higher congestion at interchange, lower levels of bus access, and less desirable pedestrian and bicycle environments **Environmental Effects:** Higher congestion due to park-and-ride at an interchange; property and visual impacts to residential areas **Constructability:** More complex construction due to proximity with interchange
B3: East Side to Mountlake Terrace Transit Center to East Side	**Environmental Effects:** Higher potential for noise, visual, and ecosystems impacts due to section located through a greenbelt **Right-of-Way Implications:** More properties needed outside of I-5 right-of-way
B5: West Side to Mountlake Terrace Freeway Station to Median	**Transportation Performance:** Increased walk distance between station platform and parking/bus transfer at Mountlake Terrace; worse platform waiting environment **Ridership Potential:** Reduced due to longer walk distance **Environmental Effects:** Higher potential for visual and ecosystems impacts along west side from NE 185th and from second pedestrian bridge **Constructability:** Substantially more difficult due to necessary design deviations, reduced speeds, and median construction for proposed Mountlake Terrace freeway station
B6: West Side to Mountlake Terrace Transit Center to Median	**Environmental Effects:** Higher potential for visual impacts from sections along the west side of I-5 and at transition to the east side approaching Mountlake Terrace Transit Center **Constructability:** Substantially more difficult due to staging constraints and traffic impacts related to crossing I-5 **Right-of-Way Implications:** Higher potential for property impacts from the west-to-east I-5 crossing
B7: West Side to Mountlake Terrace Transit Center to West Side	**Environmental Effects:** Notably higher visual impacts along west side from NE 185th Street; higher ecosystems and noise impacts due to transition back to west side and along greenbelt; higher ecosystems impacts near S. 212th Street **Constructability:** Substantially more difficult due to additional crossing of I-5 **Right-of-Way Implications:** More properties needed outside of I-5 right-of-way
B7A: West Side to Mountlake Terrace Transit Center to West Side with 220th Street Station	**Environmental Effects:** Notably higher visual impacts along west side from NE 185th Street; higher ecosystems and noise impacts due to transition back to west side and along greenbelt; higher ecosystems impacts near S. 212th Street; potential for historic impacts due to 220th Street Station **Constructability:** Substantially more difficult due to additional crossing of I-5 **Right-of-Way Implications:** More properties needed outside of I-5 right-of-way
B8: West Side to Mountlake Terrace Transit Center to East Side	**Environmental Effects:** Notably higher visual and ecosystems impacts along west side from 185th; higher visual, ecosystems, and noise impacts due to transition across I-5 and along greenbelt **Constructability:** Substantially more difficult due to additional crossing of I-5 **Right-of-Way Implications:** More properties needed outside of I-5 right-of-way

rapid transit, and extensions beyond the Lynnwood Transit Center. Light rail routes along SR 99 and 15th Avenue NE were eliminated because the Alternatives Analysis showed operating in mixed traffic would result in insufficient capacity, slow average speeds, and low reliability. Routes along SR 99 and 15th Avenue NE would not provide the type of regional service identified in the Sound Transit Long-Range Plan nor would the routes meet the project's purpose and need related to transportation effectiveness. Scoping comments from the public and agencies strongly supported further study of I-5 light rail alternatives, and not of the other modes.

Some comments received during scoping suggested different alternatives and/or station locations than those presented by Sound Transit. Sound Transit incorporated some of these suggestions into the alternatives evaluated in this EIS, such as NE 130th Street, NE 155th Street, and 220th Street SW stations. Other suggestions were not advanced because they were not consistent with the project's purpose and need or they would have lower effectiveness and higher environmental impacts. These suggestions are summarized in Table 2-4.

2.6.1 Factors Affecting the Range of Alternatives

In addition to Sound Transit's standard design considerations for light rail projects, several general planning, engineering, and environmental considerations shaped the development of alternatives for connecting Northgate and Lynnwood, from ST2 planning through to the alternatives evaluated in this EIS. These factors reflect the constraints posed by I-5 and its limited available right-of-way, as well as other community and environmental conditions along the project corridor.

- **Develop Alignment and Station Combinations that Minimize Environmental Impacts.** The general route and the specific alternative alignments were developed considering the location of the candidate station sites, along with environmental resources, such as major streams and wetlands, as well as built environment elements such as historic properties, parks, neighborhoods, and community facilities. The routes also maximized the potentially available transportation right-of-way from I-5 and adjacent city streets while maintaining the overall transportation utility of the I-5 right-of-way as a public asset.
- **Avoid the Impacts of Repeated I-5 Crossings.** I-5 crossings require costly crossing structures and cause higher impacts on properties and environmental resources near the freeway, as well as on I-5 operations and maintenance.

Table 2-4. Other Alternatives Suggested During Environmental Scoping

Suggested Alternatives	Reason Not Advanced
Consider stations along 15th Avenue NE at NE 145th Street and NE 175th Street.	15th Avenue NE alignment was removed because it would have higher environmental impacts and lower effectiveness; the narrow avenue along a developed corridor would not accommodate the stations and access levels needed to support the regional service identified in Sound Transit's Long-Range Plan.
Extend light rail to Alderwood Mall, Lynnwood Convention Center, 196th Street, Lynnwood City Center, or Ash Way, to serve more commuters or reduce traffic	An extension could be part of the future project, but it is not consistent with the current project scope, budget, or purpose and need. The project's limits from Northgate to the Lynnwood Transit Center were adopted by the Sound Transit Board and financing was approved by the voters in the region with the passage of the ST2 ballot measure in 2008.
Use Interurban Trail land for alignment.	The former Interurban right-of-way serves as a primary corridor for high voltage electrical transmission lines, and it has been developed as a trail for pedestrians and bicycles. These uses together with numerous areas where development has encroached on the right-of-way make it very difficult to integrate a light rail line without relocating the power lines, portions of the trail, and increasing environmental impacts compared to other available alternatives evaluated in the EIS.
Rebuild Northgate Park-and-Ride in the manner of Hammersmith Station in London with better connections, mixed uses, and amenities.	The Northgate Station is part of the Northgate Link Extension project, which has completed its environmental review process and is now under construction. The Northgate Station is not part of the Lynnwood Link Extension.
Consider staggered stops, run more trains but skip some stations.	Lynnwood Link is an extension of a 2-track line from Northgate that passes through the Downtown Seattle Transit Tunnel. The tunnel must accommodate operations of the light rail network that will extend from Federal Way on the south, Redmond on the east, and Lynnwood on the north. While a skip stop operation between Northgate and Lynnwood might reduce travel times in this section by 90 to 120 seconds, it would significantly increase capital costs and right-of-way needs. In addition, more frequent train service would also tax operations through the Downtown Seattle Transit Tunnel.
Consider a mix of express bus on I-5 between Lynnwood and Northgate, in combination with a limited stop light rail route using SR 99 to connect Lynnwood to Northgate.	An SR 99 alignment as well as the use of express bus or Bus Rapid Transit as modes were removed because they would not provide the levels of speed, reliability, and capacity needed to make effective regional corrections as envisioned in Sound Transit's Long-Range Plan.

- **Maximize the Advantages in Existing Transit Infrastructure in Potential Station Sites**. Siting stations at or near existing transit facilities makes efficient use of existing investments and optimizes connections between light rail and local bus services. Light rail stations need a section of straight and level track to hold four-car trains, which are 380 feet long. Station sites also need to be accessible, and ideally would provide opportunities for transit-oriented development.

- **Maximize the Advantages of Existing Transportation Rights-of-Way.** A light rail route along I-5 provides certain environmental and cost advantages over routes in entirely new rights-of-way. Sound Transit and WSDOT collaborated to identify where Sound Transit could reasonably anticipate using I-5 ROW for light rail without impacting WSDOT's ability to make future highway improvements, and without significant safety, maintenance, or operational impacts, consistent with FHWA regulations. They considered highway and light rail design standards, as well as safety and operation and maintenance needs for the highway. These efforts produced the *I-5 Light Rail Compatibility Report* (Sound Transit 2012) (attached as

Appendix Q to this Final EIS), which is the basis for the conceptual engineering of the Draft EIS alternatives and their assumptions about using WSDOT's right-of-way. Ultimately, FHWA must approve the project's use of the I-5 right-of-way.

In each of the three project segments, the range of alternatives Sound Transit considered reflects the above factors. In Segment A, for instance, all the alternatives evaluated in this EIS are on the east side. This is partly because the I-5 right-of-way is very limited on the west side in Segment A, and Sound Transit found more areas on the east side where rights-of-way for I-5 and local streets could be combined to accommodate light rail. This helped reduce comparative environmental impacts. In addition, the existing Northgate Transit Center requires the project to start on the east side of I-5, and there were more potential station sites with existing infrastructure, access, and available rights-of-way on the east side from Northgate up to nearly NE 175th Street.

Also, the west side has more parks that could be affected, such as Northacres Park, Twin Ponds Park, and Ronald Bog Park. Several of these parks contain streams and wetlands, and Thornton Creek also runs adjacent to I-5 between NE 145th Street and NE 163rd Street.

Overall, alignments on the east side of I-5 have more advantages and would have fewer impacts than west side alignments or east-west crossings. Potential west side or east-west crossing alternatives would result in higher costs, environmental impacts, and operating concerns.

During the alternatives development, Sound Transit again applied its design standards and reviewed operating, impact, and cost factors to develop and refine alternatives. For example, Segment A at NE 155th Street, Sound Transit modified the siting of a parking garage for Alternatives A5 and A7 to avoid affecting a historic home. In Segment B, it modified Alternatives B2 and B2A on the west side of I-5 to avoid affecting a historic school.

In Segment C, Sound Transit considered a variety of station and alignment concepts before defining the Segment C alternatives in this EIS. These concepts included alternatives that bisected more of the Scriber Creek wetland area, crossed nearer to Scriber Creek Park, occupied more area of the Edmonds School District site, or placed stations and tail tracks in areas requiring more properties. Sound Transit also reviewed the estimated costs, effectiveness, and impacts with cooperating agencies, including the City of Lynnwood, for all alternatives.

2.6.2 Developing Details of the Alternatives

After the Alternatives Analysis, Sound Transit defined a more detailed range of potential alignment and profile alternatives along the I-5 corridor. The Alternatives Analysis examined only a representative I-5 alternative and route that featured four stations. Sound Transit explored a variety of station and alignment design and siting choices along the I-5 corridor from Northgate to Lynnwood. The concepts reflected public and agency comments and suggestions made during the environmental scoping comment period. Sound Transit also developed alignment, profile, and station siting concepts by working with local jurisdictions and WSDOT.

After developing several I-5 alternative concepts, Sound Transit evaluated how well these various concepts addressed the project's purpose and need and how they affected constructability, impacts, and costs (the same factors considered during the Alternatives Analysis). Other evaluation criteria considered consistency with the approved ST2 program, station access needs, development constraints, Sound Transit policies, and design guidance.

Definition of EIS Alternatives by Geographic Segment

From the I-5 corridor alternative concepts, Sound Transit developed a range of potential Draft EIS alternatives in three segments from Northgate to Lynnwood, and presented them in a draft Sound Transit Board Briefing Book in March 2012. The Sound Transit Board members suggested other alternatives and variations, and Sound Transit completed a Final Board Briefing Book in April 2012 (included in Appendix K, Supporting Documents). The Briefing Books, which were publicly available, evaluated each alternative under consideration.

After reviewing the Briefing Book and public comments, the Sound Transit Board passed Motion M2012-17 regarding the alignment and station alternatives to be considered in the Draft EIS. It removed a number of the potential alternatives from further consideration based on their higher impacts, costs, and/or lower benefits when compared to other alternatives (see Figure 2-11). The Board added a few alternatives that offered different pairings of alignments and stations for consideration. The alternatives identified in Motion M2012-17 were analyzed in the Draft EIS.

After the publication of the Draft EIS and the close of the public comment period, the Sound Transit Board considered the Draft EIS information, public comments received, and supporting briefing materials. With Motion M2013-96, the Board identified a Preferred Alternative for evaluation in the Final EIS and requested that staff consider options and modifications to the Preferred Alternative and other alternatives. Section 2.4 describes the resulting range of light rail alternatives.

Draft EIS Public and Agency Comments Suggesting New or Modified EIS Alternatives

Before preparing the Final EIS, Sound Transit reviewed comments on the Draft EIS that suggested modifying the alternatives or adding other alternatives. Many of these comments focused on station area elements and features, particularly measures that would improve multimodal access. The conceptual design plans for the Preferred Alternative reflect some of these suggestions, and might be integrated during final design.

Other comments suggested moving the alignments to the west side of I-5 in Segment A, which was already considered in earlier planning but not advanced due to environmental, design, and station siting constraints, as described in Section 2.6.1. Other comments suggested lids or tunnels to allow light rail to run under or above I-5, which was not considered further due to high construction impacts to I-5. A number of comments suggested designing the stations to specifically accommodate transit-oriented development, including developments above the stations; in station locations outside the I-5 right-of-way, such opportunities to accommodate other developments would remain available to the project, but would require partnerships with developers before more specific designs would be developed. A few parties suggested widening roadways such as NE 145th Street or at 200th Street SW. The project includes specific intersection improvements; however, its traffic impacts do not warrant major widenings. Other suggestions, such as a median station at 220th Street SW, a modified station at NE 155th Street, or a station at NE 175th Street, had been previously considered but were not advanced because other alternatives with lower impacts and higher benefits were available.

In Segment C, the City of Lynnwood suggested a "C3 Modified," which Sound Transit and the City collaborated to refine, resulting in what is now the Segment C Preferred Alternative. The Pilchuck Audubon Society suggested Sound Transit extend the route farther along I-5 before shifting to the Lynnwood Transit Center or Alderwood Mall to avoid impacts on Scriber Creek Park and the adjacent stream and wetland complex. This suggestion was not incorporated because of conflicts with existing freeway direct access ramps and related design and engineering challenges.

More details on specific comments and Sound Transit's responses are provided in Appendix P, Draft EIS Public Comments and Responses.

2.7 Environmental Practices and Commitments

As an agency that has built and operated light rail, commuter rail, and regional express bus service in multiple Puget Sound communities, Sound Transit has established programs, best practices, and policies that are incorporated as part of the Lynnwood Link Extension. These include the agency's sustainability and environmental management programs (as outlined in Sound Transit's Sustainability Plan), along with

Sound Transit's design standards for light rail, its commitment to work collaboratively with other jurisdictions, and its commitment to obtain and comply with all required permits and approvals needed for construction and operation.

2.8 Estimated Project Costs

With seven alternatives in Segment A, four in Segment B, four in Segment C, and options for many alternatives, there are many possible segment combinations that could create the full 8.5-mile light rail extension from Northgate to Lynnwood. The Preferred Alternative's estimated capital costs are $1.5 billion to $1.7 billion. The other possible combinations have total capital costs that range between $1.4 billion and $2.0 billion. The Preferred Alternative is estimated to cost about $16 million (2014$) per year to operate and maintain. Other alternatives would be similar. Chapter 5, Evaluation of Alternatives, has information on estimated project costs by alternative.

2.9 Other Project Area Activities

The Lynnwood Link Extension is being proposed in an area with vibrant, established urban communities. These communities, and the transportation systems that serve them and the region, will continue to change to accommodate additional people and jobs through 2040.

There are no other major transportation projects that would span the full project corridor. However, at the southern end of the project corridor, Sound Transit will open the Northgate Link Extension, with a new light rail station and parking garage, in 2021. Sound Transit is also conducting planning and environmental review for a separate project, the Link Operations and Maintenance Satellite Facility, which includes an alternative in the project corridor (see Section 2.9.1 below). In addition, future tolling along I-5 is possible, and some local transportation projects will be developed nearby.

All of the area jurisdictions have adopted plans that anticipate increased development in the corridor, and some landowners are considering redevelopment actions. Appendix H, Other Projects and Actions Considered in Cumulative Effects, lists the projects considered in the cumulative effects analysis. Chapter 3, Transportation Impacts and Mitigation, and Chapter 4, Environmental Impacts and Mitigation, consider the cumulative effects of the Lynnwood Link Extension in conjunction with these and other plans and projects.

2.9.1 Link Operations and Maintenance Satellite Facility

Sound Transit plans to construct and operate a Link Operations and Maintenance Satellite Facility (OMSF) to support light rail operations and maintenance needs for the ST2 program of projects across the Sound Transit district. Sound Transit and FTA issued a separate NEPA/SEPA Draft EIS for this facility in May 2014 and are

now preparing its Final EIS. The new OMSF would operate in conjunction with Sound Transit's existing Forest Street Operations and Maintenance Facility (OMF) in Seattle to support the 80 additional light rail vehicles required for ST2's expanded system. The Forest Street OMF would continue to provide inspection, heavy repair, and overhaul services, while the OMSF would store, maintain, and dispatch vehicles for daily service.

This Lynnwood Link Extension EIS analysis assumes the OMSF along with other ST2 projects, as part of the No Build and all build alternatives. The OMSF is expected to be operating by 2021, before the Lynnwood Link Extension is complete. Even if the Lynnwood Link Extension does not go forward, Sound Transit will construct the OMSF to accommodate other elements of the ST2 Plan. Therefore, the OMSF is related to the Lynnwood Link Extension but it has independent utility under NEPA and SEPA.

Similarly, Sound Transit does not require the OMSF in order to build and operate the Lynnwood Link Extension, although it needs the OMSF to operate at the level of light rail service assumed for the ST2 program. If the OMSF is delayed or not constructed, Link operation and maintenance would occur exclusively at the Forest Street OMF. Thus, the Lynnwood Link Extension has independent utility from the OMSF project. However, Lynnwood Link Extension service levels without the OMSF would be substantially lower than with it. During peak periods, the OMSF would enable four-car trains at 4-minute headways between the Lynnwood Transit Center and International District Station in Seattle. Without the OMSF, the Lynnwood Link Extension would run three-car trains and have longer peak-hour headways.

Lower service levels and reduced capacity could result in overcrowding on trains and platforms and reduced ridership for the Lynnwood Link Extension. However, even with lower ridership, the Lynnwood Link Extension project's impacts would not be notably different than described elsewhere in this EIS. Lower ridership could, however, make the project less competitive for federal Capital Investment Program funding, and would prevent it from realizing its full potential benefits. Appendix R, Link Operations and Maintenance Satellite Facility Analysis, summarizes the potential change in impacts with lower service levels compared to those with the OMSF as assumed in the No Build and light rail alternatives evaluated in this EIS.

The OMSF would require 20 to 25 acres of land to serve the complete ST2 light rail system. The location must be adjacent to an operating line in the north or the east to provide efficient and reliable system-wide service. The OMSF Draft EIS (May 2014) evaluated one alternative in Lynnwood (Figure 2-12) and three alternatives in Bellevue: (see Figure R-1 in Appendix R).

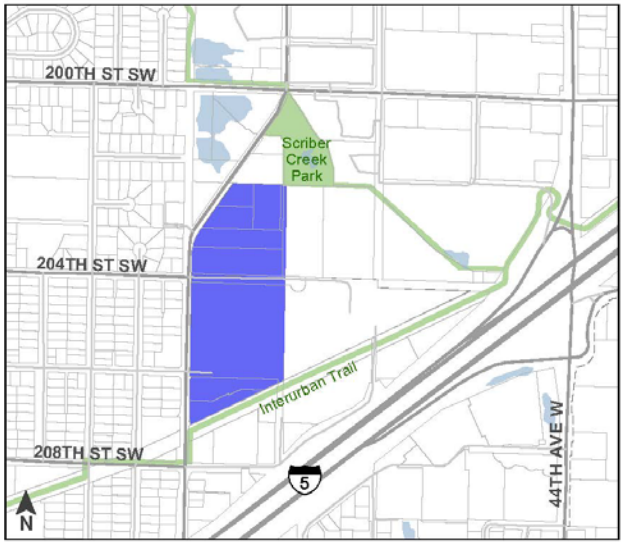


Figure 2-12
Location of Lynnwood Alternative in Sound Transit's Link Operations and Maintenance Satellite Facility EIS

The Lynnwood Alternative is north of I-5, west of the Lynnwood Transit Center, and east of 52nd Avenue West/Cedar Valley Road. It has design options that would match the configuration of any of the Lynnwood Link Extension light rail alternatives. To provide morning service to the Eastside, this alternative would be paired with a small Bellevue facility called the BNSF Storage Tracks with additional light rail vehicle storage, operator report facilities, and interior cleaning functions for up to 32 vehicles. This would be north of NE 12th Street and south of SR 520 within the Sound Transit-owned portion of the Eastside Rail Corridor and on an adjacent property to the east. The three alternatives in Bellevue, the BNSF Alternative, the BNSF Modified Alternative, and the SR 520 Alternative, are described in Appendix R and shown in Figure R-1 of that appendix.

On July 24, 2014, the Sound Transit Board identified the BNSF Alternative as the Preferred Alternative for evaluation in the OMSF Final EIS along with other alternatives (Motion M2014-51). A final decision on the OMSF site will be made after publication of the project's Final EIS, expected in summer 2015.

Because these two projects have independent utility, this Lynnwood Link Extension EIS describes and summarizes where the impacts of the OMSF alternatives worsen or change the impacts of the Lynnwood Link Extension, just as the EIS analyzes the project's potential impacts in combination with those of other reasonably foreseeable projects in the vicinity. The analysis of potential cumulative impacts of the Lynnwood Link Extension and the OMSF project is based on the OMSF Draft EIS and the Lynnwood Link Extension Final EIS. Appendix R summarizes the potential impacts of all the OMSF alternatives described in the OMSF Draft EIS; that Draft EIS can be found on Sound Transit's website (http://www.soundtransit.org/Projects-and-Plans/Link-Operations-and-Maintenance-Satellite-Facility).

2.10 Key Steps for this Project and the EIS

From September 24 through October 27, 2010, Sound Transit and FTA conducted an early scoping process for an Alternatives Analysis for the project; three public meetings were held to provide project information to the public. Early scoping is an optional step in the state and federal environmental review process and is meant to engage the public, agencies, and other stakeholders in the alternatives analysis process, which occurs before defining the alternatives evaluated in the EIS.

A year later, with completion of an *Alternatives Analysis Report and SEPA Addendum* (Sound Transit 2011a), FTA issued the Notice of Intent to prepare an EIS, after which Sound Transit and FTA conducted the environmental scoping process for the EIS from September 30 through October 31, 2011. Environmental scoping is required under SEPA and NEPA and allows the public, agencies, and tribes an opportunity to provide comments on the proposed project alternatives, Purpose and Need Statement, and potential environmental impacts. The comments received during environmental scoping helped Sound Transit and FTA refine the Purpose and Need Statement, define the scope of analysis for this EIS, and identify potential significant impacts resulting from the proposed project. Chapter 6, Public Involvement, provides additional details about the environmental scoping process and outreach for the project to date.

The Draft EIS was released on July 26, 2013, with a 60-day comment period. After considering the analysis in the Draft EIS and the public and agency comments, the Sound Transit Board identified a Preferred Alternative (Motion M2013-96) for evaluation in the Final EIS along with other alternatives. Chapter 6, Public and Agency Involvement, has further details on the Draft EIS public meetings and hearings, as well as other public involvement activities since the publication of the Draft EIS. Chapter 7, Draft EIS Comments and Responses, summarizes the public comments Sound Transit and FTA received, and Appendix P, Draft EIS Public Comments and Responses, provides the detailed comments and responses.

2.11 Next Steps

The Sound Transit Board will consider the analysis in the Final EIS, including public and agency comments and responses, and will then select the project alternative to be built. After the Board's decision, FTA also is expected to publish its Record of Decision (ROD) for the project, which will document findings by FTA that the project has met the requirements of NEPA and related environmental regulations. It will describe FTA's decision on the project, alternatives considered, the basis for the decision to approve the project, and mitigation measures required as conditions of FTA approval.

FTA is directed to issue a combined Final EIS and ROD document pursuant to Public Law 112-141, 126 Stat. 405, Section 1319(b) unless it determines, for statutory criteria or practicability reasons, that separate EIS and ROD documents are appropriate. A

joint Final EIS/ROD is not required when a Draft EIS does not identify a Preferred Alternative, which was the case with the Lynnwood Link Extension Draft EIS. The Lynnwood Link Extension EIS is a joint NEPA and SEPA document consistent with 40 CFR 1506.2(c) and it supports decision-making by Sound Transit, FTA, and other agencies, but the timing of their decisions varies. For example, SEPA requires that the Sound Transit Board's final decision on the project to be built be informed by the Final EIS, and a final decision cannot be made until the Final EIS has been issued. The FTA ROD is required to describe the final project decisions and therefore must be issued after the Sound Transit Board's final decisions on the project. FTA has thus determined it is not practical to issue a combined Final EIS and ROD; these documents are being published separately.

After the Sound Transit Board selects the project to be built and FTA issues a ROD, Sound Transit will initiate final design, begin property acquisition, conduct construction planning, and apply for the other permits and approvals needed to construct and operate the project. This includes the FHWA approvals needed to construct and operate the light rail project within the interstate right-of-way. FHWA is expected to issue its own ROD for the project and can use this Final EIS to help meet other applicable decision requirements. Similarly, the local jurisdictions issuing permits for the project may rely on the Final EIS to help satisfy their SEPA requirements. Final design and permitting is scheduled for 2015 to 2018. Construction of the project is expected to start in 2018 and end in 2023, with service starting in late 2023.

3 TRANSPORTATION IMPACTS AND MITIGATION

This chapter summarizes the characteristics of the transportation system in the Lynnwood Link Extension study area and describes potential impacts and mitigation associated with the project alternatives.

The analysis of the transportation system considers the following transportation elements:

- Regional context and travel patterns
- Transit service and operations
- Freeway operations
- Arterial and local street operations
- Nonmotorized facilities
- Freight mobility and access
- Parking
- Safety

This chapter describes the existing transportation environment for each transportation element, and then presents the analysis results showing potential impacts and mitigation. A more detailed discussion of the transportation analysis and results is in the *Transportation Technical Report*.

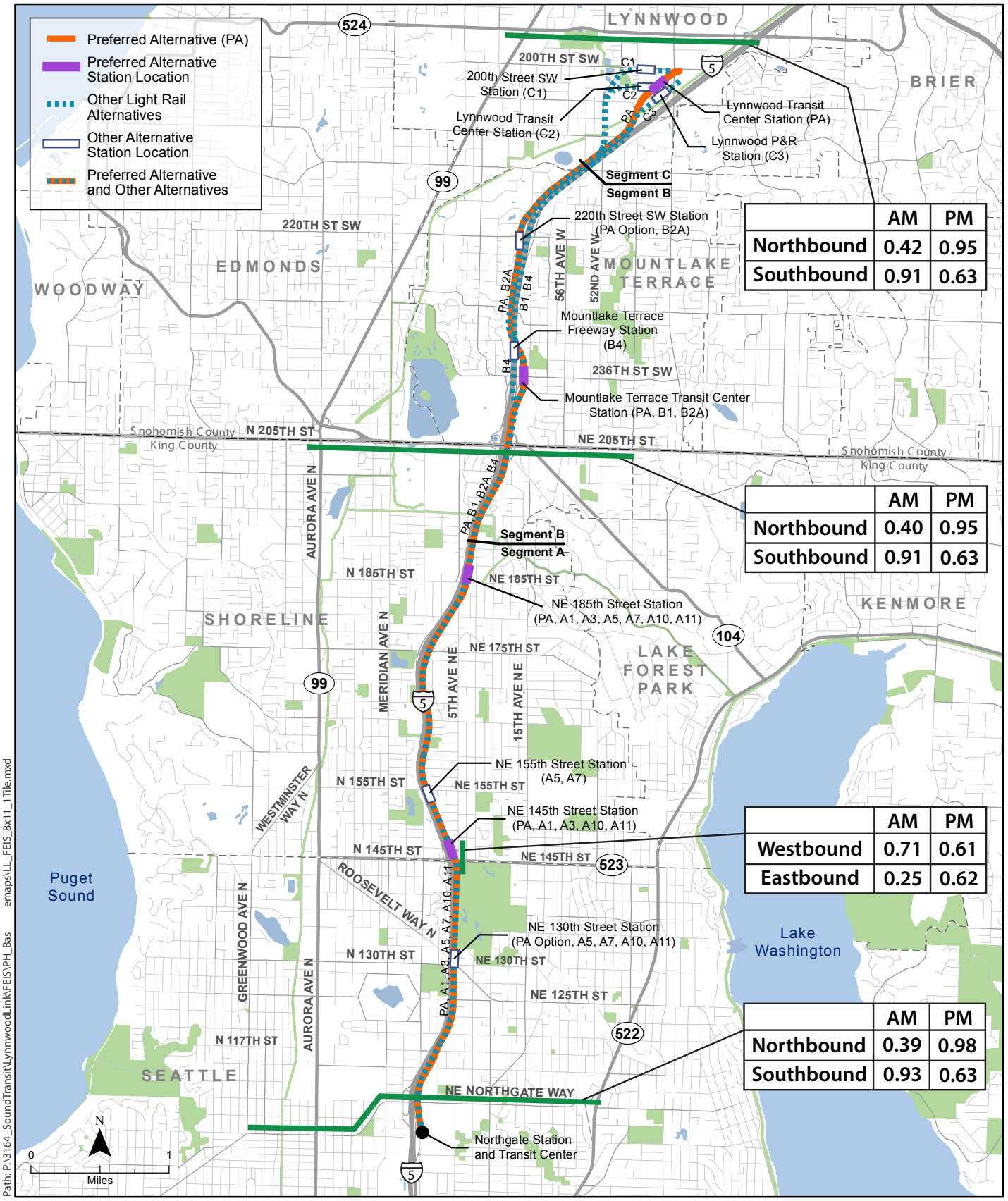
3.1 Affected Environment

3.1.1 Regional Context and Travel Patterns

Transportation Facilities

The project area is served by a network of roadways consisting of a major interstate route (I-5), state highways (SR 99, SR 523, and SR 104), and other local arterials and roads. Figure 3-1 shows the street and highway network in the Lynnwood Link Extension study area, as well as the screenline volume-to-capacity (v/c) ratios during peak hours at selected locations (described below under Travel Demand and Patterns). Higher v/c ratios generally indicate more congested traffic conditions.

The primary north-south freeway serving the project area is I-5, which provides regional and interstate movement and access to the project corridor's local communities. I-5 also serves regional express bus service in the corridor, and the freeway is at or near capacity during many hours of the day. SR 99 (Aurora Avenue North), SR 523 (also known as North/NE 145th Street), SR 522, and SR 104 are other state highways located within the project area that provide access to bus transit, passenger rail, ferries, and the movement of freight through the area. More information on transportation facilities is provided in the *Transportation Technical Report*.



	AM	PM
Northbound	0.42	0.95
Southbound	0.91	0.63

	AM	PM
Northbound	0.40	0.95
Southbound	0.91	0.63

	AM	PM
Westbound	0.71	0.61
Eastbound	0.25	0.62

	AM	PM
Northbound	0.39	0.98
Southbound	0.93	0.63

Screenlines

$$\text{Volume-to-Capacity (V/C) Ratio} = \frac{\text{Total Peak Hour Traffic Volume}}{\text{Available Peak Hour Roadway Capacity}}$$

Figure 3-1
Existing Peak Hour Volume-to-Capacity (V/C) Ratios at Screenline Locations

Several of the north-south arterials that connect neighborhoods and commercial districts in the project area include Greenwood Avenue North, Westminster Way North, Aurora Avenue North (SR 99), Meridian Avenue North, 5th Avenue NE, 15th Avenue NE, SR 522, 52nd Avenue West, and segments of Roosevelt Way North. Some of the major east-west trips are served by NE 130th Street, NE 145th Street, and NE 175th Street—all of which access I-5 with interchanges where congestion occurs regularly. North 117th Street, NE 155th Street, and NE 185th Street cross I-5 and connect business districts on each side. Within Lynnwood, 200th Street SW provides an arterial connection between SR 99 and the Lynnwood Transit Center.

Travel Demand and Patterns

Miles Driven and Hours Spent in Travel

Table 3-1 shows the vehicle miles traveled (VMT) and vehicle hours of travel (VHT) for the Puget Sound region as modeled with the Sound Transit Highway Model[1].

Table 3-1. Daily Vehicle Miles of Travel (VMT) and Vehicle Hours of Travel (VHT) in the Puget Sound Region for Base Year 2011

Alternative	VMT	VHT
Base Year (2011)	79,440,000	2,210,000

Source: Sound Transit Highway Model.

Vehicles Traveling through the Corridor

To help measure regional traffic conditions, Sound Transit set several screenlines in the study area and calculated traffic volumes and v/c ratios on the combined group of north-south freeways and arterials in the corridor. A v/c ratio above 0.90 (or 90 percent of capacity) typically represents congested conditions. A v/c ratio of 1.0 indicates that a corridor is operating at capacity and represents highly congested conditions. Figure 3-1 shows the screenline locations and results.

A "screenline" is an imaginary line across a section of freeway and/or arterials. Screenlines are often used in traffic analyses to determine how much volume is entering or exiting a particular area based on how much traffic crosses the screenline.

The corridor's peak period traffic follows typical commute patterns. These commuter trips are heavily oriented southward toward jobs in Seattle in the morning peak period and northward back to the cities with large residential bases in the evenings.

During the AM peak hour, the screenlines show the project corridor, including I-5 and north-south arterials, exceeds 90 percent of capacity in

[1] Sound Transit Highway Model is based on PSRC Regional Model: WSDOT Project Version.

the peak southbound direction and is consistently congested. Traffic in the reverse direction in the morning is much lighter.

For the PM peak hour traveling northbound, the screenlines again show traffic volumes at up to 98 percent, which is nearly at capacity, reflecting highly congested conditions. The reverse peak direction in the evening is lighter but has high volumes as well, particularly on I-5.

Additional discussions regarding travel patterns across these north-south screenlines and an east-west screenline are provided in the *Transportation Technical Report*.

People Traveling through the Corridor

Table 3-2 shows the number of persons traveling through the corridor during the PM peak period at two screenline locations in Base Year 2011. The person throughput includes trips on I-5, SR 99, and other north-south arterials via automobile and transit.

Table 3-2. Person Throughput—PM Peak Period for Base Year 2011

Screenline Location	Alternative	Northbound	Southbound	Total
North of NE Northgate Way	Transit	11,000	2,000	13,000
	Automobile	62,000	40,000	102,000
	Total	73,000	42,000	115,000
South of North 205th Street	Transit	7,000	1,000	8,000
	Automobile	49,000	32,000	81,000
	Total	56,000	33,000	89,000

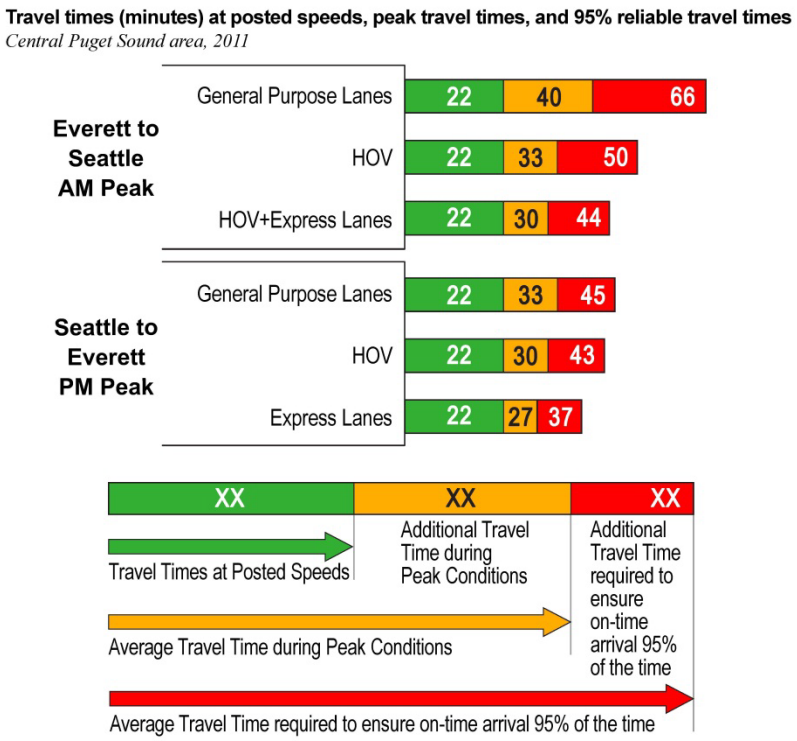
Source: Sound Transit Highway Model.

I-5 Congestion

I-5 is the most heavily traveled highway in the state, carrying from 159,000 to 196,000 vehicles on an average day in the project corridor. As a result of the high volume of travel and limited capacity in the project corridor, peak period traffic is consistently congested and travel times are unreliable.

WSDOT's time reliability calculator (Figure 3-2) illustrates that a peak period trip between Everett and Seattle at free-flow speeds should take about 22 minutes on I-5 (WSDOT 2012), but currently it takes much longer to make the trip during peak travel periods. For example, in the morning peak period a driver must typically allow 66 minutes for the southbound trip; however, a vehicle trip in the HOV lane is calculated at 50 minutes—a saving of 16 minutes.

Reverse commutes are unreliable as well because of bottleneck locations at several points in the corridor where reversible lanes, HOV lanes, and interchanges create regular backups, particularly from NE 145th Street south to Northgate and toward downtown Seattle.



Source: The 2012 Congestion Report (WSDOT 2012).

Figure 3-2. Travel-Time Reliability for the Everett-to-Seattle Commute

Unreliable travel on I-5 HOV lanes in the peak direction during the peak period affects transit because that is when most transit service occurs. The WSDOT-adopted HOV lane policy calls for HOV lanes to maintain an average speed of 45 mph or greater at least 90 percent of the time during the peak hour for both the morning and afternoon. The I-5 HOV lanes in the project corridor do not currently meet this performance standard. In addition to the peak direction, buses traveling in the non-peak direction (e.g., southbound during the PM peak period) must travel in general purpose lanes from Northgate to downtown Seattle because the reversible express lanes operate in the peak direction only. Thus, these bus trips are subject to general purpose traffic congestion for that portion of the trip.

HOV lane performance is also affected by the operation of the adjacent general purpose lanes. Travel in the HOV lane is often slowed when there is nearby slow traffic in the general purpose lane (i.e., "lane friction") due to the limited physical separation between the HOV lane and general purpose lanes, as well as non-standard lane widths and limited shoulder width to the left of the HOV lane. Drivers in the HOV lane are often reluctant to travel at faster speeds than vehicles in the next lane, and the different speeds make it difficult to move in and out of the HOV lane.

In addition to high traffic volumes and congestion on I-5, the high frequency of collisions contributes to unreliable travel. Along the approximately 10-mile section of I-5 in the project area (Northgate to Lynnwood, milepost [MP] 172 to 182), over 80 percent of the collisions were rear-end or sideswipe collisions, and about 60 percent of the collisions occurred during the peak travel periods.

PSRC's *Transportation 2040* and the *Washington Transportation Plan* do not include major expansions of highway capacity in the corridor. This is, in part, because there is little room to expand the existing roadway without high capital, societal, and environmental costs and impacts in comparison to the mobility benefits it would provide. Regional transportation planners expect the current high levels of travel demand to continue growing, and congestion and unreliability for travelers on I-5 will increase through 2040 (PSRC 2010b).

3.1.2 Transit

Regional Transit

This subsection describes existing transit service in terms of service characteristics, ridership, and transit travel times. More detail is provided in the *Transportation Technical Report*.

Service Characteristics

Transit services within the study area are provided by Community Transit, King County Metro, and Sound Transit. Bus routes along I-5, operated by Sound Transit, Community Transit, and King County Metro, provide long-distance service between major transit centers in the study area and major urban centers in the region. Sound Transit's ST Express service provides two-direction, all-day service between major regional destinations. Community Transit and King County Metro services along I-5 in the study area are primarily peak-direction, peak-period service, which is oriented to commuters. Swift, Community Transit's bus rapid transit service, operates along the Snohomish County portion of the SR 99 corridor. King County Metro's RapidRide E Line began service on Aurora Avenue North in February 2014. The frequency and number of bus routes in service increase during the peak periods, primarily in the peak direction of travel. These routes connect park-and-rides and transit centers in Snohomish and north King counties with major employment centers in the city of Seattle.

In the Lynnwood Link Extension study area, there are three transit centers with park-and-ride facilities, and two additional locations with smaller park-and-ride lots. These facilities are listed in Table 3-3.

Table 3-3. Existing Transit Center and Park-and-Ride Facilities in the Lynnwood Link Extension Study Area

Transit Facility	Type of Facility	Park-and-Ride Stalls
Northgate Transit Center (includes adjacent facilities at Northgate Mall and Thornton Place)	Transit Center, Park-and-Ride	1,523
5th Avenue NE/NE 133rd Park-and-Ride (I-5 at NE 130th Street)	Park-and-Ride	46
North Jackson Park Park-and-Ride (I-5 at NE 145th Street)	Park-and-Ride	68
Mountlake Terrace Transit Center (I-5 at 236th Street SW)	Transit Center, Park-and-Ride	880
Lynnwood Transit Center	Transit Center, Park-and-Ride	1,370

Note: Transit routes and park-and-ride stalls listed as of summer 2012. Stall capacities do not include accessible spaces or spaces reserved for other uses.

Sources: http://www.communitytransit.org/parking/; http://metro.kingcounty.gov/tops/parknride/pr-north-seattle.html; http://www.soundtransit.org/Rider-Guide/Parking-facilities

The Northgate Transit Center is accessed by general purpose ramps to and from the I-5 mainline, express lanes (to and from the south only), and arterials. Freeway flyer stops at NE 145th Street (northbound and southbound) are accessed from the outside general purpose lanes. Regional transit serving the NE 145th Street flyer stops must leave the inside HOV lane, weave through congested general purpose lanes to exit to the flyer stops, re-enter I-5, then weave again to re-enter the inside HOV lane. Regional transit currently accesses the Mountlake Terrace Transit Center using an in-line freeway station accessed directly from the HOV lanes. Regional transit serves the Lynnwood Transit Center via a direct access ramp to/from the HOV lanes.

These transit centers and park-and-ride facilities connect adjacent neighborhoods with transit service traveling along I-5 and regional arterials. These transit routes provide service to a variety of destinations, including downtown Seattle, University District, Northgate Transit Center, Aurora Village, and Mountlake Terrace Transit Center.

Ridership

Table 3-4 shows the daily bus ridership for regional bus routes on I-5 north of Northgate along with various locations on other key transit corridors in the region. Ridership on I-5 at the Ship Canal Bridge includes riders from north of Northgate, in addition to those boarding farther south between Northgate and the Ship Canal. This information shows that the project corridor currently carries the second highest bus ridership volumes in the region.

Table 3-4. Daily Bus Ridership on Select Regional Corridors—Base Year (2011)

	Bus Ridership
I-5, North of NE Northgate Way	19,400
I-5, Ship Canal Bridge	33,400
I-5, South of West Seattle Bridge	16,400
I-5, South of I-405	9,200
SR 520, Midspan	16,000
I-90, Between Seattle and Mercer Island	11,600
I-90, East of 148th/150th Avenue SE Interchange	4,000
I-405, North of SR 520	4,400
I-405, South of SR 520	4,000

Source: Sound Transit Ridership Forecasting Model.

Transit Travel Times

Table 3-5 shows scheduled transit travel times during the peak period between Shoreline (I-5 at NE 145th Street) and Lynnwood (Lynnwood Transit Center) and other regional destinations. Longer transit travel times reflect congestion as well as the need to transfer between routes to reach some destinations. The longest trips are northbound in the evening. The greater evening congestion in the I-5 general purpose and HOV lanes causes lower speeds, more stop-and-go, and longer, less predictable travel times. In addition, the southbound transit trips are slower in the PM peak period for some origin/destination pairs due to congestion and because the I-5 express lanes are operating northbound. More detailed information on transit travel times is provided in the *Transportation Technical Report*.

Table 3-5. Peak Period Transit Travel Times (minutes)

	Southbound – AM Peak		Northbound – PM Peak		Southbound – PM Peak	
Destination/Origin	From Shoreline	From Lynnwood	To Shoreline	To Lynnwood	From Shoreline	From Lynnwood
Northgate	16	52[a]	7	70[a]	17	55[a]
University of Washington	25	37	30	32	47	39
Capitol Hill	30	48	62	60	40	66
Downtown Seattle	18	36	22	41	23	35
Sea-Tac Airport	66	79	75	93	66	79

Note: These transit travel times reflect the existing conditions on existing bus routes and, in many cases, include estimated transfer times where direct services is not available. In addition to these travel times, the total transit travel time would include the time to access the bus as a pedestrian, bicyclist, passenger, or driver, along with the wait time for a bus. The wait time for a bus would be dependent on the service reliability (adherence to schedule). If a bus arrival is unreliable, then the riders must arrive prior to the scheduled time and wait until the bus arrives on time or late.

[a] Because the Northgate to Lynnwood route does not have direct service, travel times are longer than comparable trips.

Source: King County Metro Trip Planner, http://metro.kingcounty.gov/.

Transit Level of Service

Sound Transit evaluated the quality of transit service at major transit destinations and activity centers, including the proposed light rail stations for the project alternatives. The *Transportation Technical Report* quantitatively evaluates transit service in more detail. The quality of transit level of service (LOS) was analyzed for the following types of performance measures:

- Service frequency
- Hours of service
- Passenger load (passenger crowding)
- Reliability of service (on-time performance and headway adherence)

Similar to how LOS is typically measured for highway or arterial performance, transit LOS is measured using the letter grades A through F, with LOS A denoting the best performance and LOS F generally considered failing performance. One or more transit providers have direct transit service to the major urban centers in the region, with LOS ranging from A to D, but some proposed Lynnwood Link Extension station areas do not have direct bus service to or from other destinations or urban centers. If no direct bus service was provided between two destinations, LOS was not calculated. Service hours also vary; many destinations with direct transit service provide hours of service at LOS A or B, while others are at LOS E or F. Passenger load LOS in the project corridor ranges from LOS A to B, with the highest passenger loads southbound in the AM peak period and northbound in the PM peak period. When buses are more crowded, they have longer delays at stops and have less reliable travel times. The reliability of service on Sound Transit routes in the project corridor ranges from LOS B to C. Along I-5, buses may get caught in reverse-peak (i.e., southbound) congestion in the afternoon hours, delaying the start of peak direction trips. While the majority of the regional bus routes operate on time, some experience lower reliability and can be late 15 percent of the time or more.

Local and Sub-regional Transit

King County Metro and Community Transit currently provide local and sub-regional transit services in the project area. In addition to the sub-regional services provided by Community Transit's Swift and King County Metro's RapidRide, local buses provide service to several transit centers, park-and-ride facilities, neighborhoods, and activity centers throughout the project area. While local bus routes provide frequent stops (e.g., every two blocks), sub-regional bus routes may have longer distances (such as 0.5 mile) between stops. In addition, dial-a-ride services are offered in many parts of the project area. More details on local and sub-regional bus service are provided by project segment in the *Transportation Technical Report*.

3.1.3 Freeway Operations

Freeway operations were evaluated using traffic simulation software along I-5 between Northgate Way and the 196th Street SW interchange in Lynnwood. The traffic simulation model included the I-5 freeway mainline and all ramps along this segment of I-5. In addition to modeling the freeway and ramps, the ramp terminal intersections and adjacent arterial intersections were analyzed at key interchanges to capture the interaction between freeway and arterial traffic operations, including queuing activity and spill-back effects (queuing from a congested location that extends and affects operations at the next interchange or intersection). The ramp and arterial intersections were modeled at interchanges such as the NE 130th Street, NE 145th Street, 220th Street SW, 44th Avenue West, and 196th Street SW interchanges. The analysis considered travel times, mainline speeds, vehicle throughput, and LOS. Section 4.3.3 of the *Transportation Technical Report* provides more detail on I-5 freeway operations.

During the AM peak hour, average speeds along southbound I-5 within the traffic simulation area from Northgate to Lynnwood range from 24 mph approaching the NE 130th Street on-ramp to 58 mph in Lynnwood. Congested conditions are caused by high volumes of merging traffic at NE 130th Street, NE 145th Street, NE 175th Street, and SR 104, as well as heavy merging and weaving maneuvers south of the project area. In the northbound direction, I-5 is generally uncongested, with an average speed of approximately 55 mph.

During the PM peak hour, average northbound I-5 peak period speeds within the traffic simulation area range from 18 mph between Northgate and the NE 130th Street off-ramp to 51 mph in Lynnwood. Northbound I-5 is operating under highly congested conditions with high volumes of merging, diverging, and weaving traffic at all of the study interchanges along the broader I-5 traffic simulation corridor. Field observations and model analysis results for southbound I-5 show speeds on I-5 ranging from 45 mph approaching the NE 145th Street off-ramp to 58 mph farther north approaching Lynnwood. In general, southbound I-5 is operating well, except for the area approaching NE 145th Street, where high southbound off-ramp volumes cause delays and queues that sometimes extend onto the freeway mainline. In areas south of the NE 130th Street interchange, at the Northgate interchange, and farther south, I-5 slows down in the PM peak hour, in part due to HOV-lane traffic entering the general purpose lanes (due to the express lanes operating northbound during this time frame). This segment of I-5 can often be congested from this location into downtown Seattle and continuing to the south. More details on I-5 freeway operations for the entire simulation area can be found in Section 4.3.3 of the *Transportation Technical Report*.

3.1.4 Arterials and Local Streets Traffic Operations

Arterial and local street traffic operations were analyzed using traffic simulation software based on the Transportation Research Board's *Highway Capacity Manual* methodology, which calculates peak hour LOS at signalized and unsignalized intersections, and calculates v/c ratios along arterials (TRB 2000). LOS ratings range from LOS A to LOS F; LOS A represents the best operation and LOS F the poorest operation. Arterial v/c ratios range from a low of 0.0 to a high of 1.0. A v/c ratio near 1.0 is considered a highly congested condition.

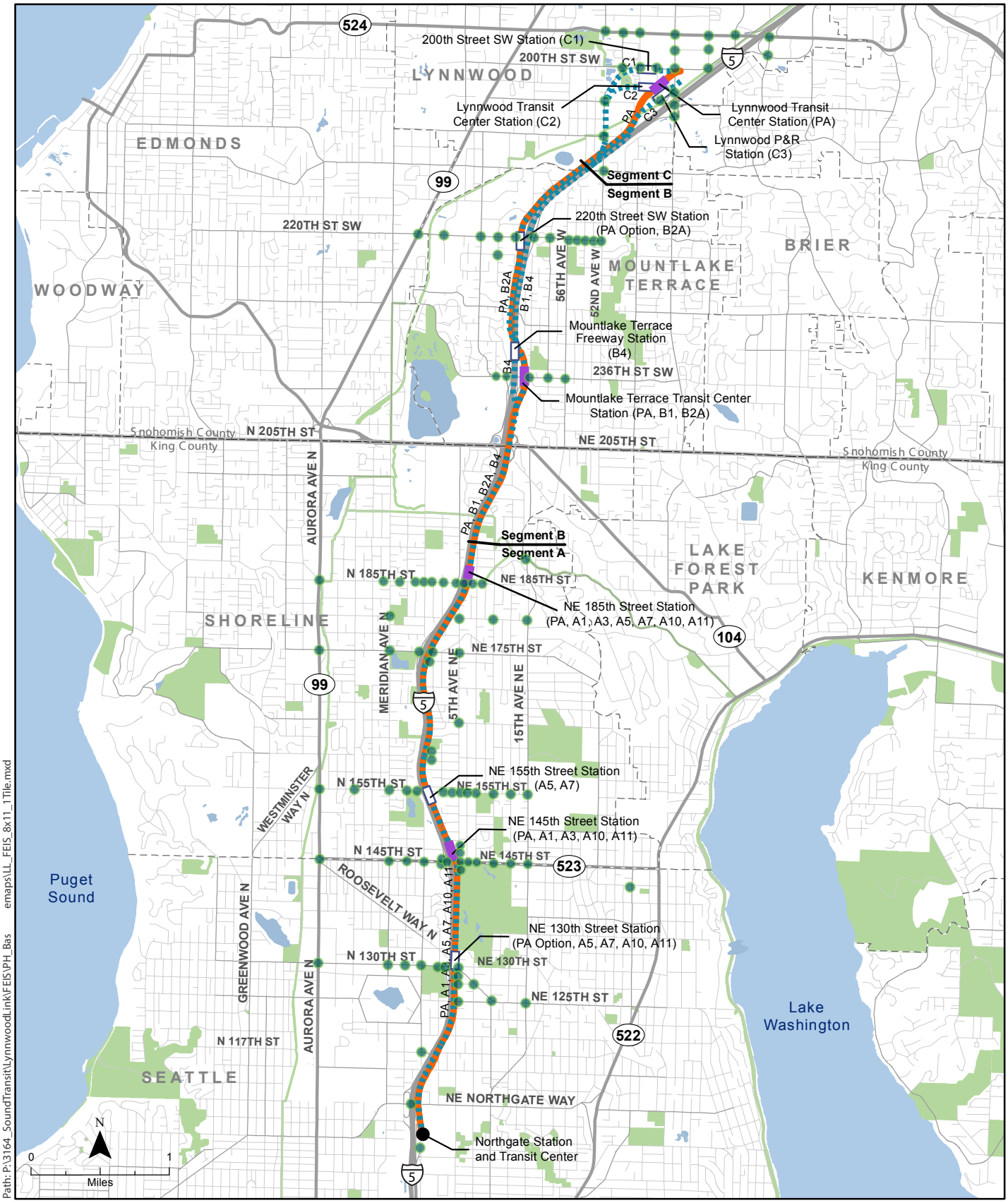
The arterial and local street traffic operations analysis covers locations most likely to be affected by the project alternatives, such as by a roadway change or signal control, or areas likely to be affected by trips to light rail stations. Figure 3-3 shows locations of the evaluated intersections; a complete list is in the *Transportation Technical Report*.

Intersections were analyzed to determine whether they are currently operating at acceptable levels or failing. Arterials within the Shoreline city limits were also analyzed to determine whether they meet City of Shoreline concurrency standards, which are intended to ensure that adequate transportation facilities will be in place as new developments occur. Intersections and arterials are considered failing when they do not operate at or better than the governing jurisdiction's performance standard. Table 3-6 summarizes the performance standards for the relevant jurisdiction. Sound Transit calculated LOS for existing traffic operations throughout the project corridor for the PM peak hour when traffic is highest. The agency also examined AM peak hour conditions for intersections with high volumes or intersections in critical locations, such as near a freeway interchange. Figure 3-4 shows the locations that currently do not meet LOS standards.

Segment A: Seattle to Shoreline

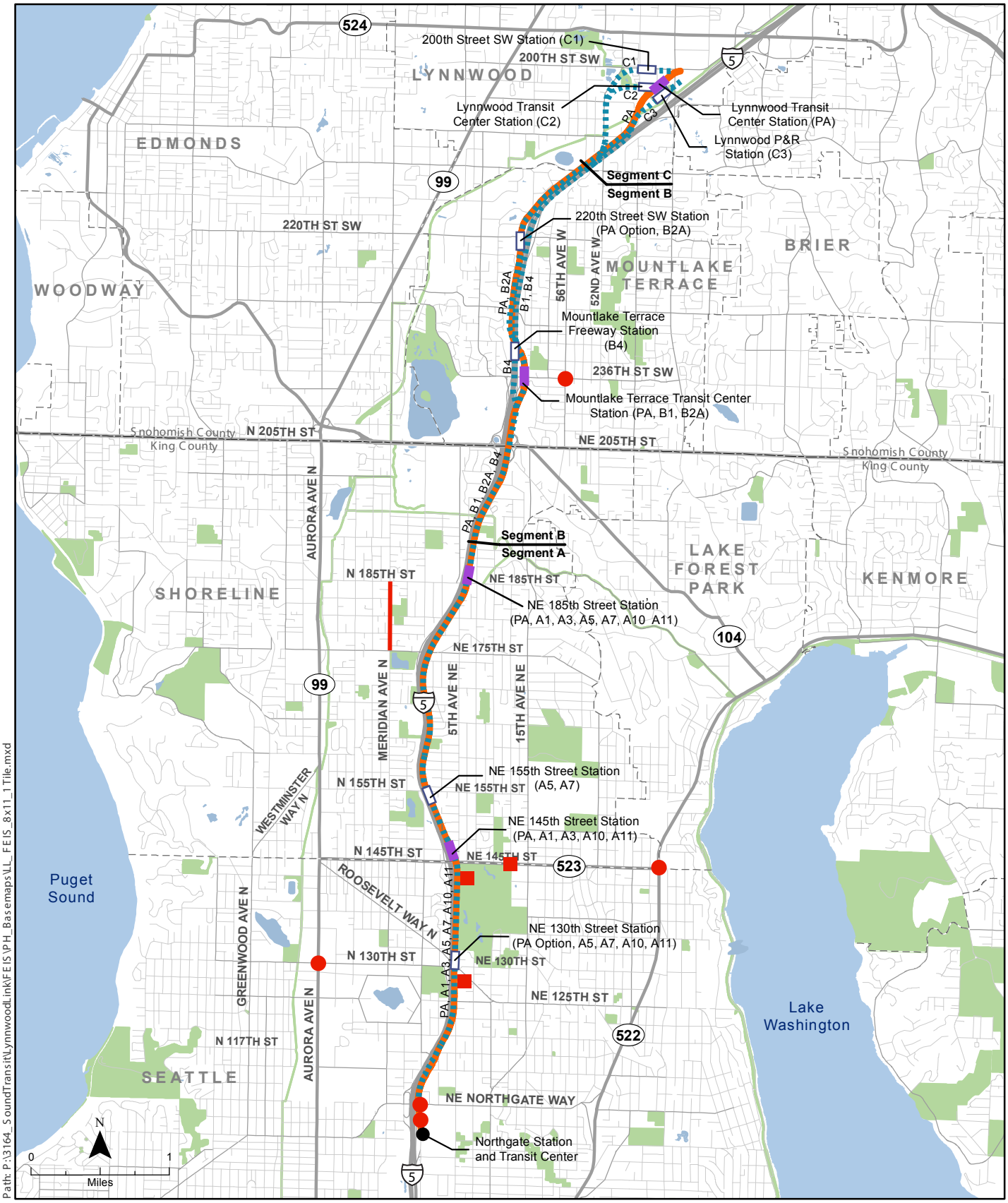
In Segment A, Sound Transit conducted PM peak hour analysis of 31 intersections in Seattle and 38 intersections in Shoreline. For the AM peak hour, Sound Transit conducted analysis at 15 intersections in Seattle and 11 intersections in Shoreline. The seven intersections listed below do not currently meet LOS standards during the AM and/or PM peak hour:

- 1st Avenue NE and I-5 ramps/Northgate Mall driveway (PM peak hour)
- 1st Avenue NE and NE Northgate Way (PM peak hour)
- 5th Avenue NE and I-5 northbound off-ramp south of NE 130th Street—eastbound approach (AM and PM peak hour)
- North 130th Street and Aurora Avenue North (PM peak hour)
- NE 145th Street and Bothell Way NE/Lake City Way NE (PM peak hour)
- NE 145th Street and 12th Avenue NE—northbound approach (PM peak hour)
- 5th Avenue NE and I-5 northbound off-ramp south of NE 145th Street—northbound approach (PM peak hour)



Preferred Alternative (PA)
Preferred Alternative Station Location
Other Light Rail Alternatives
Other Alternative Station Location
Preferred Alternative and Other Alternatives
Analysis Intersections

Figure 3-3
Analysis Intersections



Preferred Alternative (PA)
Preferred Alternative Station Location
Other Light Rail Alternatives
Other Alternative Station Location
Preferred Alternative and Other Alternatives

Signalized Intersection
Two-Way Stop: Controlled Intersection
Arterial Segment

Figure 3-4
Existing Locations Operating Below LOS standards

Table 3-6. Arterials and Local Street Performance Standards in the Project Corridor

Agency	Minimum Performance Standard
WSDOT	LOS D for Highways of Statewide Significance (HSS) LOS E/mitigated for regionally significant state highways (non-HSS)
City of Lynnwood	LOS E for city center arterials LOS D for non-city center arterials
City of Mountlake Terrace	LOS D for signalized intersections with the following exceptions (LOS E): • 212th Street SW • 244th Street SW • 220th Street SW between SR 99 and I-5 LOS E for unsignalized intersections
City of Shoreline	LOS D for signalized intersections LOS D for unsignalized intersecting arterials Volume-to-capacity ratio of 0.90 or lower for principal and minor arterials with the following exceptions: • 5th Avenue NE from NE 145th Street to the I-5 on-ramps; exempt from City concurrency standard • 15th Avenue NE from NE 150th Street to NE 175th Street; volume-to-capacity ratio of 1.10 or lower
City of Seattle	LOS D (goal)

In addition, the following arterial does not meet the City of Shoreline's concurrency standard of 0.90 or lower for principal and minor arterials during the PM peak hour:

- Meridian Avenue North from North 175th Street to North 185th Street—northbound

Segment B: Shoreline to Mountlake Terrace

In Segment B, Sound Transit conducted PM peak hour analysis of 19 intersections in Mountlake Terrace. For the AM peak hour, Sound Transit conducted analysis at six intersections. Only one, the 236th Street SW and 56th Avenue West intersection, operated below standard during the AM peak hour, but a local improvement is in place to improve conditions.

Segment C: Mountlake Terrace to Lynnwood

In Segment C, Sound Transit conducted PM peak hour analysis of 20 intersections in Lynnwood. AM peak hour analysis was also conducted at 10 intersections. All of these intersections currently meet LOS standards during the AM and PM peak hours.

3.1.5 Property Access and Local Circulation

The property access and local circulation analysis focused on streets, driveways, and connections most likely to be affected by the project alternatives. The evaluation of existing conditions includes descriptions of the physical characteristics of local street facilities near the proposed stations and along the proposed guideways in each segment. An inventory of the roadway characteristics is in the *Transportation Technical Report*.

3.1.6 Nonmotorized Facilities

The Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood have detailed inventories of their pedestrian and bicycle facilities, which Sound Transit used, along with field visits, to define existing facilities and conditions. A general depiction of regional multi-use trails and bicycle facilities is shown in Figure 3-5, based on geographic information system (GIS) database information from King County, Snohomish County, WSDOT, and Sound Transit. A detailed inventory of pedestrian and bicycle facilities near each proposed station is in the *Transportation Technical Report*.

Pedestrian Facilities

The inventory of pedestrian facilities includes arterials within a 0.5 mile radius of each proposed station.

Segment A: Seattle to Shoreline

In this segment, sidewalks or paths are along one or both sides of the street on most arterials within 0.5 mile of the proposed NE 130th Street, NE 145th Street, NE 155th Street, and NE 185th Street Stations. However, many sidewalks are substandard and do not meet the current ADA standards.

Segment B: Shoreline to Mountlake Terrace

In Segment B, sidewalks exist on one or both sides of nearly all arterials within the 0.5 mile radius of the Mountlake Terrace and 220th Street SW Station. There is a pedestrian and bicycle overcrossing of I-5 at NE 195th Street. There is also a 0.25-mile segment of paved multi-use trail along NE 195th Street between 1st Avenue NE and Meridian Avenue North. In addition, a soft-surface pedestrian trail connects the existing Mountlake Terrace Park-and-Ride to the City's library through the Veterans Memorial Park. The north-south Interurban Trail is within 1 mile of the Mountlake Terrace Transit Center as well as the 220th Street SW Station area.

Segment C: Mountlake Terrace to Lynnwood

In Segment C, there are sidewalks on all of the streets in downtown Lynnwood and in the vicinity of the station alternatives. The Interurban Trail passes through Lynnwood, generally following the Snohomish County Public Utility District (PUD) power line right-of-way. A segment of this trail is on-street for a short segment on 52nd Avenue West, then along 208th Street SW between 54th Avenue West and 52nd Avenue West, and along a short segment of 52nd Avenue West between 208th Street SW and the power line corridor just north of 208th Street SW. The City of Lynnwood is currently in the predesign phase of a project to complete this missing link in the off-street trail. From 52nd Avenue West, the trail rejoins the power line corridor, then crosses over 44th Avenue SW on a pedestrian/bicycle bridge and continues adjacent to the west side of I-5.

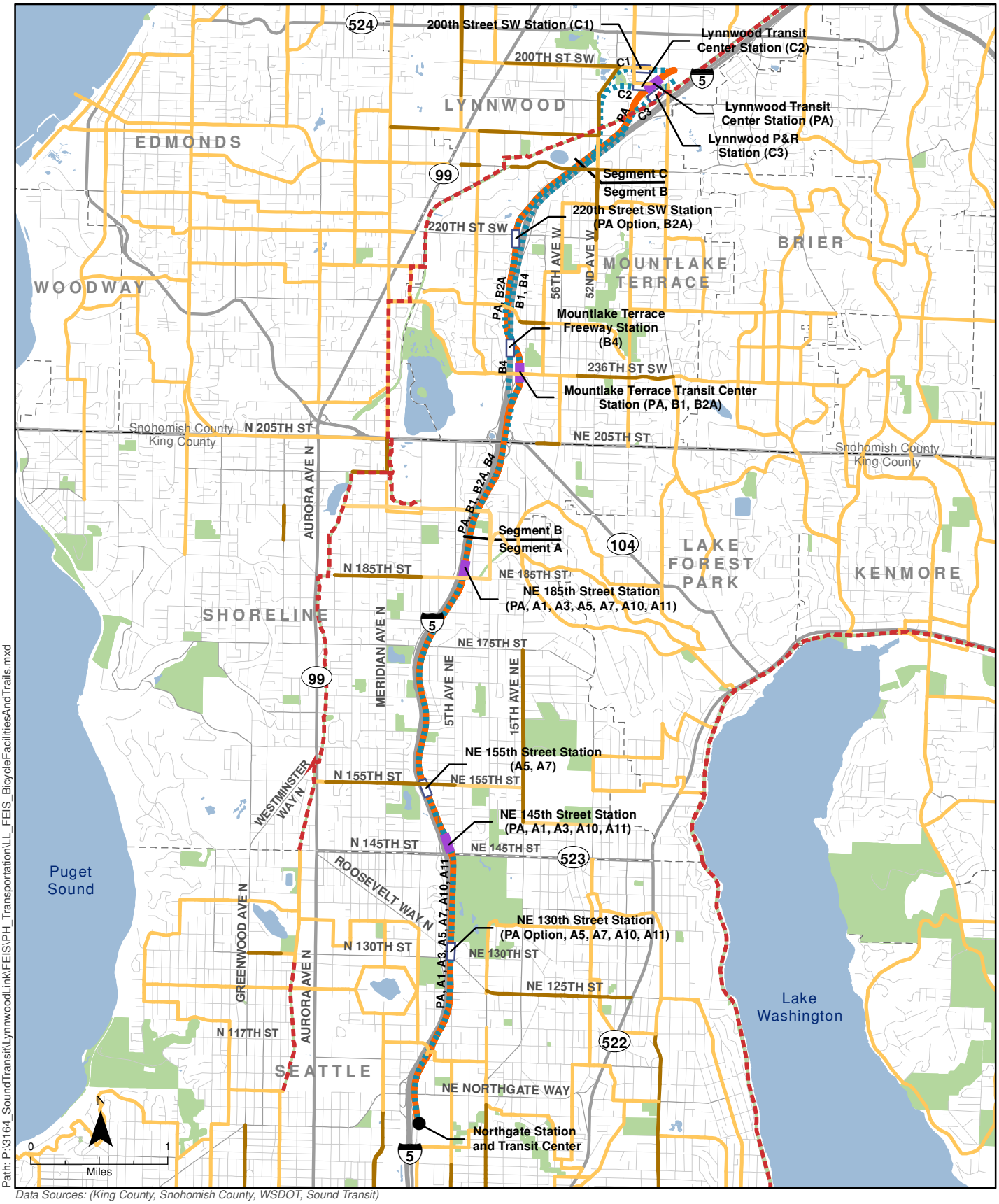


Figure 3-5
Bicycle Facilities and Regional Multi-Use Trails

Lynnwood Link Extension

Note: This map represents general shared roadways as identified by Data Sources. It does not reflect adopted inventories and planned projects by local jurisdictions. Refer to the Transportation Technical Report for inventory of sidewalks and bicycle facilities in the vicinity of each station.

Bicycle Facilities

The inventory for bicycle facilities includes arterials and multi-use trails within 1 mile of each proposed station location.

Segment A: Seattle to Shoreline

In Seattle, arterials such as 1st Avenue NE, NE 117th Street, and 5th Avenue NE have wide curb lanes adjacent to sidewalks or paved shoulders. However, many of the roadways surrounding the proposed NE 130th Street and NE 145th Street Stations lack constructed bicycle facilities. There are sharrows along portions of 1st Avenue NE, Roosevelt Way NE, and NE 125th Street. In Shoreline, bicycle lanes or striped and paved shoulders exist on parts of North 155th Street, 15th Avenue NE, NE 185th Street, 10th Avenue NE, and NE Perkins Way. A planned project by the City of Shoreline will provide sharrows along 10th Avenue NE, and on NE 180th Street between 10th Avenue NE and 15th Avenue NE.

The Cities of Seattle and Shoreline use a pavement marking called a "sharrow" to define streets that should be shared with bicycles.

Segment B: Shoreline to Mountlake Terrace

A pedestrian and bicycle overcrossing of I-5 exists at NE 195th Street, and a paved multi-use trail runs along NE 195th Street from 1st Avenue NE to Meridian Avenue North. The Interurban Trail, a regional facility, is approximately 1 mile west of the Mountlake Terrace Transit Center and connects Lynnwood with Mountlake Terrace. There are bicycle lanes on parts of 228th Street SW and 230th Street SW, but no bicycle facilities are available on arterials in the 220th Street SW area.

Segment C: Mountlake Terrace to Lynnwood

In Segment C, bicycle lanes are available on 52nd Avenue West and Cedar Valley Road from 208th Street SW north to 200th Street SW. There is also a shared-lane bicycle facility on 200th Street SW. The Interurban Trail passes through Lynnwood generally following the Snohomish County PUD power line right-of-way, and then it becomes an on-street facility adjacent to 52nd Avenue West between 208th Street SW and the power line segments (where the City of Lynnwood has a planned trail improvement). Continuing north, the trail follows the power line, crosses over 44th Avenue SW on a pedestrian/bicycle bridge, and then continues adjacent to the west side of I-5.

3.1.7 Freight Mobility and Access

Freeways, arterials, and local roadways carry freight in and through the study area. The Washington State Freight and Goods Transportation System (FGTS) classifies highways, county roads, and city streets according to the average annual gross truck tonnage they carry. Classifications range from T-5, which includes roadways that

carry over 20,000 tons in 60 days and less than 100,000 tons per year, to T-1, which includes roadways that carry over 10 million tons per year.

I-5 is the principal freight route (classified as T-1) through the Puget Sound region. For further details and maps showing the FGTS and City freight route classifications by segment, refer to the *Transportation Technical Report*.

3.1.8 Parking

Parking surveys were conducted to inventory the available on- and off-street parking and midday utilization of on- and off-street parking within approximately 0.25 mile of the proposed station locations and along the proposed footprint of the light rail alignments. Table 3-7 lists the existing unrestricted on-street and off-street parking and supply information near the proposed stations. For further detail and maps showing the area that was inventoried for each station, refer to the *Transportation Technical Report*.

Table 3-7. Existing Unrestricted On-Street and Off-Street Parking Supply and Midday Utilization by Station

	On-Street			Off-Street[a]		
Station	Supply	Utilization	Percent Utilization	Supply	Utilization	Percent Utilization
Segment A: Seattle to Shoreline						
Along the proposed light rail alignment	130	12	9%	19	12	63%
NE 130th Street[b]	430	60	14%	290	40	14%
NE 145th Street	450	120	27%	350	250	71%
NE 155th Street	580	100	17%	200	50	25%
NE 185th Street	700	80	11%	300	130	43%
Segment B: Shoreline to Mountlake Terrace						
Along the proposed light rail alignment	NA	NA	NA	NA	NA	NA
Mountlake Terrace Transit Center	440	70	16%	990	870	88%
Mountlake Terrace Freeway Station	640	50	8%	990	870	88%
220th Street SW	610	70	11%	1,300	680	52%
Segment C: Mountlake Terrace to Lynnwood						
Along the proposed light rail alignment	30	7	23%	305	235	77%
Lynnwood Park-and-Ride	0	0	NA	3,020	2,050	68%
Lynnwood Transit Center	10	10	100%	3,720	2,410	65%
200th Street SW Station	90	40	44%	4,420	2,510	57%

Note: Data were collected in May 2012 on all roads within 0.25-mile radius of the stations. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.

[a] Off-street parking supply and utilization includes parking on private property.

[b] On-street parking supply in the NE 130th Street Station area includes 400 unrestricted parking spaces and 30 time-restricted spaces.

3.1.9 Safety

To describe safety conditions in the study area and to identify locations with higher rates of accidents, Sound Transit collected accident data from local jurisdictions and WSDOT for the 4-year period 2010 to 2013 for the same intersections and roadway segments identified for operational analysis, and for I-5 between Northgate and Lynnwood. Accident rates were calculated (in accidents/year, along with traffic volumes) to give an indication of high accident occurrence.

Along I-5, between 80 to 85 percent of the accidents were congestion-related, involving rear-end collisions from slowing or stopped traffic, or sideswipe collisions from merge or weave movements, and these occurred most often during peak periods. Other collisions, involving vehicles leaving the roadway, and fixed object collisions, made up the remaining incidents, and tended to be at nighttime.

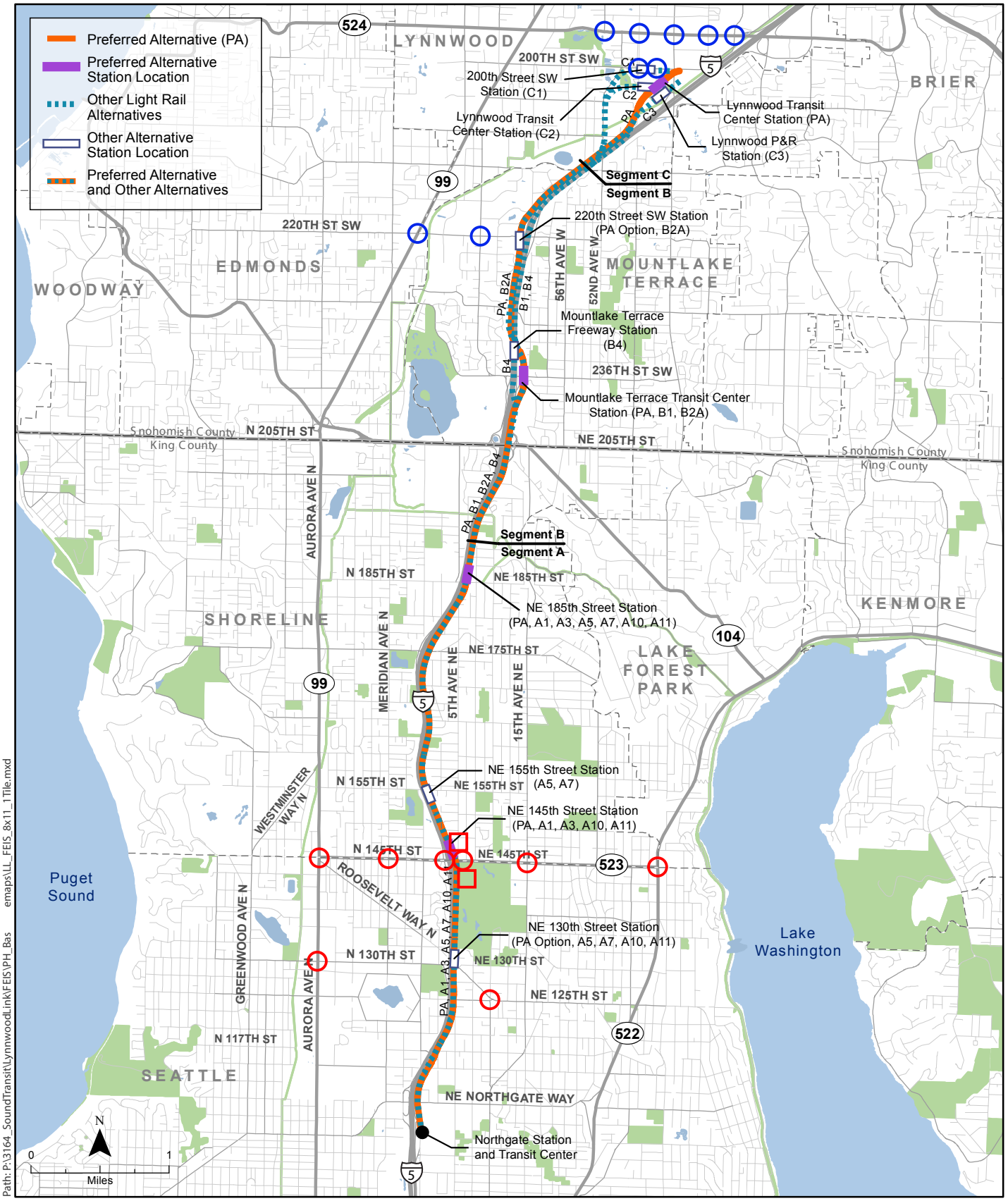
The City of Seattle identifies collision analysis locations (CALs) for future safety improvements at signalized intersections experiencing more than 10 collisions per year, and at unsignalized intersections with 5 collisions per year. For other jurisdictions, locations where the accident rate is at or exceeds 1.0 accidents per million entering vehicles were identified as CALs. Figure 3-6 shows the existing CALs. These CALs are concentrated around the following areas: 196th Street SW, 200th Street SW, 220th Street SW, Aurora Avenue North, and North/NE 145th Street. Details of the full analysis are in the *Transportation Technical Report*.

3.2 Long-Term Impacts

3.2.1 Regional Travel

Miles Driven and Hours Spent in Travel

By 2035, ridership on the Preferred Alternative and other light rail alternatives would help reduce automobile travel in the region by approximately 300,000 miles per day compared to the No Build Alternative (a reduction of approximately 0.3 percent), and about 25,000 fewer hours per day would be spent traveling by automobile (a reduction of approximately 0.8 percent). A significant portion of this reduction is expected to occur within the project corridor as new riders shift from automobile to transit. Table 3-8 shows the systemwide vehicle miles of travel and vehicle hours of travel in the Puget Sound region for the No Build Alternative, Preferred Alternative, and other light rail alternatives in forecast year 2035.



Collision Analysis Locations

- In Seattle, signalized locations with greater than 10 collisions per year
- In Seattle, unsignalized locations with greater than 5 collisions per year
- All other jurisdictions, signalized locations with greater than 1.0 accidents per million entering vehicles (MEV)
- All other jurisdictions, unsignalized locations with greater than 1.0 accidents per million entering vehicles (MEV)

Figure 3-6
Existing Collision Analysis Locations in Study Area

Lynnwood Link Extension

Table 3-8. Daily Vehicle Miles of Travel and Vehicle Hours of Travel in the Puget Sound Region for Forecast Year 2035

Alternative	VMT	VHT
No Build Alternative	100,600,000	3,140,000
Preferred Alternative and Other Light Rail Alternatives	100,310,000 – 100,330,000	3,115,000 – 3,117,000

Source: Sound Transit Highway Model.
VMT = vehicle miles of travel, VHT = vehicle hours of travel

Vehicles Traveling through the Corridor

During the AM and PM peak hours, the improved transit service provided by the Preferred Alternative and other light rail alternatives would attract more trips to transit, and hence slightly reduce vehicle volumes and congestion in the corridor. Table 3-9 shows year 2035 peak hour vehicle volumes and peak hour v/c ratios at north-south screenlines crossing the project corridor. This also reflects, in part, the additional HOV lane capacity made available for other vehicles with the truncation of bus routes that currently operate in the I-5 HOV lanes. Approximately 550 to 600 daily bus trips would be removed from the I-5 HOV lanes. The *Transportation Technical Report* has additional information, including daily vehicle volumes and v/c ratios for these three north-south screenlines and one east-west screenline.

Table 3-9. Screenline Volumes and Volume-to-Capacity Ratios

	2035 No Build Alternative				2035 Preferred Alternative and Other Light Rail Alternatives			
	AM Peak Hour V/C[a]		PM Peak Hour V/C[a]		AM Peak Hour V/C[a]		PM Peak Hour V/C[a]	
Screenline Location	NB	SB	NB	SB	NB	SB	NB	SB
North of NE Northgate Way	0.47 (8,600)	1.03 (19,300)	1.13 (21,000)	0.71 (13,300)	0.45 (8,400)	1.00 (18,800)	1.09 (20,500)	0.70 (13,100)
South of North 205th Street	0.44 (7,300)	0.98 (14,800)	0.98 (16,400)	0.74 (11,200)	0.43 (7,200)	0.95 (14,400)	0.94 (15,900)	0.72 (11,000)
South of 196th Street SW	0.55 (6,500)	0.95 (11,100)	1.04 (12,200)	0.73 (8,500)	0.54 (6,400)	0.94 (10,900)	1.03 (11,900)	0.73 (8,500)

[a] Peak hour traffic volumes shown in parentheses ( ).
V/C = volume-to-capacity ratio, NB = northbound, SB = southbound
Source: Sound Transit Highway Model.

People Traveling through the Corridor

Compared to the No Build Alternative, the Preferred Alternative and other light rail alternatives would allow the project corridor to carry more people (person throughput) during the peak periods, as measured by screenlines across the corridor.[2] The PM peak (northbound) direction is projected to have the largest increase (Table 3-10) in total trips by all modes on I-5, SR 99, and other north-south arterials. The total person throughput in both directions would increase by approximately 3 percent north of NE Northgate Way and by 4 percent south of North 205th Street. On I-5 only, up to a 10 percent increase in person throughput is expected with the Preferred Alternative and other light rail alternatives compared with the No Build Alternative.

[2] Sound Transit Highway Model is based on the PSRC Regional Model: WSDOT Project Version.

Table 3-10. Projected Person Throughput—PM Peak Period for Forecast Year 2035

Screenline Location	Alternative	Northbound	Southbound	Total
North of NE Northgate Way	No Build Alternative	86,000	48,000	134,000
	Light Rail Alternatives	89,000	49,000	138,000
South of North 205th Street	No Build Alternative	66,000	39,000	105,000
	Light Rail Alternatives	69,000	40,000	109,000

Source: Sound Transit Highway Model.

3.2.2 Transit

Regional Transit

Overall regional transit use (on both bus and rail) would increase by up to 22,000 daily transit trips with light rail in place, compared with the No Build Alternative (an increase of approximately 4 percent). There would be direct light rail service from Lynnwood to Northgate, the University District, Capitol Hill, downtown Seattle, south of downtown Seattle, the Rainier Valley, and Sea-Tac Airport. Light rail connections would also be provided to Bellevue, Bel-Red, and Overlake. In addition, light rail in the I-5 corridor would substantially improve transit service reliability to LOS A compared to LOS C or worse with the No Build Alternative. The frequency of transit throughout the day would also improve because light rail would operate with midday headways of 5 to 10 minutes, compared with midday headways of 15 minutes on the most frequent bus routes. Light rail would also provide service for more hours of the day and to more destinations, such as Shoreline and the Mountlake Terrace Transit Center.

Transit Facility and Service Characteristics

With the light rail alternatives, a number of transit facility improvements would be implemented, including new light rail stations and new or expanded park-and-ride and bus layover facilities at some of the stations. Proposed park-and-ride facilities are discussed in Section 3.2.7. Other bus facility improvements are discussed in the *Transportation Technical Report*. Before the project begins operation, Sound Transit would work with the other transit providers in the project area to revise service plans to avoid duplicating service and to provide improved or new connections to the Lynnwood Link Extension. Sound Transit worked with King County Metro, Community Transit, and Sound Transit Express to outline representative bus operations plans that could be used to serve the Lynnwood Link Extension stations to evaluate the effects of potential service changes for the EIS. Detailed service planning would be conducted before the system opens to the public, and any changes to service would go through a public comment process before each agency would proceed with service changes. The conceptual bus operations plans developed by the transit providers have low and high service scenarios, covering a range of potential future revenue scenarios. The low service scenarios were assumed for the ridership forecasting effort to avoid over-

predicting the number of people taking buses to the station, while the higher service scenarios were used to conservatively establish the size of the bus facilities at each station. More details on these plans are provided in the *Transportation Technical Report* and the *Ridership Forecasting Technical Report.*

Ridership

Transit ridership forecasts for the Lynnwood Link Extension range from 63,000 to 74,000 daily trips on the Lynnwood Link Extension in 2035 (the total of all three segments with any combination of alternatives), which would be more than double the bus ridership in the No Build Alternative. The median ridership for the Preferred Alternative would be approximately 68,000 daily riders. The Lynnwood Link Extension would add up to 22,000 new daily transit trips (on both bus and rail) throughout the region. Table 3-11 shows daily transit trips (ridership) in the project corridor in Base Year 2011 compared with the No Build Alternative, Preferred Alternative, and other light rail alternatives in 2035. Total daily trips (ridership) account for riders on the Lynnwood Link Extension, regardless of where they board the train. The forecasts for the Preferred Alternative and other light rail alternatives assume there would be no bus service on I-5 north of Northgate because light rail would replace I-5 bus routes serving areas between Northgate and Lynnwood, and I-5 routes north of Lynnwood would feed to the Lynnwood Transit Center Station.

Table 3-11. Daily Corridor Transit Riders in Base Year (2011) and Forecast Year (2035)

	Bus Riders		Light Rail Project Riders
Bus Route/Light Rail Ridership (measured by individual trips)	**Base Year (2011)**	**No Build Alternative (2035)**	**Light Rail Alternatives (2035)**
I-5 Bus Routes North of Northgate	19,400	32,000 to 34,000	---
Daily Light Rail Riders North of Northgate	---	---	63,000 to 74,000

Source: Sound Transit Ridership Model.

Figure 3-7 shows the average weekday boardings in 2035 by station under different station combinations for the Preferred Alternative and optional stations, as well as all other light rail alternative station combinations. Figure 3-7 also includes the Northgate Station (which would already be in place under all alternatives) to show how boardings at stations to the north would affect boardings at Northgate. These boardings show only the trips starting at each Lynnwood Link Extension station, while the total trips shown in Table 3-11 count all trips to or from any station for the project. Figure 3-7 shows how the number of boardings at several of the stations would vary depending on the combination of segment alternatives and the number of total stations that would be in place.

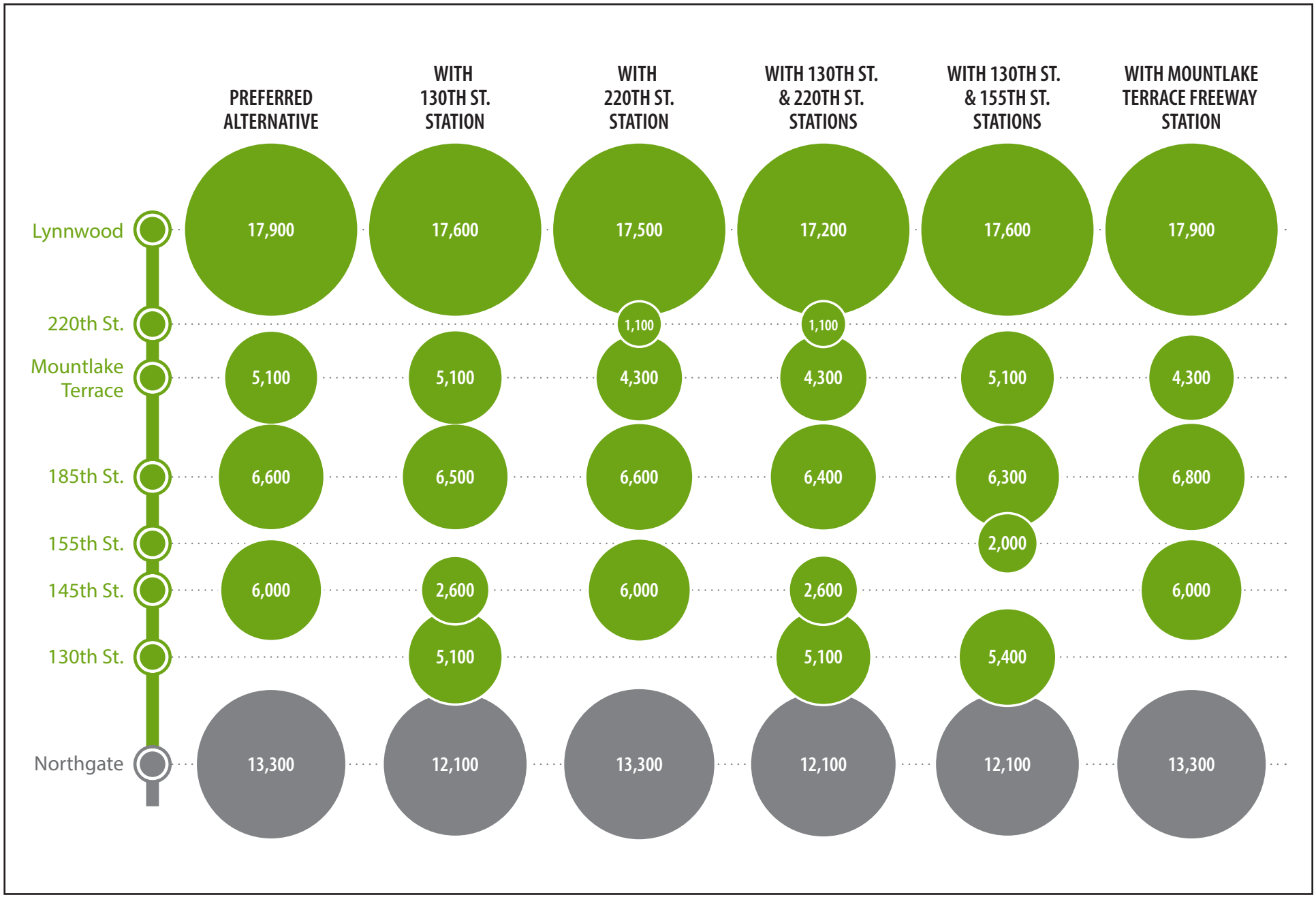


Figure 3-7
2035 Average Weekday Station Boardings for the Preferred Alternative and Options

There would not be large differences in ridership among the alternatives, but there would be some minor ridership trade-offs among the different station combinations. Some of the key trade-offs for the Preferred Alternative and its optional stations include:

- Adding the NE 130th Street Station as a third Segment A station would result in a net increase of 500 daily boardings in Segment A because it would provide additional access to the transit network. Approximately 1,200 of the daily boardings at the NE 130th Street Station would shift from the Northgate Station.
- Adding the 220th Street SW and NE 130th Street optional stations to the Preferred Alternative is projected to reduce daily boardings at the Lynnwood Transit Center Station by 700. Part of the reason for the net loss at the Lynnwood Transit Center, compared with a project without these two optional stations, is that adding the two optional stations would increase travel time for the light rail trip, which would be less attractive for riders traveling to and from Lynnwood. In addition, approximately 200 of the forecasted daily boardings would shift from the Lynnwood Transit Center to the new 220th Street SW Station.

The difference in boardings between alternatives is influenced by a combination of factors. These factors include the density of population and employment near stations, the amount of parking available at stations, local bus service connections at stations, additional travel time caused by additional stations elsewhere in the corridor, and distance between stations. Additional information on 2035 daily boardings for the Preferred Alternative, Preferred Alternative with options, and other light rail alternatives (including options) is in the *Transportation Technical Report*.

Transit Travel Times

Travel times to all regional destinations would be shorter with the Preferred Alternative and other light rail alternatives compared with the No Build Alternative. Tables 3-12 and 3-13 show estimated peak period transit travel times in forecast year 2035 between Shoreline and Lynnwood and regional destinations for the AM and PM peak periods for the No Build Alternative and light rail alternatives with four to six stations. Travel times under the No Build Alternative are expected to increase compared with existing conditions due to increased congestion. While the No Build Alternative travel times between destinations would vary between the AM and PM peak period due to different congestion levels, the travel times for light rail would be the same during the AM and PM peak period because light rail would not be affected by traffic congestion. The low end of the range represents travel times for the alternatives with fewer stations, and the higher end represents the alternatives with the most stations.

Table 3-12. Transit Travel Times from Shoreline and Lynnwood—AM Peak Period Southbound (minutes) for Forecast Year 2035

	From Shoreline		From Lynnwood	
Destination	No Build Alternative	Light Rail Alternatives	No Build Alternative	Light Rail Alternatives
Northgate	10	3-4	26	14-16
University of Washington	22	11-12	38	22-24
Capitol Hill	26	14-15	42	25-27
Downtown Seattle	22	16-17	43	27-29
Sea-Tac Airport	63	51-52	79	62-64
Downtown Bellevue	53	41-42	55	52-54
Overlake	63	51-52	79	62-64

Note: The No Build Alternative transit travel times include estimated transfer times where relevant. Actual total transit travel times would vary based on how people access transit, as well as their wait times.

Sources: King County Metro Trip Planner (http://metro.kingcounty.gov/) modified to reflect expected future traffic congestion; Sound Transit Highway Model, light rail travel time estimates.

Table 3-13. Transit Travel Times to Shoreline and Lynnwood—PM Peak Period Northbound (minutes) for Forecast Year 2035

	To Shoreline		To Lynnwood	
Destination	No Build Alternative	Light Rail Alternatives	No Build Alternative	Light Rail Alternatives
Northgate	10	3-4	24	14-16
University of Washington	22	11-12	36	22-24
Capitol Hill	26	14-15	40	25-27
Downtown Seattle	26	16-17	42	27-29
Sea-Tac Airport	63	51-52	77	62-64
Downtown Bellevue	53	41-42	64	52-54
Overlake	63	51-52	77	62-64

Note: The No Build Alternative transit travel times include estimated transfer times where relevant. Actual total transit travel times would vary based on how people access transit, as well as their wait times.

Sources: King County Metro Trip Planner, http://metro.kingcounty.gov/, Lynnwood Link Extension Project Highway Model, light rail travel time estimates.

Transfers

When transit riders need to transfer to complete a trip, they may see the transit system as being too complex and their travel times can feel longer or more unpredictable. As a result, they may choose not to use transit for the trip. However, the quality of transfers, whether between buses, between bus and rail, or from rail to rail, has a dramatic impact on how a rider views a transfer. Some of the factors that riders find important are the distances between the transfer points, wait time, waiting area conditions, reliability, safety and security, and availability of real-time arrival information.

Overall, future transfer rates with the light rail alternatives would be lower than the No Build Alternative. There would be fewer transfers because the Lynnwood Link Extension would connect with the Northgate Link Extension (under construction) and provide a no-transfer, one-seat transit trip between more destinations, including Shoreline/Lynnwood and the University District or downtown Seattle. Transfers

may be required to travel to future light rail destinations to the east, including downtown Bellevue and Overlake, although some trains may continue through to those destinations. Also, transfers in some parts of the regional system could increase as more riders use light rail for a part of their trip because it could reduce their overall travel times.

Transit Level of Service

Sound Transit analyzed transit service performance by using the *Transit Capacity and Quality of Service Manual*, 2nd Edition, Part 3, which is a nationally recognized resource for the measurement of transit capacity and quality of service (TRB 2003).

Service Frequency

When transit service is frequent, riders typically have shorter wait times before they board, and this translates into a high level of transit service. Bus routes that have headways of less than 10 minutes are considered ideal, while headways above 60 minutes are undesirable.

The Preferred Alternative and other light rail alternatives would provide headways under 10 minutes for service connecting North Seattle, Shoreline, Mountlake Terrace Transit Center, and Lynnwood Transit Center to downtown Seattle, Eastside communities, and south King County, which would markedly improve service to these locations compared with the No Build Alternative. Also, travel times would improve between these station areas and other light rail stations, such as Sea-Tac Airport, Capitol Hill, and the University District.

Hours of Service

Hours of service is another measure of transit service quality. The longer that transit service is provided throughout a 24-hour period, the more available it is to riders, resulting in better levels of service. Service that covers 19 or more hours in a day is optimal, and service of less than 3 hours a day is undesirable.

The Preferred Alternative and other light rail alternatives would provide more than 19 hours of service daily for North Seattle, Shoreline, Mountlake Terrace Transit Center, and Lynnwood Transit Center, giving them higher level of service ratings compared to the No Build Alternative.

Passenger Load

To measure passenger comfort and how easily a rider can find a seat, transit operators calculate the passenger load. When the passenger load exceeds the number of seats or available standing space, transit is overcrowded and offers a poor level of service (LOS E or F) for the passenger load; therefore, the transit service provider may need to increase service frequency. Lighter passenger loads with readily available seats or ample standing room are given high ratings (LOS A or B).

With the Preferred Alternative and other light rail alternatives, the passenger loads on buses and light rail would improve compared with the No Build Alternative. Table 3-14 shows the PM peak hour passenger load LOS ratings for transit in the corridor at three locations for the No Build Alternative, Preferred Alternative, and other light rail alternatives in forecast year 2035. With the No Build Alternative, the passenger load LOS for bus service on I-5 is expected to be between LOS D and F, while the Preferred Alternative and other light rail alternatives would improve conditions to LOS A in most locations.

Table 3-14. PM Peak Hour Passenger Load Level of Service in Forecast Year 2035

		No Build Alternative	Preferred Alternative and Other Light Rail Alternatives	
Screenline Location	**Direction**	**Bus**	**Bus**	**Light Rail**
North of NE Northgate Way	Northbound	D	A	C
	Southbound	F	A	A
South of North 205th Street	Northbound	E	A	A
	Southbound	F	A	A
North of 212th Street SW	Northbound	D	A	A
	Southbound	F	A	A

Source: Sound Transit Ridership Model, 2011.

Reliability and On-time Performance

Under the No Build Alternative, bus service would be less reliable than today as traffic congestion grows on freeways and arterials in the corridor (see Section 3.2.3). Forecasts show future speeds will decrease along I-5 as congestion increases. Buses would be less reliable and would often arrive close together (bunched) rather than at scheduled times and intervals. In contrast, all light rail alternatives would operate very reliably within the I-5 corridor because light rail would operate entirely outside of traffic in the corridor, although delays elsewhere in the system could still affect occasional trips.

Local and Regional Transit

With any of the light rail alternatives, Sound Transit would work with King County Metro and Community Transit to consider local or regional service revisions integrated with light rail service. A large number of light rail riders would access the system via local and/or regional bus service. Preliminary service integration plans by King County Metro and Community Transit were used to develop bus station requirements.

3.2.3 Freeway Operations

Freeway operations for the No Build Alternative, Preferred Alternative, and other light rail alternatives were evaluated using traffic simulation software along I-5

between the Northgate Way interchange in Seattle and 196th Street SW interchange in Lynnwood. Freeway traffic volumes for 2035 used for this analysis were estimated using growth rates derived from the Sound Transit Highway Model. Additional discussion, including traffic volume forecasts and traffic operations results, is in the *Transportation Technical Report*.

No Build Alternative

By 2035, freeway operations are projected to worsen over today's already congested conditions. I-5 traffic volumes between the NE 130th Street interchange and the 196th Street SW interchange in Lynnwood are expected to increase between 3 and 8 percent over existing conditions except for the northbound (off-peak) direction in the AM peak hour, which would increase between 10 and 15 percent over existing conditions. These traffic volume forecasts generally reflect higher growth, particularly in the northbound direction during the AM peak hour because this section of I-5 is currently not operating at capacity and therefore has greater potential for growth in vehicular demand.

During the AM peak hour, average vehicular speeds on southbound I-5 between the NE 130th Street interchange and south of the SR 104 interchange are expected to be 35 mph or slower, which means the freeway would be operating at LOS F. North of the SR 104 interchange, I-5 speeds are forecasted to be higher, with freeway operations at LOS C or D. Similar to existing conditions, during the AM peak period southbound, freeway congestion would be caused by the high volumes of entering and exiting traffic, specifically at the two southbound on-ramps from NE 145th Street and SR 104. Traffic from these ramps are forecast to influence mainline vehicular speeds at critical merging areas. In the northbound (off-peak) direction, I-5 would continue to be relatively uncongested with average speeds ranging from 44 mph near the SR 104 interchange to 56 mph and would operate at LOS C or D (free-flow conditions).

During the PM peak hour, average northbound peak period speeds would range from approximately 17 mph north of the NE 145th Street on-ramp to approximately 51 mph in Lynnwood. I-5 would continue to operate under highly congested conditions (LOS E and F), with high volumes of merging and diverging traffic. In particular, merging and diverging activity near the off-ramps to NE 130th Street, NE 175th Street, and SR 104 would cause noticeable mainline disruptions with average speeds expected to decrease to 20 mph or less.

In the southbound (off-peak) direction, speeds on I-5 are projected to range from approximately 45 to 55 mph approaching the 220th Street SW off-ramp and the NE 145th Street off-ramp. I-5 would operate relatively well (LOS D), except for the area approaching NE 145th Street and 220th Street SW, where high southbound off-ramp volumes are projected in the No Build conditions and would cause delays and

queues that could extend onto the freeway mainline at times. Similar to typical existing operations, I-5 traffic south of the NE 130th Street and NE Northgate Way interchanges would slow noticeably in the PM peak hour.

Although change to WSDOT's HOV policy was not explicitly evaluated, HOV lane speeds and performance are also expected to degrade, particularly in the peak direction, which would affect reliability and travel times for carpools and buses.

Light Rail Alternatives

While systemwide VMT and VHT in the Puget Sound region is forecast to decrease with the Preferred Alternative and other light rail alternatives (as described in Section 3.2.1), peak hour volumes along the I-5 mainline and ramps would be similar to the No Build Alternative. Traffic traveling to and from the proposed park-and-ride lots is projected to originate primarily from the local street system and would not create noticeable increases in I-5 volumes or affect AM/PM peak hour freeway speeds and performance (e.g., LOS). A small amount of the park-and-ride trips, less than 5 percent, is assumed to be heading north on I-5 from the Lynnwood Transit Center.

During the AM peak hour, northbound and southbound freeway operations and speeds for all light rail alternatives would be similar to conditions under the No Build Alternative. The majority of impacts caused by the proposed light rail stations and park-and-ride lots would be to local arterials instead of I-5 operations (see the discussions below under Arterial and Local Streets).

During the PM peak hour, the Preferred Alternative and three other light rail alternatives (Alternatives A1, A5, and A10) would improve freeway operations along northbound I-5 due to the reconfiguration of the northbound NE 130th Street off-ramp. The proposed reconfiguration and grade separation of the northbound NE 130th Street off-ramp with southbound 5th Avenue NE would allow the removal of the off-ramp stop-control. Northbound I-5 speeds just south of the NE 130th Street off-ramp would improve by approximately 5 mph. Although the freeway level of service would remain at LOS F, the traffic density would improve. Speeds north of the NE 130th Street off-ramp could decrease because more traffic would be able to get through the improved configuration at the NE 130th Street off-ramp; this increased volume could add to congestion near the NE 145th Street off-ramp. Alternatives A7 and A11, with a station at NE 130th Street but without the updated off-ramp reconfiguration, would experience speeds similar to conditions under the No Build Alternative on I-5 south of the NE 130th Street off-ramp.

During the PM peak hour in the southbound direction, operations and speeds on I-5 for the Preferred Alternative and other light rail alternatives (A1, A3, and A11) would not change compared with the No Build Alternative. The project design includes street and intersection improvements near the NE 145th Street interchange that accommodate the added traffic from the park-and-ride and maintain or improve

local street operations compared to No Build conditions; this in turn allows operations on the freeway and ramps to be the same or better than No Build conditions. The local street improvements include relocation and signalization of the northbound on-ramp intersection to the north as well as adding a westbound right-turn lane on NE 145th Street at 5th Avenue NE.

The one exception is with Alternative A10, which has a different station layout and more parking spaces (650 total) at the proposed park-and-ride. The added traffic drawn to the larger parking facility would require further mitigation to the arterial system to avoid a small decrease in I-5 speeds approaching the NE 145th Street southbound off-ramp. See Section 5.3.1 of the *Transportation Technical Report* for more detail on the light rail alternatives' effects on arterial levels of service and I-5 speeds in this area.

In addition, the Preferred Alternative and other light rail alternatives would reduce the number of buses in the I-5 HOV lanes (approximately 550 to 600 daily bus trips would be removed), which would create additional HOV capacity and improve HOV operations and speeds compared with the No Build Alternative.

3.2.4 Arterials and Local Streets

This subsection describes the effects of the No Build Alternative, Preferred Alternative, and other light rail alternatives on arterial and local street operations. The project's potential effects on traffic volumes, intersection LOS, and property access and circulation are also discussed. The *Transportation Technical Report* provides a detailed discussion of traffic volume forecasts as well as impact analysis assumptions and results.

Traffic Forecasts and Station Trips

To evaluate the impacts of the No Build Alternative and the light rail alternatives on arterials and local streets, Sound Transit forecasted traffic conditions in 2035 to determine the number of vehicles on local roadways with or without the project. Forecast year 2035 traffic volumes were developed using the Sound Transit Highway Model, which reflects PSRC's current population and land use forecasts.

Overall, by 2035, peak hour traffic volumes for the No Build Alternative in the study area are predicted to increase by an average 0.7 percent to as high as 1.3 percent per year. The Lynnwood Link Extension could increase trips to station areas, but at the same time it could reduce automobile trips in other parts of the study area as people shift from private automobiles to light rail.

For the Preferred Alternative and other light rail alternatives, Sound Transit predicted the number of trips that would be generated by each station, including automobile trips to and from the park-and-ride facilities, passenger drop-off/pick-up trips, and new bus trips. The traffic analysis assumes all park-and-rides would be

full. The predicted trip generation rates to the park-and-rides are consistent with survey data from Sound Transit's commuter rail stations, Central Link light rail park-and-rides, as well as national sources. The Sound Transit Ridership Model predicted which travel mode (e.g., bus, bicycle, pedestrian, passenger drop-off/pick-up, or drive alone) people were likely to use to access each station.

In general, the stations generating the highest number of vehicle trips are those with the highest number of new park-and-ride spaces. These include the NE 145th Street, NE 155th Street, NE 185th Street, and Lynnwood Transit Center stations. Overall, the Lynnwood Transit Center Station is expected to generate the highest number of vehicle trips. This station would be the northern terminus of the project, with the highest overall number of park-and-ride spaces and the most light rail patrons.

Traffic Operations

The traffic operations analysis compares the No Build Alternative, Preferred Alternative, and light rail alternatives in forecast year 2035 in the study area. The analysis locations were selected in coordination with local jurisdictions and include intersections in areas most likely to experience changes in traffic. These changes would likely be due to a change in channelization, access or signal control, or increased traffic to light rail stations. The light rail stations that would have new or larger park-and-rides or anticipated passenger pick-up and drop-off activity would be most likely to increase traffic.

The analysis results indicate most intersections in the Preferred Alternative and other light rail alternatives would operate at an LOS similar to that of the No Build Alternative. Some intersections around stations may degrade below the jurisdiction's LOS standard without effective improvements. The impact would be caused by traffic to and from park-and-ride facilities and by passenger drop-off/pick-up activity. Figures 3-8a, 3-8b, 3-9a, and 3-9b summarize the PM and AM peak hour LOS analysis results for the No Build Alternative (in forecast year 2035), and indicate where the Preferred Alternative and other light rail alternatives would cause LOS to degrade below standards. Locations where LOS would operate below standards in 2035 are described in the following subsections and the *Transportation Technical Report*.

Segment A: Seattle to Shoreline

Tables 3-15 and 3-16 list the locations in Segment A that would operate below LOS standards in forecast year 2035 with the No Build Alternative, Preferred Alternative, and/or other light rail alternatives during the PM and AM peak hours, respectively. As shown in Table 3-15, 17 of the 67 intersections evaluated in Segment A would operate below LOS standards with the No Build Alternative during the PM peak hour. An additional two intersections would degrade below LOS standards during the PM peak hour with the Preferred Alternative, and between three and seven

intersections would degrade with the other light rail alternatives. For the AM peak hour (Table 3-16), four intersections would operate below LOS standards with the No Build Alternative. One additional intersection would degrade below LOS standards during the AM peak hour with Alternatives A1 and A3 (5th Avenue NE and I-5 northbound off-ramp).

Table 3-15. Segment A Intersections not Meeting LOS Standards for Forecast Year 2035 During PM Peak Hour

		Alternative								
Nearest Station and Intersection	**LOS Standard**	**No Build**	**Preferred Alternative**	**Preferred Alternative + Option**	**A1**	**A3**	**A5**	**A7**	**A10**	**A11**
NE 130th Street Station										
North 130th Street/ Aurora Avenue North	D	E	E	E	E	*	E	E	E	E
5th Avenue NE and I-5 Northbound Off-ramp	D	F	*	*	*	*	*	F	*	F
NE 125th Street and 15th Avenue NE	D	E	E	E	E	*	E	E	E	E
NE 145th/NE 155th Street Stations										
North 145th Street and Aurora Avenue North	D	E	E	E	E	E	*	*	E	E
North 145th Street and 1st Avenue NE	E	D	D	**F**	**F**	**F**	*	*	**F**	**F**
NE 145th Street and 3rd Avenue NE	E	F	F	F	F	F	*	*	F	F
NE 145th Street and 5th Avenue NE	E	D	D	E	**F**	**F**	*****	*****	E	E
5th Avenue NE and I-5 Northbound Off-ramp	D	F	F	F	F	F	*	*	F	F
NE 145th Street and 6th Avenue NE	E	E/F	E/F	E/F	E/F	E/F	*	*	E/F	E/F
NE 145th Street and 10th Avenue NE	E	F	F	F	F	F	*	*	F	F
NE 145th Street and 12th Avenue NE	E	F	F	F	F	F	*	*	F	F
NE 145th Street and Lake City Way NE	D	F	F	F	F	F	*	*	F	F
North 155th Street and Aurora Avenue North	D	E	*	*	*	*	E	E	*	*
North 155th Street and Meridian Avenue North	D	D	*	*	*	*	**E**	**E**	*	*
North 155th Street and 1st Avenue NE	D	F	*	*	*	*	**F**	**F**	*	*
NE 155th Street and 8th Avenue NE	D	E	*	*	*	*	**F**	**F**	*	*
NE 155th Street and 15th Avenue NE	D	E	*	*	*	*	F	F	*	*
NE 165th Street and 5th Avenue NE	D	F	*	*	*	*	**F**	**F**	*	*
NE 185th Street Station										
North 185th Street and SR 99	D	E	E	E	E	E	E	E	E	E
North 185th Street and Meridian Avenue North	D	D	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**
NE 185th Street and 2nd Avenue NE	D	C	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**

Table 3-15. Segment A Intersections not Meeting LOS Standards for Forecast Year 2035 During PM Peak Hour

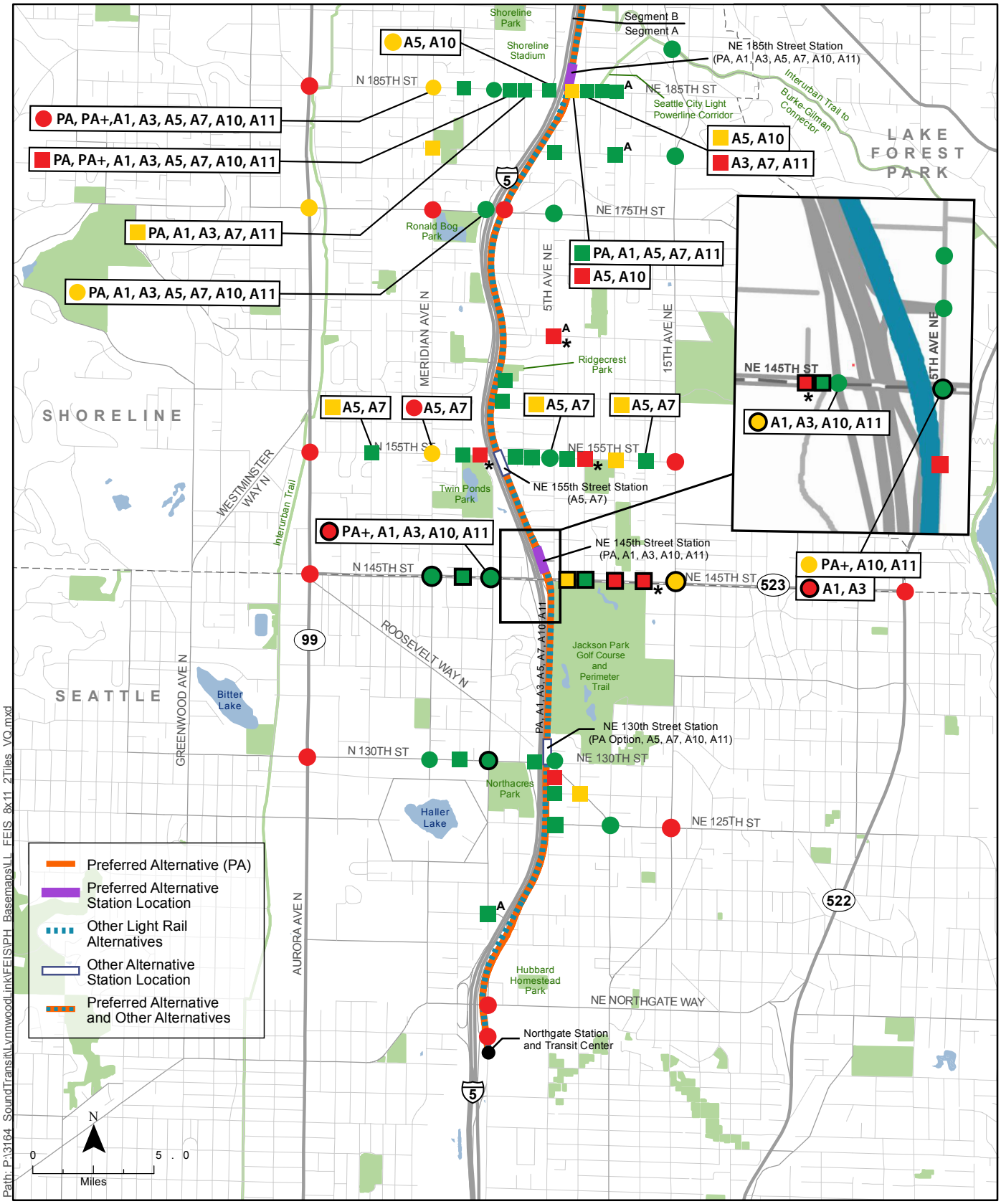
		Alternative								
Nearest Station and Intersection	**LOS Standard**	**No Build**	**Preferred Alternative**	**Preferred Alternative + Option**	**A1**	**A3**	**A5**	**A7**	**A10**	**A11**
NE 185th Street and 7th Avenue NE	D	D	A	A	C	C	**F**	C	**F**	C
NE 185th Street and 8th Avenue NE	D	C	C	C	C	**E**	D	**E**	D	**E**
North 175th Street and Meridian Avenue North	D	E	E	E	E	E	E	E	E	E
North 175th Street and I-5 Northbound Ramps	D	E	E	E	E	E	E	E	E	E

Notes: LOS results highlighted in **BOLD** and grey shading indicate intersection locations where LOS with the light rail alternatives would degrade intersections to levels that do not meet the jurisdiction's LOS standard (see Section 3.6.4) or would worsen delays at intersections already below the jurisdiction's LOS standards with the No Build Alternative.
* Location not analyzed for specified alternative. Intersection would be expected to operate similar to No Build Alternative.

Table 3-16. Segment A Intersections not Meeting LOS Standards for Forecast Year 2035 During AM Peak Hour

		Alternative								
Nearest Station and Intersection	**LOS Standard**	**No Build**	**Preferred Alternative**	**Preferred Alternative + Option**	**A1**	**A3**	**A5**	**A7**	**A10**	**A11**
NE 130th Street Station										
5th Avenue NE and I-5 Northbound Off-ramp	D	E	*	*	*	*	*	E	*	E
NE 145th/NE 155th Street Stations										
NE 145th Street and I-5 Southbound Ramps	D	F	E	F	F	F	*	*	F	F
NE 145th Street and 5th Avenue NE	E	F	F	F	F	F	*	*	F	F
5th Avenue NE and I-5 Northbound Off-ramp	D	D	D	D	**E**	**E**	*	*	D	D
North 155th Street and Meridian Avenue North	D	D	*	*	*	*	**E**	**E**	*	*
NE 185th Street Station										
North 185th Street and SR 99	D	F	F	F	F	F	F	F	F	F
North 185th Street and Meridian Avenue North	D	D	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**

Notes: LOS results highlighted in **BOLD** and grey shading indicate intersection locations where LOS with the light rail alternatives would degrade intersections to levels that do not meet the jurisdiction's LOS standard (see Section 3.6.4) or would worsen delays at intersections already below the jurisdiction's LOS standards with the No Build Alternative.
* Location not analyzed for specified alternative. Intersection would be expected to operate similar to No Build Alternative.



Intersection Level of Service

Seattle, Shoreline & WSDOT HSS[1]	WSDOT non-HSS[1]
A-C	A-D
D	E
E-F	F

[1]HSS = Highways of Statewide Significance

Project LOS (If different from No Build) — No Build LOS

Alt(s)

PA Preferred Alternative
PA+ Preferred Alternative with Options

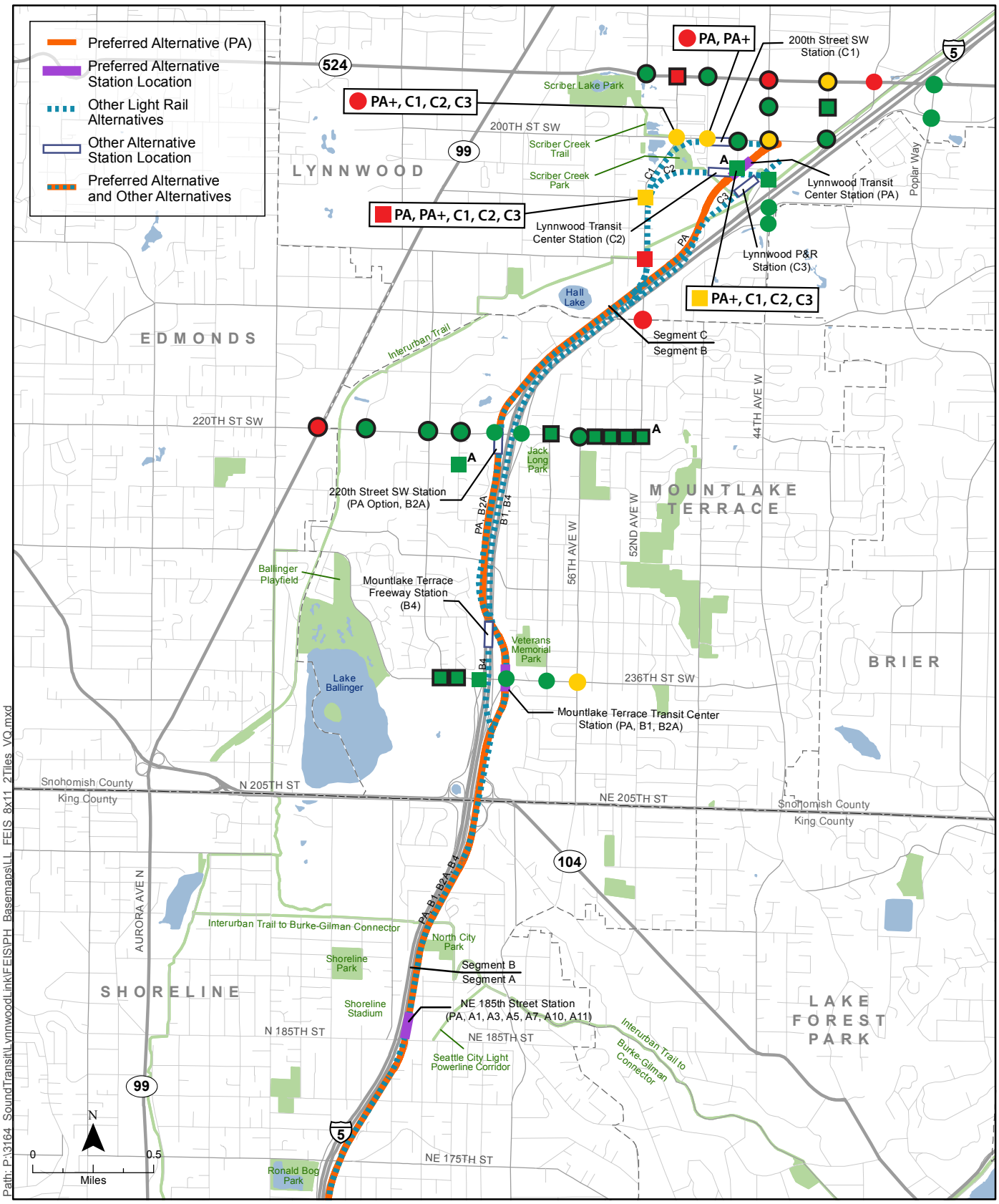
* Intersection exceeds agency LOS standard with No Build Alternative and Project Alternative(s) increase delay.

Intersection Type

- Signalized
- Two-Way Stop Controlled
- A All-Way Stop Controlled

Figure 3-8a.
Segment A
Seattle to Shoreline
2035 PM Peak Hour
Intersection LOS

Lynnwood Link Extension



Intersection Level of Service

Seattle, Shoreline & WSDOT HSS[1]	WSDOT non-HSS[1]
A-C	A-D
D	E
E-F	F

[1]HSS = Highways of Statewide Significance

Project LOS (If different from No Build) — No Build LOS

Alt(s)

PA Preferred Alternative
PA+ Preferred Alternative with Options

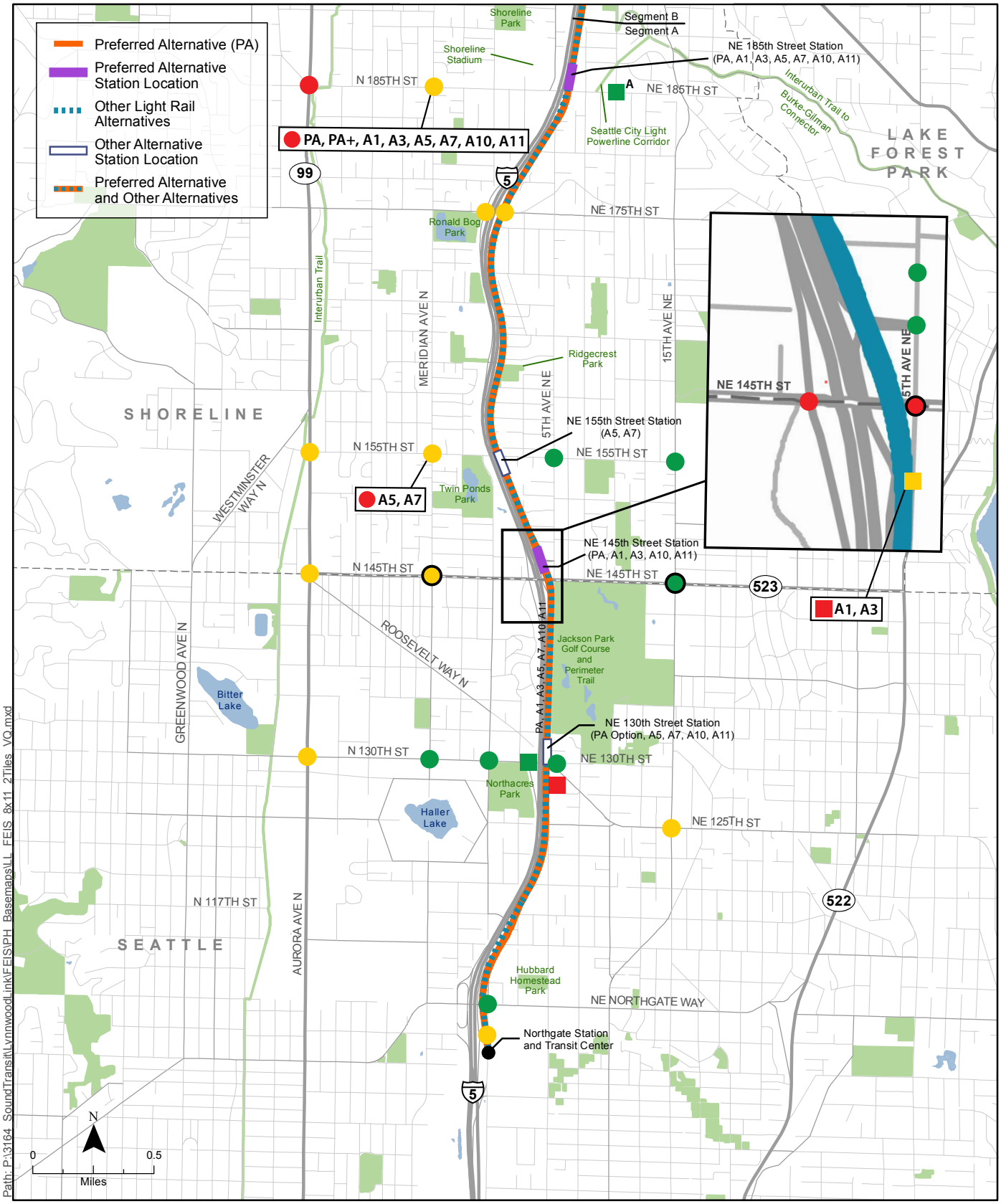
Intersection Type

- Signalized
- Two-Way Stop Controlled
- A All-Way Stop Controlled

* Intersection exceeds agency LOS standard with No Build Alternative and Project Alternative(s) increase delay.

Figure 3-8b.
Segments B and C
Shoreline to Lynnwood
2035 PM Peak Hour
Intersection LOS

Lynnwood Link Extension



Intersection Level of Service

Seattle, Shoreline & WSDOT HSS[1]	WSDOT non-HSS[1]
A-C	A-D
D	E
E-F	F

[1]HSS = Highways of Statewide Significance

Project LOS (If different from No Build) — No Build LOS

Alt(s)

PA Preferred Alternative
PA+ Preferred Alternative with Options

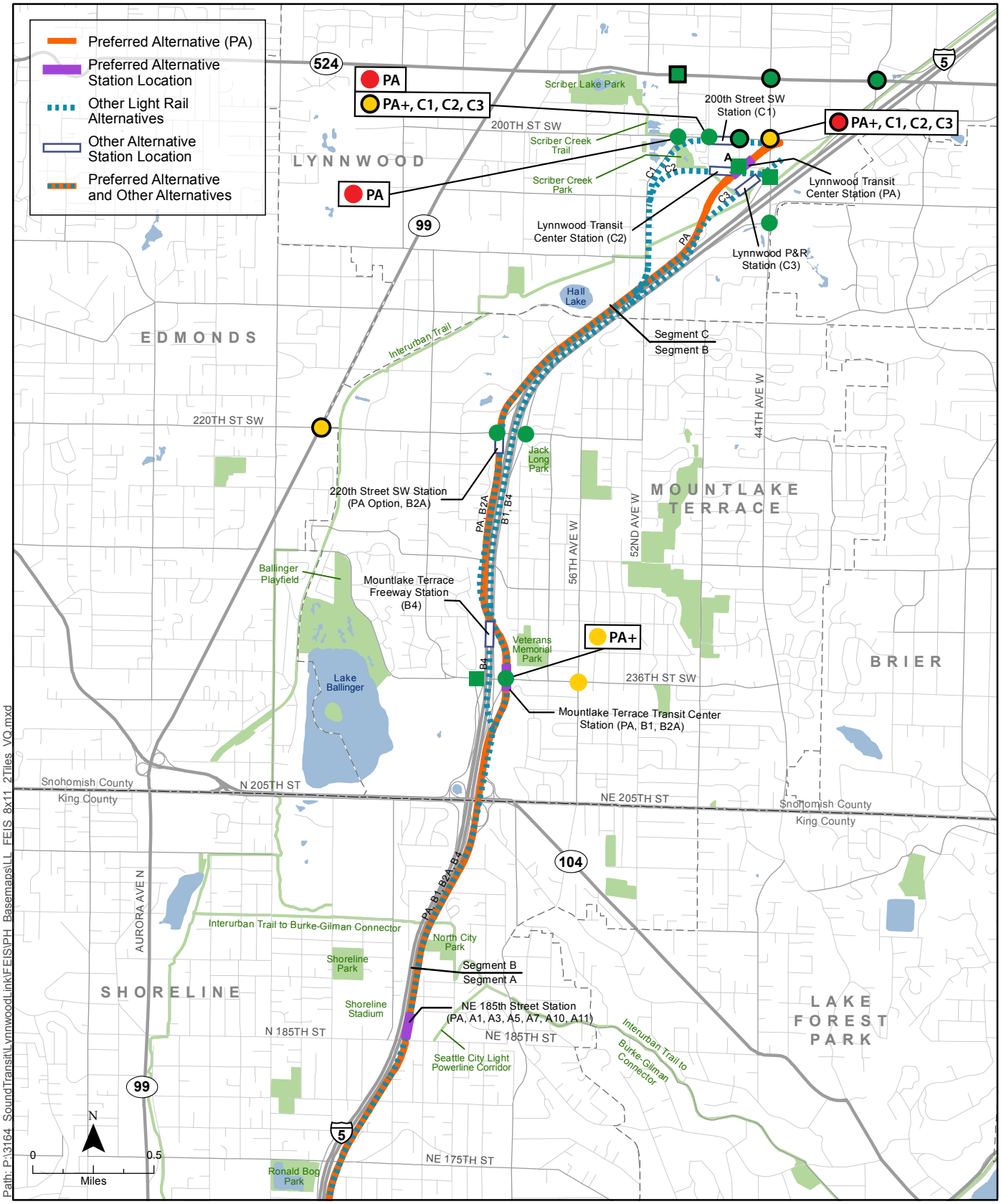
* Intersection exceeds agency LOS standard with No Build Alternative and Project Alternative(s) increase delay.

Intersection Type

- Signalized
- Two-Way Stop Controlled
- A All-Way Stop Controlled

Figure 3-9a.
Segment A
Seattle to Shoreline
2035 AM Peak Hour
Intersection LOS

Lynnwood Link Extension



Intersection Level of Service

Seattle, Shoreline & WSDOT HSS[1]	WSDOT non-HSS[1]
A-C	A-D
D	E
E-F	F

[1]HSS = Highways of Statewide Significance

Project LOS (If different from No Build) — No Build LOS

Alt(s)

PA Preferred Alternative
PA+ Preferred Alternative with Options

Intersection Type

- Signalized
- Two-Way Stop Controlled
- [A] All-Way Stop Controlled

* Intersection exceeds agency LOS standard with No Build Alternative and Project Alternative(s) increase delay.

Figure 3-9b.
Segments B and C
Shoreline to Lynnwood
2035 AM Peak Hour
Intersection LOS

Lynnwood Link Extension

City of Shoreline Arterial LOS

For the City of Shoreline, several arterials were evaluated for forecast year 2035 PM peak hour v/c ratios to ensure consistency with the City's concurrency standards. The v/c ratios for these arterials were compared with the City's v/c standard of 0.90 or lower for most principal and minor arterials. The following arterial segments would not meet the City of Shoreline's concurrency standard for principal and minor arterials with the No Build Alternative:

- Meridian Avenue North from North 155th Street to North 185th Street—northbound
- 5th Avenue NE from north of North 145th Street to NE 165th Street—northbound
- 15th Avenue NE south of and north of NE 155th Street—northbound
- NE 175th Street west of 15th Avenue NE—westbound
- NE 185th Street west of 1st Avenue NE—eastbound
- NE 185th Street east of 1st Avenue NE—westbound

In addition, the following arterial segments are projected to degrade to levels below the City of Shoreline's concurrency standards during the PM peak hour with the Lynnwood Link Extension:

- NE 185th Street east of Meridian Avenue NE—westbound (all Segment A alternatives)
- NE 185th Street from 2nd Avenue NE to 5th Avenue NE (all Segment A alternatives)

Segment B: Shoreline to Mountlake Terrace

Table 3-17 lists the one location evaluated in Segment B that is expected to operate below LOS standards in 2035 with the No Build Alternative or any light rail alternatives during the PM peak hour. All of the evaluated intersections would meet LOS standards in the AM peak hour.

Table 3-17. Segment B Intersections not Meeting LOS Standards for Forecast Year 2035 During PM Peak Hour

Nearest Station and Intersection	LOS Standard	Alternative					
		No Build	Preferred Alternative[1]	B1	B1[1]	B2A	B4
220th Street SW Station							
220th Street SW and SR 99	E	F	F	*	F	F	*

* Location not analyzed for specified alternative. Intersection would be expected to operate similar to No Build Alternative.
[1] Similar effects with or without options (220th Street SW Station for the Preferred Alternative; added parking at Mountlake Terrace Station for Alternative B1).

Segment C: Mountlake Terrace to Lynnwood

Tables 3-18 and 3-19 list the locations in Segment C that are projected to operate below LOS standards in 2035 with the No Build Alternative, the Preferred Alternative, or other light rail alternatives during the PM and AM peak hours. As shown in Table 3-18, five out of the 22 intersections evaluated in Segment C would operate below LOS standards with the No Build Alternative during the PM peak hour. With the Preferred Alternative and other light rail alternatives, most of these intersections would operate with delays similar to the No Build Alternative. The two exceptions with the Preferred Alternative are the intersections at 200th Street SW and 48th Avenue West and 52nd Avenue West and 204th Street SW, which would have higher delays than the No Build Alternative. In the Final EIS, an option is being reviewed for the Preferred Alternative to have an additional 400 park-and-ride parking spaces at the Lynnwood Transit Center Station, which would also cause the intersection of 200th Street SW and 50th Avenue West to fall below operating standards in comparison with the No Build Alternative. This is due to the increased vehicle trips associated with the additional parking stalls. The intersection of 200th Street SW and 50th Avenue West would have higher delay than No Build for all light rail alternatives except for the Preferred Alternative. For the AM peak hour (Table 3-19), none of the intersections would operate below LOS standards with the No Build Alternative, but two intersections (200th Street SW/48th Avenue West and 200th Street SW/50th Avenue West) would degrade below LOS standards with the Preferred Alternative. For all other light rail alternatives, 200th Street SW and 44th Avenue West would degrade below LOS standards during the AM peak hour.

Table 3-18. Segment C Intersections not Meeting LOS Standards for Forecast Year 2035 During PM Peak Hour

		Alternative					
Nearest Station and Intersection	LOS Standard	No Build	Preferred Alternative	Preferred Alternative + Option	C1	C2	C3
Lynnwood Station							
196th Street SW and 50th Avenue West	E	F	F	F	F	F	F
196th Street SW and 44th Avenue West	E	F	F	F	F	F	F
196th Street SW and 36th Avenue West	D	F	E	E	E	E	E
200th Street SW and 50th Avenue West	D	D	D	**E**	**E**	**E**	**E**
200th Street SW and 48th Avenue West	D	D	**E**	**E**	D	D	D
52nd Avenue West and 204th Street SW	E	E	**F**	**F**	**F**	**F**	**F**
52nd Avenue West and 208th Street SW	E	F	F	F	F	F	F
52nd Avenue West and 212th Street SW	E	F	F	F	F	F	F

Notes: LOS results highlighted in **BOLD** and grey shading indicate intersection locations where LOS with the light rail alternatives would degrade intersections to levels that do not meet the jurisdiction's LOS standard (see Section 3.6.4) or would worsen delays at intersections already below the jurisdiction's LOS standards with the No Build Alternative.

Table 3-19. Segment C Intersections not Meeting LOS Standards for Forecast Year 2035 During AM Peak Hour

		Alternative					
Nearest Station and Intersection	LOS Standard	No Build	Preferred Alternative	Preferred Alternative + Option	C1	C2	C3
Lynnwood Station							
200th Street SW and 44th Avenue West	E	E	E	**F**	**F**	**F**	**F**
200th Street SW and 50th Avenue West	D	C	**F**	C	C	C	C
200th Street SW and 48th Avenue West	D	C	**E**	D	D	D	D

Notes: LOS results highlighted in **BOLD** and grey shading indicate intersection locations where LOS with the light rail alternatives would degrade intersections to levels that do not meet the jurisdiction's LOS standard (see Section 3.6.4) or would worsen delays at intersections already below the jurisdiction's LOS standards with the No Build Alternative.

Property Access and Local Circulation

The alignment and station locations for the Preferred Alternative and other light rail alternatives could modify access for certain nearby properties, but these properties would still retain functional access. If access to a given property cannot be maintained, then the property would be acquired and identified as a displacement. Displacements are discussed in more detail in Section 4.1, Acquisitions, Displacements, and Relocations. The Preferred Alternative and other light rail alternatives would require some reconstruction of roadways adjacent to the elevated or at-grade alignments, but these areas are limited because most of the alignments are along I-5, and no long-term closures of existing roads are anticipated.

There could be cut-through traffic on neighborhood streets to access the stations via local streets, especially near stations where there is more congestion on the primary arterials serving the station, and where neighborhood streets could offer an alternative route, such as at the NE 155th Street Station, the NE 185th Street Station, and near the 220th Street Station. Property access and local circulation are discussed further in the *Transportation Technical Report*.

Circulation is currently compromised for side streets along NE 145th Street because of the difficulty in turning left from 6th Avenue NE, 10th Avenue NE, and 12th Avenue NE. With the No Build Alternative and all light rail alternatives, this movement would become more difficult in the future as volumes on NE 145th Street increase.

3.2.5 Nonmotorized Facilities

The evaluation of potential impacts on existing and future planned nonmotorized facilities resulting from the Lynnwood Link Extension are presented in this section. With the No Build Alternative, pedestrian activity near station areas would modestly increase over time as planned changes in land use occur and as future pedestrian improvements are implemented.

The Lynnwood Link Extension would increase the number of pedestrians in and around station areas within a typical 0.5-mile walking distance from the station. These increases would include walk trips to and from the following areas: light rail station platforms, park-and-ride facilities, designated passenger drop-off/pick-up areas, nearby bus stops, and surrounding neighborhoods. The Preferred Alternative and other alternatives would meet or exceed local jurisdictional, Sound Transit, and ADA design standards for pedestrian facilities fronting the station areas and roadways that are reconstructed as part of the project.

A more detailed description of pedestrian volumes at and near station areas is based on the projected number of patrons getting on or off the trains during the PM peak hour. Pedestrian volumes and LOS by alternative are summarized in the *Transportation Technical Report*. Specific locations where increased sidewalk widths are needed to accommodate peak pedestrian volumes are identified in the *Transportation Technical Report*. Design details will be further refined during final design.

With the No Build Alternative, bicycle activity near station areas would modestly increase over time as planned changes in land use occur and as future bicycle improvements are implemented.

The Preferred Alternative and other light rail alternatives are expected to increase the number of bicycles in the station areas, but they would not remove or otherwise adversely affect any of the existing or planned bicycle routes or facilities in the study area. This includes existing and planned facilities in the April 2014 *Seattle Bicycle Master Plan,* City of Shoreline 2011 *Bicycle System Plan,* and the *City of Shoreline Transportation Master Plan* (City of Seattle 2007; City of Shoreline 2011). Secure and covered bicycle parking and access would be provided at each station. In general, existing and planned bicycle facilities, implemented with reconstructed roadways, would sufficiently serve the increased levels of bicycle trips to the stations. Bicycle parking would generally be available at both ends of the stations to ease access for bicycle users. This would also minimize potential conflicts with pedestrians at stations.

3.2.6 Freight Mobility and Access

No changes to freight mobility and access are expected with the No Build Alternative beyond the increases in delay and roadway congestion that could occur over time.

With the Preferred Alternative and other light rail alternatives, freight truck traffic is expected to continue using designated FGTS and city streets for the movement of freight. In some locations, designated truck routes would travel alongside at-grade light rail profiles, but roadway and intersection conditions with the Lynnwood Link Extension would be similar to those with the No Build Alternative. Some intersection operations may improve through transportation mitigation for the Preferred Alternative or other light rail alternatives (see Section 3.6.4), which could benefit freight movement. Beyond these potential project effects, the *Transportation*

Technical Report describes the modifications to the roadway network associated with the Preferred Alternative or other light rail alternatives that could result in changes to freight mobility and access for each segment. These modifications are not anticipated to negatively affect truck circulation or change the truck route designations on the regional and local street network.

3.2.7 Parking

The Lynnwood Link Extension stations would include new, replacement, and additional park-and-ride capacity. Both on-street and off-street parking spaces are anticipated to be removed due to the placement of the light rail stations, surrounding roadway modifications, and modifications along the light rail alignment. As described in Chapter 2, Alternatives Considered, additional park-and-ride lots have generally been sized to accommodate forecasted parking demand. However, there is a possibility for parking spillover to occur at these stations if demand exceeds their capacity, particularly at the NE 130th Street Station.

At the NE 145th Street, NE 155th Street, and NE 185th Street Stations, a relatively large amount of unrestricted on-street parking exists in the vicinity of the stations; however, the potential for spillover parking is low due to the relatively large supply of parking spaces proposed for the park-and-rides. In station areas that currently lack available on-street parking supply, such as near the Lynnwood, 220th Street SW, and Mountlake Terrace station options, the potential for "hide-and-ride" parking activity (i.e., on-street parking by transit users in neighborhoods surrounding stations) would be limited. In these cases, if spillover parking occurred, it would likely be on privately owned off-street parking facilities. The potential for spillover parking impacts is discussed further in the *Transportation Technical Report*.

Changes in parking supply with the proposed park-and-ride parking spaces for each segment and alternative are described below. As part of this analysis, Sound Transit considered parking supplies within approximately 0.25 mile of each proposed station. Additional detail, including maps showing the area that was inventoried for each station, is in the *Transportation Technical Report*.

Segment A: Seattle to Shoreline

Table 3-20 summarizes the parking impacts along Segment A by alternative, not including removal of any existing park-and-ride lots and any off-street parking spaces associated with properties that might be acquired by the project. Parking at the Latvian Evangelical

Table 3-20. Segment A Parking Impacts

Alternative	Parking Spaces Removed[a]		
	On-Street	Off-Street[b]	Total
Preferred Alternative	69	0	69
Preferred Alternative with option	69	0	69
Alternative A1	69	0	69
Alternative A3	73	0	73
Alternative A5	89	0	89
Alternative A7	77	0	77
Alternative A10	96	0	96
Alternative A11	84	0	84

[a] Includes parking spaces removed for column placement where applicable.
[b] Off-street does not include park-and-ride spaces.

Lutheran Church would be modified but parking supply would be maintained. The Preferred Alternative would remove 69 parking spaces, while the other light rail alternatives would remove between 69 and 96 parking spaces due to column placement for the guideway.

Table 3-21 shows the proposed change in park-and-ride capacity at stations under each light rail alternative.

Table 3-21. Segment A Park-and-Ride Impacts and Proposed New Parking Spaces

Station	Alternative	Total Existing Parking Spaces	Removed Parking Spaces[a]	Proposed New Parking Spaces	Parking Spaces after Project	Net Change in Parking Spaces
NE 130th Street Station, with Park-and-Ride	Preferred Alternative with option, A5	46	46	100[b]	100[b]	+54
NE 130th Street Station, no Park-and-Ride	A10	46	46	0	0	-46
NE 130th Street Station	A7, A11	46	4	100	142	+96
NE 145th Street Station	A1	68	68	500	500	+432
NE 145th Street Station	A10	68	68	650	650	+582
NE 145th Street Station	Preferred Alternative, A3, A11	68	68	500	500	+432
NE 155th Street Station	A5, A7	0	0	500	500	+500
NE 185th Street Station	Preferred Alternative, A1, A3, A7, A11	0	0	500	500	+500
NE 185th Street Station	A5, A10	0	0	350	350	+350

[a] Includes parking spaces removed for column placement where applicable.

[b] Possible surface parking lot available for lease located near the station.

The discussion below focuses on areas where existing parking spaces would be removed; in other locations, the alternatives would add parking where a new station is proposed. The Preferred Alternative and Alternatives A5, A10, A7, and A11 would remove parking at the 5th Avenue NE/NE 133rd Park-and-Ride lot (46 spaces) and additional on-street parking near NE 145th Street, but these losses would be replaced with a new 500-space park-and-ride garage near the NE 145th Street Station. The Preferred Alternative would add a 500-space park-and-ride garage west of I-5 near the NE 185th Street Station.

For Alternatives A7 and A11, and an option for the Preferred Alternative, a NE 130th Street Station would remove the 5th Avenue NE/NE 133rd Park-and-Ride lot (46 spaces). The lot would also be removed with Alternatives A5 and A10. A nearby surface lot would replace the removed park-and-ride lot. Alternatives A7 and A11 would maintain the 5th Avenue NE/NE 133rd Park-and-Ride lot but columns would remove four of its parking spaces.

With the construction of the NE 145th Street Station, the Preferred Alternative and Alternatives A1, A3, A10, and A11 would remove the North Jackson Park Park-and-Ride lot (68 spaces), but a new 500- or 650-space garage would be added near the NE 145th Street Station, depending on the alternative.

Segment B: Shoreline to Mountlake Terrace

Table 3-22 summarizes the parking changes along Segment B by alternative. Alternative B2A would result in the loss of 11 on-street spaces. Table 3-23 shows the proposed changes in park-and-ride capacity at stations under each alternative.

Table 3-22. Segment B Parking Impacts

Alternative	Parking Spaces Removed[a]		
	On-Street	Off-Street[b]	Total
Preferred Alternative	0	0	0
Preferred Alternative with option	0	0	0
Alternative B1	0	0	0
Alternative B2A	11	0	11
Alternative B4	0	0	0

[a] Includes parking spaces removed for column placement where applicable.

[b] Off-street does not include park-and-ride spaces.

Table 3-23. Segment B Park-and-Ride Impacts and Proposed New Parking Spaces

Station	Alternative	Total Existing Parking Spaces	Removed Parking Spaces	Proposed New Parking Spaces	Parking Spaces after Project	Net Change in Parking Spaces
Mountlake Terrace Transit Center Station	B1, Preferred Alternative, B2A	880	0	0	880	0
Mountlake Terrace Transit Center Station	B1 with Option	880	220	500	1,160	+280
Mountlake Terrace Freeway Station	B4	880	0	0	880	0
220th Street SW Station	Preferred Alternative with Option, B2A	0	0	200	200	+200

Segment C: Mountlake Terrace to Lynnwood

Table 3-24 summarizes the parking impacts along Segment C by alternative, not including removal of any existing park-and-ride spaces because all of the removed park-and-ride spaces would be replaced. None of the light rail alternatives, including the Preferred Alternative, would remove on-street parking. The Preferred Alternative would remove 27 off-street parking spaces along the south side of 200th Street SW between 48th and 44th Avenues West. Alternatives C1 and C2 would remove eight and four off-street parking spaces,

Table 3-24. Segment C Parking Impacts

Alternative	Parking Spaces Removed[a]		
	On-Street	Off-Street[b]	Total
Preferred Alternative	0	27	27
Preferred Alternative with option	0	27	27
Alternative C1	0	8	8
Alternative C2	0	4	4
Alternative C3	0	0	0

[a] Includes parking spaces removed for column placement where applicable.

[b] Off-street does not include park-and-ride spaces.

respectively. There are several locations along Segment C where the alignment or light rail station would acquire a building. The parking associated with these locations was not considered a parking impact. Table 3-25 shows the proposed changes in park-and-ride capacity at stations under each alternative.

Table 3-25. Segment C Park-and-Ride Impacts and Proposed Parking Spaces

Station	Alternative	Total Existing Parking Spaces	Removed Parking Spaces[a]	Proposed New Parking Spaces	Parking Spaces after Project	Net Change in Parking Spaces
Lynnwood Transit Center—Modified Alternative	Preferred Alternative	1,370	1,120	1,650	1,900	+530
Lynnwood Transit Center—Modified Alternative with Additional Parking	Preferred Alternative with option	1,370	1,120	2,050	2,300	+1,030
200th Street SW Station	C1	1,370	370	900	1,900	+530
Lynnwood Transit Center	C2	1,370	670	1,200	1,900	+530
Lynnwood Transit Center	C3	1,370	1,120	1,650	1,900	+530

[a] Includes parking spaces removed for column placement where applicable.

At the Lynnwood Transit Center, the Preferred Alternative and other light rail alternatives would remove existing surface park-and-ride spaces and replace them with a new garage for a net total of 1,900 park-and-ride spaces. The Preferred Alternative also has an option that would maintain the surface lot west of 46th Street SW, for a net total of 2,300 park-and-ride spaces.

3.2.8 Safety

The Preferred Alternative and other light rail alternatives would have minimal effects on traffic safety in the project corridor because the alignments would be completely grade-separated from the street and highway networks, and the station areas would be designed for multimodal access and to minimize the potential for traffic conflicts.

The alternatives would not change the configuration of the I-5 roadway itself, nor would they affect traffic-operating conditions on the roadway; therefore, no operating impacts on I-5 related to safety are anticipated. The collision information on I-5 shows that most incidents are congestion-related due to slowing or stopped traffic in lanes, or from merge and weave actions. The Transportation Technical Report summarizes the collision data for I-5.

The alternatives involve structural and visual changes to parts of the I-5 roadside environment, which could affect safety conditions. New retaining walls, safety barrier, guardrails, or columns would be constructed along the roadway. The amount of increased hazard presented by these changes along I-5 differs by location, and depends on factors such as the highway configuration, traffic volumes, speeds, topography, the presence of shoulders or refuges, safety barriers or guardrails, and the distance between

the lanes and a new structure or barrier. While design measures may help reduce a safety concern, they may not fully remove it. For example, a guardrail in front of a structure may reduce the hazard presented by a new column along the roadway, but guardrails are also potential hazards. Such features of the project within the I-5 right-of-way must conform with FHWA's regulatory requirements for managing the right-of-way. The project would undergo a detailed safety analysis and further consideration of hazard minimization measures during final design as part of WSDOT and FHWA review and approval processes for the use of I-5 right-of-way.

Pedestrian and bicycle volumes are expected to increase at intersections near the proposed stations, which could result in an increased potential for pedestrian/vehicle, bicycle/vehicle, or pedestrian/bicycle conflicts. Bus trips would also increase near stations. The design of the station areas incorporates design features and standards that would reduce conflicts between travel modes.

The Preferred Alternative and other at-grade light rail alternatives are proposing stations and other improvements, including interchange modifications near existing collision analysis locations (CALs), notably near NE 145th Street, 220th Street SW, and the Lynnwood Transit Center. With the reconstruction of the NE 130th Street interchange and grade separating the northbound off-ramp from I-5 to 5th Avenue NE, the Preferred Alternative would remove an existing conflict point.

Multiple CALs are near the NE 145th Street Station. These include the northbound I-5 off-ramp to 5th Avenue NE, NE 145th Street at 5th Avenue NE, northbound I-5 on-ramp from 5th Avenue NE, and the southbound I-5 ramp terminal at NE 145th Street. The Preferred Alternative would improve safety for geometric modifications and access changes with a new signal at the I-5 northbound on-ramp at 5th Avenue NE. Other light rail alternatives with a NE 145th Street Station could also improve safety near this interchange because they would add a signal at the on-ramp.

Two CALs are near 220th Street SW, with one location near the proposed 220th Street SW Station in the Preferred Alternative with options. The intersection of 220th Street SW at 66th Avenue West is signalized and could experience an increase in potential conflicts between travel modes with a proposed station and park-and-ride at this location under Alternative B2A and an option to the Preferred Alternative.

Multiple CALs are near the Lynnwood Transit Center. Five of the locations are along 196th Street SW and would have similar conditions with the No Build Alternative, the Preferred Alternative, and other light rail alternatives. The two CALs along 200th Street SW adjacent to the Lynnwood Transit Center Park-and-Ride at 48th Avenue West and 46th Avenue West would be affected by the Preferred Alternative and other light rail alternatives. These intersections could experience an increase in volumes by all modes.

3.3 Construction Impacts

Construction of the Preferred Alternative or other light rail alternatives would affect local and regional traffic operations. These impacts would include increased congestion, traffic diversions caused by temporary road closures and detours, increased truck traffic associated with construction activity, and temporary changes in I-5 operations and roadside characteristics that could affect safety. Impacts could also result from the intrusion of non-local traffic into residential areas as a result of temporary street closures and traffic detours, disruptions to vehicular and pedestrian access, and the temporary loss of on- or off-street parking.

As part of normal construction planning and permitting, Sound Transit, WSDOT, FHWA, and the Cities would work to minimize the duration and impact of lane closures and reductions by (a) maintaining the same number of travel lanes on roadways affected by the project, where practical, except for short-duration closures that would occur on nights and weekends; (b) establishing detour routes on nearby arterials for short-duration closures; (c) maintaining WSDOT traffic management systems—closed circuit television (CCTV) cameras and monitoring, ramp metering, data stations, and variable message signing; and (d) providing mitigation through supplemental WSDOT incident response team service and Transportation Demand Management strategies.

The project's construction along I-5, which includes crossing over the freeway under all alternatives north of the Mountlake Terrace Transit Center, would involve temporary changes to I-5 roadway operations. It would also introduce features affecting shoulders as well as the roadside environment. There would be temporary nighttime lane closures along I-5 in some locations to allow Sound Transit to place safety barriers between the edge of the pavement and adjacent construction zones. With some alternatives, potential shoulder reductions and narrowed lanes in some locations would reduce the availability of the shoulder refuge for breakdowns and incidents. Construction access to and from I-5 would be from on-ramps and off-ramps as opposed to directly from the mainline, thereby minimizing the effects construction vehicles would have on I-5 general purpose traffic. Portions of the alignment would have construction access from the local arterials and streets in lieu of or in addition to access from on- and off-ramps. However, freeway capacity would be reduced by varying degrees due to the construction activity, resulting in increased congestion with some alternatives. The potential loss of highway shoulders with some alternatives would also affect safety. A Maintenance of Traffic plan that addresses all travel modes will be prepared at final design for FHWA and WSDOT approval and implementation during construction. This plan would include detailed design drawings establishing all physical and operating characteristics for staging, access, lane or shoulder closures and transitions, hauling, traffic management, detours, lane modifications, and other construction zones or activities. The plan would incorporate

WSDOT's established guidance for best practices and methods to be applied during construction periods, many of which are focused on reducing congestion impacts and minimizing safety hazards. For example, typical measures include signage, traveler advisories, special lighting for work zones and travel lanes, scheduling work during lower volume travel times, detailed contractor requirements, a variety of traffic and travel demand management strategies, and procedures for any construction directly affecting the active roadway.

The Preferred Alternative and other light rail alternatives would have some impacts on traffic operations on I-5 during installation of the girders for the guideway bridges and for rebuilding the I-5 bridges. Construction impacts would involve nighttime closures in each direction of mainline I-5 and traffic detours where the guideway crosses the freeway. Vertical clearance would be maintained on I-5. Construction access points, closures, and changes in I-5 operations will require approval from FHWA and WSDOT.

Reconstruction of I-5 overcrossings and overcrossing closures during construction would require lane closures, or temporary full closures, and detours. All alternatives would require reconstruction of the pedestrian bridge over I-5 at NE 195th Street. Detours could have secondary impacts on general purpose traffic, bus transit, bicyclists, and pedestrians on other facilities. Strategic phasing or sequencing of overcrossing closures, coupled with other mitigation measures described in Section 3.6, Potential Mitigation Measures, would minimize the cumulative impacts of closures. Lane closures on overcrossings would not occur for more than one bridge at a time within a segment.

Generally, construction truck traffic traveling to station construction sites would use city streets. Appendix F, Conceptual Plans, shows the potential construction staging areas and truck haul routes. The highest number of truck trips are expected during peak earthwork operations and concrete delivery for both guideway and station construction. For at-grade construction, 4 to 12 trucks per hour are estimated from each work zone. For elevated guideway construction, peak truck trips are estimated at 4 to 8 trucks per hour for the concrete delivery. Multiple work zones may be used during peak operations that would result in higher total project peak truck trips on I-5; however, these trips would generally not overlap with each other on the same local streets. Segment A would generate from 12 to 36 truck trips per hour. Segment B and Segment C would generate from 8 to 24 truck trips per hour. The estimated number of truck trips on I-5 would be from 20 to 60 truck trips; however, the actual truck trips on any specific segment of I-5 would be based on the origin and destination of the truck as it travels to and from the work zone.

Typical construction activity for surface and elevated guideways and stations would occur on a 6-day-per-week work schedule. Limits on hours of construction could occur when street detours are involved and/or construction periods need to be

abbreviated to reduce impacts. Periodic nighttime and weekend construction could occur during demolition of I-5 overcrossings and placement of new bridge girders for overcrossings.

Parking for construction workers will be provided on site with access from city streets. The contractor will provide shuttle service when off-site parking is needed. Parking could occur on city streets where parking is unrestricted.

Some loss of parking spaces at park-and-ride lots could occur during construction but would be minimized with construction phasing and temporary parking. Temporary lost parking spaces at park-and-ride lots would shift demand to other park-and-rides or cause a change in mode of access for patrons.

The Preferred Alternative and other light rail alternatives may require utility relocations along the alignment and near the stations. Utility relocations may require temporary lane closures and traffic control plans to maintain property access and circulation.

Impacts on general purpose traffic, transit operations, nonmotorized travel, and parking are summarized for each segment below and in Table 3-26. Refer to the *Transportation Technical Report* for more details on general corridor-wide and segment-specific construction impacts for the Preferred Alternative and other light rail alternatives.

Segment A Alternatives

Construction of the Preferred Alternative and other light rail alternative alignments in Segment A would primarily be conducted from staging areas within the I-5 freeway/WSDOT right-of-way and city streets between Northgate and NE 145th Street. Barriers would be installed at the edge of the pavement to establish work zone areas for the contractor. The Preferred Alternative and other light rail alternatives within Segment A would involve rebuilding overpass bridges or ramps at one or more locations.

Overpass bridge or ramp reconstruction affecting I-5 is expected at NE 117th Street, NE 130th Street, and NE 185th Street, and could require closure of one lane in each direction of I-5 during nights and weekends. The Preferred Alternative and Alternatives A1, A5, and A10 would involve nighttime closures of I-5 in the vicinity of NE 130th Street for up to 1 month for one lane southbound and one lane northbound.

Local street construction activity could include nighttime closures, intermittent daytime closures, and lane closures in one direction. Depending upon the light rail alternative, local streets affected include 1st Avenue NE, NE 117th Street, 5th Avenue NE, NE 130th Street, NE 145th Street, NE 155th Street, NE 175th Street, and NE 185th Street. Options that include construction of an elevated guideway over vehicular traffic would require nighttime closures of the affected facility (i.e.,

street, ramps, or I-5). Table 3-26 summarizes the major roadway closures for Segments A, B, and C.

Bus operations and transit riders traveling on I-5 could be affected by the increase in delay that would result from increased congestion. Bus schedules could also be less reliable as congestion and delay increase. For the alternatives with lane closures of I-5, to replace bridges over the freeway, transit would have increased travel time impacts, although maintaining an HOV lane could reduce the impacts.

All alternatives would close parking at the NE 135th Street/5th Avenue NE park-and-ride, and several alternatives would also close the existing NE 145th Street park-and-ride.

There would be no impacts on nonmotorized traffic due to construction within the I-5 alignment. However, nonmotorized travel would be affected in the vicinity of station construction as well as from reconstruction of freeway overcrossings.

The movement of trucks carrying freight would be affected similarly to general purpose traffic.

On-street parking would be lost temporarily along reconstructed street segments that have on-street parking and along roadways adjacent to the guideway construction.

Construction activities associated with stations and the guideway route may reduce or restrict property access and the contractor would need to maintain access during construction.

Table 3-26. Summary of Construction Impacts

Alternative	Roadway Closure[a]			Construction Truck Traffic[c]	Parking Loss		Regional Bus Facilities	Multimodal Neighborhood Mobility[e]
	I-5 Mainline	I-5 Interchanges	Arterial/Local Streets[b]		Park-and-Ride Spaces[d]	On-street (Yes/No)		
Segment A								
Preferred Alternative	Partial (short), Nighttime[e]	Nighttime	Nighttime – Partial (long)	Low	46	Yes	Minor	Moderate
Alternative A1	Partial (short), Nighttime[f]	Nighttime	Nighttime – Partial (long)	Low	46	Yes	Minor	Moderate
Alternative A3	Nighttime	Nighttime	Nighttime	Low	46	Yes	Minor	Low
Alternative A5	Partial (short), Nighttime	Nighttime	Nighttime – Partial (long)	Low	46	Yes	Minor	Moderate
Alternative A7	Nighttime	Nighttime	Nighttime	Low	46	Yes	Minor	Low
Alternative A10	Partial (short), Nighttime	Nighttime	Nighttime – Partial (long)	Low	46	Yes	Minor	Moderate
Alternative A11	Nighttime	Nighttime	Nighttime	Low	46	Yes	Minor	Low
Segment B								
Preferred Alternative	Nighttime	Nighttime	Partial (short)	Low	225	No	3 to 6 months plus nighttime closure of transit ramps	Moderate[f]
Alternative B1	Nighttime	Nighttime	Nighttime	Low	225	No	3 to 6 months plus nighttime closure of transit ramps	Moderate[g]
Alternative B2A	Nighttime	Nighttime	Partial (short)	Low	225	No	3 to 6 months plus nighttime closure of transit ramps	Moderate[g]
Alternative B4	Partial (short)	Nighttime	Nighttime	Low	0	No	Permanently closed when construction starts	Low[g]

Table 3-26. Summary of Construction Impacts

Alternative	Roadway Closure[a]			Construction Truck Traffic[c]	Parking Loss		Regional Bus Facilities	Multimodal Neighborhood Mobility[e]
	I-5 Mainline	I-5 Interchanges	Arterial/Local Streets[b]		Park-and-Ride Spaces[d]	On-street (Yes/No)		
Segment C								
Preferred Alternative	Nighttime	Nighttime	Nighttime	Low	560	No	Nighttime closure, direct access ramp	Low[h]
Preferred Alternative—Option to add 400 parking spaces at Lynnwood Transit Center	Nighttime	Nighttime	Nighttime	Low	560	No	Nighttime closure, direct access ramp	Low[g]
Alternative C1	Nighttime	None	Nighttime	Low	250	No	Minor	Low[g]
Alternative C2	Nighttime	None	Nighttime	Low	560	No	Nighttime closure, direct access ramp	Low[g]
Alternative C3	Nighttime	Nighttime	Nighttime	Low	560	No	Nighttime closure, direct access ramp	Low[g]

[a] Partial road closure assumes one lane is closed to traffic. Short-term duration is 2 months or less cumulative total (including intermittent periods of little activity). Long-term duration is 2 months to 12 months cumulative total, with potentially intermittent periods of little activity.
[b] Local access will be maintained throughout construction.
[c] Peak truck traffic is 4 to 12 trucks per hour at construction sites.
[d] Loss of parking during construction. Additional detail and potential mitigation, if provided, is in the Transportation Technical Report.
[e] Neighborhood mobility impacts include local transit route impacts and access to transit, pedestrian and bicycle mobility, traffic impacts due to construction, and neighborhood intrusion due to construction activities and parking.
[f] Nighttime periodic closures for the placement of the bridge girders.
[g] Moderate due to 6-month closure of NE 195th Street pedestrian/bicycle bridge over I-5.
[h] Detours required of Interurban Trail.

Segment B Alternatives

All light rail alternatives within Segment B would have construction adjacent to the east side of I-5 between NE 195th Street and the SR 104 interchange ramp. Construction would occur within the I-5/WSDOT right-of-way. Concrete barriers would be installed to define the work zone along the edge of the pavement. Construction access in this segment would primarily occur from local streets, the Mountlake Terrace Park-and-Ride, and the SR 104 interchange ramps.

Construction through the SR 104 interchange area would include construction work within the cloverleaf interchange. This activity is expected to have some impacts on traffic operations due to proximity of the construction near the interchange ramps. The ramps would also be closed periodically at night during construction of the guideway as it crosses over the ramps.

The Preferred Alternative and Alternatives B1 and B2A would require minor reconstruction of 236th Street SW along the curb/sidewalk area near the station. This would require short and periodic lane restrictions managed by flaggers.

North of the Mountlake Terrace Station, each alternative would require nighttime closures of I-5 at the overcrossings to install girders and construct the guideway bridges. Detours to local streets would be planned for these nighttime closures. For all alternatives, median or west-side construction would require staging and possible lane closures or nighttime full closures on cross streets such as 212th Street SW under I-5. For Alternative B2A and the Preferred Alternative, lane restrictions or partial closures could also affect 60th Avenue West.

Bus operations and transit riders traveling on I-5 could be affected by increased congestion resulting from construction activity adjacent to I-5 on the east side (south of the Mountlake Terrace Transit Center). There would be short-term closures (6 to 9 months plus nighttime closures) of the direct access ramps to the freeway station with the Preferred Alternative and Alternatives B1 and B2A to construct the alignment within the median north of the freeway station. Alternative B4 would permanently close the direct access ramps at the beginning of construction. With the closure of the freeway bus ramps to the Mountlake Terrace Freeway Station, buses may be rerouted to the park-and-ride, increasing travel time. However, some buses could remain on I-5 and skip the Mountlake Terrace Freeway Station.

The Preferred Alternative and all other light rail alternatives would require replacement of the NE 195th Street pedestrian bridge over I-5. The reconstruction of the NE 185th Street overcrossing or approach, located approximately 0.5 mile south of the NE 195th Street pedestrian bridge, would need to be completed at a different time than when the NE 195th Street pedestrian bridge is closed to maintain nonmotorized access across I-5 in this area.

For the Preferred Alternative and Alternatives B1 and B2A, part or all of the surface lot could be closed, reducing parking spaces during construction. No on-street parking spaces would be lost due to construction in Segment B.

Segment C Alternatives

For all alternatives, the elevated guideway in the I-5 median would require shoulder and possibly lane width reductions along both northbound and southbound I-5 to provide the median work zone. To cross over the southbound lanes of I-5, the elevated guideway would have a multi-foundation support system (using straddle bents); as a result, nighttime closures of southbound I-5 lanes would be needed. Nighttime closures on I-5 would also require detours onto surface streets. Temporary closures would also be necessary where the guideway crosses over local streets: 208th Street SW, 206th Street SW, 204th Street SW, 44th Avenue NE and its on-ramp, and the Interurban Trail.

Construction phasing and temporary parking would be used to minimize loss of parking at the Lynnwood Park-and-Ride. A loss of parking spaces would shift demand to other park-and-rides, cause a shift in mode of access, or increase the potential for transit patrons to park in other locations in the vicinity. Several large park-and-ride lots with capacity are located along I-5 north of the Lynnwood Park-and-Ride and could either capture the users upstream or result in some drivers traveling north to access transit.

There is currently no on-street parking that would be affected by the Segment C alignments; therefore, no on-street parking impacts are anticipated during construction.

3.4 Indirect Impacts

The completion of the Lynnwood Link Extension would result in fast and reliable rail service. Light rail service would help facilitate potential increases in residential and employment uses around the stations. This could lead to changes in regional and local travel patterns, as trips both to and from these areas increase for all modes, affecting transit, freeway and local traffic volumes, parking demand, and nonmotorized users. The light rail extension could also affect ridership on other transit service in the corridor, such as bus rapid transit service in the SR 99 corridor, where longer distance trips could decrease as some riders shift to light rail, and shorter trips could increase as more riders use other transit service to access light rail. Other changes in transit service in the project corridor in response to the light rail extension that are not yet planned or anticipated could also result in shifts in ridership. These could include the potential for Community Transit, Sound Transit, and King County Metro to redeploy and/or reinvest in bus service that is replaced by light rail. Also, ridership on the Sounder North commuter rail service could be

affected if some riders choose to shift from commuter rail to the Lynnwood Link Extension.

3.5 Cumulative Impacts

The future transportation impacts discussed in Section 3.2, Long-Term Impacts, were based on the results of traffic and ridership modeling that incorporated past, present, funded, and approved future actions, as well as projected growth that would generate development in the region.

Sound Transit is evaluating potential sites for an OMSF, as described in Chapter 2. One of the sites under consideration is located in Lynnwood (Segment C) north of I-5 and east of 52nd Avenue West/Cedar Valley Road. However, the transportation effects of the OMSF would be limited. The light rail trains would enter and leave the facility via a grade-separated dedicated light rail guideway. While employees, service vehicles, and shipments would arrive using local streets, the traffic is not expected to change conditions because the facility would occupy an area that is already largely developed with office and light industrial uses, and trips related to the displaced facilities would no longer occur. There would be no notable difference in the transportation effects of the OMSF related to Segment C alternatives—all of which have stations and park-and-rides that primarily would be accessed using different streets than 52nd Avenue West, which would be the street access point for the OMSF Lynnwood site alternative. In July 2014, the Sound Transit Board identified a Bellevue site as the Preferred Alternative. A final decision on the OMSF site will be made after publication of that project's Final EIS.

The Edmonds School District owns the property being considered for the Lynnwood site alternative for the operations and maintenance facility; the District has a master plan to develop the site for a support services center. This center will include administrative functions and an operations base with storage, maintenance, and fueling for the Edmonds' school bus fleet. If developed, the services center could increase traffic volumes along 52nd Avenue West, including during the morning peak period and in afternoons when the school buses are deployed. However, this added volume would not notably change the traffic impacts or mitigation measures of the Lynnwood Link Extension, which are largely focused on access points to the Lynnwood Park-and-Ride and station.

Sound Transit has started construction of the Northgate Link Extension, which would extend light rail from the University of Washington to Northgate. While this project is scheduled to be completed and in operation prior to completion of the Lynnwood Link Extension, some construction periods would likely overlap. To address this overlap with potential traffic construction impacts in the Northgate Mall area. Maintenance of Traffic plans for the two projects would be coordinated. Additionally, King County is planning to construct high-density transit-oriented

development adjacent to the planned Northgate light rail station. This development may be under construction at the same time as the Lynnwood Link Extension, potentially creating additional construction-related impacts in the area. Construction of this development will need to be coordinated with construction of the light rail extensions in order to minimize overall impacts.

Other unfunded regional and local transportation projects and development projects could have localized effects on transit ridership and travel patterns within the project area, including traffic operations near the proposed stations. However, implementation of potential plans such as new, managed, or tolled lanes in the I-5 corridor could alter transportation conditions anticipated for the No Build Alternative and the light rail alternatives; in general, these plans would be more likely to increase the use of transit. Otherwise, the transportation conditions would remain similar to those already described, with no material cumulative effects.

3.6 Potential Mitigation Measures

The following sections discuss measures Sound Transit would take to mitigate the impacts of the light rail alternatives. They also describe measures that Sound Transit proposes to take but which require the agreement of other parties. For instance, Sound Transit has identified certain intersection improvements, traffic management, safety, and parking strategies to mitigate project-related impacts, but the agency does not have the sole authority to make those improvements when the facilities are owned and managed by others. Others may also have alternative plans or projects to address project future conditions with or without the project. In these cases, Sound Transit would coordinate with these other agencies and jurisdictions to further define and implement improvements to mitigate the Lynnwood Link Extension's impacts.

3.6.1 Regional Travel

Completion of the Lynnwood Link Extension would not require mitigation for regional travel because highways and arterials are not expected to experience adverse changes in operations.

3.6.2 Transit

Mitigation for transit service would not be required because the project would improve the regional transit system and, by freeing up existing bus service resources, may allow King County Metro's and Community Transit's integration plans to provide coordinated bus service with the light rail system. To mitigate the temporary loss of park-and-ride spaces, Sound Transit would coordinate with local jurisdictions, transit providers, FHWA, and WSDOT to develop and implement plans for replacement parking and alternative access measures.

3.6.3 Freeway Operations

No mitigation would be necessary along the I-5 mainline. The Preferred Alternative and other light rail alternatives would have similar peak hour volumes and freeway operations along the I-5 mainline and ramps as the No Build Alternative. For I-5 near the NE 145th Street interchange, the intersection and arterial improvements already included in the project design (or offered in mitigation for Alternative A10) would result in the same or better conditions than would occur with the No Build Alternative; therefore no further mitigation is needed.

3.6.4 Arterials and Local Streets

For impacts on arterials and local streets, mitigation is potentially required at intersections where the intersection LOS with the light rail alternatives, compared with the No Build Alternative, would degrade to levels that do not meet jurisdictional LOS standards. For locations that would operate below LOS standards with the No Build Alternative in forecast year 2035, improvements were assumed to be needed if the light rail alternatives result in substantial increases in delays compared with the No Build Alternative. Potential mitigation measures for improvements at intersections are described below.

To mitigate intersections operating below local standards due to the project, or notably below No Build conditions that are already below local standards, Sound Transit would provide these improvements or other improvements as agreed to by the local jurisdiction. The intersection improvements would improve the AM and PM peak hour intersection delay to meet LOS standards, or for intersections that would be below standards with the No Build Alternative, to achieve the same level of service or better. In lieu of constructing the improvement proposed, Sound Transit could instead contribute to a local jurisdiction's project to improve intersection performance where the No Build Alternative would already be below standards, as agreed to with local jurisdictions.

Segment A

In Segment A, several intersections in the cities of Seattle and Shoreline could potentially require improvements to adjust for additional trips and changes in travel patterns to and from the proposed light rail stations. Tables 3-27 and 3-28 summarize the improvements Sound Transit proposes to bring intersection operations to acceptable levels. Intersection LOS results without the potential mitigation improvements are summarized in Tables 3-15 and 3-16.

Table 3-27. Forecast Year 2035 PM Peak Hour Intersection LOS with Potential Mitigation Improvements—Segment A

Nearest Station/ Intersection	LOS Standard	Alternative									Potential Improvements
		No Build	Preferred Alternative	Preferred Alternative + Options	A1	A3	A5	A7	A10	A11	
NE 145th/NE 155th Street Station											
NE 145th Street and 1st Avenue NE	E	D	D	D[a]	D[a]	D[a]	*	*	D[a]	D[a]	
NE 145th Street and 5th Avenue NE	E	D	D	D	D	D	*	*	D	D	A1, A3, A10, A11 – Add a westbound right-turn lane and overlap phase
North 155th Street and Meridian Avenue North	D	D	*	*	*	*	C	C	*	*	A5, A7 – Add left-turn pockets to the northbound and southbound approaches
North 155th Street and 1st Avenue NE	D	F	*	*	*	*	C	C	*	*	A5, A7 – Add a right-turn pocket to the northbound approach
NE 155th Street and 8th Avenue NE	D	E	*	*	*	*	C	C	*	*	A5, A7 – Add a two-way left-turn lane or refuge area on NE 155th Street
NE 165th Street and 5th Avenue NE	D	F	*	*	*	*	B	B	*	*	A5, A7 – Add a second northbound through lane
NE 185th Street Station											
North 185th Street and Meridian Avenue North	D	D	D	D	D	D	D	D	D	D	All Alternatives – Add protected-permissive phasing to the northbound and southbound left turns
NE 185th Street and 2nd Avenue NE	D	C	C	C	C	C	C	C	C	C	All Alternatives – Add a two-way left-turn lane or refuge area on NE 185th Street
NE 185th Street and 7th Avenue NE	D	D	A	A	C	C	C	C	C	C	A5, A10 – add a two–way left-turn lane or refuge area on NE 185th Street
NE 185th Street and 8th Avenue NE	D	C	C	C	C	C	D	C	D	C	A3, A7, A11 – add a two-way left-turn lane or refuge area on NE 185th Street

Notes:
[a] Intersection operations are improved based on mitigation at nearby or adjacent intersections. Mitigation is not proposed at this individual intersection.
* Location not analyzed for specific alternative. Intersection would be expected to operate similar to No Build Alternative.
LOS = level of service

Table 3-28. Forecast Year 2035 AM Peak Hour Intersection LOS with Potential Mitigation Improvements—Segment A

Nearest Station/ Intersection	LOS Standard	Alternative									Potential Improvements
		No Build	Preferred Alternative	Preferred Alternative + Options	A1	A3	A5	A7	A10	A11	
NE 145th/NE 155th Street Station											
5th Avenue NE and I-5 Northbound Off-ramp	D	D	D	D	D[a]	D[a]	*	*	D	D	
North 155th Street and Meridian Avenue North	D	D	*	*	*	*	C	C	*	*	A5, A7 - Add left-turn pockets to the northbound and southbound approaches
NE 185th Street Station											
North 185th Street and Meridian Avenue North	D	D	D	D	D	D	D	D	D	D	All Alternatives - Add protected-permissive phasing to the northbound and southbound left turns

Notes:
[a] Intersection operations are improved based on mitigation at nearby or adjacent intersections. Mitigation is not proposed at this individual intersection.
* Location not analyzed for specific alternative. Intersection would be expected to operate similar to No Build Alternative.
LOS = level of service

Segment B

In Segment B, the project would not cause intersection impacts requiring mitigation.

Segment C

In Segment C, four intersections in Lynnwood could potentially require improvements to adjust for additional trips and changes in travel patterns to and from the proposed light rail stations. Tables 3-29 and 3-30 summarize the potential improvements Sound Transit proposes to bring intersection operations to acceptable levels in the PM and AM peak hours. Intersection LOS results without the potential mitigation improvements are in Tables 3-18 and 3-19.

Table 3-29. Forecast Year 2035 PM Peak Hour Intersection LOS with Potential Mitigation Improvements—Segment C

Nearest Station/ Intersection	LOS Standard	Alternative						Potential Improvements
		No Build	Preferred Alternative	Preferred Alternative + Options	C1	C2	C3	
Lynnwood Station								
200th Street SW and 50th Avenue West	D	D	C[a]	D	C	C	C	Preferred Alternative + Options, C1, C2, C3 – Add overlap phase to northbound right-turn movement
200th Street SW and 48th Avenue West	D	D	D	D	D	D	D	Preferred Alternative, Preferred Alternative + Options – Add an eastbound right-turn pocket. Preferred Alternative + Options – Add a southbound right-turn pocket
52nd Avenue West and 204th Street SW	E	E	A	A	A	A	A	All Alternatives - Change traffic control from two-way stop control to signal or roundabout

Notes:
[a] Intersection operations are improved based on mitigation at nearby or adjacent intersections. Mitigation is not proposed at this individual intersection.
LOS = level of service

Table 3-30. Forecast Year 2035 AM Peak Hour Intersection LOS with Potential Mitigation Improvements—Segment C

Nearest Station/ Intersection	LOS Standard	Alternative						Potential Improvements
		No Build	Preferred Alternative	Preferred Alternative + Options	C1	C2	C3	
Lynnwood Station								
200th Street SW and 44th Avenue West	E	E	E	D	D	D	D	Preferred Alternative + Options, C1, C2, C3 – Add a second northbound left-turn lane and extend the eastbound right-turn pocket back to the P&R driveway
200th Street SW and 50th Avenue West	D	C	C[a]	C	C	C	C	Preferred Alternative + Options, C1, C2, C3 – Add overlap phase to northbound right-turn movement
200th Street SW and 48th Avenue West	D	C	D	D	D	D	D	Preferred Alternative, Preferred Alternative + Options – Add an eastbound right-turn pocket. Preferred Alternative + Options – Add a southbound right-turn pocket

Notes:
[a] Intersection operations are improved based on mitigation at nearby or adjacent intersections. Mitigation is not proposed at this individual intersection.
LOS = level of service, P&R = park-and-ride

3.6.5 Property Access and Local Circulation

In areas where property access and local circulation would be modified by the project, Sound Transit would work with local jurisdictions to develop and implement plans to maintain safe and effective access and circulation. In areas near modified interchanges, FHWA and WSDOT would also be involved.

To discourage cut-through traffic that may occur on residential streets in station areas, Sound Transit would work with local jurisdictions to define and implement appropriate neighborhood traffic controls.

3.6.6 Nonmotorized Facilities

The Lynnwood Link Extension alternatives would have no impact on non-motorized facilities; therefore, no mitigation would be required.

3.6.7 Freight Mobility and Access

The Lynnwood Link Extension would not require mitigation during operation to improve freight mobility and access because truck routes would be maintained and mobility would be maintained or improved with the project.

3.6.8 Parking

Where the project would remove off-street private parking spaces, Sound Transit would work with property owners to provide compensation or replacement parking.

To discourage transit patrons from parking outside of designated park-and-ride facilities, Sound Transit would work with local jurisdictions to evaluate and, if necessary, implement hide-and-ride mitigation. Sound Transit would inventory on-street parking around each station before and after the start of light rail revenue service, and would then work with the local jurisdictions to determine where mitigation measures would be needed. Potential parking control measures include parking meters, restricted parking signage, passenger and truck load zones, and residential parking zone programs.

Sound Transit would be responsible for the cost of installing the signage or other parking controls for 1 year after the light rail extension begins operation. The local jurisdiction would be responsible for monitoring, enforcing, and maintaining the parking controls.

3.6.9 Safety

To address potential safety concerns related to the placement of project structures in the I-5 right-of-way, Sound Transit will coordinate with FHWA and WSDOT during final design and will secure highway-related design approvals before construction.

3.6.10 Construction

Transit

Construction would affect the existing 5th Avenue NE/NE 133rd, North Jackson Park, Mountlake Terrace Transit Center, and Lynnwood Transit Center park-and-ride lots. Mitigation measures would include the following, as appropriate, or other measures developed in coordination with transit agencies:

- Implement service increases or other measures to encourage transit trips that do not require automobile access.
- Redirect transit riders who use these locations to nearby park-and-ride lots.
- Develop temporary parking for transit riders to use during construction.
- Use construction phasing strategies to build new park-and-ride spaces before the loss of existing spaces.
- Lease parking lots and/or new parking areas near the closed park-and-ride lots.

During construction, Sound Transit would mitigate partial closures of the Mountlake Terrace Transit Center and Lynnwood Transit Center. Transit service mitigation would include the following, as appropriate, or other measures developed in coordination with transit agencies and local jurisdictions:

- Relocate transit stops to adjacent streets.
- Provide a temporary transit center at a nearby off-street location.
- Revise transit services (including temporary service between Mountlake Terrace and destinations in King County due to temporary closure of the Mountlake Terrace Freeway Station).

Transit service mitigation measures for partial or full closures of streets would include rerouting of buses, where appropriate, to maintain transit service. Sound Transit would coordinate with King County Metro, Community Transit, and private transit service providers to minimize construction impacts and disruptions to bus facilities and services. Sound Transit would coordinate with these providers to inform passengers about changes with measures such as signage at existing transit stops and using website information, rider information systems, emails, and agency mailing lists.

Freeway Operations and Safety

As part of the WSDOT and FHWA approval process for construction within the I-5 right-of-way, and to minimize safety and operational impacts during construction, Sound Transit would collaborate with WSDOT and FHWA to develop and

implement the project's Maintenance of Traffic Plan. Sound Transit would coordinate construction with incident management, construction staging, and traffic control in places where the light rail construction would affect freeway traffic or involve changes to the roadside environment. Sound Transit would also coordinate with WSDOT to disseminate construction closure information to the public as needed.

Arterials and Local Streets

The adverse transportation impacts that would occur during construction include temporary lane or roadway closures during peak hours, temporary increases in truck traffic, and temporary loss of parking in some construction staging areas. Sound Transit would develop and implement detailed construction mitigation plans in close coordination with local jurisdictions and WSDOT during the final design and permitting phases of the project. Sound Transit would:

- Develop the Maintenance of Traffic Plan to conform to the *Manual on Uniform Traffic Control Devices* and jurisdictional agency requirements for traffic control.
- Use lighted or reflective signage to direct drivers to truck haul routes to ensure visibility during nighttime work hours.
- Use temporary reflective truck prohibition signs on streets with a high likelihood of cut-through truck traffic.
- Communicate public information about construction activities through tools such as print, radio, posted signs, Web sites, email, and direct communication with other agencies and affected parties; ongoing communications would update interested parties regarding street or freeway lane closures, detours, hours of construction, business access, and parking impacts.
- Coordinate access closures with affected businesses and residents. If access closures are required, property access to residences and businesses would be maintained to the extent possible. If access to the property cannot be maintained, the specific construction activity would be reviewed to determine if it could occur during non-business hours, or if the parking spaces and users of this access (for example, deliveries) could be provided at an alternative location.
- Require the contractor to provide parking areas for construction workers, where necessary. This may include remote parking with shuttle service to and from the construction site if sufficient on-site parking cannot be provided.
- Post signs prior to construction in areas where surface construction activities would affect access to surrounding businesses.

- Schedule traffic lane closures and high volumes of construction truck traffic during off-peak hours.
- Evaluate and limit concurrent construction to minimize construction impacts.
- Cover potholes and open trenches, where possible, and use protective barriers to protect drivers from trenches remaining open.
- Provide temporary parking to mitigate loss due to construction staging or work activities, as appropriate.

Parking

In locations where Sound Transit would remove off-street private parking spaces, Sound Transit would provide property owners with compensation or replacement parking.

Nonmotorized Facilities

Sound Transit would minimize potential impacts on pedestrian and bicycle facilities by providing detour routes through construction areas. Sound Transit would also notify the public of these changes. Multi-use trails that might be affected by construction would generally be kept open. Detours would be provided when trails are closed, unless they are closed for short durations or in areas where a detour option is not feasible. Closures or restrictions of I-5 overcrossings would be sequenced to maintain travel across I-5 at the next nearest crossing.

Freight Mobility and Access

To minimize delays and restricted access for business deliveries on arterials and local streets, Sound Transit would work with local jurisdictions to develop and implement construction traffic control plans. The agency also would coordinate with affected businesses before and during the construction period to maintain business access as much as possible.

For construction associated with I-5, Sound Transit would coordinate with freight stakeholder groups by providing construction information to WSDOT for use in the state's freight notification system. Sound Transit would provide information in a format acceptable to WSDOT.

Cumulative Construction Impacts

To mitigate cumulative impacts of potentially overlapping construction periods in the Northgate area, Sound Transit would coordinate the construction activities of the Northgate Link and Lynnwood Link extensions, and would also coordinate with the King County Metro transit-oriented development project.

4 ENVIRONMENTAL IMPACTS AND MITIGATION

This chapter discusses the affected environment and environmental consequences for the environmental topics listed at the right. Each section describes the resource study area, applicable laws and regulations with which the project would comply, and the effects of each alternative considered in this Final EIS.

Environmental Topics in Chapter 4

4.1 Acquisitions, Displacements, and Relocations
4.2 Land Use
4.3 Economics
4.4 Social Impacts, Community Facilities, and Neighborhoods
4.5 Visual and Aesthetic Resources
4.6 Air Quality and Greenhouse Gases
4.7 Noise and Vibration
4.8 Ecosystem Resources
4.9 Water Resources
4.10 Energy Impacts
4.11 Geology and Soils
4.12 Hazardous Materials
4.13 Electromagnetic Fields
4.14 Public Services, Safety and Security
4.15 Utilities
4.16 Cultural, Archaeological, and Historic Resources
4.17 Parks and Recreational Resources
4.18 Section 4(f) and Section 6(f) Evaluation

NEPA and SEPA regulations require that an EIS disclose direct, indirect, and cumulative impacts (also called effects) of a proposed action on the environment. *Direct impacts* are caused by the action and occur at the same time and place (40 Code of Federal Regulations [CFR] 1508.8(a)). *Indirect impacts* (also called secondary impacts) are caused by the action and are later in time or farther removed in distance but still are reasonably foreseeable (40 CFR 1508.8(b)), such as changes in land use patterns and related effects on air quality. Impacts can be either temporary (short term), such as construction impacts, or permanent (long term), such as with property conversion to a transportation use, or impacts due to project operation. For this EIS, the impacts analysis for each resource is divided into long-term impacts and short-term construction impacts.

A *cumulative impact* results from the proposed action's incremental impact when added to those of other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR 1508.7). Cumulative impacts are considered because the public and government agencies need to evaluate a proposed action and its alternatives in a broad perspective, including how the project might interact with impacts that persist from past actions, with present-day activities, and with other projects that are planned but have not been built yet (reasonably foreseeable future actions); see Appendix H, Other Projects and Actions Considered in Cumulative Effects, for a list of the projects considered. The study area for the cumulative impact analysis is generally a combination of the study areas defined in Chapter 3 for transportation facilities and in Chapter 4 for the various environmental resources. The

exceptions are ecosystem-related resources, where expanded study areas are used to capture potential impacts to the functions of larger ecosystems.

This chapter discusses the proposed project's direct, indirect, and cumulative impacts on each resource analyzed. Mitigation measures are proposed in the following sections for all alternatives when potential impacts could not be avoided. The set of potential mitigation measures for the Preferred Alternative is presented in Appendix N, Mitigation Plan. The FTA Record of Decision for the project will confirm the mitigation commitments of the project.

4.1 Acquisitions, Displacements, and Relocations

The Lynnwood Link Extension would acquire public and private property for the light rail right-of-way and other facilities. The project also would displace and relocate some residential, commercial, and public uses. The potential property acquisitions are based on the conceptual plans Sound Transit developed for the light rail alternatives (see Appendix F, Conceptual Plans).

This section discusses two types of potential property acquisitions:

- **Partial acquisition**—Part of a parcel would be acquired, but the current use generally would not be displaced. In some instances, such as larger parcels that hold multiple uses, a business or residential unit on a parcel could be displaced, but most uses would remain.
- **Full acquisition**—The full parcel would be acquired and the current use would be displaced. Full acquisitions include parcels that might not be fully needed for the project but would be affected to the extent that current uses would be substantially impaired (e.g., loss of parking or access).

The acquisition and displacement data presented in this section are estimates based on conceptual designs for the light rail alternatives. Final determinations of the property needs for the project, including acquisitions and displacements, will be based on the project's final design after Sound Transit completes the EIS process, selects the alternative to be built, and develops final engineering and design plans. The types of acquisitions discussed in this section provide information useful for comparing alternatives. The estimates of the displaced land uses reflect the conditions at the time the analysis was conducted. Because property uses change, the number and/or type of displacements could vary between what is disclosed in the EIS and what would actually be required. If there is surplus property (property no longer needed for construction or operation of the project) once the project is complete, Sound Transit would likely sell or transfer the surplus property.

In addition to property acquisitions, the project would require temporary construction easements, permanent easements, and the permanent use of public right-of-way owned

by WSDOT and local jurisdictions. The specific areas of the construction easements are not included in the data presented here, although the impacts of these easements are considered in the analysis. Most construction staging areas would be located within areas needed for the proposed project's construction, including properties purchased for the light rail right-of-way.

According to 23 CFR 810 Part C, Making Highway Rights-of-Way Available for Mass Transit Projects, Sound Transit must submit an application to WSDOT to use the highway right-of-way. If WSDOT is amenable, WSDOT would then request FHWA to authorize it to make the right-of-way available for Sound Transit's use. The request to FHWA would be accompanied by evidence that the use of the right-of-way for light rail would not impair future highway improvements or the safety of highway users. FHWA would review the request in accordance with 23 CFR 710 and 810, and may authorize WSDOT to make the right-of-way available to Sound Transit if it is determined that:

> "(a) The evidence submitted by the State highway agency under Section 810.206 is satisfactory;
>
> (b) The public interest will be served thereby; and
>
> (c) The proposed action in urbanized areas is based on a continuing, comprehensive transportation planning process carried on in accordance with 23 U.S.C. 134 as described under 23 CFR Part 450, subpart A." (23 CFR 810.208)

In the areas where the light rail alternatives are proposed within the I-5 right-of-way, Sound Transit and WSDOT coordinated to define the potential limits to such use. The agencies' collaborative planning considered current conditions on the corridor, applicable design standards for highways and light rail, and WSDOT's ability to make future highway improvements. The planning for the project's right-of-way assumptions resulted in the *I-5 Light Rail Compatibility Report* (Sound Transit 2012), signed by both Sound Transit and WSDOT. The report's findings formed the basis for the conceptual engineering of the EIS alternatives. The estimated WSDOT right-of-way needed for the Lynnwood Link Extension is presented in Section 4.1.2, Long-Term Impacts. Ultimately, Sound Transit must secure FHWA's approval for use of the I-5 right-of-way.

Other impacts associated with acquisitions and displacements are discussed in Section 4.2, Land Use; Section 4.3, Economics; Section 4.4, Social Impacts, Community Facilities, and Neighborhoods; Section 4.16, Cultural, Archaeological, and Historic Resources; Section 4.17, Parks and Recreational Resources; and Section 4.18, Section 4(f) and Section 6(f) Evaluation.

The project would also affect properties by modifying access on some local streets. FHWA and WSDOT must review and approve any change to I-5 ramps or

interchanges, and this process could change the access requirements for streets adjacent to a freeway entrance or exit. If WSDOT and FHWA require more restricted road access in order to maintain safe and effective interchange operations, properties that completely lose their access could be acquired by Sound Transit. The proposed project will comply with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. The Act and its amendments direct how federal agencies, or agencies receiving federal funding for a project, will compensate property owners or tenants who must relocate if displaced by the project. The project will also comply with Sound Transit's adopted Real Property Acquisition and Relocation Policy, Procedures, and Guidelines, and with Chapter 8.26 RCW, which establishes a uniform policy for relocation assistance for people displaced by public projects in Washington. Property acquisition will follow these laws and policies to ensure property owners and tenants are treated uniformly and fairly.

4.1.1 Affected Environment

The study area for the acquisitions, displacements, and relocations analysis includes the parcels that are within the areas where the light rail alignments, stations, related facilities, or mitigation require right-of-way. This land is heavily developed and contains residential, commercial, industrial, public, and vacant property. Most of the properties in Segments A and B are residential, while Segment C contains commercial, industrial, and public properties. Current and projected land uses adjacent to the light rail alternatives are discussed in Section 4.2, Land Use; estimates of changes in employment due to business displacements are provided in Section 4.3, Economics.

4.1.2 Long-Term Impacts

Sound Transit overlaid the proposed footprint for all the light rail alternatives over the parcel data from King and Snohomish counties to identify which parcels would be affected by each alternative, and to estimate the potential full and partial acquisitions and resulting displacements by the alternatives. Table 4.1-1 presents the estimated number of acquisitions and displacements for each alternative. Table 4.1-2 presents the estimated amount of WSDOT right-of-way Sound Transit would occupy for each light rail alternative. Further project design may change these estimates, and WSDOT and FHWA approvals may alter the amount of I-5 right-of-way that is used.

The tables and maps in Appendix I-4.1, Acquisitions, Displacements, and Relocations, identify the potentially affected properties by alternative. To estimate the number and types of uses affected, Sound Transit used tax assessor data from King and Snohomish counties and also conducted field surveys. During final design, Sound Transit would prepare detailed assessments of uses, underlying ownership, and the parties involved in displacements to support its Real Property Acquisition and Relocation Policy, Procedures, and Guidelines (see Section 4.1.7).

Table 4.1-1. Potential Property Acquisitions and Displacements

Alternative	Number of Affected Parcels	Residential – Single Family		Residential – Multifamily		Commercial and Industrial		Public and Institutional		Vacant Land		Total Full Acquisitions	Total Partial Acquisitions	Total Displacements	
		Full	Partial	Full	Partial	Full	Partial	Full	Partial	Full	Partial			Residential (units)	Businesses and Institutional
Segment A: Seattle to Shoreline[a]															
Preferred Alternative	130	78	41	0	1	0	1	2	7	0	0	80	50	121[b]	0
A1	115	68	37	0	0	0	1	2	7	0	0	70	45	111[b]	0
A3	107	64	33	0	1	0	1	2	6	0	0	66	41	107[b]	0
A5	128	80	37	0	1	0	1	1	8	0	0	81	47	123[b]	0
A7	117	73	34	0	1	0	1	1	7	0	0	74	43	116[b]	0
A10	122	75	36	0	1	0	1	2	7	0	0	77	45	118[b]	0
A11	107	64	33	0	1	0	1	2	6	0	0	66	41	107[b]	0
Segment B: Shoreline to Mountlake Terrace															
Preferred Alternative (with 220th Street Station South Option)	15 (21)	3 (8)	5	0	0	0	0	1 (2)	2	0	4	4 (10)	11	3 (8)	0 (1)
B1	5	0	0	0	0	0	0	1	1	1	2	2	3	0	0
B2A	18	5	6	0	0	0	0	1	1	1	4	7	11	5	0
B4	6	0	0	0	0	0	1	1	1	1	2	2	4	0	0
Segment C: Mountlake Terrace to Lynnwood															
Preferred Alternative	18	0	1	0	1	4	8	1	3	0	0	5	13	0	9
C1	31	1	2	1	0	3	22	1	2	0	0	6	26	77[c]	31
C2	29	1	2	0	0	3	20	1	2	0	0	5	24	1	3
C3	15	0	1	0	0	1	10	1	2	0	0	2	13	0	1

[a] These numbers do not include the properties that could be affected if FHWA or WSDOT require interchange access modifications for the NE 130th Street Station or NE 145th Street Station.

[b] The total of displaced residential units includes individuals in rooming/boarding houses (49 displacements), which are counted under acquisitions as single-family parcels based on assessor records. The total also includes the displacement of the caretaker's house at the Seattle Latvian Evangelical Lutheran Church in Seattle and residential building at True Jesus Church in Shoreline.

[c] The total of displaced residential units includes 76 condominium units displaced by the one full multifamily residential property acquisition.

Table 4.1-2. Estimated WSDOT Right-of-Way Needs

Alternative	Estimated Right-of-Way Occupied (acre)
Segment A: Seattle to Shoreline	
Preferred Alternative	19
A1	26
A3	20
A5	20
A7	19
A10	25
A11	20
Segment B: Shoreline to Mountlake Terrace	
Preferred Alternative	17
B1	14
B2A	16
B4	15
Segment C: Mountlake Terrace to Lynnwood	
Preferred Alternative	2
C1	1
C2	1
C3	3

Source: Conceptual design right-of-way estimates.

No Build Alternative

No properties within the study area would be acquired with the No Build Alternative. No displacements or relocations would occur.

Segment A: Seattle to Shoreline

Within Segment A, Sound Transit would acquire property for right-of-way where the available WSDOT right-of-way is too narrow to completely accommodate the light rail project. In addition to land for the light rail guideway, Sound Transit would also need to acquire property for stations, stormwater facilities, ecosystems impact mitigation, street or highway modifications, relocated utilities, traction power substations, noise walls, and other project-related facilities.

Most of the properties adjacent to the Segment A alternatives are single-family residential. The alternatives in this segment would affect more residential properties than in other segments, and the majority of the potential full acquisitions is residential. Most of the affected properties contain single-family residences, but six contain rooming or boarding houses, which Sound Transit estimates would involve 49 individual residential displacements.

Alternatives A1, A5, and A10 in the Draft EIS would have occupied a Seattle city street that provided access for the Seattle Latvian Evangelical Lutheran Church, and the Draft EIS identified the church as a full acquisition. Since the publication of the Draft EIS, the alternatives were modified by redesigning the street, which maintains access to the church property. As a result, none of the Segment A alternatives would displace the church. However, two single-family residential displacements would occur as a result of the street redesign, in addition to a residential structure related to the church (the caretaker's house).

The Segment A alternatives would require similar numbers of acquisitions. The Preferred Alternative would have the highest number of full acquisitions, and most of them would be residential. Alternatives A3 and A11 would have the fewest full acquisitions of the Segment A alternatives because most of their alignments would be elevated (including their respective stations), reducing impacts on adjacent properties. Alternative A5 would have the most full acquisitions of the Segment A alternatives, including the most residential displacements, because it is mostly at-grade bordering residential areas, and its stations would also be in residential areas.

The Seattle Latvian Evangelical Lutheran Church and the True Jesus Church would be affected by the Preferred Alternative, as well as the other Segment A alternatives, but the churches would not be displaced. No commercial, industrial, or public land uses would be displaced in Segment A.

The Preferred Alternative includes an option that allows for the eventual construction of a station at NE 130th Street. Sound Transit does not expect the construction of this station to require more property than the Preferred Alternative with no station at this location. The Preferred Alternative also includes the NE 185th Street Station Shoreline Stadium Garage Option, which would place the parking garage on the current Shoreline Stadium parking lot. This would require Sound Transit to lease or buy a portion of this property from the Shoreline School District. With the Preferred Alternative, interchanges likely would be modified for the NE 145th Street Station, which would require limited access agreements for some of the adjacent properties. For the other light rail alternatives, the NE 130th Street and NE 145th Street interchanges might also be modified for stations. Alternatives A5, A7, A10, and A11 could affect additional residential properties if they are selected and their modifications approved by FHWA and WSDOT. The alternatives with the NE 145th Street Station Option 2 (A3, A10, and A11) could also have additional full acquisitions if access to the property is eliminated by interchange modifications. Figure I-4.1-2 in Appendix I-4.1 show the areas that could be affected.

Federally designated highway beautification areas are located adjacent to I-5 in this segment. Some of these designated areas could become project right-of-way. Potential visual impacts caused by the use of these beautification areas are discussed

in Section 4.5, Visual and Aesthetic Resources; any conversion of a beautification area would require replacement land along the I-5 corridor, which may be in addition to properties identified here.

Segment B: Shoreline to Mountlake Terrace

Much of the Preferred Alternative and the other Segment B alternative alignments are within the existing highway right-of-way; therefore, light rail in this segment would affect fewer parcels than in Segment A. The Preferred Alternative has fewer acquisitions compared to the Alternative B2 outlined in the Draft EIS primarily because it has modified the alignment north of 236th Street SW to be closer to I-5 after crossing to the west side of the freeway. It would still affect three single-family residential properties (instead of the five presented in the Draft EIS), near 212th Street SW.

The Segment B Preferred Alternative has an option for a 220th Street SW Station on the now vacant Edmonds School District property on the south side of the street. This option would acquire the Edmonds School District property and five residential properties to the south.

Alternatives B1 and B4 would not affect any residential properties and would only result in two full acquisitions. Alternative B2A would fully acquire five single-family residential properties.

Segment C: Mountlake Terrace to Lynnwood

The Preferred Alternative would not affect any residential properties, but it would impact four commercial properties, resulting in the displacement of nine businesses; one fully acquired parcel has six businesses on it. The Preferred Alternative would cross a portion of an Edmonds School District property, resulting in a partial impact to the property. It would cross a public parcel containing Scriber Creek and related wetlands, resulting in a partial impact to the property, but it would avoid Scriber Creek Park to the north. The Preferred Alternative also would cross a transmission line right-of-way owned by the Snohomish County Public Utilities District, which is used as part of the Interurban Trail; the crossing would be a partial impact to the property.

Alternative C1 would affect the most properties of any alternative in Segment C. It would acquire all of the Cedar Creek Condominium buildings, requiring 76 residential relocations. It would also fully acquire two office park properties, displacing 31 businesses, and it would acquire a strip of land from Scriber Creek Park.

Alternative C2 would displace three businesses and Alternative C3 would displace one business.

All Segment C alternatives would partially impact an Edmonds School District property, but to varying degrees. The Preferred Alternative would cross the eastern part of the property.

4.1.3 Construction Impacts

During construction, property will be needed in each segment for staging areas, construction access, and temporary construction easements. Most of these construction needs would be accommodated within property required for permanent rights-of-way, although some other properties would be needed. Many staging and access requirements could be fulfilled through temporary construction easements or leases, but some full acquisitions are still likely.

A temporary construction easement allows for temporary use of a property during construction. When construction is complete, the property is restored to its previous condition for the owner and the easement is terminated. Such easements would be necessary at various locations along the project corridor. The size of the easement would depend on the type of activity expected on the property and the type of land uses in the area; for example, a vacant property would provide an opportunity for a larger easement, whereas easements adjacent to developed property likely would be smaller to reduce or avoid impacts.

Off-site staging areas might be needed to stockpile excavated materials or to cast and store precast structural elements. These areas would be located close to work sites, when possible, to minimize the impact on local traffic.

The construction staging areas would primarily be adjacent to the proposed alignments. The project would use WSDOT right-of-way for construction staging where feasible and approved by FHWA and WSDOT, and could use other available lands on a temporary basis, including parts of city street rights-of-way.

As project design and construction planning are finalized, Sound Transit may identify the need for additional construction staging areas outside of the proposed project's right-of-way, requiring the acquisition of additional property. Contractors may also negotiate use of additional property directly with the property owner. Proposed staging areas are shown in Appendix F, Conceptual Plans.

4.1.4 Indirect Impacts

The project's property impacts resulting from acquisitions, displacements, and relocations would be direct. There could also be indirect impacts associated with the change in land use, as a property currently used for residential is converted to a transportation use. Acquired property could also accommodate transit-oriented developments, consistent with Sound Transit policy and local planning requirements. Sound Transit anticipates the project would fully acquire both the

Mountlake Terrace Transit Center and Lynnwood Transit Center and park-and-ride properties for this project. These properties would retain their transportation use, but they could also accommodate future transit-oriented developments. The potential indirect or secondary impacts due to transit-oriented development are discussed in more detail in Section 4.2.4, in the Land Use section of this Final EIS.

4.1.5 Cumulative Impacts

Other projects could result in additional property acquisitions and displacements in the vicinity of the Lynnwood Link Extension. Sound Transit's Northgate Link Extension from the University District to the Northgate Transit Center is acquiring property for permanent facilities and construction activities. Most of these acquisitions and easements are expected to be completed before the Lynnwood Link Extension begins construction, although in some areas early work for the Lynnwood Link Extension could use them as well. Sound Transit's Long-Range Plan also anticipates future projects to extend light rail north to Everett, which could affect properties to the north of the terminus for the Lynnwood Link Extension in Segment C. The properties that could be affected would differ by alternative in Segment C. The final design for the Lynnwood Link Extension, as well as the design for any future project, would also determine the properties potentially affected.

Additionally, Sound Transit is completing the environmental review for a separate project to develop an OMSF. One of the alternatives is in Lynnwood, on lands adjacent to the Segment C alternatives. If the Lynnwood site is developed for the maintenance facility, additional properties would be affected within the city, including the majority of the parcel owned by the Edmonds School District. In July 2014, the Sound Transit Board identified a site in Bellevue as the Preferred Alternative. The final decision on the location for the OMSF will be made after the publication of that project's Final EIS in 2015.

Otherwise, there are few sizable public or private projects in the project vicinity that would acquire properties and displace their uses; the King County Transit-Oriented Development at Thornton Place (Northgate) may be a project to note, but there are no specific development plans at this time. See Appendix H, Other Projects and Actions Considered in Cumulative Effects, for a list of other projects that could result in acquisitions and displacements in the vicinity of the Lynnwood Link Extension. Changes in property ownership due to other developments would be more likely to occur over time as market transactions take place.

4.1.6 Relocation Opportunities

To determine relocation opportunities in the project vicinity, Sound Transit researched market conditions for available residential and commercial real estate in the study area. As shown in Table 4.1-3, the research considered real estate markets within Shoreline, Mountlake Terrace, Lynnwood, and north Seattle; these areas offer the most likely relocation opportunities in the study area. Although property availability will change over time, the research indicates that there would be adequate opportunities for residents and businesses to successfully relocate within the general area, typically within the same city. Some affected properties with unique characteristics or uses (such as a property with school district uses) could prove more challenging to replace.

Table 4.1-3. Property Available for Relocation in the Study Area[a]

Type of Property	Buildings/Units	Total Square Feet[b]	Vacancy Rate[c]	Listings[d] (2014)
Apartment	31,291	—	3%	517
Single Family	86,326	—	—	456
Office	440	6,600,000	11%	33
Industrial	280	4,700,000	5%	14
Retail	1,120	16,800,000	4%	39
Hotel	36	1,400,000	—	0

[a] The study area is Shoreline, Mountlake Terrace, Lynnwood, and north Seattle (the southern boundary of north Seattle varies by market segment, and is variably the Ship Canal, NE 65th Street, or NE 85th Street).
[b] Square feet amounts rounded to nearest 1,000.
[c] Vacancy rate as of May 30, 2014, rounded to the nearest 1 percent.
[d] Number of listings as of May 30, 2014.
Sources: Costar, Dupre+Scott, NWMLS, 2014, Kidder Matthews.

The relocation of a business or residence is an inconvenience or hardship for those involved. Sound Transit would offer relocation assistance that includes compensation as well as supporting services that consider the unique needs of those being relocated, and this assistance can help reduce inconveniences or hardships. Finally, Sound Transit is required to satisfy federal requirements for residential relocation, which define a "comparable replacement dwelling" as any dwelling that is (A) decent, safe, and sanitary; (B) adequate in size to accommodate the occupants; (C) within the financial means of the displaced person; (D) functionally equivalent; (E) in an area not subject to unreasonable adverse environmental conditions; and (F) in a location generally not less desirable than the location of the displaced person's dwelling with respect to public utilities, facilities, services, and the displaced person's place of employment (42 United States Code [USC] 61).

Apartments

There are approximately 31,000 apartment units in the study area.[1] With the current vacancy rate at about 3 percent, there are about 517 available apartment units for rent along the project corridor. For displaced tenants, a sufficient supply of comparable relocation apartments is expected to be available in various locations and building types within the study area. Finding similar reasonably priced replacement property for some owners of properties with unique uses in the proximity of the displaced property may prove challenging. However, Sound Transit would provide relocation assistance and compensation; owners would be able to choose their replacement property, or they could take compensation entirely.

Single Family

There is a reasonable supply of comparable single-family homes available to meet the relocation needs of single-family home residents displaced by the project. While the local inventory for comparable homes can be limited, this does not alter Sound Transit's obligation to find replacement properties and to provide compensation and relocation assistance to ensure the properties are affordable for the displaced parties. The inventory of condominiums and townhouses is smaller, but it is also expected to be adequate for the project's relocation needs.

Office

A review of the market found sufficient office buildings available for sale each year to replace displaced buildings. A substantial amount of space is also available for lease each year to meet the needs of displaced office tenants. In addition, vacant land and underutilized properties are available for the construction of new office buildings, which can provide additional capacity.

Industrial

Adequate industrial space is available in the market to meet the needs of the few industrial building owners and tenants that would be displaced by the project. The industrial market in the study area is stable; however, the area is becoming increasingly urbanized and market forces will encourage industrial uses to give way to other uses over time. In the future, those seeking relocation opportunities for industrial space in the study area will have fewer choices.

[1] The increase in total unit count from the Draft EIS is due to a change in methodology, which included more apartment buildings in the inventory data.

Retail

Research suggests there is a substantial amount of retail space for sale and for lease to meet the relocation needs of retailers displaced by the project. Retail space users often have specific location requirements; therefore, Sound Transit would perform a case-by-case assessment to understand how the available inventory could meet the displaced retailer's needs.

Hotels

Displaced hotel property owners would have to find a property that is for sale or a substitute site on which to construct a new hotel. The study area has 36 hotels, generally located along the I-5 and SR 99 corridors. Hotels do come up for sale, but the likelihood is probably low of finding an available property matching the location requirements and physical characteristics of the displaced property. New development sites exist and may provide the best opportunity to replace an existing hotel.

4.1.7 Sound Transit Real Property Acquisition and Relocation Policy, Procedures, and Guidelines Summary

Sound Transit notified property owners whose property would be directly affected by any of the alternatives, but acquisitions of property would begin only after the Final EIS and NEPA/SEPA processes are complete. The agency is available to answer questions and provide additional information about compensation and relocation assistance services, payments, reimbursement eligibility, and the timing of the process. Sound Transit's relocation assistance and advisory services would include, but not be limited to, measures, facilities, or services that might be necessary or appropriate to determine the relocation needs and preferences of each household, business, and organization to be displaced. The agency also would provide current information on the availability, purchase prices, and rental costs of comparable replacement properties.

Sound Transit would work closely and proactively with residents and businesses to help them plan ahead for relocation, assist in finding new homes or sites, and help to solve problems that might occur. While the ultimate choice of a relocation site would be decided by the affected resident or business, the agency would help investigate possible locations, including nearby properties. Sound Transit uses interpreters to help those with limited English proficiency understand their choices and options.

Owners would not be required to relocate until they have been paid the agreed purchase price or until an amount equal to Sound Transit's estimate of just compensation has been deposited with the court. Businesses and tenants would

not be required to move operations or relocate without receiving at least 90 days written notice.

A public agency must pay "just compensation" to property owners for land and improvements acquired for public purposes. "Just compensation" must not be less than the fair market value of the property acquired, including damages or benefits to the remaining property in the case of partial acquisitions.

Sound Transit would pay for normal expenses of sale, including escrow fees, title insurance, prepayment penalties, mortgage release fees, recording fees, and typical costs incurred as part of conveying title.

Other benefits and compensation might include payment of residential moving expenses and replacement housing payments, non-residential moving expenses, and reestablishment expenses. Sound Transit's *Business and Residential Acquisition and Relocation* handbooks outline compensation and acquisition procedures in detail.

If Sound Transit recognizes special circumstances, proactive help would be made available to help resolve problems.

4.1.8 Mitigation Measures

For property that is permanently or temporarily acquired for this project, Sound Transit would compensate property owners affected by the project, according to the provisions specified in Sound Transit's Real Estate Property Acquisition and Relocation Policy, Procedures, and Guidelines; the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended; and the state of Washington's relocation and property acquisition law and regulations. Benefits would vary by property depending on the level of impact, available relocation options, and other factors. The primary mitigation for acquisitions and displacements would be payment of just compensation and relocation assistance.

For temporary construction easements, in addition to just compensation, the property would be restored to its previous condition for the owner and/or another type of compensation would be employed as outlined during the easement's negotiation process.

If federally designated highway beautification areas are converted for project rights-of-way, Sound Transit will mitigate for these impacts by providing property along I-5 to replace the converted beautification areas, or with other measures as agreed by WSDOT and FHWA.

4.2 Land Use

This section discusses existing land uses and zoning (i.e., allowable land uses), describes changes in land use that could occur as a result of the Lynnwood Link Extension alternatives, and evaluates the consistency of the project with local and regional planning policies.

The land use study area for this EIS consists of the parcels immediately adjacent to the proposed alternative routes and within a 0.50-mile radius around the stations.

For this evaluation, the project was evaluated for land use compatibility and conformance with existing land use policies of regional and state plans, and locally adopted plans listed in Table 4.2-1. Appendix I-4.2, Land Use Plan Consistency Analysis, discusses the regional, state, and local land use plans and policies pertaining to the study area.

Table 4.2-1. Locally Adopted Plans and Policies

City of Seattle
City of Seattle Comprehensive Plan, 2009a (update expected 2016)
City of Seattle Transportation Strategic Plan, 2005
Seattle Department of Transportation Northgate Coordinated Transportation Investment Plan, 2006
Seattle Pedestrian Master Plan, 2009b
Seattle Bicycle Master Plan, 2014
City of Seattle Transit Master Plan, 2012
City of Shoreline
City of Shoreline Comprehensive Plan, 2012a (update expected 2015)
City of Shoreline Southeast Neighborhoods Subarea Plan, 2010
City of Shoreline Transportation Master Plan, 2011a
City of Shoreline Environmental Sustainability Strategy, 2008
City of Shoreline Light Rail Guiding Principles, 2011b
City of Shoreline 145th Street Subarea Plan (expected 2015)
City of Shoreline 185th Street Station Subarea Plan (expected 2015)
City of Mountlake Terrace
City of Mountlake Terrace Comprehensive Plan, 2011 (update expected 2015)
Mountlake Terrace Town Center Design Standards, 2008a
Mountlake Terrace Freeway/Tourist District Design Standards, 2010a
Mountlake Terrace Multifamily Design Standards, 2010b
Mountlake Terrace Economic Vitality Strategy, 2008b
Mountlake Terrace Sustainability Strategy, 2008c
Mountlake Terrace Transit-Oriented Development Study, 2003
Mountlake Terrace Transit Service Strategy, 2010c
Melody Hill Subarea Plan, 2006
City of Lynnwood
City of Lynnwood Comprehensive Plan, 2011 (update expected 2015)
Lynnwood City Center Access Study, 2007
Lynnwood City Center Sub-Area Plan, 2005
Lynnwood City Center Design Guidelines, 2012
City of Lynnwood Mode Split for City Center Street Master Plan, 2009a
Lynnwood City Center Street Master Plan, 2009b
Lynnwood Local Improvement District (LID) Feasibility Study, 2008

4.2.1 Affected Environment

The project corridor is located within King and Snohomish counties, and the alternatives would have stations in four cities (Seattle, Shoreline, Mountlake Terrace, and Lynnwood). Existing land uses include single-family and multifamily residential, commercial (retail, services, and office uses), institutional, light industrial, and transportation uses. Many recreational and public open space uses are in the study area. Section 4.17, Parks and Recreational Resources, provides more information. The project would not affect any farm land.

The Growth Management Act (GMA) requires state and local governments to identify and protect critical areas and natural resource lands, designate urban growth areas, and prepare comprehensive plans and implement them through capital investments and development regulations. The project is within the urban growth boundaries identified by King and Snohomish counties.

PSRC's *VISION 2040*, adopted in 2009, articulates the region's integrated long-range growth management strategy. Its strategy is to guide growth, concentrate new employment in urban centers, and link the centers with a high-quality multimodal transportation system. Urban centers are the hallmark of *VISION 2040* and its regional growth strategy. Northgate and Lynnwood have been designated as regional growth centers for housing, employment, and public services growth, as well as for multimodal transportation connections and regional funding.

The following subsections describe existing land uses for each project segment. Future allowable land uses are presented as generalized zoning in Figures 4.2-1a and 4.2-1b. Existing land use and future allowable land uses are based on information from comprehensive plans and planning documents for the cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood. Section 4.3, Economics, includes information on projected residential units and business employment within 0.50 mile of the proposed stations.

Segment A: Seattle to Shoreline

Segment A begins in the Northgate area. Northgate consists of a regional shopping center and a mix of other urban uses, such as multifamily residential and commercial usage. The Northgate Apartments multifamily residential complex is just north of the shopping center. North of North 115th Street, the area is predominantly single-family residential. Several large public parks and open spaces are in Segment A, as well as several small commercial areas primarily east of I-5, generally along 15th Avenue NE.

Other larger parcels or unique uses in Segment A include the Lakeside School, the Seattle Latvian Evangelical Lutheran Church, the Shoreline Fire Station, the King County solid waste transfer facility, the King County Metro bus base, and Shoreline Center, which is part of a complex owned and operated by the Shoreline School District.

Much of the area along the alignment is otherwise residential, with little commercial uses. While the City of Seattle's policy is to consider transit-oriented development in areas with transit investments, it currently does not have specific plans or policies supporting transit-oriented development at the proposed NE 130th Street or NE 145th Street station locations.

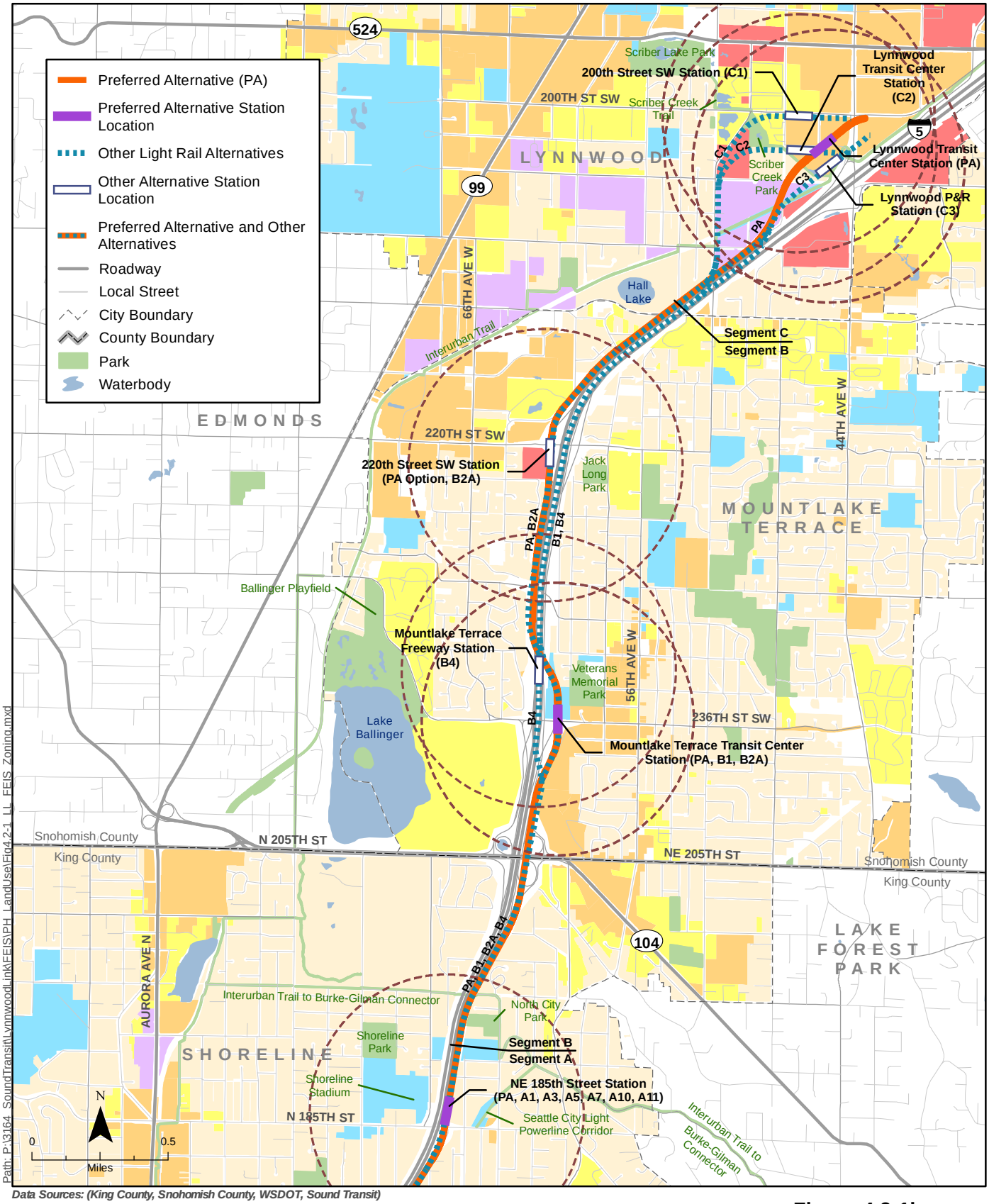
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Generalized Zoning

- Commercial
- Industrial/Warehouse
- Institutional/Public
- 1/2 Mile Station Study Area
- Single Family Residential
- Multi Family Residential
- Mixed Use (Residential/Commercial)

Figure 4.2-1a
Generalized Zoning
Segment A

Lynnwood Link Extension



Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_LandUse\Fig4.2-1_LL_FEIS_Zoning.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Generalized Zoning

- Commercial
- Industrial/Warehouse
- Institutional/Public
- 1/2 Mile Station Study Area
- Single Family Residential
- Multi Family Residential
- Mixed Use (Residential/Commercial)

Figure 4.2-1b
Generalized Zoning
Segments B and C

The City of Shoreline's *Comprehensive Plan*, Land Use Element, provides policy direction for the City as it coordinates with Sound Transit on the proposed project and describes how land uses around station areas could help foster vibrant, livable, and transit-oriented communities. The land use policies are to guide land use regulations for station areas at NE 145th Street and NE 185th Street, including transit-supportive developments with residential components mixed with complementary commercial and office uses. In 2014, Shoreline prepared a subarea plan for the NE 185th Street Station area to help further define development policies for that area. A similar effort is underway for the NE 145th Street Station area. Comprehensive plan amendments for both plans and potential zoning changes are anticipated to be adopted in 2015.

Segment B: Shoreline to Mountlake Terrace

Most of Segment B consists of single-family residential communities, with interspersed areas of multifamily residential, commercial, recreational, and open space uses. The Shoreline School District has properties along the west side of I-5 between NE 185th Street and NE 191st Street, straddling Segments A and B, as well as along the east side of I-5 between NE 191st Street and NE 194th Street. Adjacent to the Shoreline School District property to the east of I-5 is a park and the single-family residential neighborhood along NE 194th Street. A pedestrian/bicycle overpass at NE 195th Street links neighborhoods east and west of I-5. The SR 104/I-5 interchange area east of I-5 consists of a shopping center and mixed multifamily residential and commercial uses.

The Mountlake Terrace Transit Center is east of I-5 at 236th Street SW. The Mountlake Terrace Town Center is along the 236th Street SW corridor to the east, and consists of a mix of uses such as multifamily residential and commercial. A park is located near the transit center, and single-family residences surround much of the area. Businesses surrounded by small parking lots are predominant. A vacant Edmonds School District property is south of the transit center and 236th Street SW. This area was recently rezoned to allow greater density, including mixed-use development. North to 220th Street SW, the land uses to the west are initially single-family residential and then mostly commercial and multifamily, while the east side of I-5 is mostly single-family residential, with interspersed multifamily residential use. The City of Mountlake Terrace identifies the intersection of 220th Street SW and 66th Avenue West as the commercial center node that will include increased pedestrian access to surrounding areas.

Mountlake Terrace has adopted a form-based code for its town center that consists of six "districts." The central district allows mixed-use development up to seven stories high. Adjacent zones step down to transition to the existing single-family neighborhoods. The City has design standards for all new development in the town center.

Segment C: Mountlake Terrace to Lynnwood

Segment C is entirely within the Lynnwood city limits. Single-family residential use predominates in the south up to the Mountlake Terrace city limit, and then transitions to a mix of uses that includes commercial use northwest of I-5 and Alderwood Mall. Industrial uses occupy the west side of I-5 between 204th Street SW and 208th Street SW.

Segment C ends in the Lynnwood City Center, inside of the PSRC-designated regional growth center. The area is anticipated to accommodate much of the growth between Northgate and Everett with commercial, industrial, and residential uses. Most of the existing commercial uses are automobile-dependent businesses set back from the street frontage surrounded by surface parking lots. Buildings range from small single businesses to "big-box" retail and strip malls. Most of the residential uses are north and west of the city center in a mix of multifamily developments and single-family neighborhoods. Except for Group Health and the parcel owned by the Edmonds School District west of the city center, there are no major institutions in Segment C. The Edmonds School District's plans for its property include administrative buildings and a bus maintenance and storage facility.

Lynnwood's zoning regulations and design guidelines support a high-density neighborhood near the existing Lynnwood Transit Center, which is composed of three districts. The types of use permitted vary among the districts. All Segment C station alternatives are located in the "City Center West" zone, envisioned to have a mix of residential, retail, restaurant, office, and high-density housing. The tail track of the Preferred Alternative and Alternative C3 would cross 44th Avenue West into the higher-density "City Center Core" zone.

4.2.2 Long-Term Impacts

This section discusses Lynnwood Link Extension's consistency with land use plans and policies, and then describes each alternative's potential impacts on the existing and future land use patterns. Direct land use impacts would occur in locations where the light rail alternatives would require private or public property acquisitions for the proposed project facilities (e.g., alignment, stations, parking lots or structures, traction power substations, and stormwater control). These property acquisitions would convert property to a transportation-related use. Direct impacts also include proximity impacts (e.g., traffic, noise, and visual impacts) that could cause changes in adjacent land uses.

Sound Transit's property acquisitions are detailed in Section 4.1, Acquisitions, Displacements, and Relocations. This land use analysis also considers findings from other environmental elements, including Chapter 3, Transportation Impacts and Mitigation, and Sections 4.3, Economics; 4.5, Visual and Aesthetic Resources;

4.6, Air Quality and Greenhouse Gases; 4.7, Noise and Vibration; and 4.17, Parks and Recreational Resources.

No Build Alternative

The No Build Alternative includes the existing transportation system and future population and employment growth assumed in adopted plans, but without the Lynnwood Link Extension. No property would be acquired; as a result, existing land use patterns and types of land uses along the study corridor would not change in the immediate future. Planned and proposed development projects within the study corridor would continue to move through the local government permitting procedures and would be constructed.

The alternative would be inconsistent with portions of the regional land use and transportation policies that call for a mass transit system connecting the region's highest growth centers, including the Northgate Mall and the Lynnwood city center. Future development could still be allowed consistent with adopted plans, policies, and land use regulations current at the time development projects receive government approvals. However, before local jurisdictions could approve developments, they must meet transportation and land use concurrency requirements of the GMA by showing that the transportation system could accommodate the increased transportation demand of new developments. Under the No Build Alternative, a major transportation investment in the local and regional plans assumed to accommodate increased transportation demand would not be in place. Other related regional and local land use plan elements calling for communities to be developed in a more walkable, bikeable, and transit-oriented way also would not occur as envisioned.

Long-Term Impacts Common to All Light Rail Alternatives

This subsection evaluates the consistency of the light rail alternatives with land use plans and policies. It identifies, by project segment, direct impacts common to all the light rail alternatives, common indirect impacts related to transit-oriented development, and direct and indirect impacts of individual alternatives. These assessments are based on existing land use patterns and current zoning along the project corridor and within station areas.

Consistency with Land Use Plans and Policies

Regional, state, and local land use plans in the study area share the goal of improving transit accessibility and encouraging transit use. The Lynnwood Link Extension would connect employment centers and provide for uninterrupted transit access among the four jurisdictions in the project corridor. Sound Transit reviewed regional, state, local, and major institution master plans to determine whether the project would be consistent with the applicable goals and policies.

All light rail alternatives would support long-range planning and growth management to varying degrees. Local plans support Vision 2040's strategy of building on current growth management plans; directing future development generally into urban growth areas and focusing new housing and jobs in cities, particularly in the designated regional growth centers. The Preferred Alternative is generally consistent with regional and local plans and policies in the study area. Some of the other light rail alternatives have alignments or features that are less consistent with some aspects of local policies. However, at the regional level, all the light rail alternatives would provide a regional transit system serving a growing transportation need in planned high-density areas. Also, PSRC's *Growing Transit Communities Strategy* (2013), which reviewed several of the region's major transit corridors, including the "North Corridor" extending from Seattle to Everett, describes regional and local actions to encourage more housing, employment, and services close to major transit investments.

Connecting Lynnwood to other designated regional growth centers, such as downtown Seattle and, eventually, Everett, is a Sound Transit Long-Range Plan goal as well as an integral component of PSRC's *Transportation 2040*. Local land use planning documents focus on the types of land uses permitted within zones and the scale to which development is allowed within these zones.

The Lynnwood Link Extension would increase transit levels of service and linkages with other jurisdictions and regional destinations. In station areas such as at NE 145th Street and NE 185th Street, potential comprehensive plan and zoning changes by the City of Shoreline could result in more intensive land uses and economic development around those proposed stations. Most mixed-use developments would include residential and commercial uses rather than industrial or larger commercial developments. All stations would help serve existing land uses with improved mobility options.

In areas where the local jurisdictions have policies to leverage the increased mobility of light rail with higher development density (including mid- and high-density mixed use), also known as transit-oriented development, the Lynnwood Link Extension would support their goals and policies. In station areas outside of the I-5 right-of-way, local zoning might allow commercial uses to be included in transit parking structures.

The Lynnwood Link Extension is an essential public facility under the GMA; therefore, when Sound Transit's routing decision has been finalized, Seattle, Shoreline, Mountlake Terrace, and Lynnwood would have a "duty to accommodate" the project in their comprehensive plans.

All light rail alternatives would be consistent with the relevant plans and policies of the City of Seattle. The City's plans and policies focus future growth and developments into areas designated as urban villages and are supportive of high-capacity transit service to and from urban villages.

In 2012, the Shoreline City Council updated its *Comprehensive Plan*, with several station area planning policies as part of the update. These policies would support developments with residential components mixed with complementary commercial and office uses. The NE 145th Street Station subarea planning is underway, with the Draft EIS issued in January 2015. The 185th Street Station Subarea Planned Action Final EIS was issued in November 2014. Both are expected to result in *Comprehensive Plan* amendments and potential zoning changes for these station subareas later in 2015.

Lynnwood and Mountlake Terrace have policies that support more intensive land uses and economic development around the proposed stations, and both are preparing for regional transit improvements in their station areas. Both are either in the process or have recently amended their comprehensive and neighborhood plans to allow a greater density and mixture of land uses near the proposed stations. All light rail alternatives are generally consistent with the plans and policies of Lynnwood and Mountlake Terrace, except that Alternative B4 would be inconsistent with Goal 8 of the Mountlake Terrace Transit Service Strategy because it would close the freeway bus station.

Consistent with Lynnwood's designation as a regional growth center, the City has developed a vision and adopted plans and policies to achieve regional growth targets with a specific focus on the city center. The City completed a *City Center Sub-Area Plan* in 2005 with the following objective: "…to create within 20 years, a compact, intense and lively city center that offers Lynnwood new opportunities for culture, commerce and habitation."

The Lynnwood Link Extension would assist the project corridor cities in achieving their desired land use changes and densities. Further information on the project's consistency with plans, goals, and policies is provided in Appendix I-4.2.

Changes in Land Use

All light rail alternatives would acquire properties to build the Lynnwood Link Extension, as shown in Table 4.2-2. The Preferred Alternative would acquire an estimated 35 acres compared to a range from 20 to 38 acres considering all of the combinations of the light rail alternatives. Property acquisitions are detailed in Section 4.1 and Appendix I-4.1, Acquisitions, Displacements and Relocations. Although property acquisitions, displacements, and the conversion of land use would occur prior to construction, they are not considered a construction impact because of their long-term effects. Any acquisition of property would convert existing land uses to public right-of-way (which is a transportation-related use) for construction and operation of the Lynnwood Link Extension (i.e., staging areas, light rail track, stations, traction power substations, and parking facilities).

Table 4.2-2. Estimated Area of Acquisitions by Current Land Use (in acres)

	Land Use[a]							
Alternatives	**Commercial**	**Industrial**	**Institutional**	**Multifamily**	**Public[b]**	**Single Family**	**Vacant**	**Total**
PA-A	<0.1	-	0.4	<0.1	1.8	9.6	-	**12.0**
A1	<0.1	-	0.3	-	0.6	8.8	-	**9.8**
A3	<0.1	-	0.3	<0.1	0.4	8.8	-	**9.7**
A5	<0.1	-	0.3	<0.1	3.0	9.7	-	**13.2**
A7	<0.1	-	0.3	<0.1	0.6	9.0	-	**10.1**
A10	<0.1	-	0.3	<0.1	<0.1	10.6	-	**11.2**
A11	<0.1	-	0.3	<0.1	0.4	8.8	-	**9.7**
PA-B	-	-	0.6	-	6.8	0.6	0.8	**8.7**
B1	-	-	0.5	-	3.3	-	0.4	**4.2**
B2A	<0.1	-	0.5	-	3.4	0.5	0.9	**5.3**
B4	<0.1	-	0.2	-	-	-	0.4	**0.7**
PA-C	5.6	1.2	-	-	7.6	<0.1	-	**14.5**
C1	5.5	3.3	-	0.8	0.6	<0.1	-	**10.3**
C2	-	3.6	-	<0.1	5.6	<0.1	-	**9.4**
C3	5.2	1.2	-	-	9.4	<0.1	-	**15.9**

[a] Land use designations developed from King County and Snohomish County assessor data.

[b] Does not include use of WSDOT property.

PA-A = Preferred Alternative for Segment A; PA-B = Preferred Alternative for Segment B; PA-C = Preferred Alternative for Segment C.

The land to be acquired would constitute only a small portion of the total land use for each category in the project vicinity and would not materially change the regional or local land use or development patterns. Following construction, remnant land originally purchased from private property owners that would not be needed for operation of the project could be made available for redevelopment consistent with local zoning. Visual and noise impacts, after mitigation, would not be at levels that would alter existing or planned future land uses.

Table 4.1-1 in Section 4.1, Acquisitions, Displacements, and Relocations, shows how many parcels in each alternative would be converted to a transportation-related use. The totals represent the number of affected parcels outside the existing transportation rights-of-way, based on conceptual design.

The development and redevelopment potential in station areas is discussed later in this section under Section 4.2.4, Indirect Impacts.

Segment A: Seattle to Shoreline

For all light rail alternatives, the conversion of properties to a transportation use for the Preferred Alternative would not markedly alter the predominant pattern of single-family land use in Segment A.

Most of the full property acquisitions in Segment A would be single-family residences. The total single-family acquisitions would range from about 8 acres to

about 10 acres, depending on the alternative. However, multifamily residential and commercial properties would also be affected. Alternative A5 would affect the most property in this segment, followed by the Preferred Alternative. Most of the affected properties would be single-family residential or parts of the I-5 right-of-way. Alternatives A3 and A11 would generally affect the least area; however, the alternatives overall would affect similar amounts and types of property.

All Segment A alternatives would realign 3rd Avenue NE in the vicinity of NE 117th Street, which would maintain access to the Seattle Latvian Evangelical Lutheran Church.

Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Stations

The Preferred Alternative would affect a similar number of single-family properties as the other Segment A alternatives.

There is an established residential neighborhood to the north and east, and a public golf course to the south of the proposed NE 145th Street Station site. The station would not alter these land uses. Shoreline's *Comprehensive Plan* and current planning encourage light rail in this area, which is consistent with City policies.

The Preferred Alternative has an optional station at NE 130th Street; this would not require more property acquisitions. With largely residential and some recreational and public land uses surrounding the station, there is a low potential for the station to change land use characteristics.

The City of Shoreline adopted policies supporting transit-oriented development as part of its updated 2012 *Comprehensive Plan,* in which the area around NE 145th Street is designated as a Light Rail Station Study Area. The plan allows redevelopment of existing land use north of NE 145th Street. The City's 145th Station subarea planning effort included a Draft EIS that was released in 2014.

With the NE 185th Street Station Option 1, the at-grade station would be east of I-5 and a park-and-ride facility in the WSDOT right-of-way west of I-5. The areas surrounding the station are largely residential, and the parking structure west of I-5 would be adjacent to the Shoreline Conference Center. No land use impacts are anticipated. The Preferred Alternative also has a NE 185th Street Station Shoreline Stadium Garage Option, which would place the parking garage on the current Shoreline Stadium parking lot. Both of these NE 185th Shoreline Stadium parking configurations would be consistent with the City's plans.

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Stations

Alternative A1 would affect primarily single-family residential parcels but require fewer full single-family property acquisitions than most of the other alternatives.

Changes in land use are expected to be similar to those described above for the Preferred Alternative, except that the NE 145th Street Station Option 1 would acquire a row of single-family residences to accommodate a three-story parking structure for about 500 vehicles. The single-family residences to be acquired are along the south boundary of the neighborhood, and the conversion of properties to a transportation use would not markedly alter the predominant pattern of single-family land use.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Stations

Alternative A3 is similar to Alternative A1, but is a mostly elevated profile alignment to NE 145th Street.

Land use impacts resulting from the NE 145th Street Station Option 2 or NE 185th Street Station Option 2 would be similar to those under the Preferred Alternative. While the stations differ in the number of residential properties displaced, changes in land use are expected to be similar to those described for the Preferred Alternative.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Stations

Alternative A5 is similar to Alternatives A1 and A3 but would have different station sites in its southern section, and a different site configuration for the station at NE 185th Street. It would have the most full single-family property acquisitions among Segment A alternatives, largely from the at-grade alignment and the need for land to accommodate three stations.

The NE 130th Street Station Option 1 is along the western boundary of a residential area where no property acquisitions would occur. It is also west of 5th Avenue NE. Because of the physical boundary of 5th Avenue NE and the mostly single-family residential surroundings, the station would not directly change land use and development patterns in the area.

The NE 155th Street Station would include a parking structure that would displace single-family residences. The potential is low for the station to cause additional changes in land use and development patterns. The City of Shoreline has not designated this area as a Light Rail Station Study Area in its *Comprehensive Plan's* Land Use Element.

The NE 185th Street Station Option 3 would have land use impacts similar to the NE 185th Street Station with Alternative A3, except for the areas used for parking under the Seattle City Light transmission line.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Stations

Alternative A7 is similar to Alternative A5, but with a mostly elevated profile alignment to NE 145th Street. Property impacts would mostly involve single-family residential properties along the alignment and at station areas, with Alternative A7 in the middle of the range for impacts from Segment A alternatives.

The effects by station would be similar to Alternative A5 for the NE 130th Street Station Option 2, but Alternative A7 would avoid any residential displacement. The effects of the NE 155th Street Station would be the same as under Alternative A5, where residential displacements and the park-and-ride would be the primary changes in land use. For the NE 185th Street Station Option 2, the long-term impacts of Alternative A7 would be the same as described for Alternative A3 and would primarily be from acquiring land for the station and park-and-ride facility.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Stations

Alternative A10 is similar to Alternative A1 up to NE 130th Street, then it is similar to Alternative A5. It would affect more properties than most of the other Segment A alternatives, in part because it would have three stations and more at-grade sections, which require more land.

The NE 130th Street Station Option 1 effects would be low with Alternative A10, as with Alternative A5. The NE 145th Street Station Option 1 would be the same as described for Alternative A1. The NE 185th Street Station Option 3 with Alternative A10 would have impacts similar to those described for Alternative A1. These effects would involve an at-grade station in a residential neighborhood adjacent to I-5 and parking areas that would displace residential properties and use the Seattle City Light transmission line right-of-way.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Stations

Alternative A11 is similar to Alternative A3, except that a NE 130th Street Station would be included. Alternative A11 would have the same level of impact on properties as Alternative A3; displaced uses would be single-family properties. Alternative A11 land use effects would be similar to those described for Alternative A3 because the NE 130th Street Station would have limited land use effects.

Segment B: Shoreline to Mountlake Terrace

Segment B would cause fewer property acquisitions and related changes to land use than Segment A, largely because Segment B has more available right-of-way to use along I-5. A small amount of single-family land use and vacant land would also be

converted to transportation-related uses. None of the light rail alternatives would alter the predominant pattern of single-family development in the area.

Preferred Alternative: East Side to Mountlake Terrace Transit Center to West Side

Much of the Preferred Alternative is within the interstate right-of-way, with relatively few direct impacts to individual properties.

An elevated station at the Mountlake Terrace Transit Center would be east of the existing parking structure, straddling 236th Street SW, and would serve the Mountlake Terrace Transit Center and park-and-ride. A small amount of institutional and public property would be acquired, mostly south of 236th Street SW, and converted to transportation use, but no displacements would occur.

The Preferred Alternative would be consistent with the City of Mountlake Terrace plans identifying this station area for future redevelopment as transit-oriented development. The City's *Town Center Plan* includes a civic center and also outlines a vision to spur development in the surrounding area. Land use and zoning have been modified to support this plan. The area south of the station has recently been rezoned to accommodate higher-density development.

The Preferred Alternative would acquire three single-family residences, but would not alter overall land use patterns.

The Preferred Alternative has an option to locate the 220th Street SW Station south of 220th Street SW, on vacant Edmonds School District property, which would require the Edmonds School District property and five residential properties to the south of it.

Alternative B1: East Side to Mountlake Terrace Transit Center to Median

Changes in land use would be similar to the Preferred Alternative. The median alignment reduces property impacts at the north end of the alignment but overall effects on land use would be similar. However, the median alignment would generally preclude a future station at 220th Street SW.

Alternative B2A: East Side to Mountlake Terrace Transit Center to West Side with 220th Street Station North Option

Alternative B2A would have impacts similar to the Preferred Alternative, except that an elevated station would be provided above 220th Street SW with a parking garage for up to 200 vehicles located on the north side of the street, with the access driveway off 60th Avenue West. The station would support the City of Mountlake Terrace's planning goals for higher-density mixed-use development in the area, which has employers such as Premera Blue Cross and the Mountlake Terrace City Hall, as well as numerous nearby multifamily developments east and west of I-5.

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median

Alternative B4 would convert the least amount of land to a transportation use among the Segment B alternatives. It is primarily within the WSDOT right-of-way and would affect only six properties. Except for potential intensification of land uses east of the station area, changes in land use for Alternative B4 would be low.

The Mountlake Terrace Freeway Station would be located on I-5 at the existing flyer stop adjacent to the existing transit center. The freeway station would be extended to the north, retrofitted to accommodate light rail trains, and closed to bus use. This would be inconsistent with Goal 8 of the Mountlake Terrace Transit Service Strategy because it would close the freeway bus station, as discussed in more detail in Appendix I-4.2. The light rail station would be entirely within the median of I-5, with a new pedestrian bridge extending east over I-5 to 232nd Street SW. Small amounts of property would be acquired between I-5 and 232nd Street SW for this connection; however, no displacements would occur. North of the station, the median alignment would generally preclude a future station at 220th Street SW.

Segment C: Mountlake Terrace to Lynnwood

Segment C's proposed stations would be on the east end of the City Center West zone. The subarea plan for this zone includes a dense mix of commercial (office, retail, and service) uses and a concentration of residential units. In Alternative C3 the tail track would cross over 44th Avenue West ending in the City Center Core zone, which accommodates higher-density mixed-use development.

A key difference among the Segment C alternatives is the number of properties affected by acquisitions. The Preferred Alternative would affect 18 parcels with five full acquisitions. Alternative C1 would affect 31 parcels, with six full acquisitions, while Alternative C2 would affect 29 parcels with four full acquisitions, and Alternative C3 would affect 15 parcels with one full acquisition. Most of the acquisitions would be commercial, but multifamily, single-family, and public uses would also be converted. All alternatives would cross an Edmonds School District property, requiring a partial acquisition or easement.

Preferred Alternative: Along I-5 to Lynnwood Park-and-Ride Station

The Preferred Alternative would not displace any residences, but it would acquire one public and institutional parcel and four full commercial parcels north and east of the Lynnwood Transit Center, displacing nine businesses and acquiring parts of several other parcels. It would cross part of a property on which the Edmonds School District plans to develop a school bus base and other district administrative facilities. The elevated guideway would cut across an area planned for bus parking,

which would affect about five bus parking spaces, but circulation and the general layout of the master planned site would be maintained. The alternative would traverse the most southerly portion of Scriber Creek wetland complex. Compared to the original Alternative C3, the Preferred Alternative also would avoid bisecting a large block to the east of 44th Avenue West that the City of Lynnwood has identified for high-density development in its *City Center Sub-Area Plan*.

The Preferred Alternative would reconfigure parts of the existing park-and-ride in order to develop the light rail station and a parking garage. It would feature a plaza connecting to the intersection of 200th Street SW/Alderwood Mall Boulevard/44th Avenue West, nearer to the core of the City Center subarea. A tail track would extend across 44th Avenue West, occupying the front portion of several parcels on the south side of Alderwood Mall Boulevard, including a hotel. While the acquisition of all or part of several properties would change some of these existing land uses, the Preferred Alternative overall would not markedly alter the commercial or high-density residential character in the greater area.

Alternative C1: 52nd Avenue West to 200th Street SW Station

Alternative C1 would affect the most properties of the Segment C alternatives, acquiring all of the Cedar Creek multifamily residential condominium buildings and several single-family properties. This alternative would traverse the far northern portion of Scriber Creek Park, a Section 4(f) resource, converting these lands to a transportation use. This would affect the park but would not impact land use or development character in the Lynnwood City Center Zone area.

Commercial property would be acquired between the existing transit center and 200th Street SW and converted to transportation use as the parking structure that would serve the station. The tail tracks to the light rail terminus would displace some parking spaces that now serve commercial land uses.

The station would be compatible with existing land use and development patterns. The development of the station would not likely affect currently planned projects, most of which have transit-oriented development goals.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center Station

Alternative C2 would acquire and convert slightly fewer properties than Alternative C1, and it would not convert any multifamily residential properties. It would convert parts of an existing park-and-ride facility but would provide a parking structure to increase parking capacity. The station would be at the west edge of the designated Lynnwood City Center. The alternative would traverse south of Scriber Creek Park, but through the wetland complex, with no change in land use.

The station would be compatible with existing land use and development patterns and would not likely affect currently planned projects, most of which have transit-oriented development goals.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride Station

Alternative C3 would acquire and convert the most property to transportation use. The affected parcels would be mostly public with some commercial and industrial uses. These changes in land use are not expected to markedly alter land use patterns or development character in this area.

The Lynnwood Transit Center Station Options 1 and 2 have different layouts on the existing park-and-ride. Both would be compatible with area development patterns.

4.2.3 Construction Impacts

Construction impacts include changes to land use that could arise from other kinds of temporary impacts (e.g., noise, air quality, traffic, visual and aesthetic resources) on nearby properties.

Construction Impacts Common to All Light Rail Alternatives

Construction of the Lynnwood Link Extension would temporarily affect existing land uses due to construction activities (e.g., staging areas, earthmoving, and truck traffic). The temporary impacts would include increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing residential, commercial, and other uses. Chapter 2, Alternatives Considered, describes construction methods for the light rail alternatives. Although some businesses might experience hardship during construction, this would not affect the land use type unless the property became vacant.

For more information on construction impacts, including impacts on the existing uses (i.e., businesses and residences) and measures to avoid, minimize, and mitigate for those impacts, see Section 3.3 on transportation construction impacts, and Sections 4.3, Economics; 4.4, Social Impacts, Community Facilities, and Neighborhoods; 4.5, Visual and Aesthetic Resources; 4.6, Air Quality and Greenhouse Gases; and 4.7, Noise and Vibration.

Project construction would require temporary construction easements or acquisitions of private property and right-of-way owned by WSDOT and local jurisdictions. Any construction staging within I-5 right-of-way must also be approved by FHWA, considering factors such as safety, the environment, and potential impacts to the freeway. Construction easements would be temporary and the property returned to preconstruction conditions upon completion of the construction activities. Following construction, the undeveloped land originally purchased from private parties could be developed by Sound Transit or others consistent with local zoning.

Segment A: Seattle to Shoreline

No additional impacts would occur in Segment A other than those described above. Construction activity required for the Segment A alternatives would take place primarily on the east side of I-5, although the Preferred Alternative and Alternative A1 would realign a road and construct a parking garage on the west side of I-5. Most construction staging along the Segment A alignments would likely occur in the proposed guideway, station, and park-and-ride rights-of-way.

Segment B: Shoreline to Mountlake Terrace

No additional impacts would occur in Segment B other than those described above. Construction activity required for the Segment B alternatives would take place adjacent to the east side of I-5 (all Segment B alternatives), in the center median of I-5 (all Segment B alternatives) or on the west side of I-5 (Preferred Alternative and B2A). Most construction staging along the Segment B alignments would likely occur in the proposed guideway, station, and park-and-ride rights-of-way.

With the Preferred Alternative and Alternatives B1 and B2A, construction staging of the elevated Mountlake Terrace Transit Center Station would occupy part of the existing surface parking lot, and parking spaces would be temporarily displaced. Access to the existing parking structure would be maintained as well as bus operations that currently serve the transit center.

There may be opportunities to use vacant lots such as the vacant site south of 236th Street SW owned by the Edmonds School District for temporary replacement parking or construction staging.

Segment C: Mountlake Terrace to Lynnwood

No additional impacts would occur in Segment C other than those described above. Construction activity required for the Segment C alternatives would take place either in the center median of I-5 or on the west side of I-5, and near the Lynnwood Transit Center. Most construction staging along the Segment C alignments would likely occur in the proposed guideway, station, and park-and-ride rights-of-way.

4.2.4 Indirect Impacts

The project could indirectly affect land use by catalyzing others to develop or redevelop land near the project's facilities, and local governments may change land use codes to permit other development or redevelopment. Some of the possible indirect development might be transit-oriented development (TOD). Where appropriate, Sound Transit would facilitate TOD with local jurisdictions and potential development partners in accordance with Sound Transit's TOD policy. For areas within I-5 right of way, FHWA and WSDOT prohibit development that is unrelated to transportation.

Improved transit access can increase the convenience and desirability of surrounding residential, commercial, and office properties. Where stations have available land and supportive zoning in place, the resulting TOD would tend to be more intense, mixed-use development that supports high-density residential, commercial, and office-related uses.

Federal, state, regional, and local governments have an array of programs and policies to support transit-oriented development near mass transit projects. In 2011, Sound Transit identified key principles for its transit-oriented development program in its *Sound Transit Program TOD Strategic Plan* (Sound Transit 2011c); in 2012, the agency adopted the Transit-Oriented Development Policy (Resolution R2012 – 24). This policy has the following goals:

- Increase the value and effectiveness of transit by increasing transit ridership.
- Support implementation of state, regional, and local growth plans, policies, and strategies.
- Foster relationships with local jurisdictions, regional agencies, private developers, local residents, businesses, community groups and other stakeholders to facilitate transit-oriented development.
- Encourage convenient, safe multimodal access to the transit system, with an emphasis on non-motorized access.
- Support economic development efforts.
- Encourage creation of housing options including market-rate and affordable units.
- Support implementation of other related Sound Transit plans and policies, with an emphasis on the agency's *Sustainability Plan*.
- Protect and enhance Sound Transit's assets and investments.

The policy directs Sound Transit to consider transit-oriented development potential in the development of its transit projects. This includes identifying agency and community transit-oriented development opportunities and strategies, as well as considering opportunities for partnerships with public and private interests. The policy also encourages Sound Transit to consider transit-oriented development in its decisions about the acquisition, use, and disposition of land.

National studies of transit-oriented development typically cite three key conditions that indicate higher potential for development:

1. Stations are located in prime regional and community centers that are attractive to typical market forces.
2. Regional and local real estate markets are active.
3. Public policies and regulations allow or encourage intensive development in station areas.

The benefits of successful transit-oriented development have included improved mobility, increased supplies of affordable housing, increased transit ridership in a more

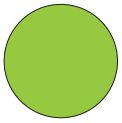
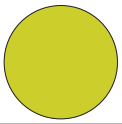
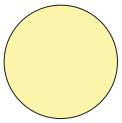
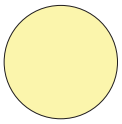
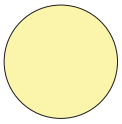
efficient urban form, and opportunities for urban redevelopment. Higher-density land uses around stations can also bring increased economic activity. Section 4.3, Economics, discusses the potential economic benefits associated with the Lynnwood Link Extension. In areas where the local jurisdictions have indicated a desire to attract transit-oriented development or have already adopted regulations consistent with this type of growth, the Lynnwood Link Extension would support their goals and policies. Sound Transit would be open for partnerships with local governments and others to develop the stations to help facilitate TOD, and would consider the potential for commercial uses in project-related parking structures located outside of the WSDOT right-of-way, and where consistent with local zoning.

Sound Transit completed a *Station Area Development Potential Report* to assess the potential for each proposed light rail station to support transit-oriented development (Sound Transit 2013a). To assess land use and economic development performance, the report considered access to regional growth centers and the station area development potential for the station areas served by each alternative. An overall rating was assigned to each station area based on its relative potential to support transit-oriented development, which was assessed according to four elements:

- Existing conditions supporting transit-oriented development
- Transit-supportive plans and policies
- Station access
- Potential development opportunities

The four elements, when considered together, allow an overall assessment of the development potential at each station area. The ratings for transit-oriented development potential are defined as limited, moderate, and strong. These qualitative ratings may change as the project design is refined and/or demographics change, new plans and policies are adopted by jurisdictions, and more detailed transit-oriented development analyses are completed. Table 4.2-3 shows the results by station area. A higher potential for transit-oriented development indicates a higher potential for indirect changes in existing land use and development patterns in station areas. However, the ratings closely relate to the types of currently allowed development within 0.50 mile of station areas based on existing plans and policies. The project would provide an opportunity for jurisdictions to implement regional policies related to mass transit (see Appendix I-4.2) as well as support increased densities, especially transit-oriented development.

Table 4.2-3. Station Area Transit-oriented Development (TOD) Potential

	Station Area	Overall TOD Potential	Existing Conditions Supporting TOD	Transit-supportive Plans & Policies	Station Access	Potential Development Opportunities
Lynnwood	**200th Street SW Station**					
	Lynnwood Transit Center Station					
	Lynnwood Park-and-Ride Station					
	Lynnwood Park-and-Ride Station - Modified (Preferred Alternative)					
Mountlake Terrace	**220th Street SW Station** (Preferred Alternative Option)					
	Mountlake Terrace Freeway Station					
	Mountlake Terrace Transit Center Station (Preferred Alternative)					
Shoreline	**NE 185th Street Station** (Preferred Alternative)					
	NE 155th Street Station					
	NE 145th Street Station (Preferred Alternative)					
Seattle	**NE 130th Street Station** (Preferred Alternative Option)					
	Northgate Station		Northgate Station not included in assessment - station constructed as part of Northgate Link project prior to Lynnwood Link Extension; overall assessment based on current development plans for the area. Northgate is a PSRC-designated Regional Growth Center and City of Seattle-designated Urban Center.			

Assess Potential

Limited Moderate Strong

Note: The station areas evaluated encompass an area 0.50 mile from the proposed station site, and the evaluation of TOD redevelopment opportunities did not consider unused land at the station site within the WSDOT right-of-way.

The Lynnwood station area has the highest development potential. Four station alternatives are being considered to serve the transit center in Lynnwood, and the potential for redevelopment is similar for each. Although the existing conditions include large blocks with automobile-dependent businesses and surface parking, the City of Lynnwood has developed specific plans and policies to achieve regional growth targets in this area. The transit station would reinforce intensification of nearby commercial and higher-density multifamily uses. Any such intensification would increase the activity levels adjacent to nearby residential properties.

The station areas with moderate development potential are those serving the Mountlake Terrace Park-and-Ride and the 220th Street SW Station (also in Mountlake Terrace). A station serving the park-and-ride has the potential to support future development in the City's proposed town center to the east and south, which could include intensifying commercial and higher-density multifamily uses primarily east of the station. The City of Mountlake Terrace has conducted more extensive transit-oriented development planning than the other jurisdictions. However, the station area development is limited by the amount of property dedicated to road rights-of-way (I-5) and the Nile Golf Course.

The remaining station areas have limited development potential, primarily because they are predominantly single-family neighborhoods, border large parks, or because current land use and comprehensive plans for these areas do not allow or encourage higher-density development. However, the City of Shoreline, as previously mentioned, has initiated light rail station area planning at NE 145th Street and NE 185th Street near I-5, which could facilitate transit-oriented development. The Comprehensive Plan and zoning changes implemented by the City of Shoreline or the Comprehensive Plan adopted by the City of Lynnwood could result in more intensive land uses and economic development around the stations.

4.2.5 Cumulative Impacts

Cumulatively, the Lynnwood Link Extension and other planned transportation and development projects would help achieve local and regional goals encouraging high-density, transit-oriented development. Other major planned developments could be attracted by the investments made by the project, and this incentive could accelerate the rate of development or redevelopment in station areas.

The Northgate Link Extension is currently under construction. King County Metro is planning a transit-oriented development project in the Northgate Station area, although details have not yet been defined. Both projects are designed to support improved transit service to designated urban centers, and both projects are consistent with land use plans for the area. The Lynnwood Link Extension, as well as other development projects around the station areas, would encourage the high-density development outlined in local and regional land use plans.

A Lynnwood site alternative is proposed for the OMSF, which is within an area that is currently zoned for commercial and light industrial uses; Alternatives C1, C2, C3, and the Preferred Alternative also would use parts of these parcels. If the Lynnwood site is chosen for the OMSF, it would increase the conflicts with the existing master plan by the Edmonds School District to develop a school bus base and other district administrative facilities. Sound Transit has identified a Bellevue location as the Preferred Alternative for the OMSF. A final decision on the site will be made after publication of the project's Final EIS in fall 2015.

4.2.6 Potential Mitigation Measures

No mitigation related to land use would be required during construction or operation of the Lynnwood Link Extension. In general, the project would not result in inconsistencies with adopted land use plans. Although Sound Transit cannot avoid all disturbances to adjacent land uses during construction, project impacts are not expected to cause substantial changes in land use. Therefore, no specific mitigation measures related to land use would be required for the project.

Refer to Section 4.1, Acquisitions, Displacements, and Relocations, for complete information on how Sound Transit would minimize the impacts associated with required acquisitions, displacements, and relocations. For measures that would minimize construction and operation impacts on adjacent land uses, refer to Chapter 3, Transportation Impacts and Mitigation, and Sections 4.3, Economics; 4.5, Visual and Aesthetic Resources; 4.6, Air Quality and Greenhouse Gases; 4.7, Noise and Vibration; and 4.17, Parks and Recreational Resources.

4.3 Economics

This analysis identifies the project's potential adverse and beneficial economic effects. Sound Transit evaluated direct and indirect economic impacts in the project area at three different levels:

- **Regional.** Economic impacts on the regional economy (such as effects on employment, traffic mobility, and congestion) were analyzed for King, Kitsap, Pierce, and Snohomish counties.
- **City.** Project effects were assessed on the tax revenue for cities with property acquisitions (Seattle, Shoreline, Mountlake Terrace, and Lynnwood).
- **Site-specific.** Site-specific impacts were evaluated for a 0.50-mile area around the light rail route and stations.

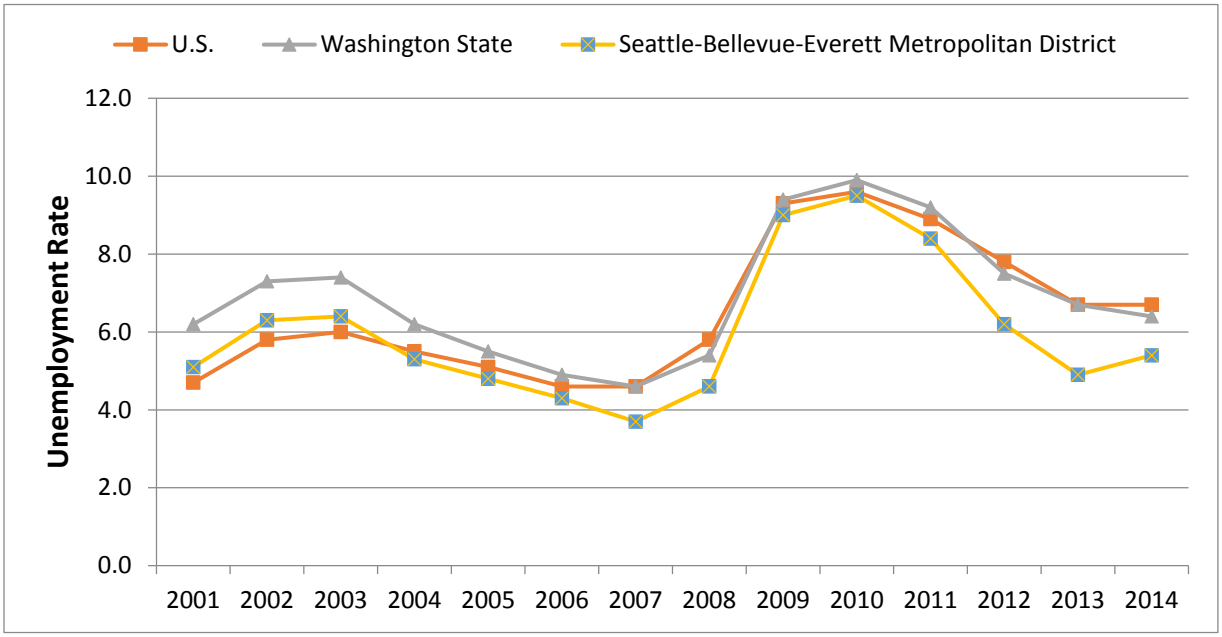
4.3.1 Affected Environment

Regional Demographic and Economic Trends

The forecast population data for King, Kitsap, Pierce, and Snohomish counties show that the region will grow by over 1.3 million inhabitants by 2040, which would total 5 million inhabitants, or about a 1 percent increase in population per year (PSRC 2013). The number of households is predicted to grow somewhat faster than the overall population, about 1.2 percent a year regionally, reflecting faster growth in smaller households. Generally, travel demand tracks more closely to the growth in the number of households than it does to population.

Median household income in the Central Puget Sound region is higher than the state average. The U.S. Census Bureau showed King County had the highest median household income in the region at about $70,000 in 2013. Snohomish County was second at about $66,000 in 2013 (Washington OFM 2014). Incomes in King County grew by 32 percent, while Snohomish County incomes increased by 24 percent, when compared to 1999 U.S. Census levels.

Employment in the region is expected to grow at an approximate average rate of 1.6 percent through 2040. The region also tends to have lower unemployment than the state or the nation, as shown in Figure 4.3-1. These trends support the predictions for generally increasing travel demand in the region and the project corridor.



Source: U.S. Department of Labor, Bureau of Labor Statistics, 2014.

Figure 4.3-1. Unemployment Rates, 2001 to 2014

Demographic and Economic Trends in Project Area

Table 4.3-1 shows population, household, and employment forecast trends for each project segment from 2010 to 2040. Segments B and C show the largest growth rates.

Table 4.3-1. Population, Housing, and Employment Forecasts by Segment

Segment	2010	2040	Average Annual Growth Rate 2010 to 2040 (percent)
Segment A: Seattle to Shoreline			
Population	67,455	88,244	0.9
Housing Units	32,116	43,288	1.0
Employment	27,232	43,842	1.6
Segment B: Shoreline to Mountlake Terrace			
Population	32,588	45,247	1.1
Housing Units	14,603	21,514	1.3
Employment	10,344	16,653	1.6
Segment C: Mountlake Terrace to Lynnwood			
Population	25,804	35,828	1.1
Housing Units	10,914	16,079	1.3
Employment	13,761	22,154	1.6

Sources: Population and housing units from 2010 U.S. Census; employment data from PSRC; and 2040 forecasts based on PSRC 2013 Land Use Baseline.

The cities within the project area—Seattle, Shoreline, Mountlake Terrace, and Lynnwood—rely heavily on property tax and sales tax revenues to fund general services for their respective jurisdictions. Revenues collected by each city, other than taxes, consist of funding from federal and state sources, such as direct federal grants and state-shared revenues, and fees collected from government-operated facilities, including the issuing of licenses and permits. In addition to funding city programs, property tax levies also provide funds for county programs, fire prevention, libraries, schools, and other governmental services. Table 4.3-2 shows funding sources for each city.

Table 4.3-2. Revenue Sources: Percent of Revenues by City

City (Budget Year)	Property Tax	Sales Tax	Other Sources
Seattle (2014)	26	19	55
Shoreline (2014)	14	9	77
Mountlake Terrace (2013 to 2014)	22	10	68
Lynnwood (2012)	20	33	47

Sources: City of Seattle 2014 Budget; City of Shoreline 2014 Budget; City of Mountlake Terrace 2013-2014 Adopted Biennial Budget; and Washington State Auditor's Office, City of Lynnwood 2012 Financial Statement

Regional Transportation of Goods and Services

Regional and interstate commerce relies on I-5, which is heavily congested. Longer travel times, increased costs, and less reliable pick-up and delivery times for truck operators result in some businesses being forced to move all or part of their business to less congested regions or avoid the Puget Sound region altogether.

In an effort to avoid moving away from the region, some transport companies are working with their customers to arrange deliveries in non-peak hours; however, many smaller customers do not find it cost-effective to extend their hours of operation. Traffic congestion also limits access to labor. As a result, companies might look to less congested parts of the metropolitan region or to other cities for future expansion. Chapter 3, Transportation Impacts and Mitigation, discusses future travel conditions, including freight, along the I-5 corridor.

4.3.2 Long-Term Impacts

A new light rail system such as the Lynnwood Link Extension can cause changes in the local business environment and surrounding neighborhoods. These changes, in turn, may benefit or adversely affect the success of existing businesses and influence future economic opportunity in the area. Direct economic impacts of each alternative could include business and employee displacements and the corresponding potential tax impacts, as well as potential changes in development patterns and regional freight mobility. Economic conditions could also change as a result of other effects such as the removal of businesses within an area, changes in parking availability, noise, visual conditions, or access. Indirect benefits could include increased economic activity around transit stations (transit-oriented development) as a result of increased pedestrian traffic, higher density and mixed land uses, and increased redevelopment opportunities.

No Build Alternative

Under the No Build Alternative, future economic development or redevelopment would be less because the project is a key element of the regional and local transportation, land use, and economic development plans. Traffic congestion would worsen, and the No Build Alternative could affect future economic development because it could make the project corridor communities comparatively less attractive as places to live or do business. The increased cost of doing business resulting from incidental and recurring delays with no alternative to avoid congestion includes the costs caused by travel delay and wasted fuel, that is, the value of lost time in passenger vehicles and the increased operating costs of commercial vehicles in congested traffic. Chapter 3, Transportation Impacts and Mitigation, provides further discussion of delays associated with future peak-period travel.

Light Rail Alternatives

Displacements

Table 4.3-3 presents estimates of the number of businesses and employees the light rail alternatives would displace due to property acquisitions in Segments A, B, and C.

In Segments A and B, the light rail alternatives would not displace businesses or employees.

In Segment C, the Preferred Alternative would displace nine businesses with an estimated 60 employees. In addition, partial acquisitions would affect parking at several parcels along 200th Street SW.

Alternative C1 would have the highest impact because Sound Transit would acquire properties holding 31 employers that provide a place of employment for an estimated 108 employees. Alternative C2 would affect three businesses with about 72 employees, and Alternative C3 would affect one business with an estimated 47 employees.

None of the Segment C alternatives affect even 1 percent of the employment within the Segment C study area (the areas within 0.50 mile of the alternative alignments), and much less than 1 percent of Lynnwood's total employment. Relative to the size of the employment base within the region, the business and employee displacements by the light rail alternatives would have a low impact on economic conditions regionally, but they would create disruptive transitions for the affected businesses and employees. Displacements are not necessarily permanent job losses because the displaced businesses would receive relocation assistance to help them continue operating, as described in Section 4.1, Acquisitions, Displacements, and Relocations. However, a business could relocate out of the area, or choose to accept compensation rather than reopening in a new location; in these cases, local jobs would be lost.

Table 4.3-3. Estimated Property Acquisition Impacts on Businesses and Employees

Alternative	Full Displacements		Commercial, Public, and Institutional Property Acquisitions	
	Businesses	Employees	Partial	Full
Segment A: Seattle to Shoreline				
Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Stations (with or without 130th Street Station Option)	0	0	8	2
Alternative A1: At-grade/Elevated with NE 145th and NE 185th Stations	0	0	4	1
Alternative A3: Mostly Elevated with NE 145th and NE 185th Stations	0	0	4	1
Alternative A5: At-grade/Elevated with NE 130th, NE155th, and NE 185th Stations	0	0	5	0
Alternative A7: Mostly Elevated with NE 130th, NE155th, and NE 185th Stations	0	0	5	0
Alternative A10: At-grade/Elevated with NE130th, NE 145th, and NE 185th Stations	0	0	4	1
Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Stations	0	0	4	1

Table 4.3-3. Estimated Property Acquisition Impacts on Businesses and Employees

Alternative	Full Displacements		Commercial, Public, and Institutional Property Acquisitions	
	Businesses	Employees	Partial	Full
Segment B: Shoreline to Mountlake Terrace				
Preferred Alternative: East Side to Mountlake Terrace Transit Center to West Side	0	0	2	1
with 220th Street Station South Option	0	0	2	2
Alternative B1: East Side to Mountlake Terrace Transit Center to Median	0	0	1	1
Alternative B2A: Optional 220th Street SW Station (elevated)	0	0	1	1
Alternative B4: East Side to Mountlake Terrace Freeway Station to Median	0	0	2	1
Segment C: Mountlake Terrace to Lynnwood				
Preferred Alternative: Along I-5 to Lynnwood Park-and-Ride	9	60	11	5
Alternative C1: 52nd Avenue West to 200th Street SW	31	108	23	4
Alternative C2: 52nd Avenue West to Lynnwood Transit Center	3	72	22	4
Alternative C3: Along I-5 to Lynnwood Park-and-Ride	1	47	12	2

Sources: King County Finance Services, Finance and Business Operations, 2012 and 2014 Real Property Tax Snohomish County Assessor's Office, 2012 and 2014 Real Property Tax.

Impacts of Displacements on Tax Base of Cities

With each light rail alternative, Sound Transit would acquire residential and commercial properties and remove those properties from tax rolls. Table 4.3-4 estimates the annual initial property tax impacts on cities resulting from the loss of taxes on fully acquired properties. These property tax impacts reflect property taxes as of 2014. When referring to the property tax impacts of acquisitions, the term "initial property tax impacts" is used because the initial impact would be lower property tax revenue (longer-term impacts are described below). In most cases, the impact would be less than 0.25 percent of the local jurisdiction's property tax revenues; in all cases, the impact would be less than 1.5 percent. If businesses relocate outside of the local jurisdiction, this would also reduce local tax revenues, affecting revenue sources ranging from business and operations taxes to sales or payroll taxes.

Table 4.3-4. Estimated Initial Property Tax Impacts on Cities by Alternative

Alternative	Annual Initial Property Tax Impact	Percent of Budgeted City Property Tax Revenue
Segment A: Seattle to Shoreline		
Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Stations	$276,000	0.1
Alternative A1: At-grade/Elevated with NE 145th and NE 185th Stations	$241,000	0.1
Alternative A3: Mostly Elevated with NE 145th and NE 185th Stations	$224,000	0.1
Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Stations	$276,000	0.1
Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Stations	$248,000	0.1
Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Stations	$290,000	0.1
Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Stations	$224,000	0.1
Segment B: Shoreline to Mountlake Terrace		
Preferred Alternative: East Side to Mountlake Terrace Transit Center to West Side	$6,000	0.1
with 220th Street Station South Option	$15,000	0.4
Alternative B1: East Side to Mountlake Terrace Transit Center to Median	$0	0
Alternative B2A: Optional 220th Street SW Station (elevated)	$$17,000	0.4
Alternative B4: East Side to Mountlake Terrace Freeway Station to Median	$0	0
Segment C: Mountlake Terrace to Lynnwood		
Preferred Alternative Along I-5 to Lynnwood Park-and-Ride	$127,000	1.1
Alternative C1: 52nd Avenue West to 200th Street SW	$138,000	1.2
Alternative C2: 52nd Avenue West to Lynnwood Transit Center	$40,000	0.4
Alternative C3: Along I-5 to Lynnwood Park-and-Ride	$37,000	0.3

Sources: King County Finance Services, Finance and Business Operations, 2014 Real Property Tax Snohomish County Assessor's Office, 2014 Real Property Tax.

The consequence of full parcel acquisition is typically permanent conversion from private to public ownership. Parcels in public ownership are exempt from property taxes, but they are still assessed certain fees.

The project would have similar property tax impacts for all Segment A alternatives. These impacts, however, would be relatively small (0.1 percent) when compared to the combined 2014 estimated property tax revenues for Seattle and Shoreline (about $268 million). The property tax impacts would be caused mainly by acquiring single-family residences.

The Segment B impacts on property taxes would occur with the Preferred Alternative and Alternative B2A, and have about a $6,000 to $17,000 initial property tax impact annually. The Preferred Alternative with the 220th Street Station South Option would slightly increase property tax impacts.

As shown in Table 4.3-3, for all alternatives in Segment C, Sound Transit would acquire commercial, public, or institutional properties that are currently places of employment. The Preferred Alternative is in the same range as Alternative C1: although it affects fewer total properties, several are higher value parcels. The other two alternatives (C2 and C3) have lower impacts.

The long-term fiscal impact on a jurisdiction depends on a number of factors. Initially, property taxes would no longer be collected from the properties Sound Transit would acquire along the light rail route. As a result, the rates charged to remaining taxpayers could increase slightly (less than 0.01 percent) to recover budgeted funds, or budgets for essential government services could be reduced accordingly. In the long run, some of the land purchased for the construction of the Lynnwood Link Extension may not be permanently needed and could be released for development after the project is built. In addition, some displaced businesses would likely either rebuild at a new location or relocate to an existing building elsewhere within the jurisdiction's boundary.

These positive fiscal impacts could be offset somewhat by the absence of new construction that might have occurred on properties acquired and retained by Sound Transit. Thus, the long-term property tax impacts would have too many variables to be predicted quantitatively, but they would likely be less than the initial property tax impacts. The overall property tax impact is expected to be low.

Impacts on Regional Transportation of Goods and Services

The main impacts on regional transportation of goods and services would result from changes in freight mobility on the I-5 corridor and the surface street network. Compared to the No Build Alternative, the light rail alternatives would result in similar 2035 peak-period travel times in the corridor. Freight mobility changes for the light rail alternatives would be minor along the I-5 corridor. On city streets, all alternatives have mitigation that would cause similar or better conditions than the No Build Alternative. The light rail alternatives would allow travelers to use transit to avoid congestion, but regional freight conditions would stay similar to conditions without the light rail project. Chapter 3, Transportation Impacts and Mitigation, further discusses I-5 transportation impacts.

4.3.3 Construction Impacts

Construction brings money into the economy from construction wages, the purchasing of local goods and services for construction, the money spent by

construction crews in the community where construction occurs, and related tax revenues. On the negative side, constructing any light rail alternative would result in economic impacts by blocking visibility and access to businesses, causing traffic delays, and rerouting traffic on detours that increase travel times and make access to some locations difficult.

Potential Beneficial Economic Impacts from Construction

Constructing the Preferred Alternative and any of the other light rail alternatives would increase employment and associated consumer spending in the project vicinity during construction. The extent of these impacts would depend on the source of project funding and the composition of work crews used during project construction.

In economic impact analyses, typically only inflows of funds from outside a region are considered "new money" that will lead to new employment and income in that region. Funds from local or regional sources are transfers that could be spent by residents and businesses on other economic activities.

While federal grants may provide a source of funding, the local funds required for approximately one-half to two-thirds of the light rail alternatives' construction costs are anticipated to be raised primarily in the communities benefiting from the project. The influx of federal funds (assumed to be $600 million) would account for between one-third and one-half of the total capital cost, depending on the alternative selected within each segment.

In addition, construction would lead to positive economic effects beyond the federal grants. Sound Transit would issue bonds to pay for project construction, and this money would go primarily to businesses in the region within a relatively short period. Principal and interest on the bonds would be repaid over many years using a variety of funding mechanisms. Some of the future repayments also could be made in the form of taxes, such as sales and use tax. Therefore, there would be a temporary impact because bonded funds would be spent over approximately 6 years, stimulating direct and indirect construction spending in the region, but the added taxes to pay for the project could reduce spending in other areas of the economy.

Table 4.3-5 shows the estimated magnitude of the economic stimulus for the alternatives. It gives the range of direct expenditures and direct employees who would be hired as a result of the low- and high-cost estimates, based on the combinations of alternatives for each segment. The number of direct employees was calculated using the Washington Office of Financial Management's model for predicting employment based on construction cost estimates.

Table 4.3-5. Estimated Direct Expenditures and Direct Employment from Lynnwood Link Extension Construction

Cost Estimates and Employment	Project Construction
Preferred Alternative Cost Estimate	
Total direct expenditure (million in 2014 $)	$1,510
Direct Employment	
Total direct employment	8,860
Annual direct employment	1,480
High-Cost Estimate	
Total direct expenditure (million in 2014 $)	$1,940
Direct Employment	
Total direct employment	11,380
Annual direct employment	1,900
Low-Cost Estimate	
Total direct expenditure (million in 2014 $)	$1,390
Direct Employment	
Total direct employment	8,150
Annual direct employment	1,360

Source: Sound Transit and Washington Office of Financial Management Input-Output Model, 2011.

Wages paid to workers in construction trades or supporting industries would be spent on other goods and services; these are referred to as induced impacts. Indirect and induced impacts are often called "multiplier" impacts. Multiplier estimates for the state of Washington (Washington OFM 2007) suggest that an additional 64 percent of value added (i.e., payments made by industry to workers, interest, profits, and indirect business taxes) would result from new direct construction spending in the region. Moreover, an additional 0.94 new jobs would be created for every direct job associated with the project, increasing the potential number of jobs generated in the region from approximately 15,800 to 22,100 with the high-cost estimate.

Although the typical methodology for economic impact analysis would count only the $600 million of federal grant funding as new spending for the purpose of determining economic impacts, the actual benefits would be greater because of the multiplier effects. Regardless of the specific method used to quantify economic impacts, it is clear that the project would create substantial short-term economic activity in the region during construction and that all of the light rail alternatives would provide approximately the same magnitude of short-term economic impact.

Potential Adverse Economic Impacts from Construction

Construction activity affects local businesses because of the associated changes in traffic circulation, access, parking, noise, and visual effects. The work in Segment C would likely have the greatest impact on nearby businesses in terms of noise, dust, and restricted access, and potential customers might choose to avoid businesses due to real or perceived inconvenience caused by construction activities. Along any given

area of the project corridor, major construction is anticipated to last approximately 1 to 2 years.

All alternatives would require construction access from the WSDOT rights-of-way on I-5 and from city streets adjacent to the project corridor. All light rail alternatives would affect traffic operations on arterials adjacent to the light rail guideway and stations. For all street reconstruction, travel lanes on local streets along the guideway would experience periodic daytime closures. Truck access to the guideway during construction would be along city arterials leading to streets adjacent to the guideway. Construction activities along the guideway might reduce or restrict property access, and the contractor would need to maintain access during construction or coordinate with property owners and businesses.

In some locations, I-5 shoulders might be narrowed and/or lane widths reduced, with FHWA and WSDOT approval, to provide space for construction activities adjacent to the freeway. This configuration would increase congestion and travel times on the freeway, which would result in lost productivity and higher costs for businesses operating in the corridor.

4.3.4 Indirect Impacts

Sound Transit evaluated the indirect long-term economic impacts of the light rail alternatives based on the following: field observations of each alternative route, the number of housing units and employees to be served by the stations, and information presented in Chapter 3, Transportation Impacts and Mitigation; Section 4.2, Land Use; Section 4.5, Visual and Aesthetic Resources; and Section 4.7, Noise and Vibration.

The operation of the light rail alternatives could have both positive and negative indirect economic impacts. Light rail projects can increase development and redevelopment potential adjacent to stations, with potential increases in property values. Negative indirect economic effects arise from access or traffic flow changes or restrictions, decreased parking, noise increases, or impaired visibility that could reduce patronage of a business or decrease value in property.

The availability of light rail increases transit access and pedestrian activity, especially in areas surrounding the stations and between important nodes of economic activity. Improved transit access can positively affect the convenience, visibility, and desirability of nearby residential and commercial properties. Increased pedestrian activity can increase the patronage of adjacent retail businesses. This activity might create a synergy of business owners and employees being more interested in relocating where there is convenient access to the light rail line. This would lead to more dense and mixed land uses around stations and related increased economic activity. This pattern is referred to as transit-oriented development and is addressed further in Section 4.2, Land Use. The economic impacts are summarized here.

Numerous case studies conclude that residential and commercial property values near light rail transit stations typically increase and are valued higher than similar properties that are not near the transit stations (TRB 2004). While proximity to good-quality transit is an important trait of transit-oriented development, this is not the only factor that adds value. When combined with higher-than-typical densities, consumer retail and services, and pedestrian amenities, proximity to transit can confer land-value benefits that are well above those of competitive markets. The transit-oriented development synergy of proximity, density, mixed uses, and walking-friendliness, under the right conditions, is expressed through accelerated gains in property values and overall real-estate market performance (TRB 2004).

However, these gains are not automatic; property value increases generally require a strong demand for real estate, locations in neighborhoods free from signs of stagnation and distress, and public policies such as zoning bonuses that further leverage transit-oriented development and transit system expansion to produce the spillover benefits of a highly integrated transportation network. Property values are also affected by external forces and might change in response to fluctuations in the economy, consumer confidence, and local development pressures. In addition, because transit-oriented development takes time to evolve, property value benefits will also take time to accrue (TRB 2004). While these positive effects might occur in all the project segments because the jurisdictions have either adopted or are contemplating plans that would support transit-oriented development, the benefits would most likely be experienced in Northgate (Segment A) and Lynnwood (Segment C), where major regional urban growth centers are planned.

Many studies have found property value impacts from light rail transit are usually positive, although some studies have documented decreased property values, particularly along a light rail route rather than in the vicinity of stations (e.g., Cervero 2004). Disruptive noise levels; light, shadow, and view impacts; reductions in vehicle access and parking; and spill-over parking from station parking garages can harm property values and sales for businesses that depend on vehicular access. Negative impacts on property values would most likely occur when the light rail project results in noise or visual impacts noticeably greater than what currently exists. Such impacts are often associated with elevated, and to a lesser degree, at-grade alternatives. All of the Lynnwood Link Extension light rail alternatives would be at-grade or elevated. With mitigation measures implemented for the project, the impacts from noise, vibration, and traffic would decrease such that there would be a low potential for adverse indirect effects on economic activity.

Potential adverse indirect effects would be influenced by the same external forces described in the preceding paragraphs for the positive indirect effects, such as changes in real-estate demand, local zoning, or the local economic climate.

4.3.5 Cumulative Impacts

Other major projects in the project area include the Northgate Link Extension, which is already under construction. Its construction period is scheduled to end in 2019, and could overlap with the start of the Lynnwood Link Extension construction. Cumulatively, this extends the period of construction impacts in the Northgate area for a longer period than for either project alone. However, both projects would employ similar construction impact mitigation, which would minimize impacts. In addition, the Lynnwood Link Extension's civil construction period in the Northgate area is likely to be localized around the elevated guideway. Access to area businesses would be maintained throughout the construction period.

Sound Transit is also developing an EIS for an OMSF, which includes an alternative in Lynnwood; in July 2014, the Sound Transit Board identified a Bellevue site as the Preferred Alternative. A final decision on the site will be made after publication of that project's Final EIS in fall 2015.

There are also eight other transportation projects of regional significance, such as the SR 99 Alaskan Way Viaduct Replacement Project, SR 520 Bridge Replacement and HOV Project, and five private development projects. The Edmonds School District has a district support center and bus maintenance base project planned for a site in Lynnwood. The OMSF and the larger transportation projects would have similar or greater capital expenditures and multiplier effects on the regional economy as the Lynnwood Link Extension.

If the OMSF was constructed in Lynnwood near the Segment C alternatives, the two projects could be built during the same time period, and areas such as 52nd Avenue West and Cedar Valley Road could have a greater level of construction-related and impacts. The Edmonds School District's support services facility also could be constructed at the same time as the Lynnwood Link Extension, which could increase construction period impacts.

Similarly, if the maintenance facility was built on the Lynnwood site, economic impacts from displacements would increase cumulatively for all alternatives in Segment C because Sound Transit would have to acquire additional property for the proposed maintenance facility. Some of the parcels needed for Alternatives C1 and C2 would also be needed for the maintenance facility; however, a number of the partial acquisitions would likely change to full acquisitions, thereby increasing the number of business displacements and the amount of lost property tax revenue experienced by the City of Lynnwood. The maintenance facility would also displace some of the opportunities for increased development and redevelopment potential adjacent to stations or potential increases in property values southwest of the Lynnwood Link Extension station alternatives. This

would reduce the potential indirect economic benefits in an area identified as having the highest redevelopment potential along the project corridor.

4.3.6 Potential Mitigation Measures

Businesses near construction activities might be adversely affected during construction by noise, dust, and restricted access. Any major construction project inconveniences or disturbs the residents, businesses, and business customers adjacent to project construction activities. While some businesses would suffer little or no adverse effect, others might experience a noticeable decline in sales, increase in costs, or a decrease in efficiency. Mitigation for noise and vibration impacts is described in Section 4.7, Noise and Vibration. Construction might cause adverse impacts on businesses from reduced access or general construction activity that affects local transportation; the mitigation for such impacts is discussed in Section 3.6, Potential Mitigation Measures, of Chapter 3, Transportation Impacts and Mitigation.

Businesses displaced by the project would receive relocation assistance, as described in Section 4.1, Acquisitions, Displacements, and Relocations, to mitigate adverse impacts.

Sound Transit would dedicate staff to work specifically with affected businesses during construction to minimize project-associated impacts. Construction mitigation plans would be developed to address the needs of businesses and would include, but are not limited to, the following measures:

- Provide a 24-hour construction telephone hotline.
- Provide business cleaning services on a case-by-case basis.
- Provide signage such as 'detour,' 'open for business,' and others as appropriate.
- Establish effective communications with the public through measures such as meetings and construction updates, alerts, and schedules.
- Implement promotion and marketing measures to help affected business districts maintain their customer base, consistent with Sound Transit policies, during construction.
- Maintain access as much as possible to each business and coordinate with businesses during times of limited access.
- Provide a community ombudsman.

To avoid cumulative construction impacts, Sound Transit would coordinate construction mitigation planning with other project owners and potentially affected parties in construction areas with multiple projects in the same vicinity at similar times. Examples include projects such as the Northgate Link Extension and King County's Northgate transit-oriented development program.

4.4 Social Impacts, Community Facilities, and Neighborhoods

This section discusses how the Lynnwood Link Extension might affect people, businesses, community facilities, and neighborhood character and cohesion along the project corridor. The analysis reflects the findings of other environmental analyses, including transportation, property, land use, economics, visual and aesthetic resources, air quality, noise and vibration, parks and recreational resources, and public services. The section concludes with a discussion of environmental justice, which summarizes the analysis of impacts on minority and low-income populations in Appendix C, Environmental Justice Analysis.

4.4.1 Affected Environment

The study area for the social environment extends 0.5 mile from the alternative alignments and stations, and it has 18 neighborhoods (see Figure 4.4.1). The names and boundaries of most of the neighborhoods are designated by local governments—the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood.

Study Area Neighborhoods

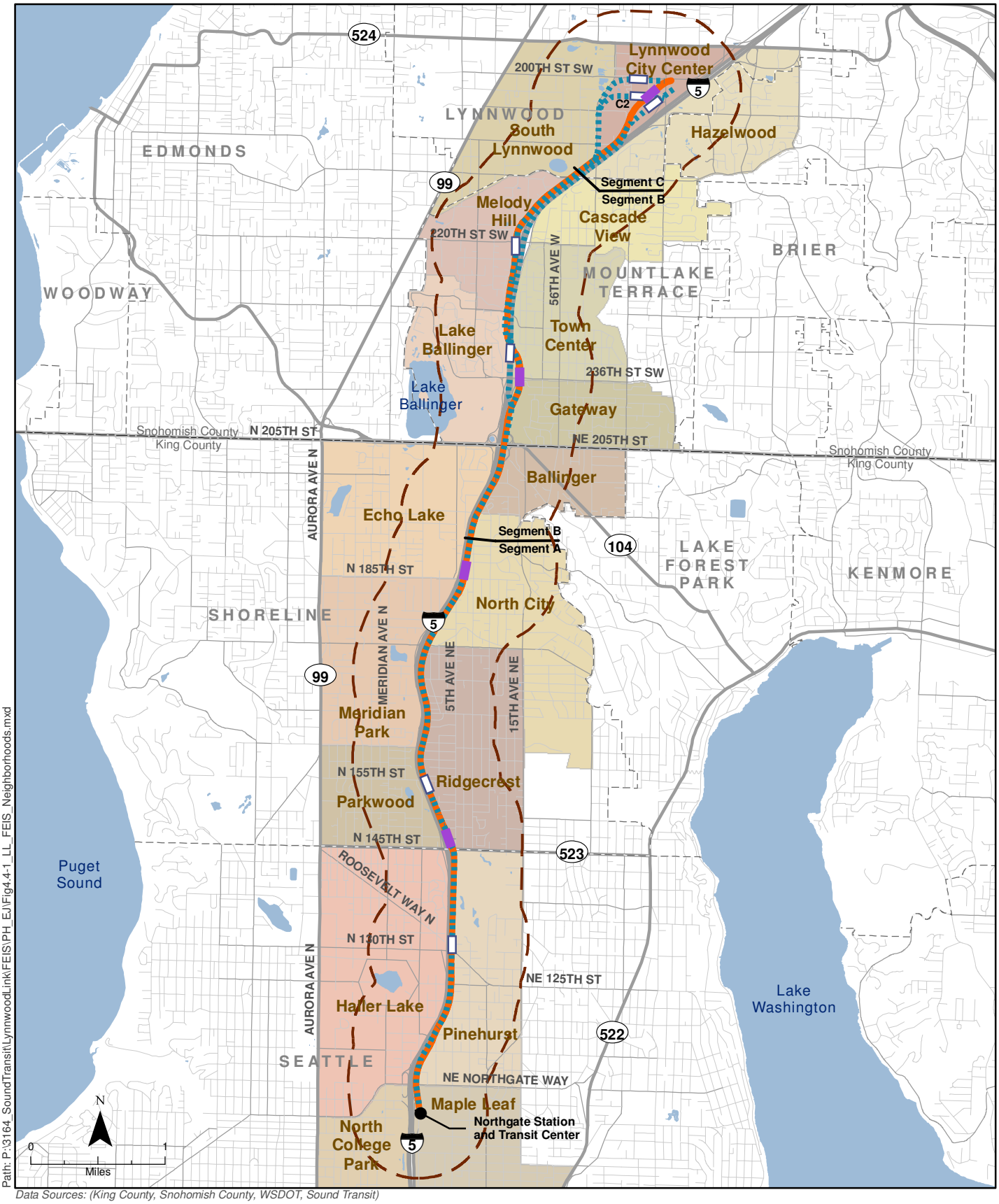
Most of the study area neighborhoods were developed as single-family housing in the decades following World War II, primarily in the 1950s and 1960s. Growth has continued in recent decades through infill and redevelopment. As of 2010, nearly 126,000 residents and an estimated 60,000 jobs were located in study area census tracts.

Minority Populations

The residents within the project corridor are diverse, with an average of over 37 percent minority residents (non-White and Hispanic persons). In comparison, the population of the Sound Transit district (urbanized King, Pierce, and Snohomish counties) is 31.13 percent minority (Sound Transit 2013b). Attachments in Appendix C provide detailed racial and ethnic composition of the study area, neighborhoods, and the alternative alignment and station impact areas. Figure 4.4-2 shows the 2010 distribution of minority populations in the study area census tract block groups.

Low-income Populations

The study area household median income is about $58,000 (Census 2010b). An estimated 11.3 percent of the study area population lives at or below the federal poverty level, whereas the Sound Transit district is 11.24 percent (Census 2010b; Sound Transit 2013b). Appendix C has detailed low-income population statistics for the study area and neighborhoods. Figure 4.4-3 shows the overall 2010 distribution of low-income populations for study area census tracts.



Preferred Alternative (PA)
Preferred Alternative Station Location
Other Light Rail Alternatives
Other Alternative Station Location
Preferred Alternative and Other Alternatives

Roadway
Local Street
City Boundary
County Boundary

Study Area
Waterbody

Figure 4.4-1
Neighborhoods

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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives

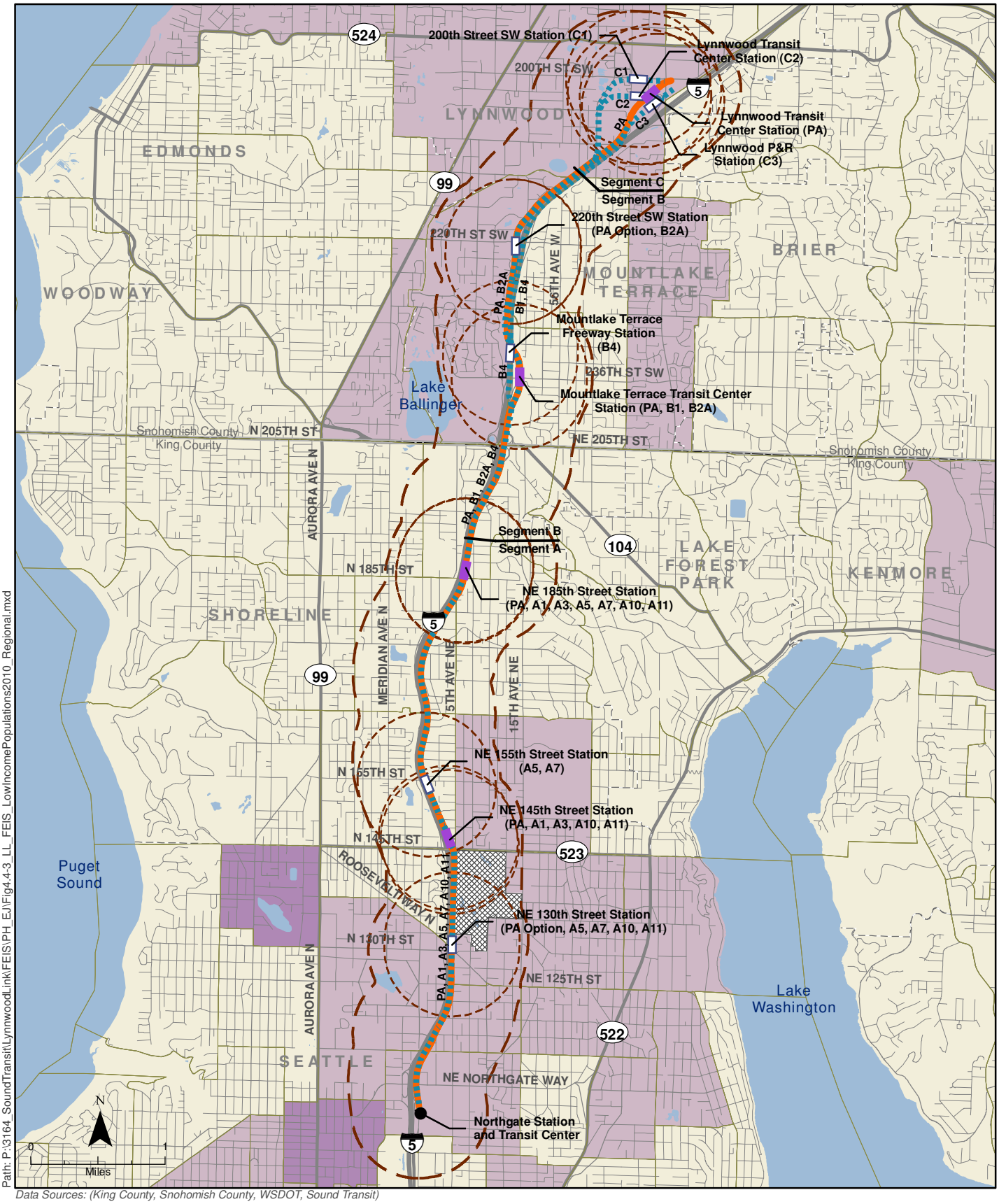
2010 Census Blocks

- 0 - 25%
- 26 - 50%
- 51 - 75%
- 76 - 100%

- Non-Populated Park Area
- 1/2 Mile Station Buffer
- Study Area

Figure 4.4-2
Minority Populations 2010 Census
(Percentage of Minority Individuals)

Lynnwood Link Extension



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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives

2010 Census Tracts

- 0 - 10%
- 11 - 20%
- 21 - 30%
- 31 - 100%

- Non-Populated Park Area
- 1/2 Mile Station Buffer
- Study Area

Figure 4.4-3
Low-income Populations 2010 Census
(Percentage of Individuals Below Poverty Level)
Lynnwood Link Extension

Household Characteristics

A third of the households in the study area are one-person households (34 percent) (Census 2010a). About 12 percent of households are non-family units. Children and the elderly comprise 18 percent and 11 percent, respectively, of the study area population. An estimated 4 percent of all study area households are transit-dependent, but three neighborhoods (Pinehurst, South Lynnwood, and Lynnwood City Center) have more transit-dependent households (7 to 8 percent). Attachment C-7 in Appendix C has a detailed breakdown of these data.

About 54 percent of homes in the study area are owner-occupied and 46 percent renter-occupied (Census 2010b). Figure 4.4-4 shows the location of low- and lower-cost housing within about 0.5 mile of the corridor alternative alignments, which includes public low-income housing and mobile home communities.

Community Facilities and Linkages

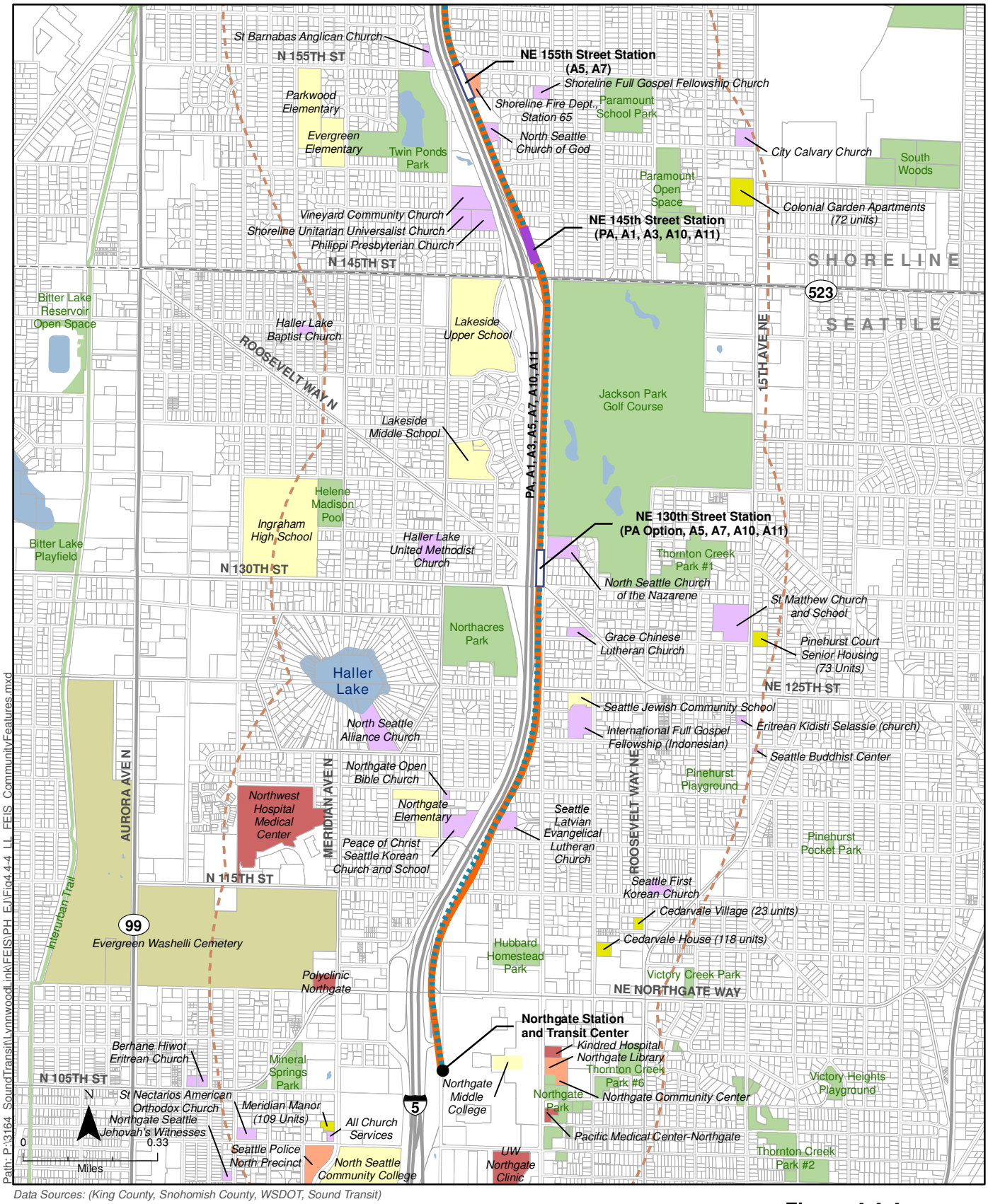
Community facilities in the study area include public and private schools, parks, recreation and community centers, senior centers, libraries, municipal buildings, fire and police emergency services, medical clinics and hospitals, religious institutions, and cemeteries. Figure 4.4-4 shows the community facilities within about 0.5 mile of the light rail alternative alignments. A list is in Attachment C-13 of Appendix C.

Transportation Network

Many parts of the Lynnwood Link Extension corridor have streets with a grid pattern, particularly in King County, but I-5 interrupts this pattern. In King County, the highway generally is parallel to major north-south arterials, but the highway angles to the northeast in Snohomish County. Public bus service runs along most major arterials. Local streets tend to lack sidewalks, but traffic volumes are generally low. Chapter 3, Transportation Impacts and Mitigation, further describes the study area transportation system.

Cohesion

Neighborhood cohesion within the study area is relatively strong, with well-defined neighborhood boundaries, good transportation connections, stable land uses and housing, and opportunities for local interaction. In all cases, I-5 is a neighborhood boundary for adjacent neighborhoods. In Seattle and Shoreline, the western boundary of adjacent neighborhoods tends to be defined by Aurora Avenue, whereas the eastern boundary of adjacent neighborhoods is defined by 15th Avenue NE. The major east-west arterials tend to form the southerly and northerly boundaries of the neighborhoods. The grid street pattern also facilitates mobility and access within neighborhoods. Moving north into Mountlake Terrace and Lynnwood, Aurora Avenue remains a common boundary for neighborhoods west of I-5; however, the



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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

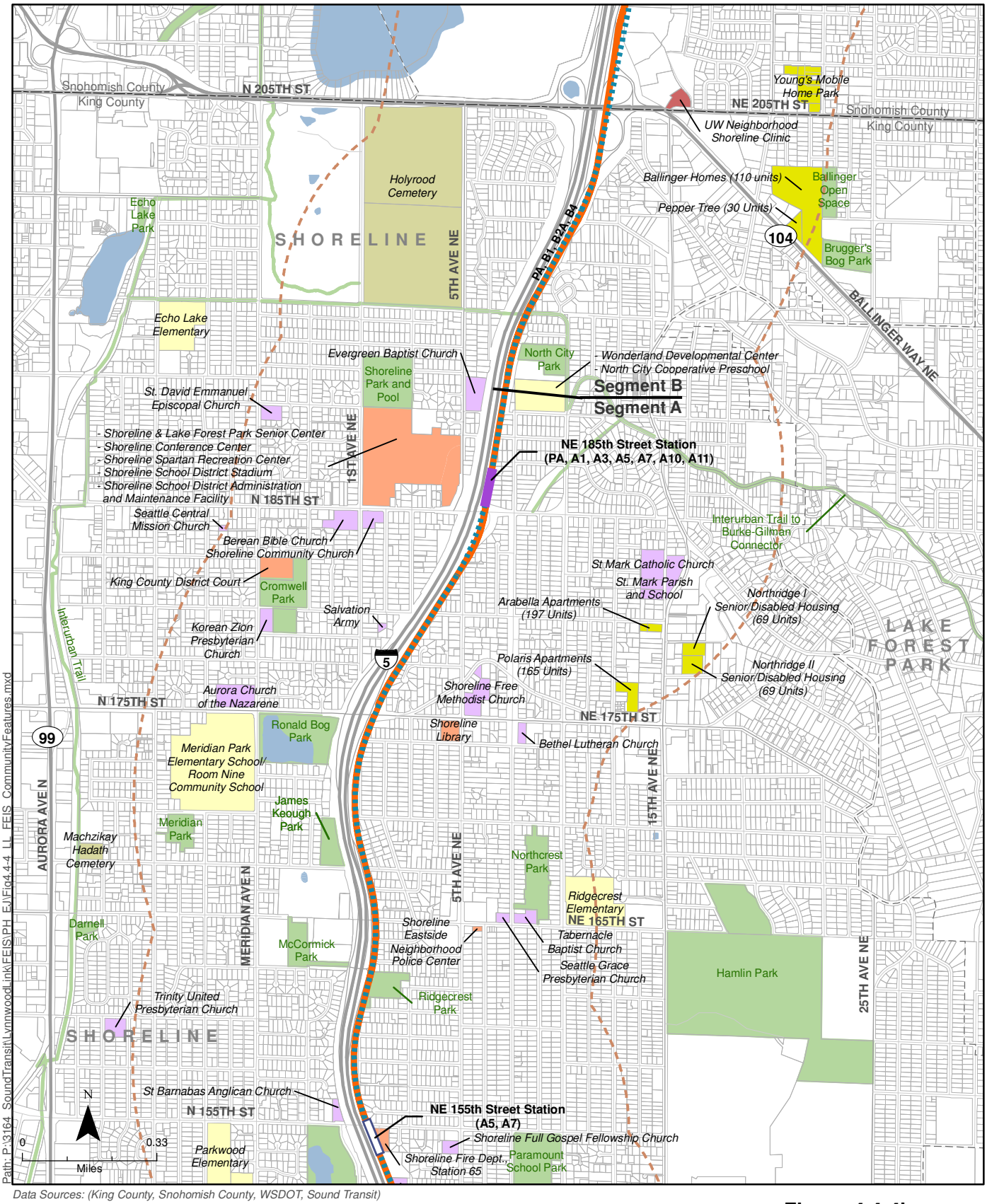
- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Half-mile Project Buffer

Community Facilities

- Community and Municipal
- Low- and Lower-Cost Housing
- Schools
- Medical
- Religious
- Cemetery
- Park
- Waterbody

Figure 4.4-4a
Community Facilities Within 0.5 Mile of Light Rail Alternatives

Lynnwood Link Extension



Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_EJ\Fig4.4-4_LL_FEIS_CommunityFeatures.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

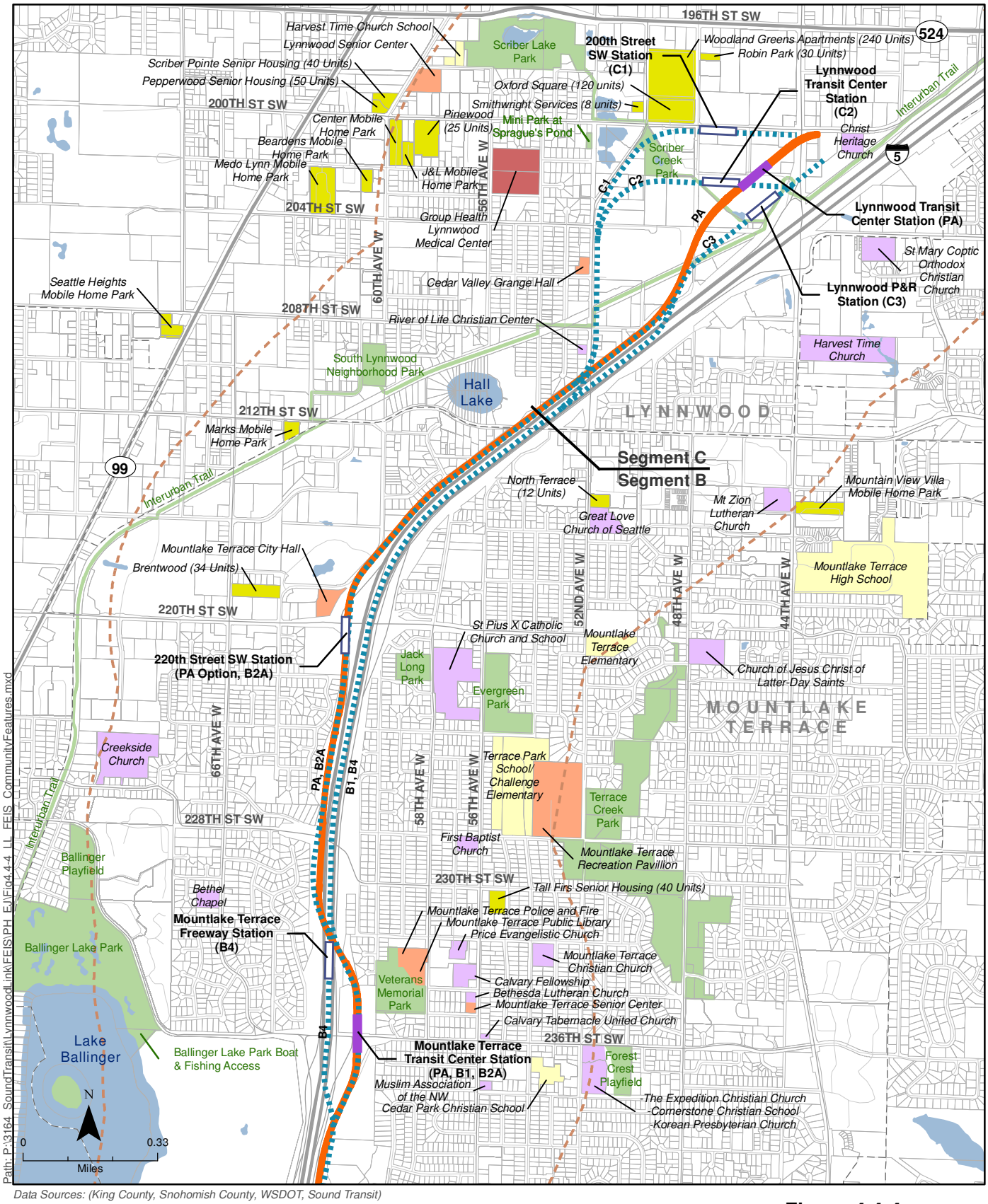
- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Half-mile Project Buffer

Community Facilities

- Community and Municipal
- Low- and Lower-Cost Housing
- Schools
- Medical
- Religious
- Cemetery
- Park
- Waterbody

Figure 4.4-4b
Community Facilities Within 0.5 Mile of Light Rail Alternatives

Lynnwood Link Extension



Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_EJ\Fig4.4-4_LL_FEIS_CommunityFeatures.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Half-mile Project Buffer

Community Facilities

- Community and Municipal
- Low- and Lower-Cost Housing
- Schools
- Medical
- Religious
- Cemetery
- Park
- Waterbody

Figure 4.4-4c
Community Facilities Within 0.5 Mile of Light Rail Alternatives

Lynnwood Link Extension

eastern boundaries of neighborhoods east of I-5 are less well defined because the streets are not in a grid pattern and the landscape includes more natural barriers such as lakes, hills, and ravines.

Originally developed in the decades following World War II, the Lynnwood Link Extension corridor neighborhoods are mature. Land uses are relatively stable and many residents have lived in their same homes for decades. The neighborhoods have many public facilities and community amenities, with many places providing opportunities for interaction. Schools, libraries, community centers, churches, and neighborhood shops foster interaction between neighborhood residents. All of the local governments have neighborhood and community planning programs that foster community interaction.

4.4.2 Long-Term Impacts

The discussion below considers long-term impacts on the social environment from the construction and operation of the light rail alternatives compared with the No Build Alternative. It is based on the impacts and mitigation described in other environmental effects analyses in this Final EIS, and it assesses how the combination of changes resulting from the project might affect corridor neighborhoods and populations.

No Build Alternative

Under the No Build Alternative, no properties would be acquired and no households or businesses would be displaced. Existing community facilities and services would not be affected. The cohesion of the 18 neighborhoods adjacent to the Lynnwood Link Extension corridor would be similar to today, although local and regional congestion would increase. Otherwise, little change would occur in air quality, noise, or transit service coverage, although transit travel times and reliability would suffer. There would be little potential for disproportionately high and adverse effects on minority and low-income populations. These populations often depend on transit more than the general population, so they would not benefit from improved transit service, decreased travel time, increased reliability, and increased access to regional community facilities and jobs as provided under the light rail alternatives.

Light Rail Alternatives

Segment A: Seattle to Shoreline

Most of the non-public property acquisitions and displacements required for the project alternatives would occur in Segment A. The impacts would primarily be residential displacements; there would be no displacements of businesses or community facilities. As the acquisitions would generally be of intermittent strips of parcels along I-5, neighborhood cohesion would remain intact.

Population and Business Changes

The Segment A alignments and stations would be on the east side of I-5, where most of the property acquisitions and displacements would occur. However, the Preferred Alternative and Alternative A1 would both include a parking garage located on the west side of I-5 at NE 185th Street.

The Preferred Alternative would acquire 80 full parcels and parts of 50 parcels (see Table 4.1-1 in Section 4.1, Acquisitions, Displacements, and Relocations). Most of the full parcels are residential, and no businesses would be displaced. A total of 121 residential units would be displaced.

Acquisitions for the other alternatives would range from 66 to 81 full parcels and parts of 41 to 47 parcels; 107 to 123 residential units would be displaced.

Community Facilities and Transportation Network Changes

The project avoids a potential displacement of the Seattle Latvian Evangelical Lutheran Church, and none of the Segment A alternatives would displace the church and social hall; a church caretaker's residence would be relocated.

All Segment A alternatives would acquire a strip of land along the west edge of Ridgecrest Park adjacent to I-5. The Preferred Alternative and Alternative A1 also would affect an edge of the Shoreline Stadium parking lot, which serves the stadium, the Spartan Recreation Center, and the Shoreline Conference Center. The community benefits of these facilities would not be affected. The Preferred Alternative's NE 185th Street Station has a stadium parking garage option, which would place the parking garage on the current Shoreline Stadium parking lot and result in the partial acquisition or lease of a larger portion of the stadium parking lot. However, the same or greater levels of parking would remain long term for stadium use. See Section 4.17, Parks and Recreational Resources, for additional information.

Several streets, bridges, and sidewalks would be modified or reconstructed in Segment A. These changes would maintain access to community facilities, and would improve access in areas that have missing sidewalks, do not meet ADA access requirements, or have other features that do not currently meet design standards.

The Preferred Alternative's proposed light rail stations at NE 145th Street and NE 185th Street would increase transit options for travel to community facilities and amenities. There are seven parks, a King County district court, a library, and multiple social services at the Shoreline School District administrative and recreation facility within 0.5 mile of these two stations. There are also several low-income apartment complexes, four schools, a preschool, 17 churches, and a neighborhood commercial district within approximately 0.5 mile of these proposed stations. Similar types of community facilities and amenities are located within 0.5 mile of the NE 130th Street and the NE 155th Street Stations. Three neighborhood commercial

districts would be within 0.5 mile of the NE 130th Street Station under the Preferred Alternative option and Alternatives A5, A7, A10, and A11. Attachment C-13 in Appendix C lists community facilities and amenities by station area. Although the alternatives vary in terms of the stations they include, they would generally have similar benefits because they would provide improved access to similar sets of community facilities and amenities.

Character and Cohesion Changes

The character and cohesion of neighborhoods adjacent to the Segment A alternatives would not be notably altered from current conditions because the new light rail would be largely within the I-5 right-of-way and would not create an additional physical barrier. The light rail facility could be perceived as reinforcing I-5 as a barrier, but there would be no physical change to neighborhood interactions, and stations servicing all surrounding neighborhoods could help offset the sense of a barrier. Noise impacts would be avoided by mitigation measures that would be incorporated into the project, including noise walls on the guideway or ground, relocated traffic noise walls, and, in some cases, sound insulation in affected residences or buildings. See Section 4.7, Noise and Vibration, for details on project noise mitigation.

The Segment A alternatives would have full and partial acquisitions in the Pinehurst, Ridgecrest, Echo Lake, and North City neighborhoods, but the acquisitions would generally be along I-5 on the periphery of these neighborhoods. Clusters of acquisitions, however, would be needed for proposed stations at NE 145th, NE 155th, and NE 185th Streets, depending on the alternative. These acquisitions would affect from half a block to a block or more of homes in the station areas, all on the edge of the affected neighborhoods. At NE 145th Street and at NE 155th Street, other non-residential parcels are already in the area of the new station, and the impact on community cohesion from these acquisitions would be low. At NE 185th Street, 17 to 23 homes, mostly east of I-5, would be acquired for the station, parking facilities, and street improvements or realignments for the Segment A alternatives. Changes to movement, interactions, and cohesion in the neighborhood would be low. While the larger residential orientation of the neighborhood would remain intact, the loss of a block or more of homes and the introduction of a station with a park-and-ride would alter part of the neighborhood.

Segment B: Shoreline to Mountlake Terrace

Minor social, community facility, and neighborhood impacts would occur in Segment B as a result of the project.

Population and Business Changes

In addition to the I-5 right-of-way, the Preferred Alternative would acquire three residential parcels. An additional six parcels, including five residences and one vacant institutional parcel, would be acquired for the optional 220th Street SW Station.

Alternatives B1 and B4 would acquire two full parcels, but neither alternative would displace any residential units. In contrast, Alternative B2A would acquire seven full parcels, and displace five single-family residences. See Table 4.1-1 in Section 4.1 for more information. No businesses would be displaced under any of the Segment B alternatives.

Community Facilities and Transportation Network Changes

No community facilities would be displaced or adversely affected by the Lynnwood Link Extension in Segment B, and portions of the street and sidewalk network near stations would be reconstructed to improve access and mobility. The Preferred Alternative option for the 220th Street SW Station would be constructed on the site of the former Melody Hill Elementary School, which was demolished in the fall of 2013.

The Mountlake Terrace Transit Center Station under the Preferred Alternative and Alternatives B1, B2A, and B4 would increase transit options to a number of community facilities and amenities. A total of three parks, a recreation pavilion, library, senior center, senior housing complex, school, 12 churches or other religious institutions, a neighborhood medical clinic, and the Mountlake Terrace town center commercial district are located within approximately 0.5 mile of this station. This benefit extends to new light rail transit riders because existing bus transit riders have access to these community amenities from the existing Mountlake Terrace Transit Center. The optional 220th Street SW Station would make light rail more accessible to five parks, Mountlake Terrace City Hall, two low- and lower-cost housing complexes, three schools, and four churches. Attachment C-13 in Appendix C lists community facilities and amenities by station area for each of the project segments.

Character and Cohesion Changes

Neighborhood character and cohesion would remain intact for the eight neighborhoods adjacent to Segment B, and no new barriers would be placed within the existing neighborhoods. While Shoreline and Mountlake Terrace have neighborhoods on either side of I-5, the new light rail largely within the highway right-of-way would not represent an additional physical barrier although it could be perceived as

reinforcing the physical separation. The transit stations would attract patrons from adjacent neighborhoods, which could help offset the sense of a barrier. Other effects such as noise and visual impacts would be mitigated, although some visual impacts may not be fully mitigated. Neighborhood character and cohesion would not be adversely affected under any Segment B alternatives.

Segment C: Mountlake Terrace to Lynnwood

Population and Business Changes

In addition to the I-5 right-of-way, the Preferred Alternative for Segment C would require acquisition of five full parcels. It would displace nine businesses with approximately 60 employees, but no residences.

Alternative C1 would displace one single-family residence and a condominium complex with 76 residences. Acquisition of three commercial properties would displace 31 businesses with 108 employees. Alternatives C2 and C3 would affect several businesses, and displace fewer employees and residences. See Table 4.1-1 in Section 4.1 for more information. For all light rail alternatives, if the affected businesses relocate within the area, the potential loss of employment from business displacements could be reduced. However, some of the businesses may relocate out of the area or choose to close, which would adversely affect the employees (see Section 4.3, Economics, on economic impacts).

Community Facilities and Transportation Network Changes

No community facilities would be acquired in Segment C. The light rail guideway would be elevated over the Interurban Trail and the Scriber Creek Trail under all Segment C alternatives, but the effects would not alter the functions or essential attributes of the trail. The Preferred Alternative would pass about 400 feet southeast of privately owned Halls Lake, but would be along the freeway. The Preferred Alternative and Alternative C3 would generally parallel I-5 and traverse the most southerly portion of the Scriber Creek wetland complex, and would be only partly visible from Scriber Creek Park to the north. Alternative C1 would traverse the far northern portion of Scriber Creek Park at the parking area. Alternative C2 would traverse to the south of the park through the wetland complex. Public comments on the Draft EIS emphasized the importance of the park to the community, as summarized in Chapter 7, Draft EIS Public Comments and Responses. Section 4.17 discusses the impacts on Scriber Creek Park.

With Alternatives C1 and C2, the elevated track would be on the east side of 52nd Avenue West across the street from the Cedar Valley Grange Hall, with no effects on the hall's activities.

All alternative stations would be located within the Lynnwood City Center neighborhood and regional commercial district. Light rail transit patrons would have access to four parks, seven low- and lower-cost housing complexes, three churches, the Cedar Valley Grange, and a major medical clinic within 0.5 mile of the station. The Lynnwood public library and civic center are located just beyond 0.5 mile from the station. The proximity of the other locations for the Lynnwood light rail station would similarly provide access to these types of community facilities and amenities. This benefit extends to new light rail transit riders as existing bus transit riders have access to these community amenities from the existing Lynnwood Transit Center. Attachment C-13 in Appendix C lists community facilities and amenities by station area for each of the project segments.

Character and Cohesion Changes

General neighborhood character and cohesion are not expected to change for the three neighborhoods adjacent to Segment C. None of the alternatives would require property acquisition or displacement impacts in the South Lynnwood or Hazelwood neighborhoods; therefore, character and cohesion would not change in these two neighborhoods. All of the Segment C acquisition and displacement impacts would occur in the Lynnwood City Center neighborhood.

Developed land uses in the Lynnwood City Center neighborhood are primarily large-lot commercial and industrial uses. The Preferred Alternative and Alternative C3 would have the least effect on this neighborhood because these two alternatives would largely be adjacent or parallel to I-5. Both would avoid displacing a condominium complex, although the Preferred Alternative would displace nine small retail businesses meeting the needs of community residents. Alternative C3 would only displace one business. See Section 4.3 for a discussion of potential economic impacts.

Alternatives C1 and C2 would travel along the east side of 52nd Avenue West, which is the eastern boundary of the neighborhood. Alternative C1 would travel through the northern part of Scriber Creek Park and displace the 76-unit condominium complex and 31 businesses and institutions. Alternative C2 would turn eastward before the park, thus avoiding all but one residential and three business impacts. Both of these alternatives would feature design measures to avoid noise impacts, but the elevated guideway would change views.

Alternative C1's displacement of the condominium complex would adversely affect the complex's property owners and residents, but would not affect the overall character and cohesion of the Lynnwood City Center neighborhood.

4.4.3 Construction Impacts

Lynnwood Link Extension construction activities that would temporarily affect the social environment are discussed below. In most sections of the project corridor where property would be acquired for permanent facilities, it could also be temporarily used for construction staging. However, where construction staging or construction activities require acquiring additional land and displacing businesses or residences, the impact is considered a long-term impact.

Population and Business Changes

During the project's approximately 6-year construction period, residents, businesses, and business employees and customers would be near construction activities. However, in any given location, major construction along the guideway would only last 1 to 2 years. In many cases, the heaviest construction activities would last less than a year, followed by train control and electrical systems development, finish work, and testing leading up to light rail operations. Construction periods would be longer at the stations and park-and-rides. As a temporary condition, construction would be unlikely to affect population levels or businesses.

Community Facilities and Transportation Network Changes

During construction, access to community facilities and general mobility for all modes of transportation would at times be affected by increased congestion, reduced use of traffic lanes or sidewalks, and closure of some streets and sidewalks. These changes would result in small increases in travel distance and travel time. North-south bus transit routes are not expected to be adversely affected, although travel on routes may be slow or detoured at times, particularly at arterial crossings of I-5 where light rail stations would be constructed, e.g., NE 145th Street, NE 185th Street, 236th Street SW, 46th Avenue West (direct access ramp), and 48th Avenue West. Access to and from neighborhood community facilities and to destinations outside of neighborhoods may be affected. Construction could also have temporary impacts on parking and local circulation.

Character and Cohesion Changes

Sound Transit plans to locate most of the staging areas and construction access within the property required for permanent rights-of-way. Some other properties may also be required for construction, including the WSDOT right-of-way (subject to WSDOT and FHWA approval), other transportation rights-of-way, and nearby vacant and/or undeveloped parcels. Construction work would create short periods of increased noise, vibration, dust, construction truck traffic, and visual changes, but generally these effects would be limited to properties immediately adjacent to the

construction areas. Section 4.7, Noise and Vibration, further discusses potential disruption to adjacent neighborhoods from construction noise and vibration.

In Segments A and B, the construction effects on social cohesion would be limited because I-5 already functions as a boundary between neighborhoods. In Segment C, Alternatives C1 and C2 follow an arterial into the Lynnwood City Center neighborhood and would be adjacent to commercial and light industrial properties as well as residences. The construction activities with these two alternatives and the related noise, vibration, dust, visual impacts, and truck traffic would be more in the center of the neighborhood than with the Preferred Alternative and Alternative C3, which continue generally adjacent to I-5. Still, only a portion of the larger Lynnwood City Center neighborhood would be affected, which would limit changes to overall neighborhood character and cohesion.

4.4.4 Indirect Impacts

Over time, implementation of the Lynnwood Link Extension could result in indirect impacts, particularly in station areas. The presence of the light rail transit facilities could result in transit-oriented development at some station locations as allowed by local zoning regulations. Several of the jurisdictions along the project corridor have initiated station area planning or already adopted plans allowing transit-oriented developments in station areas, which could result in changes to the types of development that may occur there. For example, areas that are currently low-density residential could ultimately transition to more dense residential or mixed-use developments. Section 4.2.2 in Section 4.2, Land Use, further discusses potential long-term changes in land use. These changes could alter the existing character of some neighborhoods, particularly the Lynnwood City Center neighborhood where the potential for transit-oriented development is highest. In the long term, the station areas at the edges of neighborhoods may become new neighborhood activity centers, which could support enhanced livability and sustainability.

4.4.5 Cumulative Impacts

Cumulative effects could occur in the project corridor neighborhoods if large development projects or transportation improvements were located in neighborhoods adjacent to the light rail alignment.

Other major projects could be constructed concurrently in neighborhoods that would be affected by construction of the Lynnwood Link Extension. Construction of the Northgate Link Extension guideway and station could overlap with the start of the Lynnwood Link Extension construction. King County Metro is planning a transit-oriented development project at the Northgate Station. Cumulatively, this may extend the duration of construction activities and impacts in the Northgate area. Sound Transit will coordinate the development of construction mitigation plans for the

Lynnwood Link Extension with those for the Northgate Link Extension and other projects with concurrent construction timeframes.

The OMSF alternative site in Lynnwood east of 52nd Avenue West and north of I-5 is near neighborhoods with minority and low-income populations. On June 24, 2014, the Sound Transit Board identified a site in Bellevue as the preferred site for this facility. The final decision about which project will be built will be made by the Sound Transit Board after publication of that project's Final EIS. If Sound Transit were to select the Lynnwood site for the OMSF, it would displace businesses and other enterprises in an area that is currently developed with light industrial and commercial uses. The proposed facility would not notably alter transportation conditions, including neighborhood accessibility or traffic levels. Construction impacts (such as noise, light and glare, dust, and traffic) of the two projects would affect the nearby residential areas more than impacts of just the Lynnwood Link Extension.

The Edmonds School District master plan includes a district support facility on property that includes administrative offices and bus maintenance and storage in Lynnwood. This property overlaps partly with the Lynnwood site alternative for the OMSF. The development of one or both of these projects would be within an area with other light industrial uses. With a residential neighborhood across the street, Sound Transit would undertake best practices to minimize adverse construction effects on residents, such as impacts due to construction traffic, dust, light and glare, and noise.

The impacts of the Lynnwood Link Extension alternatives, in combination with other past, present, or future projects and actions, with available mitigation applied, would not result in appreciably higher impacts on communities or neighborhoods.

4.4.6 Potential Mitigation Measures

The project's social impacts, including impacts on community facilities and neighborhoods, would generally be low.

Sound Transit would implement the design and mitigation measures identified in other chapters and sections of this Final EIS to help minimize effects on the quality of life and neighborhood cohesion, including:

- Chapter 3, Transportation Impacts and Mitigation, which describes measures to address impacts from local congestion (Section 3.6.4), parking (Section 3.6.7), and construction (Section 3.6.9)
- Section 4.1, Acquisitions, Displacements, and Relocations, which describes measures to provide compensation and assistance to affected parties
- Section 4.3, Economics, which includes measures to minimize construction impacts on businesses

- Section 4.5, Visual and Aesthetic Resources, which outlines mitigation to address areas with high visual impacts
- Section 4.6, Air Quality and Greenhouse Gases, which identifies practices to reduce construction air quality concerns
- Section 4.7, Noise and Vibration, which outlines the project's commitments to address impacts
- Section 4.15, Utilities, which describes measures to reduce impacts to utilities – both the utility system as well as area residential and commercial customers
- Section 4.17, Parks and Recreational Resources, which describes how park impacts would be reduced during construction and longer term

To reduce potential cumulative impacts of potentially concurrent construction activities in the Northgate area and in Lynnwood, Sound Transit would coordinate planning efforts with the other projects, including identifying appropriate design measures, mitigation, and community outreach to minimize adverse effects.

4.4.7 Environmental Justice Analysis and Determination

The assessment of environmental justice impacts is required by Presidential Executive Order 12898, Federal Actions to Address Environmental Justice to Minority Populations and Low-Income Populations (February 11, 1994); the U.S. Department of Transportation (USDOT) Order 5610.2, Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (April 15, 1997); and the USDOT Order 5610.2(a) (May 2, 2012), updating the USDOT policy to consider environmental justice principles in all programs, policies, and activities. The guiding principles followed by FTA, as described by FTA Circular 4703.1, are to (1) avoid, minimize, and mitigate disproportionately high and adverse effects on minority and low-income populations; (2) ensure full and fair opportunities for public involvement by members of minority and low-income populations during project planning; and (3) prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations. The discussion below summarizes the environmental justice analysis provided in Appendix C, which also describes outreach to environmental justice populations and includes detailed statistics on neighborhoods along the project corridor.

Since the start of project planning, Sound Transit has been conducting community outreach and public involvement activities that include targeted outreach to minority and low-income populations. To involve ethnic populations with limited English proficiency, mailings and handouts have included text translated into foreign languages common in the study area. FTA and Sound Transit also contacted six federally recognized tribes with interests in the area as well as non-federally recognized tribes. Appendix L, Public Involvement and Agency Coordination, includes a complete listing

of project outreach events and notices. Appendix C discusses comments and concerns from meetings in areas with low-income and minority groups.

The primary impacts of the project affecting individuals or businesses would be from property acquisition and displacement, but compensation and relocation assistance in accordance with federal regulations and Sound Transit policies would prevent these impacts from being high and adverse. Sound Transit anticipates that some low-income and minority individuals would be affected by residential and business acquisitions, based on demographic information for the corridor communities and as a result of public outreach, including meetings with property owners. While property acquisitions and the resulting displacements would be unavoidable, they would be mitigated through Sound Transit's real property acquisition policy, including its compensation and relocation assistance program. Table C-2 in Appendix C has more details on the project's impacts on minority and low-income populations.

Moreover, the Lynnwood Link Extension would have offsetting benefits, as summarized in Section C-6.2 of Appendix C. The light rail alternatives would improve access to regional activity centers and employment opportunities. Light rail transit would be more reliable and more frequent, with increased hours of service. These improvements would particularly benefit transit-dependent persons, including those having more than one job or working swing and graveyard shifts, due to extended operating hours of the light rail system compared with the bus transit systems. The light rail extension would reduce air quality criteria pollutants and mobile source air toxic pollutants compared to the No Build Alternative. Ambient noise levels may be reduced, particularly where there are no noise barriers or where replacement noise barriers would be constructed. Because of recent planned and proposed changes in municipal comprehensive and neighborhood plans, proposed stations in Mountlake Terrace, Shoreline, and especially Lynnwood could result in more intensive land uses, economic development, and mixed land uses to support neighborhood livability and sustainability. As such, the project would benefit those closest to the project even though they are most likely to be affected by the project.

Based on the findings of impacts described in this Final EIS and considering the mitigation measures to which Sound Transit is committing, project impacts would not be high and adverse. Design measures, best management practices (BMPs), offsetting benefits, and mitigation commitments would reduce the severity of individual or cumulative impacts on all populations, including minority and low-income populations, to levels that would not be high and adverse.

FTA has concluded that Sound Transit's Lynnwood Link Extension would not result in disproportionately high and adverse effects on minority and low-income populations.

4.5 Visual and Aesthetic Resources

Visual and aesthetic resources include the natural and built features of the landscape that contribute to the public's appreciative enjoyment of the environment. These resources can include individually identifiable features such as natural landmarks (for example, mountain peaks and hills, bodies of water, or stands of trees), constructed features (individual buildings or the downtown skyline), or entire landscapes such as a valley ringed by hills.

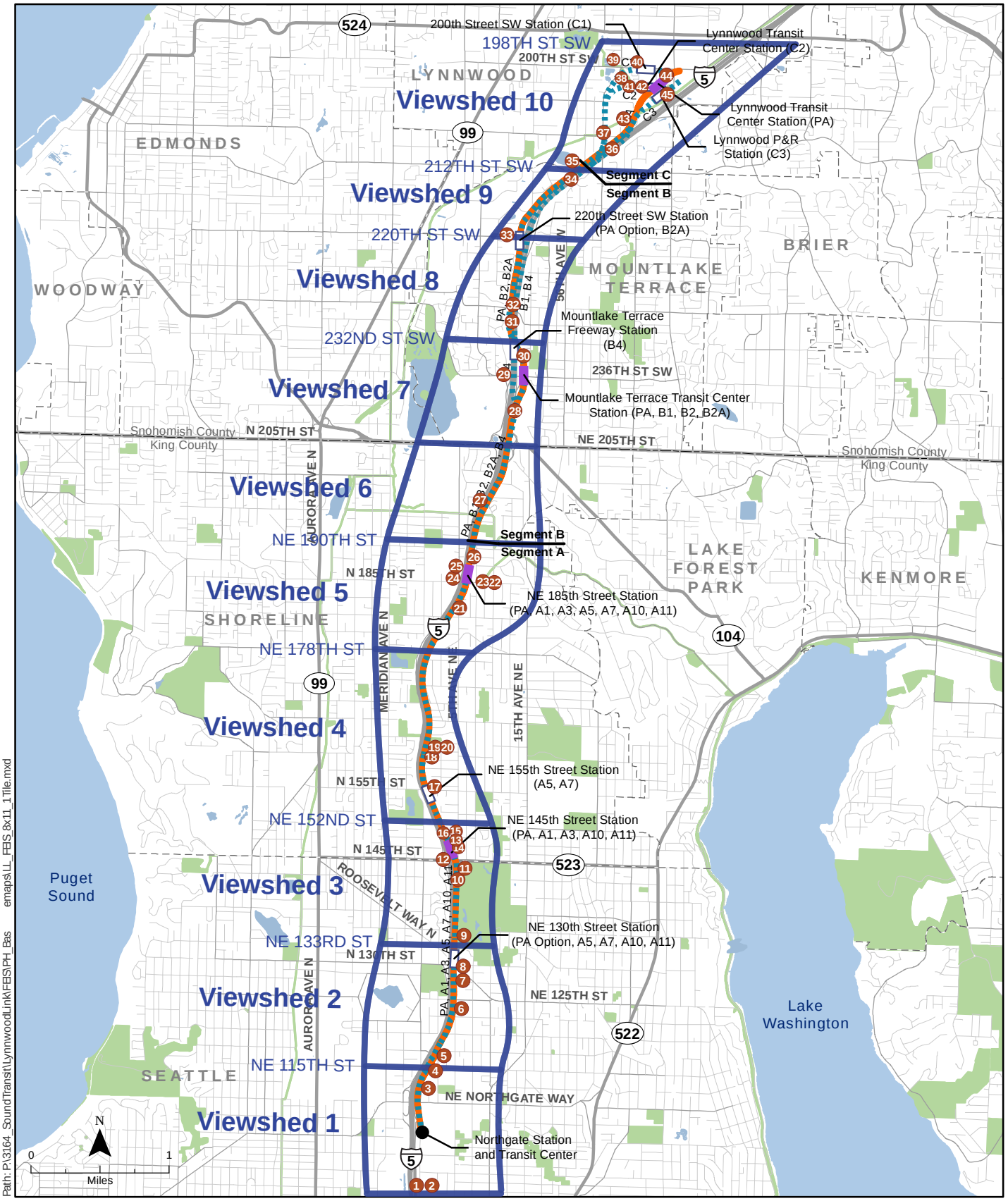
Impacts on the visual environment are defined in terms of the extent to which elements of the proposed project would change the perceived visual character and quality of the environment. Appendix G, Visual Simulations and Illustrations, provides detailed visual simulations produced for this analysis.

The study area for visual and aesthetic resources consists of viewsheds along the Lynnwood Link Extension corridor (Figure 4.5-1). These viewsheds represent distinct landscape units from which the project alternatives are visible. They encompass the travel lanes of I-5 for most of the route, and they also include areas on either side of the project corridor where people could see the project alternatives. The viewsheds are defined by changes in topography, neighborhoods, streets, bridges, or tree cover, and they range in width from a half block to up to 0.5 mile from the project corridor. The viewpoints Sound Transit used for the EIS simulations illustrate typical views of the alternatives, or locations from which project features are particularly prominent.

4.5.1 Affected Environment

Sound Transit began this visual analysis by assessing the visual character and visual quality of the landscape, and then considering how typical viewers may respond to what they see around them. The Lynnwood Link Extension EIS *Technical Analysis Methodologies* report describes the visual analysis methods in more detail, including how Sound Transit adapted FHWA's and WSDOT's guidelines for visual analysis. The FHWA guidelines provide a generally accepted methodology for preparing visual assessments for linear transportation projects and are appropriate for use on this project.

Visual character refers to identifiable visual information, including visual elements and major environmental features.



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- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Viewshed Lines
- Viewpoints

Figure 4.5-1
Viewsheds and Viewpoints Locations

Visual quality refers to the evaluation of the visual experience to the public and is described in terms of vividness, intactness, and unity. *Vividness* refers to the way landscape components combine in distinctive and memorable visual patterns. *Intactness* refers to whether the natural and human-built visual patterns form a consistent landscape, or whether highly contrasting features intrude into the view. *Unity* refers to the visual coherence and compositional harmony of the landscape considered as a whole.

Viewer response reflects viewer exposure and viewer sensitivity. *Viewer exposure* refers to where viewers are and how long they are typically there, including highway users and people in the surrounding neighborhoods. *Viewer sensitivity* refers to how viewers perceive the environment and what they find important. Viewer sensitivity can be affected by what the viewer is doing; the visual context; and the values, expectations, and the interests they may have. For each viewshed and potential viewer group, viewer sensitivity is rated as high, average, or low. High sensitivity represents viewers who highly value a particular view, and low sensitivity represents viewers who do not regard the visual setting as important to their activities. For example, residential viewers are typically rated as having high sensitivity. Persons driving for pleasure or tourists visiting an area to enjoy scenic features have a high awareness of features and high sensitivity. Individuals engaged in recreation activities in parks or on trails have a high awareness and sensitivity to the surroundings. An average sensitivity rating reflects the experience of people who view the visual context as a secondary feature of other activities. For example, these could be persons at work or shopping who may value a pleasant environment but are not at a specific location for the purpose of enjoying the scenery. Drivers and vehicle occupants passing through an area are less sensitive to the visual context because they are focusing on features other than the surrounding landscape and generally have an average to low sensitivity. Low viewer sensitivity generally describes the experience of persons engaged in activities that render the quality of their surroundings as irrelevant or incidental.

Based on these visual quality considerations, different levels of visual quality have been assigned to describe the viewsheds in the corridor:

High Visual Quality describes views with vivid, memorable, distinctive features in a landscape with compositional harmony, or where elements of the landscape fit together in a visual pattern that is free from encroaching elements.

Medium Visual Quality describes views with a unity or compositional harmony between elements of the landscape that produce a pleasing overall impression in which encroaching elements are minor and do not substantially alter the perception of the landscape as a unit. These views lack vivid, memorable features and are generally characterized as common or ordinary.

Low Visual Quality describes views that lack a dominant visual character in which there is a low level of fit between disparate elements. In some cases, these views appear disorganized with features that seem out of place, or are views with some compositional harmony but include eyesore elements that can dominate one's perception.

The visual quality of an area has a complex relationship to viewer sensitivity. In an area with high visual quality, such as a spectacular view, a person who does not regularly see the view or is distracted by the driving experience may still place a high value on the view. In an area with low visual quality, persons still may object to views that fall short of their visual goals for the area.

Appendix G includes photographs from viewpoints within each viewshed. Appendix I-4.5, Visual Quality and Aesthetic Resources, has more detailed descriptions of the viewsheds and their defining characteristics.

Highway Beautification Areas

There are areas along the I-5 right-of-way that were acquired by FHWA and WSDOT for the "restoration, preservation and enhancement of scenic beauty adjacent to the highway." They were intended to preserve and perpetuate the natural character of Washington, supporting tourism and a positive sense of place for local communities, and offering benefits such as improving water quality and enhancing wildlife habitat.

Segment A, Viewshed 1—NE 92nd Street to NE 115th Street

Viewshed 1 includes the Northgate area of Seattle. Major features include the Northgate Mall, surrounding multistory buildings with residences and businesses, and the North Seattle Community College campus and I-5 to the west. This section of I-5 is generally about 20 feet higher than the surrounding area, and it has moderately dense linear stands of trees and shrubs along the margins of the corridor. Viewers include drivers and occupants of vehicles on I-5 and local arterials (low to medium viewer sensitivity), shoppers in retail areas (low to medium viewer sensitivity), occupants of office buildings (low to medium viewer sensitivity), and residential occupants of multistory buildings on both sides of the corridor (high viewer sensitivity). Visual quality in the viewshed is medium to low for all viewer groups. The urban uses have a wide variety of building sizes and character, which tends to reduce unity. Elements of the streetscape, including street trees, provide some compositional harmony through a similar street-level character over most of the area, as illustrated in Viewpoints 1, 2, and 3.

Segment A, Viewshed 2—NE 115th Street to NE 133rd Street

Viewshed 2 has single-family residential areas on both sides of I-5, along with churches on both sides and a park on the west side of the freeway. There are continuous noise walls along both the sides of I-5 that block views of the travel lanes from residential areas. Residents and park and church users are highly sensitive to changes in the landscape. Drivers and vehicle occupants on I-5 have average to low visual sensitivity. The overpass at NE 117th Street and freeway signs can be seen

from adjacent residences and streets. There is limited vegetation along I-5, but moderately dense vegetation east of the noise walls. The visual quality of views from the residential area is medium to high due to the similar building scale and moderately dense landscaping that provide a homogenous street-level character and buffers the freeway from views, as illustrated in Viewpoints 4, 5, and 6. The visual quality of I-5 is low due to the framing of the highway by noise walls that provide little visual interest.

Segment A, Viewshed 3—NE 133rd Street to NE 152nd Street

Viewshed 3 includes 5th Avenue NE and the Jackson Park Golf Course to the east, with a single-family residential area and private school campus on the west side. The freeway interchange at NE 145th Street is bounded by residential areas to the north and east. This section of I-5 has dense trees and vegetation along both sides of the freeway. Residents and golf course users are highly sensitive to changes in the landscape. The visual quality of the golf course is medium to high due to the unity and compositional harmony of a landscaped setting and mature vegetation that buffers views of encroaching features such as I-5. Residential areas are of medium visual quality due to their homogenous character. The visual character of I-5 is generally medium due to the framing of the highway by dense vegetation on both sides. The view from southbound vehicles from NE 155th Street to NE 145th Street has higher visual quality where Mount Rainier is a distinctive and memorable element in the distance, and results in medium to high visual quality. The visual character of this area is illustrated in Viewpoints 7 through 13.

Segment A, Viewshed 4—NE 152nd Street to NE 178th Street

Viewshed 4 has single-family residential neighborhoods on both sides of I-5. Ridgecrest Park is on the east side of I-5 and is partially screened from the freeway by a row of trees. Three parks on the west side of I-5 (Twin Ponds Park, James Keough Park, and Ronald Bog Park) do not have views extending to the east side of I-5. King County Metro's North Transit Base and King County's Solid Waste Transfer Station are on the west side of the freeway. The visual quality of the residential area is medium due to the visual unity of its homogenous character and moderately dense landscaping that buffers views of I-5. The visual quality of Ridgecrest Park is high due to vegetation screening from I-5. With vegetation framing both sides of I-5, the visual quality of the freeway is medium. There are WSDOT beautification areas located southeast and northwest of the NE 175th Street interchange.

Segment A, Viewshed 5—NE 178th Street to NE 190th Street

Viewshed 5 has single-family residential uses on both sides of I-5, along with churches and other uses, such as the Shoreline Conference Center and Shoreline

Stadium and a Seattle City Light transmission line corridor. This section of I-5 is bordered by noise walls, with varied vegetation. Residential areas in this viewshed have high viewer sensitivity and medium visual quality due to the unity of character and the buffering of the freeway by noise walls and vegetation. Viewers from the Shoreline Conference Center and the Shoreline Stadium are likely to have a low level of sensitivity if their focus is on other activities; moreover, the variety of urban forms generally lowers visual quality. Drivers and occupants of vehicles on I-5 are likely to have average sensitivity in viewing the medium visual quality of the highway corridor framed by moderately dense vegetation on both sides. There is a WSDOT beautification area south of NE 180th Street.

Segment B, Viewshed 6—NE 190th Street to NE 205th Street (244th Street SW, SR 104)

Viewshed 6 has single-family residential uses on both sides of I-5. North City Park and the closed North City Elementary School on the east side of the highway are separated from I-5 by a beautification area of mature forest. This section of I-5 has high visual quality because of the frame of heavy vegetation on both sides. The residential areas have high viewer sensitivity and medium visual quality and are buffered from the freeway by noise walls, topography, and distance.

Segment B, Viewshed 7—NE 205th Street (244th Street SW) to Mountlake Terrace Transit Center (232nd Street SW)

Viewshed 7 covers an area where I-5 widens for an interchange and median. Much of this viewshed has medium visual quality, as viewed from I-5, because of the consistent character due to vegetation framing on both sides and the view of vegetation on the horizon despite the complex freeway lanes, interchange ramps, and the parking structure of the Mountlake Terrace Transit Center. The Nile Golf Course is west of I-5, with residential areas located north of 236th Street SW on both sides of I-5. Both of these areas have high visual quality and high viewer sensitivity, with few views of I-5 because of buffering vegetation. The commercial and office area on the east side of the freeway has low to medium viewer sensitivity and medium visual quality due to unity of design. This commercial area is buffered from views of I-5 by a wooded area along McAleer Creek adjacent to I-5. North of this area is a vacant former school site.

Segment B, Viewshed 8—232nd Street SW to 220th Street SW

Viewshed 8 is along I-5 in an area where the freeway has high visual quality for southbound traffic due to very dense vegetation on high steep slopes that border the highway on both sides. For northbound vehicles south of 232nd Street SW, viewer sensitivity is average, and visual quality is medium rather than high because of the encroachment of roadway crossings and the pedestrian overpass to the existing

transit stop in the median. The surrounding single-family residences along both sides of I-5 are at the top of steep wooded slopes and have high viewer sensitivity and medium visual quality with unified character. These residences are buffered from views of I-5 by topography, noise walls, and vegetation, although the residences on 227th Street SW are in a valley with noise walls that only partly screen views of I-5. On the west side of I-5 from about 233rd Street SW to just south of 228th Street SW, a highway beautification area extends along the top of the densely vegetated slope.

Segment B, Viewshed 9—220th Street SW to 212th Street SW

Viewshed 9 is along a section of I-5 that is bordered by moderate to dense vegetation on either side, with medium visual quality. The bordering neighborhoods are mostly residential, are generally below the elevation of I-5, and have medium visual quality due to unity of character. These neighborhoods are buffered from I-5 by topography, noise walls, and vegetation. Offices and a multi-family residential complex on the west side of I-5 between 220th Street SW and 216th Street SW, have low to medium visual quality due to the similar character of built elements, landscaping, and street character.

Segment C, Viewshed 10—212th Street SW to 40th Avenue West

Viewshed 10 has varied landscapes as the alternative routes move away from I-5 to the Lynnwood Transit Center. Viewer sensitivity varies as well due to the mix of viewer types.

Northbound on I-5, between 212th Street SW and 52nd Avenue West has high visual quality with vivid distant views of the Cascade Mountain peaks. Northbound and southbound views are framed by moderately dense vegetation.

West of I-5 between 212th Street SW and 52nd Avenue West is a residential area with a large open space area and a lake that has medium visual quality due to the blend of open space and residential uses.

To the west of I-5, 52nd Avenue West is characterized by a residential neighborhood on the west side, with medium visual quality due to a unity of features. The industrial uses to the east of 52nd Avenue West are not a visual intrusion to the residential area due to the low profile of buildings as well as landscaping and parking areas adjacent to the street.

Scriber Creek Park on the east side of Cedar Valley Road approaching 200th Street SW has high visual quality due to the diversity of lawn areas, wetlands, and trails and the unifying homogeneous dense vegetation throughout the area. This vegetation also buffers the park from the street and adjacent urban development.

The areas on both sides of 200th Street SW east of Cedar Valley Road include multifamily buildings and offices that transition to commercial uses east of 46th Avenue West. The multifamily residential neighborhood has medium visual quality due to a unity of bulk, design, and landscaping elements that provide compatible features. The commercial areas east of 46th Avenue West have low visual quality due to the variety of building forms and the lack of visual harmony among multiple building styles and other features.

The Lynnwood Transit Center occupies a 29-acre site with pick-up and drop-off areas and several large parking lots. The transit center is bounded to the west by a large tract with wetlands adjacent to Scriber Creek. The visual quality of the transit center is low due to the predominance of parking lots, despite landscaping features and the adjacent open space area.

The 44th Avenue West corridor south of 200th Street SW includes commercial development with the Lynnwood Transit Center on the west side and a variety of commercial development on the east side. The dominant visual image is of wide streets, large parking lots, signs, and strip shopping centers. The visual quality for viewers within the commercial area is medium to low due to lack of unity. The visual quality for occupants of vehicles traveling north on the arterial is generally low because of the multiple overcrossings by I-5 and the Interurban Trail, the freeway on-ramps and adjacent parking lots, frequent signs, and strip malls with little visual interest.

The Interurban Trail crosses 52nd Avenue West and runs northeast toward the Lynnwood Transit Center, with the Scriber Creek wetlands and the Lynnwood Transit Center to the north, before it continues to cross 44th Avenue West on an overpass near I-5. The trail is bounded by moderate to dense vegetation and has a medium visual quality due to the unity of vegetation cover along the corridor.

4.5.2 Long-Term Impacts

The discussion below describes the potential visual changes that could occur with the light rail alternatives compared to the No Build Alternative, and qualitatively assesses the level of visual change and the resulting visual quality for each viewshed. To develop the visual assessments in this section, Sound Transit prepared visual simulations that are based on photographs of existing views from locations throughout the project corridor; these simulations are provided in Appendix G.

No Build Alternative

Under the No Build Alternative, the visual quality of the project corridor would be similar to that discussed above under Section 4.5.1, Affected Environment. If the I-5 corridor experiences more adjacent private development, the visual environment in the viewsheds could change over time.

Light Rail Alternatives

The Lynnwood Link Extension would result in changes in the visual environment of varying degrees throughout the project corridor, as discussed in more detail in the following subsections. Consistent with Sound Transit design guidelines, and where practical, the project would incorporate the following features to reduce and avoid visual impacts as much as possible:

- On the east side of I-5, the project would, in some locations, place the light rail guideway on the freeway side of the wall and move existing noise walls farther east, and increase their height. In other areas, the light rail guideway would be placed east of the existing noise wall and would include separate noise walls. Areas with slopes may need new retaining walls as well as relocated or new noise walls.
- New noise walls would also be needed in some cases to mitigate light rail noise impacts. Walls could be either on or adjacent to the guideway.
- Exterior lighting at stations and park-and-ride lots would be designed to minimize height and use source shielding to avoid luminaries (bulbs) that would be directly visible from residential areas, streets, and highways. Shielding would also limit spillover light and glare in residential areas.
- For the entire Lynnwood Link Extension, Sound Transit would develop design criteria that would guide project design through a balanced set of systemwide elements and contextual elements, such as a consistent architectural theme for elevated elements and stations, consistent signage, and a systemwide art program. These criteria would be developed by interdisciplinary teams with input from local communities, local jurisdictions, and WSDOT, and would be integrated with existing plans, including plans for redevelopment.
- Sound Transit would adhere to the Cities' design standards and design review process, if applicable, to promote visual unity in station areas.
- Sound Transit would plant appropriate vegetation within and adjoining the project right-of-way to replace existing street trees and other visually important vegetation that is removed for the project, and/or to provide screening for sensitive visual environments and/or sensitive viewers.
- Sound Transit would maintain remainder parcels (purchased parcels that are unused after the project) to pursue their redevelopment consistent with city plans.

Changes in visual quality can result when defining features, including mature trees and landscaping, are removed or when prominent features such as walls, stations, elevated guideways, or larger structures are added. Visual changes also occur where overhead utilities are added or raised, or where streets, bridges, or other facilities are modified or

replaced. Elevated sections of the guideway would be prominent aboveground features when viewed by traffic users on I-5 and viewers in the surrounding area. When mature vegetation framing the roadway is removed, viewers may perceive the highway corridor as wider and more prominent, and it can change the visual context of adjacent residential areas by removing the buffer from the transportation corridor.

The changes in visual quality by location are described in Table 4.5-1. Visual simulations in Appendix G illustrate existing views and projected future views with the light rail alternatives.

Visual impacts are rated as low, medium, or high, reflecting the degree of change, the quality of the views, and the sensitivity of viewers. The following criteria are used to characterize the degree of visual quality change from existing conditions in terms of changes in the elements of vividness, intactness, and unity as well as viewer sensitivity.

- **High change** would remove existing features and/or introduce visually prominent features that alter the visual character of the area. High changes include removing dense mature vegetation that contributes to high or moderately high visual quality or when vegetation provides effective screening of less attractive views. High changes may also include prominent structures that are larger in scale or higher than surrounding visual features, including views of trains passing by. A high degree of change is more likely in an area with high visual quality and high viewer sensitivity.
- **Medium change** would alter visual features but not in a way that would be perceived as intrusive or incompatible by most viewers and would not substantially change intactness and visual unity. A medium change can result from the removal of vegetation that would not affect the extent to which highway or light rail features are screened or buffered or that renders features more visible or prominent.
- **Low change** generally includes relatively minor new features or relatively minor alteration of existing features such as vegetation cover. Replacing noise walls with similar-scale walls, and/or the inclusion of light rail facilities, would result in minor changes in intactness and visual unity. In some cases, physically prominent new features might result in a low change in visual quality if the existing visual context already has low visual quality.

Impacts by Alternative

Table 4.5-1 summarizes the potential visual impacts by segment and alternative, while Figures 4.5-2 to 4.5-7 highlight areas with high impacts.

Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
1. Northgate (NE 92nd Street to NE 115th Street)	Low	Average	**All Alternatives:** • The elevation of I-5 and the topography currently limits visibility from surrounding areas, and the elevated structure would cause little or no change in appearance or visual unity of the highway corridor. • Views of Northgate Mall from I-5 would not be impaired because the elevated structure would be at a similar elevation as the parking lot tree canopy and would maintain similar views of buildings and signage, with little change in visual unity. • Few areas with mature dense vegetation would be removed, although some landscaping would be removed along 1st Avenue NE to NE 115th Street, resulting in a localized impact, with new facilities visually encroaching and reducing visual unity. • The elevated structure would be a visually prominent element but would not affect any vivid and memorable features or views, nor would it reduce the limited unity in this complex and heterogeneous area. • Elevated structures would partly encroach on views from residential neighborhoods to the east.	G-5 G-7 G-8 G-9 G-10	**I-5** Low **Retail/Office** Low **Residential** Low and High
			Preferred Alternative and Alternatives A5 and A10: • Impacts would be the same as described above under All Alternatives to N. 113th Street. • Existing dense landscaping between a multi-family site and First Avenue N. would be replaced by a guideway on retaining walls about 30 feet high, with a high localized visual impact due to encroachment and reduced visual unity.	G-7 G-10	**I-5** Low **Residential** Low except High for one adjacent multi-family complex
			Alternatives A3, A7, and A11: • Impacts would be the same as described above under All Alternatives to N. 113th Street. • Continuation of the elevated guideway to the north would result in a high localized visual impact due to encroachment and reduced visual unity.	G-9	**I-5** Low **Residential** High

Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
2. NE 115th Street to NE 133rd Street	**I-5** Low **Residential** Medium	**I-5** Average **Residential** High	**Preferred Alternative and Alternative A1 (at-grade/elevated with no station at NE 130th Street):** • The noise wall would be relocated to the east and would be similar in scale from 117th Street to near NE 123rd Street, with low visual quality impacts to viewers from I-5. • Displaced homes and higher noise walls from NE 117th Street to NE 123rd Street would affect the unity of views from nearby residences and a church to the east. Local views would vary according to retaining wall and noise wall height and the distance between walls and residences. The greatest visual intrusion would be where noise walls are within existing back yards of residences. • Removal of buildings, street relocation, complex noise wall configuration, and loss of vegetation between NE 123rd Street and NE 130th Street would be a visual encroachment and reduce visual unity and intactness for residential areas to the east. • Loss of dense vegetation north of NE 130th Street would reduce the unity of views both from I-5 and neighborhoods to the east. • Views from residential neighborhoods to the west would not be affected.	G-12 G-13 G-15 G-17 G-18 G-21 G-24 G-29	**I-5** Low **Residential** Medium and High (mostly within 1 block from corridor)
			Alternatives A5, A10 (at-grade alternatives with station at NE 130th Street): • Impacts would be similar to Preferred Alternative and Alternative A1. • The station at NE 130th Street would be largely below grade with little additional change from the visual impacts of vegetation removal in the Preferred Alternative.	G-15 G-17 G-24 G-31	**I-5** Low **Residential** Medium and High (mostly within 1 block from corridor)
			Alternative A3 (mostly elevated with no station at NE 130th Street): • Elevated guideway and overhead catenary south of and at NE 130th Street would reduce intactness and unity of views from I-5 and the residential neighborhood and church to the east. • Removed homes and vegetation would increase the prominence of the highway corridor and affect visual unity for neighborhoods to the east, which currently have views of existing large trees and other landscaping.	G-14 G-19 G-22 G-26 G-30	**I-5** Medium and High **Residential** High (mostly within 1 block from corridor)
			Alternatives A7 and A11 (mostly elevated with NE 130th Street Station): • Impacts would be similar to Alternative A3, except the station at NE 130th Street would be more prominent. • Views of surface parking would be similar to the existing park-and-ride but could be partly screened from the view of residences by landscaping.	G-14 G-19 G-27 G-32	**I-5** Medium and High **Residential** High (mostly within 1 block from corridor)

Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
3. NE 133rd Street to NE 152nd Street	**I-5 Northbound** Medium **I-5 Southbound** Medium to High **Residential** Medium **Golf Course** Medium	**I-5** Average **Residential** High **Golf Course** High	**Preferred Alternative (with NE 145th Street Station and parking garage south of relocated ramps):** • The elevated guideway and overhead catenary would remove an existing mature vegetation screen and intrude into views from some residential neighborhoods, reducing intactness and unity; the affected residential areas are mostly on the east side of the freeway. • The elevated guideway above the grade of I-5 travel lanes south of NE 145th Street would remove mature vegetation and alter the character of a heavily vegetated transportation corridor and be a prominent visual intrusion that would reduce unity as viewed from the highway. • The elevated guideway, elevated NE 145th Street Station, and parking garage would not block views of Mount Rainier from I-5 southbound and would not change the vividness of this element in views. • There would be partial views of the guideway from Jackson Park Golf Course to the west, with less screening of views of I-5, but the station and parking garage would not affect the golf course's overall internal visual character or unity. • The guideway, station, and parking garage would eliminate existing mature trees within the existing park-and-ride lot and would intrude into views from the residential areas to the east. The station and parking lot would increase the scale of visual elements as compared to existing residences across the street, reducing visual unity. • North of NE 145th Street, removed residences and vegetation, together with an elevated guideway on 10- to 20-foot-high retaining walls with additional noise walls, would be a visual intrusion and reduce the visual unity of the residential neighborhood.	G-34 G-37 G-40 G-43 G-48 G-53 G-56 G-59	**I-5** Medium **Residential** Medium and High (in vicinity of NE 145th Street) **Golf Course** Medium
			Alternatives A1 and A10 (with NE 145th Street Station and parking garage adjacent to NE 148th Street): • Impacts of the elevated guideway and station would be the same as the Preferred Alternative on views from I-5, residential neighborhoods, and Jackson Park Golf Course. • The parking garage adjacent to NE 148th Street would displace residences, eliminate existing mature trees, and be a visual intrusion into the adjacent residential neighborhood that would alter the scale of visual elements and reduce visual unity.	G-34 G-37 G-41 G-44 G-49 G-54 G-57	Same as the Preferred Alternative
			Alternative A5 (without station at NE 145th Street): • Impacts from the elevated guideway would be similar to the Preferred Alternative but with lower effects on intactness and unity near NE 145th Street because there would be no station or garage.	G-35 G-37 G-45 G-61	Same as A1, A10 except: **Residential** Medium

Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
			Elevated Alternatives A3 and A11 (with station at NE 145th Street): • The guideway and overhead catenary would be higher and intrude into views more than the Preferred Alternative, affecting visual intactness and unity for views from neighborhoods on both sides of I-5. • The elevated guideway above the grade of I-5 travel lanes south of NE 145th Street would remove mature vegetation, alter the character of a heavily vegetated transportation corridor, and be a prominent visual intrusion that would reduce unity as viewed from the highway. • There would be no impacts to views of Mount Rainier from I-5 southbound. • Effects of the NE 145th Street Station would be similar to the Preferred Alternative. • The higher guideway and station would be more prominent in views from much of Jackson Park Golf Course than the Preferred Alternative, with greater effects on westerly views from the golf course. • North of NE 145th Street, the elevated guideway would intrude on views and reduce the visual unity of the residential neighborhood to the east. • The higher elevated structure would be visible and perceived as a visual intrusion from the residences and school west of I-5 despite existing vegetation screening.	G-35 G-38 G-40 G-43 G-50 G-60	**I-5** High **Golf Course** Medium and High **Residential** High
			Elevated Alternative A7 (without station at NE 145th Street): • Visual impacts would be similar to Alternative A3 due to the elevated guideway height, but with less prominent and less visual intrusion in the vicinity of NE 145th Street because there would be no station or parking garage.	G-35 G-38 G-46 G-51 G-62	Same as A-3 except **Residential** Medium (in vicinity of NE 145th Street without station and garage)
4. NE 152nd Street to NE 178th Street	**I-5** Medium **Residential** Medium	**I-5** Average **Residential** High	**Preferred Alternative and Alternatives A1, A3, A10, and A11 (alternatives without station at NE 155th Street):** • Between NE 152nd and NE 178th streets, light rail facilities on retained fill structures with noise walls would intrude into views from I-5 and reduce visual unity, largely by removing the moderate to dense vegetation along the highway. • In addition to vegetation loss, some homes would be removed, and new retaining walls and noise walls would be higher than existing walls and would be a visual intrusion and reduce unity and visual integrity for residential areas to the east. These effects would be greatest between NE 152nd and NE 161st Streets. • A row of trees along the east side of Ridgecrest Park would be removed, reducing the intactness and unity of views from the park and residences directly to the east. • From Ridgecrest Park to NE 170th Street, the light rail facilities would not be visible from residential areas to the east, but unity of views from the neighborhood to the highway would be affected by the loss of mature vegetation. • Five to 10 percent of a 0.5-acre WSDOT beautification area southeast of the NE 175th Street interchange would be used by these alternatives.	G-66 G-68 G-70 G-72	**I-5** Medium **Residential** Medium and High (mostly for residences with direct views) **Ridgecrest Park** High

Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
			Alternatives A5 and A7 (alternatives with station at NE 155th Street): • Impacts would be similar to the Preferred Alternative, except at the NE 155th Street Station and its garage, which would displace residences and be at a greater scale than surrounding residences. This would reduce the visual unity of the adjacent residential neighborhood and intrude on views.	G-64 G-68 G-70 G-72	**I-5** Medium **Residential** Medium and High (mostly for residences with direct views)
5. NE 178th Street to NE 190th Street	**I-5** Medium **I-5** **Residential** Medium	**I-5** Average **Residential** High	**Preferred Alternative** • Loss of moderate to heavy vegetation cover, the placement of retaining walls, and a parking garage adjacent to the highway would reduce visual unity for travelers on I-5. • Removal of homes, loss of vegetation along I-5, relocated noise walls, and realignment of 5th Avenue NE would reduce visual integrity and unity for residential neighborhoods to the east, including where views of noise walls are now buffered by vegetation. • The light rail guideway and station at NE 185th Street would mostly be lower than the residential neighborhood to the west, but parts of the station and its transit facilities would be visible. This change, as well as the removal of some homes to the east of the station, would reduce the visual unity of the residential area. • The parking structure on the west side of I-5 would remove vegetation, but would not change the visual context for views from the west given the existing stadium, surface parking, and topography. The parking structure would be partly visible from the north but would be less visible from the residential area to the east. • About 20 to 30 percent of a 0.67-acre WSDOT beautification area south of NE 180th Street would be occupied by light rail facilities, reducing mature vegetation along the highway and reducing visual unity.	G-74 G-81 G-86 G-92 G-94	**I-5** Medium and High **Residential** Medium and High
			Preferred Alternative—NE 185th Street Station with Shoreline Stadium Garage Option: • Impacts to viewers on I-5 from loss of moderate to heavy vegetation cover and the placement of retaining walls near travel lanes would be the same as with the Preferred Alternative. • Visual impacts of the scale of the parking garage adjacent to I-5 southbound lanes would be avoided by this garage location, with less loss of vegetation and greater visual unity for travelers on I-5. • The parking structure on the stadium parking site on the west side of I-5 would moderately reduce visual integrity and unity of the residential neighborhood because of the scale of the building; however, the impacts would be reduced by the current context with the large-scale stadium to the north, which is higher and more prominent. • Impacts to residential neighborhoods to the east would be the same as with the Preferred Alternative.	G-87 G-90	**I-5** Medium in vicinity of NE 185th **Residential** Medium (west side in vicinity of garage)
			Alternative A1 (at-grade alternative): • Impacts would be similar to the Preferred Alternative except between NE 182nd Street and NE 188th Street, where the route is closer to I-5, resulting in more loss of mature vegetation adjacent to the highway.	G-75 G-82 G-95	**I-5** Medium and High **Residential** Medium and High

Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
			Alternatives A5 and A10 (at-grade alternatives): • The guideway elements would be similar to the Preferred Alternative, with similar impacts. • The NE 185th Street Station Option 3 (at-grade) would have the at-grade station and platform similar in visibility to Alternative A1, but parking and access features would remove residences and vegetation to the east, covering about a block, with additional surface parking on the Seattle City Light parcel. These features would alter the visual intactness and unity of the residential neighborhood.	G-77 G-79 G-84 G-97	**I-5** Medium and High **Residential** Medium and High
			Alternatives A3, A7, and A11 (elevated alternatives): • The elevated alternatives would displace existing vegetation along the corridor and introduce a prominent elevated structure into views from I-5, intruding on views and reducing visual unity for the corridor that is now framed by mature vegetation. • Removal of homes, loss of mature vegetation, the elevated structure, and replacement of noise walls would affect visual unity for the first blocks of the adjacent residential neighborhoods to the east and south. • The parking structure east of I-5 would displace homes, remove vegetation, and be of greater scale than the homes in the neighborhood, reducing visual integrity and unity.	G-76 G-83 G-88 G-96	**I-5** Medium and High **Residential** Medium and High (mostly within 1 block from corridor)

Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
SEGMENT B ALTERNATIVES					
6. NE 190th Street to NE 205th Street (244th Street SW, SR 104)	**I-5** High **Residential** Medium	**I-5** Average **Residential** High	**Preferred Alternative and all Segment B alternatives:** • The removal of mature vegetation within existing cut slopes, the placement of retaining walls, and an elevated guideway north of NE 201st Street would reduce the visual unity of the existing corridor as viewed from I-5, where some views are now framed by wide areas of mature vegetation. • The at-grade portion of the alignment to about NE 201st Street would partly displace vegetation, but this would not alter the visual integrity and unity of adjacent residential neighborhoods to the east because views would be blocked by the existing noise walls.	G-100	**I-5** Medium and High **Residential** Low and Medium
7. NE 205th Street (244th Street SW) to Mountlake Terrace Transit Center (232nd Street SW)	**I-5** Medium **Residential** High **Commercial** Medium **Transit Center** Low	**I-5** Average **Residential** High **Commercial** Average **Transit Center** Low	**Preferred Alternative and Alternatives B1 and B2A:** • The elevated guideway would be in the periphery of views from I-5 in an interchange area with a wide expanse of pavement and complex traffic movements. It would retain some framing vegetation, reducing visual intrusion and maintaining unity for highway travelers. • The elevated structure would be prominent in views from commercial and office areas to the east, but would be largely screened by mature vegetation near McAleer Creek and would not intrude on views or reduce visual unity. • Residents to the east would not have views of the facility because of dense vegetation on the steep slope on the west side of the neighborhood; there would be no visual intrusion or reduced unity. • Similarly, views of the elevated structure from the Nile Golf Course west of I-5 would be limited and distant, with no visual intrusion or reduced unity. • The elevated structure would be noticeable but consistent with the scale, character, and visual diversity of the existing transit center.	G-102 G-105	**I-5** High **Residential** Low **Commercial** Low **Transit Center** Low
			Alternative B4: • The character of the elevated guideway would be similar to the Preferred Alternative, but the guideway would be higher and would cross to the I-5 median south of 236th Street SW. The crossing of northbound lanes would reduce the field of view from I-5; the elevated guideway and supports would cast shadows on the highway below and bring moving trains into the visual field in front of and above vehicles. The extent of perceived intrusion would be reduced somewhat by the existing context of highway overcrossings at the 236th Street SW and the pedestrian bridge to the transit center. • Visual impacts from viewpoints on either side of I-5 would be similar to other alternatives south of 238th Street SW, but the median alignment would reduce some impacts because it would involve less clearing of existing vegetation.	G-103 G106	**I-5** Medium **Residential** Low **Commercial** Low **Transit Center** Low

Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
8. 232nd Street SW to 220th Street SW	**I-5 Northbound** Medium to High **I-5 Southbound** High **Residential** Medium	**I-5** Average **Residential** High	**Preferred Alternative:** • North of the existing Mountlake Terrace Transit Center, the elevated guideway passing through a forested area on the east side of I-5 before crossing over the highway would be directly in the westerly view from several residences on 233rd Place SW; these residences currently have a view of mature trees. The guideway would intrude on views and reduce visual unity for these residences, resulting in a high visual impact. • The crossing over I-5 with an elevated guideway and associated support structures would be prominent in the views from I-5 in both directions and would cast shadows on the highway below and bring moving trains into the visual field in front of and above vehicles; this would intrude on views from the highway and reduce visual unity. • The clearing of existing dense vegetation on the lower portion of the slope on the west side of I-5 would change the forested character of the corridor. The loss of vegetation and the introduction of rail facilities and retaining walls would reduce the integrity and unity of views, especially for I-5 southbound. • The clearing of existing mature vegetation at the 220th Street SW interchange and the introduction of an overhead guideway would be a visual intrusion and reduce the integrity and unity of views. • There would be no impacts to views from residential areas to the west of I-5, south of 233rd Place SW, or on the east side of I-5, north of 233rd Place SW. • North of 223rd Place, the guideway would be above the elevation of the residential areas to the west, intruding on views.	G-108 G-112	**I-5** High **Residential** Low, but with some localized High
			Preferred Alternative with 220th Street SW Station Option: • Impacts would be the same as the Preferred Alternative south of 225th Place. • The option shifts the alignment to the west, displacing several residences and placing the station on a former school site (now vacant). It would be prominent in views from nearby residential areas to the west and would intrude on views and reduce visual unity.		**I-5** High **Residential** Medium (with localized high)
			Alternative B2A: • Impacts would be the same as the Preferred Alternative south of 223rd Place. Alternative B2A's 220th Street SW Station would be prominent in views from nearby residential areas to the west, and would be a high impact. The station would be visible from the commercial area to the west and northwest but would be less of a visual intrusion given the array of commercial buildings and major transportation facilities.	G-120a G-120b	**I-5** High **Residential** Medium (with localized high)

Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
			Alternative B1: • North of the existing Mountlake Terrace Transit Center, the elevated guideway would pass through a forested area on the east side of the highway before crossing over to the I-5 median and crossing over the highway, with the same impacts as the Preferred Alternative on residences at 233rd Place SW. • At the crossover to the I-5 median, the views from I-5 northbound would include the elevated guideway and associated supports that would cast complex shadows on the highway below and bring moving trains into the visual field in front of and above vehicles. The perception of visual intrusion would be reduced somewhat by the existing highway overcrossings at 236th Street SW and the pedestrian bridge to the transit center. • Views from I-5 southbound would include the guideway in the median as an element similar to the existing transit stop. The mature native vegetation on the west side of the corridor would remain undisturbed. • There would be no impacts to views from residential areas to the west or on the east side north of 233rd Place NE because views are limited by trees and noise walls.	G-109 G-113 G-116 G-118	**I-5** Medium **Residential** Low, but with some localized High
			Alternative B4: • The guideway and station in the I-5 median would remove existing vegetation and add an additional transportation facility but would cause little change in the character of views from I-5 as a transportation corridor. • The additional pedestrian bridge crossing to the east at the north end of the Mountlake Terrace Freeway Station would displace some vegetation and alter the perception of the continuity of I-5. The existing context limits the effects of view encroachment because bridges, pedestrian overcrossings, and the Mountlake Terrace Transit Center already create a visually diverse setting. • The light rail facilities in the I-5 median would not be visible from residential areas.	G-110 G-114	**I-5** Medium **Residential** Low

Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
9. 220th Street SW to 212th Street SW	**I-5** Medium **Commercial, Office, Multi-Family** Low and Medium **Residential** Medium	**I-5** Average **Residential** High	**Preferred Alternative and Alternative B2A:** • The light rail facility on the west side of I-5 on retained fill with noise walls would displace moderate to dense vegetation, altering the context of the linear transportation corridor as seen from I-5. This would be an encroaching element at variance with the existing frame of vegetation on both sides of the corridor and would reduce unity. • The retaining walls and noise walls would replace dense vegetation in views from residential areas to the west. This would result in a greater degree of perception of the transportation corridor encroaching on the visual unity of the existing neighborhood, which is generally buffered by vegetation from views of the freeway.	G-122	**I-5** Medium **Commercial** Low **Residential** Medium
			Preferred Alternative with Station Option at 220th Street SW, Alternative B2A: • Impacts would be the same as the Preferred Alternative except that the optional station would remove additional mature vegetation, and be a more prominent visual intrusion that would reduce the integrity and unity of views, especially for I-5 southbound. • The 220th Street SW Station would be prominent in views from the commercial area to the west and northwest but would not be a visual intrusion given the existing visual character of the area.	G-123	**I-5** Medium **Commercial** Low **Residential** Medium
			Alternatives B1 and B4 (alternatives with I-5 median alignment): • The elevated guideway in the I-5 median would cause little change in the character of views from I-5; it would displace sparse vegetation in the median and add an additional transportation facility, but likely would not be perceived by users of I-5 as out of character or an encroaching element to the transportation corridor. • The light rail facilities in the median would not be visible from residential areas.		**I-5** Medium **Commercial** Low **Residential** Low

Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
SEGMENT C ALTERNATIVES					
10. I-5/212th Street SW to 44th Avenue West	**I-5** Medium **Residential** Medium **Industrial** Low **Interurban Trail** Medium **Transit Center** Low	**I-5** Average **Residential** High **Industrial** Low **Interurban Trail** High **Transit Center** Low	**Preferred Alternative:** • The light rail facility on the west side of I-5 on an elevated guideway would displace moderate to dense vegetation from 212th Street SW to 48th Avenue West, altering the context of the linear transportation corridor as seen from I-5. This would be an encroaching element at variance with the existing frame of vegetation on both sides of the corridor and would reduce unity. • For the guideway location on the west side of I-5, loss of dense vegetation would affect views for part of the Hall Lake residential area, and the increased prominence of I-5 and light rail together would affect visual unity for the existing open space and single-family neighborhood. • The elevated guideway would cross an existing industrial site devoted primarily to storage and the vacant site of a future school district maintenance facility, and would be a prominent feature with little visual impact, given the low visual interest of the existing and proposed facilities. • The elevated guideway would cross the Interurban Trail diagonally near the existing Lynnwood Transit Center, remove a moderate to dense margin of trees, and add a prominent feature visible to trail users. In the context of an urban trail with many street crossings and a transit overcrossing to the north, bounded by varied landscapes (including the adjacent transit center parking lot), the additional crossing would intrude in an area with moderate visual unity. • The elevated guideway and station in the middle of the Lynnwood Transit Center, with a parking structure to south, would be prominent features in relation to the low scale of existing transit facilities and parking, but would not alter the integrity and unity of the landscape because of the low visual interest of the parking lots and existing transit center.	G-125 G-128 G-131 G-135	**I-5** Medium **Residential** High **Industrial** Low **Interurban Trail** Medium **Transit Center** Low
			Preferred Alternative (Median Option) • Crossing from the median to 52nd Avenue West would partially obscure northbound views of mountain peaks in the distance, but the short duration of obstruction likely would not be perceived as changing the visual context with the almost continuous views of mountain peaks available for several miles. • All other impacts the same as the Preferred Alternative.	G-126 G-129	**I-5** Medium **Residential** Low **Industrial** Low **Interurban Trail** Medium **Transit Center** Low

Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
I-5/212th Street SW to 52nd Avenue West	**I-5** Medium **Residential** Medium	**I-5** Average **Residential** High	**Preferred Alternative and Alternative C3 (west side of I-5 to Lynnwood Park-and-Ride):** • Loss of moderate to dense vegetation would change the visual context from I-5. • Loss of dense vegetation would affect views for part of the Hall Lake residential area, and the increased prominence of I-5 and light rail together would affect visual unity for the existing open space and single-family neighborhood. • Residences or commercial uses on the east side of I-5 would be screened by dense vegetation, except at street overcrossings.	G-127 G-135	**I-5** Medium **Residential Hall Lake Vicinity** High **Industrial** Low
			Alternatives C1 and C2 (I-5 median): • Crossing from the I-5 median to 52nd Avenue West would partially obscure northbound views of mountain peaks in the distance, but the short duration of obstruction likely would not be perceived as changing the visual context with the almost continuous views of mountain peaks available for several miles. • The light rail facilities would not be prominent from residences or commercial uses on the east side of I-5 due to screening by dense vegetation, but the elevated crossover structure would become prominent for viewers on the west side when aligned with 52nd Avenue West.	G-132 G-136	**I-5** Medium **Residential** High
			Alternatives C1 and C2 (west side of I-5): • Some loss of moderate to dense vegetation would occur, changing the visual context from I-5. • Loss of dense vegetation would affect views for part of the Hall Lake residential area, and the increased prominence of I-5 and light rail together would affect visual unity for the existing open space and single-family neighborhood. • Residences or commercial uses on the east side of I-5 would be screened by dense vegetation, but the structure crossing over I-5 lanes to 52nd Avenue West would be prominent for residential areas to the west.	G-133 G-136	**I-5** Medium **Residential** High
West side of 52nd Avenue West	**Residential** Medium	**Residential** High	**Alternatives C1 and C2 (elevated on the east side of 52nd Avenue West):** • The elevated guideway on the east side of 52nd Avenue West would visually intrude upon the integrity and unity of this residential area.	G-136	**Residential** High
			Preferred Alternative and Alternative C3 (along I-5 to Lynnwood Park-and-Ride): • No light rail facilities would be in this area; therefore, there would be no visual quality impacts.		N/A
East side of 52nd Avenue West	**Commercial/ Industrial** Low	**Commercial/ Industrial** Low	**Alternatives C1 and C2 (elevated on the east side of 52nd Avenue West):** • The elevated guideway on the east side of 52nd Avenue West would be taller and more prominent than the existing street frontage, but impacts would be lower given the lower sensitivity of users in this light industrial area.	G-136	**Commercial/ Industrial** Low and Medium
			Preferred Alternative and Alternative C3 (along I-5 to Lynnwood Park-and-Ride): • No light rail facilities would be in this area; therefore there would be no visual quality impacts in this area.		N/A

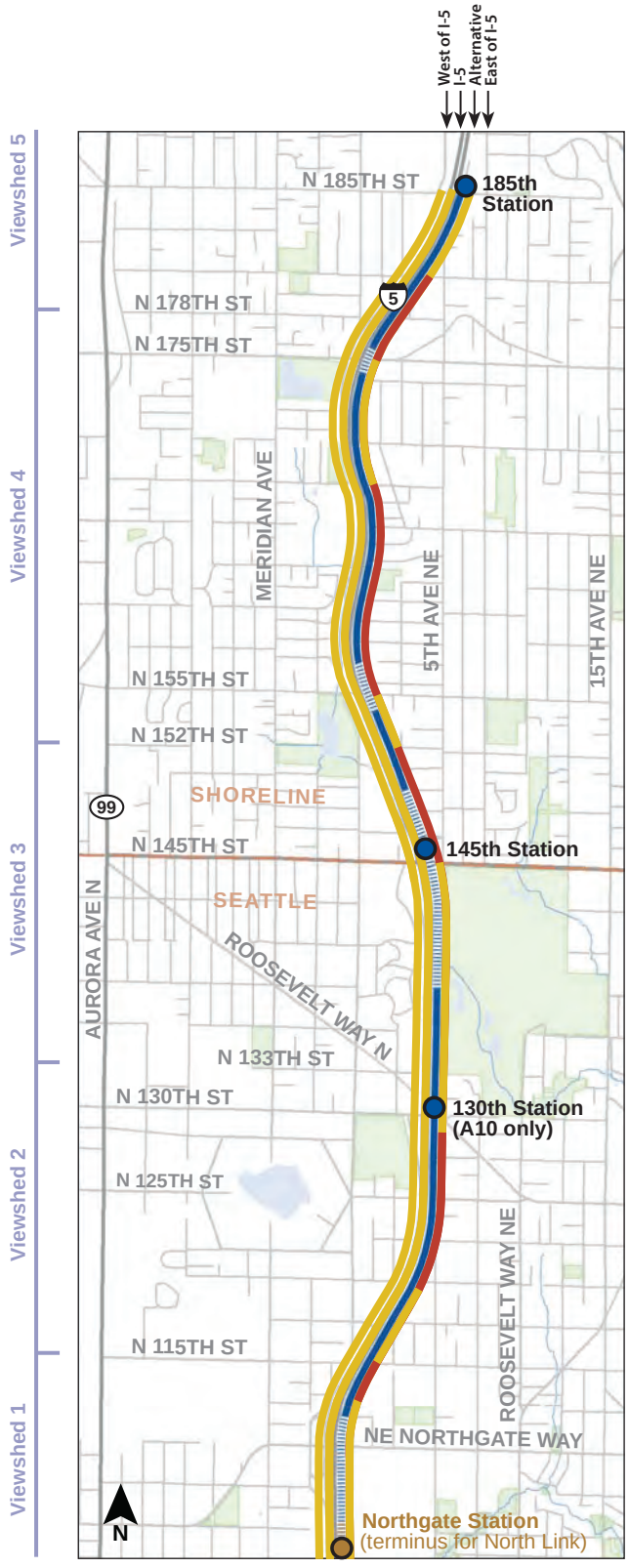
Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
Scriber Creek Park	High	High	**Alternatives C1:** • The elevated guideway would cross along the west side and across the north section of Scriber Creek Park, with loss of mature vegetation and a visual intrusion. This would reduce the existing high visual unity of the park for users.	G-138 G-140	High
			Alternative C2: • The elevated guideway in the wetland area immediately south of Scriber Creek Park would displace mature vegetation and be perceived as visual intrusion and reduced unity of views for trail users at the southern boundary and from the multifamily residential properties north of the park.	G-144 G-146	High
			Preferred Alternative and Alternative C3: • No light rail facilities would be in this area; therefore there would be no visual quality impacts in this area.		N/A
200th Street SW Cedar Valley Road to 44th Avenue West	**Multifamily** Medium **Commercial** Low	**Residential** High **Commercial** Average	**Alternative C1:** • The elevated guideway and station on the south side of 200th Street SW would be larger than existing buildings. It would encroach on the visual integrity and unity of the area, and intrude on views of the streetscape for pedestrians and occupants of vehicles. • The multistory parking garage would replace smaller-scale office buildings. • Visual encroachment would likely be perceived as less approaching 44th Avenue West because of lower visual unity in the commercial area.	G-150 G-142	**Multifamily** High **Commercial** Medium
			Preferred Alternative and Alternatives C2 and C3: • No light rail facilities would be in this area; therefore there would be no visual quality impacts in this area.		N/A
Interurban Trail and Scriber Creek Wetland	Medium	High	**Preferred Alternative and Alternative C3:** • The elevated guideway would cross the Interurban Trail diagonally near the existing Lynnwood Transit Center, remove a moderate to dense margin of trees, and add a prominent feature visible to trail users. The guideway would also cross the trail near 44th Avenue West and remove some vegetation that functions as a buffer. • In the context of an urban trail with many street crossings and a transit overcrossing to the north, bounded by varied landscapes (including the adjacent transit center parking lot), the additional crossing would be a slight visual intrusion in an area with moderate visual unity. • The elevated crossing of the Scriber Creek wetland would remove vegetation at support structures and require vegetation maintenance beneath the elevated guideway that would alter the existing natural character of the area with moderate change in visual quality, given the context in which the wetland is surrounded by industrial and transit center uses.	G-148 G-154	Medium

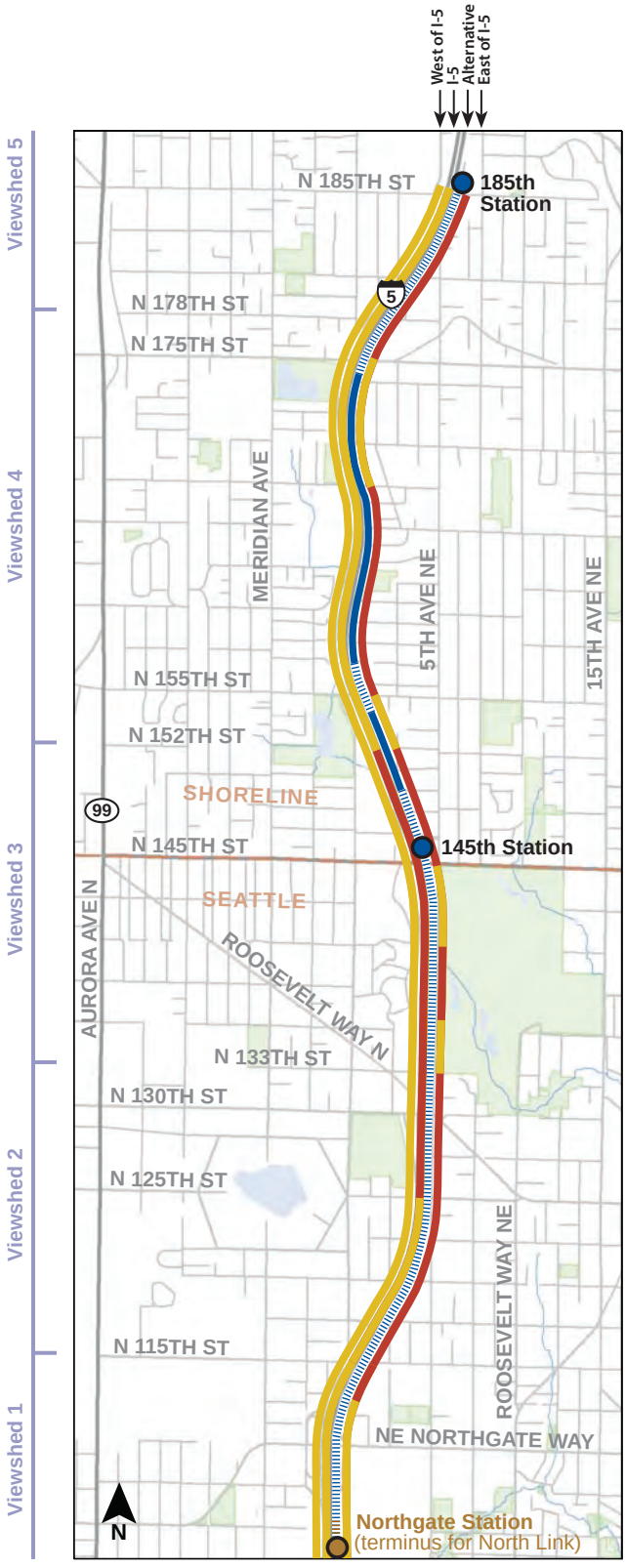
Table 4.5-1. Summary of Potential Visual Quality Impacts of the Light Rail Alternatives

Viewshed	Existing Visual Quality	Viewer Sensitivity	Changes in Landscape Elements	Figure in Appendix G	Visual Impact
			Alternatives C1 and C2: • Light rail facilities would cross over the Interurban Trail on the east side of 52nd Avenue West and remove some vegetation. In the context of an urban trail with a street crossing to the south, a transit overcrossing to the north, and varied adjacent uses including industrial, vacant, and transit center parking, the effect would be a slight visual intrusion in an area with limited visual unity. • The guideway would also cross the trail near 44th Avenue West and remove some vegetation that functions as a buffer.	G-155 G-156	Medium
Lynnwood Transit Center	Low	Low	**Preferred Alternative and Alternatives C2 and C3:** • The elevated guideway and station in the middle of the Lynnwood Transit Center, with a parking structure to the south, would be prominent features in relation to the low scale of existing transit facilities and parking, but would not alter the integrity and unity of the landscape because of the low visual interest of the parking lots and existing transit center. **Alternative C1:** • There would be no visual quality impacts in this area.		Low NA
44th Avenue West corridor	Medium to Low	Average to Low	**Preferred Alternative:** • The elevated station within the transit center with the elevated tail track crossing 44th Avenue West east of 220th Street SW would add a third crossing over the street, which the City of Lynnwood considers a gateway to the city center; however, it would not change the visual character of the street, which features other prominent transportation infrastructure elements and has a low level of visual unity.	G-152	Low
			Alternative C1: • The elevated guideway extending to 44th Avenue West would be a prominent new element in a diverse landscape but would not be an intrusion due to the low level of visual unity of this area.		Low
			Alternatives C2 and C3: • The elevated guideway and station with the tail track crossing 44th Avenue West on the general alignment of 202nd Street SW would add a third crossing over the street, which the City of Lynnwood considers a gateway to the city center; however, it would not change the visual character of the street, which features other prominent transportation infrastructure elements.	G-150	Low

N/A = Not applicable



PREFERRED ALTERNATIVE, A1, A10: AT-GRADE/ ELEVATED TO NE 145th AND NE 185th STATIONS



A3: MOSTLY ELEVATED TO NE 145th AND NE 185th STATIONS

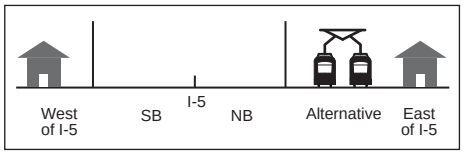
Legend

Visual Impacts

- Low to Medium Visual Impact
- High Visual Impact

Light Rail

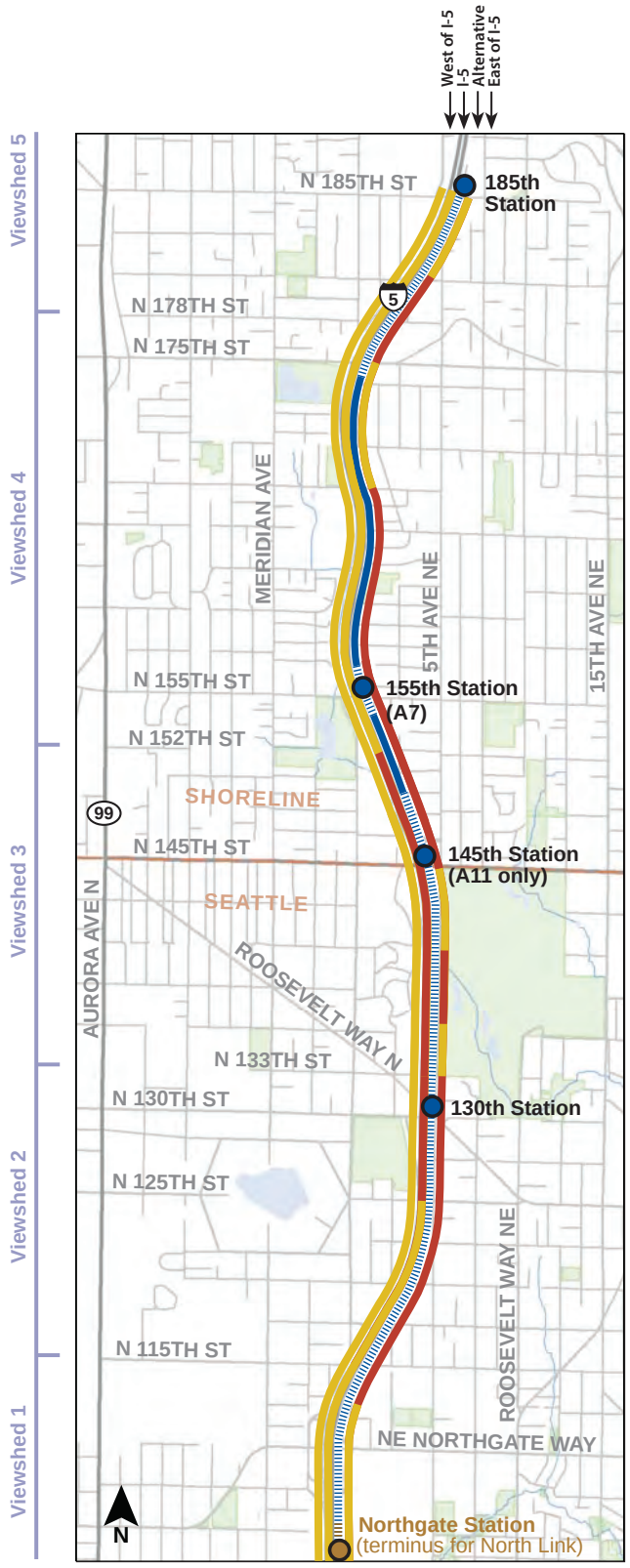
- Station
- At Grade
- Elevated



(Schematic Only - Does Not Reflect Details of Design)

Figure 4.5-2
Summary of Visual Impacts Preferred Alternative, A1, A10 and A3

A5: AT-GRADE/ELEVATED WITH NE 130th, NE 155th AND NE 185th STATIONS



A7, A11: MOSTLY ELEVATED WITH NE 130th, NE 155th AND NE 185th STATIONS

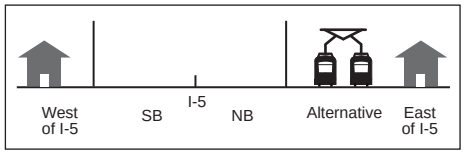
Legend

Visual Impacts

- Low to Medium Visual Impact
- High Visual Impact

Light Rail

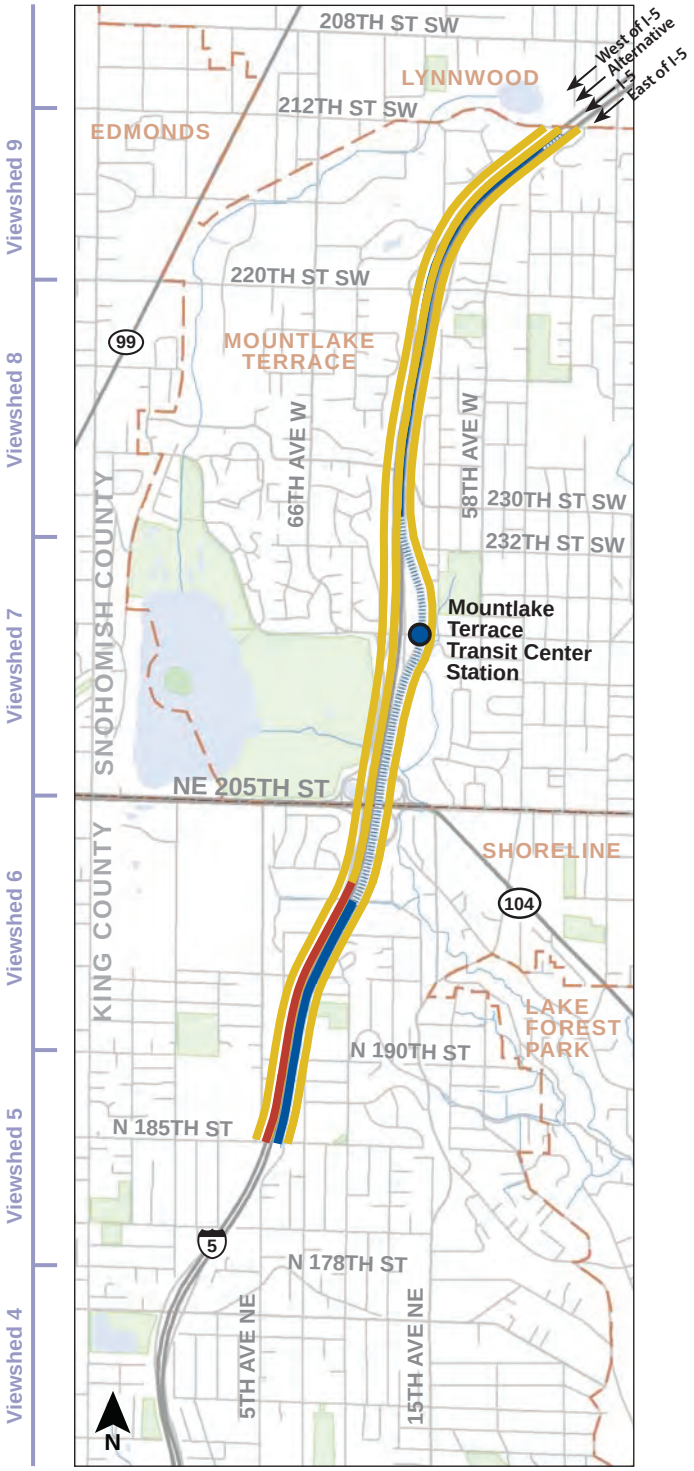
- Station
- At Grade
- Elevated



(Schematic Only - Does Not Reflect Details of Design)

Figure 4.5-3
Summary of Visual Impacts
Alternatives A5, A7 and A11

PREFERRED ALTERNATIVE: EAST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO WEST SIDE



B1: EAST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO MEDIAN

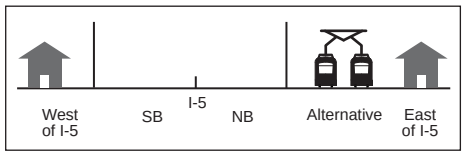
Legend

Visual Impacts

- Low to Medium Visual Impact
- High Visual Impact

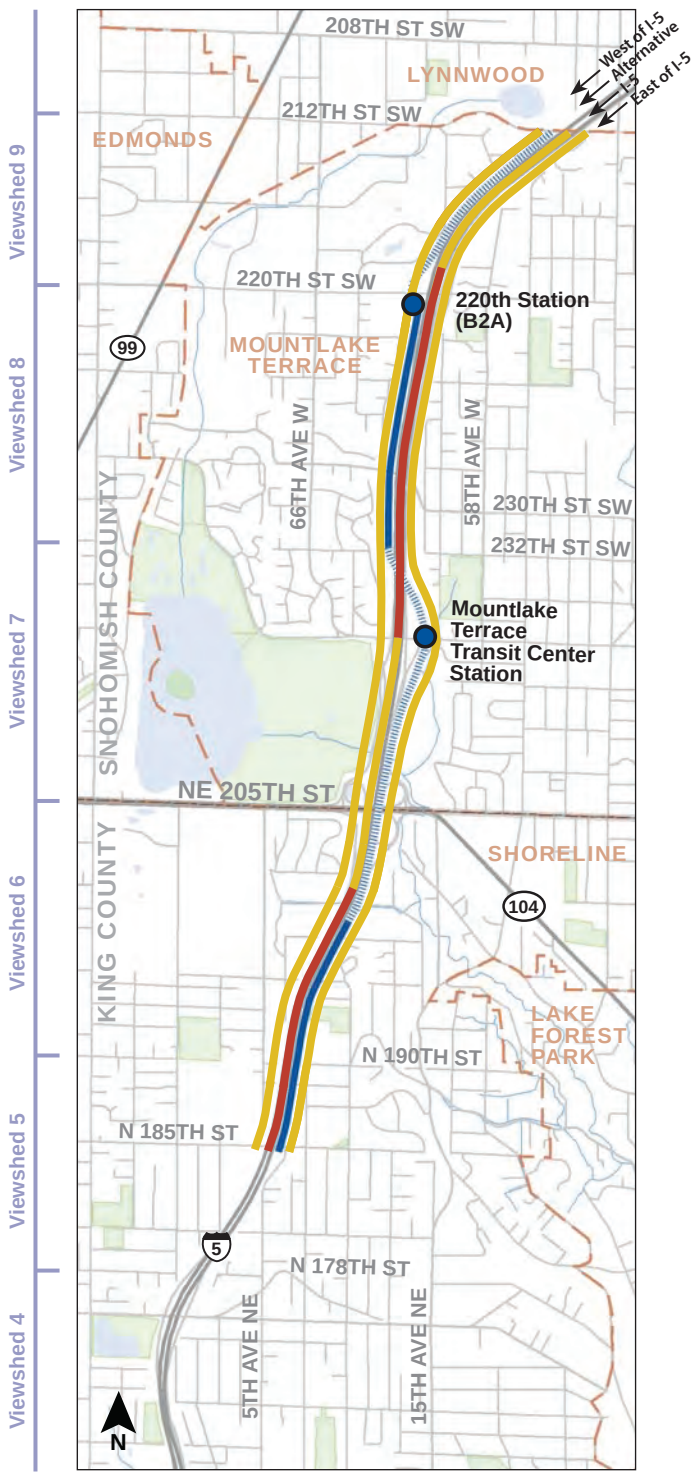
Light Rail

- Station
- At Grade
- Elevated

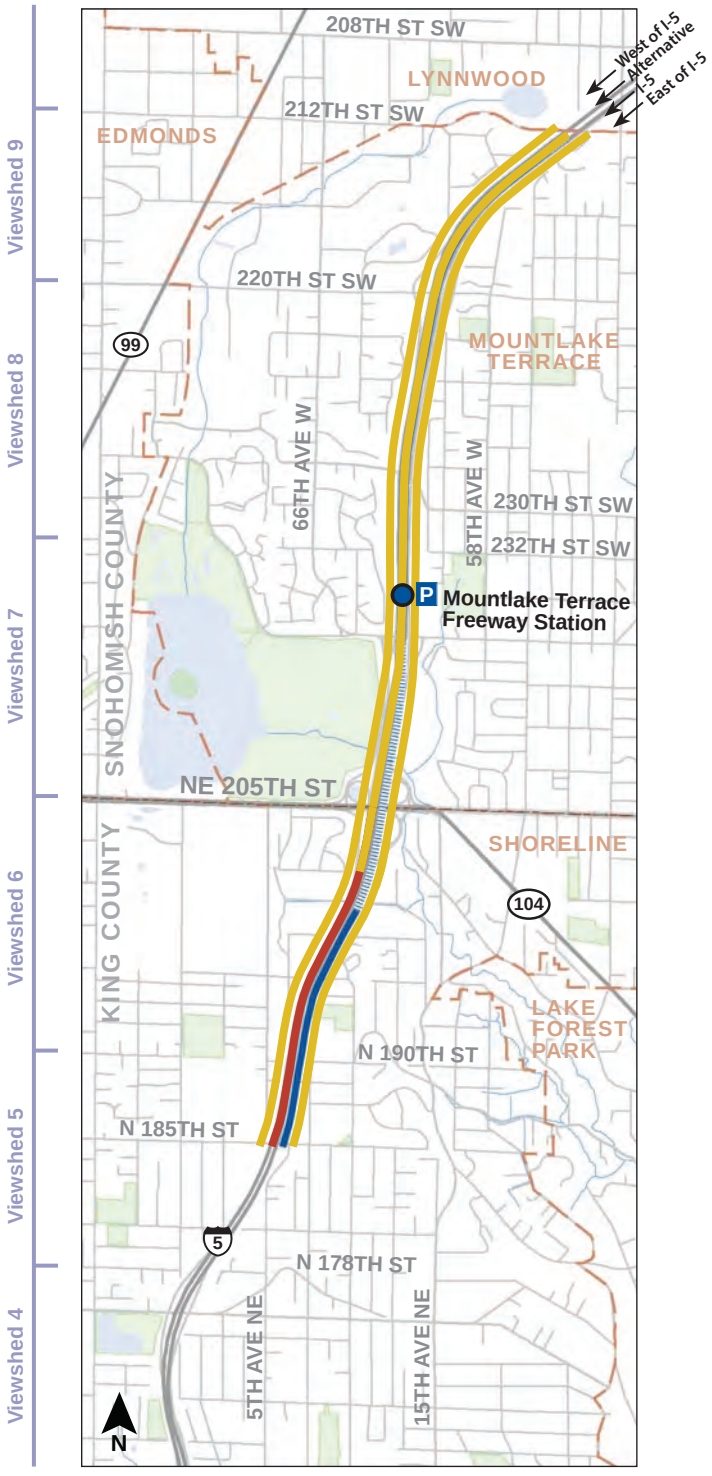


(Schematic Only - Does Not Reflect Details of Design)

Figure 4.5-4
Summary of Visual Impacts
Preferred Alternative and B1



B2A: EAST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO WEST SIDE



B4: EAST SIDE TO MOUNTLAKE TERRACE FREEWAY STATION TO MEDIAN

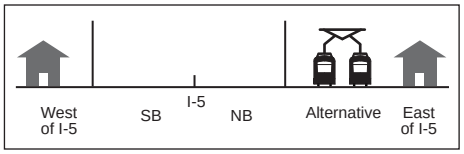
Legend

Visual Impacts

- Low to Medium Visual Impact
- High Visual Impact

Light Rail

- Station
- At Grade
- Elevated



(Schematic Only - Does Not Reflect Details of Design)

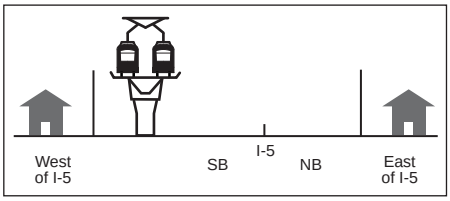
Figure 4.5-5
Summary of Visual Impacts
Alternatives B2A and B4

PREFERRED ALTERNATIVE: ALONG I-5 TO LYNNWOOD PARK & RIDE STATION

C1: 52ND AVE W TO 200TH ST STATION

Legend

- Low to Medium Visual Impact
- High Visual Impact
- Station
- At Grade
- Elevated



(Schematic Only - Does Not Reflect Details of Design)

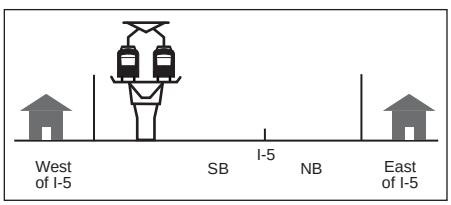
Figure 4.5-6
Summary of Visual Impacts
Preferred Alternative and C1

C2: 52ND AVE W TO LYNNWOOD TRANSIT CENTER STATION

C3: ALONG I-5 TO LYNNWOOD PARK & RIDE STATION

Legend

- Low to Medium Visual Impact
- High Visual Impact
- Station
- At Grade
- Elevated



(Schematic Only - Does Not Reflect Details of Design)

Figure 4.5-7
Summary of Visual Impacts
Alternatives C2 and C3

4.5.3 Construction Impacts

Construction impacts would vary by location and the types of construction needed for the different light rail facilities. Construction effects would be temporary but could still last for several years, and they could involve the greatest degree of visual change for the Lynnwood Link Extension. Site clearing and demolition can remove trees, ground cover, and existing structures and affect either a linear corridor or a larger site. Other sources of visual effects include construction staging areas, detours or temporary roadways, lighting, signage, heavy equipment, trailers, fences, temporary noise shielding, scaffolding, cranes, relocation of noise walls, and material storage.

Typically, visual impacts of construction occur in the same areas affected by long-term impacts, but construction has more visual clutter and little visual unity, given the variety of construction activities, equipment, and stored materials that would change throughout the construction period. The construction and staging areas would lack visual cohesion and have low visual quality compared with the existing conditions or the expected visual character after construction.

Construction of the light rail facilities at-grade or associated with retaining walls would have similar temporary visual impacts related to clearing vegetation, exposing and moving soils, constructing retaining walls, installing tracks, an overhead catenary system, and other project features. Elevated portions of the alternative routes would involve less clearing and grading. Columns and guideway sections would be constructed in various ways, ranging from being cast into forms or lifted into place with cranes. Construction access would be primarily from I-5, but adjacent roadways might be used. Light and glare impacts on adjacent areas could occur when nighttime construction is scheduled, which is most likely to take place where construction activities would disrupt I-5 traffic.

4.5.4 Indirect Impacts

Visual impacts for development and/or redevelopment, such as transit-oriented development, might occur in and near stations subject to the comprehensive plans and zoning regulations of local jurisdictions. Even where specific comprehensive plan and zoning regulations are in place, detailed visual analysis depends on the individual developments. However, when stations have available land and supportive zoning in place, there would be more potential for mixed-use development that supports high-density residential, commercial, and office-related uses. Existing properties could be redeveloped with buildings of a larger scale, but at the same time, larger expanses of surface parking could be removed. Landscaping and other visual amenities could also be developed as an integrated part of the new developments.

The station area with the highest potential for visual changes resulting from increased development would be at the Lynnwood Transit Center, based on the City of Lynnwood's plans and policies that encourage growth. The City of Mountlake

Terrace has plans around the Mountlake Terrace Transit Center and the 220th Street SW Station in Mountlake Terrace encouraging transit-oriented development. The City of Shoreline station area plans could also lead to development that would visually change the existing neighborhood. Section 4.2.4 in the Land Use Section (4.2) has a discussion of potential transit-oriented developments near stations.

4.5.5 Cumulative Impacts

The construction of I-5 in the 1960s was a major change to the visual environment in the project corridor, particularly in the neighborhoods that were already in place before the freeway was constructed. The freeway also changed other more natural or rural landscapes. The addition of the light rail alternatives to the project corridor would increase the size and visual prominence of this linear transportation corridor.

While there are no other major new transportation or development projects that run throughout the project corridor, there are sites where further development is anticipated with or without the Lynnwood Link Extension. At Northgate, the Northgate Link Extension is being constructed, and the Northgate Transit Center will be reconstructed. Adopted plans for the Northgate area call for greater mixed-use development throughout the district. Individual redevelopment proposals are expected to replace some of the existing properties with larger-scale, multi-use developments. Such redevelopment at higher densities and height would represent a larger change in views, but would also make the light rail project less prominent because background views would be of more diverse urban forms.

The Mountlake Terrace Transit Center and its multistory parking structure was also recently developed. Areas to the south and east of the station could still be redeveloped consistent with the City of Mountlake Terrace's land use plans, with or without the light rail project. However, light rail, along with other station area developments, could represent a high degree of visual change for this area.

The City of Lynnwood is targeting the city center area for increased development and redevelopment activities over time, which would alter existing visual conditions by redeveloping some existing uses. The likely future continuation of the light rail corridor would affect the character of the city center, but also may contribute to its vitality by providing a wider range of transportation options. All alternative alignments likely would displace some existing development when the light rail route extends farther north. The existing development is largely automobile-oriented with large parking lots. All alternatives would improve transportation access and contribute to the City's goal of focusing increased transit on the city center as the major regional urban center. The City's plan anticipates higher density developments that provide more visual unity, public spaces, and other amenities than the existing facilities.

If built, the OMSF alternative in Lynnwood would alter the existing frontage along 52nd Avenue West, which currently consists of parking with landscaping and low-

profile structures. Views could be changed by the removal of buildings, by changes to landscaped or vegetated areas, and by the introduction of features such as walls or fencing, maintenance buildings, lighting, and overhead catenary. For the Preferred Alternative and Alternative C3, ramps from the elevated guideway to the facility at ground level would provide access from the north, but would have little additional impact on the residential area to the west. With Alternatives C1 and C2, the addition of ramps from the elevated facility to ground level would be an additional element that would contribute to the high visual impact on residences to the west.

The City of Lynnwood's 44th Avenue West, I-5 to 194th Street SW Improvement Project proposes to widen the roadway to seven lanes, with eight lanes just south of 196th Street SW, and wider sidewalks and landscape features. However, the cumulative impacts of this project, in conjunction with the elevated guideway alternatives crossing the 44th Avenue West corridor, would not alter the overall visual context.

The City of Lynnwood's 200th Street SW, 64th Avenue West to 40th Avenue West Project would add lanes, wider sidewalks, landscape features, and bicycle facilities to accommodate future growth envisioned for the city center. This project is unlikely to alter the visual context or increase visual impacts for the light rail alternatives.

4.5.6 Potential Mitigation Measures

Long-Term Impacts

Sound Transit would incorporate specific measures to mitigate visual impacts as it develops the detailed design for the light rail facilities. Mitigation measures would be focused on areas identified as having high visual impacts. They would need to be compatible with the project's maintenance and operations requirements, which include long-term maintenance and safety and security considerations. Because the right-of-way along the project corridor is limited, there would be trade-offs between minimizing right-of-way acquisitions, providing landscaping or other mitigation, and the potential for surplus properties to be made available for redevelopment. Sound Transit's design guidelines would provide direction on how they would approach these trade-offs.

Sound Transit would adhere to jurisdictional permitting requirements, which include tree replacement and landscaping policies that WSDOT and local jurisdictions have in place. For example, within the WSDOT right-of-way, WSDOT specifies a replacement ratio of trees for small, moderate, and mature trees removed. Local jurisdictions have similar policies that would apply outside the right-of-way. The City of Seattle requires replacement trees for each significant tree (≥6-inch diameter at breast height [dbh] caliper) removed. The City of Shoreline requires four trees to be planted for each significant tree removed. The City of Mountlake Terrace requires an Essential Public Facility to retain, to the greatest extent possible, existing

significant trees (that do not constitute a safety hazard). Most of these policies encourage native plantings and younger trees because of higher opportunities for survival and ecosystem integration, compared to attempts to transplant larger and more mature trees, which have lower survival rates.

Even if larger or faster growing trees or plants are used, it may take 15 to 20 years for the plants to grow large enough to screen large facilities such as the overhead catenary wires, multistory parking garages, elevated structures, and tall retaining walls or noise walls. Mitigation for sections with mature evergreen trees could require 30 to 50 years of growth for the replacement trees.

Potential mitigation measures include:

- Sound Transit would prepare a Roadside Master Plan in accordance with WSDOT guidelines for the portion of the route on the I-5 right-of-way.
- For WSDOT's beautification areas along I-5, originally acquired under the Highway Beautification Act of 1965 that are used on this project, Sound Transit would mitigate their conversion to right-of-way with replacement property or with other measures agreed to by WSDOT and FHWA. Replacement parcels will meet the intended function of the original beautification area.
- In areas identified as having high visual impacts, Sound Transit would mitigate with landscaping or visual treatments to retaining walls and other structures, as practical, based on available land, safety, and maintenance and operational needs.

Construction Mitigation

Sound Transit would shield light sources used in nighttime construction to reduce the lighting impacts. Sound Transit would place construction screens or barriers to limit the visibility of work areas that would intrude on adjacent activities, such as public open space, community facilities, and recreational areas and trails, where practical.

4.6 Air Quality and Greenhouse Gases

This section assesses how the Lynnwood Link Extension would affect regional air quality, including greenhouse gas (GHG) emissions. It also reviews potential localized air quality impacts at arterial and local street intersections.

4.6.1 Affected Environment

The project corridor falls within the jurisdiction of the Puget Sound Clean Air Agency (PSCAA) for local air quality regulation.

The topography of the Puget Sound region is characterized by low rolling hills intermingled with a complex maze of interconnected waterways linked to the Pacific

Ocean through the Sound. The region has a mild climate with cool summers and mild, wet, and cloudy winters.

Air Quality Standards and Regulations

Air quality is regulated by federal, state, and local agencies. The air quality analyses for this project followed current guidelines developed by the U.S. Environmental Protection Agency (EPA), the Washington State Department of Ecology (Ecology), PSCAA, and the PSRC.

The Clean Air Act (CAA) is a federal law first passed in 1963. The CAA Amendments of 1990 and the Final Transportation Conformity Rule direct the EPA to implement environmental policies and regulations that will ensure acceptable levels of air quality.

The CAA and the Final Transportation Conformity Rule affect the funding and approval of proposed transportation projects. They require federally approved or funded projects to conform to applicable State Implementation Plans (SIP).

Conformity to an implementation plan means eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards (NAAQS) and achieving expeditious attainment of such standards.

Under the authority of the CAA, EPA has identified several air pollutants as pollutants of concern nationwide and has established the NAAQS. These pollutants, known as criteria pollutants, are carbon monoxide (CO), particulate matter with a diameter of 10 micrometers or less (PM_{10}), particulate matter with a diameter of 2.5 micrometers or less ($PM_{2.5}$), ozone (O_3), sulfur dioxide (SO_2), lead (Pb), and nitrogen dioxide (NO_2). The NAAQS specify maximum allowable concentrations for these criteria pollutants. The state of Washington and PSCAA have also adopted these standards, in addition to having a standard for total suspended particulates (TSP). Table I-4.6-1 in Appendix I-4.6, Air Quality and Greenhouse Gas, summarizes the standards applicable to transportation projects.

GHG emissions are federally regulated for large industrial sources. Because federal guidance on how to address GHG emissions in environmental documents for other types of sources is currently being developed. Sound Transit is analyzing GHG emissions for this project consistent with best practices and its own policies.

Conformity Requirements

Areas that meet the NAAQS are deemed *attainment areas*. Areas not in compliance with the NAAQS are deemed *nonattainment areas*. Areas that were formerly classified as nonattainment areas but have since demonstrated attainment with the NAAQS are classified as *maintenance areas*. Because the Puget Sound region is a maintenance area for CO, the project must demonstrate conformance with the NAAQS for CO. The region is in an attainment area for all of the other criteria pollutants; therefore,

further conformity analysis of criteria pollutants (SO_2, NO_2, O_3, particulates, and Pb) is not required.

The CAA requires states to develop a State Implementation Plan (SIP) for protecting and maintaining air quality in all areas of the state.

The Lynnwood Link Extension is currently included in PSRC's regional transportation improvement program (RTIP) as project RTA-78, which demonstrates its conformity with the SIP. A project demonstrates project-level conformity by showing that it would not cause or contribute to any new violation of any NAAQS, increase the frequency or severity of any existing NAAQS violations, or delay timely attainment of the NAAQS.

Pollutants of Concern for this Project

Motor vehicles are the largest contributors of air pollution from transportation projects. The main criteria pollutants emitted from motor vehicles are CO, PM_{10}, $PM_{2.5}$, and the O_3 precursors—volatile organic compounds (VOCs) and oxides of nitrogen (NO_X). GHGs and air toxic emissions are also pollutants of concern. This subsection discusses how the main pollutants of concern affect public health and the environment for this project.

Carbon Monoxide

CO is a colorless and odorless gas that interferes with the transfer of oxygen to the brain. It is emitted almost exclusively from the incomplete combustion of fossil fuels. Prolonged exposure to high levels of CO can cause headaches, drowsiness, loss of equilibrium, or heart disease. CO concentrations can vary greatly over relatively short distances. Relatively high concentrations are typically found near congested intersections, along heavily used roadways carrying slow-moving traffic, and in areas where atmospheric dispersion is inhibited by urban "street canyon" conditions. Consequently, CO concentrations are predicted on a localized, or microscale, basis.

Particulate Matter

Particulate pollution is composed of solid particles or liquid droplets that are small enough to remain suspended in the air. Of particular concern are those particles that are smaller than, or equal to, 10 micrometers (PM_{10}) and 2.5 micrometers ($PM_{2.5}$). Particulates can include smoke, soot, dust, salts, acids, and metals. Particulate pollution also forms when gases emitted from motor vehicles react in the atmosphere.

When inhaled, these particles can damage the respiratory tract. Particles 2.5 to 10 micrometers in diameter tend to collect in the upper portion of the respiratory

system, whereas particles 2.5 micrometers or less in diameter are so tiny that they can penetrate deeper into the lungs and damage lung tissue.

Ozone

O_3 is a colorless toxic gas that enters the bloodstream and interferes with the transfer of oxygen. It also damages plants by inhibiting their growth. Although O_3 is not directly emitted, it forms in the atmosphere through a chemical reaction between reactive VOCs and NO_X. O_3 is also produced from industrial sources and automobile emissions.

Greenhouse Gases

Gases that trap heat in the atmosphere are often referred to as GHGs. These gases are necessary because they keep the planet's surface warmer than it would be otherwise. As concentrations of these gases increase, however, the Earth's temperature rises. Vehicles emit a variety of gases during their operation; some of these are GHGs. The GHGs associated with transportation are water vapor, carbon dioxide (CO_2), methane, and nitrous oxide. Nationally, the transportation sector (including on-road vehicles, construction activities, airplanes, and boats) accounts for almost 30 percent of total domestic CO_2 emissions, but in the state of Washington, it accounts for nearly 50 percent of emissions.

Mobile Source Air Toxic Pollutants

Air toxics are pollutants known or suspected to cause cancer or other serious health effects. Most air toxics originate from human sources, including on-road mobile sources, airplanes, and certain kinds of businesses or industries. There are seven priority mobile source air toxic (MSAT) pollutants: acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter (POM).

Monitored Air Quality Concentrations and Trends

Regional air pollutant trends have generally followed national patterns over the last 20 years. While the average weekday VMT in the Central Puget Sound region has increased from 30 million in 1981 to 80 million in 2009 (PSRC 2010), pollutant emissions associated with transportation sources have decreased. CO is the criteria pollutant most closely tied to transportation. Regionally, the maximum measured CO concentrations have decreased considerably over the past 20 years as a result of greater vehicle fuel efficiency and EPA's national control programs. Other transportation-related pollutants have followed similar but less pronounced trends.

Air quality data were compiled using EPA Air Data (EPA 2014) databases for 2011 to 2013—the latest calendar years for which these data are available. Table 4.6-1 shows the highest recorded ambient air quality levels from representative sites that were monitored for these data and are located within or near the study area. The

monitored concentrations for CO do not exceed national and state ambient air quality standards in the study area.

Table 4.6-1. Monitored Ambient Air Quality Levels

Pollutant	Averaging Time	2011 Maximum Concentration	2012 Maximum Concentration	2013 Maximum Concentration	NAAQS
CO	8 hours	0.9 ppm	0.7 ppm	1.4 ppm	9 ppm
	1 hour	1.0 ppm	1.0 ppm	1.8 ppm	35 ppm
O_3	8 hours	0.046 ppm	0.049 ppm	0.047 ppm	0.075 ppm
$PM_{2.5}$	Annual	5.7 µg/m^3	5.9 µg/m^3	6.2 µg/m^3	15 µg/m^3
	24 hours	16.5 µg/m^3	16.6 µg/m^3	20.7 µg/m^3	35 µg/m^3
PM_{10}	24 hours	23 µg/m^3	28 µg/m^3	30 µg/m^3	150 µg/m^3

Sources: http://www.ecy.wa.gov/programs/air/air_monitoring_data/WAQA_Intro_Page.html and http://www.epa.gov/airdata/

Notes: Monitoring location was at 4103 Beacon Avenue South, Seattle, WA.

Values shown correspond to NAAQS time periods.

CO = carbon monoxide

µg/m^3 = micrograms per cubic meter

NAAQS = National Ambient Air Quality Standards

O_3 = ozone

$PM_{2.5}$ = particulate matter with diameter less than or equal to 2.5 micrometers

PM_{10} = particulate matter with diameter less than or equal to 10 micrometers

ppm = parts per million

4.6.2 Long-Term Regional Operational Impacts

Long-term regional operational impacts have been evaluated for future scenarios in forecast year 2035 for all the alternatives. Regional traffic data were developed using PSRC's travel demand model for a representative project alternative that shows the expected effects of all the light rail alternatives. As discussed in Chapter 3, Transportation Impacts and Mitigation, the light rail alternatives have only minor differences in their mode split, travel patterns, and roadway speeds, and they all perform similarly when compared to the No Build Alternative.

Pollutant and GHG emission rates were developed using EPA's Motor Vehicle Emission Simulator (MOVES), model version 2010b. PSRC provided regionally specific MOVES input files, and national defaults were used when regionally specific inputs were not available.

Criteria Pollutant Emissions

Table 4.6-2 summarizes and compares predicted emission burdens for existing conditions (2011), the future 2035 No Build Alternative, and the Preferred Alternative in 2035. (The other potential combinations of light rail alternatives from Segments A through C would be similar to the Preferred Alternative.) Vehicle emissions in 2035 are predicted to be lower than existing levels due to EPA's national emission control programs and regulations. As shown in Table 4.6-2, all predicted criteria pollutants under the light rail alternatives would be below existing conditions and below the No Build Alternative pollutant levels in 2035.

Table 4.6-2. Daily Regional Emission Burden Assessment for Forecast Year 2035

Criteria Pollutant	Existing 2011 (kg/day)	No Build Alternative (kg/day)	Preferred Alternative (kg/day)	Percent Change from Existing (2011) to No Build Alternative	Percent Change from No Build Alternative to Preferred and Other Alternatives
VMT	79,442,960	100,592,498	100,307,852	26.26%	-0.28%
CO	501,626	274,061	273,279	-45.52%	-0.29%
$PM_{2.5}$	5,421	2,174	2,162	-60.11%	-0.55%
PM_{10}	7,233	4,722	4,688	-35.19%	-0.72%
VOCs	20,112	5,606	5,574		
NO_X	142,952	36,020	35,893	-74.89%	-0.45%

Source for 2011 conditions: PSRC Travel Demand Model; EPA MOVES model 2010b
kg/day = kilograms per day
VMT = vehicle miles traveled
CO = carbon monoxide
$PM_{2.5}$ = particulate matter with diameter less than or equal to 2.5 micrometers
PM_{10} = particulate matter with diameter less than or equal to 10 micrometers
VOCs = volatile organic compounds
NOx = nitrogen oxides

Mobile Source Air Toxic Emissions

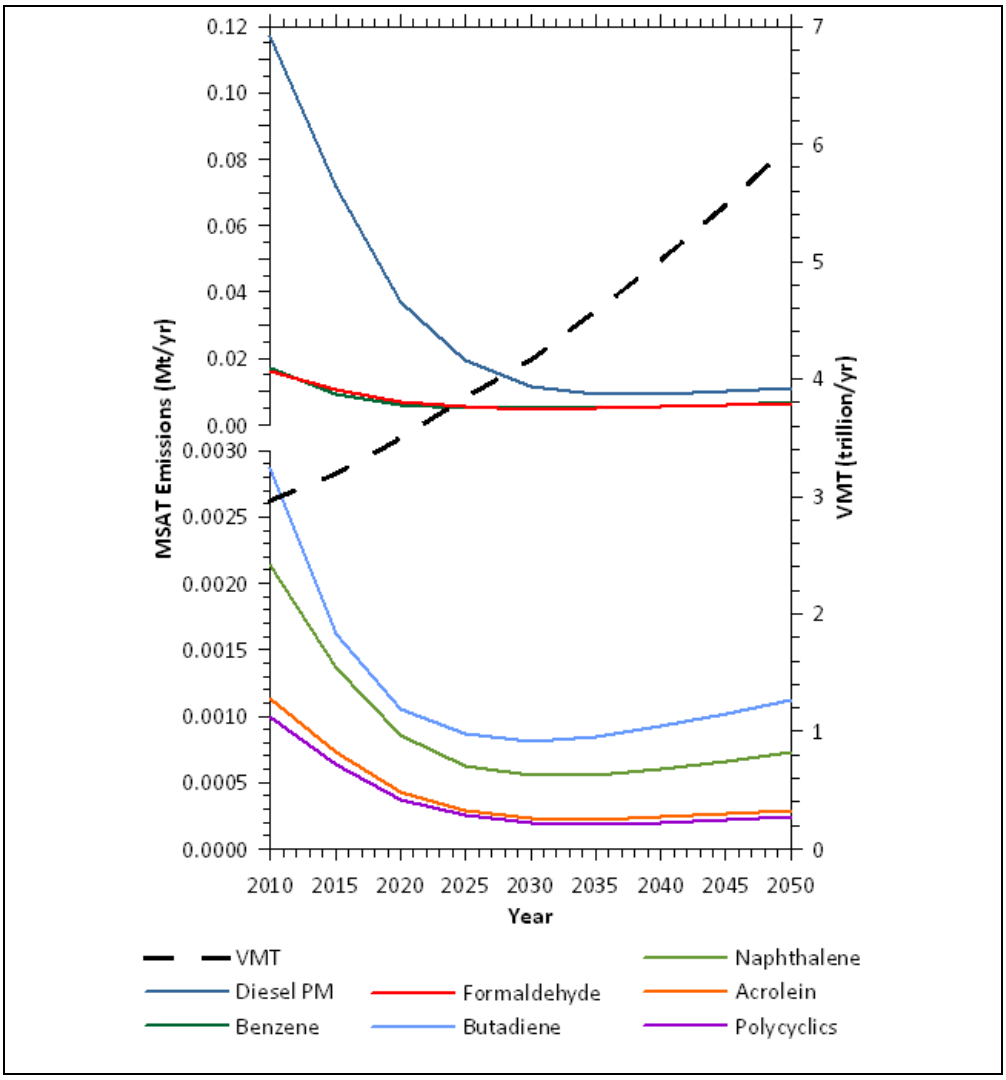
As compared to criteria pollutants, future MSAT emissions would experience greater reductions from present levels, with or without the Lynnwood Link Extension. As shown in Figure 4.6-1, EPA's national control programs are projected to reduce MSAT emissions by 83 percent from 2010 to 2050 even if the VMT increases by 102 percent (FHWA 2012). The reduced VMT predicted for the Preferred Alternative (Table 4.6-2) would enhance these MSAT emission reductions, although on a regional scale the percentage difference is small compared with the No Build Alternative in 2035.

Greenhouse Gases

GHG emission rates for the electricity required to operate the light rail were developed using emission factors from local electricity vendors (PSE 2013). Sound Transit's long-term target is to use only carbon neutral electricity. Currently, only electricity from one vendor (Seattle City Light) is carbon neutral. If only carbon-neutral electricity from all vendors is used, light rail GHG emissions would be much lower than those used in this analysis.

GHG emissions for commuter rail and buses were developed using EPA's Emission Factors for Greenhouse Gas Inventories (EPA 2011).

GHG emission rates for highway and road vehicles were developed using EPA's MOVES, model version 2010b. PSRC provided regionally specific MOVES input files, and national defaults were used when regionally specific inputs were not available. EPA's Emission Factors for Greenhouse Gas Inventories and MOVES do not take into account recent and likely future updates to EPA's fuel economy and emission standards. Other state and federal legislation also could reduce future emission rates. Therefore, future GHG emissions from commuter rail, buses, and highway and road vehicles could be lower than the model's estimates.



Source: Federal Highway Administration's Interim Guidance Update on Air Toxic Analysis in NEPA Documents (FHWA 2012); EPA MOVES 2010b model runs conducted during May–June 2012 by FHWA

Note: Trends for specific locations may be different, depending on locally derived information representing vehicle miles traveled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors

Figure 4.6-1. Mobile Source Air Toxic Emissions Trends

GHG emissions are normally presented as the total CO_2 equivalent (CO_{2e}) released. The CO_{2e} emissions take into account the global warming potential of chemical emissions from a source. The analysis of the GHG emission impacts included evaluating the vehicle movements occurring in King, Pierce, Snohomish, and Kitsap counties. Chapter 3, Transportation Impacts and Mitigation, describes how the changes in vehicle movements were determined.

Table 4.6-3 summarizes the total projected GHG emissions for the No Build Alternative and the Preferred Alternative (representing all other light rail alternatives as well) for projected scenarios in 2035. CO_{2e} emissions are predicted to decrease by

76,285 metric tons annually in the region due to the reduction of VMT, a 0.5 percent reduction in CO_{2e}, as shown in Table 4.6-4.

Table 4.6-3. Daily Transportation Greenhouse Gas Emissions in Terms of CO_{2e} for Forecast Year 2035

Emission Source	Existing Vehicle Miles Traveled	Existing Daily CO_{2e} Emissions (metric tons)	No Build Alternative Vehicle Miles Traveled	No Build Alternative[a] Daily CO_{2e} Emissions (metric tons)	Preferred Alternative and Other Alternatives (vehicle miles traveled)	Preferred Alternative and Other Alternatives[a] Daily CO_{2e} Emissions (metric tons)
Non-transit Highway and Road Vehicles	79,442,960	40,730	100,592,498	45,192	100,307,852	44,988
Bus	254,100	706	243,000	675	240,400	667
Heavy Rail	960	7	1,470	10	1,470	10
Light Rail	4,430	4	13,600	33	17,900	36
Daily Total	**79,702,450**	**41,447**	**100,850,568**	**45,910**	**100,567,622**	**45,701**

CO_{2e} = total carbon dioxide equivalent

Table 4.6-4. Total Greenhouse Gas Emissions in Terms of CO_{2e} for Forecast Year 2035

Emission	No Build Alternative[a]	Preferred Alternative and Other Alternatives[a]
Daily CO_{2e}	45,910	45,701
Daily CO_{2e} Reduction	Not applicable	209
Annual CO_{2e} Reduction	Not applicable	76,285

[a] Unit of measure is metric tons CO_{2e} emissions

CO_{2e} = total carbon dioxide equivalent

Sound Transit published a *Sustainability Plan* in 2011 that builds on the 2007 Sustainability Initiative. According to the *Sustainability Plan*, Sound Transit will integrate efficient operating practices at existing and new facilities, use energy-saving equipment to reduce energy demand, and maximize intermodal transit connections to reduce automobile VMT. The implementation of the *Sustainability Plan* will reduce Sound Transit energy consumption, resulting in lower emissions burdens from light rail operation than currently predicted.

4.6.3 Long-Term Localized Operational Impacts

Long-term localized operational impacts on air quality and GHG emissions were evaluated using EPA's MOVES model to calculate vehicular emissions, and EPA's CAL3QHC dispersion model to calculate CO concentrations at sensitive receptors.

Sound Transit conducted CO modeling on the intersection in each project segment with the highest potential CO emissions. Intersections evaluated are presented in Appendix I-4.6. Traffic data were used to identify intersections with the highest traffic volume and a LOS of D or worse under the light rail alternatives for forecast year 2035. If one intersection had the highest volume under several of the alternatives, then that intersection was only evaluated under the alternative with the highest volume, representing the highest potential CO concentrations at that intersection. In addition to the forecast year conditions, each evaluated intersection was modeled for existing conditions, none of which showed CO concentrations above the NAAQS.

No Build Alternative

The modeled CO concentrations did not exceed the NAAQS for CO with the No Build Alternative in forecast year 2035; however, they increased slightly compared to 2011 due to increased traffic volumes. The results of the CO modeling are presented in Appendix I-4.6.

Long-Term Impacts Common to All Light Rail Alternatives

The modeled CO concentrations did not exceed the NAAQS in forecast year 2035. Therefore, none of the light rail alternatives would have intersections with CO concentrations above the NAAQS. Modeled Lynnwood Link Extension CO emissions were similar to the No Build Alternative because only slight variations in traffic would occur at the highest-volume intersections. The results of the CO modeling are presented in Appendix I-4.6.

4.6.4 Construction Impacts

Air Quality Pollutants

Construction-related air quality effects would result primarily from emissions from heavy-duty construction equipment (e.g., bulldozers, backhoes, and cranes), diesel-fueled mobile sources (e.g., trucks, brooms, and sweepers), diesel- and gasoline-fueled generators, and on-site and off-site project-related vehicles (e.g., service trucks and pickups).

Fugitive PM_{10} emissions are associated with land clearing, ground excavation, grading, cut-and-fill operations, and structure erection. PM_{10} emissions would vary from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive PM_{10} emissions from construction activities could be noticeable if uncontrolled. Mud and particulates from trucks may also be of concern if construction trucks are routed through streets near sensitive land uses (e.g., residences, schools, and parks).

Heavy trucks and construction equipment powered by gasoline and diesel engines would also generate $PM_{2.5}$, CO, and NO_x in exhaust emissions. If construction traffic and lane closures increase congestion and reduce the speed of other vehicles in the area, emissions would increase temporarily during delays. The effects would generally be limited to the immediate area in which the congestion occurs.

Some construction phases (particularly paving operations using asphalt) would result in short-term odors, which might be detectable to some people near the site. However, these odors would be diluted as distance from the site increases.

Greenhouse Gases

The generation of GHG emissions is directly related to the amount of fossil fuel burned. During construction, GHG emissions would be generated by diesel engines used to power most of the construction equipment. Sound Transit estimated GHG emissions during construction by using several sources, including information based on the agency's own projects that are similar in scale and construction methods to the Lynnwood Link Extension. Table 4.10-5 in Section 4.10, Energy Impacts, estimates overall energy use during construction as well, but it is based on a more general method of using general transportation or highway construction costs, and uses broader categories of factors to reach an energy estimate. Sound Transit's method calculates construction GHG emissions based on the agency's records of fuel costs and related construction activities on a per mile basis by alignment type (at-grade or elevated). It shows the estimated minimum and maximum construction-related GHG emissions for two representative alternatives from each project segment (Table 4.6-5).

Table 4.6-5. Estimated Construction Greenhouse Gas Emissions

Description	Segment A	Segment B	Segment C	Total
GHG emissions: Preferred Alternative (metric tons of CO_{2e})	32,489	18,884	13,050	64,423
GHG emissions: Other alternatives[a] (metric tons of CO_{2e})	30,264 to 32,489	18,492 to 20,365	10,349 to 13,050	59,105 to 65,904

[a] Segment A used Alternatives A5 (low) and A11 (high). Segment B used Alternatives B4 (low) and B2 (high). Segment C used Alternatives C3, Option 1 (low) and C3, Option 2 (high).

CO_{2e} = total carbon dioxide equivalent

The low estimate for the alternatives with the least construction-related GHG emissions is the sum of Alternatives A5, B4, and C3 Option 1. The high estimate for the alternatives with the highest construction-related GHG emissions is the sum of the Preferred Alternative in Segment A, Alternative B2A, and the Preferred Alternative in Segment C.

Conformity Determination

In the Puget Sound region, PSRC determines regional conformity by including a project in the Metropolitan Transportation Plan (MTP) and the RTIP. The Lynnwood Link Extension is identified and described in the region's MTP, *VISION 2040*, *Transportation 2040*, and in the 2013-2016 RTIP (PSRC 2012). It is designated in PSRC's RTIP as project RTA-78.

In addition to the long-term localized operational impacts (2035), Sound Transit predicted localized worst-case CO concentrations from the Lynnwood Link Extension for initial operations (2023) and the long-range RTP analysis year (2040) to demonstrate project-level CO conformity. The results of the CO modeling are presented in Appendix I-4.6. None of the Lynnwood Link Extension alternatives, including the Preferred Alternative, would have intersections with CO concentrations above the NAAQS. The project corridor is in an attainment area for all the other criteria pollutants (including PM_{10} and $PM_{2.5}$); therefore, further analysis of the other criteria pollutants is not required. Based on the results of the localized CO analysis presented in Appendix I-4.6, the Lynnwood Link Extension, including the Preferred Alternative, would not cause the NAAQS for CO to be exceeded or exacerbated. It would meet the project-level conformity requirements of the CAA.

4.6.5 Indirect Impacts

The traffic analyses for the Lynnwood Link Extension considered the long-term traffic forecasted to operate within the study area. Minor indirect air quality benefits would occur because the project would help to reduce future traffic volumes and levels of congestion within the study area compared with the No Build Alternative, as well as reduce traffic-related air pollutant and GHG emissions. Negative indirect air quality effects would be unlikely.

Producing and disposing of materials needed to build the project will release GHGs, which would be an indirect effect of the project. However, at this time, there is no accurate and standardized methodology for calculating the embodied and lifecycle emissions from transportation projects.

4.6.6 Cumulative Impacts

Cumulative air quality effects include those from the project when combined with those of other past, present, and reasonably foreseeable projects. The project's air quality analysis of 2035 conditions includes the transportation-related emissions related to the region's reasonably foreseeable population and employment growth. Therefore, the preceding findings about 2035 conditions reflect the cumulative effects.

On a very small scale, other projects could affect transportation and, therefore, air quality at specific intersections. For example, Sound Transit's OMSF, if sited in

Lynnwood, would alter traffic in Lynnwood, although that project's Draft EIS found no NAAQS exceedances (Sound Transit 2014).

Also, Sound Transit is developing the Northgate Link Extension. While this project is scheduled to be completed and in operation prior to completion of the Lynnwood Link Extension, some overlapping periods of construction could occur at Northgate. To address this, the construction phasing and the construction mitigation plans between the two projects will be coordinated to minimize any combined impacts, minimizing typical construction period air quality impacts such as dust or diesel emissions, or emissions from increased traffic congestion. King County's high-density transit-oriented development at Northgate could create additional construction-related impacts in the area. Construction of this development will need to be coordinated with construction activities related to the light rail projects in order to minimize overall impacts.

Localized construction pollutants and GHG emissions would be higher with concurrent projects, but would probably not exceed air quality standards because Sound Transit would employ mitigation measures and BMPs to minimize any impacts.

4.6.7 Potential Mitigation Measures

Operational Mitigation

Because no adverse air quality impacts are expected, no specific mitigation is proposed.

Construction Mitigation

Consistent with PSCAA requirements, Sound Transit would use BMPs to prevent and reduce air quality impacts resulting from construction activities. Construction activities must comply with local regulations governing air quality, including those for controlling fugitive dust during construction. The following mitigation measures would be used, as necessary, and in accordance with standard practice to control PM_{10}, $PM_{2.5}$, and emissions of CO and NO_x during construction. Several of these measures would also reduce GHG emissions:

- Spray exposed soil with a dust control agent, such as water.
- Cover all transported loads of soils and wet materials before transport, or provide adequate freeboard (i.e., space from the top of the material to the top of the truck).
- Install wheel washes or manually wash truck wheels, where needed.
- Remove the dust and mud that are deposited on paved, public roads.
- Route and schedule high volumes of construction traffic, where practicable.

- Require appropriate emission-control devices on all construction equipment powered by gasoline or diesel fuel.
- Use well-maintained heavy equipment.
- Cover, install mulch, or plant vegetation as soon as practicable after grading.
- Encourage contractors to employ emission-reduction technologies and practices for both on-road and off-road equipment and vehicles (e.g., retrofit equipment with diesel control technology and/or use ultra-low sulfur diesel).
- Implement idling restrictions for construction trucks.
- Locate construction equipment and truck staging zones away from sensitive receptors, as practicable, and in consideration of other factors such as noise and safety.

4.7 Noise and Vibration

This section describes the project's noise and vibration effects during construction and operation, including mitigation measures Sound Transit would implement to address impacts from the project. For more information and reference sources, see the *Noise and Vibration Technical Report*.

4.7.1 Background and Criteria

Noise and vibration are caused by waves of energy being transmitted through a material such as air or the ground. Noise, which is unwanted sound, includes vibrations that can be detected by the ear. Groundborne vibration differs from airborne noise in that it consists of energy transmitted through the earth rather than the air.

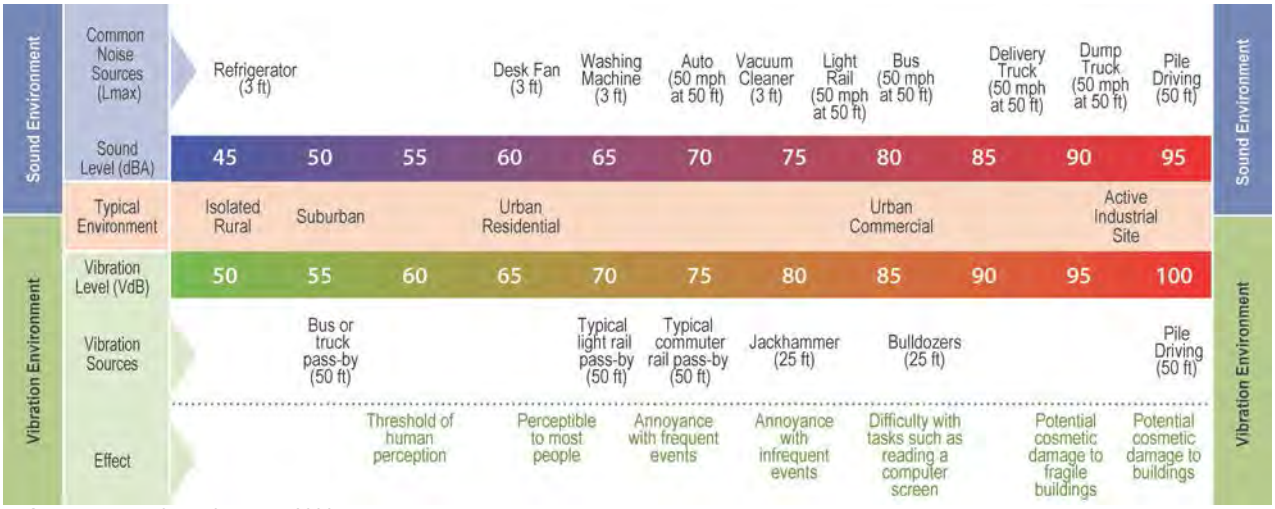
Sound Transit evaluates noise and vibration impacts for transit projects according to the FTA *Transit Noise and Vibration Impact Assessment* guidance manual (FTA 2006). FTA's standards for noise and vibration impacts are based on several decades of studying community reaction to environmental noise and vibration exposure (FTA 2006). The FTA manual categorizes land uses based on their sensitivity to noise or vibration.

Noise

Environmental noise is composed of many frequencies, each occurring simultaneously at its own sound pressure level. The range of magnitude, from the faintest to the loudest sound the ear can hear, is so large that sound pressure is expressed on a logarithmic scale in units called decibels (dB). The commonly used frequency weighting of environmental noise is A-weighting (dBA), which is a measure of how an average person hears changes in sound levels; people can typically detect a 2 dBA change in sound levels. The human ear perceives a 10 dBA

change in sound level as a doubling of loudness. However, adding two sounds of the same loudness together does not double the decibel value.

A common noise descriptor for environmental noise is the equivalent sound level (Leq). Leq is a measure of total noise, a summation of all sounds, during a period of time and averaged over that period of time. Leq measured over a 1-hour period is the hourly Leq [Leq(h)]. The day/night noise level (Ldn) describes the cumulative 24-hour exposure to sound, with a penalty applied to noise exposure between 10 pm and 7 am. Lmax is the maximum noise level during an event. Ldn is used by the EPA and FTA to evaluate noise levels in residential areas. Typical sound and vibration levels experienced in urban environments are shown in Figure 4.7-1.



Sources: EPA 1971, 1974; FTA 2006

Figure 4.7-1
Typical Sound and Vibration Levels

Noise from light rail operations is generated by the interaction of wheels and rails, warning devices, motive power, rail substructure vibration, associated park-and-rides, and the operation of traction power substations. The interaction between steel wheels and rails generates four different types of light rail noise depending on track work: (1) noise generated by passing trains on the track, (2) wheel squeal on a tightly curved track (common for a curve radius of less than 600 feet and possible for a curve radius between 600 and 1,000 feet), (3) noise generated from wheel flanging caused by the centrifugal force from an unbalanced car body, and (4) noise generated on special trackway sections, such as at crossovers or turnouts. Warning bells are another source of light rail noise; bells are sounded when trains enter or leave the stations. Noise levels near a project may also be affected by changes to traffic patterns, roadway alignments, noise walls, and other shielding.

The level at which project noise (called project noise exposure) creates an impact varies, depending on the existing (pre-project) noise environment and on the type of land use that is affected. Future noise exposure is the combination of existing noise exposure and the additional noise exposure caused by a project. Many land uses are not noise-sensitive. FTA guidance categorizes noise-sensitive land uses as shown in Table 4.7-1.

Table 4.7-1. FTA Land Use Categories for Noise Impact Analysis

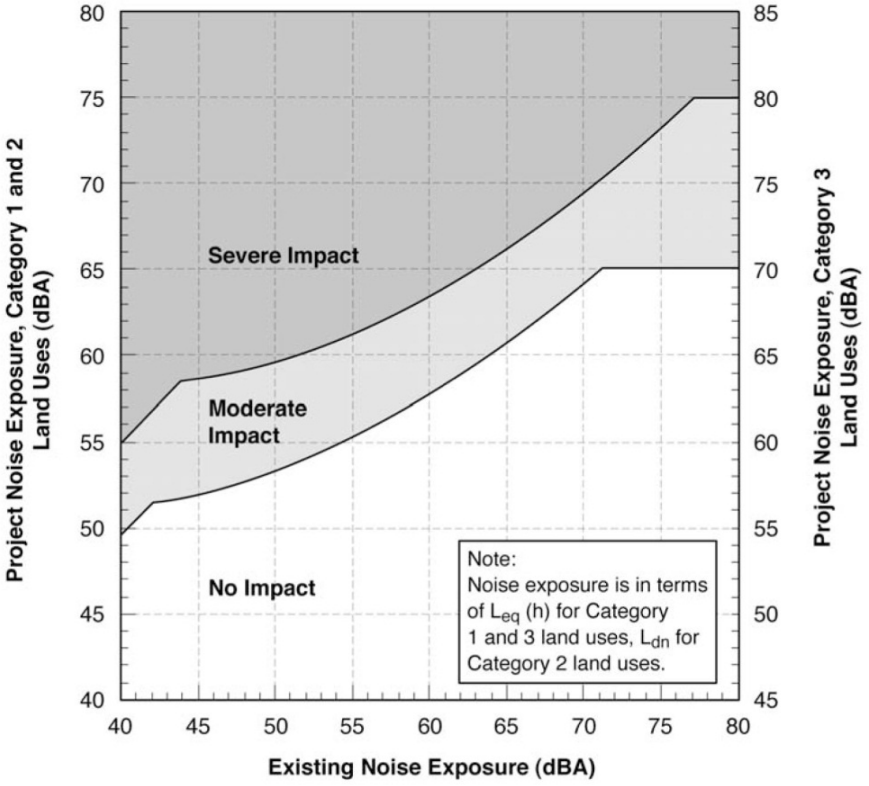
Category	Metric	Land Use Description
1	Leq(h)[a] (dBA)	Tracts of land where quiet is an essential element in their intended purpose. This category includes lands set aside for serenity and quiet, land uses such as outdoor amphitheaters and concert pavilions, and National Historic Landmarks with substantial outdoor use.
2	Ldn (dBA)	Residences and buildings where people normally sleep. This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.
3	Leq(h)[a] (dBA)	Institutional land uses with primary daytime and evening use. This category includes schools, libraries, and churches where it is important to consider interference with such activities as speech, meditation, and concentration on reading material. Buildings with interior spaces where a quiet environment is important, such as medical offices, conference rooms, recording studios, and concert halls, fall into this category. It also includes places for meditation or study associated with cemeteries, monuments, and museums. Certain historical sites, parks, and recreational facilities are also included. However, parks are not noise-sensitive if they feature active recreation or sporting facilities.

[a] Leq for the noisiest hour of transit-related activity during hours of noise sensitivity.

Source: FTA 2006

The FTA noise impact criteria recognize that in a loud environment, even a small increase in noise can increase annoyance. The criteria are shown by category on Figure 4.7-2. Impact criteria for highly-sensitive uses (Category 1, measured in Leq[h]) and residential uses (Category 2, measured in Ldn) are shown on the left side of the graph. Impact criteria for noise-sensitive institutional uses (Category 3, measured in Leq[h]) are shown on the right. The graph shows, for example, that if the existing noise level in a residential area is 60 dBA Ldn, then a project that generates less than 58 dBA Ldn will not have an effect. If the project generates between 58 and 63 dBA Ldn, it will cause a moderate impact, and if it generates more than 63 dBA Ldn, it will cause a severe impact. Above the severe impact criteria, most people would be highly annoyed by the noise.

FTA requires that mitigation be considered for both moderate and severe impacts. Sound Transit's practice is to mitigate both moderate and severe impacts to meet applicable FTA, state, and local noise criteria using a prioritized approach to measures beginning with source treatment, to treatments in the noise path, and then sound insulation as the last option (Motion No. M2004-08, Sound Transit 2004).



Source: FTA 2006

Figure 4.7-2
FTA Transit Project Noise Exposure Impact Criteria

FTA's guidance is to follow FHWA noise assessment procedures and abatement criteria when a project is a joint FTA and FHWA project, the transit operations are adjacent to or on the highway, and highway noise dominates the transit noise over the 24-hour day. The Lynnwood Link Extension Project is not a joint project; therefore, FTA criteria are applicable. Where a project could change traffic noise levels experienced at sensitive receivers because it would include activities such as relocating existing highway noise walls, making changes to ramps, or removing existing noise-blocking structures, FTA's guidance is to consider both potential transit noise impacts using the FTA criteria and traffic noise impacts using FHWA's criteria included in 23 CFR 772.

FTA has general guidance on construction noise assessment that considers the nature and duration of the construction as well as local community factors. State or local noise regulations apply to construction noise and operational noise from stationary sources, such as park-and-rides and traction power substations. Seattle and Lynnwood have adopted noise control ordinances based on the Washington State Noise Control Rule (Washington Administrative Code [WAC] 173-60). The rule includes property-line noise limits (Table 4.7-2), but does not apply to warning devices or to motor vehicles that are regulated under WAC 173-60 as individual noise sources. Shoreline and Mountlake Terrace regulate noise as a public

disturbance. Sound Transit will apply the Washington State noise limits as noise impact criteria for stationary sources within those jurisdictions. The *Noise and Vibration Technical Report* discusses the requirements of the individual local ordinances when they differ from the WAC regulations.

Table 4.7-2. Washington State Noise Limits

	Maximum Allowable Sound Level (dBA)[a] at Property Line		
Property Usage	**Residential**	**Commercial**	**Industrial**
Residential	55	57	60
Commercial	57	60	65
Industrial	60	65	70

[a] Between 10 pm and 7 am, the levels given above are reduced by 10 dBA for residential receiving property.

Source: WAC Chapter 173-60-040; excludes transportation sources on public right-of-way.

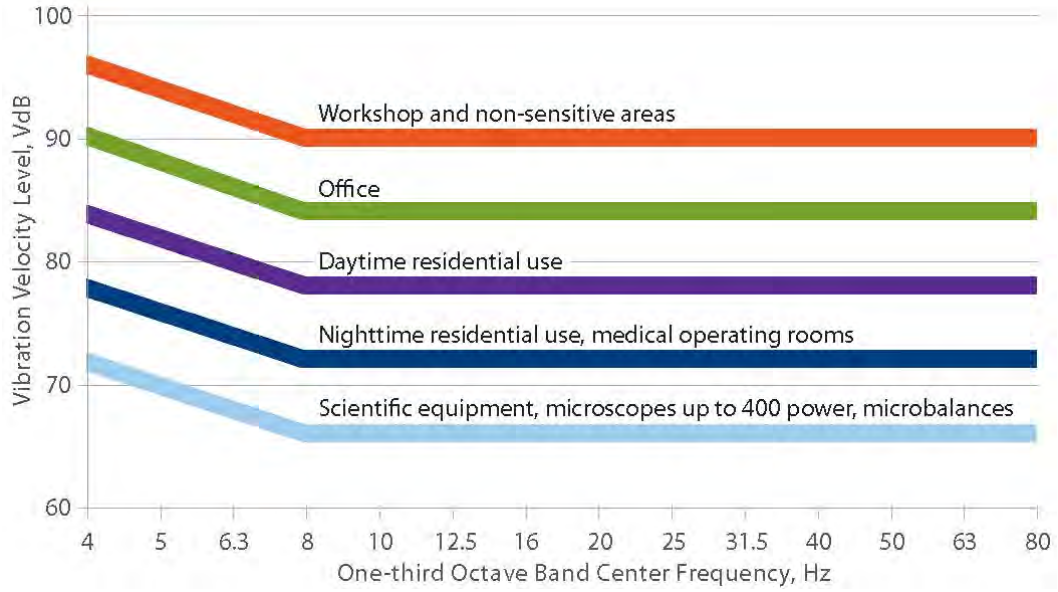
Note: Local noise ordinances can include different noise limits than state law.

Vibration

Vibration is an oscillatory (back-and-forth) motion that is often characterized by the velocity of the back-and-forth motions (measured in inches per second) and their frequency. Root-mean-square characterizes the average vibration velocity over time and may be reported on a logarithmic scale as vibration decibels (VdB), which is a good indicator of how people perceive vibration. Groundborne vibration generally occurs within a frequency range between approximately 1 and 200 hertz (Hz). The FTA groundborne vibration impact criteria are based on land use and train passage frequency. Typical vibration levels experienced in urban environments are shown in Figure 4.7-1.

Vibration is generated by motion at the wheel and rail interface, and is affected by rail condition or roughness, track geometry, vehicle suspension, train speed, rail substructure type and geometry, special trackwork, and soil conditions. Vibration from a passing train can move through the ground and transfer this motion to a building's foundation. This type of vibration does not damage buildings but can be annoying to building occupants. Detailed vibration analysis criteria consider the frequency (Hz) and velocity (VdB) of the back-and-forth motions of vibration. Figure 4.7-3 shows the detailed vibration impact criteria for land uses found within the project corridor (FTA 2006).

Short-term impacts caused by construction vibration are evaluated for their potential to cause cosmetic damage to nearby structures; however, the vibration levels are temporary and do not require an analysis based on the uses inside the structures. Also, most construction processes involve vibration well below the levels that could cause building damage, even if vibrations are felt.



Source: FTA 2006

Figure 4.7-3
FTA Detailed Vibration Analysis Impact Criteria

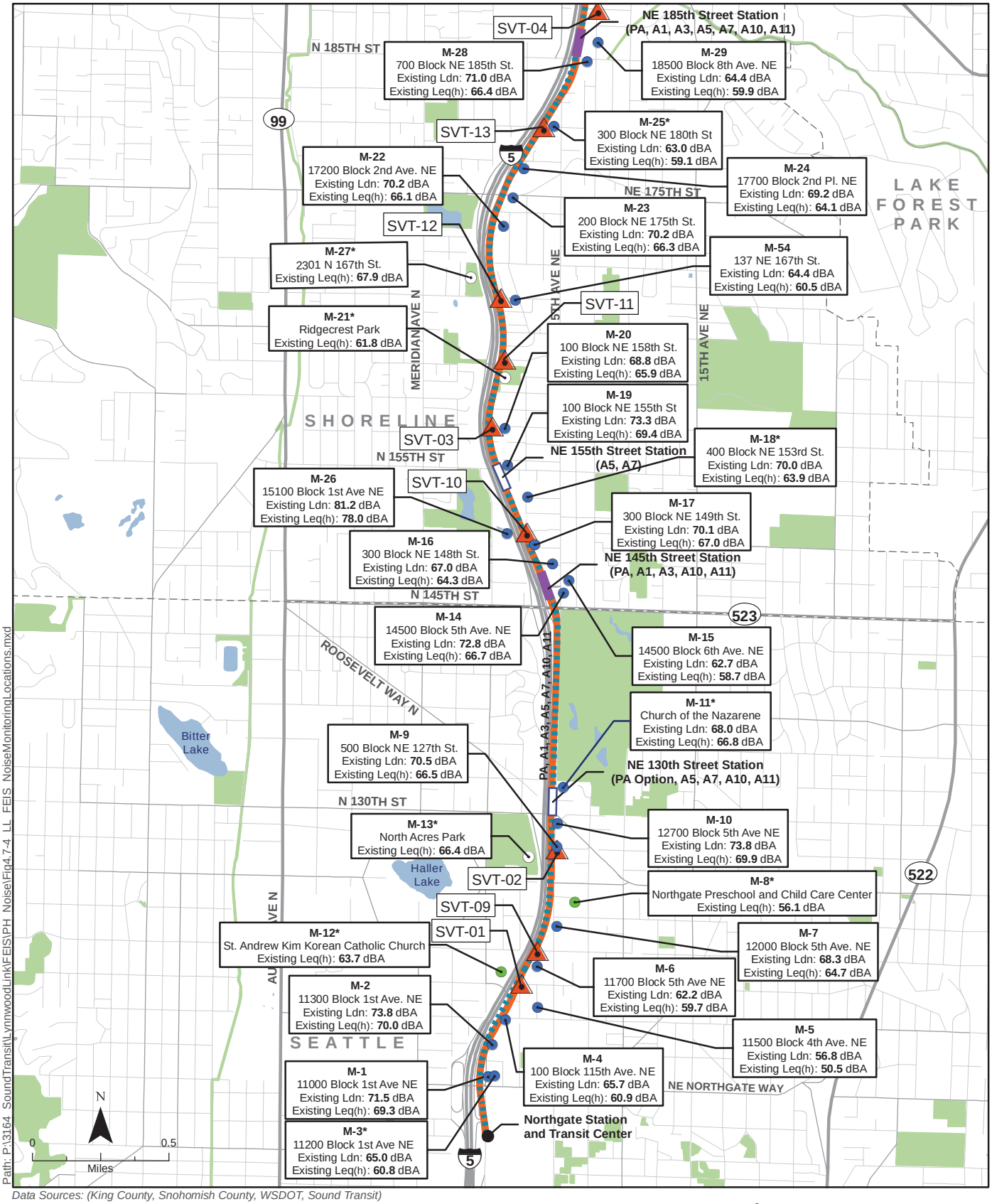
4.7.2 Affected Environment

To provide a baseline for comparing future project-generated noise and vibration levels, Sound Transit measured noise levels at 59 locations, and took vibration propagation measurements at 14 locations, as shown in Figures 4.7-4a and 4.7-4b.

Traffic on I-5 is the dominant noise source and traffic on local streets is the dominant vibration source in the project corridor. Existing noise walls reduce the freeway noise reaching neighboring residential areas through several areas of the corridor, particularly in Segment A in Seattle and Shoreline. While land use in the corridor is largely suburban, sound levels were typical of urban residential environments because of the proximity to I-5.

The majority of the project corridor includes single- and multifamily residential uses. Non-residential noise-sensitive uses in the corridor include schools and churches. Parks are noise sensitive when the primary use of the park is noise sensitive, but not when the primary use is active recreation. Uses in Scriber Creek Park have been classified as noise sensitive. There are no FTA Category 1 uses in the study area.

Two vibration-sensitive commercial uses, including one business that does laser etching and one for phonograph restoration, are at 20815 52nd Avenue West in Lynnwood.



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Noise Monitor Locations

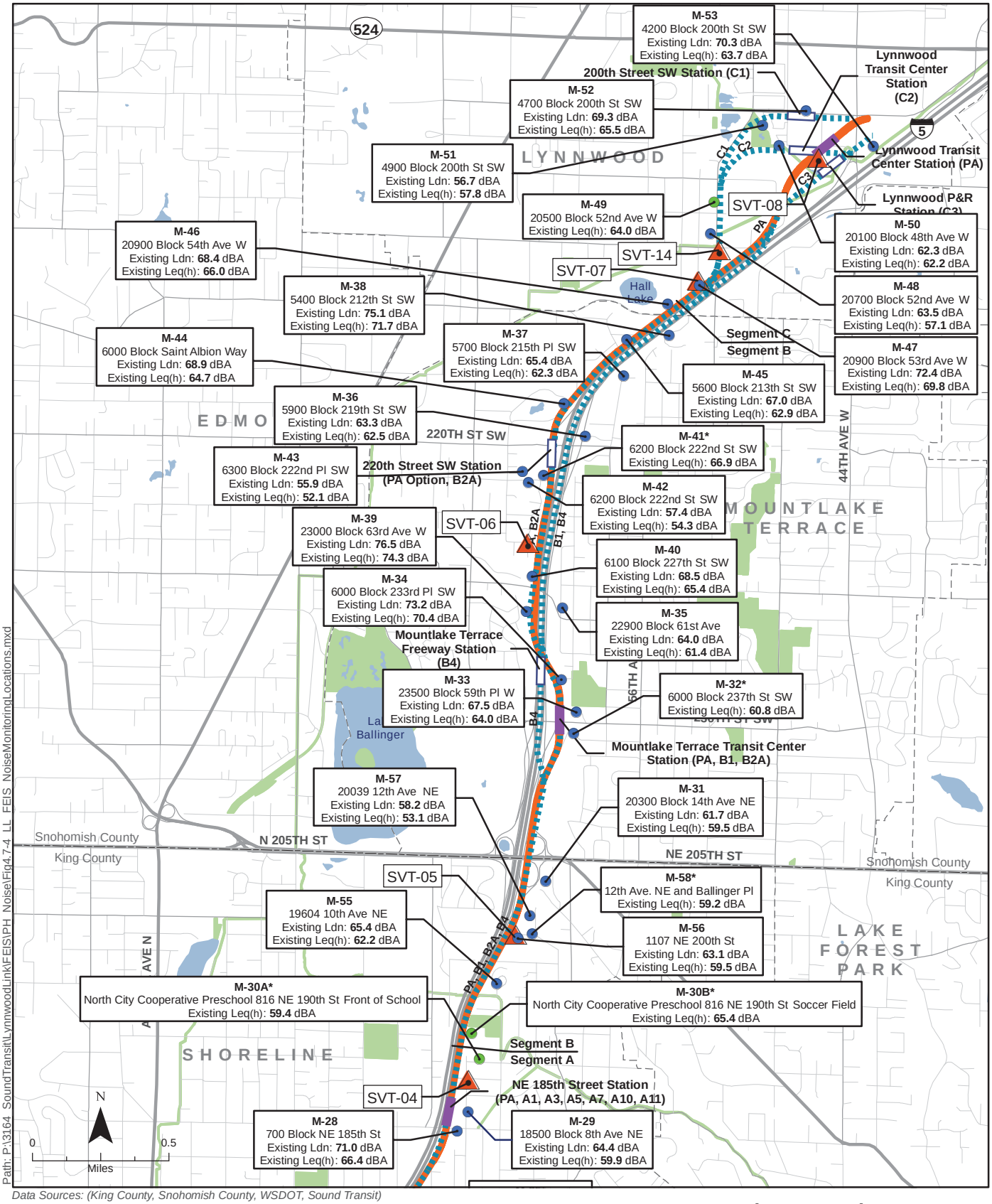
- FTA Land-use Category 2
- FTA Land-use Category 3
- General Ambient Noise Location
- Surface Vibration Test Location

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives

Notes: - Ldn values for residences and hotels only.
- Noise Monitor Locations displayed with an asterisk (M-32*) are short term (Leq only) monitoring sites.

Figure 4.7-4a
Noise Monitor and Surface Vibration Test Locations
Segment A

Lynnwood Link Extension



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Noise Monitor Locations

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- FTA Land-use Category 3
- General Ambient Noise Location
- Surface Vibration Test Location

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives

Notes: - Ldn values for residences and hotels only.
- Noise Monitor Locations displayed with an asterisk (M-32*) are short term (Leq only) monitoring sites.

Figure 4.7-4b
Noise Monitor and Surface Vibration Test Locations Segments B and C

Lynnwood Link Extension

4.7.3 Long-Term Impacts

The noise impact analysis considers noise from passenger service train operation, wheel squeal from curves, warning bells, and the effects of crossover switches. The alternatives do not include any at-grade crossings; therefore, warning devices would only be used for trains entering and leaving stations. In addition to assessing transit noise, the impact analysis includes areas where the project could change traffic noise levels experienced at sensitive receivers as a result of relocating existing highway noise walls, changing ramps, or removing existing structures to accommodate the construction and operation of light rail (primarily in Segment A). Relocated traffic noise walls are included in the project design as shown in Appendix F, Conceptual Plans.

The vibration analysis takes into account the location and structures for the guideway (at-grade or elevated), distance to sensitive receivers, soil conditions, and trackwork, such as switches.

Noise and vibration impacts identified in this EIS are those that would occur absent any mitigation; however, as detailed in Section 4.7.7, Sound Transit would provide mitigation for all vibration and moderate or severe noise impacts caused by the project. Residual impacts would occur where typical mitigation approaches could not reduce project noise exposure levels to below the moderate impact criteria. These locations may be eligible for sound insulation to further reduce interior noise levels. Figures 4.7-5a through 4.7-5d show the potential noise and vibration impacts along the project corridor for each light rail alternative.

For the Final EIS, the number of noise and vibration impacts associated with the light rail alternatives has increased since the Draft EIS because Sound Transit adjusted the assumed operating plan to reflect the potential need for four-car trains running during all operating hours (the Draft EIS assumed that two-car trains would be run after 6:30 pm).

No Build Alternative

Noise in the corridor would continue to be dominated by I-5 and would not be affected by the construction of a new transit project.

Segment A: Seattle to Shoreline

As shown in Table 4.7-3, moderate to severe noise impacts would occur at between 306 and 309 locations along the Preferred Alternative, while the other Segment A alternatives would affect 234 to 493 properties. Elevated sections would have the most noise impacts; however, the elevated sections would create fewer vibration impacts.

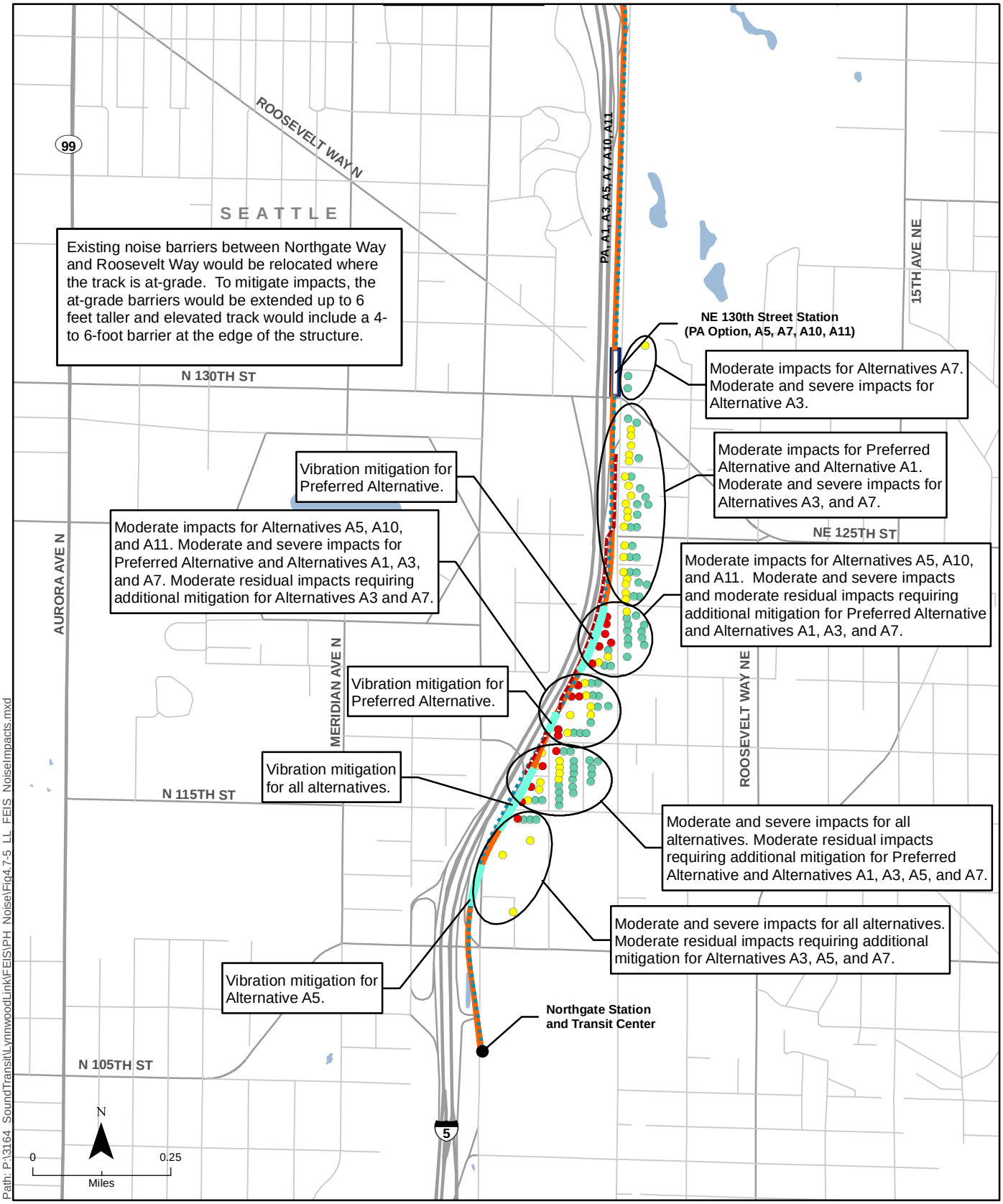


Figure 4.7-5a
Potential Noise and Vibration Impacts

Lynnwood Link Extension

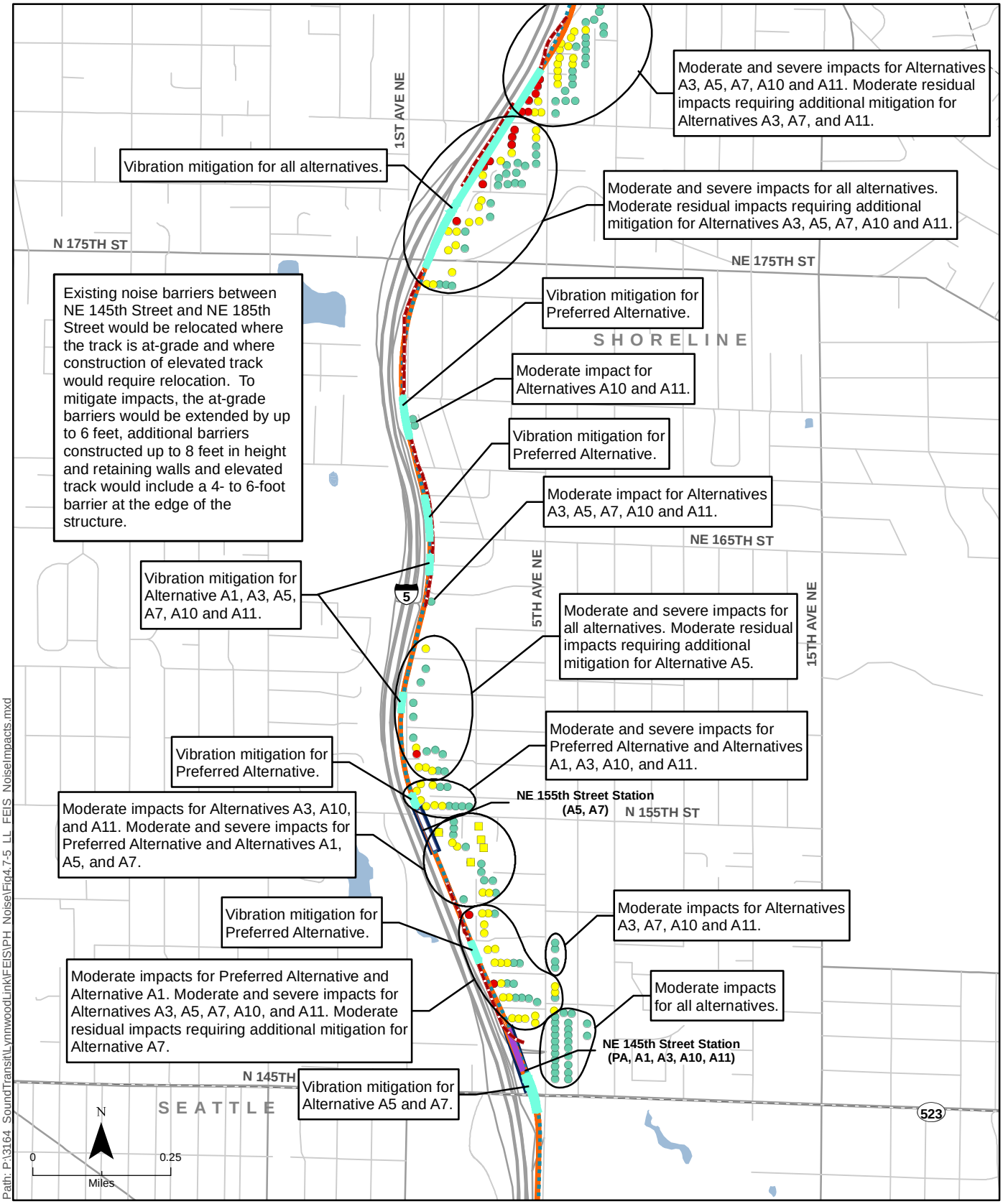


Figure 4.7-5b
Potential Noise and Vibration Impacts

Lynnwood Link Extension

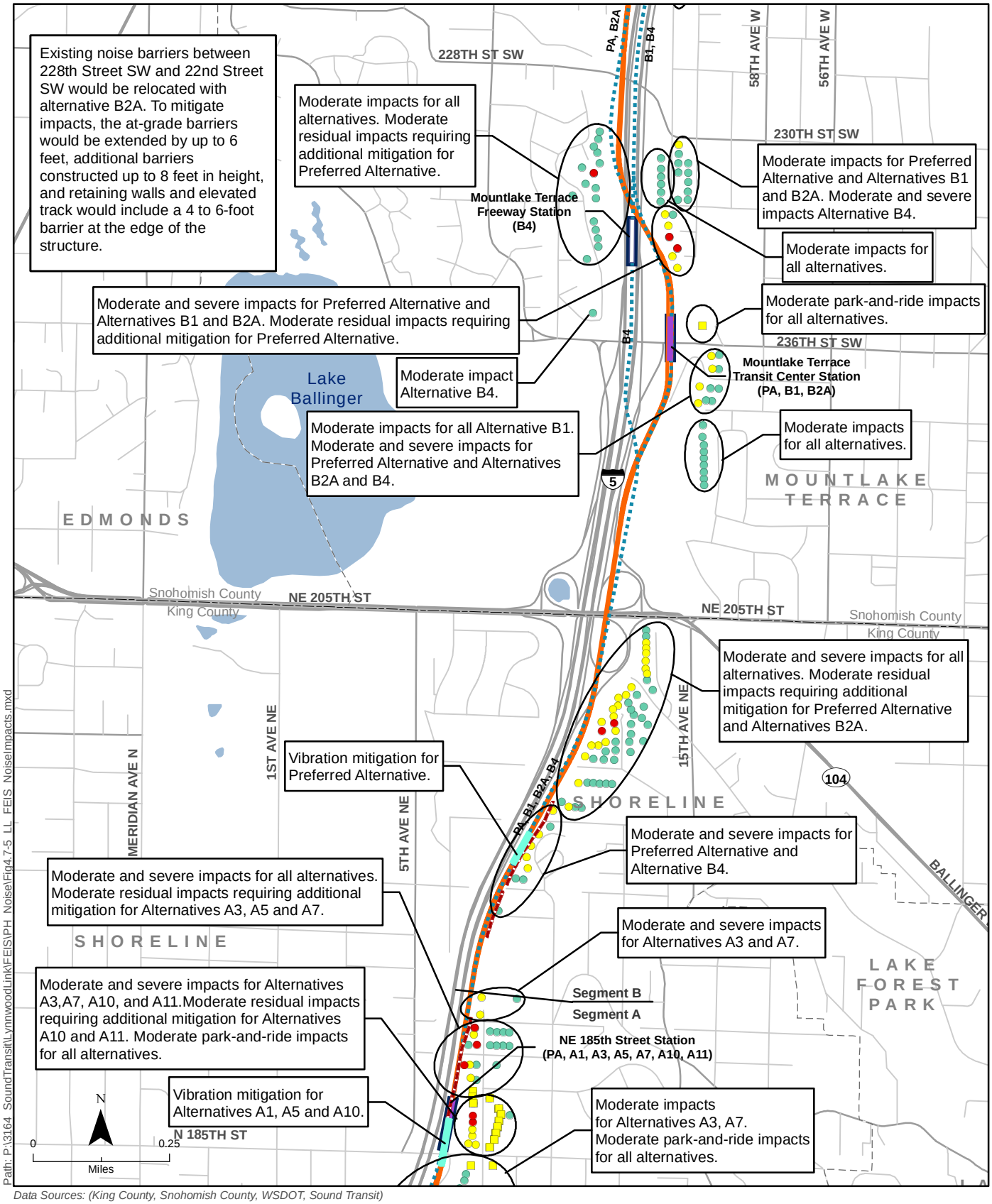


Figure 4.7-5c
Potential Noise and Vibration Impacts

Lynnwood Link Extension

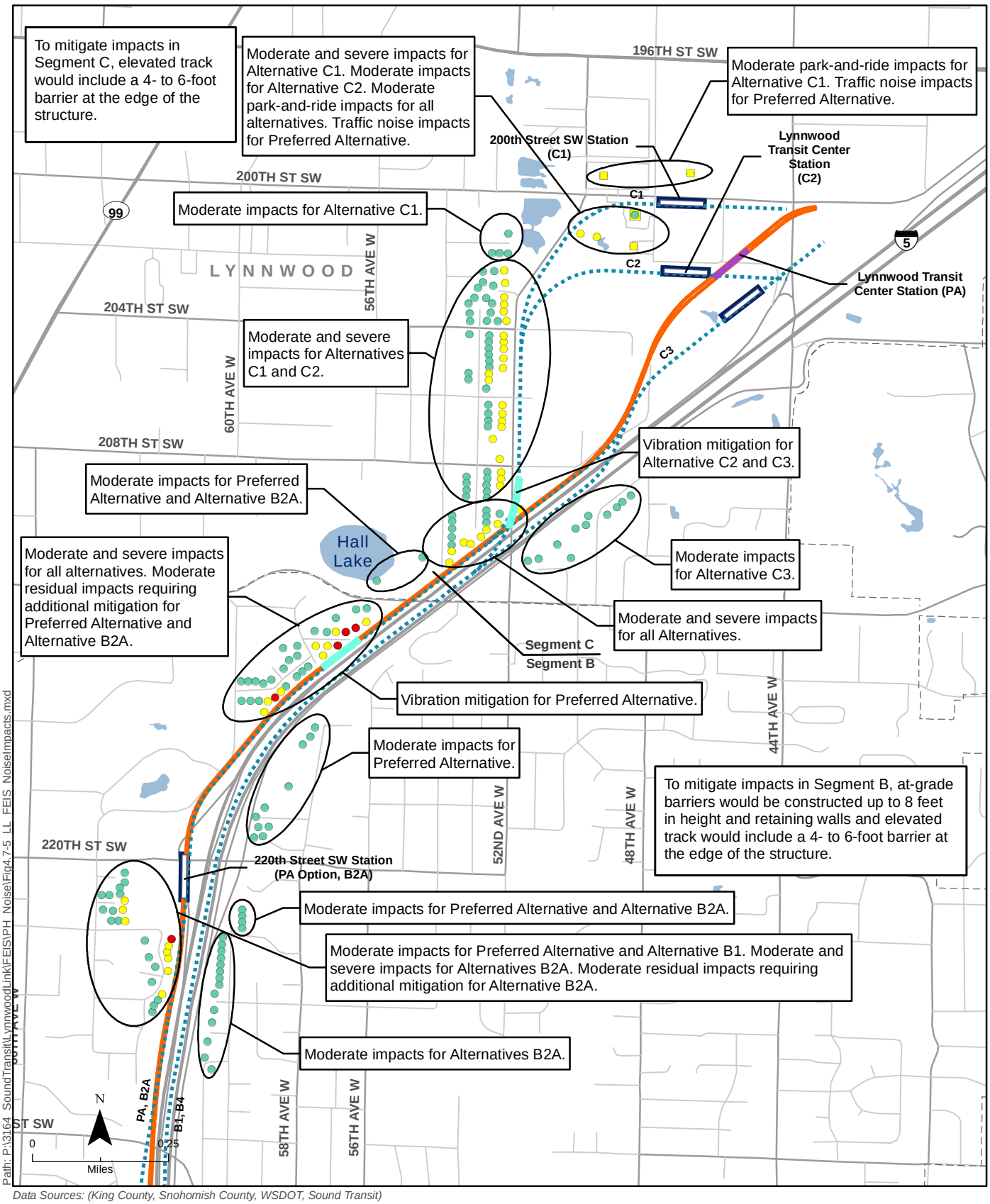


Figure 4.7-5d
Potential Noise and Vibration Impacts

Lynnwood Link Extension

Table 4.7-3 shows noise impacts for all alternatives from buses within the park-and-rides and off-street transfer points at the NE 185th Street Station. Noise levels at this location would not exceed the FTA impact criteria but would exceed local noise limits.

For all alternatives, the project would remove, relocate, and replace existing noise walls along I-5. The replacement noise-reduction treatments would be designed to provide at least as much noise reduction of highway noise as the walls being removed; where feasible, the walls also would reduce noise from light rail whether or not the light rail noise would otherwise create an impact.

Table 4.7-3. Number of Properties with Projected Transit Noise and Vibration Impacts in Segment A (Before/After Mitigation) [a,b]

Alternative	Moderate Noise Impacts	Severe Noise Impacts	Station and Park-and-Ride Access Impacts	Total Noise Impacts	Vibration Impacts
Preferred Alternative	181/0	112/0	13/0	306/0	27/0
Preferred Alternative With Shoreline Stadium Parking Garage Option	181/0	112/0	16/0	309/0	27/0
A1	190/0	29/0	15/0	234/0	9/0
A3	269/0	198/0	9/0	476/0	8/0
A5	181/0	105/0	17/0	303/0	16/0
A7	296/0	183/0	14/0	493/0	9/0
A10	161/0	110/0	12/0	283/0	14/0
A11	272/0	195/0	9/0	476/0	8/0

[a] Properties that are planned to be acquired are not included in the noise impact analysis.

[b] Noise levels that are not reduced to below the applicable criteria through source and path treatments (such as noise walls on the ground or noise barriers on the light rail guideway) may be eligible for sound insulation.

With the Preferred Alternative and other mostly at-grade alternatives, Sound Transit would need to relocate four to six sections of the existing noise walls on the east side of I-5 in Segment A. The elevated alternatives would relocate and rebuild sections as well. The Preferred Alternative would replace approximately 11,900 linear feet of noise wall (see Appendix F, Conceptual Plans) while the other alternatives would replace between 2,100 and 8,200 feet of noise wall. Most of the replacement walls would be east of their current locations and reduce both rail noise and traffic noise reaching the residents. For light rail sections that are elevated, some existing noise walls along I-5 could be maintained in place where they do not conflict with the construction of the elevated guideway, but there are areas where noise walls still would need to be replaced. Ground-level freeway noise walls would not reduce transit noise from an elevated structure; therefore, the elevated structures would have noise barriers incorporated into the guideway when transit noise levels exceed criteria at nearby properties.

Rail track curves within Segment A have more than a 1,000-foot radius; therefore, no wheel squeal is anticipated in Segment A. All of the Segment A alternatives have crossover switches, which are an additional source of wheel-track noise.

Vibration levels before mitigation would affect between 8 and 27 properties, with more properties affected by the Preferred Alternative and other mostly at-grade alternatives (Table 4.7-3).

Preferred Alternative: At-grade/Elevated with NW 145th and NE 185th Stations

The Preferred Alternative would cause noise impacts at single- and multifamily residences and two churches (the Seattle Latvian Evangelical Lutheran Church and the True Jesus Church/Resurrection Fellowship Church of God). Most of the impacts would occur between Northgate Way and NE 127th Street and in sections where the guideway is elevated, such as near NE 145th Street and NE 155th Street. Bus noise would impact residences near the NE 185th Street Station with either of the parking garages located west of I-5; however, there would be three additional impacts with the Shoreline Stadium parking garage option. Relocated noise walls would mitigate any traffic noise impacts associated with project changes requiring movement of the existing noise walls.

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Stations

Alternative A1 would cause transit noise impacts at single- and multifamily residences, mostly located between NE Northgate Way and NE 117th Street and in sections where the guideway is elevated, such as near NE 145th Street, NE 155th Street, and NE 175th Street. These impacts include residences near the NE 185th Street Station that would be affected by noise from buses accessing the station.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Stations

Alternative A3 would cause transit noise impacts at single- and multifamily residences, and two churches—the Seattle Latvian Evangelical Lutheran Church and the North Seattle Church of the Nazarene. Impacted receivers also include residences near the NE 185th Street Station park-and-ride. The longer stretches of elevated guideway are the primary reason that Alternative A3 would have more impacts than the mostly at-grade Preferred Alternative, which already would benefit from existing noise walls along at-grade sections.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Stations

Alternative A5 would cause transit noise impacts at single- and multifamily residences and one church—the True Jesus Church/Resurrection Fellowship Church

of God. Park-and-ride noise would affect residences near the NE 155th Street and the NE 185th Street Stations. Alternative A5 would cause more severe impacts than the Preferred Alternative in the area between NE Northgate Way and NE 117th Street because the alignment would be closer to residences. Compared with the Preferred Alternative, impacts would be greater at NE 145th Street because train speeds would be higher and fewer properties would be displaced without the NE 145th Street Station. Fewer impacts, however, would occur between NE 149th Street and NE 156th Street because train speeds would be lower near the NE 155th Street Station.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Stations

Alternative A7 transit noise impacts would be similar to Alternative A3, including park-and-ride noise impacts to residences near the NE 155th Street and NE 185th Street Stations. Compared to Alternative A3, fewer light rail noise impacts would occur in the vicinity of NE 155th Street, but more impacts would be experienced between NE 145th Street and NE 151st Street because of differences in speed, alignment, and the number of residential properties near the different station sites.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Stations

Alternative A10 transit noise impacts would be similar to Alternative A5, with slightly fewer impacts between NE 145th Street and NE 151st Street.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Stations

Transit noise impacts with Alternative A11 would be similar to Alternative A3, including park-and-ride noise impacts near the NE 185th Street Station.

Segment B: Shoreline to Mountlake Terrace

The Preferred Alternative in Segment B would cause between 202 and 217 moderate or severe noise impacts, depending on the station option, while other alternatives would cause 110 to 192 noise impacts (Table 4.7-4 and previous Figures 4.7-5c through 4.7-5d). These impacts include noise from rail operations and from bus service to the Mountlake Terrace Station.

Each Segment B alternative includes a park-and-ride at Mountlake Terrace Station, where noise limits are governed by state code, as previously shown in Table 4.7-2. Although noise from the park-and-ride would not exceed the FTA impact criteria, noise levels at four residences adjacent to the park-and-ride would exceed noise limits under state code as a result of modified bus service to the station. Only Alternative B2A would relocate existing noise walls in Segment B.

Table 4.7-4. Number of Properties with Transit Noise and Vibration Impacts in Segment B (Before/After Mitigation)[a,b]

Alternative	Moderate Noise Impacts	Severe Noise Impacts	Station and Park-and-Ride Access Impacts	Total Noise Impacts	Vibration Impacts
Preferred Alternative	148/0	65/0	4/0	217/0	3/0
Preferred Alternative with 220th Street Station South Option	133/0	65/0	4/0	202	3/0
B1	89/0	29/0	4/0	122/0	0
B2A	138/0	50/0	4/0	192/0	0
B4	73/0	33/0	4/0	110/0	0

[a] Properties that are planned to be acquired are not included in the noise impact analysis.

[b] Noise levels that are not reduced to below the applicable criteria through source and path treatments (such as noise walls on the ground or noise barriers on the light rail guideway) may be eligible for sound insulation.

Preferred Alternative: East Side to Mountlake Terrace Transit Center to West Side

The Preferred Alternative would affect single- and multifamily residences along the guideway and the Mountlake Terrace Preschool. Moderate park-and-ride noise impacts would occur near the Mountlake Terrace Station. An 800-foot radius curve south of the Mountlake Terrace Transit Center could generate wheel squeal. The options for a station south of 220th Street SW would result in fewer noise impacts than the Preferred Alternative with no 220th Street SW Station because of changes in vehicle speed and alignment in the vicinity of the station, and because the guideway to the station would shift west and displace five residences that would otherwise experience noise impacts with the Preferred Alternative.

Alternative B1: East Side to Mountlake Terrace Transit Center to Median

Transit noise levels would cause impacts to single- and multifamily residences, including park-and-ride noise impacts near the Mountlake Terrace Station. Alternative B1 would have fewer noise impacts than the Preferred Alternative because the alignment would follow the I-5 median for the majority of Segment B, relatively distant from noise-sensitive uses. An 800-foot radius curve south of the Mountlake Terrace Transit Center could generate wheel squeal.

Alternative B2A: East Side to Mountlake Terrace Transit Center to West Side

Lower train speeds near the 220th Street SW Station would reduce noise impacts compared with the Preferred Alternative. Sound Transit would replace approximately 900 linear feet of existing highway noise wall along I-5.

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median

Noise impacts would occur along the alignment and near the Mountlake Terrace Station. An 800-foot radius curve at 236th Street SW could generate wheel squeal.

Segment C: Mountlake Terrace to Lynnwood

The Preferred Alternative would have noise impacts at 115 properties, while other alternatives in Segment C would cause between 29 and 234 such impacts (Table 4.7-5 and previous Figure 4.7-5d).

All of the alternatives would reconfigure the existing park-and-ride at 200th Street SW and would modify the transit center operations. While noise from the park-and-ride would not exceed the FTA impact criteria, noise levels at up to 58 multifamily residential units adjacent to the park-and-ride would exceed City of Lynnwood noise limits before mitigation is applied. The Preferred Alternative would include roadway changes to improve access to the Lynnwood Transit Center that would cause traffic noise impacts to 23 residential units.

Because the alternatives would be elevated, there is limited potential for vibration impacts; however, Alternatives C1 and C2 could cause one or two vibration impacts, depending on the option, because the elevated guideway columns would be close to vibration-sensitive properties.

Table 4.7-5. Number of Properties with Transit Noise and Vibration Impacts in Segment C (Before/After Mitigation)[a,b]

Alternative	Moderate Noise Impacts	Severe Noise Impacts	Station and Park-and-Ride Access Impacts	Total Noise Impacts	Vibration Impacts
Preferred Alternative	26/0	8/0	81[c]/0	115/0	0
C1 (Option 1: Median)	159/0	24/0	51/0	234/0	2/0
C1 (Option 2: West of I-5)	152/0	23/0	51/0	226/0	1/0
C2 (Option 1: Median)	52/0	41/0	58/0	151/0	2/0
C2 (Option 2: West of I-5)	49/0	41/0	58/0	148/0	1/0
C3 (Option 1: Median)	16/0	1/0	12 - 58/0	29 - 75/0	0
C3 (Option 2: West of I-5)	13/0	8/0	12 - 58/0	33 - 79/0	0

[a] Properties that are planned to be acquired are not included in the noise impact analysis.

[b] Noise levels that are not reduced to below the applicable criteria through source and path treatments (such as noise walls on the ground or noise barriers on the light rail guideway) may be eligible for sound insulation.

[c] Twenty three multi-family residential units would be affected by traffic noise resulting from roadway changes to 200th Street SW related to access to the Lynnwood Transit Center.

Preferred Alternative: West Side to Lynnwood Park-and-Ride Station

The Preferred Alternative would have moderate or severe transit noise impacts to 34 noise-sensitive properties west of 52nd Avenue West and 81 additional noise impacts from roadway changes to improve access to the Lynnwood Transit Center and from bus access to the transit center.

Alternative C1: 52nd Avenue West to 200th Street SW

Transit noise impacts would occur at single- and multifamily residences adjacent to the guideway and one church (the River of Life Christian Center), including noise impacts from a revised bus facility at the Lynnwood Park-and-Ride. An 800-foot-radius curve between Cedar Valley Road and 200th Street SW could cause wheel squeal. With Option 1 (median), impacts would occur at an additional eight residences along I-5 and 52nd Avenue West compared with Option 2 (west of I-5) because Option 2 would operate at a lower speed through the curve onto 52nd Avenue West. Option 2 also includes an 800-foot radius curve as the guideway turns from I-5 to 52nd Avenue West, which may generate wheel squeal.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center Station

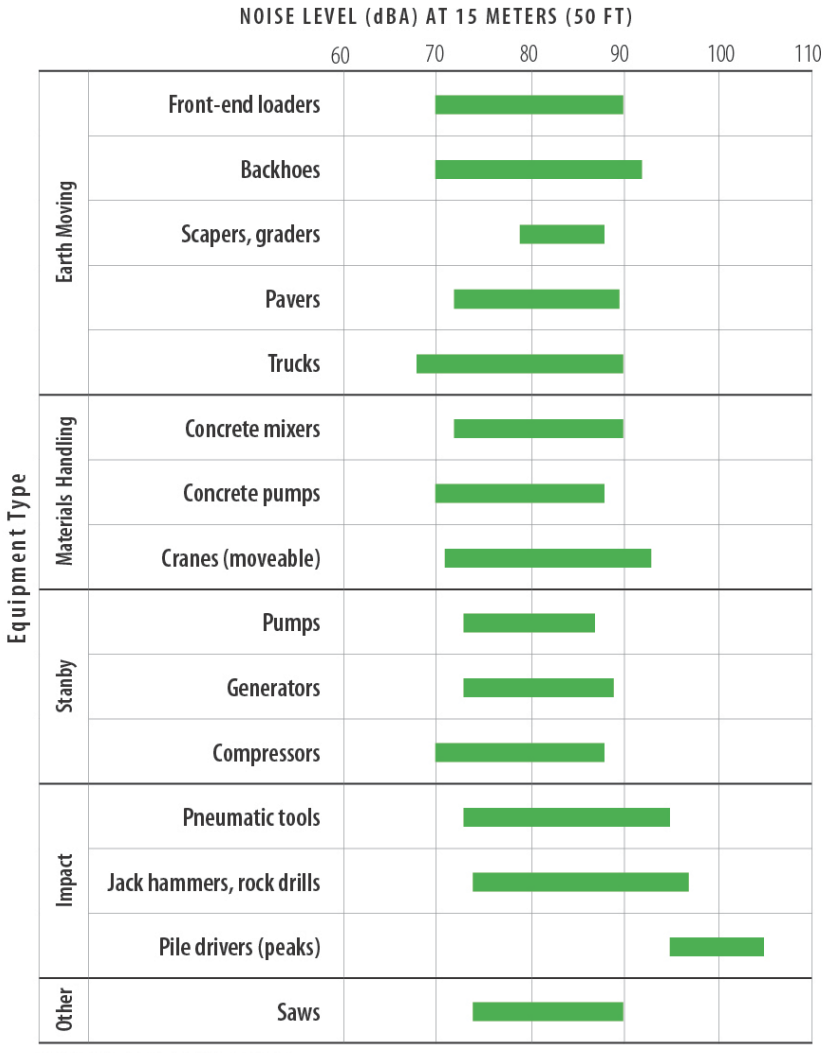
Alternative C2 would pass near fewer noise-sensitive properties than Alternative C1, although its initial section along 52nd Avenue West is the same. Properties that would experience transit noise impacts include single- and multifamily residences adjacent to the guideway and one church (the River of Life Christian Center). These impacts include residences affected by park-and-ride noise. Alternative C2 has the same two options for departing from I-5 as Alternative C1, with Option 1 (median) having more impacts than Option 2 (west of I-5). As with Alternative C1, Option 2 also includes an 800-foot radius curve as the guideway turns from I-5 to 52nd Avenue West, which may generate wheel squeal.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride Station

Alternative C3 would have noise impacts similar to the Preferred Alternative. Option 1 (median) would have fewer impacts because the alignment would be located farther from residences along 52nd Avenue West and 53rd Avenue West. These impacts include residences affected by park-and-ride noise. Alternative C3 would not generate wheel squeal because it does not include any curves of less than 1,000 feet. With Alternative C3, there are two options for the Lynnwood Transit Center. Option 1, which maintains the current transit center configuration, would create noise impacts at 58 multifamily residential units, while Option 2, which would reconfigure the transit center around the light rail station, would create noise impacts at 12 multifamily residential units.

4.7.4 Construction Impacts

Construction-related noise, which is regulated by state or local ordinances, would be produced by earthmoving equipment, pneumatic tools, generators, concrete pumps, and similar equipment (Figure 4.7-6). While most construction activity would be completed during daytime hours, some activities, including any that would require lane closure of major roadways, including I-5, likely would be completed at night and would need noise permits or variances, as required by local ordinance. Construction impacts would be similar for all alternatives, but vary in time and location of the noise and vibration. Construction noise and vibration are evaluated in the *Noise and Vibration Technical Report*.



Source: EPA, 1971 and WSDOT, 1991.

Figure 4.7-6
Typical Construction Equipment Noise Levels

Construction would occur in several phases. During the loudest phases of work, which include demolition, grading, structure erection, and track installation, Leq noise levels would be approximately 88 dBA at 50 feet from the construction, with shorter work periods reaching 94 dBA. Each phase of guideway construction would occur over a short period in each area, with construction activities progressing from multiple starting points along the alignment. Areas requiring considerable demolition, grading, and construction activity would experience the longest periods of disruption.

Common sources of vibration during construction activities include jackhammers, pavement breakers, hoe rams, bulldozers, backhoes, and soil compactors. Pavement breaking and soil compacting would likely produce the highest levels of vibration.

Elevated sections would generally be constructed on drilled-shaft foundations, which generate less noise and vibration than driving piles. Limited pile driving could be required for some foundations and for retaining wall construction. Depending on soil conditions, pile driving could produce Lmax noise levels reaching 105 dBA at 50 feet, with vibration levels reaching a peak-particle velocity of 0.5 inch per second. No pile driving is anticipated within 80 feet of buildings. Pile driving conducted at more than 80 feet from buildings in the corridor would not damage buildings but could still cause temporary annoyance.

Segment A Alternatives

There are many single- and multifamily residences along the Segment A alternatives. At adjacent residences, maximum noise levels exceeding 80 dBA Lmax could occur for short periods of the day during some construction activities. In locations where the noise walls would conflict with the light rail tracks or guideway, replacing the noise walls could generate short periods of construction noise and increased traffic noise until the new walls are in place. Unless the replacement noise walls can be constructed prior to removal of the existing walls, and if temporary barriers are not practical, traffic noise levels would increase temporarily between approximately 5 and 10 dBA Leq. The affected noise wall locations are primarily in Segment A. In Segment A, the area that would experience the most guideway construction noise is between NE Northgate Way and North 117th Street. Station construction would produce similar noise levels as guideway construction, but constructing the station would occur over a longer period in the same location. The Preferred Alternative and Alternative A1 would widen or reconstruct the NE 185th Street bridge and include construction both east and west of I-5. Alternatives A5 and A7 would include the construction of a station and multi-story parking facility at NE 155th Street, which could result in a longer period of construction than alternatives without stations at this location. The NE 185th Street Station options with a parking garage

are more complex than options with surface parking and would have longer construction periods.

Guideway and station construction would not cause vibration damage to adjacent buildings unless vibratory pile driving occurs within 80 feet or vibratory rollers are used within 40 feet of sensitive structures. Vibration could cause annoyance at locations near stations where construction activity would occur over a longer period than that for guideway construction.

Segment B Alternatives

In Segment B, the area south of Ballinger Way would more likely experience guideway construction noise, as would the west side of I-5 in the western alignment for the Preferred Alternative and Alternative B2A. Alternatives B1 and B4 follow the median of I-5 for the majority of Segment B; therefore, construction noise with those alternatives would be farther from residences. Activities and noise levels would be similar to Segment A. The types of vibration impacts expected with any of the alternatives would be similar to Segment A.

Segment C Alternatives

In Segment C, the major noise sources would be associated with foundation, column, and guideway erection rather than grading activity and retaining wall construction. Alternatives C1 and C2 would cause more construction noise disruption than the Preferred Alternative and Alternative C3 because they are closer to residences. A crossing of the Scriber Creek stream and wetland complex could involve pile driving for the Preferred Alternative and Alternatives C2 and C3, which would be a source of temporary noise and vibration. Noise levels and typical vibration impacts would be similar to Segment A.

4.7.5 Indirect Impacts

Indirect effects of the project on noise and vibration could include noise or vibration caused by changes in development or travel patterns influenced by the project.

The project would lessen the future transportation demand on the roadway system compared to the No Build Alternative, but with or without the light rail project, traffic volumes and traffic noise would still be higher than today.

Transit-oriented development facilitated by the additional transportation options and accessibility provided by the project would generate noise consistent with the land use developed in accordance with local comprehensive plans and zoning regulations.

4.7.6 Cumulative Impacts

Previous projects have introduced noise and vibration sources in the corridor. The greatest existing source of noise in the corridor is I-5 and it will continue to be the major source. Areas that do not have existing or planned noise walls could experience increased traffic noise levels. Similarly, local roads will continue to be a source of noise or vibration in the corridor. Future expansion of I-5 and other transportation facilities envisioned in *Transportation 2040* (PSRC 2010a), including the Northgate Link Extension currently under construction, may contribute to future noise and vibration in the corridor.

In addition to the facilities identified in *Transportation 2040* (PSRC 2010a), the Sound Transit OMSF, with a site alternative in Lynnwood, could be an additional source of noise or vibration in the area; Sound Transit has identified a Bellevue site as the Preferred Alternative for that project. If constructed in Lynnwood, the OMSF would remove light industrial and commercial properties and replace them with the light rail guideway, surface tracks, and buildings, which could generate localized noise and vibration impacts. The OMSF would be farther from the closest sensitive receivers than would some of the Segment C light rail alternatives. In any event, in accordance with Sound Transit noise mitigation policy, severe and moderate impacts would be mitigated for both projects, and no cumulative effects are expected. If constructed concurrently with the Lynnwood Link Extension, construction of the OMSF could contribute additional temporary noise and vibration impacts.

The Edmonds School District's master plan includes developing a bus base and support services center in the same area. A large fleet of buses deployed from that site could cause higher noise levels for the area.

Some areas, such as in Lynnwood or Mountlake Terrace, may be redeveloped based on current local plans, placing more residential units or other noise-sensitive properties near the freeway or near the light rail project. Lynnwood Link Extension would be designed to avoid or mitigate noise impacts on existing noise-sensitive properties, but developers would need to consider light rail operations and ambient noise levels in the planning and design of future projects.

Because Sound Transit is mitigating all noise and vibration impacts (as defined by exceeding applicable FTA, state, or local criteria) created by the project, the project would not increase cumulative noise or vibration impacts, considering other current or future actions in the project area.

4.7.7 Potential Mitigation Measures

Depending on the combination of segment alternatives selected, if mitigation were not provided, the project would cause light rail noise impacts at 342 to 867 locations, local roadway access to park-and-rides and bus access noise impacts at 25 to 102

locations, and vibration impacts at 8 to 32 locations. However, Sound Transit will mitigate the as detailed in Table 4.7-6, are consistent with Sound Transit's Light Rail Noise Mitigation Policy (Motion No. M2004-08). The FTA manual also defines when mitigation is needed and bases this on the impact's severity, with severe impacts requiring the most consideration. Mitigation requirements for each alternative are summarized in Table 4.7-6; the specific locations and types of mitigation are detailed in the *Noise and Vibration Technical Report*.

When source mitigation measures, noise walls, or sound barriers are infeasible or not entirely effective at reducing noise levels below the FTA impact criteria or applicable requirement, then residential sound insulation would be evaluated and offered at properties where the existing building does not already achieve a sufficient exterior-to-interior reduction of noise levels.

All rail track curves of less than 1,000-foot radius near noise-sensitive land uses would be designed to accommodate a track lubrication system that Sound Transit would install should wheel squeal occur during operation.

Vibration impacts would be mitigated by design measures that reduce the amount of vibration energy transferred from passing trains into the ground. The use of a tire-derived aggregate (shredded tires) in a layer below the track ballast is an effective measure to reduce vibration transfer; other measures, such as ballast mats, a resiliently supported track, high-compliance rail fasteners, or column isolation, are also available and may be appropriate in some locations, such as on structures. Specific vibration-isolation designs to mitigate impacts to below the FTA criteria would be determined during final design.

Additional noise and vibration is generated at rail track cross-overs. Special trackwork, such as a movable-point or spring frog (a device that allows two rails to cross), would be used in place of a conventional frog where the cross-over would otherwise cause a noise or vibration impact.

During final design, all predicted noise and vibration levels and mitigation measures will be reviewed in further detail. If equivalent mitigation can be achieved by a less costly means or if the final design analysis shows no impact, then the mitigation measure may be modified or eliminated. Further noise mitigation will be provided if, after operations commence, noise impacts occur for which mitigation is deemed necessary and appropriate under FTA noise standards.

Table 4.7-6. Summary of Mitigation Measures for Noise Impacts

Alternative	Relocation of Noise Walls Required for Project Construction	Mitigation for Light Rail Noise Impacts after Relocating Noise Walls	Mitigation for Station and Park-and-Ride Access Impacts
Segment A Alternatives			
Preferred Alternative	Approximately 12,250 feet of relocated noise walls along I-5	Approximately 9,700 feet of additional noise walls. Insulation offered to 8 units.	Approximately 530 feet of noise walls at NE 185th Street Station.
A1	Approximately 7,900 feet of relocated noise walls along I-5	Approximately 11,200 feet of additional noise walls.	Approximately 530 feet of noise walls at NE 185th Street Station.
A3	Approximately 2,100 feet of relocated noise walls along I-5	Approximately 17,300 feet of additional noise walls. Insulation offered to 27 units.	Insulation offered to 9 residences at NE 185th Street Station.
A5	Approximately 8,200 feet of relocated noise walls along I-5	Approximately 11,000 feet of additional noise walls. Insulation offered to 8 units.	Approximately 200 feet of noise walls and insulation offered to 10 residences at NE 185th Street Station.
A7	Approximately 2,100 feet of relocated noise walls along I-5	Approximately 17,400 feet of additional noise walls. Insulation offered to 29 units.	Insulation offered to 9 residences at NE 185th Street Station.
A10	Approximately 8,100 feet of relocated noise walls along I-5	Approximately 11,500 feet of additional noise walls. Insulation offered to 3 units.	Approximately 200 feet of noise walls and insulation offered to 10 residences at NE 185th Street Station.
A11	Approximately 3,400 feet of relocated noise wall along I-5	Approximately 17,100 feet of additional noise walls. Insulation offered to 28 units.	Insulation offered to 9 residences at NE 185th Street Station.
Segment B Alternatives			
Preferred Alternative	None	Approximately 16,975 feet of additional noise walls. Insulation offered to 9 units.	Approximately 400 feet of noise walls at Mountlake Terrace Station.
Preferred Alternative – 220th Street Station Option	None	Approximately 16,975 feet of additional noise walls. Insulation offered to 9 units.	Approximately 400 feet of noise walls at Mountlake Terrace Station.
B1	None	Approximately 20,800 feet of additional noise walls.	Approximately 400 feet of noise walls at Mountlake Terrace Station.
B2A	None	Approximately 15,000 feet of additional noise walls. Insulation offered to 3 units.	Approximately 400 feet of noise walls at Mountlake Terrace Station.
B4	None	Approximately 20,000 feet of additional noise walls.	Approximately 400 feet of noise walls at Mountlake Terrace Station.
Segment C Alternatives			
Preferred Alternative	None	Approximately 3,960 feet of additional noise walls.	Insulation offered to 58 residential units. Approximately 1,275 feet of noise walls or insulation offered to an additional 23 residential units to address traffic noise.
C1, either option	None	Approximately 7,200 feet of additional noise walls.	Insulation offered to 51 residential units.
C2, either option	None	Approximately 6,600 feet of additional noise walls.	Insulation offered to 58 residential units.
C3, either option	None	Approximately 1,700 feet of additional noise walls.	Insulation offered to between 12 and 58 residential units.

Segment A Alternatives

In Segment A, most of the at-grade alignments near residential areas would be protected by noise walls that would be relocated from their existing locations along I-5 to outside of the track alignment as part of the project design. Replacement noise walls would be between 6 and 24 feet in height to mitigate the combination of projected I-5 traffic noise levels resulting from the removal of the existing noise walls, changes to ramps and shielding, and light rail noise introduced by the project to below the impact criteria. Sound Transit would incorporate a 4-foot-tall to 8-foot-tall barrier at the edge of the structure closest to the noise-sensitive uses to mitigate most noise impacts from light rail operating on an elevated structure. Mitigation would reduce noise levels at nearby receivers, including areas already below applicable impact criteria.

Sound Transit would provide sound insulation at up to eight residences with the Preferred Alternative, none for Alternative A1, and at up to 38 residences with Alternatives A3, A5, A7, A10, or A11. Sound insulation would be provided where other standard measures that mitigate outdoor noise impacts are not completely effective.

The project would include vibration-reduction measures in several locations to reduce vibration levels to below FTA impact criteria.

Mitigation for impacts from buses and cars operating in the NE 185th Street park-and-rides would include noise barriers along the edge of the facility, sound insulation, or revising the design of the facility to move access driveways and bus loading areas farther from residences.

Segment B Alternatives

In Segment B, the project would include at-grade noise walls to reduce impacts on adjacent receivers for at-grade sections of the alignment. For the Preferred Alternative, the walls would range between 4 and 10 feet above the track height, or from the top of retaining walls built as part of the project. Walls for the other alternatives would range from 4 feet above retaining walls to at least 8 feet above track height. Alternative B1 would have the most walls, including 4-foot to 6-foot walls along both sides of the track in some locations to reduce noise from operation in the median of I-5 to below the FTA impact criteria.

The elevated sections of guideway would require additional mitigation. Sound Transit would incorporate a 4-foot-tall to 6-foot-tall barrier at the edge of the elevated guideway to reduce noise to below the FTA criteria. This would reduce noise levels at nearby properties, including those where levels would already be below the impact criteria. Sound Transit would provide sound insulation to nine residences with the Preferred Alternative and three residences with Alternative B2A.

The project would include vibration-reduction measures in several locations to reduce vibration levels to below FTA impact criteria.

For all alternatives, mitigation measures, such as a noise wall along the eastern edge of the facility, would alleviate noise impacts from buses serving the Mountlake Terrace Station park-and-ride.

Segment C Alternatives

In Segment C, all alternatives would be built on an elevated structure. Sound Transit would incorporate a 4-foot-tall to 6-foot-tall barrier at the edge of the structure to reduce noise caused by the elevated guideway to below FTA criteria.

Sound Transit would mitigate impacts from buses and passenger vehicles operating within the Lynnwood Transit Center Park-and-Ride with sound insulation of up to 58 residences for all alternatives, or through circulation or operational changes, such as revising the design for bus access. Roadway changes to improve access to the Lynnwood Transit Center as part of the Preferred Alternative would cause noise impacts at 23 multi-family residences that would be mitigated with noise walls along 200th Street SW and with sound insulation.

The project would include vibration-reduction measures in several locations to reduce vibration levels to below FTA impact criteria. Sound Transit would include resilient supports and column isolation for Alternatives C1 and C2 to avoid vibration impacts to businesses at 20815 52nd Avenue West in Lynnwood.

Construction

Sound Transit would reduce construction noise and vibration impacts with operational methods and scheduling, equipment choice, and acoustical treatments. In locations where existing noise walls must be relocated, the relocation would be completed as early in the construction process as practical so that the relocated walls would reduce noise from the ongoing construction activities. When required, Sound Transit or its contractor would seek the appropriate noise variance from the local jurisdiction. Construction noise and vibration control mitigation will include the following measures, as necessary, to meet required noise limits and minimize vibration:

- Install construction site noise barrier or noise wall by noise-sensitive receivers where feasible and appropriate.
- Use smart backup alarms during nighttime work that can be automatically adjusted, or lower the alarm level or tone based on the background noise level, or switch off back-up alarms and replace with spotters.
- Use low-noise emission equipment.

- Implement noise-deadening measures for truck loading and operations.
- Monitor and maintain equipment to meet noise limits.
- Use lined or covered storage bins, conveyors, and chutes with sound-deadening material.
- Use acoustic enclosures, shields, or shrouds for equipment and facilities.
- Install high-grade engine exhaust silencers and engine-casing sound insulation.
- Prohibit aboveground jackhammering and impact pile driving during nighttime hours.
- Minimize the use of generators or use whisper-quiet generators to power equipment.
- Limit use of public address systems.
- Use movable noise barriers at the source of the construction activity, where appropriate.
- Limit or avoid noisy or high vibration activities during nighttime hours.
- Demolish existing structures near vibration-sensitive receivers with methods that do not cause impact forces against the buildings or near them.
- Minimize use of vibratory soil compactors and vibratory hammers near vibration-sensitive receivers.
- Use oscillatory pile-casing techniques where appropriate.
- Avoid using variable-frequency vibratory hammers in dense residential areas, such as around the NE 130th Street, NE 145th Street, NE 155th Street, and NE 185th Street Stations.
- Avoid conventional vibratory hammers; an alternative to conventional vibratory pile drivers is a resonance-free vibrator or variable eccentric moment vibrator.

4.8 Ecosystem Resources

An ecosystem is defined by the interaction between plants, animals, microorganisms, and the physical environment in which they live. Ecosystems are made up of living organisms, including humans, and the areas they inhabit. This section addresses the ecosystem components—aquatic species and habitat; vegetation, terrestrial wildlife, and wildlife habitat; and wetlands—in the vicinity of the Lynnwood Link Extension alternatives. The *Ecosystem Resources Technical Report* has detailed background information about the methods, affected environment, species, and impacts discussed in this section.

4.8.1 Affected Environment

The study area for ecosystems includes all species and habitat within 200 feet of the project alternatives or features, as well as areas up to 100 feet upstream and 300 feet downstream of any sites where any of the proposed alignments would cross a stream.

Aquatic Species and Habitat

The aquatic resources in the study area are primarily in urban areas, and most of the aquatic habitats have already been changed by development. While conditions vary from stream to stream, the greatest changes are in areas with the most urban development, including roads, freeways, and urban centers. Flows from some of the smaller streams and headwater reaches are channeled through pipes and ditches, thereby changing the natural flow patterns and processes such as groundwater recharge.

Three stream systems drain the study area: Thornton Creek, McAleer Creek, and Scriber Creek (Figures 4.8-1a through 4.8-1c). All three streams drain to Lake Washington. Many species of native and introduced fish, including species listed under the Endangered Species Act (ESA), inhabit Lake Washington and its tributary streams. These waterways also provide essential fish habitat for federally managed species; such habitat is protected under the Magnuson-Stevens Fishery Conservation and Management Act. The streams, stream habitats, and fish species that occur in the study area are described in greater detail in the *Ecosystem Resources Technical Report.*

In addition to Thornton Creek, McAleer Creek, and Scriber Creek, the Lynnwood Link Extension study area includes five tributaries to those streams (Table 4.8-1).

Thornton Creek supports populations of several salmonid fish species, although most are prevented from using stream habitats in the study area because downstream barriers to fish passage are present. The salmonid species most likely to use Thornton Creek stream habitats in the study area are resident cutthroat trout (*Oncorhynchus clarkii*) and rainbow trout (*O. mykiss*). Observers have found steelhead trout (the anadromous, or ocean-going, form of rainbow trout) in Thornton Creek upstream of the study area, but it is not known whether steelhead spawn there. The quality of Thornton Creek's in-stream habitat and riparian habitat within the study area is considered poor, based on channel morphology, sediment regime, existing physical habitat conditions, and degraded riparian habitat conditions.

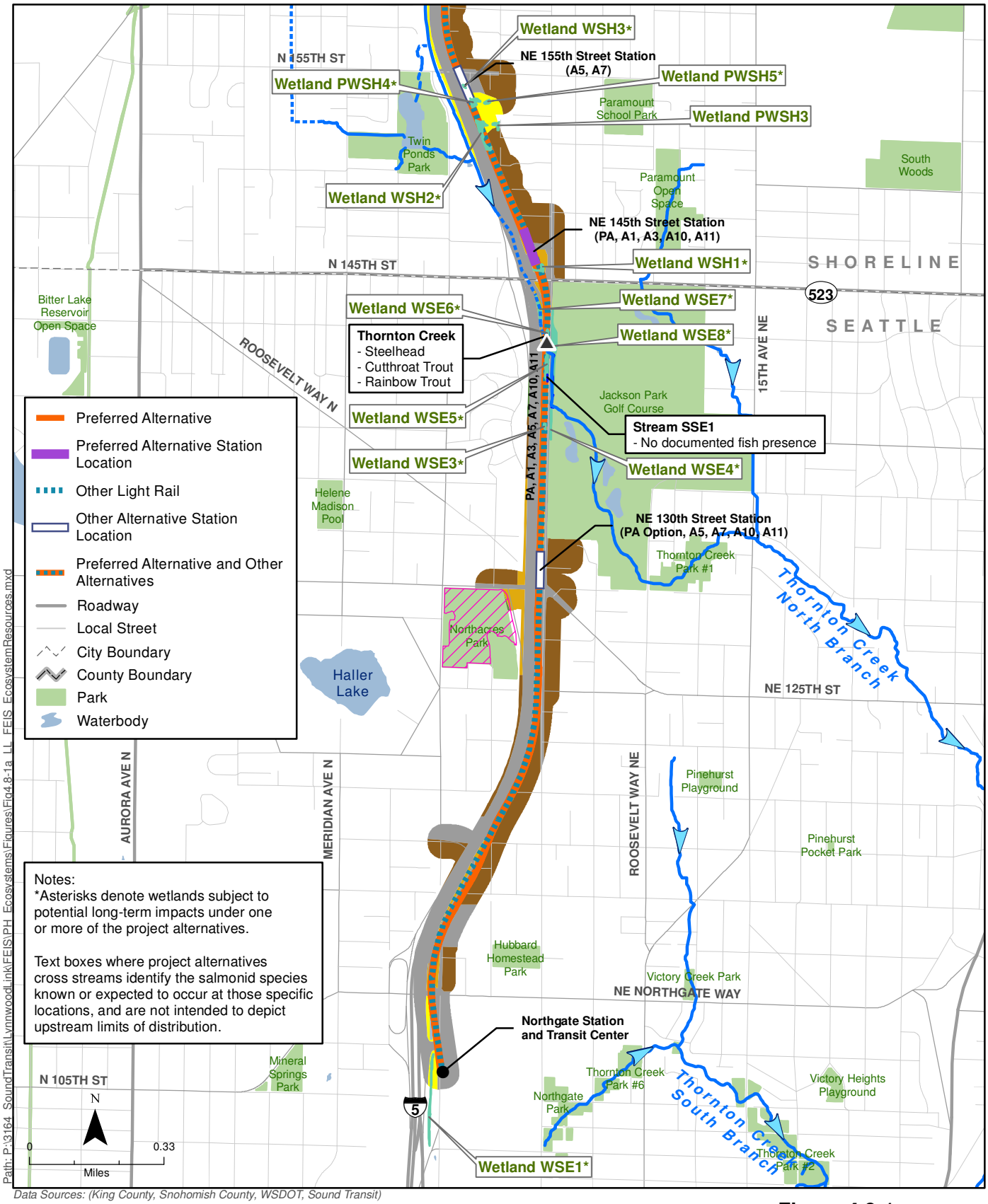
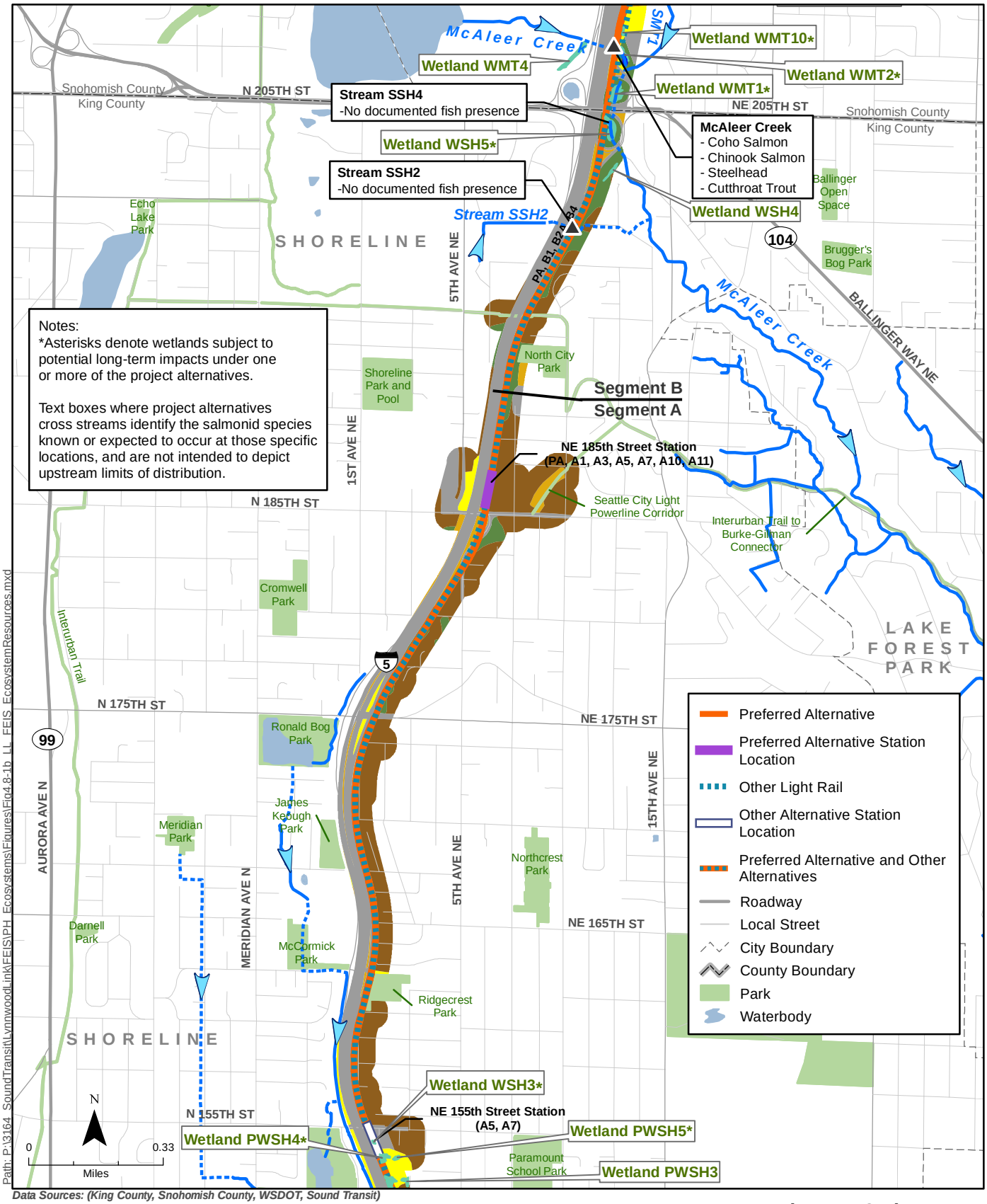


Figure 4.8-1a
Ecosystem Resources

Lynnwood Link Extension



Stream Crossing
Open Stream
Piped Stream
Flow Direction

WDFW Priority Habitat
Wetland*
Stream

Land Cover Types in the Study Area

Forest
Shrub
Maintained Vegetation
Residential
Urban
Open Water

Figure 4.8-1b
Ecosystem Resources

Lynnwood Link Extension

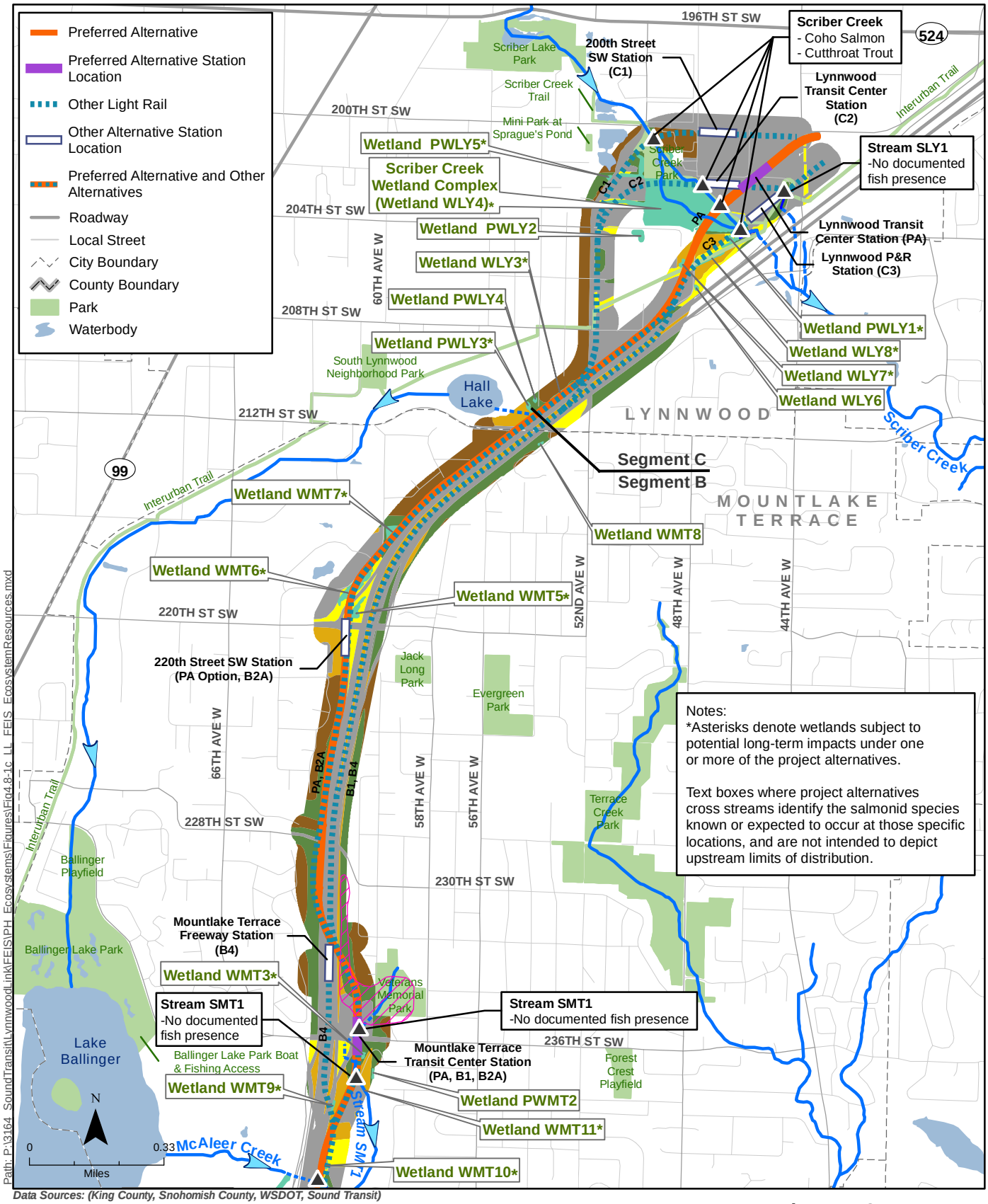


Figure 4.8-1c
Ecosystem Resources

Lynnwood Link Extension

Table 4.8-1. Streams in the Lynnwood Link Extension Study Area

Stream Name [a]	Local Jurisdiction	Local Jurisdiction Stream Classification [b]	Local Jurisdiction Buffer Width (feet) [c]	Fish Species Documented in the Study Area
Thornton Creek, North Branch	Seattle	Type 3	75 [d]	Steelhead Cutthroat Trout Rainbow Trout
Thornton Creek Tributary (SSE1)	Seattle	Type 3	75 [d]	none
McAleer Creek	Shoreline Mountlake Terrace	Type II Class II	115 100	Coho Salmon Chinook Salmon Steelhead Cutthroat Trout
McAleer Creek Tributary (SSH2)	Shoreline	Piped	10	none
McAleer Creek Tributary (SSH4)	Shoreline	Type III	65	none
McAleer Creek Tributary (SMT1)	Mountlake Terrace	Class III / Class V	65 / 0	none
Scriber Creek	Lynnwood	Category I	100	Coho Salmon Cutthroat Trout
Scriber Creek Tributary (SLY1)	Lynnwood	Category III	35	none

[a] Streams other than Thornton Creek, McAleer Creek, and Scriber Creek are identified with alphanumeric codes: SYYn. S = stream; YY = two-letter code for local jurisdiction (SE = Seattle, SH = Shoreline, MT = Mountlake Terrace, LY = Lynnwood); n = sequential identification number.

[b] Identification and classification of streams in this analysis represent conservative estimates, based on available information and the provisions of local critical areas rules (Seattle Municipal Code 25.09.020 (D5), Shoreline Municipal Code 20.80.470, Mountlake Terrace Municipal Code 16.15.080, and Lynnwood Municipal Code 17.10.060). Some of the watercourses identified in this analysis may not actually be defined as streams by the local jurisdictions, or they may be assigned smaller buffers. Actual impacts would be analyzed and mitigated as appropriate through local permitting processes.

[c] Seattle Municipal Code 25.09.200.A.3.d.1; Shoreline Municipal Code 20.80.480; Mountlake Terrace Municipal Code 16.15.090; Lynnwood Municipal Code 17.10.061

[d] Note that the Seattle Municipal Code applies development restrictions and specifies mitigation requirements only within environmentally critical areas or buffers on publicly or privately held parcels. The locations where the proposed alignments would cross Thornton Creek and pass near Stream SSE1 are within the right-of-way for I-5 and are therefore not subject to City of Seattle buffer requirements. For this analysis, the regulatory buffer width is used to identify potential impacts to the riparian buffer for Thornton Creek. Mitigation requirements would be developed through local permitting processes.

McAleer Creek supports salmon and trout as far upstream as Lake Ballinger, and parts of the stream provide spawning and rearing habitat for coho salmon (*O. kisutch*). Observers have seen steelhead and cutthroat trout spawning in McAleer Creek approximately 200 feet downstream of the study area, and Chinook salmon (*O. tshawytscha*) farther downstream. The creek's habitat quality varies by location, and several sections are separated by culverts. Immediately downstream of the study area, the in-stream habitat is rated poor, based on the preponderance of fine sediments and scouring and incision resulting from bank hardening. Riparian (or streamside) habitat quality where the stream has an open channel in the study area is generally good, with forest canopy that provides shade and woody debris for channel complexity.

Three tributaries meet McAleer Creek in the study area. One tributary (Stream SSH2) passes under I-5 south of SR 104 and is entirely within culverts in the study area.

Another tributary (Stream SSH4) emerges from a culvert in the cloverleaf interchange between SR 104 and I-5, then flows approximately 30 feet before joining McAleer Creek. The third tributary (Stream SMT1), which originates in Veterans Memorial Park in Mountlake Terrace, is partly within culverts and joins McAleer Creek near I-5. All of the tributaries flow only intermittently. Based on the presence of human-created barriers to fish passage, neither SSH2 nor SMT1 is known or expected to support fish under current conditions, although the basin sizes, channel widths, and gradients of both streams suggest the potential to support fish. From McAleer Creek, fish can enter the surface-flowing segment of SSH4 in the study area.

In Scriber Creek, coho salmon have been observed upstream of the study area and cutthroat trout use stream habitats as far upstream as Scriber Lake Park. However, a beaver dam about 0.5 mile downstream of the study area impedes access by other salmonid species to reaches of Scriber Creek in the study area. The Washington Department of Fish and Wildlife (WDFW) has classified the dam as a total barrier to fish passage. Spawning habitat quality in Scriber Creek within the study area is generally poor due to limited canopy and vegetative cover, the presence of bank armoring, and the abundance of silt and other fine substrates; however, some side channels may provide suitable rearing habitat. For much of its length in the study area, the stream channel is braided and indistinct as it flows through the large wetland complex south and west of the Lynnwood Transit Center. Based on input provided by Ecology staff who collaborated on field delineations in July 2014, the ordinary high water mark of Scriber Creek through the wetland complex is defined as encompassing the entire breadth of the complex.

An intermittent tributary (Stream SLY1) flows south along the eastern edge of the Lynnwood Transit Center and under I-5 to join Scriber Creek southeast of I-5. For most of its length the tributary is contained within culverts or ditches. Most of its water comes from urban runoff, and the habitat quality is generally poor due to degraded water quality and flows that peak abruptly and fall off rapidly after rain events. Based on the presence of human-created barriers to fish passage, the tributary is not currently known to support fish, but based on its basin size, channel width, and stream gradient, it may have the potential to support fish.

Four aquatic species that have federal or state listing status, or that are candidates for listing, might use habitats in the study area:

- Chinook salmon is listed as threatened under the ESA and is a state candidate species.
- Steelhead trout is listed as threatened under the ESA.
- Bull trout (*Salvelinus confluentus*) is listed as threatened under the ESA and is a state candidate species.
- River lamprey (*Lampetra ayresii*) is a state candidate species.

Of these species, only steelhead trout are known to occur in the study area, but river lampreys are also likely. Based on the lack of suitable habitat and the presence of fish passage barriers downstream of the study area, bull trout are not expected to use any streams in the study area. Although habitat conditions in McAleer Creek are unfavorable for Chinook salmon, and none have been documented in the study area, their presence in the lower reaches of the stream suggests the possibility that Chinook salmon could use McAleer Creek in the study area. Additional information about ESA-listed species in the study area is available in the Biological Assessment prepared for this project (Appendix O).

Vegetation, Terrestrial Wildlife, and Wildlife Habitat

The study area has a mix of urban and more natural vegetation types. Table 4.8-2 identifies the six land cover types in the study area and describes the amount of area covered by each type. The geographic distribution of these cover types is shown in Figures 4.8-1a through 4.8-1c. Most of the study area is dominated by land cover types (Urban Areas, Residential Areas, Maintained Vegetation) where reduced structural complexity and high levels of human activity result in low habitat quality for wildlife. Comparatively natural land cover types (i.e., Forest and Shrub) are found in approximately 20 percent of the study area (Table 4.8-2). More detailed information about vegetation and wildlife resources in the study area is provided in the *Ecosystem Resources Technical Report.*

Much of the study area consists of roadways (including I-5) and commercial, industrial, and residential areas. Such areas provide habitat primarily for species that can coexist with humans and that do not depend on large blocks of relatively undisturbed native vegetation. Most land cover types in the study area offer potential nesting habitat for bird species that are protected under the Migratory Bird Treaty Act. Red-tailed hawks (*Buteo jamaicensis*) and other raptors prey on voles (*Microtus* spp.) that are found in abundance in the grassy vegetation in the I-5 right-of-way. Patches of forest and other native habitat types in the study area are isolated from other areas of similar habitat and generally do not serve as connective corridors to other areas of habitat outside of the study area.

The largest area of native habitat in the study area is the wetland/stream complex located near the Lynnwood Transit Center (also called the Scriber Creek wetland complex). Vegetation and other features in the wetland complex provide habitat for many species of songbirds, mammals, and amphibians. Waterfowl use areas of slow-moving water, and snags throughout the complex show evidence of recent excavation by woodpeckers. The wetland complex is surrounded on all sides by residential and commercial developments, roads, and highways, limiting its value for wildlife species that require large, undisturbed areas and undeveloped travel corridors. Animals that use habitats in

the Scriber Creek wetland complex are likely accustomed to relatively high levels of human activity.

Table 4.8-2. Land Cover Types in the Lynnwood Link Extension Study Area

Land Cover Type	Description	Acres in Study Area
Forest	Areas dominated by evergreen conifers, deciduous broadleaf trees, or a mixture of both, generally greater than 20 feet tall. Canopy cover variable but typically greater than 40 percent. Understories include shrubs, forbs, and/or grasses.	89
Shrub	Areas dominated by native or non-native shrubs. May include trees (particularly red alder) singly or in patches.	59
Maintained Vegetation	Typically, exotic grasses or annuals, such as mown grasses and other low vegetation, most of which are rarely allowed to go to seed. Includes stormwater detention areas.	62
Residential Areas	Houses and yards, including lawns, ornamental plantings, and pruned trees. Tree and shrub canopy cover generally less than 30 percent. Moderate to high levels of human disturbance. Snags, woody debris, and other natural structures are essentially non-existent.	171
Urban Areas	Roadways, parking lots, and other areas dominated by impervious surfaces. Little or no vegetation present.	309
Open Water	Areas of ponding, including natural lakes, streams, and stormwater ponds. All open water in the study area is fresh water.	<1
Total Area		**690**

No terrestrial ESA-listed or state-listed threatened or endangered plant or wildlife species are known or expected to occur in the study area, but several state-listed sensitive species and candidate species may use habitats in the study area. The state lists bald eagle (*Haliaeetus leucocephalus*) and peregrine falcon (*Falco peregrinus*) as sensitive species, and the candidate species are Townsend's big-eared bat (*Corynorhinus townsendii*), western toad (*Anaxyrus boreas*), pileated woodpecker (*Dryocopus pileatus*), and Vaux's swift (*Chaetura vauxi*). There are no documented observations of any of these species in the study area, although biologists conducting field reviews observed evidence of pileated woodpecker activity in some wooded areas within and adjacent to the study area.

Wetlands

Sound Transit identified 37 wetlands in the study area (see Figures 4.8-1a through 4.8-1c; individual wetlands are described in the *Ecosystem Resources Technical Report*). On parcels where rights-of-entry were available, wetlands within 100 feet of the footprint of the Preferred Alternative were formally delineated and rated according to local regulations and the *Washington State Wetland Rating System for Western Washington*. Some other wetlands, including those within public rights-of-way near any of the other light rail alternatives, were mapped and rated as well. Wetlands outside of public rights-of-way and more than 100 feet from the footprint of the Preferred Alternative were identified via existing documentation and public vantage points. All the wetlands are in areas where the natural environment has been altered by urban development.

Many are within maintained rights-of-way where they receive stormwater runoff from pipes, ditches, or overland flow, but groundwater, precipitation, and nearby streams also provide a source of water. With one exception, all of the wetlands in the study area have relatively low quality ratings (Category III or IV), indicating moderate to low levels of wetland function and moderate to high levels of disturbance. The exception is a Category II wetland associated with Scriber Creek. This large wetland/stream complex located near the Lynnwood Transit Center provides multiple water quantity, water quality, and habitat functions. Most of the wetlands in the study area are small (less than 0.5 acre), but a few are larger, including the 17-acre wetland associated with Scriber Creek.

4.8.2 Long-Term Impacts

Construction and operation of the Lynnwood Link Extension could have long-term impacts on ecosystem resources. For aquatic species and habitat, such impacts may include permanent loss or degradation of in-stream or riparian habitat, altered hydrology, or water quality degradation. Construction of at-grade or elevated guideways near streams would preclude the development of mature forest habitat in those areas, reducing the potential for the recruitment of large woody debris to nearby streams. Long-term impacts on vegetation, wildlife, and wildlife habitat may include permanent loss or degradation of terrestrial habitat (including habitat connectivity); disturbance due to increased human access, noise, and light; or contributions to the spread of noxious or invasive plant species. Wetlands and buffers in the study area may also experience permanent loss or degradation.

To comply with ESA requirements, FTA initiated consultation with the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) concerning the potential effects of the proposed project on ESA-listed species and critical habitat. Sound Transit prepared a Biological Assessment (see Appendix O) to serve as the basis for the consultation. The Biological Assessment was sent to the U.S. Fish and Wildlife Service and NOAA Fisheries on December 22, 2014. Based on the analysis in that document, including its proposed mitigation measures, FTA determined that construction of the Lynnwood Link Extension may affect, but is not likely to adversely affect, ESA-listed species and critical habitat. The Biological Assessment also included a proposed determination of "no adverse effect" on essential fish habitat protected under the Magnuson-Stevens Fishery Conservation and Management Act. NOAA Fisheries concurred with these determinations on January 27, 2015, and the U.S. Fish and Wildlife Service concurred on January 29, 2015.

Under the Preferred Alternative or any of the other light rail alternatives, construction and operation of guideways, stations, and ancillary features would have direct effects on in-stream habitat only in Scriber Creek and possibly Stream SMT1.

Under any of the light rail alternatives, guideways, stations, and other project features would be elevated at all open stream crossings. Except for the area within the Scriber Creek wetland complex and possibly SMT1, the project would be outside of the ordinary high water mark of all streams (see discussion of the Segment B alternatives later in this section for more about SMT1). Based on the preliminary determination that the ordinary high water mark of Scriber Creek coincides with the outer boundary of the wetland complex, the support columns for the elevated guideway in that area would be within the aquatic habitat of Scriber Creek. Potential construction-related impacts are discussed in Section 4.8.3, below.

No impacts on fish passage are anticipated because no new culverts would be added in any streams and no existing culverts would be extended. Sound Transit would use native vegetation when replanting areas disturbed by construction. At sites where riparian zones are currently dominated by non-native species, the reintroduction of native vegetation could lead to long-term improvements in riparian habitat conditions.

Stormwater from all project-related impervious surfaces would receive appropriate flow control; stormwater from pollutant-generating impervious surfaces would also receive water quality treatment. The light rail alternatives would be designed to meet standards of the applicable jurisdiction and Ecology's Stormwater Management Manual for Western Washington. If a local jurisdiction has more stringent design requirements than those in the Stormwater Management Manual, then Sound Transit would apply the local requirements in the applicable areas. Based on the analysis for water resources (Section 4.9, Water Resources), none of the light rail alternatives would degrade existing water quality conditions. Discharges from stormwater detention facilities could periodically increase water velocities in receiving waters. This could potentially reduce the availability of salmonid prey and displace juvenile fish from cover.

Based on the quality of existing habitat in most portions of the study area[2], the operation of any of the light rail alternatives would not result in long-term adverse effects on the viability of local wildlife populations. Currently, the predominant types of land cover in the project footprint for any of the light rail alternatives are Urban Areas, Residential Areas, and Maintained Vegetation. Little or no vegetation is present in areas classified as Urban. The vegetation that is present in these three types of land cover is highly modified from predevelopment conditions and dominated in many areas by invasive species. In addition, habitat in these areas

[2] Section 4.5 (Visual and Aesthetic Resources) identifies changes in visual quality in some areas due to the loss of dense vegetation cover. Note that these visual impacts would not equate to adverse effects on ecosystem resources because the current habitat value of the affected areas is low. Although changes to low-value habitat may be noticeable to human observers, the impact of such changes on ecosystem functions would be minimal.

occurs along roads and other areas with low value for wildlife. Because the light rail alternatives would be built alongside the I-5 corridor (an existing impediment to migration by terrestrial species), they would not affect areas that serve as connective corridors to other areas of habitat outside of the study area.

Although the potential for adverse effects would be low, operation of any of the light rail alternatives could result in some adverse effects on vegetation and wildlife over the long term. For example, maintenance activities that involve the removal of vegetation or structures that support bird nests (e.g., bridges, overpasses) during the breeding season could destroy nests, eggs, or birds protected under the Migratory Bird Treaty Act. At-grade guideways and other facilities in grassy areas (e.g., along the margins of I-5) would reduce the amount of habitat for voles and other species that are prey for raptors. In addition, disturbance of comparatively natural land cover types in the study area could have some adverse effects, as discussed below.

For this analysis, the amount of Forest cover affected by each light rail alternative is used to indicate the potential for long-term adverse effects on vegetation and wildlife. Construction of project features would have a greater likelihood of reducing the habitat quality of forested areas than other cover types. The removal of trees, snags, and understory vegetation would result in a loss of potential nesting sites, foraging sites, and hiding cover for many species of birds and small mammals. The introduction of cleared areas through patches of contiguous forest cover would fragment the forested habitat. Project construction in some areas classified as Shrub would also diminish the structural and biotic diversity associated with the variety of plant and wildlife species previously present in the cleared areas. The areas where the potential for adverse effects would be greatest are those dominated by native species. These areas generally occur near patches of Forest land cover. For example, most areas dominated by native shrub species in the Scriber Creek wetland complex occur near areas of Forest cover. Alternatives that affect a greater amount of Forest cover would also affect a greater amount of native Shrub cover.

Based on the existing high levels of noise and vehicle traffic on I-5, as well as human activity associated with residential and commercial development in the study area, wildlife that use habitats adjacent to the light rail alternatives are likely accustomed to noise and human activity. The potential is therefore low for any of the light rail alternatives to cause disturbance due to increased human access, noise, and light. Minor localized movements of some species may occur, but would not affect their viability. In addition, operation of the light rail system would not result in any long-term increases in nighttime illumination of fish-bearing waters or cause increases in predation on juvenile salmon, should any be present.

The light rail alternatives would have direct, long-term impacts on wetlands where the project footprint crosses wetlands or buffers. Indirect, long-term impacts might also occur due to construction and operation activities, such as modification of

vegetation, partial shading, water quality degradation, and alteration of wetland hydrology sources.

This impact assessment is based on the information obtained from overlaying the conceptual designs for the light rail alternatives onto ecosystem resource base maps and applying an additional buffer (10 to 12 feet) to account for other features such as noise walls and retaining walls. Not all areas within this analytical buffer would be subject to long-term impacts; some areas would be unaffected under the light rail alternatives or would be subject only to temporary impacts during construction. The acreage values resulting from this analytical approach provide a reasonable indication of the nature and magnitude of potential impacts and reflect differences among alternatives (Table 4.8-3). To provide a conservatively high estimate of impacts, all impacts within these areas are considered to be long term for this analysis.

Although these analytical buffers represent a conservative estimate of the areas where long-term effects may occur, some impacts could take place outside of these areas. For example, some trees in areas adjacent to the analytical buffer may need to be removed to protect light rail safety and reliability. Removal of such hazard trees may accompany construction of any of the light rail alternatives, and hazard tree removal would continue as a maintenance activity during the operational life of project facilities.

Some of the areas identified as long-term impacts occur where the guideway and other features would be elevated, spanning areas of vegetation and other resources. Although construction of elevated structures can minimize the amount of permanent ground disturbance, the amount of water and sunlight available to the vegetation underneath would likely be reduced. Because the elevated guideway structures would be relatively narrow (about 30 feet wide) and more than 15 feet above the ground surface in most places, shading and other impacts on vegetation would likely be minimal. As observed on the Sound Transit Central Link project, herbaceous plants and shrubs are generally able to grow beneath narrow guideways that are at least 15 feet above the ground (Sound Transit 2011d), as long as there is a source of water.

Figures 4.8-1a through 4.8-1c depict the locations of potential long-term impacts of the light rail alternatives on aquatic resources, vegetation, wildlife, and wetlands; Table 4.8-3 summarizes these impacts. Although individual wetlands and other resource areas would be adversely affected by project construction and operation under the light rail alternatives, these effects would be offset through the implementation of compensatory mitigation as required by federal, state, and local regulatory agencies.

Table 4.8-3. Summary of Potential Long-Term Impacts on Aquatic Resources, Vegetation and Wildlife, and Wetlands by Segment Alternative

Segment/Alternative	Aquatic Resources [a, b] (total acres)	Vegetation / Wildlife [c] (total acres)	Wetlands / Wetland Buffer (total acres)	Wetlands Affected [b, d]
Segment A: Seattle to Shoreline				
Preferred Alternative: At-grade/ Elevated with NE 145th and NE 185th Stations	Thornton Creek (0.5) SSE1 (0.2)	2	0.9 / 0.3	WSE1[e], WSE3, WSE4[e], WSE5, WSE6, WSE7[e], WSE8[e], WSH1, WSH2, WSH3, PWSH4
Alternative A1: At-grade/ Elevated with NE 145th and NE 185th Stations	Thornton Creek (0.5) SSE1 (0.2)	2	0.9 / 0.3	
Alternative A3: Mostly Elevated with NE 145th and NE 185th Stations	Thornton Creek (0.5) SSE1 (0.2)	1	0.9 / 0.3	
Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Stations	Thornton Creek (0.5) SSE1 (0.2)	2	0.9 / 0.8	WSE1[e], WSE3, WSE4[e], WSE5, WSE6, WSE7[e], WSE8[e], WSH1[e], WSH2, WSH3, PWSH4, PSWH5[e]
Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Stations	Thornton Creek (0.5) SSE1 (0.2)	1	0.9 / 0.8	
Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Stations	Thornton Creek (0.5) SSE1 (0.2)	2	0.9 / 0.3	WSE1[e], WSE3, WSE4[e], WSE5, WSE6, WSE7[e], WSE8[e], WSH1, WSH2, WSH3, PWSH4
Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Stations	Thornton Creek (0.5) SSE1 (0.2)	2	0.9 / 0.3	
Segment B: Shoreline to Mountlake Terrace				
Preferred Alternative: East Side to Mountlake Terrace Transit Center to West Side	McAleer Creek (0.5) SMT1 (0.5) SSH2 (<0.1) SSH4 (<0.1)	11	0.8 / 1.6	WSH5, WMT1[e], WMT2[e], WMT3[e], WMT5, WMT6, WMT7, WMT10[e], WMT11[e], PWLY3[e]
Preferred Alternative: East Side to Mountlake Terrace Transit Center to West Side with 220th Street Station South Option	McAleer Creek (0.5) SMT1 (0.5) SSH2 (<0.1) SSH4 (<0.1)	11	0.5 / 1.6	WSH5, WMT1[e], WMT2[e], WMT3[e], WMT6, WMT7, WMT10[e], WMT11[e], PWLY3[e]
Alternative B1: East Side to Mountlake Terrace Transit Center to Median	McAleer Creek (0.5) SMT1 (0.5) SSH2 (<0.1) SSH4 (<0.1)	5	<0.1 / 0.9	WSH5, WMT1[e], WMT2[ee], WMT11[e]
Alternative B2A: East Side to Mountlake Terrace Transit Center to West Side with Optional 220th Street SW Station	McAleer Creek (0.5) SMT1 (0.5) SSH2 (<0.1) SSH4 (<0.1)	11	1.6 / 1.3	WSH5, WMT1[e], WMT2[e], WMT3[e], WMT5, WMT6[d], WMT7, WMT10[e], WMT11[e], PWLY3[f]
Alternative B4: East Side to Mountlake Terrace Freeway Station to Median	McAleer Creek (0.7) SSH2 (<0.1) SSH4 (<0.1)	3	0.2 / 0.7	WSH5, WMT1, WMT2, WMT9[e], WMT10

Table 4.8-3. Summary of Potential Long-Term Impacts on Aquatic Resources, Vegetation and Wildlife, and Wetlands by Segment Alternative

Segment/Alternative	Aquatic Resources [a, b] (total acres)	Vegetation / Wildlife [c] (total acres)	Wetlands / Wetland Buffer (total acres)	Wetlands Affected [b, d]
Segment C: Mountlake Terrace to Lynnwood				
Preferred Alternative: Along I-5 to Lynnwood Park-and-Ride Station	Scriber Creek (0.5)[f]	2	0.7 / 1.0	WLY3, WLY4, WLY7
Alternative C1: 52nd Avenue West to 200th Street SW (Option 1—Median)	Scriber Creek (0.2)	1	<0.1 / 0.7	WLY3[e], WLY4, PWLY5[e]
Alternative C1: 52nd Avenue West to 200th Street SW (Option 2—West of I-5)	Scriber Creek (0.2)	1	0.2 / 1.1	WLY3, WLY4, PWLY3[e], PWLY5[e]
Alternative C2: 52nd Avenue West to Lynnwood Transit Center Station (Option 1—Median)	Scriber Creek (0.9)[f] SLY1 (0.1)	<1	0.9 / 0.6	WLY3[e], WLY4
Alternative C2: 52nd Avenue West to Lynnwood Transit Center (Option 2—West of I-5)	Scriber Creek (0.9)[f] SLY1 (0.1)	1	1.1 / 1.1	WLY3, WLY4, PWLY3[e]
Alternative C3: Along I-5 to Lynnwood Park-and-Ride Station (Option 1—Median)	Scriber Creek (0.1)[f] SLY1 (0.1)	1	0.2 / 1.0	WLY4, WLY7[e], WLY8[e], PWLY1
Alternative C3: Along I-5 to Lynnwood Park-and-Ride Station (Option 2—West of I-5)	Scriber Creek (0.1)[f] SLY1 (0.1)	2	0.3 / 1.7	WLY3, WLY4, WLY7[e], WLY8[e], PWLY1, PWLY3[e]

[a] The potential for adverse effects on aquatic resources is indicated by the acres of project footprint within each local jurisdiction's regulatory buffer area for specified streams.

[b] Streams (other than Thornton Creek, McAleer Creek, and Scriber Creek), wetlands, and potential wetlands (i.e., wetlands that were identified via existing documentation but not confirmed through site visits) are identified with alphanumeric codes: SYYn and WYYn. S = stream and W = wetland; YY = two-letter code for local jurisdiction (SE = Seattle, SH = Shoreline, MT = Mountlake Terrace, LY = Lynnwood); n = sequential identification number.

[c] For the reasons identified in the discussion of long-term effects above, the potential for adverse effects on vegetation and wildlife is indicated by the acres of project footprint that overlap with areas classified as Forest land cover.

[d] Impacts to Wetland WMT6 under Alternative B2A could exceed 0.5 acre, potentially triggering additional Clean Water Act permitting requirements, if the impacts cannot be reduced by avoidance measures.

[e] Wetlands that would be affected by buffer impacts only.

[f] The portions of Scriber Creek that would be crossed by the Preferred Alternative and Alternatives C2 and C3 are within the Scriber Creek wetland complex. Based on the preliminary determination that the ordinary high water mark of the stream coincides with the boundary of the wetland complex, potential impacts to aquatic resources in Scriber Creek are calculated as the area of the project footprint overlapping the wetland complex. Stream buffer impacts are described qualitatively in the accompanying text. The *Ecosystem Resources Technical Report* provides additional detail.

No Build Alternative

The No Build Alternative would not have any direct long-term impacts on ecosystem resources. Conversely, implementing the No Build Alternative would not have beneficial effects over the long term. The potential environmental benefits that would not be realized under the No Build Alternative include reduced motor vehicle traffic in the region; possible improvements for past impacts or poorly functioning environmental features along the corridor that have degraded water quality, wetlands,

streams, and regulatory buffers; as well as more concentrated residential and commercial development in planned growth centers. Land development in areas away from such centers could contribute to the degradation or loss of high-value habitat or wetlands in outlying and rural areas. Potential improvements in water quality would not be realized because stormwater would not receive water quality treatment with the No Build Alternative.

Segment A Alternatives

All Segment A alternatives would follow identical routes in the vicinity of Thornton Creek and Stream SSE1 and would, therefore, affect equal amounts of the streams' regulatory buffers (see Table 4.8-3). Based on the condition of the riparian habitat for those watercourses, the potential for adverse effects would be minimal.

The Preferred Alternative would affect 2 acres of Forest cover. The other light rail alternatives would affect similar amounts of Forest cover, ranging between 1 and 2 acres. All affected areas would be immediately adjacent to the I-5 corridor, where existing habitat has been substantially modified from pre-settlement conditions. Therefore, impacts in these areas would not be expected to result in substantial adverse effects on vegetation or wildlife resources in the study area.

All light rail alternatives in Segment A have the potential to affect a total of approximately 0.9 acre of wetland area, distributed among seven wetlands. The regulatory buffers of all these wetlands would also be affected, along with the buffers of four additional wetlands. The total area of wetland buffer impacts under the Preferred Alternative and Alternatives A1, A3, A10, and A11 would be 0.3 acre. Alternatives A5 and A7 would additionally affect the buffer of an additional wetland, with a total wetland buffer impact area of 0.8 acre (Table 4.8-3). Most affected wetland and buffer areas are within the WSDOT right-of-way; they are degraded, vegetated by invasive species, and disconnected from other wetlands by roadways and development.

Segment B Alternatives

Elevated portions of the guideway of the Preferred Alternative would cross a piped portion of the main stem of McAleer Creek immediately east of I-5, passing through the regulatory buffers of surface-flowing segments of that stream at the I-5/SR 104 interchange, and would affect approximately 0.5 acre of regulatory buffer. Alternatives B1 and B2A would cross the main stem of McAleer Creek at the same location as the Preferred Alternative, immediately east of I-5, and would affect approximately equal amounts of the regulatory buffer for that stream and its three tributaries in the study area (Table 4.8-3). Alternative B4 would cross an open segment of McAleer Creek where it exits the culvert under I-5 and would affect more of the stream's buffer than the other alternatives.

The Preferred Alternative and Alternatives B1 and B2A would cross over a segment of Stream SMT1 south of the Mountlake Terrace Transit Center, affecting approximately 0.5 acre of that stream's regulatory buffer. At the elevated crossing of any of these alternatives, it is possible that a portion of one guideway support column could be placed below the ordinary high water mark of that watercourse.

Alternative B4 would not affect Stream SMT1 or any of its buffer areas because the route would enter the I-5 median south of the existing Mountlake Terrace Transit Center. All of the Segment B alternatives, including the Preferred Alternative, would affect less than 0.1 acre of each regulatory buffer for Streams SSH2 and SSH4. The design for the 220th Street Station South Option would not change these impacts on stream buffers.

The Preferred Alternative and Alternative B2A would affect approximately 11 acres of Forest cover, including some in a location that WDFW has identified as a priority habitat area. Alternative B1 would cross the same priority habitat area but would affect a smaller amount of Forest cover overall (5 acres). Alternative B4 would affect only 3 acres of Forest cover because it would enter the I-5 median south of the Mountlake Terrace Freeway Station and avoid the forested habitat to the north. The potential adverse effects of alignments in forested areas under any of these alternatives would include habitat loss and an increased risk of introducing or spreading invasive species. As noted in the general discussion of long-term impacts above, the risk of disturbance to wildlife due to increased human access, noise, and light would be low because the affected areas currently have high noise levels. The design options for the 220th Street SW Station would not affect impacts on Forest cover.

The Preferred Alternative would have the potential to affect 0.8 acre of wetland area, distributed among four wetlands. Implementation of the 220th Street Station South Option under the Preferred Alternative would eliminate the need for reconstructing the off-ramp from I-5 southbound at 220th Street SW, thereby avoiding one wetland and reducing the total wetland impacts to 0.5 acre (Table 4.8-3). The Preferred Alternative (with or without the 220th Street Station South Option) would affect 1.6 acre of wetland buffers. Of all the Segment B alternatives, Alternative B1 would affect wetlands the least, followed by Alternative B4, because both are largely in the freeway median. Alternative B2A would have the most wetland and buffer impacts. The impacts of the Preferred Alternative would be intermediate (Table 4.8-3). Alternative B1 would directly affect one wetland, and Alternatives B2A and B4 would each affect four wetlands.

Under all the alternatives, most impacts would occur along the edges of wetlands and buffers, except for the Preferred Alternative and Alternative B2A, either of which would cross over much of the second-largest wetland in the study area (Wetland WMT6). All of the wetlands that would be affected by the Segment B alternatives

have relatively low quality ratings, based on habitat degradation, the presence of invasive species, and lack of connectivity with wetlands.

Reconstructing the southbound I-5 off-ramp and parking garage near the 220th Street SW Station under Alternative B2A could have impacts on Wetland WMT6 that would exceed 0.5 acre; if this alternative was selected for implementation, permitting requirements under the Clean Water Act would likely require consideration of reasonable avoidance measures to reduce the impacts to less than 0.5 acre.

Segment C Alternatives

Under all of the Segment C alternatives, habitats in Scriber Creek and the associated wetland complex would be spanned by elevated guideways, minimizing the potential for direct adverse effects. The amount of Scriber Creek's regulatory buffer affected by the Preferred Alternative would be approximately 0.5 acre (Table 4.8-3). Among the other light rail alternatives, Alternatives C1 and C3 would have the least impact (ranging from 0.1 to 0.2 acre) because with either their median (Option 1) or west options (Option 2), they would cross small portions along the northern or southern edges of the wetland complex. Alternative C2 (both Options 1 and 2) would have the greatest impact, crossing through the middle of the wetland complex and affecting approximately 0.9 acre of Scriber Creek's regulatory buffer. Impacts to the Scriber Creek wetland complex could adversely affect coho salmon and cutthroat trout that rear and overwinter in wetland habitats adjacent to Scriber Creek.

Under any of the Segment C alternatives, the extent of adverse impacts after final design and at the point of permitting would likely be smaller than is suggested by these acreage estimates. The guideway would be more than 15 feet above the ground surface in this area, and shading and other impacts on vegetation would likely be minimal. Direct impacts would be limited to the areas occupied by support columns for the guideway. Under any of the Segment C alternatives with median and west side options, the amount of stream or stream buffer affected under Option 1 and Option 2 would be the same.

Although all of the Segment C alternatives and options, including the Preferred Alternative, would cross the Scriber Creek wetland complex at different locations, their impacts on Forest and Shrub cover would be similar (Table 4.8-3). The Preferred Alternative and Option 2 of Alternative C3 would affect more Forest cover (2 acres) than the other alternatives and options. Most of the affected area would consist of a strip of Forest along I-5 east of 52nd Avenue West. The current habitat value of this strip is limited by its narrow, linear shape and its location between I-5 and adjacent commercial development.

The Scriber Creek wetland complex and associated buffers would be affected by all the Segment C alternatives (Table 4.8-3). The Preferred Alternative would have the

potential to affect 0.7 acre of wetland area and 1.0 acre of wetland buffer overall; most of the affected area would be associated with smaller wetlands near I-5. Among the light rail alternatives, Alternative C1 would affect the Scriber Creek wetland complex less, crossing a small portion along the northern edge of the wetland complex. Alternative C2 (both Options 1 and 2) would affect it more, crossing through the middle of the wetland complex. Alternative C3 would cross a small portion along the southern edge of the wetland complex, affecting only slightly more area than Alternative C1. Alternative C3 would also affect a nearby wetland. For each of the Segment C alternatives with median and west side options, Option 2 (west of I-5) would have a greater impact on wetlands than Option 1 because Option 2 would affect a small (less than 0.1 acre) portion of a wetland near I-5.

Under any of the light rail alternatives, long-term ground alteration of any wetlands in Segment C would be less than reported in Table 4.8-3 because the alignment would be elevated through all areas where wetlands are present. The elevated guideway would span the smaller wetlands; in the Scriber Creek wetland complex, columns would be constructed in the wetland.

4.8.3 Construction Impacts

Construction impacts would be limited to the period during and immediately following project construction. The construction period would last 6 years (from beginning of construction to beginning of operation). At most locations, ground-disturbing activities would last a year or two. Temporarily disturbed sites would be replanted immediately following construction in each project segment, and vegetation would likely become reestablished within a year or two at most sites.

The conceptual level of design for the footprints of the light rail alternatives include some assumptions and buffers for construction activities and staging areas (some of which are assumed to be located within the project's footprint and are therefore identified as permanent impacts). Although detailed construction limits are not defined at this early phase in the project design, potential construction limits have been estimated near streams, stream buffers, wetlands, and wetland buffers. These consist of areas where temporary impacts could extend beyond the 10- to 12-foot buffer generally defined for the analysis of long-term impacts to account for additional areas that would be needed to construct the project. Additional staging areas could be identified later by the contractor, if needed. In Segment A, the alignment and associated features would be situated on or adjacent to currently developed areas. For this reason, it was assumed for this analysis that no additional construction areas would be required in wetlands, streams, or buffers outside of the analytical buffer that was used to estimate long-term impacts.

For aquatic species and habitat, earthwork and equipment associated with project construction could introduce sediment and contaminants (e.g., fuel or hydraulic

fluids) to streams downstream of the project. Within each project segment, aquatic resources would be at risk during construction based on the total amount of ground-disturbing activity within each basin. Construction work within stream buffers, including work on elevated guideways that pass over streams, would have the highest risk of delivering sediment and pollutants to those streams. The use of artificial lighting for nighttime construction could affect fish because changes in nighttime light conditions may alter migratory behavior or affect predation rates on juvenile salmonids.

Estimated construction impacts on stream buffers are summarized in Table 4.8-4. Under all light rail alternatives, the potential for adverse effects on aquatic species and habitat would be minimized by ensuring that work conditions and activities comply with the required project permits, and by implementing BMPs designed to avoid or minimize the delivery of construction-related sediment and contaminants to streams (see Section 4.8.6, Potential Mitigation Measures).

Table 4.8-4. Summary of Potential Construction Impacts on Aquatic Resources and Wetlands by Segment Alternative

Segment/Alternative	Aquatic Resources[a] (acres)	Wetlands/Wetland Buffers (acres)	Wetlands Affected
Segment A: Seattle to Shoreline			
All alternatives, including the Preferred Alternative	0.0	0.0	NA[b]
Segment B: Shoreline to Mountlake Terrace			
Preferred Alternative	McAleer Creek (0.4) SMT1 (0.2)	0.1 / 0.4	WSH5, WMT1, WMT2, WMT3, WMT6, WMT7, WMT10, WMT11, PWLY3
Preferred Alternative with 220th Street Station South Option	McAleer Creek (0.4) SMT1 (0.2)	0.1 / 0.4	WSH5, WMT1, WMT2, WMT3, WMT5, WMT6, WMT7, WMT10, WMT11, PWLY3
Alternative B1	McAleer Creek (0.4) SMT1 (0.2)	0.0 / 0.1	WMT3, WMT10
Alternative B2A	McAleer Creek (0.4) SMT1 (0.2)	0.0 / 0.1	WMT3, WMT10,
Alternative B4	0.0	0.0 / 0.1	WMT10

Table 4.8-4. Summary of Potential Construction Impacts on Aquatic Resources and Wetlands by Segment Alternative

Segment/Alternative	Aquatic Resources[a] (acres)	Wetlands/Wetland Buffers (acres)	Wetlands Affected
Segment C: Mountlake Terrace to Lynnwood			
Preferred Alternative	Scriber Creek (N/A)	0.3 / 0.2	WLY3, WLY4, WLY7
Alternative C1 (with Option 1)	Scriber Creek (0.1)	0.0 / <0.1	WLY4
Alternative C1 (with Option 2)	Scriber Creek (0.1)	0.0 / <0.1	WLY4
Alternative C2 (with Option 1)	Scriber Creek (N/A) SLY1 (<0.1)	0.0 / 0.2	WLY4
Alternative C2 (with Option 2)	Scriber Creek (N/A) SLY1 (<0.1)	<0.1 / 0.3	WLY3, WLY4
Alternative C3 (with Option 1)	Scriber Creek (N/A) SLY1 (<0.1)	0.0 / <0.1	WLY4
Alternative C3 (with Option 2)	Scriber Creek (N/A) SLY1 (<0.1)	<0.1 / 0.1	WLY3, WLY4

[a] The potential for construction-related effects on aquatic resources is indicated by the estimated construction area within each local jurisdiction's regulatory buffer area for specified streams. The *Ecosystem Resources Technical Report* provides additional detail (see Appendix D of the technical report).

[b] Because the proposed alignment in Segment A would be located within or adjacent to currently developed areas, it is anticipated that any of the light rail alternatives could be constructed without disturbing areas outside the analytical buffer that was used to estimate long-term impacts.

To minimize the potential for impacts on ecosystem resources in Scriber Creek and the associated wetland complex for the Preferred Alternative (as well as Alternatives C2 and C3), temporary work trestles would be used for equipment access during construction of the elevated guideway across the Scriber Creek wetland complex. The trestles would be supported by steel piles and would remain in position only as long as needed for the completion of project construction. Any in-water work for trestle construction (including pile driving and pile removal) would be conducted in accordance with the terms of the Hydraulic Project Approval (HPA) and other applicable permits obtained for the project. Such permits typically place restrictions on the time of year when work can be conducted below the ordinary high water mark of any streams. These permits also typically include numerous provisions aimed at avoiding or minimizing the potential for adverse effects on fish and aquatic habitat (discussed in Section 4.8.6, Potential Mitigation Measures).

For vegetation and wildlife, Sound Transit assumes that the temporary construction impacts on habitat for each alternative would be proportionate to the amount estimated for long-term impacts. In other words, alternatives with greater amounts of long-term impacts would likewise be expected to have greater amounts of temporary impacts. Vegetation and wildlife habitat would be temporarily affected by clearing for the project's permanent facilities as well as for access roads and equipment storage areas. Wildlife species near the project corridor could be affected by noise, vibration, dust, dirt, light, and the clearing and grubbing of the landscape along the alignment. As with the long-term impacts described in Section 4.8.2, there would be a low risk of disturbance to wildlife from human access, noise, and light during construction

because the affected areas currently have high noise levels and low habitat value. Construction activities involving the removal of vegetation or structures that support bird nests (e.g., bridges, overpasses) during the breeding season could destroy nests, eggs, or birds protected under the Migratory Bird Treaty Act.

Wetlands could incur temporary loss, or wetlands and buffers could be degraded by construction-related activities, such as vegetation clearing and temporary site grading and filling for site access. Estimated construction impacts on wetlands and wetland buffers are summarized in Table 4.8-4.

Temporary construction impacts to wetlands and their functions would be minimized by the installation, monitoring, and maintenance of appropriate BMPs for the duration of construction. Wetland functions could be affected by soil compaction, accidental spills of hazardous substances, noise and human-caused disturbance, potential increase of sediment input, and introduction of invasive species.

4.8.4 Indirect Impacts

Under any of the light rail alternatives, several factors would limit the potential for development near stations to adversely affect ecosystem resources. All proposed stations would be located in areas that are already densely developed. Any new development in these areas would be subject to review under local critical areas ordinances. This review would trigger the implementation of mitigation measures and practices aimed at avoiding or minimizing the potential for adverse effects on wetlands, aquatic species and habitat, and other natural resources such as fish and wildlife habitat conservation areas.

Indirect impacts also include potential interference with possible future habitat restoration projects. For example, the presence of guideways, stations, or other facilities near streams could affect the potential replacement of existing fish passage barriers by limiting options for locations and types of fish-passable crossing structures. In most locations, the potential for construction of the light rail alternatives to interfere with possible future fish habitat restoration projects would be minimal because project features would be designed and located to avoid streams. As noted in Section 4.8.2, Long-Term Impacts, no new culverts would be added in streams with documented or potential fish habitat and no existing culverts in such streams would be extended. Moreover, construction and operation of any of the light rail alternatives would not interfere with any anticipated culvert replacement projects.

One stream in the study area (SMT1) that is currently categorized as non-fish-bearing is upstream of a culvert identified as a fish passage barrier in the I-5 right-of-way. The reach of SMT1 crossed by the light rail alternatives is approximately 2,000 feet upstream of the barrier culvert. The alternatives that cross SMT1 (the Preferred Alternative and Alternatives B1 and B2A) would be elevated at this location. If the barrier culvert is removed and fish access to SMT1 is restored in the future, and if

fish habitat improvement projects are subsequently planned for the stream reach crossed by the elevated guideway, it is possible that a guideway support column at this location could complicate the design of such habitat restoration projects. Such interference is unlikely to occur, however, because the stream channel at this location is poorly defined and the local topography offers ample opportunities for the creation of a channel that would avoid support columns or other structures.

4.8.5 Cumulative Impacts

Past actions and development have greatly changed the landscape in the study area and surrounding vicinity. Present and reasonably foreseeable future actions, including other transportation or infrastructure projects and other planned or pending land use actions or developments in the project vicinity, could contribute to cumulative impacts on ecosystem resources in the study area. Not all reasonably foreseeable actions have the potential to result in adverse effects on the environment. For example, WSDOT and WDFW formed a cooperative program in 1991 to inventory and assess fish passage barriers on WSDOT facilities statewide. Culvert replacement and retrofitting projects through that program may improve fish access to streams in the study area. Sound Transit would coordinate its light rail facility design with WSDOT to avoid conflicts with these projects.

Several proposed site development projects could have some effect on ecosystem resources in the study area. These include a site in Mountlake Terrace, south of 236th Street SW and the Mountlake Terrace Transit Center, which is envisioned by the City of Mountlake Terrace to accommodate higher-density development. The Edmonds School District master plan includes developing a bus base and administration center north of I-5 and east of 52nd Avenue West in Lynnwood. Construction of this facility could affect ecosystem resources such as the Scriber Creek wetland complex. Sound Transit is considering an OMSF alternative in the same area, although the Preferred Alternative is a Bellevue site. The Lynnwood site alternative would largely be built on previously developed parcels but a portion would extend into the Scriber Creek wetland complex, with about 2 acres of potential direct impacts to wetlands and slightly under 2 acres of wetland buffer impacts. The impacts of one or potentially both of these projects in Lynnwood could be lessened through final design, but their combined impacts would result in loss or degradation of vegetation, wildlife habitat, streams, wetlands, and associated buffer areas in the complex. These impacts would be both short-term (e.g., temporary disturbance during construction) and long term (e.g., conversion of vegetated areas to impervious surface).

These projects and future projects generally would have limited potential for adversely affecting aquatic species, aquatic habitat, vegetation, wildlife, or wetlands in the study area. Any projects or land use actions would be subject to regulatory

review and/or permitting under federal, state, and local regulations. These review and permitting processes would trigger the implementation of measures to avoid or minimize impacts on ecosystem resources. Such processes would also provide compensatory mitigation for any unavoidable impacts on streams, stream buffers, wetlands, or wetland buffers. If combined with the effects of the Lynnwood Link Extension, there would be higher cumulative effects on ecosystem resources than if the impacts of each project were considered on its own. However, if avoidance and mitigation measures such as those described below are applied for all projects, the effects would be minimal. Coordination among the project proponents could also help to reduce impacts.

4.8.6 Potential Mitigation Measures

Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources as much as possible, and to provide adequate mitigation for unavoidable impacts to ensure no net loss of ecosystem function and acreage as a result of agency projects. Mitigation for ecosystem impacts is based on a hierarchy of avoiding, minimizing, and compensating for unavoidable adverse impacts. The design of the Lynnwood Link Extension already incorporates avoidance and minimization techniques, although further avoidance and minimization measures would continue to be pursued as the project enters final design and permitting stages.

Under any of the light rail alternatives, Sound Transit would comply with standard BMPs and applicable federal, state, and local mitigation requirements during design, construction, and post-construction activities. A summary of BMPs that would be applied to avoid and minimize impacts on ecosystem resources follows. Additional details are provided in the *Ecosystem Resources Technical Report*.

Construction Best Management Practices

Sound Transit's construction contractor would implement construction BMPs that would apply to all work in or around sensitive areas. The construction contractor would work within construction limits marked with fencing and signage to prevent unintended impacts on riparian vegetation, wetlands, woodlands, and other sensitive sites outside of the construction limits.

The construction contractor would be required to develop, implement, and monitor a temporary erosion and sediment control (TESC) plan to address potential erosion for the duration of construction. Temporary work trestles or other measures that minimize impacts would be used in extremely sensitive areas, such as the Scriber Creek wetland complex.

BMPs would be employed for fish and aquatic habitat protection. All work below the ordinary high water mark would comply with the terms and conditions set forth in the

HPA issued by WDFW for the project. Seasonal restrictions (i.e., work windows) would apply to work conducted below the ordinary high water mark. To reduce the risk of adverse effects on migrating salmonids, Sound Transit would require construction contractors to direct lighting away from fish-bearing waters and to place hoods or shields on lights, as needed, to minimize the amount of backlight or dispersed light cast toward the water's surface. Any affected streambeds and stream banks would be restored and replanted with native vegetation after in-water work.

For water quality protection, the project would obtain and adhere to a construction stormwater general permit under the National Pollutant Discharge Elimination System (NPDES) permit program to reduce or eliminate stormwater pollution and other impacts on surface waters. A construction stormwater pollution prevention plan (SWPPP), approved by Ecology, would also be implemented before the start of construction. The plan would include BMPs to (1) prevent erosion; (2) prevent sedimentation; and (3) identify, reduce, eliminate, or prevent stormwater contamination and water pollution from construction activity. The requirements of the plan and the BMPs to be employed are described in Section 4.9.3 (Construction Impacts – Water Resources).

Measures would be implemented before and during project construction to avoid or minimize effects on vegetation and wildlife resources. Examples of these measures are minimizing vegetation clearing, restoring temporarily affected areas, preparing and implementing a revegetation plan, and implementing construction methods to avoid impacts on migratory birds. In accordance with the Migratory Bird Treaty Act, Sound Transit would consult with the U.S. Fish and Wildlife Service on measures to avoid impacts on migratory birds. Measures likely to be required may include pre-construction surveys for migratory birds and/or restrictions on vegetation clearing during the breeding season for migratory birds. Sound Transit would also implement appropriate measures to minimize the risk of introduction and spread of noxious and invasive species, including restoring temporarily disturbed areas as soon as practical following construction in each project segment. To minimize use of herbicides and fertilizers, restoration of disturbed areas would include the use of mulching, ground cover, and other planting strategies that discourage growth of undesirable species.

Design and Operation Best Management Practices

Sound Transit would also implement design and operation BMPs for permanent stormwater runoff treatment and flow control. These would include natural or engineered dispersion BMPs; biofiltration BMPs such as vegetated filter strips, biofiltration swales, or ecology embankments; wet-pool BMPs; and infiltration BMPs. The project would route drainage to maintain existing stream basin contributing areas. In addition, Sound Transit would coordinate with WSDOT, local

jurisdictions, and resource agencies conducting restoration projects in the area to minimize the potential for light rail facilities to interfere with future restoration projects. Except where hazard trees pose an immediate threat to light rail safety or reliability, vegetation maintenance and hazard tree removal would be conducted outside of the breeding season for migratory birds.

Compensatory Mitigation

To the extent that impacts cannot be avoided or adequately minimized through BMPs, Sound Transit would implement additional measures to reduce adverse effects, as well as provide compensatory mitigation measures where adverse effects are unavoidable. Sound Transit has committed to achieving no net loss of ecosystem function and acreage on a project-wide basis. This includes a commitment to no net loss of wetland functions and wetland areas. Long-term impacts on wetlands and wetland buffers would be mitigated through the use of available approved mitigation banks, the King County in-lieu fee program, or project-specific mitigation developed by Sound Transit. Sound Transit would implement compensatory mitigation in accordance with applicable federal, state, and local requirements and guidelines.

Mitigation for unavoidable impacts on streams, stream buffers, and wildlife habitat would comply with local critical areas ordinances. In general, those ordinances state that mitigation should prevent the net loss of ecological function; the means of achieving that goal are determined through individual permitting processes. Sound Transit's actions to mitigate for impacts on wetlands and wetland buffers (e.g., planting native trees and shrubs near wetland areas) would help offset the loss of some habitat for wildlife and contribute to improved ecological function of nearby streams and stream buffers. Tree planting required for compliance with WSDOT's and local jurisdictions' tree protection rules would also help mitigate impacts on streams, stream buffers, and wildlife habitat. Lastly, planting of trees and shrubs to mitigate for visual impacts (including in replacement lands for affected WSDOT beautification areas along I-5, as described in Section 4.5, Visual and Aesthetic Resources) would also provide ecological benefits.

Potential sites currently under consideration for project-specific mitigation for impacts on wetlands and wetland buffers are described below.

North Seattle Community College Campus

Various opportunities may be present on the North Seattle Community College Campus for wetland restoration and enhancement, although other projects proposed in the vicinity may reduce the area available.

Jackson Park Golf Course/5th Avenue NE

Potential wetland and riparian mitigation could be constructed along the east side of the 5th Avenue NE right-of-way and the Jackson Park Golf Course, particularly along North Branch Thornton Creek.

NE 145th Street Vicinity

Two potentially available parcels near Paramount Park in Shoreline may provide opportunities for wetland protection and restoration.

NE 155th Street Station Vicinity

Wetland creation may be possible south of the NE 155th Street Station (proposed under Alternatives A5 and A7) near the locations of Wetlands PWSH4 and PWSH5.

Ballinger Lake Golf Course

The City of Mountlake Terrace will be transitioning the Ballinger Lake Golf Course to a passive park/open space, which could create wetland restoration opportunities.

Scriber Creek Wetland Complex (Wetland WLY4)

Wetland and stream mitigation opportunities are present in the Scriber Creek vicinity near the Lynnwood Transit Center. These parcels are under both public and private ownership, including parcels that could be acquired by Sound Transit because they intersect with areas needed for the light rail right-of-way. A private parcel on Cedar Valley Road, along the western edge of the wetland complex, could also provide an opportunity for mitigation. These mitigation opportunities may include wetland creation, restoration, or enhancement.

4.9 Water Resources

This section discusses how the project would potentially affect water resources. The discussion covers surface water quality, stormwater runoff volumes, drainage systems, shorelines, floodplains, and construction stormwater management.

4.9.1 Affected Environment

The study area for the water resources analysis comprises the stream basins that would be crossed by the project, as shown on Figure 4.9-1.

Natural Water Bodies

The surface water in the study area discharges to one of three urban stream basins: Thornton Creek, Lake Ballinger/McAleer Creek, and Swamp Creek–all of which are located in Water Resource Inventory Area (WRIA) 8 (Lake Washington/Cedar/ Sammamish Watershed). In general, the lakes and streams in the study area have been affected by the surrounding urban environment, and all of the streams have

reaches that are channelized or have been piped. The following subsections describe each water body and also identify those listed in Ecology's Water Quality Assessment (the Clean Water Act Section 303(d) list). The 303(d) list designates waters that have beneficial uses–such as drinking, recreation, aquatic habitat, and industrial use, and those that are impaired by pollution.

Thornton Creek Basin

Most of Segment A would be located in the Thornton Creek Basin, from the southern starting point at Northgate to the northern boundary of the stream basin at approximately NE 185th Street (see Figure 4.9-1). In the study area, the Thornton Creek Basin contains the following water bodies:

- Thornton Creek: The southern part of the study area is near the Thornton Creek South Branch, also known as Maple Leaf Creek. The study area also crosses the Thornton Creek North Branch just south of NE 145th Street, and remains near the North Branch up to about North 176th Street. Thornton Creek collects stormwater from large sections of Shoreline and north Seattle, where the majority of the land is impervious. The creek has several sections in culverts and is on Ecology's 303(d) list of impaired water bodies for non-compliance with temperature, dissolved oxygen, and fecal coliform bacteria standards. However, there is strong public interest in returning the creek to a more natural state; some sections have been restored already, including segments around Northgate Mall.
- Twin Ponds: These created ponds, which together comprise about 4 acres, are located near NE 155th Street in Shoreline to the west of the project. They are not on Ecology's 303(d) list of impaired water bodies.
- Ronald Bog: Ronald Bog is a 7.7-acre pond/wetland complex near NE 175th Street in Shoreline. It is not on Ecology's 303(d) list of impaired water bodies.

Lake Ballinger/McAleer Creek Basin

In the study area, the Lake Ballinger/McAleer Creek Basin contains the following water bodies:

- McAleer Creek: This creek system begins at Hall Lake in Lynnwood, flows south through Hall Creek to Lake Ballinger by way of Edmonds and Mountlake Terrace, and becomes the McAleer Creek West Tributary through Shoreline to Lake Washington. The creek is fish-bearing and has multiple piped segments. The City of Lynnwood has documented flooding problems near Hall Creek and Lake Ballinger. Part of the creek near Lake Washington is on Ecology's 303(d) list of impaired water bodies for non-compliance with dissolved oxygen and fecal coliform bacteria standards.

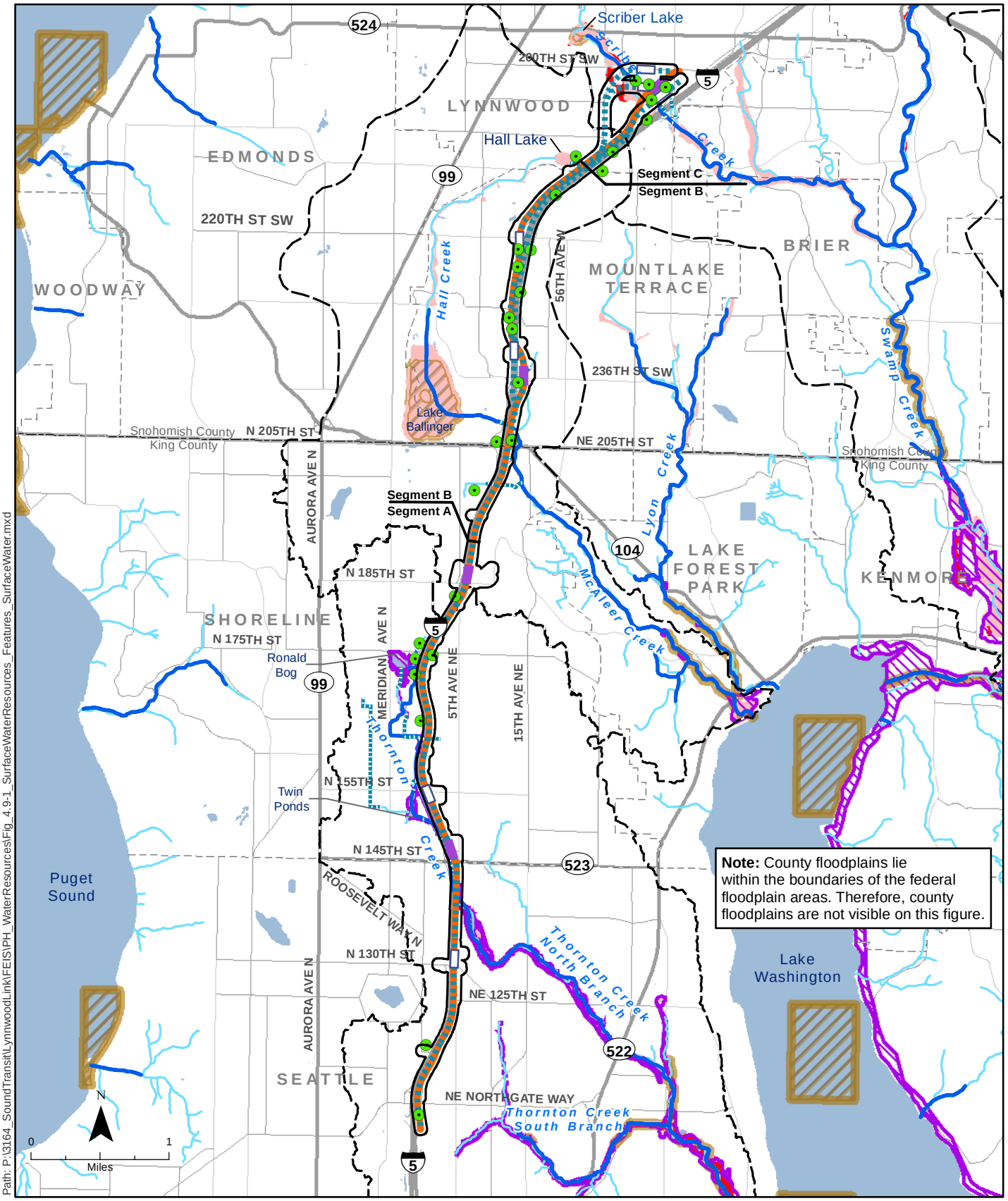


Figure 4.9-1
Water Resources
Affected Environment
Surface Water

Lynnwood Link Extension

- Lake Ballinger: Lake Ballinger is a relatively shallow 104-acre lake near the southern border of Edmonds and Mountlake Terrace. Lake Ballinger's water levels are controlled by an outlet weir, although flooding of homes surrounding Lake Ballinger is a continuing problem during large storm events. Drainage downstream in McAleer Creek is constrained by a 60-inch pipe that is too small to accommodate flows and results in continued flooding problems in the creek during large storms. While the lake is fish-bearing and supports other wildlife, it is on Ecology's 303(d) list for non-compliance with dioxin, dieldrin (a pesticide), and polychlorinated biphenyl (PCB) standards.

Swamp Creek Basin

Within the Swamp Creek Basin, only Scriber Creek is in the study area. Scriber Creek begins above Scriber Lake in Lynnwood and flows downstream to a large wetland near the Lynnwood Transit Center, goes under I-5 in a pipe, and then flows through forested wetland to Swamp Creek. Scriber Creek is not on Ecology's 303(d) list of impaired water bodies.

Stormwater Infrastructure

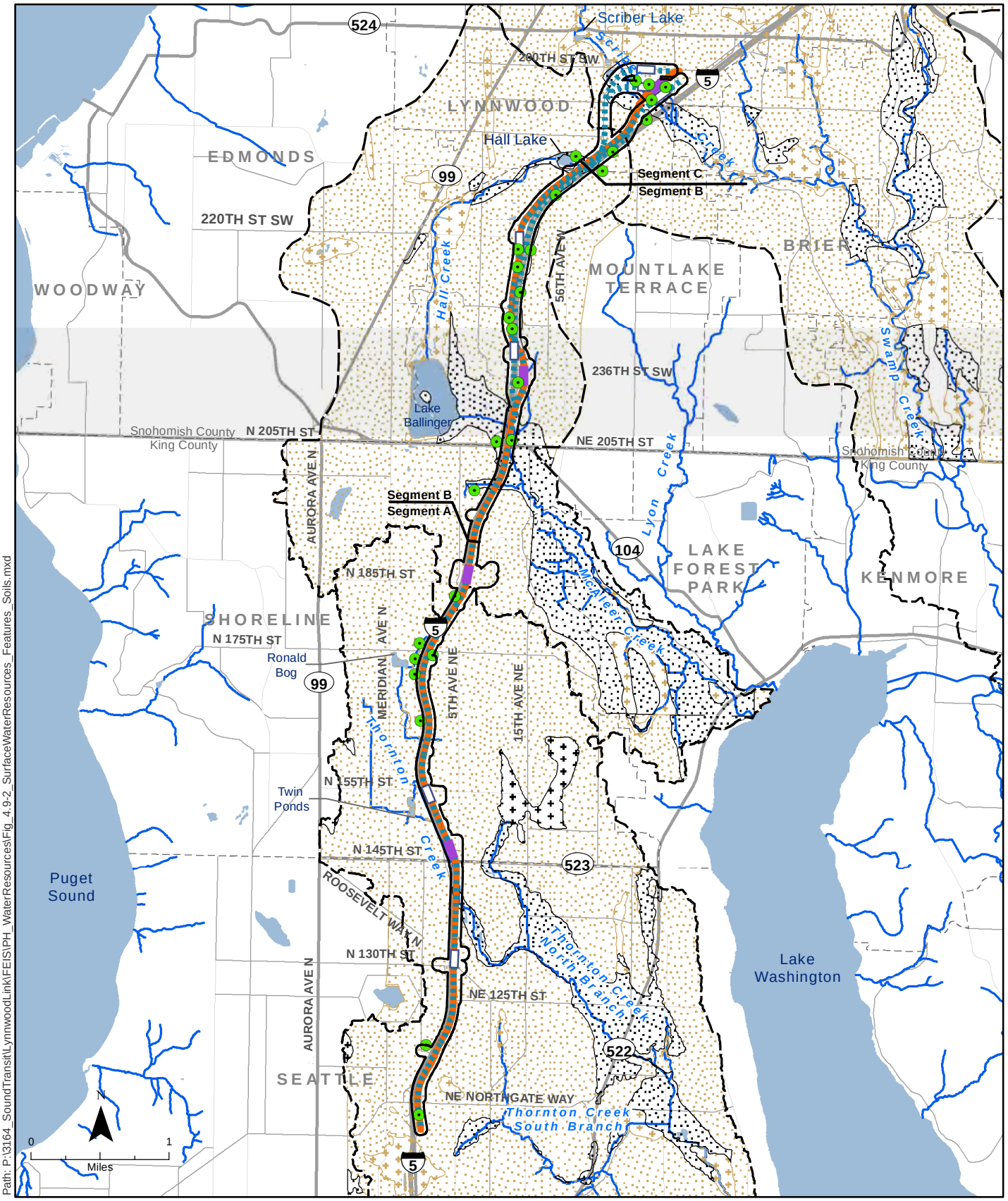
In the study area, most of the surface stormwater is collected by piped municipal systems. The largest system is in the I-5 right-of-way and features pipes and roadside ditches, media filter drains, stormwater ponds, and vaults. The locations of existing water quality and flow control facilities (WSDOT and municipal) in the proposed project vicinity are presented in Figure 4.9-1. A detailed list of the existing facilities is provided in Appendix I-4.9, Water Resources.

Land Use

Next to the proposed project is a mixture of urban residential, commercial, and vegetated areas. The impervious (hard) surfaces along the study area are a fairly even mix of pollution-generating roadway and parking areas, with non-pollution-generating surfaces that typically include roofs and sidewalks. Sound Transit reviewed the existing land cover within 100 feet of the proposed light rail routes to establish existing conditions and estimate potential changes in runoff flow volumes and pollutant loads with the project.

Infiltration

Figure 4.9-2 shows the hydrologic soil groups in the study area. The most common group is Type C, which is predominantly till-type soil that has a low infiltration and a high runoff potential. Type C soils are generally not compatible with stormwater management facilities that require surface water to infiltrate, which includes many low impact development (LID) approaches. Other soil groups in the study area are



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Data Sources: (King County, Snohomish County, City of Seattle, City of Shoreline, WSDOT, WDOE, Sound Transit, NRCS)

- Study Area
- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Stream Basin
- Waterbody
- Stream
- Existing Stormwater Facility

Hydrologic Soil Group

- A: High Infiltration
- B: Moderate Infiltration
- C: Low Infiltration
- D: Minimal to No Infiltration

Figure 4.9-2
Water Resources
Affected Environment
Soils

Lynnwood Link Extension

Types A and B, which have high to moderate infiltration potential, respectively, and are generally compatible with many types of LID stormwater facilities. There are also areas of Type D soils, which are typically saturated areas that do not allow percolation of additional surface water. Details regarding soil types and locations within each hydrologic soil group are presented in Appendix I-4.9.

Shorelines

Ecology has delegated authority to regulate designated shorelines in the study area to the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood. Lake Ballinger is the only water body in the study area with a state-designated shoreline, but it is not a shoreline of statewide significance. Around the shoreline of Lake Ballinger and its associated wetlands, the City of Mountlake Terrace requires prior approval and permits for larger development.

Floodplains

Federal floodplains, county flood hazard areas, and city flood hazard areas within the study area are shown on Figure 4.9-1. Thornton Creek, McAleer Creek, and Scriber Creek have floodplains that extend beyond their banks in the vicinity of the proposed project. In addition to requiring the flood storage and conveyance capacity of the flood zones to be maintained, local governments in the study area generally prohibit certain types of construction and activities in their flood zones, require preservation of wetlands or other natural flood storage features, and require flood-proofing for construction. Flood zone designation details for each study area jurisdiction and applicable floodplain regulations are presented in Appendix I-4.9.

4.9.2 Long-Term Impacts

This subsection identifies potential long-term impacts from the project alternatives.

No Build Alternative

Under the No Build Alternative, light rail would not be extended to Lynnwood and the associated changes to the landscape within the study area would be avoided. As a result, there would be no direct impacts from the project.

Impacts Common to the Light Rail Alternatives

The light rail alternatives are all similar in structural components, operational activities, and general alignment locations at the stream basin level. Therefore, each light rail alternative poses similar types of potential impacts to water resources, but in some cases in varying degrees.

Through continued project design and development in compliance with stormwater management regulations, Sound Transit would prevent or minimize potential impacts

to water resources. Examples of measures to prevent or minimize impacts include minimizing impervious footprints, avoiding the placement of project elements in or near water resources where possible, and installing appropriate water quality treatment and flow control facilities. Sound Transit's *Link Design Criteria Manual* (Sound Transit 2012b) requires stormwater facilities for its projects to conform to the requirements of local jurisdictions.

Chapter 30 of Sound Transit's *Link Design Criteria Manual* emphasizes sustainability measures, including LID as a preferred stormwater management method, if appropriate and feasible. Also, the 2012 Ecology *Stormwater Management Manual for Western Washington* requires LID approaches to stormwater management to the extent feasible. Stormwater management facilities would be designed using sustainable, LID approaches where practical. Some site conditions, however, may necessitate other approaches. Additional water resource regulations applicable to the project area and potential stormwater management approaches that could be implemented by the project are discussed in Appendix I-4.9.

Surface Water

The potential impacts to surface water from the project are summarized in Tables 4.9-1 and 4.9-2 for each project segment. To evaluate these impacts, Sound Transit considered:

- Increases in impervious surfaces: Impervious surfaces increase runoff volumes that can escalate flooding and flow frequencies, which in turn can contribute to stream erosion and aquatic habitat degradation. In addition, impervious areas subject to vehicular traffic and other pollution-generating activities accumulate contaminants that are transported to water bodies by stormwater runoff. This can include parking areas, although garages would have less pollution-generating areas than surface lots.
- BMPs: The design of the alternatives already features stormwater management facilities. Other BMPs and LID strategies will be considered in addition to these water quality and flow control facilities.
- Use of at-grade versus elevated structures: At-grade areas would be slightly wider than the elevated guideway structures and result in more impervious surfaces, pose more risk of direct conflict with municipal stormwater management facilities, and require more alteration of surface grade areas and flow paths.
- Stream crossings: Sound Transit's design is elevated for all stream crossings, which minimizes impacts to stream channels; columns or other structures in and around stream buffers can still pose a risk to buffer quality.
- Use of the I-5 median: The project would require less vegetation removal if the guideway were placed in the I-5 median rather than adjacent to the highway.

Given Sound Transit's commitment to design the project to meet the stormwater management requirements of each jurisdiction and to comply with applicable permit requirements, the light rail alternatives are not expected to adversely affect surface waters.

Impervious Surfaces

The Preferred Alternative and other light rail alternatives would add both pollution-generating and non-pollution-generating impervious surfaces in the vicinity of the light rail alternatives. Pollution-generating impervious surfaces are subject to motor vehicle use and include parking areas, bus holding areas, and project-associated roads or road realignments. Non-pollution-generating impervious surfaces are not subject to motor vehicle use and include the light rail tracks, guideways, and stations. Table 4.9-2 summarizes the range of impervious surface changes that would result from the Preferred Alternative and other alternatives in Segments A, B, and C compared to existing conditions. A discussion of the impervious surface calculation is presented in Appendix I-4.9, including a table and map depicting estimated changes for individual alternatives.

Table 4.9-1. Surface Water: Comparison of Alternatives

Segment/ Alternative	Impervious Increase [a]	BMPs Featured in Design	At-Grade Portions	Stream Crossings	Additional Considerations
Segment A: Seattle to Shoreline					
Preferred Alternative	About 30 acres	Detention Ponds, Detention Vaults, Guideway Dispersion, Bioretention, and Infiltration Facilities	Highest amount of at-grade portions, NE 130th Street Station at-grade	Elevated over Thornton Creek crossing south of NE 145th Street	Smallest NE 145th Street Station footprint Options: ▪ NE 130th Street Station (would not change the amount of impervious increase) ▪ Shoreline Stadium Garage (would not change amount of impervious increase)
Alternative A1	About 30 acres	Same as Preferred Alternative	Medium amount of at-grade portions	Same as Preferred Alternative	Includes reconstruction of NE 117th Street bridge; largest NE 145th Street Station footprint
Alternative A3	About 27 acres	Same as Preferred Alternative	Lowest amount of at-grade portions	Same as Preferred Alternative	Smallest NE 145th Street Station footprint
Alternative A5	About 30 acres	Same as Preferred Alternative	Medium amount of at-grade portions, NE 130th Street Station at-grade	Same as Preferred Alternative	Includes new parking lot at NE 155th Street Station

Table 4.9-1. Surface Water: Comparison of Alternatives

Segment/ Alternative	Impervious Increase [a]	BMPs Featured in Design	At-Grade Portions	Stream Crossings	Additional Considerations
Alternative A7	About 27 acres	Same as Preferred Alternative	Lowest amount of at-grade portions	Same as Preferred Alternative	Includes new parking lots at NE 130th and NE 155th Street stations
Alternative A10	About 30 acres	Same as Preferred Alternative	Medium amount of at-grade portions, NE 130th Street Station at-grade	Same as Preferred Alternative	Includes reconstruction of NE 117th Street bridge; largest NE 145th Street Station footprint
Alternative A11	About 27 acres	Same as Preferred Alternative	Lowest amount of at-grade portions	Same as Preferred Alternative	Includes new parking lot at NE 130th Street Station; smallest NE 145th Street Station footprint
Segment B: Shoreline to Mountlake Terrace					
Preferred Alternative	About 17 acres	Infiltration Ponds, Other Infiltration Facilities, Detention Ponds, and Detention Vaults	Lowest amount of at-grade portions	Elevated over McAleer Creek crossings at NE 205th Street/SR 104 and near 237th Street SW	None of the alignment would be within existing I-5 median Option: ▪ 220th Street SW Station South with 200-car surface parking lot (amount of impervious increase with option would be similar to Alternative B2A)
Alternative B1	About 10 acres	Same as Preferred Alternative	Highest amount of at-grade portions	Same as Preferred Alternative	Makes some use of I-5 median alignment Option: ▪ Parking garage on existing surface lot with 280 additional spaces (would not change amount of impervious increase)
Alternative B2A	About 20 acres	Same as Preferred Alternative	Medium amount of at-grade portions	Same as Preferred Alternative	None of the alignment would be within existing I-5 median; includes new parking lot at 220th Street SW Station
Alternative B4	About 10 acres	Same as Preferred Alternative	Highest amount of at-grade portions	Similar to Preferred Alternative, but avoids crossing near 237th Street SW	Makes the most use of I-5 median alignment, including Mountlake Terrace Freeway Station

Table 4.9-1. Surface Water: Comparison of Alternatives

Segment/ Alternative	Impervious Increase [a]	BMPs Featured in Design	At-Grade Portions	Stream Crossings	Additional Considerations
Segment C: Mountlake Terrace to Lynnwood					
Preferred Alternative	About 4 acres	Detention Vault and Guideway Dispersion	All elevated	Moderate crossing footprint over Scriber Creek and associated buffers	Lynnwood Transit Center Station would not add any new impervious surface and would potentially remove existing impervious surface
Alternative C1	About 4 acres	If connected to a west side alignment: Same as Preferred Alternative If connected to a median alignment: Infiltration Trenches, Detention Vaults, and Guideway Dispersion	All elevated	Smallest crossing footprint over Scriber Creek and associated buffers	200th Street SW Station would be located on mostly existing impervious surface; Alignment Option 2 would add more new impervious surface than Alignment Option 1[b]
Alternative C2	About 4 acres	Same as Alternative C1	All elevated	Largest crossing footprint over Scriber Creek and associated buffers	Lynnwood Transit Center Station would be located on mostly existing impervious surface; Alignment Option 2[b] would add more new impervious surface than Alignment Option 1
Alternative C3	About 4 acres	Same as Alternative C1	All elevated	Moderate crossing footprint over Scriber Creek and associated buffers	Lynnwood Park-and-Ride Station would potentially remove existing impervious surface; Alignment Option 2 would add more new impervious surface than Alignment Option 1 Station Options: 1. Existing transit center remains 2. Existing transit center relocated (would add more pollution-generating impervious surface than Station Option 1)

[a] Calculation of impervious area increase included the areas of the alternatives only and did not include options. Detailed calculations are provided in Appendix I-4.9.

[b] Alignment Option 1 refers to the alignment from the I-5 media; Alignment Option 2 refers to the alignment from the west side of I-5.

Table 4.9-2. Estimated Changes in Impervious Surfaces

Project Segment	Total Existing Impervious (acres)			Total Impervious After Project (acres)		
	PGIS[a]	NPGIS[b]	Total	PGIS[a]	NPGIS[b]	Total
Segment A Alternatives	79	11	90	79 to 83	38	117 to 121
Preferred Alternative	79	11	90	83	38	121
Segment B Alternatives	64	5	69	60 to 64	20 to 24	80 to 87
Preferred Alternative	64	5	69	64	23	86
Segment C Alternatives	56	11	67	53 to 54	16 to 17	69 to 71
Preferred Alternative	56	11	67	54	17	71

[a] PGIS (pollution-generating impervious surface) includes parking, bus areas, and roads.

[b] NPGIS (non-pollution-generating impervious surface) includes light rail tracks, guideways, and stations.

Total pollution-generating impervious surface area would be similar to existing conditions because most of the proposed road segments and parking lots would be located in areas with similar existing uses. Runoff from some areas of existing pollution-generating impervious surfaces currently receive water quality treatment while some do not. All of the light rail alternatives would include treatment of runoff from pollution-generating impervious surfaces, as summarized in Table 4.9-1. Non-pollution-generating impervious surfaces would increase compared to existing conditions, mostly as a result of the new guideway covering existing grassy right-of-way areas as shown in Table 4.9-2. The increase would not affect groundwater recharge; groundwater is discussed in Section 4.11, Geology and Soils.

Shorelines

The proposed project design would not alter any areas within regulated shorelines; therefore, no impacts are expected.

Floodplains

The Preferred Alternative and all other light rail alternatives would use elevated guideways to cross water bodies, and columns would be located outside the stream channel floodway or floodplain when it is possible to span these areas. At the Thornton Creek and McAleer Creek crossings, the preliminary engineering for the Preferred Alternative guideway spans the narrow floodplains and floodways without columns being placed within their boundaries; therefore, minor impacts or no impacts are expected. Similar designs would be anticipated for the other alternatives to minimize impacts.

In Segment C, the Scriber Creek floodplain is so wide that the project would likely have to place elevated guideway columns within the floodplain boundaries. Also, the guideway segments in this area would be wider to accommodate the station at the Lynnwood Transit Center and would be supported by pairs of columns rather than a single column in the center. The floodplain width to be crossed by the Preferred Alternative is approximately 380 feet, which would likely place 3 or 4 pairs of columns within the floodplain. Alternative C1 would cross the least amount of floodplain; this

alternative would cross two separate branches of the Scriber Creek floodplain that are 125 feet wide and 60 feet wide, respectively, and would probably place at least one pair of columns within the 125-foot-wide floodplain segment. Alternative C2 would cross the floodplain almost at its widest location of approximately 925 feet, requiring placement of 7 to 9 pairs of columns within the floodplain. Similar to the Preferred Alternative, Alternative C3 would cross a moderate width of approximately 350 feet of floodplain, which would place 2 or 3 pairs of columns within the floodplain. Placement of columns within the Scriber Creek floodplain would require a Development Permit from the City of Lynnwood, and the project would need to create additional flood storage to fully compensate for storage removed. No adverse impacts are expected.

4.9.3 Construction Impacts

The light rail alternatives would have similar potential construction-related impacts to water resources because construction equipment and techniques would be similar. Construction of alternatives with more at-grade portions (see Table 4.9-1) would have more disturbed ground area, with more areas requiring BMPs to protect sensitive areas. The activities that could affect water resources include:

- Earthwork, trench work, stockpiling, and material transport: Soil exposed in sloped excavations, fills, or trench work is especially susceptible to local erosion until vegetation is established or the surface is stabilized with pavement. If exposed soil becomes dry, it can be eroded by wind. Loose soil can be carried by water or wind off site to stormwater drains or streams where it increases turbidity in the water. Construction vehicle tires can carry soil onto roadways, where the soil could be carried into ditches or streams during storms.
- Concrete work and paving: The pH in surface water can increase to levels harmful to fish and wildlife if runoff comes in contact with process water or slurry from concrete work or curing concrete.
- Stream Crossings: Over-water work and construction in stream buffers can degrade water quality through pollutant spills, sediment transport, or wind deposition of stockpiled materials.
- Construction machinery: Equipment leaks or spills can affect water quality in nearby water resources. Hydrocarbons and other hazardous materials associated with construction machinery can increase turbidity or affect other water quality parameters, such as pH levels or the amount of available oxygen in the water.

Regulatory agencies responsible for water quality typically require construction projects to implement various BMPs, depending on site-specific and project-specific circumstances. Common measures are listed below. Sound Transit would implement the BMPs required by its permits or as necessary to meet regulatory requirements.

These permits and regulatory procedures include the NPDES Construction Stormwater General Permit process, the WDFW Hydraulic Project Approval, applicable elements of the ESA consultation, and applicable guidance manuals. Sound Transit would develop and implement a construction SWPPP to serve as the overall construction stormwater mitigation plan. This plan would be submitted to Ecology and required to be implemented for the duration of construction as part of the NPDES Construction Stormwater General Permit compliance. The construction SWPPP would include the following elements (see further details in Appendix I-4.9):

- Temporary Erosion and Sediment Control
- Spill Prevention, Control, and Countermeasures
- Concrete Containment and Disposal
- Dewatering Management
- Fugitive Dust Control

The BMPs commonly applied in the permits and regulations that apply to the project include:

- Phasing the work to minimize the amount of disturbed area at any one time
- Minimizing the need for haul roads that use fill material in sensitive areas (e.g., stream crossings or wetlands) by instead building temporary bridges or platforms with small piles (i.e., pin piles)
- Marking and fencing of construction limits
- Minimizing the amount of cleared area at a construction site
- Stabilizing construction entrances and haul roads using quarry spalls (crushed basalt)
- Washing truck tires at construction entrances
- Constructing silt fences downslope from exposed soil
- Protecting catch basins from sediment
- Containing and controlling concrete and hazardous materials on site
- Installing temporary ditches to route runoff around or through construction sites, with periodic straw bales or rock check dams to slow and settle runoff
- Providing temporary plastic or mulch to cover soil stockpiles and exposed soil
- Using straw wattles to reduce the length of unbroken slopes and minimize runoff concentration
- Using temporary erosion control blankets or mulch on exposed steep slopes to minimize erosion before vegetation is established
- Constructing temporary sedimentation ponds to remove solids from concentrated runoff and dewatering before being discharged

- Conducting vehicle fueling and maintenance activities no closer than 100 feet from waters of the state
- Implementing stream protection measures, as necessary, including diverting stream flow around the construction area and limiting the construction period to the required "work window," a period of the year identified in the HPA when fish would be minimally affected

Through compliance with applicable construction permits and the BMPs the permits would incorporate, none of the light rail alternatives is likely to adversely affect water resources during construction.

4.9.4 Indirect Impacts

Population in Washington is expected to increase in the future, with increased vehicular traffic and likely development pressure on many parts of the state. The proposed project could be expected to shift some future vehicular traffic to light rail and reduce vehicle-related stormwater pollutants. The project could also attract development in the urban areas designated for higher growth, which could protect undeveloped areas in other portions of the watershed from development. Therefore, the proposed project could indirectly offset some adverse impacts on water resources caused by population increases. The project would also support increased redevelopment in station areas, where allowed by local plans. While most of these areas are already urbanized, redevelopments would comply with current standards for water quality protection, which would be beneficial.

4.9.5 Cumulative Impacts

Historically, development in the Puget Sound watershed led to discharges of municipal sewage, stormwater runoff, and industrial wastes into local area surface waters. Logging and land clearing resulted in sedimentation in streams, lakes, and marine water bodies. Pesticides and fertilizers used on landscaped areas and contaminated runoff from impervious surfaces made their way into surface water via stormwater runoff. These past and ongoing actions have degraded water quality in many of the water bodies in the study area. Current regulations primarily target point discharge sources; however, new development or redevelopment is required to bring many existing non-point-source pollution-generating surfaces up to current standards for flow control and water quality treatment in more populated areas of the Puget Sound watershed. Therefore, small improvements in water quality are expected to occur over time, with or without the light rail project.

If other projects were constructed within the vicinity of the proposed project and within the same timeframe, the cumulative risk of construction-related impacts on water resources would increase.

In some locations, other large projects could be developed during a similar timeframe and in the vicinity of the light rail alternatives. If Sound Transit's OMSF were located at the Lynnwood site, there is the potential for increased impervious surfaces, fill impacts within the Scriber Creek floodplain, and the loss of adjacent wetland or riparian buffer. However, much of the area that potentially would be occupied by the maintenance facility is already developed, and a redevelopment to current stormwater management standards could help improve existing problems with water quality management.

Additional areas that could be developed by other projects include the master-planned Edmonds School District support services center, which would include administrative facilities and a school bus base in Lynnwood on a district-owned site that overlaps with a portion of Sound Transit's maintenance facility alternative in Lynnwood. The school district site is partly developed already, but the development could increase pollution-generating impervious surface in the Scriber Creek Basin. The school district project would prevent or minimize impacts to water resources by meeting the current stormwater management standards required by construction permits; therefore, no cumulative impacts are expected.

4.9.6 Potential Mitigation Measures

The project would be designed to comply with all federal, state, and local regulations, which would prevent or minimize potential impacts to water resources through project planning, design, and the application of required BMPs (see Section 4.9.3 and Appendix I-4.9). Measures to prevent or minimize long-term impacts include LID approaches, where applicable, and stormwater flow control and water quality treatment as identified in Table 4.9-1. Sound Transit will comply with the NPDES permit program, and will implement measures defined for the project through its construction SWPPP. With these impacts controlled, as described in Sections 4.9.2 and 4.9.3, no operational or construction-related adverse impacts on water resources are expected and no mitigation is required.

The project design would include avoidance and minimization measures to prevent cumulative impacts to water resources by other projects constructed within the vicinity of the Lynnwood Link Extension and within the same timeframe. These measures would adhere to applicable regulatory standards, the Ecology NPDES Construction General Permit, and the WDFW Hydraulic Project Approval.

4.10 Energy

This section discusses the project's use of energy for construction and operation, and the potential for indirect and cumulative changes in energy used for regional transportation. Energy use is often expressed in terms of a standard measure known as the British thermal unit (Btu). At the regional scale, the units are counted in the millions to trillions (mBtu or tBtu, respectively).

4.10.1 Affected Environment

With an annual consumption of 2,195 tBtu, Washington consumes more energy than it produces. Of the 2,195 tBtu consumed in 2012 in the state, roughly 48 percent came from fossil fuels (43 tBtu from coal, 272 tBtu from natural gas, and 743 tBtu from petroleum). Renewable energy was the second highest energy source consumed, at approximately 47 percent (1,039 tBtu), and nuclear energy was third at 4 percent (98 tBtu) (EIA 2014a).

In 2012, transportation was the highest end-use energy consumption sector in the state at roughly 30 percent (619.8 tBtu), followed by industrial at 28 percent (582.1 tBtu), residential at 23 percent (479.6 tBtu), and commercial at 18 percent (375.1 tBtu) (EIA 2014a).

The study area for energy is the four-county Central Puget Sound urbanized area (King, Snohomish, Pierce, and Kitsap counties) regional transportation network. According to the PSRC travel demand model, which provided the base transportation data used in this analysis, most regional miles traveled are in passenger cars and light trucks. Public transit accounts for less than 1 percent of the regional miles traveled. Compared to the No Build Alternative, potential transit improvements would reduce motor vehicle use within the study area, as well as increase travel on Sound Transit's light rail network, this analysis evaluates existing energy consumption of these transportation modes. The proposed project would also affect public transportation provided by other agencies because the Lynnwood Link Extension could reduce the need for other transit routes that would otherwise be operating under congested conditions; therefore, energy consumption from other public transportation agencies is included in this analysis. Energy consumption per mile for transit vehicles is listed in Table 4.10-1 along with the estimated 2011 energy consumption based on vehicle miles traveled.

Table 4.10-1. Existing (2011) Daily Vehicle Energy Consumption in the Study Area

Travel Mode	Btu per Vehicle Mile[a]	2011 Daily Vehicle Miles Traveled	2011 Daily Energy Consumption (mBtu)
Bus[b]	37,718	254,100	9,584
Commuter Rail	92,474	960	89
Light Rail	64,585	4,430	286
Total Transit Energy Consumption	—	*259,490*	*9,959*
On-Road Vehicles (including automobiles, light trucks, medium trucks, and heavy trucks)	—	79,442,960	532,429

[a] Transportation Energy Data Book, Edition 32, Table 2.12 (2013)

[b] Bus vehicle miles traveled include King County Metro, Pierce Transit, Everett Transit, Community Transit and Sound Transit buses.

Energy consumption for passenger vehicles was developed using EPA's MOVES model version 2010b (released in June 2012). For this analysis, PSRC provided regionally specific MOVES input files, and national defaults were used when regionally specific inputs were not available. Vehicle miles traveled by mode and associated energy consumption are listed in Table 4.10-1. Total transit and passenger vehicle energy consumption for 2011 is shown in Table 4.10-2. As indicated in this table, passenger vehicles and trucks consume the most transportation energy within the study area.

Table 4.10-2. Total 2011 Energy Consumption in the Study Area

Travel Mode	2011 Daily Energy Consumption (mBtu)	Percentage of Total Daily Energy Consumption
Transit Energy Consumption	*9,959*	1.8%
On-Road Vehicles (including automobiles, light trucks, medium trucks, and heavy trucks)	532,429	98.2%
Total	***542,388***	

4.10.2 Long-Term Impacts

The proposed project's long-term impacts would change energy consumption for transportation along roadways, and change energy use by the public transit system. The analysis applies to all alternatives because their operation and ridership characteristics are similar. Table 4.10-3 shows the estimated 2035 energy consumption for the No Build Alternative and for the Preferred Alternative by vehicle type.

Table 4.10-3. 2035 Energy Consumption by Travel Mode (mBtu)

Travel Mode	No Build Alternative in 2035[a]		Light Rail Preferred Alternative in 2035[a]		Daily Energy Consumption Change from No Build Alternative in 2035[a] (percent)
	Daily Vehicle Miles Traveled	Daily Energy Consumption (mBtu)	Daily Vehicle Miles Traveled	Daily Energy Consumption (mBtu)	
On-Road Vehicles (including automobiles, light trucks, medium trucks, and heavy trucks)	100,592,498	591,488	100,307,852	588,820	-0.5%
Bus	243,000	9,165	240,400	9,067	-1.0%
Heavy Rail	1,470	980	1,470	980	0.0%
Light Rail	13,600	878	17,900	1,156	31.7%
Weekday Daily Total	***100,850,568***	***602,511***	***100,567,622***	***600,023***	***-0.4%***

[a] The energy calculations do not assume the most recent and likely future updates to EPA's fuel economy and emission standards. Other state and federal legislation also could reduce future energy consumption rates. Thus, actual 2035 energy consumption could be lower.

No Build Alternative

The transportation energy forecasts for the No Build Alternative account for other planned transportation projects as well as the increased travel demand based on future land use, population, and employment. These forecasts also consider predicted changes in vehicle fuel consumption as future vehicles become more efficient; however, the current models do not yet assume the most recent or likely future updates to EPA's fuel economy and emission standards. Still, while overall miles traveled would increase by nearly 27 percent by 2035, energy consumption for transportation would increase by less than half that, or 11 percent.

Light Rail Alternatives

The travel forecasts combined the Preferred Alternative from each project segment (A, B, and C) to provide a representative prediction of regional travel for the project, even if other alternative combinations by segment were used. Although the individual light rail alternatives would have some differences in ridership, the changes in roadway operating conditions and travel by mode at the regional level would be statistically similar to the Preferred Alternative. All the light rail alternatives are expected to primarily shift commuters from automobiles and light trucks to light rail as well as from bus transit to light rail. These shifts in travel mode are expected to occur throughout all periods of the weekday, with the most dramatic shifts occurring in the morning and evening peak periods, which is consistent with the typical work commute times. Energy consumption would decrease by about half of 1 percent as a result of the mode shift as well as the higher operating speeds on roadways, which improve fuel economies for all vehicle classifications.

Sound Transit published a *Sustainability Plan* in 2011 that builds on the 2007 Sustainability Initiative. It commits Sound Transit to integrate efficient operating practices at existing and new facilities, using energy-saving equipment to reduce energy demand, and maximizing intermodal transit connections to reduce automobile VMT. Many of these practices have been incorporated into the initial Central Link light rail segment that began operating in 2009. The *Sustainability Plan* identifies a long-term energy target in which all fleets would deploy fuel-efficient, clean, and cost-effective vehicles to optimize the use of proven technologies. It also identifies initiatives to develop and implement an energy management strategy and to continue to develop and implement fuel reduction strategies for Sounder commuter rail, ST Express buses, and the non-revenue fleet. Sound Transit's design standards for light rail also require designers to maximize the energy efficiency of transit facilities, buildings, and systems. Implementing the *Sustainability Plan* and Sound Transit's design standards could further reduce energy consumption during Lynnwood Link Extension construction and operations.

4.10.3 Construction Impacts

Using the Preferred Alternative as representative of all alternatives, Sound Transit estimated the construction-related energy consumption of the project. The estimate uses a method developed by the California Department of Transportation (Caltrans). The Caltrans method applies energy consumption rates to the various construction activities and quantities identified by the design team for developing construction cost estimates. These estimates are summarized in Table 4.10-4.

The estimate for the Preferred Alternative construction-related energy consumption is 5,171,499 mBtu, the sum of the total construction energy consumed by segment as shown in Table 4.10-4.

During final design, Sound Transit would identify and implement sustainability measures consistent with its Sustainability Program, which includes a variety of energy-saving protocols and practices.

Energy used during construction and in the manufacture of construction materials would be irretrievable. However, the proposed project would not adversely affect the continued availability of energy because the scale of the project is negligible when compared to energy production in Washington.

Table 4.10-4. Light Rail Preferred Alternative Construction Energy Consumption (mBtu) by Segment

Description	Segment A	Segment B	Segment C	Total
Length (Miles):	4.5	3.0	1.0	8.5
Number of Stations:	2	1	1	4
Guideway and Track Elements (mBtu)	1,415,200	1,291,011	521,722	3,227,933
Stations, Stops, Terminals (mBtu)	440,006	193,612	553,962	1,187,580
Sitework and Special Conditions (mBtu)	253,891	74,361	23,933	352,185
Systems (mBtu)	209,071	138,174	56,556	403,801
Total Construction Energy (mBtu)	**2,318,168**	**1,697,158**	**1,156,173**	**5,171,499**

Note: Estimates are based on preliminary construction cost estimates developed by the project team in July 2014; they do not include change order contingency; right-of-way, land, and existing improvements; vehicles; professional services; unallocated contingency; or high-estimate factor (15 percent).

4.10.4 Indirect and Cumulative Impacts

There are no long-term indirect impacts associated with this project because energy consumption used in operating the light rail extension would be a direct impact. Cumulative impacts of the proposed project are accounted for in the regional scope of the travel demand model used for this energy consumption analysis. Operating light rail would result in less energy usage than the No Build Alternative; therefore, this project would not contribute to the cumulative impacts of increased energy consumption in the region. The cumulative energy impacts of additional projects, such as the OMSF or the Edmonds School District support services center, would be negligible on the regional scale.

4.10.5 Potential Mitigation Measures

No mitigation measures would be needed for the Lynnwood Link Extension long-term or construction impacts. The light rail alternatives would consume less energy compared with the No Build Alternative because of the shift in travel mode to light rail, which would also reduce traffic congestion. Mitigation measures proposed for transportation and air quality impacts (see Section 3.6 in Chapter 3, Transportation Impacts and Mitigation, and Section 4.6, Air Quality and Greenhouse Gases) would also result in reduced energy consumption during construction.

4.11 Geology and Soils

This section describes the existing geological conditions that could affect or be affected by the Lynnwood Link Extension, including topography, regional geology, groundwater, seismicity, and geologic hazards.

4.11.1 Affected Environment

This section discusses the geology and soils in a study area extending 100 feet from the light rail alternatives. Sound Transit also researched the geologic units and soil characteristics in the larger project area by reviewing existing geologic maps and surveys, including geotechnical reports for previous projects in and near the project area. These sources included logs of over 700 borings and test pits completed in or near the study area since 1962, and logs of almost 100 borings completed for preliminary design of this project.

Topography, Regional Geology, Groundwater, and Seismicity

The project would be located within the central Puget Lowland, a north-south trending trough bordered by the Cascade Mountains to the east and the Olympic Mountains to the west. The existing topography and regional geology have been largely shaped by glacial activity.

The regional geology generally includes a thick sequence of glacially consolidated soils overlying bedrock, which is generally 300 feet to 1,600 feet below the ground surface in the project area. Under the weight of the glaciers, the underlying soils became consolidated and are generally very hard or compact. More recent soils have been deposited over the glacially consolidated soils by lake and river actions.

Figure I-4.11-2 in Appendix I-4.11, Geology and Soils, shows the surficial geology of the project area, and Table I-4.11-1 in the same appendix describes the geologic units and their engineering properties.

Where pervious soils are present at the ground surface, rainfall and snowmelt infiltrate to sustain typical shallow water table or perched groundwater conditions. In upland areas of the project where glacial till is present at or near the surface, the upper portion of the till and/or the thin veneer of overlying sediments can develop perched groundwater conditions because the underlying till has low permeability and water percolates into the till only at very slow rates. Such groundwater occurrences are commonly seasonal, developing through the wet winter months and diminishing or drying out completely during the dry summer months.

Groundwater that percolates into the glacial till moves downward slowly to eventually recharge an aquifer, which is usable as a water resource. However, none of the aquifers present along the project alignment are used for municipal or private water supply.

In some portions of the study area, groundwater is present throughout the year within confined and unconfined aquifers in permeable soils. Groundwater levels are usually tied to adjacent stream conditions, with levels increasing during the wet winter months and lowering as they feed the streams during drier weather

conditions. Near Thornton Creek, borings have encountered groundwater under moderate artesian pressure.

The Puget Sound region has experienced numerous earthquakes in the past and will experience earthquakes in the future. This region is located at the convergent continental boundary known as the Cascadia Subduction Zone. Three major types of earthquakes occur in this zone, which contribute to the overall earthquake hazard.

Shallow crustal earthquakes involve movement within the crust of the North American Plate. This movement tends to occur along faults such as the Seattle Fault (9 miles south of the project area) and the South Whidbey Island Fault (3 miles north of the project area); the Seattle Fault last ruptured 1,100 years ago and the South Whidbey Island Fault last ruptured 3,000 years ago. Intraplate earthquakes occur within the subducting Juan de Fuca Plate at depths of 20 to 40 miles. Relatively recent intraplate earthquakes include the Olympia 1949, Seattle 1965, and Nisqually 2001 events. Even larger earthquakes involve movement along all or a portion of the Cascadia Subduction Zone and represent the largest anticipated earthquakes for the region; the most recent occurred just over 300 years ago in 1700.

Geologic Hazards

Washington State's GMA (RCW Chapter 36.70A) requires all cities and counties to identify critical areas within their jurisdictions and to formulate development regulations for their protection. The GMA defines critical areas, including geologically hazardous areas, as areas that are susceptible to erosion, sliding, earthquake, or other geological events and are therefore not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns.

The Lynnwood Link Extension would pass through four cities and two counties, all of which have defined geologically hazardous areas in their respective codes (see Figure I-4.11-1 in Appendix I-4.11, which shows geologic hazardous areas). These geologic hazards include the following:

- Erosion hazard areas (generally encompassing the entire project area), with surficial soils that are prone to erosion if left exposed.
- Steep slope hazard areas, with grades between 15 and 40 percent, that might move during wet weather or seismic events.
- Landslide hazard areas where past slides have occurred, where the soil types under steep slopes make them unstable, or any areas where the slope is steeper than 40 percent. There are no known past landslides in the project area.
- Seismic hazard areas subject to earthquake-induced ground shaking or fault displacement. Shown in Figure I-4.11-1 in Appendix I-4.11, these areas have saturated loose granular soils that can liquefy and become unstable during an

earthquake (referred to as liquefaction). The project area is located outside known fault zones; therefore, the risk of fault displacement is low.

- Settlement hazard areas, with soft or loose soils that could experience significant settlement under the weight of new fill or structures.

Sole-Source Aquifers

The project would not be located within an EPA-designated sole-source aquifer area (EPA defines a sole-source aquifer as the primary source for drinking water in a given area). The nearest is Cross Valley Sole-Source Aquifer, which is located at least 3 miles east of the I-5 corridor.

Critical Aquifer Recharge and Wellhead Protection Areas

Aquifer recharge areas restrict developments that could affect sources for groundwater used for potable water supplies. Wellhead protection areas designated by local jurisdictions also help control activities involving potential sources of pollutants. The project would not be located within the boundaries of a King County or Snohomish County critical aquifer recharge or wellhead protection area.

Site Geology

The topography along the entire project corridor was substantially modified during construction of I-5 with engineered cuts and fills to create the existing freeway corridor. The light rail alternative routes within Segments A and B have similar geological conditions, but in Segment C the geological characteristics may vary slightly among the alternative routes. Most of the project area is underlain by glacial till and advance outwash. These soils are considered favorable for support of light rail, with good bearing support and little settlement, but several areas also include soils that would be subject to liquefaction. These areas include:

- Near Thornton Creek (south of NE 145th Street in Segment A)
- North and south of the King-Snohomish county line (in Segment B)
- Near Hall Lake (in Segments B and C)
- Near Scriber Creek (Lynnwood Transit Center in Segment C)

4.11.2 Long-Term Impacts

During preliminary design, Sound Transit conducted geotechnical borings and detailed soil analyses to inform and refine potential design and construction approaches to avoid potential impacts and geological risks during light rail operations. This section summarizes potential long-term operational impacts from the Lynnwood Link Extension and the No Build Alternative.

No Build Alternative

Under the No Build Alternative, the Lynnwood Link Extension would not be constructed. While there may be other localized projects, there are no major projects in the project corridor that would change existing geological and soils conditions.

Impacts Common to All Light Rail Alternatives

The discussion below considers long-term impacts that the proposed project could cause, as well as geological conditions that could affect the project. Sound Transit anticipates that the overall impacts would be similar among the alternatives.

Elevated guideway structures and light rail stations would both likely have shallow foundations (approximately 6 feet to 10 feet deep) or drilled shaft foundations (approximately 40 feet to 60 feet deep).

Retaining structures would be required in many areas along the routes of the alternatives. Some could require permanent soil anchors that extend beyond the limits of the study area onto adjacent properties, which would require permanent easements and could affect the future use of neighboring properties. Retaining structures can affect or be affected by local groundwater movement and seepage. Their design would provide appropriate means of drainage or waterproofing.

Parking structures would likely be supported on shallow foundations (approximately 6 feet to 10 feet deep) or drilled foundations (approximately 30 feet to 50 feet deep); ground improvement may also be used, likely in combination with shallow foundations. Surface lots would be supported at-grade.

Surface water runoff from impervious areas such as parking structures and station buildings would be managed with stormwater facilities described in Section 4.9, Water Resources. These would include infiltration facilities that discharge most or all of the collected stormwater to the ground (after appropriate treatment). Municipalities in Western Washington are required to maximize the use of LID techniques for new projects because they recharge aquifers, improve the base flow to streams, and reduce the risk of flooding, erosion, and surface water contamination.

Overall, the risk of adverse impacts on light rail facilities is low because the design would address potential impacts that could be caused by the geological conditions and/or soils in the project right-of-way. The potential impacts on the light rail facilities would be similar among the alternatives, with slight variances arising from the available space for construction; proximity of existing structures; loads from adjacent slopes; soil type; and steep slope, settlement, and seismic hazards (particularly liquefaction).

Insufficient Stability of Earth Slopes and Retaining Structures

Insufficient stability of earth slopes and retaining structures could endanger light rail facilities, light rail passengers, and neighboring properties. Earth slopes could include

existing slopes, slopes that are steepened, and slopes for embankment fills. These would generally be areas identified as steep slope and landslide hazard areas. The risk of insufficient slope stability would be greater when a large seismic event occurs.

The overall risk from unstable slopes and retaining structures is low because Sound Transit has evaluated these risks during project design and would increase the stability of the slope and retaining structures to acceptable levels. If slopes intersect perched groundwater or the water table, the project would collect and drain seepage to prevent erosion and loss of soils by piping or sloughing that could otherwise compromise long-term slope stability.

Settlement of New Earth Fills

New earth fills would be used in some areas to support light rail structures, but the fills would typically include retaining structures to limit the extent of the fill. The fills would cause increased loads on the soil and could result in settlement of soft soils, which could damage light rail structures as well as existing improvements.

Most of the new earth fills would be located in areas underlain by glacially consolidated soils, which are not expected to experience significant settlement. The light rail alternatives would use elevated structures to cross over most areas underlain by soft soils (wetland deposits, younger alluvium, and recessional outwash), which would reduce the risk of settlement in these areas.

The overall risk of settlement along the project corridor is low. Project design would incorporate measures to improve the soils in locations with the potential for settlement, or would allow tolerances for anticipated settlement.

Seismic Ground Shaking

The elevated light rail and retaining structures would be designed to withstand the effects of seismic ground shaking, thereby minimizing the risks to rail facilities and users. Sound Transit light rail design standards are based on the occurrence of a rare and large seismic event; therefore, the risk of damage from seismic ground shaking would be low.

4.11.3 Construction Impacts

The construction impacts of the Lynnwood Link Extension would be similar for all light rail alternatives because construction equipment and techniques would be similar. Construction activities could cause various geology- and soils-related impacts on a short-term basis. If not properly managed, the short-term construction impacts could become long-term problems.

Erosion

Construction activities could expose soils to rainfall and potential erosion through vegetation and tree removal, excavation and grading, and stockpiling of soils. The risk of erosion is a function of the soil type, slope inclination, presence of perched or shallow

groundwater, area of soil exposed, and rainfall intensity. Erosion hazards would be reduced using BMPs described in Section 4.9, Water Resources.

Slope Instability and Excavations

Construction would include removal of vegetation, excavation of temporary and permanent cut slopes, placement of earth embankment fills, and construction of retaining structures. These activities could affect the stability of slopes, particularly in steep slope and landslide hazard areas.

Slopes and retaining structures would be evaluated and designed for adequate stability using appropriate techniques, such as limiting slope inclination, limiting surcharge loading, or adding slope reinforcement such as soil nails. Shallow or perched groundwater intersected by cut slopes or other excavations would require drainage to control seepage and prevent it from contributing to slope instability.

Existing soils excavated during construction that cannot be used as structural fill would be disposed of. This would result in additional truck traffic, dust, and other construction-related impacts.

Table 4.11-1 shows the estimated total cut-and-fill earthwork quantities for the Preferred Alternative and the other light rail alternatives.

Table 4.11-1. Estimated Earthwork Quantities (in cubic yards)

Alternative(s)	Cut[a]	Fill[a]
Preferred Alternative A[b]	227,000	180,000
A1, A5, A10	214,000	67,000
A3, A5, A11	83,000	32,000
Preferred Alternative B	56,000	66,000
B1	98,000	23,000
B2A	123,000	33,000
B4	92,000	54,000
Preferred Alternative C	28,000	0
C1	11,000	0
C2	10,000	0
C3	9,000	0

[a] Includes calculations of the areas with cuts or fills needed for elevated or at-grade structures, with a 50 percent addition for station earthwork and a contingency amount reflecting the early stage of design information available.
[b] The Preferred Alternative's fill estimates also include retained fill structures transitioning to elevated structures based on updated design information.

Seismic Ground Shaking

Seismic ground shaking could occur during light rail construction, and the impacts would be similar to those previously discussed. If a large earthquake occurred during construction, the major risk would be damage to facilities under construction. The risk of seismic ground shaking is low due to the low probability of an earthquake occurring during the construction window.

Settlement from Construction Earth Loads

Construction earth loads would result from temporary stockpiling and the placement of new earth for embankments. The risk of settlement from construction earth loads is low. During the design process, Sound Transit would identify areas where soft soils could settle and avoid these areas or take other measures to protect against settlement damage.

Dewatering

Sound Transit does not anticipate dewatering for construction. Drilled shaft foundations are the primary project element that would extend below the groundwater table. Shafts would be completed without dewatering, and may even require the addition of water during installation ("water heading") to prevent heaving conditions at depth.

If dewatering is required, the design process would consider the potential effects of dewatering-induced settlement on nearby structures. Sound Transit would reduce settlement by using localized dewatering, reinjecting groundwater, using sheet piles for groundwater cutoff, or underpinning nearby structures.

4.11.4 Indirect Impacts

Although other developments could occur in the station areas, any new development would be built to meet current design standards and permit requirements. Permanent soil anchors could be used for major structures, which could restrict excavations for new developments within the anchor zone. However, such restrictions would be limited and alternative design remedies could be used.

4.11.5 Cumulative Impacts

A few proposed projects in the project area could alter geological or soil conditions, including Sound Transit's OMSF alternative in Lynnwood and the Edmonds School District's support services center. Both of these projects would require earthwork and other construction-related activities, but these would not add to the Lynnwood Link Extension's impacts.

4.11.6 Potential Mitigation Measures

With appropriate use of engineering design standards and BMPs as described above in Section 4.11.3, Sound Transit does not expect adverse geological and soils impacts.

4.12 Hazardous Materials

This section discusses the potential for the Lynnwood Link Extension alternatives to encounter existing hazardous materials that could pose risks to human health and/or the environment or could create control or cleanup requirements for the project. It also discusses the potential for the project to introduce new sources of hazardous materials contamination.

Hazardous materials can be classified in a number of different categories based on laws and regulations that define their characteristics and use. These categories include hazardous waste, dangerous waste, hazardous substances, and toxic substances.

4.12.1 Affected Environment

The hazardous materials study area extends 1/8 (0.125) mile around the light rail alternatives (project footprint). Contaminated sites within this area are considered the most likely to affect the project. Because of the nature of hazardous materials, pollutants could migrate toward the project from nearby sites, typically through groundwater migration. To address this potential risk, Sound Transit considered the physical setting, including geologic, surface water, and hydrologic conditions, and collected regulatory database information about sites with known contamination or potential contamination, as well as relevant historical conditions, within 0.25 mile of the project footprint; this area is shown as the Search Area in Figure 4.12-1. This was a conservative approach to ensure that all hazardous materials sites that could potentially affect the study area were captured in the database review.

Physical Setting

The project corridor is located within the Central Puget Lowland ecoregion, where the existing topography and regional geology have been largely shaped by glacial activity. The terrain in the study area features valleys and hills varying by up to 300 feet in elevation. The region is mostly underlain by Vashon Till, and surface soils in the study area generally consist of a mixture of sands, silts, and gravels of varying thicknesses and occurrences.

Depth to groundwater in the study area can vary considerably. However, monitoring well information and local municipal information indicate that, in general, depth to groundwater ranges from less than 10 feet below ground to approximately 30 feet below ground. Groundwater flow direction is also variable and highly influenced by streams and other surface water features. In general, groundwater flow is relatively flat, with a slight gradient to the west toward Puget Sound in much of the study area.

As noted in Section 4.9, Water Resources, the study area lies entirely within the Lake Washington/Cedar/Sammamish Watershed (WRIA 8), which has the greatest urban development and population density of any watershed in Washington.

Contamination issues are of particular concern in sensitive areas, such as wetlands, floodplains, rivers, and creeks.

Hazardous Materials Sites

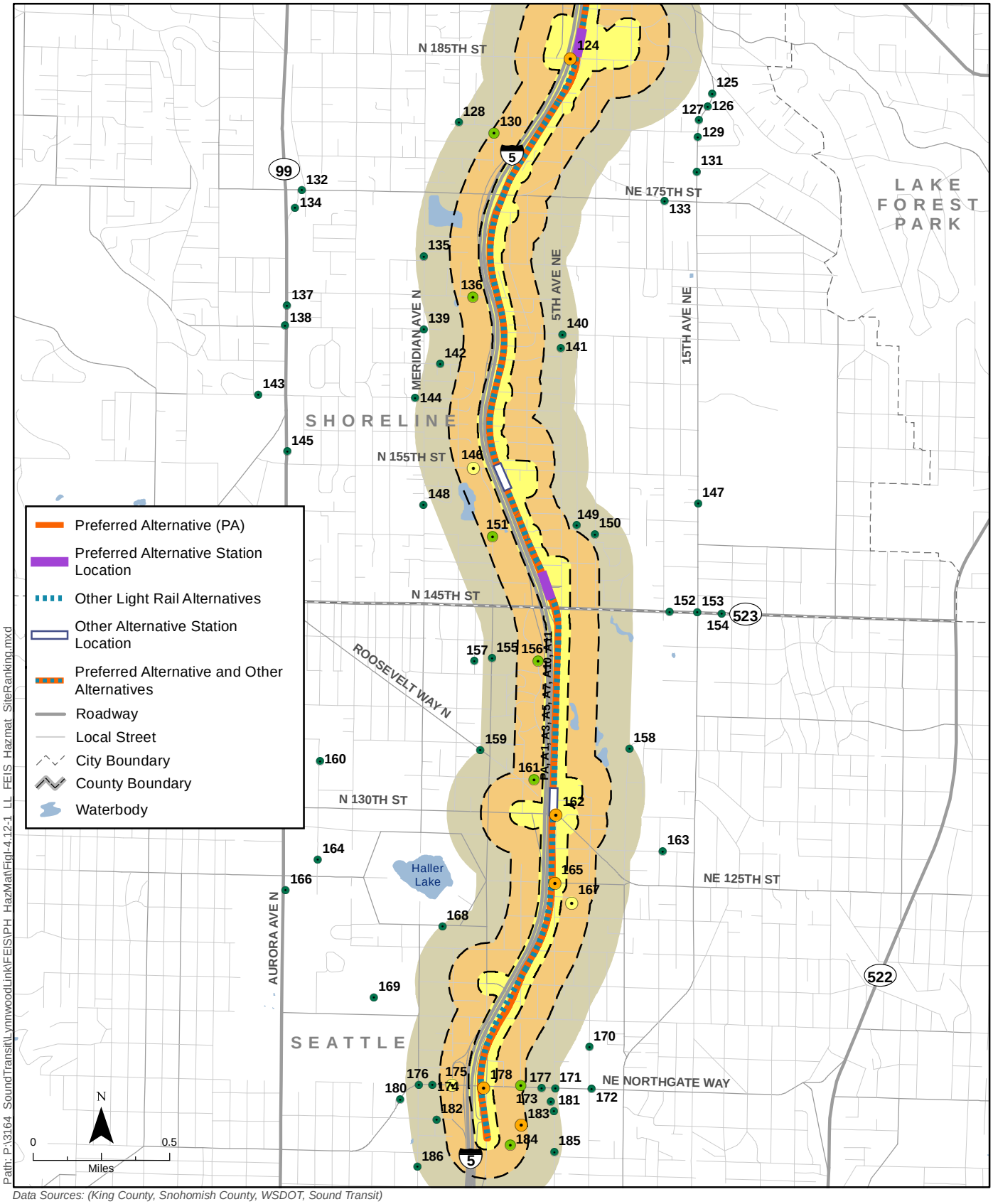
Sound Transit identified approximately 200 properties with previous records of contamination within or near the study area. While much of the study area is residential, with few sites of past contamination, there are areas where businesses or other entities have used hazardous materials, or where spills or leaks have occurred. These are mostly along arterials and in areas with commercial, manufacturing, or industrial uses. Sound Transit considered the potential of each site to act as a contaminant source affecting the project footprint and ranked them based on:

- Location of the site (relative to the project footprint)
- Type and number of environmental database listings
- Occurrence of a known release of a hazardous substance(s) or petroleum product
- Status of cleanup—active, inactive, or unknown; all sites are considered active unless identified as having no further action or inactive status

Sites were ranked on a scale of 0 to 5 (lower priority concern to higher priority concern) as follows:

0 – Identified site is more than 1/8 mile from the project footprint.
1 – Identified site is 1/8 mile or less outside the project footprint and has had no confirmed or suspected release.
2 – Identified site is within the project footprint and is not known to have had a confirmed or suspected release.
3 – Identified site is 1/8 mile or less outside the project footprint and has had a confirmed release.
4 – Identified site is within the project footprint and has had a confirmed or suspected release; however, no further action is required or pending.
5 – Identified site is within the project footprint, has had a confirmed or suspected release, and cleanup activities at the site are active.

Figures 4.12-1a and 4.12-1b show the location and ranking of the hazardous materials sites identified in the study area. Figure I-4.12-1 in Appendix I-4.12, Hazardous Materials, shows the highest ranked sites (4 and 5) and their proximity to the alignment and potential acquisition parcels. A higher ranking indicates sites of higher concern because of the type and extent of their contamination and location relative to the alternatives. In Appendix I-4.12, Table I-4.12-1 lists all sites found in environmental databases and their environmental database number (EDR ID); Table I-4.12-2 shows the distance of each site from the project footprint and its corresponding rank; Table I-4.12-3 lists the higher priority hazardous materials sites (sites listed as a 4 or 5). Information on all higher priority sites identified within, or adjacent to, the Preferred Alternative was obtained (where available) to confirm conditions and current status of sites (EDR 2012a, 2012b). These sites are discussed in greater detail in Section 4.12.3, Construction Impacts.



Hazardous Materials Site and Ranking

0 1 2 3 4 5

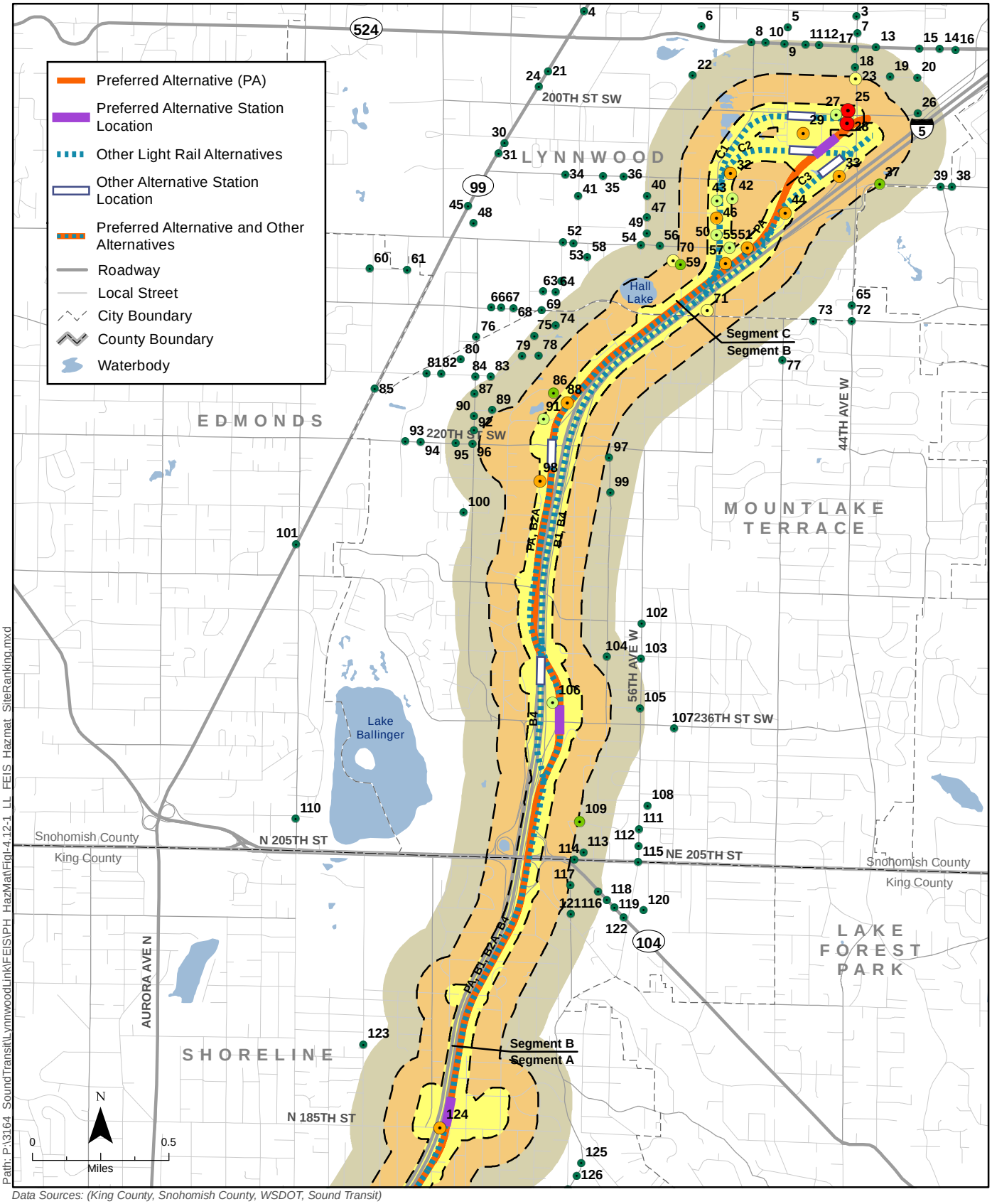
43 (EDR ID)*

Project Footprint
1/8-Mile Study Area
1/4-Mile Search Area

**Note:*
EDR ID is assigned from the Environmental Data Resources (EDR) regulatory database review.

Figure 4.12-1a
Ranking of Hazardous Materials Sites
Segment A

Lynnwood Link Extension



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Hazardous Materials Site and Ranking

0 1 2 3 4 5

43 (EDR ID)*

Project Footprint
1/8-Mile Study Area
1/4-Mile Search Area

**Note:*
EDR ID is assigned from the Environmental Data Resources (EDR) regulatory database review.

Figure 4.12-1b
Ranking of Hazardous Materials Sites
Segments B and C

Lynnwood Link Extension

4.12.2 Long-Term Impacts

This analysis of the project's long-term direct impacts considered long-term operation and maintenance activities. An operating transit facility could cause long-term impacts if there were an accidental release of hazardous materials, such as a fuel spill. Because light rail trains operate on electricity and not fuel, major spills are unlikely; however, minor hazardous material releases could result during maintenance activities on the tracks or at the stations and park-and-ride facilities where buses and automobiles operate. Sound Transit has an established hazardous materials handling plan and program for responding to emergencies within its system, including a spill response. There is generally a low potential for impacts from ongoing system operations under all the light rail alternatives.

If Sound Transit purchases a contaminated property for project use, the agency might need to conduct cleanup activities (see Figure I-4.12-1 in Appendix I-4.12). Although this could affect project costs, it would also be an environmental benefit. Most of these cleanups would occur during light rail construction and are discussed under Section 4.12.3, Construction Impacts. A site with complex hazardous materials concerns can require remediation actions in the long term, such as deed restrictions that would affect further site uses, or additional monitoring or maintenance. However, an environmental restoration plan that specifies the regulatory process, cleanup actions, and associated costs and schedule would be implemented for longer-term remediation actions.

No Build Alternative

The No Build Alternative would not acquire potentially contaminated sites. Ongoing bus transit operations under the No Build Alternative would involve hazardous materials, but systems are in place to manage potential releases through spills or accidents.

Segments A and B: Seattle to Mountlake Terrace

There are no high priority hazardous materials sites located on parcels identified for acquisition within Segments A and B. However, there is the potential to encounter contamination from known or unknown hazardous materials sites in the study area.

Segment C: Mountlake Terrace to Lynnwood

Under each of the Segment C alternatives, Sound Transit would acquire all or parts of parcels that contain hazardous materials sites. Seven sites of high concern were identified within the alternatives; four of these sites are located within the Preferred Alternative. While most of these sites have already been remediated, residual contamination could remain, requiring additional cleanup.

The Preferred Alternative and Alternative C1 would affect a service station site (Chevron 94953) that poses a higher level of concern than sites the other light rail alternatives would encounter. While contamination at most of the sites would be addressed before and during project construction, as discussed in more detail under Section 4.12.3, Construction Impacts, the Chevron site could require ongoing active remediation, monitoring, or other protective measures or restrictions. Each site would be handled consistent with applicable regulations and approvals.

4.12.3 Construction Impacts

During construction, direct impacts could result from the presence of hazardous materials on a site or the use of hazardous materials. Table I-4.12-1 in Appendix I-4.12 lists the environmental databases in which the identified hazardous materials sites were recorded. Soils, sediments, surface water, stormwater, and groundwater can be adversely affected by existing contamination or the release of hazardous substances during construction activities. Construction impacts could occur when contaminated soil, groundwater, underground storage tanks (USTs), and/or leaking underground storage tanks (LUSTs) that contain hazardous materials are encountered during construction activities. Hazardous materials could be encountered during excavation, grading, dewatering, drilling, and demolition activities. Construction or demolition can create or expose contaminated materials, such as treated timbers; contaminated soil, sediment, and groundwater; transformers; abandoned waste; and lead or asbestos-containing materials in demolished structures. Both elevated and at-grade construction could encounter hazardous materials during in-ground work; however, the potential for the elevated options is less due to less in-ground work required.

Fuels and other hazardous materials such as lubricants are also used during construction. Spills of any size could cause harm to the environment if not contained. Hazardous materials could affect worker safety and public health during construction, although the handling of contaminated materials is regulated at the state and federal levels. Workers could be exposed through skin contact and inhalation of contaminated vapors or particulates, such as during excavation work, demolition, or the use of materials containing hazardous substances.

Contaminants encountered or released during construction can migrate into the environment through various pathways. Shallow soil contamination can migrate downward into subsurface soils and/or groundwater through "drag-down" from excavation, utility relocation, drilling, stormwater infiltration, or dewatering.

Segment A: Seattle to Shoreline

Four hazardous materials sites of concern were identified near all of the light rail alternative alignments in Segment A. However, these sites (Table 4.12-1) are not located on parcels that might be acquired by Sound Transit, and are not likely to affect the Segment A light rail alternatives. An additional site was also found near the Preferred Alternative, due to a partial acquisition of a tax lot that extends well beyond the project area (Northgate Mall; EDR #183).

Table 4.12-1. Higher Priority Hazardous Materials Sites Adjacent to Segment A Alternatives

EDR ID Number	Owner Name	Address	Rank	Potentially Affected Alternatives						
				Preferred Alternative	A1	A3	A5	A7	A10	A11
Segment A										
183	Northgate Mall	555 Northgate Mall	4	●	●	●	●	●	●	●
178	WSDOT I-5/Northgate	1st Avenue NE and NE 110th Street	4	●	●	●	●	●	●	●
165	Puget Sound Energy	5th Avenue NE and NE 125th Street	4	●	●	●	●	●	●	●
162	Unknown	5th Avenue NE and NE 130th Street	4	●	●	●	●	●	●	●
124	WSDOT	Interstate 5 and NE 185th Street	4	●	●	●	●	●	●	●

Segment B: Shoreline to Mountlake Terrace

Sound Transit identified two hazardous materials sites of concern near, but not on, parcels that might be acquired by Sound Transit. Therefore, they are not likely to affect any of the Segment B light rail alternatives.

Table 4.12-2. Higher Priority Hazardous Materials Sites Near Segment B Alternatives

EDR ID Number	Owner Name	Address	Rank	Potentially Affected Alternatives			
				Preferred Alternative	B1	B2A	B4
Segment B							
98	Snohomish County PUD	6200 222nd Street SW	4	N/A	N/A	●	N/A
88	Snohomish County PUD	21604 60th Avenue West	4	●	N/A	●	N/A

N/A = not applicable; PUD = Public Utility District

Segment C: Mountlake Terrace to Lynnwood

Sound Transit identified nine hazardous materials sites (from industrial, manufacturing, public utility, transportation, and service station sites) in Segment C that have generated past releases of contaminants to soil and groundwater. Four are located on parcels that Sound Transit would acquire for the Preferred Alternative, and two are adjacent to it (Table 4.12-3).

Table 4.12-3. Higher Priority Hazardous Materials Sites In and Adjacent to Segment C

EDR ID Number	Owner Name	Address	Rank	Potentially Affected Alternatives			
				Preferred Alternative	C1	C2	C3
Segment C (potential acquisitions in Segment C)							
57	Budget Tank Removal	20825 52nd Avenue West	4	●	●	●	●
51	Sheldons Custom Cab LTD	20626 50th Avenue West	4	●	N/A	N/A	N/A
46	Connelly Skis Inc.	20621 52nd Avenue West	4	N/A	●	●	N/A
44	C Martin Trucking	20610/20631 48th Avenue West	4	●	N/A	N/A	●
32	RIMPAC Steel Inc.	20311 52nd Avenue West	4	N/A	●	●	N/A
29	Community Transit	20100 48th Avenue West	4	N/A	●	●	N/A
28	Chevron 94953	20010 44th Avenue West	5	●	●	N/A	N/A
Segment C (sites adjacent to Segment C)							
51	Sheldons Custom Cab LTD	20626 50th Avenue West	4	N/A	●	●	●
33	Lynnwood Sewer Lift Station 10	4599 204th Street	4	●	●	●	●
25	Shell Station 120839	19930 44th Avenue West	5	●	●	●	●

N/A = not applicable

The elevated profile of the Segment C alternatives would lessen (but not eliminate) the need for excavation in contaminated soils.

The Chevron 94953 (Site ID# 28; 44th Avenue West and 200th Street SW) service station site is of concern because it is an ongoing cleanup site that would be acquired by Sound Transit for the Preferred Alternative as well as for Alternative C1.

The site includes benzene and gasoline contamination confirmed in groundwater and soil in 1990. Groundwater monitoring has been conducted since that time. In 2007, 2008, and 2009, Ecology concluded that the site required further actions. In September 2009, a 1,000-gallon used oil UST and three fuel dispenser islands were decommissioned, and a new 8,000-gallon diesel UST was installed. Petroleum and benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in soil samples collected from the central dispenser island excavation. Approximately 734 tons of contaminated soil were excavated and removed from the site. There was reportedly evidence of affected soil remaining near the central and northeastern dispensers (Conestoga-Rovers & Associates 2009).

The site is still active, and regulatory action continues. Potential on-property sources of contamination include the current and former USTs located in the central and southern portions of the site; fuel dispenser islands and conveyance piping, located in the central and southern portions of the site; and the former waste oil and heating oil USTs located in the central portion of the site. Construction activities are expected to encounter existing contamination in the soil and groundwater. Thus, acquisition of the property and/or construction activities associated with the Preferred Alternative would likely require remedial actions or monitoring, regulatory interactions, and/or liability negotiations and protections with the site owner.

4.12.4 Indirect and Secondary Impacts

Construction of the Lynnwood Link Extension could result in redevelopment of existing structures and/or paved areas, as opposed to development of natural areas. Existing contamination is more likely to be encountered or potentially released during redevelopment activities in older urban areas. Redevelopment of older structures in the study area may result in the cleanup of hazardous materials sites, which would be an indirect benefit of the project.

4.12.5 Cumulative Impacts

The trend in managing hazardous materials impacts is toward cleanup. Federal and environmental regulations have resulted in the identification and cleanup of past hazardous materials sites, and in fewer hazardous materials spills and releases. Because encountered hazardous materials must be cleaned up or remediated during project development, future development projects, with or without the Lynnwood Link Extension, would accelerate the cleanup of existing contaminated sites in the study area.

If the Lynnwood site (near the Lynnwood Transit Center) were selected for the proposed OMSF, that project could acquire properties associated with inventoried hazardous materials sites. Operation of this facility would involve storage and handling of some hazardous materials associated with vehicle maintenance. Sound Transit would handle these materials in accordance with applicable state and federal regulations, and the facility would not be a source of additional cumulative effects related to hazardous materials. The Edmonds School District's proposed support center and bus facility near 52nd Avenue West would also have storage and handling of hazardous materials, but no additional cumulative impacts are expected if they are handled consistent with applicable rules.

4.12.6 Potential Mitigation Measures

Sound Transit would adhere to applicable regulations regarding hazardous materials handling and spill response during construction and long-term operation of the Lynnwood Link Extension; as a result, the project would not have an adverse effect

on the environment, but could have a net beneficial impact. When encountered, contaminated sites would be cleaned up or contained, in compliance with regulations, to the extent that would allow for project construction.

Ideally, Sound Transit would minimize potential long-term impacts from contaminated sites by avoiding contaminated sites or portions of such sites. However, the project area has other physical, environmental, or topographic constraints in many locations. To avoid impacts from potential contaminated sites in the project area, Sound Transit would perform environmental due diligence for properties along the project corridor before property acquisition, and attempt to avoid contaminated sites, where feasible.

Typical environmental due diligence includes the completion of environmental site assessments, which become more detailed if past contamination is identified. Phase I environmental site assessments help identify liability issues associated with acquiring or building on a facility or property. Sound Transit would perform a Phase I site assessment on properties to be acquired or properties that have substantial associated construction activities. A Phase II environmental site assessment might be necessary for property acquisition or for construction purposes if the Phase I site assessment identifies potential contamination. The Phase II site assessment can include the collection of samples of soil, groundwater, and/or building materials. The substances most frequently tested for are petroleum hydrocarbons, metals, pesticides, solvents, asbestos, and/or lead-based paint.

These assessments could establish the condition of acquisition properties and help to determine plans for cleanup and construction management, as needed. Ecology would be notified if unknown contamination is encountered during an assessment. Some previously contaminated properties might require longer-term covenants, restrictions, or other remedial activities, which would be approved by Ecology.

To address potential impacts on environmental resources from construction activities, Sound Transit would implement applicable BMPs. These would include requiring contractors to prepare and implement hazardous materials management plans, construction stormwater pollution prevention plans, health and safety plans, spill control and prevention plans, contaminated media management plans, and lead and asbestos abatement programs, as necessary. These plans would establish the procedures for managing hazardous materials in accordance with state and federal regulations. To the extent practicable, Sound Transit would limit construction activities that might encounter contaminated groundwater or contaminated soil. With these standard practices and measures in place, no adverse impacts are anticipated.

4.13 Electromagnetic Fields

Electric and magnetic fields, known as electromagnetic fields (EMFs), are produced wherever electricity is used. EMFs surround all electrical equipment, appliances, and facilities, including the electrical power lines and electrical devices as proposed in the Lynnwood Link Extension. Although there are no regulatory requirements or exposure limits for EMFs, these fields can result in electromagnetic interference, which can cause disruptions and possibly malfunctions in sensitive equipment. In addition, in certain situations, EMFs can affect human health.

4.13.1 Affected Environment

The study area for identifying potential EMF effects on sensitive equipment and facilities is 200 feet from the proposed project alignment. This area covers all locations where potential EMFs from the light rail facilities and operating light rail vehicles would be more than the ambient EMFs from other common sources, such as automobiles, appliances, or street power lines.

Sources of Electromagnetic Fields

Electric charges and currents create electric and magnetic force fields. The greater the charge or current, the stronger the electric field at a given distance from it. The strength of both electric and magnetic fields decreases rapidly with distance from the source. The many existing electrical power lines and electrical devices in the project corridor create a complex pattern of EMFs in the project area.

Light Rail and Electromagnetic Fields

The power transmission lines that would provide power to the traction power substations along the proposed light rail alternative routes would produce EMFs. EMFs would also be produced by the overhead catenary wires that provide power to the light rail train, and by the individual train cars, especially when they are moving. The electricity needed to operate the cars flows from the overhead catenary wires to the traction motors and other electronic equipment. The amount of electricity flowing would vary depending on whether the train is accelerating, running at steady speed, decelerating, or is stationary. EMFs would be created whenever the train is operating, and the electrical current would be highest when the train is accelerating. The strength of the magnetic field generated by light rail operations diminishes sharply relative to the distance from the tracks.

Potentially Affected Receptors

Based on Sound Transit's projections for EMFs that could temporarily interfere with the operation of sensitive electronics and electrical equipment near the right-of-way,

the project design team reviewed all nearby land uses and facilities that might be sensitive to EMFs. Hospitals or clinics that use sensitive electronic equipment would be typical facilities of concern, as would some broadcast facilities. Most of the properties near the light rail alternative alignments serve residential, open space, or transportation uses. The nearest medical facilities to the Lynnwood Link Extension are more than 1,000 feet away—more than 10 times the distance within which effects would be experienced. No other specialized technical or broadcast uses exist in the project area.

Some types of specialized sound systems can also be affected by EMFs; however, this is unusual.

EMFs also can affect humans. Certain EMF combinations can cause shock and burn injuries through direct contact with energized components, or they can interfere with the operation of electrical and magnetic devices, including heart pacemakers.

4.13.2 Long-Term Impacts

No Build Alternative

The No Build Alternative would not introduce any new sources of EMFs into the project area.

Light Rail Alternatives

There are no potentially sensitive hospital-, clinic- or broadcast-related electronic or electrical receptors located closer than 1,000 feet to the Preferred Alternative or any of the other light rail alternative alignments. The project's system designers have reviewed existing aerial utilities along the alignments to establish the necessary safeguards between light rail electrical systems and other systems. No impacts are anticipated. Receptors external to the light rail system (e.g., the public, nearby residences, institutions, and places of employment) would experience EMFs primarily from the overhead catenary system and the traction power substations. Cables emerging from the substations would carry direct current power, creating EMFs primarily in the static (0 to 3 Hz) frequency range.

Based on Sound Transit's existing operations and on data available from similar light rail systems, the Lynnwood Link Extension alternatives are unlikely to generate EMFs that would pose health concerns.

There are no federal regulations that limit exposure to electric or magnetic fields; however, EMFs at locations of human exposure within and adjacent to the light rail alignment would be considerably below exposure guidelines established by the American Conference of Governmental Industrial Hygienists, including the more

recent guidelines established by the International Commission on Non-Ionizing Radiation Protection, which address known biological effects of EMFs.

4.13.3 Construction Impacts

Sound Transit anticipates no impacts from EMFs during project construction because construction equipment generates negligible amounts of EMFs.

4.13.4 Indirect and Cumulative Impacts

Increases in population and employment along the project corridor could increase the demand for electrical power and could also increase the number of sources and the cumulative intensity of EMFs. The proposed site for the OMSF would increase EMF levels if the facility is sited in Lynnwood near the Segment C alternatives, but the combined levels from that facility and other potential projects would not materially affect people or equipment.

4.13.5 Potential Mitigation Measures

Under all light rail alternatives, EMF impacts from the Lynnwood Link Extension are not anticipated. No mitigation is proposed.

4.14 Public Services, Safety and Security

This section discusses the Lynnwood Link Extension's potential impacts on public services, including fire and emergency medical services (including hospitals), police, solid waste and recycling, schools, and postal services. It also discusses public safety and security issues in the project corridor communities and in the light rail operating environment and facilities.

4.14.1 Affected Environment

The following subsections summarize the primary public services in the project area. Section 4.4, Social Impacts, Community Facilities, and Neighborhoods, has a map showing major facilities (Figure 4.4-4).

Emergency Services and Law Enforcement

Fire and emergency medical services are provided in Seattle by the Seattle Fire Department; in Shoreline by the Shoreline Fire Department, which is a member of King County Medic One; in Mountlake Terrace by Snohomish County Fire District 1; and in Lynnwood by the Lynnwood Fire Department. Table 4.14-1 indicates the response times in 2013 for emergency services by jurisdiction.

Table 4.14-1. Fire and Emergency Response Times by Jurisdiction in 2013

Jurisdiction	Advanced Life Support	Basic Life Support	Fire, Rescue, and Hazardous Materials Response
Seattle	3.74 minutes	3.74 minutes	4.45 minutes
Shoreline	7.19 minutes	5.36 minutes	6.42 minutes (first engine) Full: 10.52 minutes EMS: 6.42 minutes
Mountlake Terrace (Snohomish County Fire District 1)	5:34 minutes	5:47 minutes	Fire: 5:52 minutes
Lynnwood	5.50 minutes	4.31 minutes	7.50 minutes

The Seattle Police Department precinct covering the project area is the north precinct/station at 10049 College Way North in Seattle. The Shoreline Police Department, which operates through a contract with the King County Sheriff's Office, has one police station at 1206 North 185th Street in Shoreline. The Mountlake Terrace Police Department station is located at 5906 232nd Street SW in Mountlake Terrace, in a facility shared by Mountlake Terrace Fire Station 19. The Lynnwood Police Department station is located at 19321 44th Avenue West in Lynnwood.

Table 4.14-2 shows the 2013 crime rates for the jurisdictions in which the Lynnwood Link Extension would travel. Thefts of motor vehicles and thefts from motor vehicles are included in the property crimes total. Table 4.14-3 shows the police response times.

Table 4.14-2. Crime Rates by Jurisdiction in 2013

Jurisdiction	Population[3]	Crimes per 1,000 Residents	Crimes Against Persons per 1,000 Residents	Property Crimes (Total)
Seattle	626,600	56.0	5.9	31,422
Shoreline	53,670	32.9	1.4	1,725
Mountlake Terrace	20,160	28.6	1.7	574
Lynnwood	35,960	70.4	3.0	2,452

Table 4.14-3. Police Response Times by Jurisdiction in 2013

Jurisdiction	Highest Priority[a]	Medium Priority[a]	Lower Priority[a]
Seattle	6.9 minutes	9.2 minutes	Not applicable
Shoreline	3.42 minutes	6.48 minutes	9.51 minutes
Mountlake Terrace (2011)	Standard is 8 minutes; met 90 percent of the time.		
Lynnwood (2011)	4.63 minutes	5.22 minutes	Not applicable

[a] Jurisdictions use different names for these categories.

[3] All population figures are from Washington State Office of Financial Management.

Solid Waste and Recycling Services

In Seattle, the Seattle Solid Waste Utility, a division of Seattle Public Utilities, currently contracts with Waste Management, CleanScapes, SeaDruNar, and Allied. In Shoreline, curbside, multifamily, business garbage, and recycling pick-up is provided by CleanScapes. In Mountlake Terrace, residential and business waste and recycling pick-up is provided by Waste Management NW. In Lynnwood, the City does not provide garbage service and curbside pick-up. Residents and businesses may use private contractors or transport their own waste to transfer stations.

Schools

Twenty-three public and private schools are within 0.50 mile of the light rail alternatives (see Figures 4.4-2a, 4.4-2b, and 4.4-2c in Section 4.4, Social Impacts, Community Facilities, and Neighborhoods). Altogether, the schools serve approximately 28,000 students, almost two-thirds of whom (about 18,000) are enrolled in North Seattle Community College.

4.14.2 Long-Term Impacts

No Build Alternative

With continued population and employment growth and related increases in development, traffic, and other activities, there would be higher demands on all public services and safety and security with the No Build Alternative, including emergency services. Increased traffic congestion could affect emergency service response times.

Light Rail Alternatives

All alternatives have generally similar types of impacts on public services and safety and security. This subsection summarizes the impacts for all segments and alternatives jointly, and then briefly discusses the differences in impacts by alternative starting with the Preferred Alternative and then discussing how other alternatives differ.

Fire and Emergency Medical Services

All alternatives would run trains on an exclusive right-of-way. Because the right-of-way is not crossed by roads, sidewalks, or paths of any kind, accidental intrusions by people or vehicles onto the right-of-way are very unlikely, resulting in a very low potential for crashes.

Light rail trains would not cross surface streets at-grade; therefore, light rail operations at street crossings would not directly affect emergency and incident response routes or times. However, increased congestion at station areas and park-and-ride lots could affect response times. Chapter 3, Transportation Impacts and Mitigation, identifies locations where traffic congestion and delays would occur with

the light rail alternatives, and the associated mitigations; of these, Shoreline Fire Station No. 65 is discussed below.

All of the jurisdictions along the project corridor currently operate Emergency Vehicle Preemption (EVP) programs that give emergency vehicles priority. Sound Transit would work with the jurisdictions to anticipate the EVP programming needs around stations and to ensure that emergency response times would not be affected.

Service providers would need special training to respond to emergencies at light rail elevated guideway sections and stations. In general, it is slower and more difficult to access elevated sections in an emergency compared to at-grade sections, although at-grade locations may have access restrictions, such as where at-grade facilities are within WSDOT's right-of-way and immediately adjacent to active freeway lanes or shoulders. Several of the alternatives are within the freeway median (such as Alternative B1 or B4) or where the guideway crosses above traffic lanes (all alternatives in Segment B, and some options in Segment C). However, Sound Transit's design standards and operating procedures for light rail directly address emergency access needs for all types of facilities and alignments featured in the light rail alternatives.

Access plans for getting to the stations and guideway from I-5 will be developed in consultation with WSDOT, FHWA, and the affected agencies, and will include regular ongoing coordination with the service providers. No existing I-5 median emergency and law enforcement vehicle turnarounds will be removed.

In Segment A, Alternatives A5 and A7 would have unique impacts because they would place a station and park-and-ride lot adjacent to Shoreline Fire Department Station No. 65 that would alter traffic levels and construct new driveways and intersections adjacent to that fire station. The increase in traffic at the park-and-ride lot could slightly increase response times.

Access to fire hydrants, fire lanes, and access points within or adjacent to the project boundaries will be maintained where possible; where it is not possible, access will be redesigned in concert with the appropriate agencies and jurisdictions.

Project design will be in accordance with Link light rail design standards and in coordination with local jurisdictions and the Link Fire, Life, and Safety Committee. Sound Transit design standards require specific facilities and locations to allow emergency access throughout the light rail line and for evacuating passengers if needed. These standards include design requirements for lighting, unobstructed views, pedestrian safety, elevators and escalators, public plazas, patron information centers, public telephones, call-for-aid stations, emergency management panels, security cameras, vandalism deterrents, public address systems, radio communications, and alarms. They also include principles and guidelines designed to ensure safety and security throughout the light rail system.

Operationally, a Lynnwood Link Extension emergency response and safety and security plan will be developed and implemented and include training and equipment, as well as procedures for light rail construction and operation.

Law Enforcement

All alternatives would require police and security staff to monitor stations, parking facilities, and other areas to protect people and property. Sound Transit operates its own security force within its facilities.

Studies by Sound Transit, the City of Seattle, and others have consistently found that crime at transit facilities, such as stations, generally reflects the conditions in the surrounding neighborhoods. Quality-of-life crimes (for example, vandalism, drunkenness, and panhandling) and property crimes account for more than 90 percent of transit facility crimes. Violent crimes account for most of the remaining crimes. Crimes are more likely to occur at a station than on a light rail car. In addition, stations with park-and-ride lots have more potential for crime than stations without parking. Different types of station access (stairs, escalators, or elevators) do not appear to influence criminal activity, but their design and location can be a factor if they provide places where criminals can act without being observed by others.

The project's final designs will incorporate Crime Prevention Through Environmental Design principles. These principles, in association with other security features of the light rail system and the presence of security personnel, would deter criminal activity and generally make light rail stations and parking facilities safer and more secure.

As with fire and emergency services, because light rail trains would not cross surface streets at-grade, light rail operations at street crossings would not directly affect police response routes or times. However, increased congestion at station areas and park-and-ride lots could affect response times. Chapter 3, Transportation Impacts and Mitigation, identifies locations where traffic congestion and delays are predicted to occur with the light rail alternatives, and provides associated mitigation.

As with fire and medical emergencies, police access to the light rail trains would require additional planning for alternatives with an elevated guideway and stations, and for stations not easily accessible from the existing road network. This would occur with segments of the Preferred Alternative and all other alternatives.

Since events in 2001, terrorism has received heightened awareness, and federal legislation has given FTA a safety oversight role for transit systems. Many measures that address non-terrorism security and safety issues also address terrorism concerns. Sound Transit will continue to work with FTA, law enforcement agencies, the U.S. Department of Homeland Security, and emergency service

providers to develop strategies to prevent and respond to terrorist activities that could affect the proposed project.

Solid Waste

The Preferred Alternative and all other alternatives would not acquire or otherwise affect any property currently occupied by recycling, composting, and solid waste facilities or operating bases. Travel times or collection routes for these facilities would not be notably affected by the project.

Other Public Facilities

Neither the Preferred Alternative nor any other alternatives would acquire any property currently in active use as a school, post office, postal facility, or hospital. The project would acquire a portion or all of a parking lot at NE 185th and 5th Avenue NE on Shoreline School District property now in use as a conference and recreation center. In addition, the project would occupy a portion of Edmonds School District vacant properties; this would occur in Segment B with the 220th Street Station South Option in the Preferred Alternative, and in Segment C with all alternatives, but the property affected could still be developed. Section 4.1, Acquisitions, Displacements, and Relocations, identifies areas where the Preferred Alternative or other alternatives could affect parcels owned by the public school districts. No alternatives would notably affect the travel times or routes for school buses.

Current postal services or routes would not be notably affected by the project, and the project would not affect access to hospitals.

Lakeside School is close to the proposed NE 145th Street Station with the Preferred Alternative and Alternatives A1, A3, A10, and A11. It serves a widely dispersed student body, some of whom might arrive by light rail. Currently, students using public transit and walking to the school have routes with safety concerns, including incomplete sidewalk links. The light rail project would not introduce any new safety concerns, and it would upgrade street crossings and the intersection immediately adjacent to the station. Any other safety-related improvements (sidewalks and protected crossings) constructed to serve pedestrians accessing the new light rail station could also serve Lakeside students for parts of their routes to and from the station. While there are other schools near the proposed light rail alignment along I-5, no other schools are as close to a station alternative as Lakeside; see Figures 4.4-2a, 4.4-2b, and 4.4-2c in Section 4.4, Social Impacts, Community Facilities, and Neighborhoods.

4.14.3 Construction Impacts

Sound Transit would work with contractors, utility providers, Cities, WSDOT, and FHWA to minimize disruption to the transportation network; however, some disruption would still occur. Traffic rerouting, lane closures, and construction traffic

may affect emergency response times and the travel times or routes for public service vehicles during construction periods, especially at stations or construction sites. This could also require emergency responders to alter their response routes or it could increase their response times. The reconstruction or closure of I-5 overcrossings could require detours or increase delays.

Alternative A1 would rebuild the NE 117th Street overpass, which would affect access to Northgate Elementary School. The Preferred Alternative and Alternatives A1, A5, and A10 would rebuild the NE 130th Street overcrossing and northbound off-ramp. Alternative A1 would rebuild the NE 185th Street overcrossing. All Segment A alternatives would construct an elevated structure over NE 155th Street, which could cause temporary lane closures or delays at NE 155th Street, where a fire station is located and where the Shoreline Fire Department's only ladder truck is based. Any closures or delays would be temporary and of short duration as a single event, although these closures and delays may occur over several months. Still, this could affect response times and require detours, alternative routes, or other modified operations during the most active period of construction at the affected location.

The above impacts are limited to Segment A because the other light rail segments do not include major rebuilds of streets and bridges. Chapter 3, Transportation Impacts and Mitigation, identifies the locations where construction traffic changes are anticipated, and also describes the construction traffic mitigation measures that would be implemented to reduce impacts. Construction haul routes would primarily be on arterials and at freeway ramps and would not affect public service facilities, except at Shoreline's Fire Station No. 65, where plans would be developed to maintain emergency access and response times.

In Segments B and C, the Preferred Alternative could result in construction-related impacts to Edmonds School District property, such as the relocation of school buses that could use the Edmonds School District property in Segment C for parking during project construction.

4.14.4 Indirect and Cumulative Impacts

As described above for the No Build Alternative and light rail alternatives, the continued growth in population, employment, and general urban activity in the project area through 2040 would increase demand on public services, including emergency and public safety services. As described in Section 4.2, Land Use, and Section 4.3, Economics, population and employment growth consistent with regional and local comprehensive plans, the Lynnwood Link Extension, and other potential projects in the area, such as the proposed OMSF (if sited in Lynnwood) and the Edmonds School District master planned services center development, would cumulatively increase the level of development and public activity in station areas and increase the demand for public services within the project area. However, the

project's contribution to the potential increase in demand for public services would be minor, and the project's indirect and cumulative effects would not hinder service providers in delivering services.

4.14.5 Potential Mitigation Measures

Sound Transit would coordinate with the Shoreline Fire Department during final design to avoid construction impacts to Station No. 65, and to define measures to minimize impacts on response times and operations.

During final design and construction, Sound Transit would coordinate with the Edmonds School District to minimize property impacts on its properties in Segments B and C.

During construction, Sound Transit would provide regular updates to schools, emergency service providers, local agencies, and postal services. The agency would also assist public school officials in providing advance and ongoing notices to students and parents about construction activity near schools.

No other mitigation would be needed, given the project commitments to:

- Provide mitigation measures as identified in Chapter 3, Transportation Impacts and Mitigation, for long-term and construction impacts on traffic.
- Design the project in accordance with Link light rail's design standards that fully address emergency, safety, and security.
- Operate the light rail in accordance with Link light rail's existing approaches to ensure safety and security throughout the system.
- Develop emergency response and safety and security plans and programs in cooperation with WSDOT, FHWA, local jurisdictions, and affected agencies, including working with local emergency response providers to ensure they have the necessary equipment to access the guideway at all points along the route.

4.15 Utilities

This section analyzes the short-term construction and long-term operations impacts of the Lynnwood Link Extension on utility providers and systems that currently serve, or are planned to serve, the project area.

4.15.1 Affected Environment

The study area for this analysis extends 100 feet from the alternative alignments and stations. Utility providers within the project area include municipal agencies, public utility districts, and private companies. In addition to public or municipal utility providers, such as the cities with water or sewer utilities, there are electrical power, natural gas, water, sanitary sewer, stormwater, and telecommunications service

providers in the study area. The individual utilities are identified below in Section 4.15.2, Long-Term Impacts.

Sound Transit asked all the utility providers in the project area about any planned improvements that might affect or be affected by the light rail alternatives. Five of the future projects identified by providers in the project area are considered major utility projects (12-inch-diameter pipelines or larger for water, sewer, and stormwater). These five projects are the City of Shoreline's fish barrier removals west of I-5 near mile post 174.9, City of Mountlake Terrace's 24-inch-diameter stormwater line and 12-inch-diameter water line, Alderwood Water & Wastewater District's 20-inch-diameter water line, and Snohomish County PUD's electric power substation. Although the Snohomish County PUD's planned substation was initially identified as potentially within the Lynnwood Link Extension footprint, Sound Transit subsequently adjusted the design for the project to avoid this potential conflict.

4.15.2 Long-Term Impacts

No Build Alternative

Under the No Build Alternative, light rail would not be extended to Lynnwood. Without the light rail extension, direct impacts on utilities would be avoided.

All Light Rail Alternatives

All light rail alternatives in Segments A, B, and C would need to relocate existing utilities in order to avoid conflicts with utility infrastructure and operations. The potential for conflicts occurs wherever the alternative alignments and associated features would cross an existing utility such as electric lines, water mains, stormwater or sewer lines, natural gas lines, or telecommunications (cable and fiber optic) networks. Also, conflicts would occur where utilities are located parallel and in proximity to the alternatives. Table 4.15-1 shows the affected utilities by segment, and Table 4.15-2 shows the number of affected utilities. Appendix I-4.15, Utilities, has further details on the areas where potential major utility conflicts might occur. Through project design, conflicts would be addressed by avoiding the conflict or by relocating the utility; no long-term impacts are expected.

After the conflicting utilities are relocated, the project would not cause major disruptions in service to utility customers during light rail operations or maintenance along the guideway. In some cases, manholes, pipes, vaults, and other maintenance access points might also need to be permanently relocated to ensure that maintenance activities could be conducted without interrupting either light rail or utility service.

Sound Transit would work closely with WSDOT or utility providers during the design process to provide required access to facilities and any relocated manholes, vaults, utility mains, fire hydrants, and/or other features. Nearly all water, sewer, and

stormwater lines within the project footprint are 12 inches or more in diameter and all are considered major utilities. These major utility lines are either buried or hung from bridges. Consequently, except for the elevated guideway columns, there would be direct conflicts only where these utilities cross below at-grade sections of the light rail alignment. Major utility crossings have been flagged as potential conflicts, as shown in Table 4.15-1. During final design, additional coordination with the utility providers would confirm and resolve potential conflicts.

Table 4.15-1. Potential Conflicts with Existing Utilities in the Study Area

Jurisdiction and Segment	Utility	Provider	Number of Conflicts
Seattle	Gas	Puget Sound Energy	5
	Electricity	Seattle City Light	16
Segment A	Water	Seattle Public Utilities	1
	Wastewater	Seattle Public Utilities	1
	Stormwater	Seattle Public Utilities	2
	Cable	Comcast	2
	Communications	CenturyLink, Verizon, WSDOT, AT&T, Clearwire, T-Mobile	5
Shoreline	Gas	Puget Sound Energy	2
	Electricity	Seattle City Light, PSE	13
Segments A and B	Water	Seattle Public Utilities	2
	Wastewater	Ronald Wastewater District	3
	Stormwater	City of Shoreline	9
	Cable	Comcast	2
	Communications	CenturyLink, WSDOT	5
Mountlake Terrace	Electricity	Snohomish County PUD	4
	Wastewater	City of Mountlake Terrace	3
	Stormwater	City of Mountlake Terrace	4
Segment B	Cable	Comcast, Black Rock Cable	1
	Communications	CenturyLink, WSDOT	3
Lynnwood	Electricity	Snohomish County PUD	5
	Water	City of Lynnwood	1
Segments B and C	Communications	Frontier Communications	2

Abbreviations: PSE = Puget Sound Energy; PUD = Public Utility District, WSDOT = Washington State Department of Transportation's Illumination and Intelligent Transportation Systems

Table 4.15-2. Utility Conflict Summary: Crossings and Parallel Relocations

Segment/Alternative	Total Crossings	Linear Feet of Parallel Utilities
Segment A		
Preferred Alternative[a]	65	6,595
Alternative A1	30	3,000
Alternative A3	28	550
Alternative A5	29	2,850
Alternative A7	25	550
Alternative A10	28	2,850
Alternative A11	27	550
Segment B		
Preferred Alternative	25	1,695
Alternative B1	16	9,900
Alternative B2A	21	1,150
Alternative B4	23	9,900
Segment C		
Preferred Alternative	6	50
Alternative C1	12	2,400
Alternative C2	6	700
Alternative C3	11	0

[a] The Preferred Alternative utility information reflects additional design information needed to identify minor as well as major utilities and their relocation or avoidance requirements.

The light rail system would draw power from the regional electrical power grid. The alternatives would operate electric trains with up to four cars from existing 26-kilovolt (kV) and 12-kV primary electric distribution facilities. Sound Transit would locate traction power substations approximately every 1.5 miles along the project corridor to provide power to the overhead catenary system that powers the light rail vehicles. These substations would be powered by primary electric distribution lines connecting to the nearest existing power source, either overhead or underground. In some cases, the existing local network may be upgraded or new power lines constructed to transmit power to light rail substations. However, the power demands of the light rail system would not affect the ability of electrical utilities to meet the overall demand in their service areas.

Some utilities within or adjacent to the light rail facility footprint could be susceptible to stray currents. Without corrosion control measures, a portion of the electrical current flowing through the light rail trains could stray along conducting utility lines in the ground. These existing utilities will be carefully evaluated during design for possible effects from stray currents. Sound Transit will also coordinate the implementation of control measures with potentially affected utility providers.

These control measures could include the following:

- Installing cathodic protection systems
- Installing insulating unions to break the electrical conductivity of the utility
- Isolating electrical rails from the ground
- Installing stray-current-control track fastening systems to control stray current where appropriate

Most of the telecommunications, cable, and fiber optic facilities in the alternatives' footprint are identified as potential conflicts, and almost all are within the I-5 right-of-way or other public rights-of-way. Most private utilities within public rights-of-way are franchise holders (the utility has an agreement with the city government or WSDOT to use the public right-of-way) who must relocate their utilities at the City's or WSDOT's request, at their own expense. Sound Transit would work with the affected utilities on relocation, consistent with Sound Transit's design criteria, policies, and applicable laws and permits, including city codes and charter provisions.

To resolve conflicts with overhead power lines, some power poles would need to be relocated and/or raised. Typically, when an electric power transmission line is raised, it affects several power poles because power line elevation changes need to be spread out. For example, changes in height for a 115-kV transmission line may affect power poles, transmission line heights, and the supporting poles from 350 to 450 feet on either side of where the elevation changes are needed. There are approximately eight 115-kV transmission line crossings over the length of the Preferred Alternative, with seven additional power line crossings of lesser voltage. There will also be a need to relocate local primary distribution power lines that conflict with the guideway and stations, as well as the related reconstruction of surface streets. For the overhead primary power distribution lines crossing over the project and I-5, the overhead lines may need to be placed underground, instead of being raised, if the reach of the utility maintenance vehicles is too short.

Preferred Alternative

Table 4.15-3 lists overhead electrical line crossings for the Preferred Alternative. The largest change in an existing transmission line is expected in Lynnwood at 48th Avenue West. This is where the crossing of light rail with a transmission line along the Interurban Trail would relocate a portion of the transmission line and poles about 1,300 feet to the west and another portion about 900 feet to the east.

Table 4.15-3. Major Overhead Power Line Conflicts

Location	Type of Crossing	Utility	Proposed Action	Typical Runout[a] West	Typical Runout[a] East
NE 123rd Street/I-5	115-kV Transmission	SCL	Raise Pole	None	Yes
NE 155th Street/I-5	Distribution	SCL	Relocate and Raise Pole	Yes	Yes
NE 165th Street/I-5	115-kV Transmission/Distribution	SCL	Raise Pole	None	None
NE 167th Street/I-5	Distribution	SCL	No Action Required	None	None
NE 170th Street/I-5	Distribution	SCL	Raise Pole	None	None
NE 180th Street/I-5	Transmission/Distribution	SCL	Relocate and Raise Pole	None	Yes
NE 189th Street/I-5	Distribution	SCL	Raise Pole	None	Yes
NE 195th Street/I-5	115-kV Transmission	SCL	Raise Pole	None	None
NW 201st Street/I-5	115-kV Transmission	SCL	Raise Pole	Yes	Yes
NE 205th Street/Ballinger Way NE and I-5	115-kV Transmission/Distribution	SCL/PUD/PSE	Raise Pole	Yes	Yes
58th Avenue West/I-5	Distribution	PUD	Raise Pole	Yes	None
212th Street SW/I-5	115-kV Transmission/Distribution	PUD	Relocate and Raise Pole	None	None
52nd Avenue West/ I-5	115-kV Transmission/Distribution	PUD	Raise Pole	Yes	Yes
Interurban Trail/48th Avenue West	115-kV Transmission/Distribution	PUD	Relocate and Raise Pole	Yes	Yes
200th Street SW/44th Avenue West	Distribution	PUD	Underground	None	None

[a] Typical Runout: Horizontal distance and additional raised power poles required to allow elevated power lines to converge with existing adjacent non-elevated power lines.

SCL = Seattle City Light; PUD = Public Utility District; PSE = Puget Sound Energy

Segment A: Seattle to Shoreline

The Preferred Alternative's most common utility conflicts would involve overhead and underground power (27 conflicts). Others would be a 16-inch high-pressure gas main and two gas district regulators near NE 130th Street; a 24-inch water main at NE 185th Street; a 30-inch water main at NE 115th Street; and up to eight sewer systems (3,010 linear feet of parallel sewer lines). Ridgecrest Park would be affected by 250 linear feet of sewer replacement that is parallel and adjacent to Segment A on the west side of the park. The impacts would temporarily affect the existing landscaping berm and transitional areas (see Section 4.17, Parks and Recreational Resources, for more information about Ridgecrest Park).

Neither the NE 130th Street Station Option nor the NE 185th Street stadium parking garage option would alter the number of affected utilities.

Segment B: Shoreline to Mountlake Terrace

The Preferred Alternative has approximately 25 utility conflicts, including nine electric power conflicts. There are also sewer conflicts at and near the Mountlake Terrace Transit Center. There are seven telecommunications conflicts and two water conflicts; 1,695 linear feet of parallel utilities are in conflict. The major electric conflicts involve raising transmission lines at I-5 and NE 195th Street, raising transmission lines at I-5 and NE 201st Street, raising transmission lines at I-5 and NE 205th Street, raising distribution lines at I-5 and 58th Avenue West, and raising transmission lines at I-5 and 212th Street SW after first relocating a power pole that is in the path of the Preferred Alternative.

The Preferred Alternative's 220th Street Station Option would create three additional minor conflicts: telecommunication lines and cables for WSDOT's Illumination and Intelligent Transportation Systems.

Segment C: Mountlake Terrace to Lynnwood

The Preferred Alternative has six potential power line conflicts in Segment C along with 50 linear feet of parallel utility conflicts; power transmission poles and lines adjacent to the Interurban Trail would need to be raised. However, there would be no permanent effect on these utilities.

Other Light Rail Alternatives

The following discussion and Table I-4.15-1 in Appendix I-4.15, Utilities, indicate the relative differences among the alternatives by segment.

Segment A: Seattle to Shoreline

The other Segment A alternatives would have 25 to 30 potential utility conflicts; many of these involve overhead power lines. There are also potential gas line conflicts in Segment A with all the light rail alternatives. Other utilities of concern include a 30-inch-diameter Seattle Public Utilities water line crossing at North 115th Street and a 24-inch-diameter Shoreline Water District water line crossing at NE 185th Street. These crossings would be of heightened concern because of their large supply capacity and the large number of customers who would be affected if service were disrupted. The other conflicts would be with storm drains and communication lines.

The linear feet of parallel utilities vary by alternative in Segment A, depending on whether it is at-grade or elevated (conflicts with parallel utilities would be not only where they are along the alignment but also where they would be encountered at a similar grade or could restrict access). For example, there are 550 feet of parallel utilities within the footprints of the mostly elevated alternatives (A3, A7, and A11), but the mostly at-grade alternatives (A1, A5, and A10) would have approximately 3,000 linear feet of parallel utility conflicts.

Segment B: Shoreline to Mountlake Terrace

There are 16 to 23 potential utility conflicts in Segment B. Many of these conflicts would involve power lines, but there are also four potential gas line conflicts for all Segment B alternatives. Other conflicts would include water lines, one sewer line, storm drains, and communication lines.

The linear feet of parallel utilities vary considerably among the Segment B alternatives. The footprint of Alternative B2A would include only 1,350 linear feet of parallel utilities, but Alternative B4 would have more than eight times that amount.

Segment C: Mountlake Terrace to Lynnwood

Segment C utility conflicts would be from Snohomish County PUD power lines. Alternative C1 would have the greatest number of potential power line conflicts, both in terms of the number of crossings and in length of parallel construction conflicts. Alternative C2 would have approximately half as many potential power line conflicts as the two other Segment C alternatives. Alternative C3 would have nearly as many potential conflicts as Alternative C1, but no potential parallel conflicts. Alternative C3 would require relocating two large transmission poles and raising the Snohomish County PUD transmission lines, but they would remain within the PUD right-of-way, and the new poles would be outside the areas currently occupied by the Interurban Trail.

4.15.3 Construction Impacts

Construction impacts would occur when utilities are located along the project footprint (parallel impacts) or where utilities would intersect the light rail alignment. Impacts would be avoided or minimized by permanently or temporarily relocating the affected utilities during construction, by adjusting the light rail alignment during final design, or by protecting utilities from construction damage, in accordance with Sound Transit's *Link Design Criteria Manual* (Sound Transit 2013).

Underground utilities may need to be relocated because of impeded maintenance access, inadequate vertical clearance between the utility and the rail line (especially in cut sections), or structural impacts to the utility (both in cut sections and at-grade sections).

For elevated light rail guideways, impacts on underground utilities should be minimal, provided that the support columns could be located to provide adequate horizontal clearance between the utility and the support column. However, conflicts between elevated light rail guideways and overhead utilities could occur where elevated guideways either run directly underneath the utility lines or cross them. Also, utility lines may need to be raised to accommodate large construction equipment. These conflicts would be resolved by raising the lines over the overhead light rail catenary system at the utility's required minimum distance, in compliance

with the National Electrical Safety Code. Work plans would be submitted to the utility providers prior to construction. Sound Transit will replace existing utilities in-kind if Sound Transit funds the relocation.

Potential Service Disruptions

For the Preferred Alternative and other at-grade alternatives, high pressure gas mains on 5th Avenue NE just south of NE 130th Street would be relocated. Puget Sound Energy indicated that this relocation, which would temporarily reduce gas transmission capacity, should only occur during the summer when demand is lowest. Two Puget Sound Energy regulators at the southwest corner of 5th Avenue NE and NE 130th Street would also likely need to be relocated, as would a 6-inch intermediate pressure gas main on the NE 130th Street bridge, and a 6-inch intermediate pressure gas main along 5th Avenue NE, just north of NE 185th Street. Brief interruptions in service to customers would occur while service switches to temporary connections.

For all alternatives, brief water service outages would be required as water mains are switched over from existing systems to new or temporary facilities. The service outages would generally be a few hours to half a day. Customers would be given advanced warning of the shutdown well in advance of the shutdown. Affected areas would be limited to the immediate vicinity of the work.

At the bridge crossing at NE 185th Street, an existing 24-inch water main would be modified to accommodate changes to the bridge. The configuration of the valves in the vicinity of this work would not allow the work to be fully isolated from the adjacent systems. As a result, customers between 1st Avenue NE and I-5 and north of NE 185th Street would experience outages while the system is switched to a temporary line, and again when the system is switched back to the new permanent facilities.

Power and telecommunications (cable, telephone, fiber optic) service to customers in the vicinity of the project would be interrupted briefly as lines are adjusted to accommodate the light rail infrastructure. Final design and coordination of the construction would be completed by the respective utility source providers, and they would be responsible for maintaining service and notifying customers. In general, service outages would be brief and isolated to the immediate vicinity of the work sites.

4.15.4 Indirect and Cumulative Impacts

The availability of light rail service could encourage development of property near the project footprint, which in turn would increase the demand for utility services in this area. However, any development near the project footprint would be no more intense than what is allowed in the adopted land use plans of the local governments. Concurrent construction projects near the project could result in more utility relocations, which could increase the number of short-term service disruptions.

Potential concurrent projects are OMSF (Lynnwood site alternative) and the Edmonds School District master planned services center. See Section 4.2, Land Use, for more details on the indirect and cumulative impacts related to land use development.

4.15.5 Potential Mitigation Measures

All alternatives include design standards and BMPs to minimize impacts. These measures include coordination with utility providers and the public to minimize impacts on utilities during light rail construction and operation. If simultaneous projects in the vicinity of the Lynnwood Link Extension would have impacts on utilities, Sound Transit would coordinate with those projects to minimize additional service disruptions. Sound Transit would conduct potholing and preconstruction surveys to identify utility locations, including outreach to inform customers of potential service disruptions. Sound Transit would continue to work with utility providers to minimize any potential service interruptions.

In some cases, establishing temporary utility lines might be necessary during construction to ensure continuous service or to minimize service disruptions. In addition, Sound Transit and its contractors will follow safety protocols, especially when working near gas lines and power facilities, to protect the safety of construction workers.

With the implementation of design standards and BMPs, Sound Transit does not anticipate any adverse impacts on utilities during light rail operation; therefore, no additional mitigation is proposed.

4.16 Cultural, Archaeological, and Historic Resources

This section identifies and describes the historic properties in the vicinity of the Lynnwood Link Extension alternatives. Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to identify historic properties and to consider the potential project impacts on those historic properties. Regulations in 36 CFR 800 outline the process for complying with Section 106 requirements. Historic properties are defined in 36 CFR 800.16(l)(1) as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior," and can also include traditional cultural properties.

Historic properties are identified and evaluated in consultation with the State Historic Preservation Officer (SHPO) at the Washington State Department of Archaeology and Historic Preservation (DAHP); tribes with jurisdiction or interest; local jurisdictions (Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood); and other consulting parties.

To be eligible for National Register of Historic Places (NRHP) listing, a historic resource must meet standards of integrity and at least one of the following criteria (36 CFR 60.4):

a) Is associated with an important event or series of events that have made a significant contribution to the broad patterns of American history; or

b) Is associated with an important individual who was significant in our past; or

c) Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master or possesses high artistic values; or represents a significant and distinguishable entity whose components lack individual distinction.

d) Has yielded, or may be likely to yield, information important in history or prehistory.

Regulations in 36 CFR 800 outline the process for satisfying the Section 106 requirements. The process includes the following steps: (1) initiate consultation with regulatory agencies, tribes with jurisdiction or interest, local governments, and other interested parties; (2) define the Area of Potential Effects (APE); (3) identify, record, and evaluate resources for potential NRHP eligibility; (4) identify project effects; and (5) consult with affected parties to resolve adverse effects, if any, on historic properties.

A law known as Section 4(f) of the Department of Transportation Act provides further protection for historic properties that could be affected by a transportation project with FTA involvement; see Section 4.18, Section 4(f) and 6(f) Evaluation, for further details.

There are also state and local regulations that require consideration of cultural resources. SEPA and its implementing rules contained in WAC 197-11 require the identification of historic, archaeological, and cultural resources listed in national, state, or local registers, and the identification of measures to reduce or control effects on these resources. For listing in the Washington Heritage Register (RCW 27.34.200 and WAC 25-12), a property must typically be at least 50 years old, have a high-to-medium level of integrity, and have documented historic significance at the local, state, or federal level. Nine areas of significance are taken into consideration.

RCW 27.44 (Indian Graves and Records) protects Indian burials, while RCW 27.53 (Archaeological Sites and Resources) protects archaeological sites. RCW 76.09 (Confidentiality of Information) provides for the confidentiality of information on archaeological sites.

The Governor's Executive Order 05.05 addresses the need for state agencies to consult with Indian tribes in acquiring or developing land for capital improvements.

This analysis follows guidance provided by DAHP's *Washington State Standards for Cultural Resources Reporting*.

Three of the jurisdictions within the APE—Seattle, Shoreline, and Lynnwood—have a local preservation program with a board or commission that maintains a register of significant historic properties. The City of Shoreline's ordinance incorporates the King County preservation ordinance. The City of Mountlake Terrace has not adopted a preservation ordinance. The criteria for listing in local registers are generally similar to, but broader than, the NRHP criteria cited above.

The *Cultural, Archaeological, and Historic Resources Technical Report* provides detailed information on the historic, archaeological, and cultural resources discussed in this section. It also provides additional information about federal, state, and local regulations for protecting the resources.

4.16.1 Affected Environment

The APE for the Lynnwood Link Extension encompasses any historic, archaeological, and cultural property that could be directly or indirectly affected by construction or operation of the project. It includes all areas within 200 feet of the center of the light rail guideway, including at-grade or elevated profile sections, and within 200 feet of any station, parking structure, staging area, or other project facility. The vertical APE for archaeological resources includes all areas of ground disturbance associated with project construction. However, at this stage in the project, details regarding the depth of construction may vary by alternative and will continue to be developed as the project progresses through design.

Archaeological Resources

Archaeologists conducted a field survey in 2012, targeting locations within the APE that had some potential for having intact archaeological deposits. The project's Archaeological Work Plan (Appendix A of the *Cultural, Archaeological, and Historic Resources Technical Report*) describes the survey methods and the approach Sound Transit used to determine survey locations. The technical report also discusses the survey findings.

In recent decades, roadway construction and residential or other urban development have disturbed much of the study area; as a result, the overall APE has a low to moderate probability for intact archaeological remains.

Two historic-period archaeological sites (the Seattle–Everett Interurban Trail Segment site, 45SN531, and the Scriber Creek Park site, 45SN609) were identified during the archaeological investigation, but neither site retains integrity nor is considered historically or prehistorically significant. In consultation with the SHPO and affected tribes, FTA has determined these sites are not eligible for listing in the NRHP; the

SHPO concurred with these determinations on December 4, 2012. These sites are described in the *Cultural, Archaeological, and Historic Resources Technical Report*.

Traditional Cultural Properties

FTA and Sound Transit have consulted with the Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians, Suquamish Tribe, Tulalip Tribes of Washington, and Yakama Nation.[4] None of these parties has identified any potential for a traditional cultural property within the APE.

Historic Buildings and Structures

To identify potential historic properties within the APE, Sound Transit conducted a historic resources field survey. Every property within the APE that was built in or before 1970 was surveyed at an intensive level. While the standard NRHP age threshold is 50 years, Sound Transit used 1970 as the threshold year based on a conservative estimate of 2020 as the start of construction. Over 650 properties were surveyed.

Sound Transit also reviewed properties that are less than 50 years old but meet the age criteria for a local jurisdiction's preservation program. The agency coordinated with the Cities that have historic resource programs (Seattle, Shoreline, and Lynnwood) to identify any properties that were potentially eligible for their historic registers.

As a result of the historic resources field survey, FTA and Sound Transit determined that five historic resources within the APE retain a high level of integrity and meet NRHP eligibility criteria under Criterion C.[5] The SHPO concurred with these determinations on December 4, 2012.

In October 2013, after the publication of the Draft EIS, one of the NRHP-eligible resources, Melody Hill Elementary School, was demolished by its owner, Edmonds School District No. 15.

The remaining four NRHP-eligible buildings are located within Segment A, and are described in the following paragraphs. Table 4.16-1 lists these historic properties and Figure 4.16-1 displays them.

[4] Consistent with federal guidance, FTA and Sound Transit have also consulted with the potentially interested (although not federally recognized) Duwamish and Snohomish tribes.

[5] The NRHP-eligible resources are also considered Section 4(f) resources. Please see Section 4.18, Section 4(f) and 6(f) Evaluation, of this Final EIS for details on the project's 4(f) analysis.

Table 4.16-1. NRHP-eligible Resources within the Area of Potential Effects

Address	Description	Construction Date	Historic Status Eligibility
11200 1st Avenue NE, Seattle	Northgate Plaza Apartments	1950–51	Eligible NRHP Criterion C
11725 1st Avenue NE, Seattle	Northgate Elementary School	1956	Eligible NRHP Criterion C
13130 5th Avenue NE, Seattle	Parsonage	1928	Eligible NRHP Criterion C
132 NE 155th Street, Shoreline	Log House	1920	Eligible NRHP Criterion C

Northgate Plaza Apartments is a garden apartment complex with 207 units in 34 buildings. It was designed in 1950–51 by John Graham, Jr., the architect of nearby Northgate Mall, to help address the critical need for housing after World War II.

Northgate Elementary School (11725 1st Avenue NE, Seattle) was built in 1956 to accommodate post-World War II population growth in north Seattle. It was designed by Paul Thiry, one of Seattle's notable Modernist architects.

A residence at 13130 5th Avenue NE, Seattle, currently used as a parsonage by the North Seattle Church of the Nazarene, is a very good example of the Georgian Revival style, exhibiting an Italian Renaissance influence and an extensive use of terra cotta ornamentation.

The log house (132 NE 155th Street, Shoreline) is one of the oldest houses in the vicinity and is an example of a style that is very unusual in north King County.

In addition to being NRHP eligible, these properties are also eligible for listing in the Washington Heritage Register and for landmark designation in the cities of Seattle and Shoreline.

The historic resources survey identified one additional property that appears likely to meet the Seattle landmark designation standards: the Seattle Latvian Evangelical Lutheran Church (11710 3rd Avenue NE, Seattle). The property, built in 1971, does not yet meet the age criteria for the NRHP but does meet Seattle's 25-year threshold for landmarks. Only the Seattle Landmarks Preservation Board has the authority to determine if a property is eligible for designation. No other properties in the survey appear likely to meet local landmark criteria.

Only one previously identified historic resource is within the APE: a house at 727 NE 189th Street, Shoreline, which was identified in King County's Historic Resources Survey of Shoreline as meeting King County's and Shoreline's criteria for landmark designation. In consultation with the SHPO, this house has been determined to lack sufficient integrity to be eligible for NRHP listing.

Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_LandUse\LL_FEIS_Lynnwood_HistoricListings.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Roadway
- Local Street
- City Boundary
- County Boundary
- Park
- Waterbody
- Area of Potential Effect

Figure 4.16-1
National Register Eligible Properties within the APE

Lynnwood Link Extension

During consultation, the City of Lynnwood noted two buildings that have been altered and lack integrity, but have some historical importance to the City. The Cedar Valley Grange played an important role in the history of Lynnwood, serving as a community fixture. The City also noted that Hall's Lake is important to local history as the location of one of the area's first sawmills and an early church camp. The City also noted the Interurban Trail, which has been built on the former Interurban line right-of-way. The importance of the Interurban rail service is discussed in the *Cultural, Archaeological, and Historic Resources Technical Report*, but no visible evidence of the rail line remains.

4.16.2 Determination of No Adverse Effect

Under Section 106 regulations, an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects include, but are not limited to, the following:

- Demolition or alteration of the property
- Alteration of the property's setting
- Introduction of visual, audible, or atmospheric elements that are out of character with the setting of the historic property
- Physical encroachment upon an archaeological site

An agency may make a finding of no adverse effect, in consultation with the SHPO, when the undertaking is modified or conditions are imposed to avoid adverse effects.

FTA and Sound Transit have determined that this project would have no adverse effects on historic properties. The SHPO concurred with this determination in a letter dated November 13, 2014. The SHPO's letter is attached to the *Cultural, Archaeological, and Historic Resources Technical Report*. The factors considered in determining the lack of effects to identified historic properties are described below.

No NRHP-eligible archaeological resources or traditional cultural properties have been identified; however, it is possible one or more archaeological sites exist beneath the ground surface in areas where project excavation would take place. Through the NEPA review and the Section 106 process, FTA and Sound Transit will continue to consult with the SHPO, tribes, and other interested parties to minimize impacts to a potential site, if found.

Long-Term Impacts

Long-term impacts are those that would occur or continue to occur while the proposed project is in operation. The impact would constitute an adverse effect if it, as described above, alters any of the characteristics that qualify the property for inclusion in the NRHP or local landmarks ordinances.

None of the light rail alternatives would adversely affect any of the NRHP-eligible historic properties within the APE, or have a long-term effect on any other potential landmark properties in Seattle, Shoreline or Lynnwood.

No Build Alternative

The No Build Alternative would have no long-term effects on historic properties.

Light Rail Alternatives

Segment A: Seattle to Shoreline

No alternative would affect historic properties during operation of the transportation facility. All of the historic properties are far enough from the transportation facility to preclude adverse vicinity impacts, such as noise, vibration, or visual effects. The new guideway would not alter or diminish the buildings' integrity of setting because the guideway would be constructed adjacent to I-5. I-5 has already altered the setting of nearby historic properties. Introduction of a new rail alignment next to I-5 would not further alter or diminish the integrity of those historic properties. None of the alternatives would alter or diminish the historic properties' remaining aspects of integrity: location, design, workmanship, feeling, or association.

The **Northgate Plaza Apartments** are located across the street from all the potential Segment A alternatives. This would cause a minor alteration of the apartments' integrity of setting, but because the new guideway is across the street, adjacent to I-5, the effect would not be adverse. There would be no other long-term alteration of the apartments' integrity of location, design, materials, workmanship, feeling, or association.

Northgate Elementary School is located west of I-5 and adjacent to the NE 117th Street overpass, which would be rebuilt under Alternative A1. This would not affect the historic property because the overpass would be replaced rather than newly located to the site. There would be no other long-term alteration to the building's integrity of location, design, setting, materials, workmanship, feeling, or association. All other Segment A alternatives are east of I-5 and would not affect this resource.

The **Parsonage** would be across I-5 from all alternatives. Alternatives A5, A7, A10, A11, and the Preferred Alternative with station option would include a station at NE 130th Street. This would cause a minor alteration to the Parsonage's integrity of setting and feeling, but because the new guideway and station are adjacent to I-5, these effects would not be adverse. No other aspect of integrity (location, design, materials, workmanship, or association) would be altered as a result of the station operation.

The **Log House** is located across the street from the proposed parking facility that would be constructed under Alternatives A5 and A7. All of the Segment A

alternatives would include a guideway west of the Log House. This would cause a minor alteration to the building's integrity of setting and feeling, but because the new guideway is adjacent to I-5 and the parking facility is across NE 155th Street and adjacent to the fire station, these effects would not be adverse. This project would not alter any other aspect of integrity (location, design, materials, workmanship, or association).

The project could affect the property owned by the **Seattle Latvian Evangelical Lutheran Church**, which is not NRHP eligible, but may meet Seattle Landmarks eligibility criteria. The Preferred Alternative and Alternatives A1, A5, and A10 would displace the residence (used as a caretaker's house) on the property, which has been determined to not be NRHP eligible, but the church buildings would be unaffected.

If the Seattle Landmarks Preservation Board were to designate the property as a Seattle Landmark, Sound Transit would seek a Certificate of Approval from the Board to undertake the necessary work on the site and would comply with the Board's requirements.

Segment B: Shoreline to Mountlake Terrace

None of the Segment B alternatives would affect historic properties because there are no historic properties within this segment of the APE.

The house at **727 NE 189th Street** is not NRHP eligible but is on the City of Shoreline's Historic Property Inventory; this property would also not be negatively affected by the project. It is located about 125 feet east of the guideway, which would run along the east side of I-5. The introduction of the new transportation facility would not alter or diminish the building's integrity of setting because the guideway would be constructed adjacent to I-5. I-5 has already altered and diminished the setting of nearby historic resources. Introduction of a new rail alignment adjacent to I-5 would not further alter or diminish the historic resource's remaining aspects of integrity: location, design, workmanship, feeling, or association.

Segment C: Mountlake Terrace to Lynnwood

None of the Segment C alternatives would affect historic properties because there are no historic properties within this segment of the APE. None of the Segment C alternatives would affect landmarks or locally significant resources in Lynnwood. All of the alternatives would be along the freeway as the edge of the Halls Lake property. Alternatives C1 and C2 would be elevated across the street from the Cedar Valley Grange and would not affect it.

Construction Impacts

Construction impacts such as noise, vibration, dust, or reduced access would be temporary and occur only during project construction. While they may temporarily disturb occupants, they would only be an adverse effect if they diminished the

qualities that make the property eligible for NRHP listing or local landmarks ordinances.

In order to reduce construction-related effects, Sound Transit will implement standard BMPs throughout the project construction period. Construction noise and vibration impacts are discussed in Section 4.7, Noise and Vibration.

Although Sound Transit has not identified significant archaeological resources in the project area and the corridor overall has a moderate-to-low probability for containing intact archaeological resources, construction activities involving excavation could encounter an unanticipated archaeological site. If the site is determined to be significant, an adverse effect could occur.

No Build Alternative

The No Build Alternative would have no construction-related effects on historic properties.

Light Rail Alternatives

Segment A: Seattle to Shoreline

The **Northgate Plaza Apartments** are located across the street from the potential alignment. All of the Segment A alternatives, including the Preferred Alternative, would involve guideway construction between the Northgate Plaza Apartments and I-5, which would have temporary minor effects, including noise, changed visual quality, and reduced access. These effects may temporarily alter the setting, but they would not permanently diminish any of the aspects of integrity (location, design, workmanship, materials, setting, feeling, and association); therefore, these effects are not considered adverse.

Northgate Elementary School would experience temporary, minor proximity effects from Alternative A1 during the rebuilding of the NE 117th Street overpass. These effects may include noise and visual intrusions. The setting may potentially be temporarily altered, but not diminished. No other Segment A alternative, including the Preferred Alternative, would affect this resource.

The **Parsonage** would experience temporary, minor proximity effects from the alternatives (Preferred Alternative with options, A5, A7, A10, and A11) during construction of the NE 130th Street Station. Construction impacts, such as noise, vibration, reduced access, or visual intrusions, could temporarily alter the integrity of setting and feeling of this historic resource. However, setting and feeling would not be permanently diminished, and these effects are not considered adverse. No other aspect of integrity (location, design, materials, workmanship, or association) would be altered.

The **Log House** would experience temporary, minor proximity effects from Alternatives A5 and A7 during construction of a parking facility across the street. Construction impacts, such as noise, vibration, reduced access, or visual intrusions, could temporarily alter the setting of this historic resource. However, setting and feeling would not be permanently diminished, and these effects are not considered adverse. No other aspect of integrity would be altered. No other Segment A alternative, including the Preferred Alternative, would affect this resource.

The **Seattle Latvian Evangelical Lutheran Church**, which is not NRHP eligible, but may meet Seattle Landmarks eligibility criteria, could have short-term restricted access during construction for all alternatives. Other construction impacts, such as construction traffic, visual changes and intrusions, noise and vibration, could also be nearby, but would not permanently alter the church structure.

Segment B: Shoreline to Mountlake Terrace

None of the Segment B alternatives, including the Preferred Alternative, would affect historic properties during construction because no historic properties are located within or adjacent to the proposed construction area.

Segment C: Mountlake Terrace to Lynnwood

No historic properties are located within or adjacent to the proposed construction area. None of the Segment C alternatives, including the Preferred Alternative, would affect landmarks or locally significant resources in Lynnwood. The properties of local significance (Hall's Lake and the Cedar Valley Grange) would have light rail nearby but would not be directly affected.

4.16.3 Indirect Impacts

Indirect impacts would be limited because there are so few historic properties in the project corridor.

4.16.4 Cumulative Impacts

Cumulative impacts would be limited because few historic properties exist in the project corridor; moreover, there are few pending projects involving construction or other developments that could affect historic resources in areas where the light rail project could also have effects.

4.16.5 Potential Mitigation Measures

Section 106 of the NHPA directs FTA, in consultation with the SHPO and other consulting parties, to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties. Where adverse effects cannot be avoided, they will be resolved through

mitigation measures in a Memorandum of Agreement (MOA). Because there would be no adverse effects on NRHP-eligible historic properties, no MOA is anticipated for the Lynnwood Link Extension.

To minimize the risk of damage to currently unknown archaeological resources, Sound Transit would develop an Inadvertent Discovery Plan prior to ground-disturbing construction activities. FTA and Sound Transit would coordinate with the SHPO and tribes to review the plan. In addition, archaeologists would conduct training for contractors to help them identify potential archaeological remains during construction; the training would also cover protocols to implement if something is discovered.

If potentially significant archaeological materials or sites (or evidence thereof) are discovered during construction, activities would be halted around the find. All reasonable measures would be taken to avoid or minimize harm to the property until such time as FTA and Sound Transit, in consultation with the SHPO and the tribes, determine that appropriate measures have been taken to ensure that the project is in compliance with Section 106 of the NHPA.

The Inadvertent Discovery Plan also would describe the procedures that Sound Transit and FTA would follow if any human remains are discovered during project construction.

4.17 Parks and Recreational Resources

The parks and recreational resources considered in this section consist of designated public parks, designated open spaces, trails, and other publicly owned and publicly accessible lands that support recreational activities.

4.17.1 Affected Environment

The study area covers parks and recreational resources within 200 feet of potential light rail track alignments and 0.25 mile of potential station locations. Figures 4.17-1a and 4.17-1b map the parks and recreational resources in the study area. Table 4.17-1 summarizes the size, recreational use, location, and access for the resources.

In addition to the effects discussed in this section, impacts on parks and recreational resources are also evaluated under two federal statutes: Section 4(f) of the U.S. Department of Transportation Act of 1966, and Section 6(f) of the 1965 Land and Water Conservation Fund Act. These statutes require specific analysis of recreational resources, including avoidance or mitigation for certain direct impacts on some properties with parks and recreational uses. This analysis is provided in Section 4.18, Section 4(f) and Section 6(f) Evaluation.

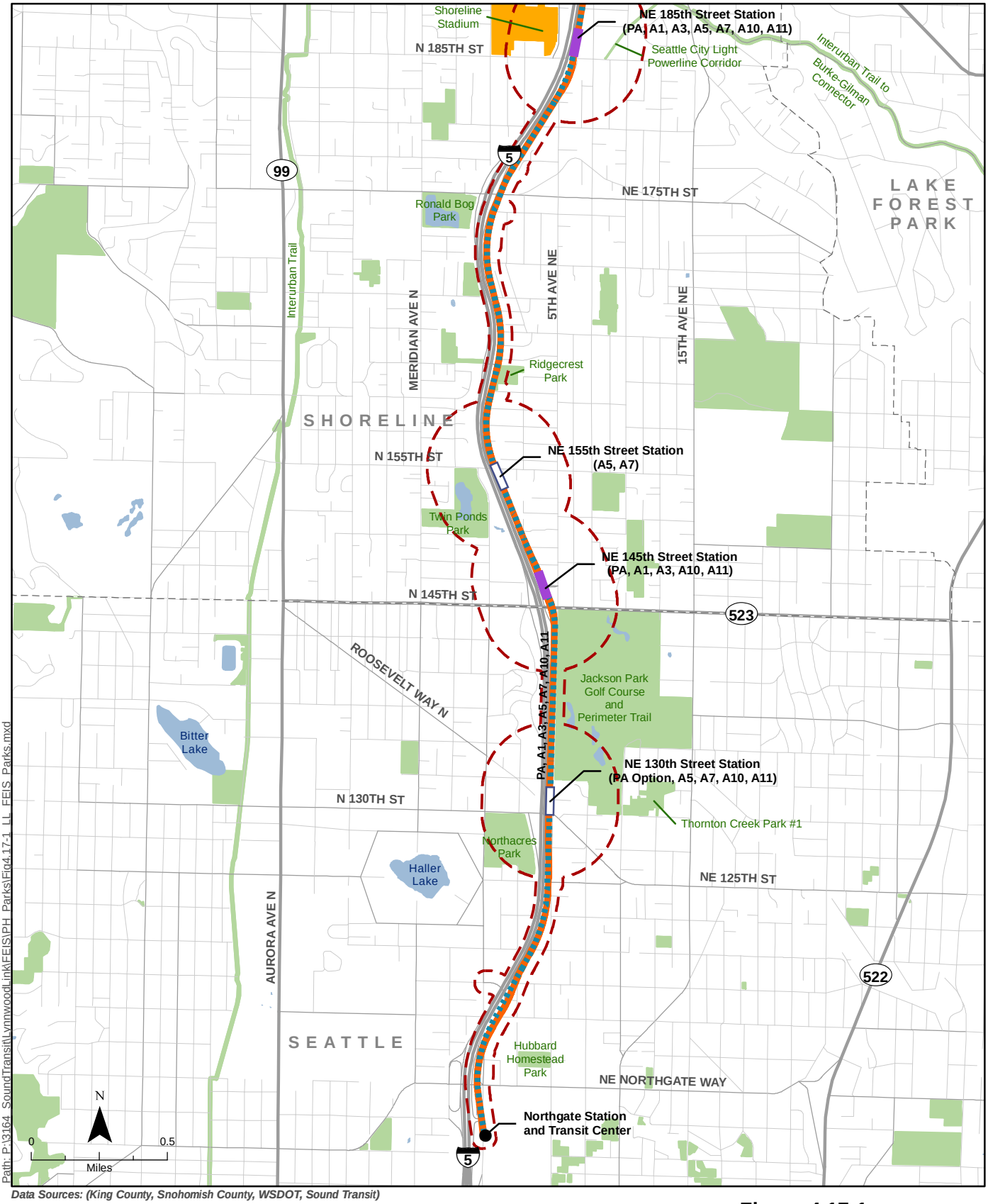
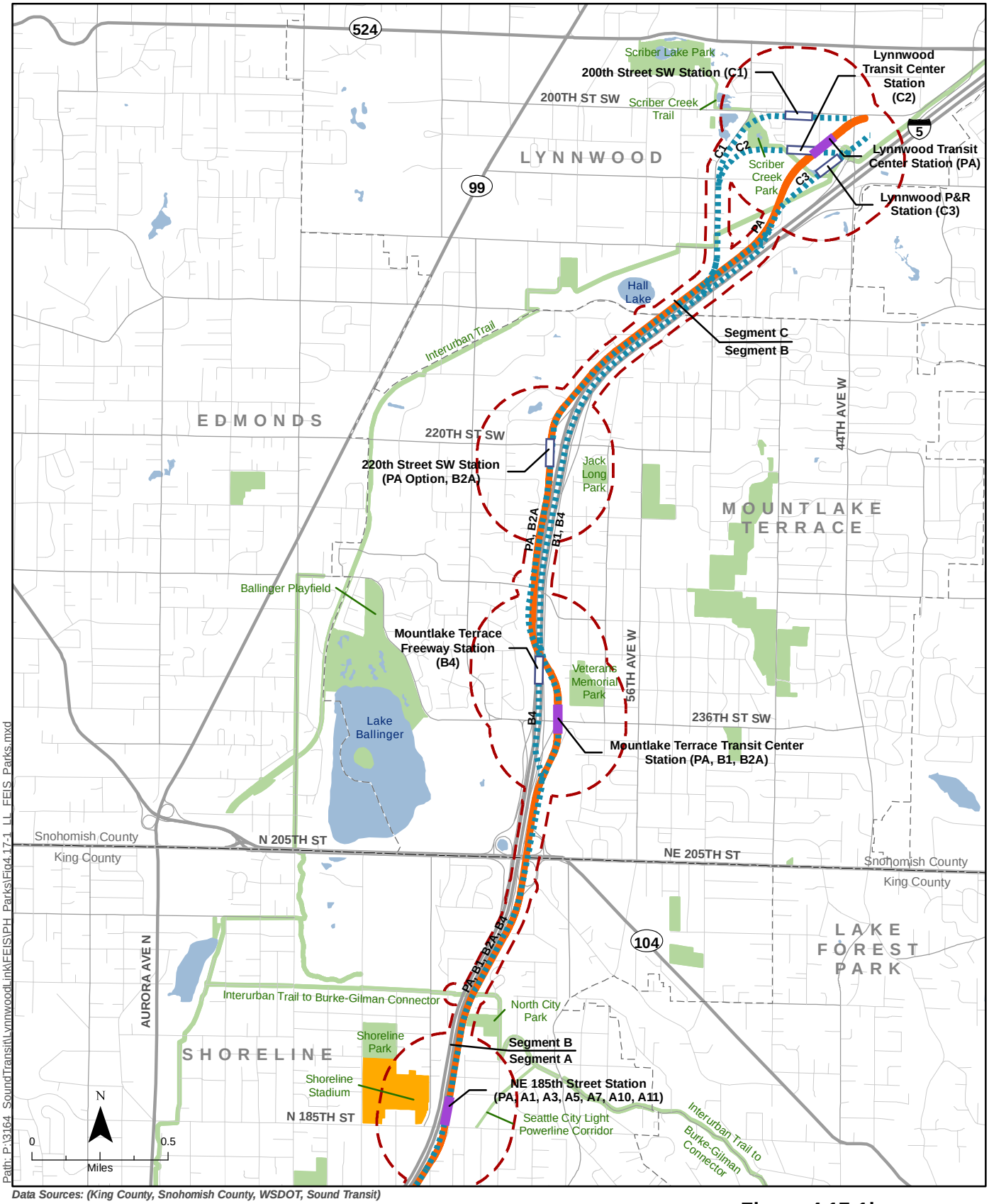


Figure 4.17-1a
Park and Recreational Facilities in the Study Area

Lynnwood Link Extension



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Study Area
- Public Recreation Facility
- Park
- Trail
- Waterbody

Figure 4.17-1b
Park and Recreational Facilities in the Study Area

Lynnwood Link Extension

Table 4.17-1. Parks and Recreational Resources in the Study Area

Park Facility	Size (acres)	Recreational Uses	Location of Recreational Uses Within Facility	Access Locations	Recreational or Open Space Values
Segment A					
Jackson Park Golf Course City of Seattle	160.38	Golf, walking trail	Throughout; trail facility along boundary.	NE 135th Street	Golf, scenic setting, mature conifers.
Thornton Creek Park #1 City of Seattle	7.8	None	Not applicable (N/A)	N/A	Scenic natural setting.
Northacres Park City of Seattle	20.67	Baseball, softball, soccer, nature trails, off-leash dog area, children's playground.	Throughout	1st Avenue NE	Active recreational facilities, off-leash dog area, large mature forest.
Twin Ponds Park City of Shoreline	21.96	Soccer, tennis, nature viewing, trails, playground.	Throughout; developed recreation located at the east side of park.	1st Avenue NE	Ponds and wildlife viewing access.
Ridgecrest Park City of Shoreline	3.82	Baseball diamond, handball, open grass.	Baseball diamond is nearest the proposed light rail route; handball is located on the east side of the park.	NE 161st Street	None
Seattle City Light Power Line Corridor	2.21	Open space.	Throughout	NE 185th Street, NE 188th Street	None
Shoreline Park and Stadium City of Shoreline	39.62	Football/soccer/track and field stadium, tennis, indoor swimming pool, grass fields, field turf soccer fields, forested trails.	The stadium is located nearest the potential light rail development; other uses are farther to the west.	Primary from 1st Avenue NE, secondary access from NE 185th Street	One of the few venues for large-scale track and field meets in the region; stadium seating for football, track, and soccer events.
Segment B					
Interurban Trail to Burke-Gilman Trail Connector City of Shoreline	(planned)	Planned signed bicycle and trail route connecting Interurban and Burke-Gilman trails.	Follows NE 195th Street to the Burke-Gilman Trail at NE 170th Street in Lake Forest Park; uses existing bridge crossing over I-5.	Part of street system	Urban street
North City Park City of Shoreline	3.96	Forest trails; adjacent school property is open to the public for soccer and playground use.	The forested section of North City Park extends east from the I-5 right-of-way.	10th Avenue NE	Mature Pacific Northwest forest.
Veterans Memorial Park City of Mountlake Terrace	10	Forested walking trails, gazebo, picnicking.	Throughout	232nd Street SW and 58th Avenue West	Mature Pacific Northwest forest; Veterans Memorial installation.
Jack Long Park City of Mountlake Terrace	3	Nature trails, picnicking, horseshoes.	Throughout	58th Avenue West	Mature conifers.

Table 4.17-1. Parks and Recreational Resources in the Study Area

Park Facility	Size (acres)	Recreational Uses	Location of Recreational Uses Within Facility	Access Locations	Recreational or Open Space Values
Segment C					
Interurban Trail City of Lynnwood	N/A	Walking, running, bicycling, skating.	Entire facility	Several street crossings; existing park-and-ride	Long-distance recreational trail.
Scriber Creek Trail City of Lynnwood	N/A	Walking, running, nature viewing.	Throughout	Scriber Creek Park and Lynnwood Park-and-Ride	Nature viewing.
Scriber Creek Park City of Lynnwood	4.59	Nature park with parking, picnicking area, short loop nature trail in the north section of the park and Scriber Creek Trail section to the south.	Picnicking and short loop trail in the northernmost section of the park; wetland trail to the south.	Cedar Valley Road, additional pedestrian access from 48th Avenue West	Mature conifers, natural character, wetland boardwalk, and trail.

Segment A

Jackson Park Golf Course, Seattle

Jackson Park Golf Course is a 27-hole golf course owned by the City of Seattle and managed by a private company. This golf course, which opened in 1930, is characterized by mature conifers and rolling topography. A public walking trail is located near the boundary of the course. In some locations the trail is a soft-surface walking path; in other locations it is a sidewalk.

Thornton Creek Park #1, Seattle

The undeveloped Thornton Creek Park #1 open space consists of riparian forest along the banks of Thornton Creek. There are a few unofficial trails in this park, but otherwise the open space does not accommodate recreational use.

Northacres Park, Seattle

Northacres Park is a large open space that provides baseball, softball, and soccer fields for active recreation, as well as nature trails, play areas, an off-leash dog area, and undeveloped open space for more passive recreation. The children's play area includes a wading pool.

Twin Ponds Park, Shoreline

Twin Ponds Park includes an artificial turf soccer field, children's playground, tennis court, nature trails, and a viewing deck for its namesake ponds.

Ridgecrest Park, Shoreline

Ridgecrest Park features a baseball diamond and a concrete handball court, as well as a grassy outfield/open space area. It has a small parking lot in the southwest corner. Although this park is located just east of I-5, a berm planted with mature cottonwood trees buffers the park from the freeway.

Shoreline Park and Stadium, Shoreline

This recreational complex includes Shoreline Park, Shoreline Stadium, and the Shoreline Pool. Shoreline Park includes tennis courts and two artificial turf soccer fields as well as a small forested area with walking paths. Recreational facilities on a portion of the site owned by the Shoreline School District include an undeveloped grass field and the Shoreline Stadium. The grass field is used for track and field events and informal recreation. The Shoreline Stadium includes an artificial turf football/soccer field as well as track and field facilities. It has a covered grandstand, and hosts large regional high school sports competitions, including an annual invitational track meet as well as football games, track meets, and soccer games. The recreational facilities associated with the Shoreline Stadium are open for public use.

Seattle City Light Power Line Corridor

Between North 185th Street and North 188th Street, Seattle City Light maintains a power line corridor as a grassy open space. A few informal trails cross the corridor. This corridor has no developed facilities, and the prominent overhead power lines reduce the aesthetic quality of the open space.

Segment B

Interurban Trail to Burke-Gilman Trail Connector, Shoreline

This planned route will connect the Interurban Trail and the Burke-Gilman Trail along North/NE 195th Street and NE 170th Street in Lake Forest Park. The route includes the existing pedestrian bridge over I-5 at NE 195th Street. According to the City of Shoreline, this route is primarily a transportation facility that can support recreational activities; impacts on the connector as a transportation facility are discussed in Chapter 3, Transportation Impacts and Mitigation.

North City Park, Shoreline

This small park includes a patch of remnant conifer forest with nature trails. The park is adjacent to a school play area and provides public access to this area, including a grass soccer field and children's play structures. The school's play area is adjacent to I-5 on the east side of the freeway and is buffered from the freeway by a wide stand of mature mixed forest.

Veterans Memorial Park, Mountlake Terrace

Veterans Memorial Park, located just northeast of the Mountlake Terrace Town Center, is a forested park offering nature trails, a gazebo, picnicking, and a children's play area. It also includes a flagpole and plaque as a memorial to veterans.

Jack Long Park, Mountlake Terrace

This small park east of I-5 is located adjacent to the Mountlake Terrace water towers. Its most significant feature is a patch of mature conifers. Recreational facilities include a nature walk trail, picnic tables, a small climbing rock, and horseshoe pits.

Segment C

Interurban Trail, Lynnwood

The Interurban Trail is a regional, multipurpose trail that spans several local jurisdictions. The segment of the trail in the study area is managed by the City of Lynnwood and includes segments on Snohomish County PUD right-of-way, as well as a side-path adjacent to city streets. North of the Lynnwood Park-and-Ride the trail continues adjacent to the I-5 right-of-way.

Scriber Creek Park, Lynnwood

This small park includes a parking area, picnic tables, a grassy area for passive recreation, and a short trail through mature conifers. It includes an open-water pond that is part of a larger wetland extending southward beyond the park property. A trail on the south end of the park (Scriber Creek Trail, described in the following paragraph) provides recreational access to the wetland within the park and expansive views over the larger wetland outside the park. This park was developed with bond funding from Snohomish County, which came with restrictions on how land could be converted to other uses.

Scriber Creek Trail, Lynnwood

Scriber Creek Trail connects Scriber Lake Park with Scriber Creek Park and the Interurban Trail. It enters Scriber Creek Park from Cedar Valley Road, extends southward to the park's boundary at a large wetland, then turns eastward to the edge of the Lynnwood Park-and-Ride and follows the boundary of the park-and-ride southeast, eventually connecting with the Interurban Trail.

4.17.2 Long-Term Impacts

Long-term impacts typically include permanent changes to a resource, such as when a project converts land from a park or recreational resource to another use. Indirect long-term impacts (discussed in Section 4.17.4) include changes to the area surrounding the park or recreational resource that would affect recreational opportunities or the recreational experience. While long-term impacts generally refer to permanent changes,

some construction impacts can be considered long term if they would have a major effect on the resource and extend for years.

Table 4.17-2 summarizes the long-term impacts that would affect parks and recreational resources in Segment A, where the highest number of resources would be encountered. The impacts in all three segments are described below.

No Build Alternative

The No Build Alternative would not affect parks and recreational resources.

Segment A Alternatives

Jackson Park Golf Course

Near the Jackson Park Golf Course, the Preferred Alternative transitions to an elevated guideway, with an above-grade station north of NE 145th Street and a multi-story parking garage. Portions of the guideway, the station, and the parking structure would be visible from some playing areas of the golf course and from parts of the walking trail along the boundary of the course. The light rail facilities would be most visible from the section of trail along 5th Avenue NE. The visibility of the guideway and station would not affect public use of the golf course or trail but would change some of the views.

For the other alternatives, portions of the guideway would also be visible from within the park, with the mostly elevated alternatives being more visible (A3, A7, and A11). Alternatives A1 and A10 would have similar visual impacts as the Preferred Alternative. For more discussion of this impact on views, see Section 4.5, Visual and Aesthetic Resources. Visual simulations from selected viewpoints within Jackson Park are provided in Appendix G, Visual Simulations and Illustrations (Viewpoint 10).

Thornton Creek Park #1

The project would have no long-term impacts on Thornton Creek Park #1.

Northacres Park

The project would have no long-term impacts on Northacres Park.

Twin Ponds Park

The project would have no long-term impacts on Twin Ponds Park.

Table 4.17-2. Long-Term Impacts, Segment A

Park Facility	Preferred Alternative	Alternative A1	Alternative A3	Alternative A5	Alternative A7	Alternative A10	Alternative A11
Jackson Park Golf Course	No property impacts, but areas with vegetation removal and an elevated NE 145th Street Station would be visible from parts of the golf course and walking trail.	Same as the Preferred Alternative.	Similar to the Preferred Alternative, but elevated guideway more visible.	Visual impacts from vegetation removal only.	Visual impacts from guideway only.	Same as the Preferred Alternative.	Same as the Preferred Alternative.
Thornton Creek Park #1	No anticipated impacts.	No anticipated impacts.	No anticipated impacts.	No anticipated impacts.	No anticipated impacts.	No anticipated impacts.	No anticipated impacts.
Northacres Park	No anticipated impacts for the NE 145th Street Station Option. The NE 130th Street Station Option would provide improved access to the park; however, restrictions on parking would be needed to discourage use of the parking lot by transit patrons.	No anticipated impacts.	No anticipated impacts.	NE 130th Street light rail station would provide improved access to the park. Restrictions on parking would be needed to discourage use of the parking lot by transit patrons.	Same as Alternative A5.	Same as Alternative A5.	Same as Alternative A5.
Twin Ponds Park	No anticipated impacts.	No anticipated impacts.	No anticipated impacts.	NE 155th Street light rail station would provide improved access to the park. Possible unintended use of parking lot may occur as informal parking for light rail patrons. Restrictions on parking would be needed to discourage use of parking lot for transit patrons.	Same as Alternative A5.	No anticipated impacts.	No anticipated impacts.
Ridgecrest Park	The light rail facility would occupy approximately 0.30 acre at the western edge of the park, removing a berm and trees that provide a buffer to I-5. Sound Transit would provide replacement parkland to the south.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.

Table 4.17-2. Long-Term Impacts, Segment A

Park Facility	Preferred Alternative	Alternative A1	Alternative A3	Alternative A5	Alternative A7	Alternative A10	Alternative A11
Shoreline Park and Stadium	The NE 185th Street Station would relocate a local street, affecting 0.18 acre of the Shoreline Stadium property (part of the existing surface parking lot, and the edge of the track and field facility). An option would locate the garage in the existing parking area.	Relocated local road would require use of 0.18 acre of the parking lot and stadium field for Shoreline Stadium. Impacts would include reduced parking spaces.	No anticipated impacts.	No anticipated impacts.	No anticipated impacts.	No anticipated impacts.	No anticipated impacts.
Seattle City Light Power Line Corridor	Potential minor additional use of informal trail to access light rail station.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Portion of the open space replaced with parking for light rail station.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.

Ridgecrest Park

The Preferred Alternative would occupy a portion of the park's western edge for the light rail right-of-way. It requires realigning 1st Avenue NE, which offers an opportunity to create replacement parkland to the south to offset the park impact. The total park impact area would be approximately 0.30 acre. This area is adjacent to parking on the south side of the park and to the baseball diamond on the north side. The light rail facility would partially replace a berm and row of mature cottonwoods that currently buffer the park from I-5. A portion of the berm and existing trees may be retained at the northern edge of the park, depending on the final design of the light rail facility.

Figure 4.17-2 shows the area that would be affected within the park. The light rail guideway would be in a retained cut through this area, although the tracks would be close to existing grade. The anticipated impacts would not reduce parking or affect use of the baseball diamond, handball court, or grassy play area. The Preferred Alternative would have a berm, landscaping, or other barriers between the light rail facility and the park to replace the noise reduction and visual screening functions of the affected berm (see Viewpoints 21 and 22 in Appendix G). Also, to replace the property impacted by the light rail facility, property to the south of the existing park would be added to the park, and typical park features such as parking and landscaping would be developed; see Figure 4.17-2 for the proposed mitigation area.

The other Segment A alternatives would have similar impacts as the Preferred Alternative; similar replacement land and other mitigation have been included in those alternatives.

Shoreline Park and Stadium

The Preferred Alternative station at NE 185th Street would realign 5th Avenue NE, requiring retaining walls along the edge of Shoreline Stadium's parking lot and into part of a spur to the running track. About 10 of the 73 parking spaces in the existing parking lot would be affected. These changes within the stadium property would not permanently interfere with sporting activities at the facility or with the stadium's operations. The total impact area, including both parking and field impacts, would be approximately 0.18 acre, and is shown in Figure 4.17-3.

An option to the Preferred Alternative is to locate a five-story parking structure on the stadium's existing surface parking area (Figure 4.17-4). The parking garage would replace the surface spaces of the existing lot. During non-peak transit periods (after evening peak travel and on weekends), additional spaces would be available for stadium users. The parking garage could be seen from the stands and active sports areas, but would not affect user experience or function of the facility.

Path: P:\3164 SoundTransit\LynnwoodLink\FEIS\PH Parks\Fig4.17-2 LL FEIS Park Detail Ridgecrest.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit, Bing Aerial)

All Light Rail Alternatives
Area of Affected Park and Recreation Facility
Area of Impact
Relocated 1st Avenue NE and Replacement Park Land

Figure 4.17-2
Ridgecrest Park Impacts

Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_Parks\Fig4.17-3_LL_FEIS_Park_Detail_Stadium.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit, Bing Aerial)

Preferred Alternative
Area of Affected Park and Recreation Facility
Area of Impact

Figure 4.17-3
Shoreline Stadium Potential Impacts With Preferred Alternative and Alternative A1

Lynnwood Link Extension

Path: P:\3164 SoundTransit\LynnwoodLink\FEIS\PH Parks\Fig4.17-4 LL FEIS Park Detail Stadium.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit, Bing Aerial)

Area of Affected Park and Recreation Facility

Area of Impact for the Preferred Alternative Option

Figure 4.17-4
Shoreline Stadium Potential Impacts With Preferred Alternative Option

Alternative A1 would have similar impacts to the Preferred Alternative because it would realign 5th Avenue NE to accommodate the parking garage on the west side of I-5. The other Segment A alternatives would place both the parking and the station on the east side of I-5, which would not have any impacts on the stadium.

Seattle City Light Power Line Corridor

Alternative A5 would convert part of the corridor's open space to use as parking areas for the NE 185th Street Station. No other Segment A alternatives would affect this power line corridor.

Segment B Alternatives

Interurban Trail to Burke-Gilman Trail Connector

All alternatives would rebuild the WSDOT bridge that crosses I-5 at NE 195th Street, which is a link in the trail system. The replacement bridge would continue to connect the trails.

North City Park

All alternatives would narrow the forested buffer between North City Park and I-5, but the light rail facility would not be visible from the park. No direct impacts to park property are anticipated.

Veterans Memorial Park

The Preferred Alternative would have no long-term impacts on Veterans Memorial Park. Alternative B1 has an option for a parking garage on what is now surface parking, in an area that borders the park, but does not physically alter the park or trail.

Jack Long Park

The project would have no long-term impacts on Jack Long Park.

Segment C Alternatives

Interurban Trail

All alternatives cross over the Interurban Trail. In all cases, the light rail facility would be elevated over the trail and would not interfere with its use or maintenance. Figure 4.17-5 shows where each alternative crosses the Interurban Trail and the Scriber Creek Trail.

The Preferred Alternative would cross over the Interurban Trail as it passes through an open field and wetland area south of Scriber Creek (see Viewpoint 48 in Appendix G). Several power line poles alongside the trail would be relocated. The light rail guideway would be prominent from the trail, but would not affect the use of the trail for recreation or commuting purposes. Because the trail is already in a visually complex urban setting, the light rail crossing overhead would have a minor impact on the trail character.

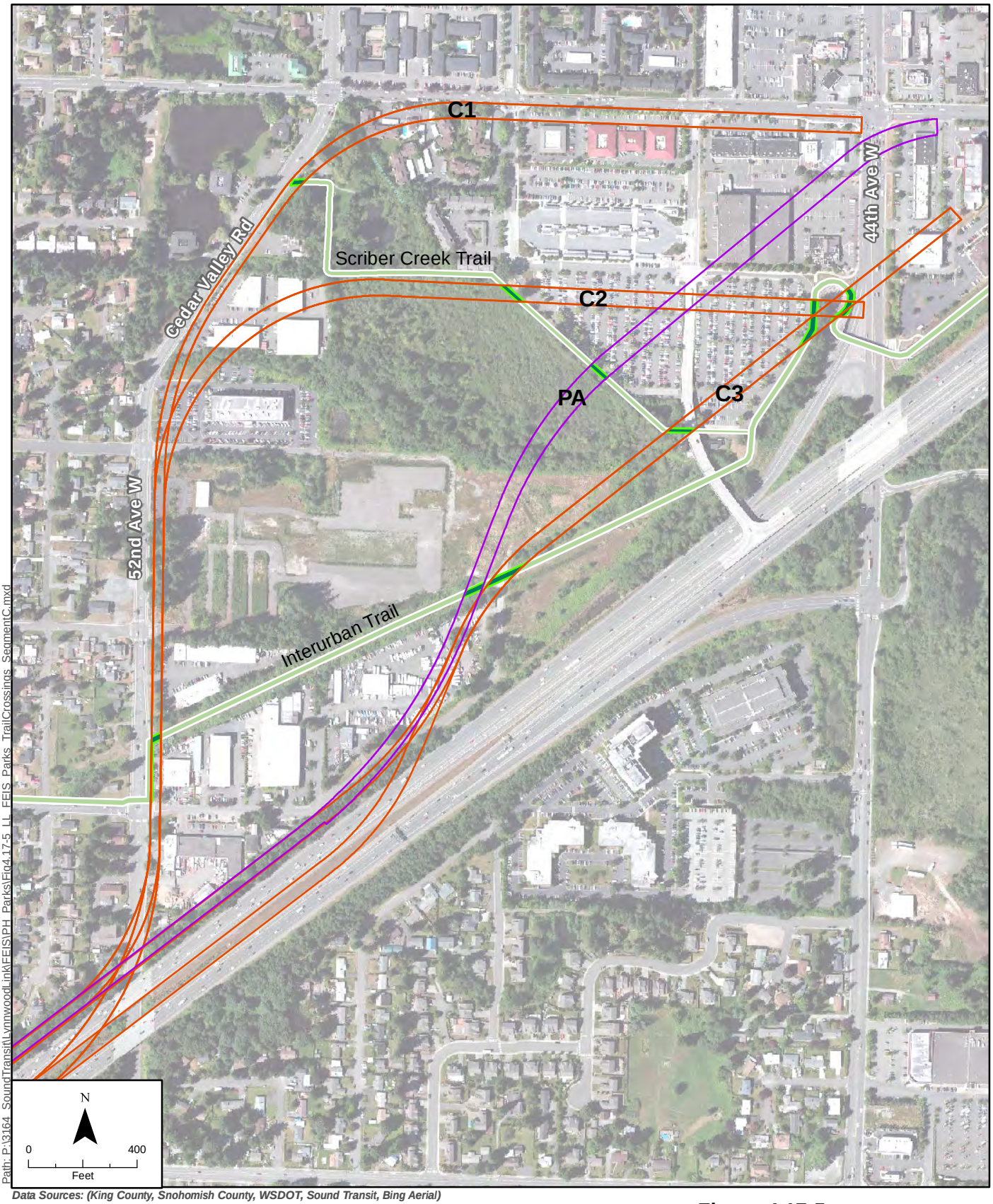


Figure 4.17-5
Segment C Trail Overcrossings

Alternative Footprint
Preferred Alternative
Potential Trail Overcrossing
Trail

Under Alternatives C1 and C2, the guideway would cross over the trail just east of 52nd Avenue West. The elevated tracks would also be located directly east of the trail for approximately half a block extending north from 208th Street SW. The light rail facility would be prominent for trail users; however, the trail is already in a visually complex urban setting in this location and the light rail facility would have a negligible impact on its use and enjoyment.

Under Alternative C2, the tail tracks would extend above the trail near 202nd Street SW as the trail slopes upward to the 44th Avenue West overcrossing.

Under Alternative C3, the elevated guideway would be similar to the Preferred Alternative but cross the trail about 50 feet to the south (see Viewpoint 43 in Appendix G). After crossing the trail, it would then travel northeast, roughly parallel to the trail for about 400 feet, until it crosses the trail again at the ramp leading to the 44th Avenue West overcrossing. An existing set of power line poles alongside the trail would be relocated. The light rail guideway would alter the quality of the views from the trail, but would not affect the use of the trail for recreation or commuting purposes.

Scriber Creek Park

The Preferred Alternative would cross to the Lynnwood Transit Center about 1,000 feet southeast of Scriber Creek Park. Elevated tracks would be visible in the distance, but would be partly screened by vegetation and would be difficult to distinguish from I-5 and the existing HOV direct access ramps, which characterize the more distant views.

Under Alternative C1, an elevated portion of the light rail route would pass above the Scriber Creek Park's entrance road and parking lot. Support columns would be located within the park property, and would directly affect approximately 0.42 acre of the park. The elevated guideway would be a prominent feature of the parking area, crossing directly overhead and changing the experience of the parking lot, which is currently buffered from the surrounding street and neighborhoods by established vegetation. The light rail facility would be visible from the short nature trail and picnic areas in the park but would not be as prominent as it would be from the parking area, and would not restrict recreational activities inside the park. While mitigation or other design measures could reduce impacts, Alternative C1 would still modify the character of the park by introducing larger-scale transportation infrastructure within the park. Public comments on the Draft EIS consistently described the natural setting of the park as a key part of its character. Figure 4.17-6 shows the area within the park anticipated to be used for the project right-of-way. Also, see Viewpoints 43 and 44 in Appendix G.

Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_Parks\Fig4.17-5_LL_FEIS_Park_Detail_ScriberCreek.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit, Bing Aerial)

Potentially Affected Park and Recreation Facility
Potential Impact
Potentially Impacted Taxlot

Figure 4.17-6
Scriber Creek Potential Impacts

Under Alternative C2, an elevated guideway would pass over a wetland area adjacent to and south of the park and be visible from the segment of Scriber Creek Trail located in this area of the park, as shown in Figure 4.17-4 and Viewpoints 41 and 42 in Appendix G. Although the park would not experience direct property impacts, the light rail would be a prominent part of the view from the trail and would change the experience of this area of the park, which is focused on the natural wetland area. Enjoyment of some activities in the park, including wildlife watching and enjoyment of the natural environment of the adjacent wetland, could be diminished by the proximity of the elevated structure.

The project includes noise walls to mitigate noise impacts at nearby residences, which would also minimize noise increases in the park. Support columns, the elevated guideway, and the presence of passing trains would change the natural character of the wetland view from the park. Without mitigation, Alternative C2 would reduce the natural character of the park setting and user experience.

Alternative C3 would be about 1,100 feet southeast of the park. While the elevated light rail guideway would be visible from a park trail at the southeast edge of the park, it would be a distant view, similar to that of the Preferred Alternative.

Scriber Creek Trail

Each Segment C alternative includes an overcrossing of the Scriber Creek Trail, and effects would be similar to those described above for the Interurban Trail. The overcrossing would change the visual character of the trail in that location but not affect trail use.

With the Preferred Alternative, the elevated light rail guideway would cross over the Scriber Creek Trail on the southwest side of the park-and-ride. Views of the wetlands associated with Scriber Creek would not be obstructed.

Under Alternative C1, the light rail would cross the trail inside Scriber Creek Park where the trail is adjacent to the park's parking area, near 52nd Avenue West.

Under Alternative C2, the light rail would cross the trail as it follows the edge of the Lynnwood Park-and-Ride near 48th Avenue West. The elevated guideway would be adjacent to the trail for approximately 500 feet, including the portion of the trail on the southern boundary of Scriber Creek Park and its extension to 48th Avenue West. This section of the trail is alongside the Scriber Creek wetland.

Under Alternative C3, the location and character of the overcrossing would be farther south, closer to the HOV ramp to I-5, but its effects would be similar to that of the Preferred Alternative.

4.17.3 Construction Impacts

For parks and trails near construction activities, access could be affected by detours and street or lane closures, and by increased congestion caused by construction traffic. Visual impacts, light, glare, dust, and noise could also affect users in some of the parks and trails, although most of these impacts would affect small portions of the parks closest to the light rail facilities being constructed. Visual and noise impacts would be temporary and would not inhibit park use. The parks and recreational facilities with direct physical impacts from one or more of the alternatives (Ridgecrest Park, Shoreline Park and Stadium, and Scriber Creek Park) could have areas that are temporarily affected to allow construction access, staging, utility relocation, or other construction activities.

All alternatives would require temporary trail closures and detours. In Segment A, the Preferred Alternative and other alternatives would close a bridge that is related to the planned Interurban Trail to Burke-Gilman Trail connector, because WSDOT's existing pedestrian bridge crossing I-5 at NE 195th Street would be rebuilt. A detour to either NE 185th Street or NE 205th Street/Ballinger Way NE would be available during construction.

All alternatives would cross the Interurban Trail near the Lynnwood Transit Center. Work above or adjacent to the trail would involve short-term delays or longer, but temporary closures and detours would occur depending on the work involved.

The Preferred Alternative and Alternatives C2 and C3 would temporarily close a segment of the Scriber Creek Trail adjacent to the park-and-ride during construction, but detours would maintain connections to Scriber Creek Park and the Interurban Trail.

Tables 4.17-3 through 4.17-5 summarize the construction impacts for all light rail alternatives by segment.

4.17.4 Indirect and Secondary Impacts

The Lynnwood Link Extension could improve access to parks and recreational facilities. The facilities may experience increased congestion and unplanned parking, requiring cities in the affected areas to restrict parking to park and recreational users.

In Segment A, the Shoreline Park and Shoreline Stadium could be affected by unauthorized transit patron parking as well as increased roadway congestion under all alternatives. Although there are no current plans for redevelopment of the complex, which is school district property, the light rail station could increase the potential for redevelopment.

Table 4.17-3. Potential Construction Impacts, Segment A

Park Facility	Preferred Alternative	Alternative A1	Alternative A3	Alternative A5	Alternative A7	Alternative A10	Alternative A11
Jackson Park Golf Course	Noise and minor visual impacts from construction of facility along 5th Avenue NE, and from construction of NE 145th Street Station.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.
Ridgecrest Park	Light rail facility and a relocated underground sewer line would be located on western part of the park, replacing existing buffer; park would have noise and visual impacts during construction.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.
Shoreline Park and Stadium	Noise and visual impacts during construction. Parking restrictions to stadium. Short-term closures of parts of the track and field areas. An option with a parking garage would temporarily close the parking area, but alternative parking locations would be available.	Same as the Preferred Alternative.	No impacts.	No impacts.	No impacts.	No impacts.	No impacts.
Interurban Trail to Burke-Gilman Trail Connector (planned)	Temporary closure for replacement of NE 195th Street pedestrian bridge.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.

Table 4.17-4. Potential Construction Impacts, Segment B

Park Facility	Preferred Alternative	Alternative B1	Alternative B2A	Alternative B4
North City Park	Noise and screened views of construction activities.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.
Veterans Memorial Park	Alteration of transit center sidewalks connecting to a park trail, but the park would remain accessible.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	No impacts.

Table 4.17-5. Potential Construction Impacts, Segment C

Park Facility	Preferred Alternative	Alternative C1	Alternative C2	Alternative C3
Interurban Trail	Short-term closures with detours during construction.	Same as the Preferred Alternative.	Same as the Preferred Alternative.	Same as the Preferred Alternative.
Scriber Creek Park	Minor visual impacts on the wetland boardwalk area of the park.	Short-term partial closure of the park during construction. Visual and noise impacts.	Noise and visual impacts during construction activities.	Same as the Preferred Alternative.
Scriber Creek Trail	Detour around temporary closure of the section of the trail on sidewalks connecting Scriber Creek Park and the Interurban Trail.	Detour during a short-term closure of trail entrance to Scriber Creek Park.	Short-term closure during construction of elevated guideway.	Same as the Preferred Alternative.

At Northacres Park, light rail alternatives that include a light rail station at NE 130th Street (Alternatives A5, A7, A10, and A11) would have potential indirect effects on the park. The light rail station would improve access to the park, which could increase use of park facilities. The park may also be used as a pedestrian or bicycle route for neighborhood residents using the light rail facility. Its parking area could also be used for parking by light rail users, reducing the capacity for park users.

For Twin Ponds Park, the light rail alternatives that include a light rail station at NE 155th Street (Alternatives A5 and A7) would have effects similar to those described above for Northacres Park.

In Segment B, Veterans Memorial Park could benefit from higher levels of use due to increased development in the areas targeted by the City of Mountlake Terrace for transit-oriented development. Apart from the Lynnwood Link Extension, an improved pedestrian connection could be developed by others between the Mountlake Terrace Town Center and the station. This could increase the number of users in the park. The Veterans Memorial Park trail also could experience increased use from commuters accessing the station area. This effect would occur with all Segment B alternatives.

In Segment C, Scriber Creek Park and Scriber Creek Trail could have increased use due to high levels of development in the station area. Several properties adjacent to the park and trail could be developed to higher levels. The Interurban Trail also could experience increased use from commuters accessing the station area.

4.17.5 Cumulative Impacts

The proposed OMSF, if sited in Lynnwood, would be adjacent to the southwest corner of Scriber Creek Park and the Scriber Creek Trail. While the light rail facility would not occupy park property, it would be adjacent to a corner of Scriber Creek Park and would require lead track guideways over the Interurban Trail to connect to the light rail alternatives. Part of the parcels that currently buffer the park and trails could also be developed. The light rail facility could be visible from some locations in the park but would be clearly visible from portions of the Interurban Trail. The Edmonds School District has a master plan for a support services building and bus storage facility on its property. The Lynnwood site alternative for the OMSF would overlap with the Edmonds School District property. Either project or potentially both projects would cumulatively increase the view impacts experienced by trail users, but overall impacts would remain minor.

No major additional changes to parks or recreational resources by other projects or actions are anticipated. The No Build Alternative and the light rail alternatives assume continued population and employment growth through 2040, which would likely increase the use of parks and recreational facilities throughout the project area.

4.17.6 Potential Mitigation Measures

For all of the affected resources, Sound Transit would work closely with the owning or managing jurisdictions to design and implement measures and construction plans that minimize potential long-term and construction effects. Many of the mitigation measures identified in this EIS for other resources (visual and aesthetics, air quality, water quality, neighborhoods, noise and vibration, and transportation) would also reduce the potential effects on affected resources and their users. Similarly, where park property would be needed for the proposed project, Sound Transit would work with the agency that has jurisdiction to provide compensation, consistent with the procedures outlined in Section 4.1, Acquisitions, Displacements, and Relocations. Potential mitigation measures for the affected resources include:

- **Northacres Park** (Preferred Alternative 130th Street Station Option; Alternatives A5, A7, A10, and A11). Signage would limit potential parking impacts due to unauthorized parking by transit patrons.
- **Twin Ponds Park** (Alternatives A5 and A7). Signage would limit potential parking impacts due to unauthorized parking by transit patrons.
- **Ridgecrest Park** (all alternatives). Sound Transit would coordinate with the City of Shoreline to provide landscaping and restoration of the affected area, and place a barrier between the light rail facility and the park to function like the existing berm in buffering I-5 noise and views of I-5. The project would also design and rebuild 1st Avenue NE from NE 159th Street to NE 161st Street in coordination with the City, and transfer replacement property at the south end of the park, or other property as agreed to with the City, consistent with the requirements of Forward Thrust. The replacement land would be developed to a level comparable to the displaced park area, and the design process would include outreach in the adjacent neighborhood to inform roadway and park design, in coordination with the City.
- **Shoreline Park and Stadium** (Preferred Alternative and Alternative A1). Sound Transit would restore affected areas after construction, and would coordinate access improvements and construction activities with the Shoreline School District.

  For the Preferred Alternative NE 185th Street Station Option, Sound Transit would also enter into an agreement with the School District to develop the garage and establish a shared-use agreement for using the garage for stadium events or casual recreation.
- **Trails**. For all temporary trail closures or reroutes associated with construction, Sound Transit would coordinate with appropriate local jurisdictions to develop detours, and to provide public information and

detour routes with signage during construction to allow for continued connections.

- **Scriber Creek Park**. For Alternative C1, Sound Transit would need to address Section 4(f) requirements that have not yet been satisfied (see Section 4.18, Section 4(f) and Section 6(f) Evaluation). Sound Transit would coordinate with the City of Lynnwood and Snohomish County to develop landscaping and site improvements to offset the impact of guideway encroachments; options could also include expanding the park or improving trail connections. Any necessary property acquisition would be coordinated with both the City and the County, in accordance with original agreements funding the park. For Alternative C2, Sound Transit would either provide landscaping and trail improvements to reduce the visual impacts and related changes to the park's setting or it would implement other mitigation as agreed to with the City of Lynnwood.

For mitigation for construction impacts that do not involve physical changes to a park or recreational facility, Sound Transit would coordinate with appropriate jurisdictions and facility operators to minimize impacts. Mitigation for construction period impacts would include outreach to the public to provide information on temporary closures or detours; on-site signage describing the duration and type of temporary impacts; detour signage; temporary ADA improvements (for example, temporary curb ramps for detour routes that do not currently include curb ramps for existing sidewalks); and similar strategies to ensure the continued use and enjoyment of affected park facilities.

4.18 Section 4(f) and Section 6(f) Evaluation

This section addresses a federal law known as Section 4(f), which protects parks, recreation areas, historic and cultural resources, and wildlife and waterfowl refuges, and another law known as Section 6(f), which restricts the conversion of lands previously purchased with money from the Land and Water Conservation Fund (LWCF).

4.18.1 Section 4(f)

The U.S. Department of Transportation Act of 1966, Section 4(f), generally prohibits U.S. Department of Transportation (USDOT) agencies (including the FTA) from approving projects that would use land from:

> …a significant publicly-owned park, recreation area or wildlife and waterfowl refuge or any significant historic site, unless there is no feasible and prudent alternative to the use of land from the property and the action includes all possible planning to minimize harm to the property resulting from the use.

A *use* is generally defined as a transportation activity that permanently or temporarily acquires land from a Section 4(f) property, or that substantially impairs the important activities, features, or attributes that qualify the property as a Section 4(f) resource.

Section 4(f) applies to significant publicly owned parks and recreation areas that are open to the public; publicly owned wildlife and waterfowl refuges; and historic sites of national, state, or local significance. The USDOT regulations for Section 4(f) define historic properties as those listed in or eligible for the NRHP.

The Section 4(f) study area for this project is based on the APE used for cultural, archaeological, and historic resources (see Section 4.16, Cultural, Archaeological, and Historic Resources) and the parks and recreational resources analysis (see Section 4.17, Parks and Recreational Resources). This evaluation also takes into account the areas of effect and analyses from other environmental investigations, including acquisitions, displacements, and relocations; transportation; land use; noise and vibration; and visual and aesthetic resources.

4.18.2 "Uses" of Section 4(f) Resources

Under Section 4(f), a use can be permanent, temporary, or constructive.

Permanent use would acquire or incorporate all or part of a Section 4(f) property as part of the transportation facility.

Temporary use occurs when the project temporarily occupies any portion of the resource (typically during construction), and it substantially impairs the resources. A temporary occupancy can avoid being a Section 4(f) "use" if:

- The project would occupy the property less than the time needed for the construction of the project, and there will be no change in ownership;
- There are minimal changes to the Section 4(f) resource;
- There are no permanent adverse physical changes or interference with protected activities, features, or attributes of the resource;
- The land is restored to the same or better condition; and
- The federal, state, or local officials with jurisdiction over the resource and the authority over the land agree in writing that the use is not adverse.

Constructive, or indirect, use can occur when the project is near the Section 4(f) resource and has effects that substantially impair the protected activities, features, or attributes of a property. For example, a park property that is primarily a scenic viewpoint could have a constructive use if a transportation project blocks its views.

Conditions for Approval of a Use for a Section 4(f) Property

The FTA can approve a transportation use of a Section 4(f) property only if:

- The use of the property meets the requirements for a regulatory exception established under Section 4(f). For instance, a temporary occupancy can be allowed if it meets the requirements described above.

or:

- The use will have a *de minimis* impact on the property.

or:

- There is no feasible and prudent *avoidance* alternative to using the property; and
- The program or project includes all possible planning to minimize harm to the property resulting from the use.

De minimis impacts cannot "adversely affect the activities, features, and attributes" of a Section 4(f) resource. A *de minimis* impact finding can take into account any mitigation or enhancement measures that would be implemented, including design measures to avoid or reduce impacts. Before FTA can make this finding, it must send a written notice to notify the official with jurisdiction over the resource, and there must be an opportunity for public notice and comment (the Draft EIS comment period served this purpose for the Lynnwood Link Extension).

For public parks or recreation properties, a *de minimis* impact finding requires written concurrence from the agency with jurisdiction over the property, such as a city or county parks department. For historic and archaeological sites, a *de minimis* impact is allowed if FTA has determined "no adverse effect" in compliance with Section 106 of the NHPA (see Section 4.16). Prior to making a *de minimis* finding, FTA must send a written notice to the SHPO. If the SHPO concurs or does not object, FTA may proceed with a *de minimis* finding.

When FTA has made a *de minimis* determination, the project is not required to analyze avoidance alternatives for that Section 4(f) property.

Avoidance Alternatives and Least Harm Analysis

When a project's Section 4(f) impact would be greater than *de minimis*, FTA must consider whether there are feasible and prudent alternatives that would avoid the impact. As defined in the Section 4(f) regulation, an alternative is feasible if it can be built as a matter of sound engineering judgment. An alternative is prudent if:

- It meets the project purpose and need and does not compromise the project to a degree that makes it unreasonable to proceed in light of its stated purpose and need; and
- It does not cause extraordinary operational or safety problems; and

- It causes no other unique problems or severe economic or environmental impacts; and
- It would not cause extraordinary community disruption; and
- It does not have construction costs of an extraordinary magnitude; and
- There are no other factors that collectively have adverse impacts that present unique problems or reach extraordinary magnitudes.

If FTA finds that an alternative is not feasible and prudent, that alternative is removed from consideration as a way to avoid a Section 4(f) use. If there are no prudent and feasible alternatives that can avoid all Section 4(f) resources, then FTA must determine which alternative results in the least overall harm, after considering the following factors:

i. The ability to mitigate adverse impacts to each Section 4(f) property (including mitigation measures that result in benefits to the property);
ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features of the Section 4(f) property;
iii. The relative significance of each Section 4(f) property;
iv. The views of the official(s) with jurisdiction over each Section 4(f) property;
v. The degree to which each alternative meets the purpose and need for the project;
vi. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
vii. Substantial differences in costs among the alternatives.

4.18.3 Section 6(f) Resources

The LWCF Act provides funds for acquiring or developing parks and recreation areas. Section 6(f) of the LWCF prohibits conversion of LWCF properties to a non-recreational purpose, without the approval of the U.S. Department of the Interior's National Park Service.

Sound Transit reviewed the records of grants under the LWCF, which are maintained by the Washington State Recreation and Conservation Office. There are two properties in the study area developed with LWCF funds: Twin Ponds Park in Shoreline and Jack Long Park in Mountlake Terrace. Neither property would be directly converted to a non-recreational use; the potential for indirect impacts (such as the possibility of transit users using the parks for unauthorized parking) is discussed in Section 4.18.5.

4.18.4 Section 4(f) Resources

Sound Transit's Section 4(f) analysis considered potential impacts on significant publicly owned parks, recreation areas, and NRHP-eligible historic properties in a

study area that extended 200 feet from any potential project feature. Sound Transit also reviewed existing public agency records and plans, performed field inspections, and coordinated with the agencies that own or have jurisdiction over the resources. The Section 4(f) analysis reflects Sound Transit's and FTA's research and coordination for Section 106 of the NHPA, as described in Section 4.16, and the parks and recreational analysis discussed in Section 4.17. These efforts helped Sound Transit and FTA identify the important features, qualities, and characteristics of potential Section 4(f) resources.

Sound Transit did not find any public wildlife and waterfowl refuges in the study area. Historic properties and parks and recreation properties were the only Section 4(f) resources found within the study area. The parks, recreation, or NRHP-eligible historic resources within the study area that qualify as Section 4(f) resources are shown on Figures 4.18-1a and 4.18-1b.

Historic Resources

Sound Transit conducted a historic resources field survey considering every property within 200 feet of any of the alternatives. The survey documented every property built on or before 1970, although the standard age threshold for NRHP eligibility is 50 years. Over 600 properties were surveyed. Four historic resources have been determined eligible for listing in the NRHP.

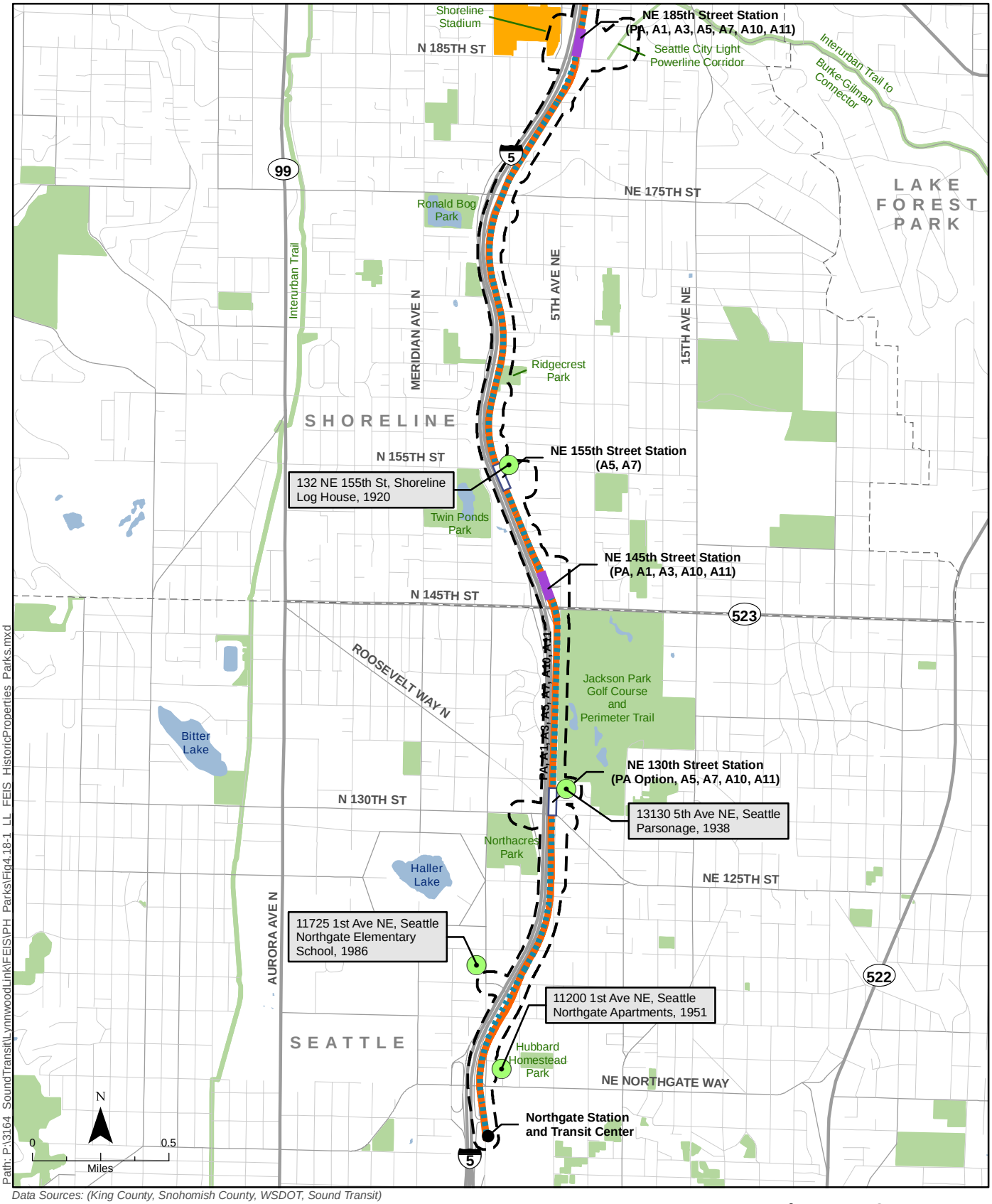
Table 4.18-1 lists the historic resources in the study area.

Table 4.18-1. Historic Properties

Address	Description	Construction Date	Historic Status	Section 4(f) Resource?
11200 1st Avenue NE, Seattle (Segment A)	Northgate Plaza Apartments	1951	Eligible NRHP Criterion C	Yes
11725 1st Avenue NE, Seattle (Segment A)	Northgate Elementary School	1956	Eligible NRHP Criterion C	Yes
132 NE 155th Street, Shoreline (Segment A)	Log House	1920	Eligible NRHP Criterion C	Yes
13130 5th Avenue NE, Seattle (Segment A)	Parsonage	c. 1920	Eligible NRHP Criterion C	Yes

Field surveys, records reviews, and contacts with tribes in the study area and the SHPO revealed no significant archaeological resources or traditional cultural properties in the study area.

For more detail on individual historic resources in the study area and the project's Section 106 research and consultation efforts, see Section 4.16 and the *Cultural, Archaeological, and Historic Resources Technical Report.*

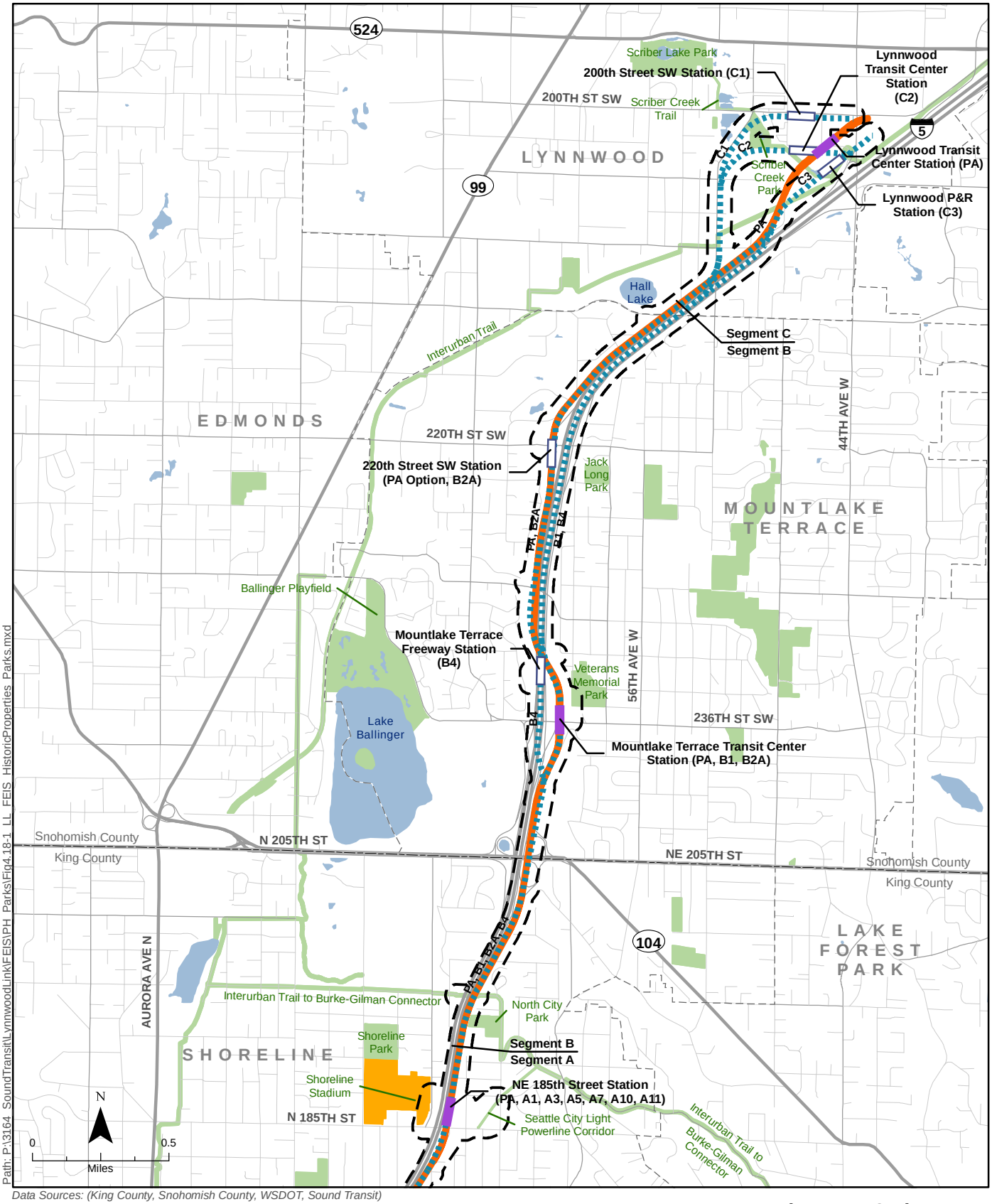


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Trail
- Study Area
- Historic Property Within Study Area
- Public Recreation Facility
- Park

Figure 4.18-1a
Section 4(f) Resources in Segment A Study Area

Lynnwood Link Extension



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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Trail
- Study Area
- Historic Property Within Study Area
- Public Recreation Facility
- Park

Figure 4.18-1b
Section 4(f) Resources in Segments B and C Study Area

Lynnwood Link Extension

Parks and Recreational Resources

Table 4.18-2 lists parks and recreational resources in the study area, and identifies the resources qualifying as Section 4(f) or Section 6(f) properties. Section 4.17 has more detail about these resources.

Table 4.18-2. Parks and Recreational Properties Reviewed for Section 4(f) and Section 6(f) Eligibility

Park Facility and Owner or Jurisdiction	Size	Recreational Uses	Section 4(f) Resource?	Section 6(f) Resource?
Segment A: Seattle to Shoreline				
Jackson Park Golf Course, City of Seattle	161 acres	Golf, walking trail	Yes	No
Northacres Park, City of Seattle	21 acres	Baseball, softball, soccer, nature trails, off-leash dog area, children's playground	Yes	No
Twin Ponds Park, City of Shoreline	22 acres	Soccer, tennis, nature viewing, trails, playground	Yes	Yes
Ridgecrest Park, City of Shoreline	3.8 acres	Baseball diamond, handball, open grass	Yes	No
Shoreline Stadium, Shoreline Public Schools	40 acres	Football/soccer/track and field stadium with adjacent parking area	Yes	No
Segment B: Shoreline to Mountlake Terrace				
Interurban Connector Trail, City of Shoreline	(planned)	Planned signed bicycle and trail route connecting Interurban and Burke-Gilman trails, crossing I-5	No. Planned trail on city streets and WSDOT-owned facilities is considered a transportation facility.	No.
North City Park, City of Shoreline	4 acres	Forest trails, plus adjacent school has open public playgrounds and fields	Yes	No
Veterans Memorial Park, City of Mountlake Terrace	10 acres	Forested walking trails, gazebo, and picnicking	Yes	No
Jack Long Park, City of Mountlake Terrace	3 acres	Nature trails, picnicking, horseshoes	Yes	Yes
Segment C: Mountlake Terrace to Lynnwood				
Interurban Trail, Snohomish County PUD, City of Lynnwood	15 miles	Walking, running, bicycling, skating	Yes	No
Scriber Creek Trail, City of Lynnwood	1.5 miles	Walking, running, nature viewing	Yes	No
Scriber Creek Park, City of Lynnwood	4.7 acres	Nature park with parking, picnicking area, short loop nature trail in the north section of the park and Scriber Creek Trail section to the south	Yes	No

4.18.5 Potential Impacts on Section 4(f) and Section 6(f) Resources

Sound Transit reviewed all locations where Section 4(f) or Section 6(f) properties could be affected by light rail alternatives. Table 4.18-3 summarizes the potential impacts. Unaffected properties in the study area are not listed. For Section 6(f) resources, Sound Transit's analysis concluded there would be no potential for a direct or indirect conversion of any part of Twin Ponds Park or Jack Long Park, satisfying Section 6(f) requirements.

The Draft EIS included a preliminary Section 4(f) evaluation, as well as a listing of potential *de minimis* findings FTA was considering. The public review period for the Draft EIS also served as a public notice and comment opportunity for *de minimis* findings for the alternatives studied in the Draft EIS.

For this Section 4(f) evaluation, Sound Transit and FTA have coordinated with the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood, as well as with the Snohomish County PUD and the Shoreline School District, which are the resource owners or managing jurisdictions for parks and recreational facilities in the project area. Through the Section 106 process, Sound Transit and FTA have also consulted with the SHPO and tribes on cultural and historic resources.

The Section 4(f) evaluation identifies potential uses of Section 4(f) resources, along with mitigation and avoidance measures. The evaluation considers public comments on the Draft EIS, and reflects Sound Transit and FTA coordination with the agencies with jurisdiction as they developed measures to minimize and mitigate impacts. The impacts include acquisition and conversion of properties to a transportation use, as well as proximity impacts that could affect the property (which federal regulations refer to as a "constructive use"). Where FTA has found no Section 4(f) use, it means there are no impacts that would adversely affect the features, attributes, or activities qualifying the properties as Section 4(f) resources.

Table 4.18-3. Section 4(f) Impacts

Section 4(f) Resource	Alternatives	Section 4(f) Use Determination
PARK AND RECREATION PROPERTIES		
Jackson Park Golf Course	Preferred Alternative and all other Segment A alternatives	No Section 4(f) use.
Ridgecrest Park, City of Shoreline	Preferred Alternative and all other Segment A alternatives	*De minimis.* Light rail facility would be located on the west edge of the park, removing a berm and trees that provide an existing visual buffer. The park would experience property and visual impacts but current park functions and activities would not be substantially changed. In addition to restoring areas affected by construction, including providing a barrier to replace an existing berm, Sound Transit would

Table 4.18-3. Section 4(f) Impacts

Section 4(f) Resource	Alternatives	Section 4(f) Use Determination
		provide replacement property to the south of the park to compensate for parkland converted to transportation use, with features and design details to be developed during final design with the City of Shoreline. Shoreline has signed a letter of concurrence.
Northacres Park, City of Seattle	Preferred Alternative with NE 130th Street Option; Alternatives A5, A7, A10, and A11	No Section 4(f) use. Unauthorized parking by transit users would be prohibited.
Twin Ponds Park, City of Shoreline	Alternatives A5, A7, and A11	No Section 4(f) use. Unauthorized parking by transit users would be prohibited.
Shoreline Stadium, Shoreline School District	Preferred Alternative, Alternative A1	*De minimis*. With the Preferred Alternative and Alternative A1, the garage between 5th Avenue NE and I-5 would require a minor right-of-way acquisition for a roadway realignment and new retaining wall, affecting part of the larger parcel containing the stadium, and affecting several parking spaces for the stadium. Sound Transit would restore affected areas and make facility improvements defined in coordination with the Shoreline School District during final design. The District has signed a letter of concurrence.
	Preferred Alternative with Shoreline Stadium Parking Garage Option	Potential *de minimis* only if Shoreline School District concurs. With this option for a shared-use garage on the stadium parking lot, Sound Transit would build a garage on District property, with spaces to be available for stadium users, and replacement parking supplied off site during construction. Sound Transit would provide landscaping, access improvements, restoration of other affected areas, and coordinated planning with the District during final design and construction. FTA has determined that the impact would qualify as *de minimis* if the District concurs. However, the Shoreline School District has not yet concurred, and the option could not be selected for further development without future written agreement by the District.
North City Park, City of Shoreline	Preferred Alternative and all other Segment B alternatives	No Section 4(f) use.
Veterans Memorial Park, Mountlake Terrace	Segment B Preferred Alternative, B1 and B2A	No Section 4(f) use. Alternative B1 has an option for a parking garage on the existing surface lot adjacent to the park. There are no direct impacts to the park, and potential indirect impacts would not cause a constructive use of park property.

Table 4.18-3. Section 4(f) Impacts

Section 4(f) Resource	Alternatives	Section 4(f) Use Determination
Jack Long Park, City of Mountlake Terrace	Alternatives B1 and B4	No Section 4(f) use.
Interurban Trail, Snohomish County PUD, City of Lynnwood	Preferred Alternative	No Section 4(f) use. No direct or constructive long-term 4(f) uses. Temporary construction closures meet the criteria for temporary occupancy. The City of Lynnwood has agreed in writing that the project meets Section 4(f) exceptions for temporary occupancy during construction. Detour routes to be provided during short-term construction closures.
	All other Segment C alternatives	No Section 4(f) use, presuming written agreement with the City of Lynnwood. (Sound Transit requested written agreement specifically for the Preferred Alternative.)
Scriber Creek Park, City of Lynnwood	Preferred Alternative	No Section 4(f) use.
	Alternative C1	Section 4(f) use. The alternative would occupy part of the park with columns and would remove trees and vegetation.
	Alternative C2	No Section 4(f) use. There is no direct use, and mitigation would reduce visual and setting impacts to levels that would not impair the park's essential functions, attributes, and activities.
	Alternative C3	No Section 4(f) use.
Scriber Creek Trail, City of Lynnwood	Preferred Alternative	No Section 4(f) use. The City of Lynnwood has agreed in writing that the project meets Section 4(f) exceptions for temporary occupancy during construction. Detour routes would be provided during short-term construction closures.
	Alternatives C2 and C3	No Section 4(f) use, presuming written agreement with the City of Lynnwood. (Sound Transit requested written agreement specifically for the Preferred Alternative.)
HISTORIC PROPERTIES		
Northgate Plaza Apartments	All Segment A alternatives	No Section 4(f) use.
Log House	Alternatives A5 and A7	No Section 4(f) use.
Northgate Elementary School	Alternatives A1, A5, and A10	No Section 4(f) use.
Parsonage	All Segment A alternatives	No Section 4(f) use.

Segment A

Northgate Plaza Apartments (Historic)

All Segment A Alternatives, including the Preferred Alternative, would place the light rail guideway between the Northgate Plaza Apartments and I-5, which would alter some views to and from the apartments. No alternative would physically alter the building or the property or adversely affect the property's historic qualities. While the guideway would be visible adjacent to I-5, it would not impair the building's historic qualities, and would not rise to the level of a constructive use.

Log House (Historic)

Alternatives A5 and A7 include a NE 155th Street Station several properties away, and a park-and-ride structure would be across an arterial from the historic log house. There would be no physical impacts, and the development of nearby areas for light rail would not substantially impair its historic characteristics, which do not depend on its setting.

Northgate Elementary School (Historic)

While the Preferred Alternative would have no effect, several at-grade/elevated alternatives (A1, A5, and A10) would reconstruct the NE 117th Street bridge over I-5, which is adjacent to the Northgate Elementary School. The reconstruction of the bridge would not alter the historic characteristics of the school building. There would be no Section 4(f) use of the property by any alternative.

Parsonage (Historic)

None of the alternatives would require any land from the parsonage building. Alternatives A1, A5, and A10 would have no effects on the parsonage, and the elevated alternatives (A3, A7, and A11) would install noise walls along the guideway to avoid noise impacts. None of the alternatives would alter the historic characteristics of the parsonage, and there would be no Section 4(f) use.

Jackson Park Golf Course

None of the light rail alternatives would acquire any part of the Jackson Park Golf Course property, and no other impacts would rise to the level of a Section 4(f) use. All alternatives would be visible from the golf course, and the elevated alternatives (A3, A5, A7, and A11) would have visual impacts, as noted in Section 4.5, Visual and Aesthetic Resources. The change in views would not impair the ongoing recreational activities, features, and attributes of the golf course.

Ridgecrest Park

All alternatives would acquire about 0.30 acre of Ridgecrest Park property along its west side, adjacent to a parking area and a baseball diamond. They would cut into a berm and remove mature cottonwoods that buffer the park from I-5, and they would

also alter the parking area and southern entrance during construction. Viewpoints 19 and 20 in Appendix G, Visual Simulations and Illustrations, show a visual simulation of this potential change to the park.

The affected area is at the edge of the park and does not alter the recreational activities or features of the park. This is an active-use, recreational park that is not considered noise-sensitive, and it would not have noise impacts under FTA criteria even if it were a noise-sensitive property. For the Preferred Alternative, Sound Transit would replace the acquired park property with additional property to the south of the park, which it would develop for the City as parkland in conjunction with a 1st Avenue NE realignment. Design details and features for the replacement park property would be consistent with features of property acquired for the project, and defined in coordination with the City and public outreach to adjacent neighborhoods during final design. Other measures to restore and enhance park features include re-landscaping affected areas, and placing a wall or barrier along the guideway's eastern side to provide a safety and visual buffer between the park and the light rail facility and I-5. The barrier, which could also be combined with residential noise walls required for the project, would also help shield the park from I-5 noise. The City of Shoreline concurs with the *de minimis* finding (see Appendix D, Section 4(f)/Section 6(f) Correspondence).

Shoreline Stadium

The Preferred Alternative and Alternative A1 would acquire about 0.18 acre of a parcel encompassing the stadium, a parking area, and adjacent facilities. It would be needed for a realignment of 5th Avenue NE (see Figure 4.18-1) to accommodate a parking garage on the west side of I-5 for a station at NE 185th Street. All the other Segment A alternatives place both the parking and the station on the east side of I-5, avoiding the Section 4(f) use. Also, an option for the Preferred Alternative would develop a shared use garage on the existing surface parking area south of the stadium.

For the Preferred Alternative and Alternative A1, the acquisition of land needed for the roadway realignment and a retaining wall would affect the edge of a parking lot serving the stadium and also a corner of the area adjacent to the track. Several parking spaces could be displaced, and some buffering landscape elements would be removed. An edge of a spur to the track also would be affected. In consultation with the Shoreline School District, Sound Transit has developed measures to offset these impacts, which include providing compensation for the acquired property, replacing parking spaces or redesigning the parking lot to replace lost parking, and coordinating final design and construction with the District to minimize effects on track and field activities or operations.

Considering the limited amount of land involved, as well as Sound Transit's mitigation measures and other commitments, FTA has determined the Preferred Alternative and Alternative A1 would have a *de minimis* impact. The Shoreline School District has concurred (see Appendix D).

For the optional garage on the stadium's surface parking lot, there would be no change to the stadium itself or the track and field facility. The new park-and-ride garage would be available to stadium users, subject to the terms of an agreement that Sound Transit and the School District would develop in exchange for the right to place the park-and-ride garage on District property. Sound Transit would develop design and construction details for the garage in coordination with the District. During construction of the garage, the current surface parking lot with about 72 spaces would be temporarily closed, but the stadium would remain open. For major events at the stadium during the construction period, Sound Transit would provide replacement parking or work with the District to direct users to existing spaces within the Conference Center complex. Given the lack of impacts to the stadium facility itself, and with the commitments to maintain access and adequate parking supply during construction, FTA has preliminarily determined the impact would qualify as *de minimis* if the District concurs, but for the option to be advanced, the District must agree in writing.

Northacres Park

Alternatives A5, A7, A10, and A11 would develop a NE 130th Street Station that would modify a street adjacent to Northacres Park. There would be no Section 4(f) use. Any potential for unauthorized use of the park's parking facilities would be managed by parking restrictions.

Twin Ponds Park

Alternatives A5, A7, and A11 would develop a NE 155th Street Station on the other side of the freeway. Any potential for unauthorized use of the park's parking facilities would be managed by parking restrictions. There would be no impacts on Twin Ponds Park and no Section 4(f) use.

Segment B

North City Park

All alternatives would remove part of a forested area on WSDOT land adjacent to North City Park, but no parkland would be acquired. Trees on the park property would not be disturbed and a visual buffer between the park and I-5 would be maintained. There would be no Section 4(f) use.

Veterans Memorial Park

Under the Preferred Alternative and Alternatives B1 and B2A, Sound Transit would develop a light rail station west of Veterans Memorial Park and within the current Mountlake Terrace Transit Center. The existing parking and traffic circulation at the transit center, immediately adjacent to the park, would be reconfigured. Alternative B1 has an option for a garage on the existing surface lot. No property within the park would be required by any of the alternatives. Construction activities would temporarily increase noise levels and visually alter areas adjacent to the park's western boundaries, but would not impair the important features and attributes of the park. Construction could also temporarily alter the transit center sidewalks connecting to a trail in the park, but the public would have several other ways to access the park. There would be no Section 4(f) use.

Jack Long Park

Alternatives B1 and B4 would be in the median of I-5, and the park is east of the freeway. The Preferred Alternative and Alternative B2A are to the west of I-5. There would be no effects and no Section 4(f) use.

Segment C

Interurban Trail

In Segment C, an elevated guideway would pass directly over short sections of the Interurban Trail for all alternatives (Viewpoint 43 in Appendix G). This would change the visual setting for part of the trail, but would not directly affect the essential activities, features, and attributes of the regional trail. Although the elevated guideway would be visually prominent to trail users, the trail is already in a variable urban setting with nearby roads, industrial properties, the freeway and its ramps, and other large infrastructure. The elevated guideway would require air rights; however, no piers or other appurtenances would be located on Section 4(f) property. Aerial structures passing over a Section 4(f) property are not considered a direct use.

The location of the light rail facility near the trail raises the possibility of indirect impacts, which are discussed below, but these impacts are not substantial enough to cause a constructive use of the property. Short-term closures of the trail would be necessary during construction, and would need to meet the criteria for temporary occupancy. The temporary occupancy analysis for the alternatives is also described below.

For the Preferred Alternative, the elevated guideway would cross over the Interurban Trail in an area where the trail has an open field and wetland area on one side and large industrial properties (including the Edmonds School District property) on the other. The alternative would then continue across Scriber Creek and the wetland area to a station on the southeast corner of the Lynnwood Transit Center. Existing

power poles beside the trail would be relocated and the transmission lines would be raised to provide clearance for the elevated light rail line. The light rail facility near a part of the trail would not substantially impair the trail's character, given other transportation facility crossings along the trail, and the light rail facility would not alter or impair trail activities.

During construction of the Preferred Alternative, the trail would need to be closed for the short term. Sound Transit would coordinate with the City of Lynnwood to develop a detour and provide signage and notices to users. There would be no physical change to the trail facility, which would be reopened in the same condition; ownership of the underlying property would remain the same; and replacement landscaping would be provided where vegetated areas might need to be cleared for construction. With these measures in place, the short-term construction impacts of the Preferred Alternative would qualify for a Section 4(f) exception for temporary occupancy, and no Section 4(f) use would occur. The City of Lynnwood has provided written concurrence for a temporary occupancy finding for the Preferred Alternative (see Appendix D).

For Alternatives C1 and C2, the light rail guideway would cross above the Interurban Trail at 52nd Avenue West. Some vegetation where the trail currently crosses the street would be removed, and the elevated guideway would pass overhead. The guideway would create shading and alter views at the existing arterial crossing, but this would not affect the trail's active recreational and trail travel activities.

Under Alternative C3, the elevated guideway would cross over the Interurban Trail, with similar effects as the Preferred Alternative. Tail tracks would also cross over the trail near 44th Avenue West. The presence of light rail facilities near sections of the trail would not be a notable change in the trail's character, and would not impair its activities.

As with the Preferred Alternative, the other alternatives would qualify for a temporary occupancy exception by providing detours and restoring the trail to the same or better condition; therefore, activities during construction would not involve a Section 4(f) use.

FTA did not request concurrence on temporary occupancy from the City of Lynnwood for the other alternatives. Written concurrence to a temporary occupancy determination would be required prior to the selection of alternatives other than the Preferred Alternative.

Scriber Creek Park

Preferred Alternative. The Preferred Alternative does not involve a Section 4(f) use of Scriber Creek Park because it does not physically alter the park or otherwise affect the protected activities, attributes, or features that qualify the park as a Section 4(f) resource. The Preferred Alternative would be about 1,000 feet from the

southern edge of the park, and any views of the guideway would be distant and intermittent. Construction work (such as cranes) may be noticeable from some areas of the park, but public activities in the park could continue without impairment.

Alternative C1. Under Alternative C1, an elevated guideway would pass above the entrance road and parking lot to Scriber Creek Park before curving to cross over a corner of the park and a portion of the creek. An elevated guideway would cross over 0.42 acre of the park, but a portion of the park property would be acquired for the structures that support the guideway (see Figure 4.17-4 in Section 4.17 for a diagram, and Viewpoints 38 and 39 in Appendix G). In addition to vegetation clearing that would include removing mature trees, the elevated guideway would affect views, light, and shade for part of the park. These impacts are described in more detail in Section 4.17.

Construction activities would also require a short-term closure of a portion of Scriber Creek Park. This would include all or part of the parking area and potentially the main entrance, but the trail entrance or an alternative entrance would be maintained to allow the park to remain open for normal public use.

The City of Lynnwood and Sound Transit have discussed mitigation measures to reduce and offset long-term and short-term impacts that Alternative C1 would have on the park. The measures include providing additional landscaping after construction, restoring affected natural areas to minimize impacts on the park's natural setting, and implementing potential enhancements such as trail improvements. However, following public comments on the Draft EIS, the City of Lynnwood has stated that the impacts would be adverse, and the City does not agree to a *de minimis* finding. Therefore, FTA has determined that a Section 4(f) use would occur with Alternative C1, and other prudent and feasible alternatives to avoid the use must be considered. Unless Alternative C1 were either modified to avoid the park property or to reduce impacts to a *de minimis* level (any occupation of the park requires agreement by the City of Lynnwood), FTA cannot approve a project featuring this alternative. The other Segment C alternatives would be feasible and prudent avoidance alternatives available to the Sound Transit Board.

Alternative C2. Under Alternative C2, no parkland would be acquired. The elevated guideway would pass over a non-park area adjacent to and south of Scriber Creek Park near the park's nature trail, which also forms part of the Scriber Creek Trail (see Appendix G, Viewpoints 41 and 42, for visual simulations). Section 4.17 describes the impacts on the park in more detail; impacts would include visual impacts and construction-related visual, noise, and dust impacts to park users.

The City of Lynnwood and Sound Transit have considered mitigation measures to help offset these impacts. Restoring cleared areas with natural plantings would maintain and enhance the park's natural setting. Landscaping and other improvements to other areas of the park would minimize impacts to park users. Other mitigation options include creating additional trail, park, or wetland natural improvements on other nearby properties that would be acquired for the light rail project. Alternative C2 would also require wetland mitigation, which would present additional opportunities to restore the wetlands in conjunction with measures to restore and enhance the park's natural setting. With such mitigation measures in place to help maintain the natural characteristics of the park and its boardwalk, FTA anticipates no constructive use of the park, as defined for Section 4(f).

No other impacts would impair the park to the level rising to a constructive use. A high level of ambient noise already exists at the park due to the nearby freeway, roadways, and adjacent light industrial properties. The light rail guideway would have noise barriers along the guideway to avoid noise impacts to nearby residences, which would also minimize the change in noise levels within the park.

Alternative C3. Under Alternative C3, Scriber Creek Park would not have any direct property or vegetation impacts. The light rail facility may be visible from parts of the wetland boardwalk, but only from a distance, and the intermittent views of the guideway would not impair the park's setting or any other important features, activities, or attributes. Construction work may be noticeable from the park, but public activities in the park could continue without impairment. There would be no Section 4(f) use.

Scriber Creek Trail

All alternatives would cross over part of the Scriber Creek Trail, but no trail property would be permanently acquired.

With all four alternatives, the trail would continue to maintain its essential function of connecting parks to a regional trail, and there would be no permanent direct or constructive use of the trail. Sound Transit would coordinate with the City of Lynnwood to provide a detour during a temporary closure of the trail for construction. The trail would be reopened in the same or better condition than today and replacement landscaping would also be provided. With these measures in place, the short-term construction impacts qualify for a temporary occupancy

exception, and there would be no Section 4(f) use of the trail with any of the alternatives. The City of Lynnwood has agreed in writing to this exception for the Preferred Alternative (see Appendix D).

For the other alternatives, Sound Transit would apply the same measures as the Preferred Alternative, written concurrence with a temporary occupancy exception would still be needed before any other alternative would be implemented.

4.18.6 Conclusions and Section 4(f) Findings

Section 4(f) regulations do not allow FTA to approve an alternative with a Section 4(f) use if there are prudent and feasible avoidance alternatives, unless there is a *de minimis* finding.

Preferred Alternative

The Preferred Alternative would acquire a portion of Ridgecrest Park adjacent to the freeway. Given the minor impacts to the park and Sound Transit's mitigation commitments, and the results of coordination with the City of Shoreline, FTA has determined the impacts would be *de minimis*. The City of Shoreline has signed a letter of concurrence.

The Preferred Alternative, with the mitigation commitments Sound Transit has identified, would have *de minimis* impacts to Shoreline Stadium. The Shoreline School District has concurred in writing with the *de minimis* finding. An option for the Preferred Alternative to place a parking garage on an existing surface lot is also anticipated to have *de minimis* impacts, with the mitigation measures and related commitments to maintain adequate parking supply for stadium activities during construction. The Shoreline School District has not yet agreed to a *de minimis* finding. The option could not be selected for further development without written agreement by the District.

The Preferred Alternative would cross over the Interurban Trail and the Scriber Creek Trail. The project would require air rights only, would not convert land from the trails, and would not substantially impair important activities, features, or attributes of the trails. During construction, Sound Transit would provide signage, detour routes, and construction mitigation measures to address the impacts of a trail closure during construction. These commitments and the written concurrence from the City of Lynnwood meet the requirements for Section 4(f) temporary occupancy exceptions for the trails; neither trail would have a Section 4(f) use.

Appendix D provides the letters of concurrence by the City of Shoreline and the Shoreline School District on the *de minimis* findings, as well as the letter of agreement signed by the City of Lynnwood regarding the temporary occupancy exceptions for the project.

Other Light Rail Alternatives

All of the Segment A alternatives would require a portion of Ridgecrest Park adjacent to the freeway. Given the minor impacts to the park and Sound Transit's mitigation commitments described for the Preferred Alternative, they would also have *de minimis* impacts. For the Shoreline Stadium, Alternative A1 would have the same *de minimis* impacts as the Preferred Alternative.

Alternative C1 involves a Section 4(f) use of Scriber Creek Park. It could not be implemented as part of the project unless it were redesigned to avoid the use of the park or mitigate any park impact to *de minimis* levels. The Preferred Alternative and Alternatives C2 and C3 all avoid the park and any other Section 4(f) uses. These alternatives would be reasonable and feasible avoidance alternatives to the Section 4(f) use of Scriber Creek Park.

In Segment C, Alternatives C1, C2, and C3 cross over the Interurban Trail and the Scriber Creek Trail. As with the Preferred Alternative, they would require air rights only, and would not convert land from the trails, or permanently impair the important activities, characteristics, or features of the trail. For construction, Sound Transit would provide signage, detours, and related construction mitigation measures to address the impacts of a trail closure during construction. These commitments meet the requirements for Section 4(f) temporary occupancy exceptions, but written concurrence from the City of Lynnwood would be needed.

5 EVALUATION OF ALTERNATIVES

This chapter begins by evaluating how well the Lynnwood Link Extension alternatives meet the project's Purpose and Need Statement. It then compares the environmental and transportation performance of the project alternatives, discusses their costs, and reviews other implementation issues.

5.1 Ability to Meet the Purpose and Need

The Purpose and Need Statement, presented in Chapter 1, is summarized in Table 5-1, which compares the No Build Alternative and light rail alternatives with the project's Purpose and Need. Each Purpose and Need objective is discussed further below.

Table 5-1. Consistency with Project Purpose and Need

Purpose and Need	No Build Alternative	Preferred Alternative	Other Light Rail Alternatives
Provide reliable, rapid, and efficient transit service with sufficient capacity to meet current and projected demand	No	Yes	Yes
Forecast year 2035 transit travel times on I-5 from Lynnwood to Northgate (AM peak period)	26 minutes	14 minutes	14 to 16 minutes
Forecast year 2035 transit travel times on I-5 from Northgate to Lynnwood (PM peak period)	24 minutes	14 minutes	14 to 16 minutes
Forecast year 2035 PM peak hour passenger load transit level of service at screenlines on I-5	LOS D–F	LOS A–C	LOS A–C
Create an alternative to travel on congested roadways	No	Yes	Yes
Support the region's adopted land use, transportation, and economic development plans	No	Yes	Yes
Extend the regional light rail system in support of the Sound Transit Long-Range Plan	No	Yes	Yes
Implement a financially feasible system that seeks to preserve and promote a healthy environment	No	Yes	Yes

Provide reliable, rapid, and efficient transit service with sufficient capacity to meet current and projected demand

All of the light rail alternatives would offer reliable, rapid, and efficient transit service with sufficient capacity to meet current and projected demand. They would be very reliable because they would operate outside of traffic. In contrast, under the No Build Alternative, bus service would be less reliable than today as traffic congestion increases on freeways and arterials in the project corridor.

Travel times to all regional destinations would be shorter with the light rail alternatives, with trips to Northgate and downtown Seattle 5 to 16 minutes faster

than the No Build Alternative depending on where a trip starts. The light rail alternatives also would expand the person-carrying capacity of the I-5 corridor and would reduce bus overcrowding as some riders shift from bus to light rail.

Create an alternative to travel on congested roadways

All of the light rail alternatives would bypass congested roadways by operating on an exclusive at-grade or elevated guideway. With light rail operating at least every 10 minutes for the majority of the day and offering faster travel times than bus service, travelers would have a more time-competitive and reliable alternative to driving on congested roadways.

Support the region's adopted land use, transportation, and economic development plans

To address future population and employment growth, all regional, state, and local land use and transportation plans include a goal of improving transit accessibility and encouraging transit use; in addition, economic development plans call for reducing congestion to increase mobility of goods and services. All of the light rail alternatives support these long-range planning goals, and they are generally consistent with the land use plans and policies of the jurisdictions served by the project. Local and regional plans anticipate growth in urban centers that are connected by high quality transit. In the project corridor, the major urban growth centers are at Lynnwood and Northgate, which would be connected by light rail. Other station areas included in local jurisdictions' transit-supporting plans or policies include the NE 145th Street Station (Preferred Alternative and Alternatives A1, A3, A10, and A11) and NE 185th Street Station (all light rail alternatives) in Shoreline; the Mountlake Terrace Transit Center or Freeway Station in Segment B; and the 220th Street SW Station (an option for the Preferred Alternative and part of Alternative B2A) in Mountlake Terrace.

Light rail construction and operation would directly support economic development goals by creating jobs. Moreover, light rail can encourage future private development and investment near stations if supportive land use designations are in place, which would result in further economic benefits and advance the region's economic development plans.

Extend the regional light rail system in support of the Sound Transit Long-Range Plan

Sound Transit's Long-Range Plan calls for extending regional transit north to Everett. Any of the light rail alternatives would help implement the Long-Range Plan.

Implement a financially feasible system that seeks to preserve and promote a healthy environment

All of the light rail alternatives have project construction and operating costs similar to those considered in the financial plan developed as part of the ST2 program. Compared to the No Build Alternative's all-bus system, the light rail alternatives would be more efficient and financially feasible to operate, particularly as the demand for transit service increases. The transit system with the No Build Alternative would also become increasingly expensive to operate given increased congestion and travel times, which would be in addition to the service hours needed to meet projected travel demand. The light rail alternatives would create environmental benefits through air quality and greenhouse gas improvements, cleanup of previously contaminated sites, reduced noise, and improved stormwater management. They would also best support regional plans to manage growth and reduce the environmental problems associated with sprawl.

5.2 Comparison of Ridership, Environmental Impacts, and Benefits of Light Rail Alternatives

This section summarizes the ridership, environmental impacts, and benefits that differentiate the light rail alternatives. While this discussion focuses on their major differences, a complete summary of all environmental issues is provided in the Summary to this Final EIS.

5.2.1 Segment A: Seattle to Shoreline

Table 5-2 displays the key measures that differentiate the seven alternatives being considered in Segment A, including cost, transportation, and environmental performance. The alternatives represent two basic types of choices:

- Would it be better to have the alternatives at-grade wherever possible, with limited elevated sections, or would it be better to be mostly elevated?
- Should there be two or three stations, and where should they be placed?

As Table 5-2 shows, all Segment A alternatives would have a similar number of residential displacements due to property acquisitions. While all of the alternatives seek to minimize property acquisitions by using WSDOT right-of-way as much as possible, in some locations, there is not sufficient room to accommodate any of the alternatives without requiring other property. The primary differences in right-of-way needs are at the stations, although the elevated alternatives (A3, A7, and A11) would be able to avoid impacts in some areas. There would be similar numbers of properties affected by the difference in choices for stations with park-and-rides at NE 145th Street (Preferred Alternative, A1, A3, A10, and A11) and NE 155th Street

Table 5-2. Comparison of Segment A Alternatives

	Alternative	Preferred Alternative	A1	A3	A5	A7	A10	A11
	Stations	Two: NE 145th and NE 185th Streets	Two: NE 145th and NE 185th Streets	Two: NE 145th and NE 185th Streets	Three: NE 130th, NE 155th, and NE 185th Streets	Three: NE 130th, NE 155th, and NE 185th Streets	Three: NE 130th, NE 145th, and NE 185th Streets	Three: NE 130th, NE 145th, and NE 185th Streets
	Profile	Mixed At-Grade and Elevated	Mixed At-Grade and Elevated	Mostly Elevated	Mixed At-Grade and Elevated	Mostly Elevated	Mixed At-Grade and Elevated	Mostly Elevated
Category[a]	Measure							
Capital Cost Range[b]	2014 dollars (in millions)	$730 to $840	$760 to $880	$790 to $910	$740 to $850	$830 to $950	$750 to $860	$850 to $970
Ridership	2035 daily boardings (net)[c]	12,600 (13,000[d])	12,600	9,500	13,000	10,900	10,900	10,900
Station Area Transit-Oriented Development	Qualitative rating of potential under existing conditions (limited-moderate-strong)	NE 145th Street: limited NE 185th Street: limited-moderate	NE 145th Street: limited NE 185th Street: limited-moderate	NE 145th Street: limited NE 185th Street: limited-moderate	NE 130th Street: limited NE 155th Street: limited NE 185th Street: limited-moderate	NE 130th Street: limited NE 155th Street: limited NE 185th Street: limited-moderate	NE 130th Street: limited NE 145th Street: limited NE 185th Street: limited-moderate	NE 130th Street: limited NE 145th Street: limited NE 185th Street: limited-moderate
Transportation	Number of intersections requiring mitigation	2 (3[d])	5	6	7	7	4	4
	I-5 bridges rebuilt	NE 130th Street	NE 117th, NE 130th, and NE 185th Streets	---	NE 130th Street	---	NE 130th Street	---
	I-5 ramps relocated	NE 130th Street north off-ramp NE 145th Street north on-ramp	NE 130th Street north off-ramp	NE 145th Street north on-ramp	NE 130th Street north off-ramp	---	NE 130th Street north off-ramp	NE 145th Street north on-ramp
	Realigned streets	1st Avenue NE 5th Avenue NE 7th Avenue NE	1st Avenue NE 5th Avenue NE 7th Avenue NE	1st Avenue NE	1st Avenue NE 7th Avenue NE	1st Avenue NE	1st Avenue NE 7th Avenue NE	1st Avenue NE
	Number of parking spaces removed[e]	69	69	73	89	77	96	84
Property	Number of parcels affected	130	115	107	128	117	122	107
	Number of residences displaced	121	111	107	123	116	118	107
	Businesses and institutions displaced	0	0	0	0	0	0	0

Table 5-2. Comparison of Segment A Alternatives

	Alternative	Preferred Alternative	A1	A3	A5	A7	A10	A11
	Stations	Two: NE 145th and NE 185th Streets	Two: NE 145th and NE 185th Streets	Two: NE 145th and NE 185th Streets	Three: NE 130th, NE 155th, and NE 185th Streets	Three: NE 130th, NE 155th, and NE 185th Streets	Three: NE 130th, NE 145th, and NE 185th Streets	Three: NE 130th, NE 145th, and NE 185th Streets
	Profile	Mixed At-Grade and Elevated	Mixed At-Grade and Elevated	Mostly Elevated	Mixed At-Grade and Elevated	Mostly Elevated	Mixed At-Grade and Elevated	Mostly Elevated
Category[a]	Measure							
	Estimated WSDOT right-of-way needed (acres)	19	26	20	20	19	25	20
Visual and Aesthetic Resources	Low-medium-high impact	Medium	Medium	High	Medium	High	Medium	High
Ecosystem Resources	Wetland/buffer acres affected	0.9 / 0.3	0.9 / 0.3	0.9 / 0.3	0.9 / 0.8	0.9 / 0.8	0.9 / 0.3	0.9 / 0.3
	Acres of forest vegetation removed	2	2	1	2	1	2	2
Noise	Number of properties affected before/after mitigation[f]	306 (309[d])/ 0	234 / 0	476 / 0	303 / 0	493 / 0	283 / 0	476 / 0
Vibration	Number of properties affected before/after mitigation	27 / 0	9 / 0	8 / 0	16 / 0	9 / 0	14 / 0	8 / 0
Parks and Recreational Resources	Resources directly affected	Ridgecrest Park, Shoreline Stadium	Ridgecrest Park, Shoreline Stadium	Ridgecrest Park	Ridgecrest Park	Ridgecrest Park	Ridgecrest Park	Ridgecrest Park

[a] Only categories with notable impacts or differences among alternatives are shown; Chapters 3 and 4 include the full results for all environmental topics.

[b] Range reflects contingencies for a conceptual level design. Figures rounded to the nearest $10 million.

[c] The net boardings reflect ridership at all the segment stations, minus the drop in ridership that would occur at the Northgate Station; the more sizeable drop is with a station located at NE 130th Street, which overlaps more with the Northgate Station ridership area than a station at NE 145th Street.

[d] Parentheses show when the 130th Street Station Option for the Preferred Alternative is included.

[e] Includes on-street and off-street parking. Does not include park-and-ride spaces.

[f] Includes park-and-ride noise impacts.

(A5 and A7). The NE 185th Street Station options would have different property impacts, depending on whether the parking is in a multistory garage on the west side of the freeway (Preferred Alternative and A1), on the east side with surface lots (A5 and A10), or in a parking structure to the east (A3, A7, and A11).

Transportation impacts would primarily occur at the station sites where some intersections would have increased delays, but Sound Transit would use mitigation measures to reduce delays to conditions similar to the No Build Alternative or better. Several of the alternatives have stations or alignments that would rebuild I-5 ramps at NE 130th Street or NE 145th Street, requiring FHWA and WSDOT approvals; these changes would not affect the performance of ramps or adjacent areas of the freeway.

All Segment A alternatives would require noise walls, barriers, and other mitigation measures to alleviate noise impacts at properties along the corridor. These measures would satisfactorily mitigate noise impacts to levels below FTA criteria. Similarly, all alternatives include design measures to reduce vibration to be below FTA's impact threshold.

Impacts on water resources and ecosystems would be relatively similar; the mostly elevated alternatives (A3, A7, and A11) would have more opportunities to avoid impacts through design.

Impacts on parks and recreation facilities would be generally similar among all Segment A alternatives, with all alternatives requiring an edge of Ridgecrest Park in Shoreline. The mostly elevated alternatives (A3, A7, and A11) would have more impacts on views from the Jackson Park Golf Course. The Preferred Alternative and Alternative A1 include a roadway realignment that would affect a small part of the Shoreline Stadium parking lot, and the Preferred Alternative also has an option to develop a garage on the stadium's lot.

Overall, the mostly elevated alternatives (A3, A7, and A11) have higher costs but lower impacts compared with the mostly at-grade alternatives (including the Preferred Alternative), except for having higher visual impacts.

Among the station pairing choices, alternatives featuring a NE 130th Street Station as part of a three-station configuration in Segment A (A5, A10, and A11, and an option for the Preferred Alternative) rather than two stations (Preferred Alternative, A1, and A3) would have more access points but longer travel times and higher costs. Three stations could add about 400 daily boardings in Segment A because some users in north Seattle would find the NE 130th Street Station more convenient to use than the Northgate Station. While this is an increase in project ridership, it would not increase overall Link system ridership. Any three-station pairing would have about the same ridership and effects as any two-station combinations.

There are also tradeoffs between having a station at NE 145th Street or at NE 155th Street. The NE 145th Street Station alternatives (Preferred Alternative, A1, A3, A10, and A11) would displace residential properties, require street or interchange modifications, and place a multistory parking garage near residences. However, the station would serve several populous neighborhoods in Seattle and Shoreline, and it would have convenient I-5 access. The NE 155th Street Station (A5 and A7) would also displace residences, and add a multistory garage in a mostly residential area, but would lack I-5 access adjacent to the station. The City of Shoreline's planning policies identify stations at NE 145th Street and NE 185th Street, and the City has conducted station planning at those locations, including plans for higher density development at the NE 185th Street Station area. The City's policies do not anticipate a station at NE 155th Street, which would also need to be paired with a second station to allow light rail to serve Seattle neighborhoods.

The NE 130th Street Station (A3, A7, A10, and A11) would not appreciably increase environmental impacts or ridership compared with alternatives that do not include this station; it would mostly attract riders who would otherwise use the NE 145th Street Station or Northgate Station. While the NE 130th Street Station would increase costs, it could be paired with either a NE 145th Street Station or NE 155th Street Station with little difference in other effects.

The NE 185th Street Station would have similar ridership for all options. Costs and impacts tend to be the differentiating factors. At-grade alternatives (Preferred Alternative, A1, A5, and A10) would have more street and/or bridge reconstruction, while the elevated alternatives would have more visually prominent guideways and stations. The siting and configuration for parking elements is generally interchangeable among the alternatives, but the choices for structures or surface lots, as well as their siting, would determine which properties would be acquired. All of the alternatives would affect some residential properties; however, the alternatives with parking to the east of I-5 (A3, A5, A7, A10, and A11) would impact more residences.

5.2.2 Segment B: Shoreline to Mountlake Terrace

Table 5-3 displays the key measures that differentiate the four Segment B alternatives. These alternatives vary in their station location at the Mountlake Terrace Transit Center; whether they continue north in the I-5 median, or cross to the west side of the freeway; and whether they offer a station at 220th Street SW. The Preferred Alternative and B2A cross to the west of the freeway, affecting more properties, while Alternatives B1 and B4 stay in the median.

Table 5-3. Comparison of Segment B Alternatives

	Alternative	Preferred Alternative	B1	B2A	B4
	Stations	One: Mountlake Terrace Transit Center	One: Mountlake Terrace Transit Center	Two: Mountlake Terrace Transit Center and 220th Street SW	One: Mountlake Terrace Freeway Station
	Alignment	I-5 East Side to I-5 West Side	I-5 East Side to I-5 Median	I-5 East Side to I-5 West Side	I-5 East Side to I-5 Median
Category[a]	Measure				
Capital Cost[b]	2014 dollars (in millions)	$450 to $510	$390 to $450	$530 to $610	$360 to $410
Ridership	2035 daily boardings (net)[c]	5,100 (5,300)[d]	5,100	5,100	4,300
Station Area Transit-Oriented Development	Qualitative rating of potential under existing conditions (limited-moderate-strong)	Mountlake Terrace Transit Center: moderate-strong	Mountlake Terrace Transit Center: moderate-strong	Mountlake Terrace Transit Center: moderate-strong 220th Street SW: moderate	Mountlake Terrace Freeway Station: moderate
Property	Number of parcels affected	15 (21)[d]	5	18	6
	Number of residences displaced	3 (8)[d]	0	5	0
	Estimated WSDOT right-of-way needed (acres)	17	14	16	15
Transportation	Number of parking spaces removed	0	0	11	0
	I-5 bridges rebuilt	NE 195th Street	NE 195th Street	NE 195th Street	NE 195th Street
Ecosystem Resources	Wetland/buffer acres affected	0.8 / 1.6 (0.5 / 1.6)[d]	Less than 0.1 / 0.9	1.6 / 1.3	0.2 / 0.7
	Acres of forest vegetation removed	11 (11)[d]	5	11	3
Visual and Aesthetic Resources	Qualitative rating (low-medium-high impact)	High	Low	High	Low
Noise	Number of properties affected before/after mitigation[e]	217 (202)[d] / 0	122 / 0	192 / 0	110 / 0

[a] Only categories with notable impacts or differences among alternatives are shown; Chapters 3 and 4 include full results.

[b] Range reflects contingencies for a conceptual level design. Figures rounded to the nearest $10 million.

[c] Net boardings within the segment, less any reduction in ridership that could occur in other segments with an additional station.

[d] The number in parenthesis is the Preferred Alternative with the optional station at 220th Street SW.

[e] Includes park-and-ride noise impacts.

The Preferred Alternative and B2A would have higher impacts on visual quality along I-5 from about 233rd Street SW to 220th Street SW. Existing dense vegetation would be cleared on the lower portion of the hillside on the west side of I-5, which would change the visual character of this area. Alternatives B1 and B4 would have lower visual impacts because more of their alignments would be in the I-5 median, although Alternative B4 would have a prominent pedestrian bridge over I-5. The median alignment for Alternatives B1 and B4 also would result in fewer noise impacts.

The vegetation removal mentioned above, where the Preferred Alternative and B2A alignments travel along the hillside west of I-5, would eliminate about 11 acres of forest cover compared to 5 acres with Alternative B1 and 3 acres with Alternative B4. Likewise, the Preferred Alternative and B2A would affect the most wetlands and wetland buffer because they would cross a large portion of the second largest wetland in the study area. Also, Alternative B2A and the Preferred Alternative with the option for a 220th Street SW station would create the most impervious surface and would require more mitigation measures to protect water resources.

Transportation impacts would not differentiate the alternatives in Segment B except during construction, when Alternative B4 would need to close the bus ramps at the current freeway transit stop for the Mountlake Terrace Transit Center. This would affect transit service to the transit center for several years.

The Segment B alternatives would have different ridership depending on whether a station is sited at the Mountlake Terrace Transit Center (Preferred Alternative, B1, and B2A) or its nearby freeway transit stop (Alternative B4); a freeway station would take longer for riders to access, which would reduce ridership. Alternative B2A and an option for the Preferred Alternative have an additional station at 220th Street SW, which could encourage transit-oriented development in this area, but the project's overall ridership would not notably increase. Although the added station would attract some riders, many of them would be riders switching from the Mountlake Terrace Transit Station and Lynnwood to the 220th Street SW Station. The longer travel time to stop at an added station would slightly lower overall ridership as well.

The Preferred Alternative and Alternatives B1 and B2A would best support potential transit-oriented developments in Mountlake Terrace's planned town center because their station would be east of I-5, at the existing park-and-ride with an entrance south of 236th Street SW. This would be closer to the planned town center than the Alternative B4 freeway station.

5.2.3 Segment C: Mountlake Terrace to Lynnwood

Table 5-4 displays the key measures that differentiate the performance of the four Segment C alternatives, including environmental impacts and property acquisition.

Alternative C1 would affect the most properties because it would displace up to 77 residences and 31 businesses in a condominium complex and two business

parks. In contrast, the Preferred Alternative would displace nine businesses, Alternative C3 would displace one business, and Alternative C2 would displace three businesses, with no residential impacts.

Alternatives C1 and C2 would have higher visual impacts because of the elevated guideway near residential properties and Scriber Creek Park, while the Preferred Alternative and Alternative C3 would have lower visual impacts.

Alternative C2 would cross the Scriber Creek wetland complex and affect the largest amount of stream and wetland buffer area. Alternative C1 would cross north of the wetlands over Scriber Creek Park. The Preferred Alternative would cross the southern end of the Scriber Creek wetland complex and would have less impact than Alternative C2, but more than Alternative C3.

Alternative C1 would have columns and a section of the elevated guideway within Scriber Creek Park along Cedar Valley Road. FTA has determined that converting part of the park to a transportation use would not be a minor impact, and a federal regulation known as Section 4(f) would require Sound Transit to choose other alternatives to avoid the use of parkland, unless Alternative C1 were redesigned to avoid the use of the park or Sound Transit mitigated the park impact to a *de minimis* level. Alternative C2 would not be in the park but the guideway and columns adjacent to the park would have visual impacts, primarily from the Scriber Creek Trail. The Preferred Alternative and Alternative C3 would not affect the park.

While all of the Segment C alternatives would serve the same area and have similar opportunities to support transit-oriented developments, the station site choices would provide different opportunities for developing the area over time. The Preferred Alternative would acquire four commercial properties to the north and east of the Lynnwood Transit Center and change those existing land uses; however, it would avoid cutting across property that the City of Lynnwood has identified for high-density development on the east side of 44th Avenue West.

The Preferred Alternative would have a plaza connecting to the intersection of 200th Street SW/Alderwood Mall Boulevard/44th Avenue West on the edge of the designated town center of Lynnwood, although the Alternative C1 station at 200th Street SW would be closest to the designated town center for Lynnwood. Alternative C1 would have the fewest impacts on the existing transit center and park-and-ride during construction. The Preferred Alternative and Alternatives C2 and C3 would temporarily reduce the current parking capacity at the transit center for the construction of a park-and-ride garage. Alternative C3 also has the option to relocate the existing transit center at the same time as the light rail is built, or the transit center could be relocated later, potentially as part of future transit-oriented development plans. However, Alternative C3 has a tail track that cuts across a large parcel that would otherwise be available for future transit-oriented development.

Table 5-4. Comparison of Segment C Alternatives

	Alternative	Preferred Alternative	C1	C2	C3
	Station	At park-and-ride	200th Street SW	At transit center	At park-and-ride
Category[a]	Measure				
Capital Cost[b]	2014 dollars (in millions)	$340 to $380	$330 to $380	$300 to $340	$300 to $390
Ridership	2035 daily boardings (net)[c]	17,900 (17,200[d])	17,600 to 17,900	17,600 to 17,900	17,600 to 17,900
Station Area Transit-Oriented Development	Qualitative rating of potential under existing conditions (limited-moderate-strong)	Lynnwood Park-and-Ride: moderate-strong	200th Street SW Station: moderate-strong	Lynnwood Transit Center: moderate-strong	Lynnwood Park-and-Ride: moderate-strong
Property	Number of parcels affected	18	31	29	15
	Number of residences displaced	0	77	1	0
	Businesses and institutions displaced	9	31	3	1
	Estimated WSDOT right-of-way needed (acres)	2	1	1	3
Transportation	Realigned streets	---	---	---	208th Street SW
	Number of parking spaces removed	27	8	4	0
	Number of intersections requiring mitigation	3(4[f])	3	3	3
Ecosystem Resources	Wetland/buffer acres affected	0.7 / 1.0	Less than 0.1 – 0.2 / 0.7 - 1.1	0.9-1.1 / 0.6 – 1.1	0.2 – 0.3/ 1.0 - 1.7
	Acres of forest vegetation removed	2	1	1	1-2
Visual and Aesthetic Resources	Qualitative rating (low-medium-high impact)	Medium	High	High	Medium
Noise	Number of properties affected before/after mitigation[e]	115 / 0	226–234 / 0	148–151 / 0	29–79 / 0
Vibration	Number of properties affected before/after mitigation	0 / 0	1-2 / 0	1-2 / 0	0 / 0
Parks and Recreational Resources	Resources affected	Interurban Trail, Scriber Creek Trail	Interurban Trail, Scriber Creek Park, Scriber Creek Trail	Interurban Trail, Scriber Creek Trail	Interurban Trail, Scriber Creek Trail
Section 4(f)	Resources involving a Section 4(f) use	None	Scriber Creek Park	None	None

[a] Only categories with noteworthy information, impacts or differences among alternatives are shown; Chapters 3 and 4 include full results.

[b] Range reflects contingencies for a conceptual level design. Figures rounded to the nearest $10 million.

[c] Ridership range reflects total boardings at this station, but adjusted to reflect ridership changes caused by additional station(s) in Segment A or B and their effect on ridership in this segment.

[d] Preferred Alternative, with optional stations in Segments A and B.

[e] Includes park-and-ride noise impacts.

[f] Includes option for added parking.

In other respects, including transportation performance, accessibility, and overall transit-oriented development, the Segment C alternatives would have similar effects.

5.3 Other Considerations

This section identifies other issues Sound Transit considered while planning and evaluating the benefits and impacts of the Lynnwood Link Extension.

5.3.1 Costs and Funding

Tables 5-2 through 5-4 list estimated capital costs of the alternatives. With seven alternatives in Segment A, four in Segment B, and four in Segment C, there are many possible segment combinations that could be linked to create the full 8.5-mile extension from Northgate to Lynnwood, with total costs ranging from $1.4 billion to $2.0 billion, depending on the alternatives selected in each segment. The Preferred Alternative would have total costs of $1.5 to $1.7 billion.

These estimates capture the cost differences of the essential features of alternatives for the purpose of comparison. The project cost estimates include:

- Construction costs for facilities, including the trackway/guideway, stations, and anticipated mitigation requirements
- Contingencies that address the varying levels of uncertainty and construction risk that have been identified for alternatives
- Right-of-way acquisition costs, including temporary construction easements
- Costs for design, permitting, agency administration, and program management

Because the project is still in conceptual planning, these estimates include substantial contingencies that recognize the uncertainty around some key factors that affect cost, such as WSDOT/FHWA design requirements, construction methods, mitigation measures, and market factors.

All of the light rail alternatives are estimated to cost about $16 million per year to operate and maintain, varying by several hundred thousand dollars depending on how many stations are included. Major operating costs include labor and benefits, electric power, insurance, and parts and equipment to run and maintain the trains, guideway, systems, and stations.

Project costs and revenues available to cover those costs were major considerations for the Sound Transit Board when it identified a Preferred Alternative for the Final EIS, which included four stations out of a possible six. However, the Board also requested further study of two stations as options for the Preferred Alternative. One of the purposes of the project is to support the implementation of the Sound Transit Long-Range Plan. The Long-Range Plan emphasizes cost-effective and efficient

transportation solutions, and it calls for a financially feasible system that is affordable to build, run, and use.

Sound Transit's financial plan currently includes $1.322 billion for this project (as indicated in Sound Transit's 2013 Transportation Improvement Program). Additional funding or cost reductions (including those that may be found through advanced design to reduce risk assumptions and related contingencies) would be needed for all of the alternatives.

Cost Tradeoffs

As noted, there are relatively small differences in operating costs among the alternatives. Capital cost differences are more pronounced; major cost tradeoffs among alternatives are summarized below.

Segment A: Seattle to Shoreline

A major cost driver in Segment A is the amount of guideway that is elevated, which is more expensive than at-grade. The Preferred Alternative and Alternatives A1, A5, and A10 place more of the guideway and at least one of their stations at-grade; however, they would require rebuilding three or four bridges that cross I-5. Alternatives A3, A7, and A11 elevate more of the guideway to cross over bridges to avoid the impacts of rebuilding them. The mostly elevated alternatives are $30 million to $80 million more expensive than the more at-grade alternatives because the cost of the elevated guideways and stations is higher than the cost of rebuilding the bridges.

The number of stations also affects costs. The Preferred Alternative and Alternatives A1 and A3 include two stations, while Alternatives A5, A7, A10, and A11 include three. The Preferred Alternative also has an option to add a third station at NE 130th Street. Including a third station adds $30 million to $50 million to the overall cost.

Segment B: Shoreline to Mountlake Terrace

There are several cost tradeoffs among the alternatives in Segment B. Converting the Mountlake Terrace Freeway Station for light rail use in Alternative B4 would cost $20 million to $30 million less than building a new elevated station in the Mountlake Terrace Transit Center in the Preferred Alternative and Alternatives B1 and B2A. North of 236th Street SW, crossing all the way over I-5 and then running on mostly elevated structures along the west side of the freeway (Preferred Alternative and B2A) would cost about $40 million more than crossing only to the median and then running at-grade in the median to Lynnwood (B1 and B4). Finally, adding a station near 220th Street SW in Alternative B2A would cost approximately $50 million or more, and an option to add a station for the Preferred Alternative would be similar.

Segment C: Mountlake Terrace to Lynnwood

The cost ranges in Segment C reflect the length of elevated guideway, property acquisition costs, and the cost for modifying existing transit facilities. All alternatives in this segment are elevated and each includes an elevated station near the existing Lynnwood Transit Center. The cost of the Preferred Alternative would be similar to Alternative C1. They both have longer guideways and more property acquisitions than the other two alternatives, costing up to $30 million more than Alternatives C2 and C3. Alternative C2, which has less guideway and less property acquisition, is the least expensive of the alternatives.

Funding

Sound Transit funds its facilities, services, and programs through a combination of revenue sources, including voter-approved sales, motor vehicle excise and rental car taxes, state and federal grants, passenger fares, and bond proceeds. The Lynnwood Link Extension is one project in the overall $17.8 billion ST2 system expansion program approved by voters in 2008. Since that approval, the recession has required Sound Transit to lower the revenue forecast through 2023 by 30 percent. Sound Transit has responded to the reduced revenue by taking steps to control costs and realign the ST2 program to ensure that the majority of the ST2 program, including the Lynnwood Link Extension, can be delivered by 2023. However, financial challenges remain. Sound Transit's financial plan has assumed that the agency would secure at least $600 million in funding from FTA's nationally competitive Capital Investment and Grant Program. This funding will be required to build any of the Lynnwood Link Extension alternatives. Sound Transit believes this project will compete well nationally. The agency has secured similar size grants in the past, receiving $500 million to help fund the initial segment of Central Link and another $813 million to help fund the University Link project.

5.3.2 Commitment of Resources

If built, the Lynnwood Link Extension would have irreversible and irretrievable commitments of property and natural resources.

For this project, private properties with residential and commercial uses would be converted to transit use. The use of the WSDOT right-of-way for the project would also be a commitment of resources that could affect the costs and impacts of future projects in the corridor, including potential projects involving environmental improvements, such as stormwater management or habitat restoration. While WSDOT and Sound Transit have been collaborating to develop this project in a way that maintains WSDOT's flexibility to make future improvements, the project would ultimately need to secure FHWA's approval to use highway lands, considering factors such as safety, transportation and environmental performance, maintenance, and potential future improvement needs. FHWA must approve the detailed design

plans for the project, which would include permanent facilities as well as construction traffic plans.

The conversion of public or private lands to light rail use would permanently alter visual quality and character along the project corridor. This would result in some visual impacts that would not be mitigated by replacement vegetation and landscaping that must mature to be effective. The project would affect wetlands, wildlife habitat, aquatic resources, and highway beautification areas to varying degrees, depending on the alternative built. Mitigation measures would be employed, but some of these resources would be irretrievably altered.

Building the project also would irretrievably commit resources such as fuel and construction materials (e.g., aggregate for concrete, wood for forms and frames, and steel for rebar).

5.3.3 Benefits and Disadvantages of Delaying Project Implementation

As required under SEPA (WAC 197-11-440), Sound Transit has evaluated the benefits and disadvantages of delaying the project, compared with moving forward with it as planned.

If Sound Transit delays construction, this would temporarily avoid the long-term and construction-related environmental consequences associated with the project. Other long-term impacts such as visual impacts also would be delayed. Delays in acquiring properties could be seen as a benefit because property owners could reside on their property longer, but this could also create burdens on property owners or tenants, particularly if the project delays the acquisition and relocation processes. Delay in acquiring property also could make the acquisitions more expensive for Sound Transit.

The primary disadvantage of delaying the project would be the failure to address the growing transportation needs of the corridor communities and the region. Sound Transit and PSRC transportation plans, as well as the long-range planning, growth management, and economic development plans of the project corridor communities (see Section 4.2, Land Use) emphasize the need for a transportation alternative in the face of growing congestion along this major corridor.

A substantial delay in implementing the Lynnwood Link Extension would impair the region's ability to accommodate its projected growth in travel demand, population, and employment. The current high levels of congestion and unreliability for travelers in the I-5 corridor would worsen because travel demand is expected to continue growing. Increasing congestion would continue to degrade bus transit service. Increased traffic congestion could affect future economic development in the region because it could increase the cost of doing business, including costs for lost productivity and wasted

fuel. Increased business costs would make the project corridor communities comparatively less attractive as places to live or do business.

Finally, delays in addressing this transportation problem could change planned development patterns, leading to less dense development and lost opportunity to create transit-supported communities. This could hamper economic growth, worsen environmental conditions, and negatively affect the regional quality of life.

5.3.4 Areas of Controversy and Issues to be Resolved

Public and agency comments suggest limited project-related controversy in most areas. However, during the Draft EIS public review and comment period, Sound Transit and FTA received several hundred comments about potential impacts to the Seattle Latvian Evangelical Lutheran Church, which would have been relocated by some of the Segment A alternatives. The church, individuals, community organizations, and representatives of Latvia asked Sound Transit to explore additional options to avoid impacting the church. Following issuance of the Draft EIS and public comments, Sound Transit developed designs to realign a section of 3rd Avenue NE, which would maintain access to the church and avoid the need to relocate the church or its community hall.

Also in Segment A, two of the alternatives (A5 and A7) would include a station at NE 155th Street, which the City of Shoreline opposed in its comment letter during environmental scoping.

The Edmonds School District also has concerns about potential impacts to District properties. One of the Segment B alternatives (the 220th Street Station option for the Preferred Alternative), would affect the former Melody Hill School site. The District has plans to sell the site for other development. In Segment C, Alternatives C2, C3, and the Preferred Alternative would cross a District property that is to be developed as a bus base and district operations center. The District's comment letter on the Draft EIS stated concerns about any alternatives that would conflict with the development plans for the property, but also supported a City of Lynnwood proposal to modify Alternative C3. The Preferred Alternative now features several elements of that proposal, as refined by Sound Transit in coordination with the City and the District.

Public comments on the Draft EIS also highlighted impacts to Scriber Creek Park in Segment C, which many commenters and the City of Lynnwood described as particularly valued for its natural characteristics. Alternative C1 was the most criticized, followed by Alternative C2. FTA has determined that a Section 4(f) use would occur with Alternative C1 due to its impacts on Scriber Creek Park, and therefore other alternatives that avoid the use must be considered instead. The EIS includes proposed measures to mitigate impacts should Alternative C2 be selected. The Preferred Alternative and Alternative C3 would not impact Scriber Creek Park.

Alternatives C1 and C2's acquisition and relocation impacts to businesses and/or residents were also frequent topics in public comments on the project.

The City of Lynnwood and the Edmonds School District opposed the Lynnwood site alternative for Sound Transit's OMSF, which is a separate project that would support light rail operations and maintenance needs for the ST2 program of projects, including the Lynnwood Link Extension and the East Link Extension. In July 2014, Sound Transit identified a site in Bellevue as the Preferred Alternative for evaluation in the Final EIS, along with other alternatives. A final decision on the OMSF site will be made after the Final EIS is issued for that project in summer 2015.

Issues yet to be resolved relate to agreements that Sound Transit must secure from WSDOT and FHWA to use parts of the I-5 right-of-way permanently as well as during construction. In addition to needing approvals for the use of the right-of-way, Sound Transit would need approvals for modifying any I-5 interchange or other parts of the freeway, such as shoulders or existing noise walls; for constructing staging and access; for implementing any lane closures affecting the interstate highway; and for conducting any modifications that could affect highway operations or safety. Most of these approvals would occur during final design. Sound Transit has coordinated with FHWA and WSDOT to develop conceptual engineering definitions for the alternatives, but as final design progresses, FHWA or WSDOT could request modifications or place other restrictions on the project. Sound Transit has worked successfully with WSDOT and FHWA to obtain approvals for right-of-way use for other Sound Transit projects, but it would affect the project costs, construction impacts, and work schedule if Sound Transit is not able to use the right-of-way as anticipated in the current design of the alternatives.

As noted above in Section 5.3.1, project funding also remains an issue to be resolved. Sound Transit is proposing the project as a candidate for FTA's New Starts grants program. Recent legislation has changed some of the requirements for the program and its long-term funding levels are not known.

Potential stations at NE 130th Street, NE 155th Street, and 220th Street SW were not evaluated in the ST2 planning process, which analyzed ridership and cost for each station, and are not currently included in the ST2 Plan. Consistency with the ST2 Plan would need to be further evaluated before any of these stations could be added to the Lynnwood Link Extension.

6 PUBLIC INVOLVEMENT AND AGENCY COORDINATION

Public involvement and agency coordination activities are important components of the NEPA/SEPA environmental process.

Sound Transit and the FTA are providing ongoing opportunities for all those interested in the Lynnwood Link Extension to be involved, get information, ask questions, and give comments. Sound Transit and FTA have a formal Coordination Plan with specific elements for agency and tribal outreach and public involvement. The Coordination Plan is summarized in this chapter and the project's public involvement, agency, and tribal coordination activities are further defined.

The public involvement and agency coordination effort for what is now the Lynnwood Link Extension began in October 2010, when FTA and Sound Transit began early scoping for the North Corridor Alternatives Analysis. They issued public notices in the Federal Register and SEPA Register, advertisements and legal notices in local newspapers, postcard mailings, and email messages. They held three public meetings (one each in Seattle, Shoreline, and Lynnwood) and one agency meeting during the early scoping period. FTA and Sound Transit requested the public to submit suggestions about the transportation problems of the project corridor and to propose a broad range of potential transit solutions. See the *Alternatives Analysis Report and SEPA Addendum* (September 2011), in Appendix K, Supporting Documents, for more information about the Alternatives Analysis, which led to the alternatives evaluated in this Final EIS, and its public involvement and agency coordination. The scoping phase for the Draft EIS for the Lynnwood Link Extension started September 30, 2011, as discussed in Section 6.2.1.

6.1 Coordination Plan

The public involvement, agency coordination, and tribal coordination efforts outlined in the project's Coordination Plan cover activities from the Alternatives Analysis process through the Final EIS. These efforts also comprise agency and tribal coordination and outreach that Sound Transit formally initiated when the project began environmental scoping for the Draft EIS. This process has continued through the release of the Draft EIS, the subsequent public comment period, and the development of the Final EIS. The Coordination Plan provides a structured approach to public outreach for the project team throughout the EIS process.

The Coordination Plan also includes strategies for outreach to traditionally hard-to-reach populations, such as minority, low-income, and low-English proficiency populations. The plan aims to identify and involve minority and low-income populations that the project could benefit or affect adversely. Sound Transit and FTA recognize it is important to try to reach all people potentially affected by the project.

6.2 Public Outreach Activities and Methods

The project's outreach activities have continued throughout the environmental review process, which culminates with the release of the Final EIS, Sound Transit Board's selection of the project to be built, and FTA's issuance of a Record of Decision. Some activities have occurred at specific project milestones, such as the publication of the Draft EIS, while other types of activities have been conducted on an ongoing basis, such as targeted community outreach. The following subsections summarize the outreach activities and methods used or planned during the project's environmental process. A detailed list of all the public outreach activities conducted to date, including public meetings and hearings, is provided in Appendix L, Public Involvement and Agency Coordination.

6.2.1 Scoping

Sound Transit and FTA conducted early scoping for an Alternatives Analysis beginning in October 2010. Following the release of the Alternatives Analysis report, Sound Transit conducted formal public scoping. Scoping supports the environmental review process requirements of NEPA and SEPA. The scoping process began with the public notice of the intent to prepare an EIS in the Federal Register on September 29, 2011, and in the SEPA Register on September 30, 2011. The formal notices were accompanied by advertisements and other public notices and outreach materials. Scoping notice postcards were sent to 103,000 addresses, and emails were sent to 1,000 email addresses. During the scoping period, Sound Transit and FTA asked the public to comment on the proposed Purpose and Need Statement, the environmental issues to be evaluated in the Draft EIS, and alternatives to be considered for evaluation in the Draft EIS.

To provide project information to the public during scoping, Sound Transit produced the following documents and made them available on the project Web site (http://www.soundtransit.org/lle) and at public meetings (all are part of Appendix K):

- *Scoping Information Report:* This summary of the environmental scoping effort provides a planning history of the project, the results of the Alternatives Analysis, the draft Purpose and Need Statement, the range of alternatives being considered for study in the Draft EIS, the potential environmental topics to be reviewed in the Draft EIS, and the project schedule.
- *Coordination Plan*: This plan is a summary of the efforts to engage the public, agencies, and tribes throughout the environmental review process. This plan was then finalized after the public scoping period ended, and was updated following the release of the Draft EIS.
- *Alternatives Analysis Report and SEPA Addendum*: This is a summary document and complete technical report describing the initial study Sound Transit

conducted to define the most promising alternatives for further review in the Draft EIS, along with alternatives to be dropped from further consideration.

During the 30-day scoping period, Sound Transit and FTA held public meetings in Seattle, Shoreline, and Lynnwood, and an agency meeting in Shoreline. They received 69 comment submittals from individuals, 14 from jurisdictions and agencies, and three from organizations. The comments received during scoping were provided to the Sound Transit Board for consideration before the Board identified the alternatives for analysis in the EIS. The *Environmental Scoping Summary Report* (Sound Transit 2011f) summarizes all the comments received during scoping. Table 6-1 provides further details on the scoping meetings (including early scoping).

Table 6-1. Public, Agency, and Tribal Scoping Meetings

Scoping Meetings	Dates	Number of Attendees
Public	October 7, 12, and 14, 2010	200 people
Agency and Tribal	October 14, 2010	9 agencies
Public	October 11, 13, and 18, 2011	185 people
Agency and Tribal	October 11, 2011	13 agencies

The majority of the comments Sound Transit and FTA received were positive. All the jurisdictions, agencies, and organizations that provided written comments either supported the proposed project or offered advice on the project's next steps into the environmental process. None were opposed.

Seven of the agencies and jurisdictions specifically indicated support for an I-5 alternative, as did all of the organizations that commented. Several agencies voiced concerns about an SR 99 alternative's impacts, costs, ridership, or ability to meet other purpose and need objectives. Most of the individual public comments supported the proposed project or one or more of the light rail alternatives. Several agencies suggested additional sites or options, including stations at NE 130th Street, NE 155th Street, and 200th Street SW. Three of the individual public commenters were opposed to the proposed project, including one who preferred bus rapid transit instead of light rail. The other comments varied, but included suggestions about environmental or land use factors, and the purpose and need for the project. A number of commenters asked Sound Transit to move ahead quickly to build the project.

6.2.2 Tech Talk

Tech Talk was an informal, lunch-hour outreach activity during the scoping period on October 7, 2011, and during the Draft EIS comment period on September 13, 2013. Project managers provided information about the project and answered questions online. Participants accessed the broadcast by going to video.soundtransit.org. The videos of the broadcasts are on the project Web site.

6.2.3 Public Meetings, Open Houses, Briefings, and Workshops

In addition to scoping meetings, Sound Transit has held public meetings, open houses, and workshops to present project information and solicit comments from the public. The format typically included time for the public to view project information and to speak with project team members one-on-one. Appendix L lists all public meetings and briefings for the project to date. Sound Transit has continued to hold these public events as the project progressed through the EIS process.

Sound Transit also regularly provides briefings to neighborhood associations, organizations, and businesses located within the project vicinity to provide project information and to answer questions. Briefings typically include a presentation by project staff and an opportunity for questions and answers.

6.2.4 Community Events

Sound Transit representatives have attended various community events planned by other organizations to reach community members who might not otherwise seek out information about the Lynnwood Link Extension. These events, which included street and community fairs and festivals such as Cinco de Mayo celebrations in corridor communities and nearby towns, proved to be an effective way for Sound Transit to reach new people interested in the project. With booths and staffed tables at the events, Sound Transit representatives talked to the public about the project, helped them sign up for the project mailing list, and informed them of other ways to be involved. Sound Transit reached several thousand people in this way, beginning with outreach during the project's early planning, continuing on through public scoping, and throughout the development and release of the Draft and Final EIS documents.

In 2011, in support of early scoping and the Alternatives Analysis, Sound Transit attended eight events, engaging more than 1,100 community members; in 2012, the year EIS scoping and EIS alternatives were being identified, Sound Transit attended eight events, engaging more than 830 people in the community; in 2013, the year the Draft EIS was released, Sound Transit attended six events, engaging nearly 650 community members. In 2014, as the Final EIS and additional engineering studies were being completed, Sound Transit attended seven events, engaging nearly 700 people. Appendix L lists the community events that Sound Transit has attended.

6.2.5 Drop-in Sessions

In March 2012, Sound Transit held 10 drop-in sessions along the project corridor in Seattle, Shoreline, Mountlake Terrace, Edmonds, and Lynnwood at various public locations, such as community centers, grocery stores, and libraries. These sessions were advertised by postcards inviting people to drop in at the locations to talk to

staff, learn more about the project, and provide additional feedback prior to the Sound Transit Board identifying the alternatives included in the Draft EIS. Sound Transit staff members spoke with approximately 450 people during these sessions.

In June 2014, Sound Transit held four drop-in sessions along the project corridor at the Northgate Community Center in Seattle and the public libraries of Shoreline, Mountlake Terrace, and Lynnwood. These sessions were advertised by postcards, inviting people to drop in at the locations to talk to staff and learn more about the project, including the Preferred Alternative considered in this Final EIS. Sound Transit staff members spoke with approximately 250 people during these sessions.

6.2.6 Project Web Site

The project has a Web site (www.soundtransit.org/lle) that provides current project information, including project maps, schedule, and project-related documents, which Sound Transit updates regularly. The Web site is also a document archive and includes a video animation of the Preferred Alternative, which has been viewed often by Web site visitors.

6.2.7 News Media

At times, Sound Transit uses local newspapers to inform, educate, and involve the public. News releases and advertisements for public meetings are sent to newspapers in the project vicinity.

6.2.8 Fact Sheets, Brochures, and Newsletters

Fact sheets and brochures are often distributed at public meetings, workshops, and community events. The purpose of the fact sheets and brochures is to concisely provide project updates. Newsletters were mailed and emailed in April 2011 (emailed only), June 2012, March 2013, January 2014, and June 2014 to provide project information and updates. In addition, annual project updates were sent to email subscribers.

6.2.9 Email Subscription List

Sound Transit maintains an email subscription list of people who have expressed interest in the project, or who have requested project information, and provides periodic project updates and e-newsletters to subscribers. At the close of September 2014, there were 3,318 subscribers to the email subscription list.

6.2.10 Kiosks

Sound Transit rotates three project information kiosks throughout the corridor with updated project information for residents and environmental justice populations (see Section 6.2.13 Environmental Justice Coordination), typically at public libraries, community centers, or community colleges within the project corridor. They were first displayed in December 2012, and will continue to be displayed up to final

design, at which point Sound Transit will evaluate whether kiosks are still an effective way to provide the community with project updates. The kiosks have displayed the early planning area; announced public meetings, hearings, and comment periods; advertised the availability of the Draft EIS; and provided information about the Preferred Alternative. They are always stocked with the most recent newsletter. To increase exposure, they are relocated based on the number of project information sheets that were taken by the public. They include a short statement in several different languages inviting non-English speaking community members to contact Sound Transit for more information. Languages include Vietnamese, Tagalog, Spanish, Korean, Chinese, and Amharic.

6.2.11 Fieldwork Outreach

Sound Transit provided advance notice to property owners and residents prior to geotechnical work, vibration and noise testing, and topographical surveys during the spring and early summer of 2014. Recognizing that some of this work would be out of the ordinary in residential areas when large equipment is in operation with potential noise and vibration effects, the purpose of the outreach was to:

- Alert potentially affected residents and businesses, especially property owners who had already signed Right of Entry agreements
- Inform the public where they can find additional information
- Reduce surprises associated with this work
- Comply with permitting agencies' notification requirements (as applicable)

Sound Transit notified the public about upcoming field work through telephone calls to known property owners and hand-distributed flyers. They also placed fieldwork activity information in other project-related materials, including a spring newsletter, information kiosks, e-updates, and the project Web site.

6.2.12 Property Owner Outreach

Starting in 2013, Sound Transit used the following ways to reach out to property owners who could have some or all of their property acquired:

- Before the Draft EIS, Sound Transit mailed notification letters to property owners letting them know their property could be affected. The letters invited potentially affected property owners to contact Sound Transit staff to set up a meeting to learn more about the potential effects. The first set of notification letters was mailed in June 2013, the month before publication of the Draft EIS. Subsequent mailings occurred in February and March 2014, following further design modifications to the Preferred Alternative.
- Sound Transit met with potentially affected property owners in person, at their request. A group meeting included residents of Cedar Creek Condominiums and Northgate West Condominiums. Sound Transit also

met several times with representatives of the Seattle Latvian Evangelical Lutheran Church, including once with the greater church community.

- Sound Transit consulted individuals by telephone at their request, including potentially affected property owners, and non-affected property owners concerned that their properties would be acquired.
- Sound Transit added potentially affected property owners to the project's mailing list to receive the Winter 2014 newsletter and the announcement of the Sound Transit Board's recommendation of the Preferred Alternative. An electronic version of the newsletter was also sent to the email recipients on the subscription list. Throughout the notification process and individual meetings, property owners have submitted their email addresses and signed up to the project's email subscription list for project updates.
- Sound Transit contacted property owners for right-of-entry approval prior to geotechnical work, vibration and noise testing, and topographical surveys (see Section 6.2.11, Fieldwork Outreach). Sound Transit will continue to communicate with potentially affected property owners as it refines the design of the proposed alternatives. It will update property owners after key milestones, such as the Sound Transit Board's selection of the project to be built, and the completion of final designs.

6.2.13 Environmental Justice Coordination

At the start of project outreach activities in late 2010 and again in 2011 and 2013, Sound Transit worked to better understand demographic and community characteristics in the corridor, with a particular focus on low-income and minority populations. Stakeholder interviews helped the agency identify community organizations in the project corridor that were likely to represent or provide services to minority and low-income individuals. The resulting environmental justice population outreach activities conducted for the project are summarized in Section 4.4, Social Impacts, Community Facilities, and Neighborhoods, and Appendix C, Environmental Justice Analysis. Some examples of Sound Transit's targeted outreach are:

- Publication of the environmental scoping notices in *La Raza*, *Korean Daily*, *Seattle Chinese Times*, *Russian World Newspaper*, *Seattle Chinese Post*, and *tu Decides*.
- Project staff attendance at Cinco de Mayo festival events to hand out project materials translated into Spanish and a Spanish interpreter present to translate.
- Project posters distributed to several organizations that serve minority and low-income populations in the project corridor.

Sound Transit's environmental justice outreach activities to date are summarized in Table L-1 in Appendix L.

6.3 Agency Coordination

In addition to the public meetings and hearings to which agencies are invited, Sound Transit coordinates with agencies via periodic meetings designed to gather input. These meetings are either policy- or technical-related, depending on the topic of discussion. The participating and cooperating agencies with which Sound Transit has been coordinating for the proposed project are listed in Table 6-2.

Table 6-2. Participating and Cooperating Agencies

Cooperating Agencies[a]	Participating Agencies[b]
Federal Highway Administration	U.S. Department of Interior
Washington State Department of Transportation	U.S. Fish and Wildlife Service
U.S. Army Corps of Engineers	U.S. Environmental Protection Agency
City of Edmonds	National Oceanic and Atmospheric Administration
City of Lynnwood	Homeland Security/Transportation Security Administration
City of Mountlake Terrace	Advisory Council on Historic Preservation
City of Seattle	Federal Emergency Management Agency
City of Shoreline	Federal Railroad Administration
King County	National Park Service
Snohomish County	Seattle City Light
	Snohomish County Public Utility District
	Washington Department of Archaeology and Historic Preservation
	Washington Department of Fish and Wildlife
	Washington State Department of Ecology
	Puget Sound Regional Council
	Puget Sound Clean Air Agency
	Community Transit
	Everett Transit
	City of Mill Creek

[a] A cooperating agency is any federal agency, other than a lead agency, that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project or project alternative (40 CFR 1508.5).

[b] A participating agency is any agency with an interest in the project (23 USC 139(d)).

Sound Transit has been coordinating project planning with many of the agencies since the Alternatives Analysis. For several years, FHWA and WSDOT have been involved in the development and review of alternatives affecting I-5 or the use of I-5 right-of-way, and they have participated in technical reviews of the preliminary Draft and Final EIS documents. Local jurisdictions and other cooperating agencies have been similarly involved since the project's inception.

6.4 Tribal Coordination

Sound Transit contacted the following federally recognized tribes that have treaty rights, cultural resources, or other interests in the project area:

- Muckleshoot Indian Tribe
- Snoqualmie Tribe
- Stillaguamish Tribe of Indians

- Suquamish Tribe
- Tulalip Tribes
- Yakama Nation

FTA initiated government-to-government consultation with the affected tribes and invited them to become participating agencies. FTA and Sound Transit will continue to consult with the tribes regarding potential natural and cultural resources impacts. In compliance with the Historic Preservation Act, Sound Transit also contacted the Duwamish and Snohomish tribes, which are not federally recognized but have interests in cultural resources in the region.

6.5 Draft EIS Comment Period

Sound Transit published the Notice of Availability of the Draft EIS in the Federal Register and SEPA Register. The public comment period for the Draft EIS ran from July 26, 2013 to September 23, 2013 and included four public open houses and public hearings:

- August 14, 2013 — Nile Shrine Golf Center, Mountlake Terrace
- August 20, 2013 — Northgate Community Center, Seattle
- August 21, 2013 — Embassy Suites, Lynnwood
- August 22, 2013 — Shoreline Conference Center, Shoreline

In addition to the Federal Register and SEPA Register notices, Sound Transit advertised the comment period through mailed postcards, emails, community calendar postings, and online and print display advertisements.

Sound Transit collected written comments on the Draft EIS via mail, email, comment forms, and court reporter transcriptions of oral comments made during public hearings. Sound Transit received 634 comment documents (written, email, and hearing transcripts) during the comment period from agencies, tribes, and public. They were reviewed by Sound Transit and FTA, and considered during development of this Final EIS.

Chapter 7, Draft EIS Comments and Responses, discusses the public outreach and involvement process leading up to the release of the Draft EIS and summarizes the comments received. Appendix P, Draft EIS Public Comments and Responses, provides Sound Transit's and FTA's response to each substantive comment received.

Preferred Alternative

Based on information in the Draft EIS, and comments from the public, agencies, and tribes, the Sound Transit Board, in Motion M2013-96, identified a Preferred Alternative in November 2013 for evaluation in the Final EIS. Motion M2013-96 also directed Sound Transit to further evaluate potential modifications and options

for the Preferred Alternative and other alternatives, as described in Chapter 2, Alternatives Considered. Sound Transit conducted further public outreach and communication about the Preferred Alternative. This outreach included emails to those on the project email list, social media, a newsletter, updates on the project Web site, drop-in meetings, and booths or kiosks in community centers and gathering places in the corridor where staff, handouts, and displays provided updates.

6.6 Final EIS, Sound Transit Board Action, and the Federal Record of Decision

The Final EIS is one of the final steps in the NEPA and SEPA process before FTA and Sound Transit decide whether to take further action on the project. This Final EIS was released with a notice of availability published in the Federal Register, advertised in the *Seattle Times* and other publications, and with written notice to all parties that commented during scoping or in the review of the Draft EIS. Distribution of the Final EIS in written and electronic form mirrors the distribution used for the Draft EIS.

The Sound Transit Board, following the Final EIS release, will select the project to be built. After the Board takes action, FTA is anticipated to issue a Record of Decision in accordance with NEPA. At that point, Sound Transit would move forward with securing federal funding, completing final design, obtaining permits, starting construction, and then moving into operations. Other federal, state, and local agencies, such as FHWA, WSDOT, the U.S. Army Corps of Engineers, and the corridor cities will also be asked to take action on permits and approvals and may rely on this Final EIS to support their decisions. See pages iv-v of the Summary for a list of approvals that the project is expected to need.

7 DRAFT EIS COMMENTS AND RESPONSES

This chapter summarizes the agency, tribe, and public comments Sound Transit and FTA received during the 60-day public comment and review period following the release of the Draft EIS for the Lynnwood Link Extension on July 26, 2013.

A Draft EIS Public Comment Summary Report was prepared for the Sound Transit Board and FTA following the public comment period, and posted on the project Web site. Based on its review of the Draft EIS, and comments received from the public, agencies, and tribes, the Sound Transit Board identified a Preferred Alternative for evaluation in this Final EIS, along with other alternatives. All of the comments received are in Appendix P, Draft EIS Public Comments and Responses.

7.1 Overview of the Draft EIS Comments

Sound Transit and FTA received 634 comment submittals from the public (individuals), agencies, tribes, businesses, and organizations. The comment tallies in Table 7-1 include the spoken comments made at the public hearings, as well as written comments. Some of the written comments came in the form of petitions, including one that had been posted online and endorsed by more than 1,800 people.

The two most common topics were the impacts to the Seattle Latvian Evangelical Lutheran Church and Community Center in Seattle in Segment A, and to Scriber Creek Park in Lynnwood in Segment C.

Most of the other comments focused on a preference for one or more of the light rail alternatives or station locations, but many people also had specific comments on potential environmental issues discussed in the Draft EIS. These topics notably concerned acquisitions, displacements, and relocations; ecosystem resources; transportation; noise and vibration; visual and aesthetic resources; social impacts, community facilities, and neighborhoods; and parks and recreational resources.

Table 7-1 shows the number of comments Sound Transit and FTA received by commenter type during the comment period.

Table 7-1. Comment Submittals Received by Commenter Type

Commenter Type	Number
Federal Agency	5
Tribe	1
State or Regional Agency	4
Local Agency	15
Businesses	8
Organizations or Groups	46
Individual	555

7.2 Comments from Agencies and Tribes

Three federal agencies provided brief comments on the project but generally did not endorse specific alternatives. Four state agencies commented, including WSDOT. The local agencies, including all cities along the corridor, wrote to support the light rail extension and indicated preferences for specific alternatives. They also had comments about areas of environmental concerns and mitigation. Table 7-2 lists the agencies and tribes that provided comments to Sound Transit and FTA.

Table 7-2. List of Agencies and Tribes Providing Comments

Federal Agencies	Local Agencies and Jurisdictions
U.S. Army Corps of Engineers	Alderwood Water & Wastewater District
U.S. Department of Interior	Community Transit
U.S. Environmental Protection Agency	Edmonds School District
Other Governments	King County Department of Transportation
Ambassador of the Republic of Latvia	City of Lake Forest Park
Tribes	City of Lynnwood
Muckleshoot Indian Tribe	City of Mountlake Terrace
State Agencies	City of Seattle
Department of Archaeology and Historic Preservation (DAHP)	City of Shoreline
University of Washington's Department of Scandinavian Studies	City of Shoreline Fire Department
Washington State Department of Ecology	Puget Sound Regional Council (PSRC)
Washington State Department of Transportation	

7.2.1 Federal Agencies

The letter from the U.S. Army Corps of Engineers had no comments on the Draft EIS, but noted potential wetland impacts that would require its involvement during the project's permitting phases.

The U.S. Department of Interior sent a letter indicating no major comments, but subsequently amended the letter to note that two park properties, Twin Ponds Park in Shoreline and Jack Long Park in Mountlake Terrace, were developed with Land and Water Conservation Funds, and should be protected from transportation impacts. It noted that the NE 155th Street Station option with Alternative A5 (and Alternative A7) has the potential to affect Twin Ponds Park if transit users parked there for commuting purposes.

The EPA wrote in support of the overall project and its potential to provide environmental benefits, but expressed concerns about alternative alignments in Segments B and C that would affect aquatic or wetland resources or park properties. It asked for further information to be developed for the Final EIS, but also stated it had no major objections to any of the Segment A alternatives, or to Alternatives B1, B4, or C3. EPA recommended that the Final EIS include:

- A 404(b)(1) comparative alternatives analysis of wetlands impacts, particularly for Segments B and C
- More detail on Alternatives C1 and C2 construction and operation impacts to Scriber Creek Park and the Scriber Creek wetland complex
- Identification and listing of land purchase funding sources as well as use restrictions applied to parks and natural areas that would be affected by the proposed project
- Effects on ecological connectivity, including restoration options
- More detail on cumulative impacts to Scriber Creek Park and wetlands from the Lynnwood alternative for the OMSF
- Information about parking supply during construction

7.2.2 Tribes

The Muckleshoot Indian Tribe thanked Sound Transit and FTA for addressing its previous concerns, and added the following comments:

- Prefer Alternative C1 because it would have the fewest impacts on Scriber Creek and Swamp Creek tributary, associated wetlands and floodplain, and thus fewer impacts to salmon and salmon habitat
- Include Muckleshoot Indian Tribe Fisheries Division on state-owned culvert replacement projects (due to recent federal court decisions related to tribal involvement for such projects)
- Prefer enhanced treatment methods for stormwater water quality treatment to maximize removal of heavy metals and oils that may otherwise adversely affect salmon

7.2.3 State Agencies

WSDOT submitted a comment letter thanking Sound Transit for the cooperative planning to date. It noted the importance of keeping WSDOT's freeway management systems operational throughout construction (CCTV, Variable Message Signs, data station, ramp meters, etc.). WSDOT emphasized the need for effective multimodal access to stations. It also cited visual impacts as a key concern, and that WSDOT believed some areas had higher visual impacts than the Draft EIS stated. It asked Sound Transit to further explore mitigation measures and minimize the loss of vegetation, particularly large trees.

DAHP submitted a comment letter concurring with the Draft EIS preliminary finding that the project would have no adverse effect to historic resources.

Ecology wrote in support of alternatives that avoid and minimize impacts to wetlands and streams in the project corridor, such as Alternative C1 or C3, which reduce impacts to the Scriber Creek wetland complex. Ecology also submitted technical comments on the ecosystems and water resources sections of the Draft EIS.

The University of Washington's Department of Scandinavian Studies submitted a letter to express concern for the future of the Latvian Community Center (located at the Seattle Latvian Evangelical Lutheran Church), stating that the Department uses the Latvian Community Center to hold activities and events.

7.2.4 Regional and Local Agencies and Jurisdictions

PSRC wrote a letter concurring with the Draft EIS findings that the project would generally be consistent with regional planning documents. PSRC asked Sound Transit to provide more comparative detail on the transit-oriented development potential of various station alternatives. PSRC also asked Sound Transit to include station access data by mode and to show how those different modes contribute to potential ridership.

The letter from the King County Department of Transportation focused largely on Segment A alternatives. It emphasized station access issues, including the need for connecting transit service and nonmotorized travel options, combined with transit-oriented development in lieu of park-and-rides. Additionally, the King County Department of Transportation suggested the EIS acknowledge future tolling and other transportation demand strategies.

The letter from King County specifically supported Alternative A10 or A11, which include stations at NE 130th Street and NE 145th Street. It favors the NE 130th Street Station because it would capitalize on the strong ridership projections, provide more efficient local bus connections, and provide good nonmotorized access. It also supported a NE 145th Street Station, but asked for further study of lower parking capacity there because of congestion problems, with potentially more spaces at

NE 185th Street. King County also suggested a non-median station at Mountlake Terrace (with suggested design modifications) to allow continued transit use of the existing freeway stop by Sound Transit and Community Transit during light rail construction. King County also provided comments from its paratransit service division focusing on ADA-accessible facilities.

The City of Seattle supported the Alternative A1 alignment, but they preferred a station at NE 130th Street as shown on Alternative A5/A10 (Option 1), with no parking at NE 130th Street. The preference for the A1 alignment included specific comments on the following topics:

- Reducing impacts to the Seattle Latvian Evangelical Lutheran Church by maintaining its right-of-way access
- Reconstructing NE 130th Street off-ramp to address a high accident location
- Retaining trees on the east side of 1st Avenue NE between 113th Street and 115th Street
- Retaining strong existing
- connections and opportunities to provide improved bicycle and pedestrian facilities if 1st Avenue NE and the 117th Street bridge are reconstructed
- Including sidewalks and a bicycle lane on the west side of 5th Avenue NE between NE 130th Street and NE 145th Street

The City of Seattle's comments on the NE 130th Street Station (Alternative A5/A10, Option 1) suggested the station would expand access to the regional transit system. This station would have an average weekday ridership of 3,200 compared to 2,200 average weekday riders at the NE 145th Street Station, and would provide a unique opportunity for bus, bicycle, and pedestrian access.

The City of Mountlake Terrace supported the light rail project and noted the City's support for transit-oriented development. Although the City stated Alternative B1 was acceptable, the City prefers Alternatives B2 and B2A because they would provide the greatest opportunity for transit-oriented development. The City does not favor Alternative B4 because it is least supportive of transit-oriented development.

The City of Shoreline wrote a detailed comment letter that expressed excitement about the extension of light rail to Shoreline. The City identified NE 145th Street (Option 2) and NE 185th Street (Option 1) as the best locations for stations; the letter also provided details on the planning the City is doing in support of these stations. The City also noted that the NE 155th Street Station was not preferred because it would have higher impacts and less effective access. The City recommended a mostly at-grade alignment, and stated its interest in continuing to work with Sound Transit on project planning and design, especially in station areas

to ensure effective multimodal access. A letter attachment detailed further technical comments on the Draft EIS, including transportation-related issues at the station sites, as well as visual, ecosystem, land use, public safety and security, and utility impacts and issues.

The City of Lynnwood supported bringing light rail to the Lynnwood Transit Center, and proposed an alternative configuration, "C3 Modified," which it preferred over the alternatives in the Draft EIS. Alternative C3 Modified would be between Alternatives C2 and C3. The following are the City's key comments:

- Traffic impacts will be worse than presented in the Draft EIS
- A separate analysis is needed for the OMSF as an independent project
- The expectation that 80 percent of riders will arrive by bus is optimistic
- Alternative C3 could limit future development potential in areas slated for the highest density development in the Lynnwood regional growth center, particularly the City Center block located east of 44th Avenue West.

The City of Lake Forest Park wrote in support of light rail on the east side of I-5 in Segments A and B, and supported stations at NE 145th Street and NE 185th Street.

The letter from the Edmonds School District supported either Alternative B2 or B2A. The letter also supported the City of Lynnwood's C3 Modified alternative. The Edmonds School District asked to participate in the engineering and planning process for the Segment C alternatives because these alternatives would affect their property.

The letter from the Alderwood Water & Wastewater District requested that Sound Transit work with the District to ensure water supply is maintained in the vicinity of I-5 and the Interurban Trail.

The letter from the Shoreline Fire Department supported the NE 145th Street Station. The Fire Department is concerned that a NE 155th Street Station would interfere with its fire station operations.

Community Transit's letter supports the project. The agency expressed its intent to serve Link light rail stations in Snohomish County. The detailed comments focused on proposed mitigation measures to preserve mobility during construction, as well as system design elements that will enable effective bus-rail integration. Community Transit prefers Alternative C1 and Alternatives B1 and B2. Community Transit agrees with the comments provided by King County Metro's paratransit service, requesting that the station design maximize accessibility for all patrons.

7.3 Comments from Businesses

Sound Transit received eight comment letters from businesses within the project area:

- Cairncross & Hempelmann
- Cascade Trophy
- JC Auto Restoration
- Mayes Testing Engineers, Inc.
- Mike Raskin
- Mortgage Capital Associates
- Mullally Development Company
- Simon Property Group

Simon Property Group, the company that owns Northgate Mall, submitted a detailed letter from its attorneys outlining concerns about the cumulative effects of the Lynnwood Link Extension, Northgate Link Extension, and King County's plans for transit-oriented development south of the mall. The letter described concerns about mall traffic access, visibility of the mall for customers coming from I-5 and 1st Avenue NE, traffic on arterials and local streets near the mall, and parking—both parking for mall patrons and exacerbation of existing "hide and ride/park" problems.

The Mullally Development Company, owner of the Northgate Plaza Apartments, does not believe the Draft EIS fully takes into account the project's impacts on their property. They have concerns about the access to their property (they would like a more complete discussion of access during construction), and noise and vibration impacts. They prefer Alternative A1, and do not agree with the conclusion that the Northgate Plaza Apartments are eligible for listing on the NRHP.

Sound Transit received a letter from Cairncross & Hempelmann, a law firm representing several unnamed local, national, and international real estate developers constructing and/or planning transit-oriented development projects adjacent to future Sound Transit light rail stations. The law firm provided its assessment of the potential for transit-oriented development in the corridor by alternative, and supported Alternatives A3 (for its stations at NE 145th and NE 185th Streets), B1, B2, B2A, and C1.

Five businesses in Lynnwood provided comments. All strongly preferred Alternative C3, or an alternative that is not aligned along 52nd Avenue West, to avoid the business acquisitions that Alternative C1 would have. These businesses stated that relocation would be difficult. One of the businesses employs more than 100 employees.

7.4 Comments from Community Organizations

Sound Transit received comments from community organizations, including established organizations as well as less formal neighborhood groups. Most of these groups wrote in support of the project, but some had concerns about specific alternatives or issues. Table 7-3 lists the community organizations that commented.

Table 7-3. List of Community Organizations Providing Comments

Comments from Community Organizations		
145th-155th Street Station Citizens Committee	Latvian Association of the State of Washington	Seashore Transportation Forum
185th Station Citizen Committee	Latvian Evangelical Lutheran Church Abroad	Seattle Congregation of Estonian Evangelical Lutheran Church
American Latvian Association	Latvian Evangelical Lutheran Congregation of Seattle and Latvian Association of Washington	Seattle Estonian Society
American Latvian Association, Latvian Museum	Latvian Seniors Association	Seattle Latvian Community Center
American Latvian Youth Association	Latvian Sorority Gundega	Seattle Latvian Lutheran Church
Bellevue Sister Cities Association	Lettonia State of Washington Alumni Association	Seattle Latvian School
Cascade Bicycle Club	Mezotne Latvian Language Camp	Senior Services
Edmonton Latvian Society	Northgate West Condominiums	Sigulda
Estonian American National Council	North King County Mobility Coalition	Sound Cities Association
Feet First	Paramount Park Neighborhood Group	Thornton Creek Alliance
Fellowship of American Baltic Spouses	Parkwood Neighborhood Association	Thornton Creek Legal Defense Fund
Friends of Jackson Park Trail	Pilchuck Audubon Society	Transportation Choices
Futurewise	Ridgecrest Neighborhood Association	West Coast Latvian Song Festival
Honorary Consul of the Republic of Estonia		
Lithuanian-American Community—Washington State Chapter	Save Scriber Creek Park	World Federation of Free Latvians

About half of the written comments from organizations, as well as half the statements made at public hearings, were associated with the Seattle Latvian Evangelical Lutheran Church and its community center. These commenters urged Sound Transit to choose an alternative that would not affect the church or community center because it is an important and unique community resource. Twenty-three different organizations affiliated with Latvian heritage sent written comments, including the Honorary Consul of the Republic of Estonia in Seattle. Their comments consistently highlighted the importance of the Latvian Evangelical Lutheran Church and Community Center for the local and national Baltic community. Many of the comments described how these facilities have been used

for cultural activities and events for more than four decades, after being relocated in the 1970s. Some representative comments follow:

> "The center is of important cultural heritage and importance to Seattle-area Latvians and Balts. When the Latvian refugees were admitted to the United States after World War II, several hundred settled in the Seattle area."
>
> "The church and the center are the glue holding our organization (Latvian Sorority Gundega) and our community together, allowing it to grow while preserving Latvian ethnicity and culture."
>
> "I am very concerned that all of the proposed alternatives will severely impact the Latvian Church and Community Center and the activities of hundreds of families who consider it their 'ethnic home.'"

Organizations such as Futurewise, Sound Cities Association, Transportation Choices Coalition, North King County Mobility Coalition, and SeaShore Transportation Forum commented on transit-oriented development, mobility, and access issues. Most of these organizations preferred a station at NE 145th Street and were opposed to the NE 155th Street Station, typically citing access and transit-oriented development potential for their preferences. Most also supported the NE 185th Street Station, and Futurewise and Transportation Choices Coalition supported a station at NE 130th Street. They also supported Alternative B2A, citing its transit-oriented development potential.

Transportation Choices Coalition, Feet First, and the Cascade Bicycle Club emphasized the need for the project to provide multimodal benefits, including benefits to bicyclists and pedestrians, and urged Sound Transit to do more to provide facilities and infrastructure for these travel choices. Some of the suggestions included evaluating potential new bicycle and sidewalk facilities within a 3-mile radius of the proposed light rail stations, adding more stations, constructing more sidewalks and bicycle improvements instead of parking facilities, and siting the stations as far from I-5 as possible. Several parties questioned the need for parking garages when the region is encouraging denser communities that depend less on the automobile.

The North King County Mobility Coalition was concerned with ADA issues. The organization felt the Draft EIS focused primarily on the needs of able-bodied commuters, and it would like to see greater outreach to and input from special needs communities as the project continues.

Several community or neighborhood groups and associations located along the corridor wrote comments about specific alternatives and issues near them. Many of these groups were from neighborhoods in Segment A, and included the Ridgecrest Neighborhood Association, the Paramount Park Neighborhood Group, the Parkwood Neighborhood Association, and neighborhood groups near the NE 185th Street and NE 145th/NE 155th Street stations. Several of these groups discussed

trade-offs between the NE 145th Street and NE 155th Street Stations, but indicated that their members were not unified in a station preference. Others encouraged Sound Transit to develop stations that were in scale with the neighborhood and allowed good access from the neighborhoods. Congestion, parking, visual impacts, noise, and safety were common concerns.

The Save Scriber Creek Park group circulated a petition against Alternatives C1 and C2, and gathered approximately 1,800 signatures (their count). They stated Alternative C3 was the clear "winner" with their group.

The Thornton Creek Legal Defense Fund, Paramount Park Neighborhood group, Thornton Creek Alliance, and Friends of Jackson Park Trail wrote letters concerning impacts to Thornton Creek and other natural resources in the project area, water quality, parks, trails, and open spaces; several of the letters suggested areas where mitigation was needed.

7.5 Comments from Individuals

Sound Transit and FTA received 555 comment submittals from individuals, either in writing or recorded by court reporters at the open houses and public hearings. They covered a wide range of topics; the most common are presented here.

Segment A Alternatives

Of the Segment A alternatives, A1 was most often identified as the preferred route with A5 and A10 having the second greatest preference. Of the alternatives for station locations, more people favored the NE 130th Street Station, followed by preference for the NE 145th Street Station and the NE 155th Street Station. Of the options for the NE 185th Street Station, those who identified an option chose Option 1 (at-grade station east of I-5 with 500-stall parking garage to the west) over the other two options.

Segment B Alternatives

Of the Segment B alternatives, B2A was preferred by the most people. With this alternative, more people supported the 220th Street SW Station than opposed it.

Segment C Alternatives

Of the Segment C alternatives, the majority of responders preferred Alternative C3, with C1 the second most preferred. Those in support of Alternative C3 typically cited the need to preserve Scriber Creek Park, but many also noted acquisition and displacement impacts and stream and wetland impacts. The majority of those in favor of C1 provided their comments via a form letter with no explanation for their preference.

Acquisitions, Displacements, and Relocations

Most of the individual comments were related to acquisitions, displacements, and relocations, primarily regarding the Seattle Latvian Evangelical Lutheran Church. Comments related to other properties were less common, although several provided detailed descriptions of the impacts to specific properties. For instance, the owner of rooming houses south of the proposed NE 130th Street Station was concerned with acquisition of the properties and the effects it would have on investment and income. Similar comments came from businesses affected by Alternative C1 or C2.

Social Impacts, Community Facilities, and Neighborhoods

Comments on social impacts, community facilities, and neighborhoods focused largely on the Segment A alternatives, especially the Seattle Latvian Evangelical Lutheran Church, and on Segment C Alternatives C1 and C2. The largest number of comments were from members of this church and users of the community center. They described the importance of the Seattle Latvian Evangelical Lutheran Church and community center and stated concerns about not only the loss of these facilities, but also the potential effects of the loss of community.

Transportation

Transportation had the third greatest number of comments among environmental impact topics. The most common comments concerned pedestrian and bicycle amenities, parking, transit, and local streets and intersections. The main comments related to parking included on-street parking conflicts between local residents and commuters, insufficient parking, and too much parking (i.e., Sound Transit should not provide parking). Commenters also emphasized the need to integrate local transit with the light rail system and expressed concern over increased traffic in the vicinity of station locations and the potential effects on local streets and arterials.

Land Use and Economics

Most comments on land use and economics were related to transit-oriented development, including comments favoring specific stations that they felt could create transit-oriented development opportunities. Other commenters noted concerns about property values for single-family homeowners, or the need for mitigation during construction.

Visual and Aesthetic Resources

There were some concerns about impacts on visual and aesthetic resources. Most of these comments were from those living in single-family homes abutting the proposed alignments.

Noise and Vibration

Noise and vibration-related comments were mostly about the potential for noise, and included comments from single-family homeowners and representatives of the Seattle Latvian Evangelical Lutheran Church.

Ecosystem Resources

Most of the comments on ecosystem resources related to tree and vegetation removal, and impacts to streams and wetlands. Most expressed concerns about the impacts of Alternatives C1 and C2 on the ecosystem resources at Scriber Creek Park and associated wetlands.

Public Services, Safety, and Security

The few comments received on this topic were mostly about impacts to the fire station near the proposed NE 155th Street Station.

Cultural, Archaeological, and Historic Resources

There were few comments on this specific topic, although there were many comments noting the Seattle Latvian Evangelical Lutheran Church as an important cultural center for Latvians and those with Baltic heritage.

Parks and Recreational Resources

This topic received numerous comments. Most were related to the parks and open space in the vicinity of Alternatives C1 and C2, especially Scriber Creek Park.

Suggestions for Other Alternatives

Sound Transit received some comments recommending other alternatives or modifications to the alternatives presented in the Draft EIS. Chapter 2 describes how these suggestions were addressed in the Final EIS. The primary suggestions were:

- The City of Lynnwood suggested a modified Alternative C3 that would potentially allow greater redevelopment of the City Center property block east of 44th Avenue West; the modification would place a station and alignment generally midway between Alternatives C2 and C3. (The Edmonds School District supported this suggestion as well.)
- The Pilchuck Audubon Society asked Sound Transit to consider an alternative that would avoid the Scriber Creek area. It proposed extending the route farther along I-5 before shifting east to the Lynnwood Transit Center or continuing the route north to the Alderwood Mall.
- Futurewise asked Sound Transit to consider a new alternative in Segment C to allow for a station closer to the Lynnwood Transit Center.

Most other commenters did not suggest new alternatives, but many encouraged considering options to avoid affecting the Seattle Latvian Evangelical Lutheran Church, including a comment suggesting moving I-5 to the west. Others recommended options that would avoid properties in specific locations. Another suggested a station at 220th Street SW in the freeway median.

7.6 Responses to Common Comments

Appendix P of this Final EIS includes responses to each substantive comment received during the Draft EIS public comment period. It lists the commenter's name and comments, and provides Sound Transit's and FTA's responses. Table 7-4 shows some of the most common comments received and the responses. They have been summarized or paraphrased.

Table 7-4. General Responses to Draft EIS Common Comments

Common Theme	Common Response
Alternatives Considered	
Consider a modified Alternative C3.	In response to the City of Lynnwood's request for a modified Alternative C3 to better connect to the Lynnwood Transit Center, preserve re-developable land, and minimize wetland and stream impacts, Sound Transit, in collaboration with the City of Lynnwood, developed a modification of Alternative C3 for the Final EIS. The Final EIS calls this the Preferred Alternative.
Consider increasing the number of stations.	Sound Transit considered additional stations beyond those outlined in earlier planning studies and additional stations were added as a result of early EIS scoping comments. Opportunities for stations also need to coincide with east-west access points, which are limited. As a regional transit project with a purpose and need to connect major regional centers, the number of stations needs to be balanced with the prevailing surrounding densities (single-family residential in much of this corridor) and the increase in system-wide travel time that would result from adding stations.
Did Sound Transit consider routes away from I-5?	Alternative routes away from the I-5 corridor were considered during the Alternatives Analysis and early EIS planning based on input from the public during early scoping and EIS scoping. These routes included alignments along Lake City Way, 15th Avenue NE, and SR 99. Given the lack of available right-of-way in the largely developed areas outside of I-5, these other alignments would involve higher levels of impacts to traffic and the built environment (particularly neighborhoods), lower ridership, and higher costs. For more detail see Section 2.6 in Chapter 2.

Table 7-4. General Responses to Draft EIS Common Comments

Common Theme	Common Response
Transportation Impacts and Mitigation	
Multimodal access to the stations should be a high priority. Sound Transit should accommodate all modes, including buses, bicycles, pedestrians, and automobiles.	The project's purpose is to expand the light rail system in order to provide reliable, rapid, and efficient transit service that, among other benefits, connects to the regional multimodal transportation system. This system includes buses, bicycles, pedestrians, automobiles, paratransit, and persons with disabilities. Appendix F, Conceptual Plans, of the Final EIS illustrates the conceptual design of station features that accommodate these modes. Sound Transit has also adopted a system access policy to help guide access decisions throughout the region.
Suggestions to lower or increase the parking provided at stations.	The alternatives identify the number of park-and-ride spaces for station options as a planning estimate that serves as a conservative basis for impact analysis, cost estimating, and ridership forecasts. For the Final EIS, additional parking supply options were also considered at Mountlake Terrace Transit Center and the Lynnwood Transit Center. The estimates consider accessibility of the station area, overall ridership, conditions of the local roadway network, the desires of the local jurisdictions and surrounding community, and the likely demand for automobile access to the stations. The automobile demand is also analyzed from an overall corridor perspective and the distribution of spaces by station. Sound Transit balances the sizing and design of the parking facility at the station with the need for good multimodal connections in order to serve the needs of the region as well as local communities. The agency's system access policy will also guide final design details about parking spaces.
What are the proposed traffic mitigation and improvements in the neighborhoods surrounding the proposed stations?	The traffic impact mitigation measures are identified in the Final EIS in Chapter 3. Sound Transit updated them to reflect design refinements as well as additional traffic forecasts and analysis. In addition to mitigation, some elements of the project (such as new or modified roadways, sidewalks, and intersections) are described in Chapter 2, with conceptual designs illustrated in Appendix F.
Environmental Impacts and Mitigation	
4.1 Acquisitions, Displacements and Relocations; 4.4 Social Impacts, Community Facilities, and Neighborhoods	
Avoid displacement of the Seattle Latvian Evangelical Lutheran Church. The church is culturally important to the region's Latvian community, the larger Baltic community, and those interested in Scandinavian studies.	All Segment A alternatives now realign a section of 3rd Avenue NE to avoid displacing the church or the church hall (also called the cultural center).

Table 7-4. General Responses to Draft EIS Common Comments

Common Theme	Common Response
4.2 Land Use	
Consider transit-oriented development at station locations.	Sound Transit's policy is to support transit-oriented development around its light rail stations. However, conceptual plans for the stations (including parking garages) do not depict specific transit-oriented development details. Several stations are also on the I-5 right-of-way, where non-transportation uses are not allowed, although development could still occur on nearby properties. Sound Transit will consider opportunities to encourage transit-oriented development partnerships with others. Sound Transit will also coordinate with local jurisdictions and other property owners to consider opportunities to maximize transit-oriented development potential in station areas.
4.5 Visual and Aesthetic Resources	
Retain mature trees to improve aesthetics and to provide a visual separation for the residential areas surrounding the stations.	The Preferred Alternative has modifications to minimize tree removal in some locations, but in other locations removal is unavoidable. The project will include landscaping and aesthetic treatments where feasible, and WSDOT and the Cities also have tree replacement requirements that apply to the project. It may take 15 to 20 years for plant growth to fully screen large facilities, such as parking garages or the guideway, and replacing the mature evergreen trees could require 30 to 50 years of growth. Section 4.5.6 in Chapter 4 has more details.
4.7 Noise and Vibration	
Retain a tree buffer to minimize noise created by the light rail.	Dense, evergreen foliage, at least 100 feet deep and 20 feet high, has been shown to reduce noise from traffic by up to 3 dB; however, the project corridor is too narrow to maintain enough foliage to notably reduce noise levels. Buffers may still be used to help minimize visual impacts. Section 4.7 (Noise and Vibration) describes the mitigation measures Sound Transit would take to address noise impacts.
Noise pollution from I-5 is already an issue; please minimize additional noise that would result from the proposed light rail.	It is Sound Transit's policy to mitigate moderate to severe noise and vibration impacts caused by the project, as defined by FTA and FHWA criteria.
4.8 Ecosystem Resources	
Sound Transit's alternatives should protect wetlands and streams.	The alternatives were developed to protect or avoid impacts to wetlands and streams, especially high quality resources. In areas where impacts may still occur, Sound Transit has explored design refinements that could avoid or reduce impacts. In addition to complying with local, state, and federal environmental laws and regulations that emphasize avoidance and minimization, Sound Transit's policy, Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007), states that Sound Transit's projects are to avoid impacts on environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure no net loss of ecosystem function and acreage as a result of agency projects. These values have been incorporated in the design of the alternatives for this project.

Table 7-4. General Responses to Draft EIS Common Comments

Common Theme	Common Response
4.9 Water Resources	
Incorporate low impact development into all alternatives to the maximum extent feasible.	Sound Transit requires all projects to consider low impact development methods, such as permeable pavement, as a first choice for stormwater treatment. Many such measures are already incorporated within the project's conceptual designs, and Sound Transit will continue to consider low impact development strategies as part of the final design.
4.14 Public Services, Safety and Security	
Avoid interference with Shoreline Fire Station No. 65 near proposed NE 155th Street Station.	Sections 4.14.2 and 4.14.5 in Chapter 4 describes measures Sound Transit could apply to manage traffic serving the station while maintaining effective access for the fire station. If this station is included in the project, Sound Transit would work closely with the City of Shoreline and the Fire Department to resolve potential conflicts with bus and vehicle traffic, and to maintain emergency response times and access during the construction period and light rail operation.
4.17 Parks and Recreational Resources	
Please avoid impacting Scriber Creek Park.	Alternatives C1 and C2 impact Scriber Creek Park. Alternative C1 crosses Scriber Creek Park, while Alternative C2 runs near (but outside) the southern border of the park. Section 4.17.6 in Chapter 4 includes proposed measures to mitigate impacts if these alternatives are selected; however, for Alternative C1, some impacts would be unavoidable. For this reason, FTA has determined that Alternative C1 would result in a Section 4(f) use of Scriber Creek Park; therefore, Sound Transit would need to pursue alternatives that would avoid the park. The Preferred Alternative and Alternative C3 would not impact Scriber Creek Park.

Appendix A

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Appendix B

Glossary

APPENDIX B – GLOSSARY

Access Time. The time required to walk, bicycle, or drive from the origin of the trip (for example, from home) to a (boarding) transit stop, plus the waiting time based on the frequency of transit service, and/or the transfer time and the walking or driving time from the transit (de-boarding) stop to the destination. For automobile trips, it is the time required to walk to and from parking places, and delays within parking facilities, if any.

Accessibility. The ease by which an individual can reach desired activities in any location by use of the transportation system.

Air Pollutant. Smoke, dust, fumes, or odors in the ambient air that have the potential for harmful effects.

Alighting. Term describing the departure of passengers from a bus or transit vehicle.

Alignment. Horizontal geometric elements, which define the location of the light rail track or roadway.

Alluvium. An unconsolidated, terrestrial sediment composed of sorted or unsorted sand, gravel, and clay that have been deposited by water in streams, rivers, and creeks.

Annualized Capital Cost. A one-time capital cost converted into an annual value that incorporates both the depreciation on the capital item and the foregone interest on the money invested in the project.

Aquatic Resource. The physical elements of the aquatic environment, such as streams, rivers, lakes, and shorelands; as well as life forms such as aquatic plants and fish that live within the aquatic environment.

Aquifer. An underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, or silt) from which groundwater can be extracted using a water well.

Area Source. A general classification of the origin of an air pollutant (e.g., park-and-ride lots are area sources of carbon monoxide emissions).

Arterial. A major thoroughfare used mainly for through traffic rather than access to adjacent property. Arterials generally have greater traffic-carrying capacity than collector or local streets and are designed for continuously moving traffic.

Artifact. Any portable object used and/or modified by civilization (particularly during prehistoric times).

At-Grade. Term used to express that a feature, such as a rail track or crosswalk, and a roadway meet at the same elevation.

At-Grade Crossing. Any intersection of two or more flows of traffic at the same elevation (possibly involving more than one mode of transportation), such as light rail/road crossings.

Attainment Area. An attainment area is an area considered to have air quality as good as or better than the national ambient air quality standards for specific pollutants as defined in the Clean Air Act.

Average Annual Megawatt. The average hourly demand for or supply of electricity measured in megawatts over a year.

Average Daily Traffic (ADT). The total volume of traffic during a given time period divided by the number of days in that time period, representative of average traffic in a 1-day time period.

Average Time (also, Exposure Time). The duration of exposure to a given concentration of an air contaminant, specified in the ambient air quality standards (e.g., the two national standards of 9 parts per million and 35 parts per million specify averaging times of 8 hours and 1 hour).

Average Wait Time. Average time spent by passengers at a station or bus stop waiting for transit service.

Average Weekday. A measurement of average conditions during one weekday, i.e., Monday through Friday.

A-Weighted Sound Level (dBA). To approximate the way humans interpret sound, a filter circuit with frequency characteristics similar to the human hearing system is built into sound measurement equipment. Measurements with this filter enacted are referred to as A-weighted sound levels, expressed in dBA (see Decibel).

Background Concentration. The pollutant level that would exist at a site in the absence of air pollution sources in the neighborhood of the site.

Baseline Energy Consumption. Energy consumption, usually for a no-build alternative, that is used as a reference against which energy consumption for a build alternative is compared.

Best Management Practices (BMPs). Approved physical, structural, and/or managerial practices that, when used singularly or in combination, prevent or reduce pollutant discharges.

Bioretention Facility. A shallow landscaped depression with an engineered soil mix designed to filter runoff from a small contributing area, which can be in the form of a swale or cell. It is commonly referred to as a rain garden.

Boarding. Term describing the arrival of passengers onto a bus or transit vehicle.

Boarding Trips. A trip on a transit line or group of lines where each boarding of a transit vehicle is considered the start of a new trip. Number of trips boarding (entering) transit vehicles, regardless of whether the trip involves a transfer from another transit vehicle. A fare may or may not be collected for each boarding trip, depending on whether a transfer is used.

British Thermal Unit (Btu). An energy unit equal to the quantity of heat required to raise the temperature of 1 pound of water 1 degree Fahrenheit.

Buffer. An area adjacent a critical area (e.g., wetland or stream) that functions to avoid loss or decline in ecological functions and values. In addition to preserving the ecological functions of a

wetland system, a buffer physically isolates a critical area from potential disturbance and harmful intrusion, and works to minimize risk to the public from loss of life, well-being, or property damage.

Capacity, Person. The maximum number of persons that can be carried past a given location during a given time period under specified operating conditions without unreasonable delay, hazard, or restriction (usually measured in terms of persons per hour).

Capacity, Roadway. The maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway and traffic conditions.

Capacity, Vehicle. The maximum number of vehicles that can be accommodated in a given time by a transit or highway facility.

Capital Costs. Non-recurring costs required to construct transit systems, including costs of right-of-way, facilities, rolling stock, power distribution, and the associated administrative and design costs, as well as financing charges during construction.

Carbon Monoxide (CO). A colorless, odorless, tasteless gas, and one of the U.S. Environmental Protection Agency's criteria air pollutants released from automobile exhaust.

Carpool. A group of passengers and drivers organized to use one automobile on a regular basis, riding together, for the same trip purpose (generally the work trip).

Census Tract. A census tract is a small subdivision of an urban area used by the U.S. Census Bureau to identify population and housing statistics. Census blocks are subdivisions of census tracts and are the smallest unit of census geography for which the Census Bureau collects data. The boundaries of census blocks are generally streets or other notable physical features and often correspond to a city block. A census block group is a combination of census blocks, typically encompassing two to four city blocks. The U.S. Census collects some information at the block level, some at the block group level, and some at the tract level.

Channelization. The use of traffic markings or islands to direct traffic into certain paths. For example, a "channelized" intersection directs portions of traffic into a left turn lane through the use of roadway islands or striping that separates the turn lane from traffic going straight.

Circulation. The free movement or passage of a vehicle, pedestrian, bicycle, or other transportation mode through a given area.

Concentration (also, level). A measure of the air pollutant in the ambient air, having the units of mass per volume.

Conformity (air quality). A process that ensures federal funding and approval goes to transportation activities consistent with federal air quality goals. The Federal Highway Administration and the Federal Transit Administration jointly determine that specific regions meet air quality standards.

Construction Staging Area. During construction, a site temporarily used for materials or equipment storage, assembly, or other temporary, construction-related activities.

Corridor. A general path from one point to another; the Lynnwood Link Extension study corridor begins in Northgate and travels north to Shoreline, Mountlake Terrace, and Lynnwood.

Criteria Air Pollutants. Those air pollutants that have been recognized by the U.S. Environmental Protection Agency as potentially harmful and for which standards have been set to protect the public health and welfare. The criteria air pollutants are carbon monoxide, sulfur dioxide, particulates, nitrogen dioxide, ozone, hydrocarbons, and lead.

Day Night Sound Level (Ldn). Ldn is a 24-hour equivalent continuous sound level (Leq), but with a 10-dB penalty assessed to noise events occurring at night. Nighttime is defined as 10 pm to 7 am. This strongly weights Ldn toward nighttime noise because most people are more easily annoyed by noise during the nighttime hours when background noise is lower and most people are sleeping.

dBA. The sound level obtained through the use of A-weighting characteristics specified by the American National Standards Institute (ANSI) Standard S1.4-1971. The unit of measure is the decibel (dB), commonly referred to as dBA when A-weighting is used. The "A" weighting scale closely resemble human response to noise.

Decibel. The unit used to measure the loudness of noise.

De Minimis Finding. De minimis is a Latin phrase meaning something of insignificance or negligible. De minimis impacts are defined as those elements that do not adversely affect the activities, features, and attributes of a Section 4(f) resource or property.

Dewatering. The temporary removal of ground or surface water from a construction area to allow construction to be done under dry conditions.

Displacement. A property acquisition that would require removing an existing use.

Disturbed Habitat. A habitat in which naturally occurring ecological processes and species interactions have been significantly disrupted by the direct or indirect results of human presence and activity.

Drop-Off Zone. A station that provides temporary loading and unloading facilities for automobiles and/or buses. The station may be combined with feeder bus stations, stations that provide lateral bus transportation service for riders to transfer to a light rail mode.

Ecologically Sensitive Area. An area, valued locally for its rare or sensitive habitat, existing in a relatively undisturbed, natural state and supporting indigenous species.

Elevated Guideway. A guideway that is positioned above the normal activity level (e.g., elevated structure for light rail to cross over a street).

Emission. Particulate, gaseous, noise, or electromagnetic byproducts of the transit system or vehicle.

Emission Control. Method by which emissions are governed in an effort to minimize pollutants and/or noise.

Emission Inventory. A listing by emission source of the amounts of air pollutants released into the atmosphere (generally, in tons or kilograms per day).

Emission Source. The origin of an air pollutant (e.g., automobiles and trucks are sources of carbon monoxide, hydrocarbons, and nitrogen oxides).

Emission Standards. A limitation on the release of an air contaminant into the ambient air (e.g., the federal government limits carbon monoxide, hydrocarbon, and oxides of nitrogen (NOx) emissions per mile of travel in new automobiles).

Endangered Species. According to the Endangered Species Act of 1973, an endangered species is any species in danger of extinction throughout all or a significant portion of its range, other than an insect determined by the Secretary of the Interior to constitute a pest whose protection under the provisions of this act would present an overwhelming and overriding risk to man.

Equivalent Level (Leq). Leq is a measure of sound energy over a period of time. It is referred to as the equivalent sound level because it is equivalent to the level of a steady sound which, over a referenced duration and location, has the same A-weighted sound (dBa) energy as the fluctuating sound.

Express Service. Transit service where a very limited number of stops is made.

Facility. The means by which a transportation mode is provided. For example, a sidewalk is a facility for pedestrians as a highway is a facility for vehicles.

Fixed Guideway. A public transportation facility using a separate right-of-way for the exclusive use of public transportation or a system of vehicles that can operate on its own guideway constructed for that purpose (e.g., commuter rail, light rail).

Forest or Woodland Habitat. In the Puget Sound lowlands, a habitat type generally dominated by Douglas fir, western red cedar, and western hemlock, frequently with a hardwood understory. The ground cover is generally lush. Birds and small mammals abound, and larger mammals are common in large stands.

Frequency, Vehicle. Time rate of vehicle arrivals at a station stop or along a transit line.

Full Acquisition. The full parcel would be acquired and the current use would be displaced. Full acquisitions include parcels that might not be fully needed for the project but would be affected to the extent that current uses would be substantially impaired (e.g., loss of parking or access).

General Purpose Lane. Term used to describe a traffic lane on a highway that can be used by all types of vehicles including single-occupant automobiles, carpools, trucks, and motorcycles.

Glacial Till. This type of soil typically consists of a diverse mix of gravelly sand with scattered cobbles and boulders in a clay/silt matrix. It is very dense and is locally referred to as "hardpan." The predominant glacial till encountered in the project area is Vashon-age glacial till.

Grade Separated. Parallel or crossing lines of traffic that are vertically or horizontally physically separated from each other and do not share a common intersection.

Greenhouse Gases (GHG). Greenhouse gases include carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). These gas emissions are collectively leading to the greenhouse effect, trapping the sun's solar rays and leading to an increase in Earth temperature.

Groundborne Noise. Noise that is transmitted through the ground, typically reported in decibels.

Groundborne Vibration. A small but rapidly fluctuating motion transmitted through the ground, typically reported as velocity or acceleration.

Guideway. Specifically designed way traversed by transit vehicles constrained to the way (see Elevated Guideway).

Habitat Function. Terrestrial plant communities, wetlands, and aquatic systems such as streams provide a variety of functions in the environment. For instance, depending on the condition and location of a wetland, wetland functions might include water quality improvement, groundwater recharge, nutrient and sediment filtering, and habitat for a variety of animals, as well as education and recreation opportunities for people—the habitat function is one of several functions potentially performed by wetlands. Similarly, terrestrial and aquatic systems each also may perform many functions. When they provide habitat for animals, they are said to be performing or providing a "habitat function."

Habitat Value. The value of a plant community's function as determined by the habitat's ability to support the needs of biological species. High-value habitats are those that support or may support threatened, endangered, and/or sensitive species as determined by federal, state, and local jurisdictions.

Hazardous Materials. Hazardous materials are materials, which, because of their chemical, physical, or biological nature, pose a potential risk to life, health, or property when released. Such materials include hazardous waste, dangerous waste, hazardous substances, and toxic substances.

Headway. The headway between vehicles in public transit systems is the amount of time (usually in minutes) that elapses between two vehicles passing the same point traveling in the same direction on a given route.

High-Capacity Transit. A system of public transportation services within an urbanized region operating principally on exclusive rights-of-way; examples include light rail transit or express buses on exclusive bus ways and their supporting services.

High-Occupancy Vehicle (HOV). Any passenger vehicle that meets or exceeds a certain predetermined minimum number of passengers, for example, more than two or three people per automobile. Typically includes carpools with two or more people, vanpools, and buses.

Hours of Service. The number of hours during the day between the start and end of service on a transit route, also known as the service span.

Indirect Energy. A term used to denote all energy inputs for the construction, operation, and maintenance of a system.

Indirect Source. An entity that does not directly emit pollutants but attracts emission sources such as automobiles and trucks. Shopping centers, stadiums, and highways are examples of indirect sources.

Integration with Other Modes. Method by which a transit system interfaces with other modes of transportation.

Interchange. The system of interconnecting ramps between two or more intersecting roadways or guideways that are grade separated.

Interim Terminus. A station where the project would operate until the next portion of the project can be built. The terminus would typically include a station with tail tracks extending beyond the station for layover of trains.

Kilowatt (kW). A unit of electrical energy.

Kilowatt-hour (kWh). One kilowatt of energy used over one hour.

Land Development Pattern. The use, types, and intensity of development. Land development patterns affect trip demand, average trip length, and, therefore, energy consumption.

Landscaped Habitat. A habitat in urban areas having limited native species. Vegetation generally consists of mowed lawns and exotic trees and bushes.

Ldn. The day/night average noise level.

Leq. The equivalent steady-state sound level that, in a specified time period, would contain the same acoustic energy as the varying sound level during the same period; considers volume capacity, travel speeds, and delay.

Leq(h). The hourly value of Leq.

Level of Service (LOS). A qualitative measure that represents the collective factors of travel under a particular volume condition. A measure of traffic congestion.

Light Rail Transit (also Light Rail). A mode of mass transportation comprising light rail vehicles, which travel on steel tracks and are powered by electricity from overhead wires. This mode is characterized by its ability to operate in at-grade and/or grade-separated environments.

Link. Sound Transit's light rail system.

Liquefaction. Conversion of soil into a fluid-like mass during an earthquake or other seismic event.

Load Factor. The average ratio of passengers to seats, during a specified period of operation of a public transit route.

Local Service. A type of transit operation involving frequent stops and consequent low speeds, the purpose of which is to deliver and pick up transit passengers as close to their destinations or origins as possible.

Locally Preferred Alternative. Following the publication of the Draft EIS, the Sound Transit Board identifies a preferred alternative consisting of routes and station preferences. This is known as

a "locally" preferred alternative because the Federal Transit Administration has not yet selected a preferred alternative.

Low Income. A person whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines.

Low Income Population. Any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by the project.

Maintenance Area. Maintenance areas are geographic areas with a history of non-attainment of National Ambient Air Quality Standards (NAAQS) but which now consistently meet NAAQS.

Median Alignment. In rail operations, a type of alignment where tracks are positioned in the median on the street, as opposed to being positioned on one side of the street.

Megawatt (MW). 1,000,000 watts.

Microgram per Cubic Meter ($\mu g/m^3$). A unit of concentration equal to one thousandth of a gram per cubic meter.

Minimum Turn Radius. Generally assumed to be the minimum horizontal turn radius (tightest curve).

Minority. A person who is:

- Black - A person having origins in any of the black racial groups of Africa;
- Hispanic or Latino - A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
- Asian - A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;
- American Indian or Alaskan Native - A person having origins in any of the original people of North or South America, including Central America, and who maintains cultural identification through tribal affiliation or community recognition; or
- Native Hawaiian or Other Pacific Islander - A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Minority Population. Any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by the project.

Mobility. The ease of continuous movement along the transportation system.

Mode. A particular form or method of travel, such as pedestrian, bicycle, automobile, bus, or light rail.

Mode Share. The percentage of travelers that travel either by single-occupancy vehicle, high-occupancy vehicle, or transit modes on a given roadway facility.

Mode Split. Forecast of proportion of total person trips that would use each of the various modes of transportation that include transit and cars.

Model Toxics Control Act (MTCA). The Model Toxics Control Act Cleanup Regulation, WAC 173-340, implements the Model Toxics Control Act, RCW 70.105D, which addresses strict requirements for site discovery and reporting, site assessments, and site remediation. Most important, the regulation defines standard methods used to assess whether a site is contaminated or clean.

National Ambient Air Quality Standards (NAAQS). Federal limits on levels of atmospheric contamination necessary to protect the public from adverse effects on health (primary standards) and welfare (secondary standards).

National Historic Preservation Act of 1966 (NHRA). The Act that established the National Register of Historic Places and State Historic Preservation program and set forth guidelines and regulations for environmental review of projects involving federal funding.

National Register of Historic Places (NRHP). The official list of the nation's cultural resources determined to be worthy of preservation; the register is maintained by the National Park Service.

Network. A system of real or hypothetical interconnecting links that forms the configuration of transit routes and stops comprising the total system.

New Starts. A federal funding program administered by the Federal Transit Administration. Section 5309 New Starts funds are discretionary federal funds available for new fixed guideway systems and extensions to existing systems.

Noise Wall. A noise barrier (also called a sound wall) that is an exterior structure designed to protect inhabitants of sensitive land use areas from noise pollution. Noise walls are considered the most effective method of mitigating roadway, railway, and industrial noise sources.

Nonattainment Area. An area designated by the U.S. Environmental Protection Agency as currently violating the National Ambient Air Quality Standards, based on archival air quality data.

NO_x. Oxides of nitrogen (nitrogen oxide and nitrogen dioxide). The pollutants released during high-temperature combustion of fossil fuels such as diesel.

Off-Peak. Those periods of the day when demand for transit service is not at a maximum.

Operating Costs. Recurring costs incurred in operating transit systems, including wages and salaries, maintenance of facilities and equipment, fuel, supplies, employee benefits, insurance, taxes, and other administrative costs. Amortization of facilities and equipment is not included.

Operating Revenue. The gross income from operation of the transit system including fares, charter income, concessions, advertising, etc. Does not include interest from securities, non-recurring income from sale of capital assets, etc.

Operational Energy. The energy used for vehicle propulsion, facilities, and maintenance for a specified period, usually one year.

Originating Ride (or Trip). A one-way trip taken on a transit line or group of lines, where a transfer from one line to another is not considered to be the start of a new trip.

Overhead Catenary. The system of electrical transmission wires suspended over the track to supply power for the light rail vehicles.

Ozone. A gas consisting of three oxygen atoms formed in reactions of non-methane hydrocarbons and nitrogen oxides in the presence of sunlight. Ozone is one of the U.S. Environmental Protection Agency's criteria air pollutants.

Palustrine Wetland. Freshwater wetlands dominated by trees, shrubs, and emergent vegetation.

Park-and-Ride Lot. A lot that provides parking for patrons of a transit facility.

Parking Utilization. The number of parking spaces being utilized at a given location; it is calculated as the total number of parking spaces occupied divided by the total parking supply at a given location.

Partial Acquisition. Part of a parcel would be acquired, but the current use generally would not be displaced. In some instances, such as larger parcels that hold multiple uses, a business or residential unit on a parcel could be displaced, but most uses would remain.

Particulate Matter. A mixture of extremely small particles and liquid droplets that is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. U.S. Environmental Protection Agency is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs.

Passenger Load/Passenger Load LOS. The number of passengers on a transit unit (vehicle or train) at a specified point.

Patronage. The number of person-trips carried by a transit system over a specified time period.

Peak Hour. The hour of the day in which the maximum demand for service is experienced, accommodating the largest number of automobile or transit patrons.

Peak Particle Velocity (PPV). Specifications for allowable levels of vibration from blasting, pile driving, and other construction processes with the potential of causing building damage are almost always expressed in terms of peak particle velocity because this is thought to be well correlated with maximum stresses in buildings. Peak particle velocity is the instantaneous positive or negative peak in the vibration signal.

Peak Period. A time period or periods when travel activity is at its heaviest.

Pedestrian Level of Service (LOS). An overall measure of walking conditions on a route, path, or facility.

Person Demand. The number of persons that use a specific roadway or highway facility, thus creating a demand for usage of the facility; it is often compared to roadway capacity to determine the level of congestion.

Person Throughput. The amount of persons that can pass a point on a roadway or pass through an intersection over a specified period of time.

Person Trip. A trip from a point of origin to a destination made by a person by any travel mode. Within transit, transfers are not counted. That is, a person traveling from home to work on a bus with one transfer creates only one-person trip.

Point Source. A general classification of the origin of an air or water pollutant, usually characterized as smokestacks or outfalls.

Pollution-Generating Impervious Surface (PGIS). Impervious surfaces considered to be a significant source of pollutants in stormwater runoff. Such surfaces include those subject to vehicular use, industrial activities (as defined in Washington State Department of Ecology's Stormwater Management Manual), or storage of erodible or leachable materials, wastes, or chemicals, and which receive direct rainfall or the run-on or blow-in of rainfall.

Polychlorinated Biphenyls (PCBs). Hazardous environmental pollutants upon which the federal government has placed additional controls regulating disposal.

Potentially Affected Area. This is defined differently by each technical discipline. It includes the area that could be affected by the light rail alternatives.

Poverty-Level Household. As used for the 2000 U.S. Census data, the average poverty threshold for a family of four persons was $17,603 in 2000. The defined family poverty level threshold varied by total number of family members, number of children under 18 years, and number of persons over age 65. For a detailed discussion of the poverty definition, see U.S. Bureau of the Census, *Current Population Reports, Series P-60, No. 171, Poverty in the United States: 1988 and 1989.*

Preferred Alternative. Following publication of the Draft EIS, the Sound Transit Board identifies a Preferred Alternative, including route and station options. The Final EIS will further evaluate the Preferred Alternative as well as other alternatives.

Queue. A line of vehicles, bicycles, or persons waiting to be served by the system in which the flow rate from the front of the queue determines the average speed within the queue. Slowly moving vehicles or people joining the rear of the queue are usually considered part of the queue. The internal queue dynamics can involve starts and stops.

Recessional outwash. Sediment deposited by meltwater streams flowing away from a retreating glacier during the last episode of glaciation.

Reliability. How often transit service is provided as promised; affects waiting time, consistency of passenger arrivals from day to day, total trip time, and loading levels.

Right-of-Way. The corridor (horizontal and vertical space) owned by the transit agency for the transportation way.

Riparian Habitat. A habitat type associated with stream or river margins and characterized by dense vegetation consisting primarily of willow, alder, and cottonwood species, supporting a wide variety of waterfowl, songbirds, amphibians, and small mammals.

Route. The course followed by a transit vehicle as a part of the transit system.

Runoff. The rainwater that directly leaves an area in surface drainage, as opposed to the amount that seeps out as groundwater.

Screenline. A screenline is an imaginary line across a section of freeways or arterials. Screenlines are often used in traffic analyses to determine how much volume is entering or exiting a particular area.

Section 106. Section 106 of the National Historic Preservation Act of 1966 established a procedure to review the potential effects on cultural resources by projects that involve a federal action.

Section 4(f). Section 4(f) of the U.S. Department of Transportation Act restricts the United States Department of Transportation's approval of projects affecting the following properties: publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge, or any land from a significant historic site.

Section 401. Section 401 of the Clean Water Act is a certification program administered by the Washington Department of Ecology under guidelines of the U.S. Environmental Protection Agency to ensure projects applying for a Section 404 permit comply with state water quality standards and other requirements of the state law.

Section 404. Section 404 of the Clean Water Act is a permit program administered by the U.S. Army Corps of Engineers under guidelines by the U.S. Environmental Protection Agency to protect the nation's waters from dredged and fill sources.

Section 6(f). Section 6(f) of the Land and Water Conservation Act of 1965 established restrictions on, and replacement requirements for, the use of land acquired with funds authorized under the Land and Water Conservation Fund Act.

Segment. Refers to the three geographic sections of the Lynnwood Link Extension (A, B, and C) in which the proposed alternatives reside, as defined in Chapter 2 of the EIS.

Sensitive Receptor (Auditory). A local area or site that supports activities easily disrupted by audio intrusions or distractions, such as a school, historic landmark, or residential neighborhood.

Sensitive View. A view that is identified by local jurisdictions as requiring protection.

Sensitivity Analysis. A "what-if" type of analysis to determine the sensitivity of the outcomes to changes in parameters; if a small change in a parameter results in relatively large changes in the outcomes, the outcomes are said to be sensitive to that parameter.

Service Frequency. The number of transit units (vehicles or trains) on a given route or line, moving in the same direction, that pass a given point within a specified interval of time, usually 1 hour.

Side-Track Alignment. In rail operations, a type of alignment where the tracks are positioned on one side of the street, as opposed to being positioned in the median of the street.

Signal Phasing. A group of three traffic-signal timed intervals (green, yellow, red) that are assigned to an independent traffic movement or combination of movements.

Social Interaction. Intra-neighborhood communication and circulation using street, sidewalk, and bikeway connections between residential areas and community facilities, retail businesses, and employment centers. Also includes verbal interaction and telecommunications facilities.

Sounder. Sound Transit's commuter rail system, which travels from Everett to Lakewood, through Seattle.

Sound Transit 2 (ST2). A package of high-capacity transit investments in the regional transit system, adopted by the Sound Transit Board in July 2008, which included light rail as the mode choice for the project corridor. ST2 includes a major expansion of the Link light rail system. ST2 would extend light rail from North Seattle into Snohomish County, across Lake Washington into East King County, and south of Sea-Tac International Airport to Federal Way.

Staging Area. Section of land near a construction site designated for equipment and truck storage, maintenance, and warm-up prior to engagement in construction activities.

State Implementation Plan (SIP). A plan required of each state by the Clean Air Act that describes how the state will attain and maintain the National Ambient Air Quality Standards.

Stormwater. Stormwater is rain and snow melt that runs off surfaces such as rooftops, paved streets, highways, and parking lots. As water runs off these surfaces, it can pick up pollution.

Stormwater Detention. The temporary storage of stormwater runoff and subsequent release at a slower rate.

Stormwater Treatment. Stormwater ponds and underground vaults are used to remove sediments and dissolved metals from stormwater. They collect sediments on the bottom of the pond or vault, where maintenance workers can clean them out on a regular basis.

Subarea. A unique portion of the Regional Transit Authority taxing district, one of five as defined in *Sound Move* (Snohomish County, North King County, East King County, South King County, and Pierce County).

Subduction Zone. An area where one crustal plate is descending below another. The Puget Sound area is close to a subduction zone, which is formed by the Juan de Fuca plate descending below the North American plate. This action can cause significant seismic activity.

Terminal. The terminating point of transportation routes with transfer facilities and, often, amenities for passenger convenience.

Terminus. A transit station located at the end of a transit (including light rail) line.

Threatened Species. According to the Endangered Species Act of 1973, any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Title 23, Code of Federal Regulations, Part 771 (23 CFR Part 771) (Revised 1987). Federal Highway Administration and Federal Transit Administration regulations governing the preparation of environmental impact statements and related documents.

Total Maximum Daily Loads (TMDL). For 303(d)-listed water bodies, TMDLs are developed by the Washington State Department of Ecology for the pollutants that exceed water quality standards as a means for ultimately attaining the standards.

Till. A poorly sorted, gravel-like deposit of sediment that is left behind by a glacier, which does not show stratification. Till is sometimes called boulder clay because it is composed of clay, boulders of intermediate sizes, or a mixture of these.

Total Suspended Particulates (TSP). Air pollutants that consist of solid particles (dust, lead, salts, etc.) suspended in the atmosphere. TSP is a U.S. Environmental Protection Agency's criteria air pollutant.

Total Travel Time. The total elapsed time between the beginning and ending of a trip, including travel, terminal, and waiting time.

Traction Power Substation (TPSS). An electrical station that provides the power needed to drive the trains. The substations are housed in either standalone structures, or within transit stations, typically within or adjacent to the right-of-way. The substations would typically be built about 1.5 miles apart.

Transfer Ratio. The number of boarding trips divided by originating trips.

Transfer Time. The elapsed trip time required to change between modes (e.g., bus to light rail) or to transfer between routes of the same mode (e.g., bus to bus).

Transfer. The portion of a trip between two connecting transit lines, both of which are used for completion of the trip.

Transit. A transportation system principally for moving people in an urban area and made available to the public usually through paying a fare.

Transit Center. A station with shelters where a large number of transit vehicles and passengers can be brought together with safety and convenience.

Transit-Oriented Development. The Transportation Research Board provides several definitions of transit-oriented development that emphasize high-quality walking environments, mixed land uses, and high-density developments linked to transit. Generally, transit agencies agree that what constitutes a transit-oriented development is a pattern of dense, diverse, pedestrian-friendly land uses near transit nodes that, under the right conditions, translates into higher transit patronage.

Transit Service Reliability. Reliability is defined as the degree to which transit service can be counted on for consistent, on-time performance.

Transit Street Classification System. The City of Seattle's system for designating certain streets as being important for transit. This is part of the city's overall street classification system.

Transportation Corridor (also, Corridor). The group of travel movements (or travel flows) between two or more locations. A corridor might have components or subcorridors. A corridor

includes all facilities, transit and highway, that might be used to accommodate the specified travel movement.

Transportation Systems Management (TSM). Incorporates relatively low-cost approaches to improving mobility without constructing major new transportation facilities. TSM generally emphasizes smaller physical improvements and operational changes such as intersection improvements, minor widenings, traffic engineering actions, operational changes such as queue jumps or queue bypass lanes for buses, expanded bus service, transit centers, and improved transit access.

Travel Time (in vehicle). The time required to travel between two points, not including terminal or waiting time.

Trip. The one-way movement of one person between the origin and the destination, including transfers, and the walk distance to and from the means of transportation.

Trip Demand. The number and type (public or private origin and destination) of trips measured, calculated, or forecasted in a specified area having a given land development pattern. Trip demand also depends on prevailing economic, behavioral, and attitudinal conditions.

Trip Length. The number of miles per trip. This is usually an average number for a specified trip type, area, and analysis year.

Turn Pocket. Term used to describe a traffic lane that separates turning vehicles from through lanes. For example, a left-turn pocket is also commonly known as a left-turn lane.

Unity. In visual analysis, the visual coherence and compositional harmony of the landscape.

Use of Section 4(f) Land. According to regulations of the U.S. Department of Transportation, use of Section 4(f) land is defined as: (1) acquisition of title or easement to land, or (2) in unusual circumstances, serious indirect impacts, such as increase in noise, visual intrusion, or access obstruction.

Vehicle Hours of Travel (VHT). The total vehicle hours expended traveling on the roadway network in a specified area during a specified time period.

Vehicle Mile. The amount of travel equivalent to one vehicle traveling one mile.

Vehicle Miles of Travel (VMT). The total number of vehicle miles traveled within a specific geographic area over a given period of time.

Vehicle Occupancy. The number of persons per vehicle. Usually an average number for a specified trip type, area, and analysis year.

Vehicle Throughput. The number of vehicles, usually on a highway, that get through a screenline over a short time period such as an hour.

Vibration Velocity. Vibration velocity is the basic measure of groundborne vibration. It is a measure of the rate at which particles in the ground are oscillating relative to the equilibrium point.

Vibration Velocity Level. It is generally accepted that, over the frequency range important for groundborne vibration from transit systems, human response to vibration is best correlated to the root mean square (rms) vibration velocity. In this EIS, rms vibration velocity is always expressed as decibels relative to 1 micro-inch per second.

Viewer Sensitivity. The extent of the viewer's concern for a particular view or viewshed. Viewer sensitivity to the viewed environment is classified as low, average, or high.

View. A scene observed from a given vantage point.

Viewshed. An area of land, water, or other environmental element that is visible to the human eye from a fixed vantage point.

Visual Character. Refers to identifiable visual information, including visual elements and major environmental features.

Visual Encroachment. The imposition of an object, or objects, on a view such that the view is disrupted, obstructed, or otherwise modified from its original state.

Visual Quality. Refers to the evaluation of the visual experience to the public and is described in terms of vividness, intactness, and unity. *Vividness* refers to the way landscape components combine in distinctive and memorable visual patterns. *Intactness* refers to whether the natural and human-built visual patterns form a consistent landscape, or whether highly contrasting features intrude into the view. *Unity* refers to the visual coherence and compositional harmony of the landscape considered as a whole.Visual quality is an assessment of the visual character and is categorized as low, medium, or high, as follows:

> **Low Visual Quality.** Views that lack a dominant visual character in which there is a low level of fit between disparate elements. In some cases, these views appear disorganized with features that seem out of place, or are views with some compositional harmony but include eyesore elements that can dominate one's perception.
>
> **Medium Visual Quality**. Views with a unity or compositional harmony between elements of the landscape that produce a pleasing overall impression in which encroaching elements are minor and do not substantially alter the perception of the landscape as a unit. These views lack vivid, memorable features and are generally characterized as common or ordinary.
>
> **High Visual Quality.** Views with vivid, memorable, distinctive features in a landscape with compositional harmony or that fit between elements of the landscape that is free from encroaching elements.

Volume to Capacity (v/c) Ratio. The ratio of demand flow rate to capacity for a highway or arterial facility; a v/c ratio below 1.0 means that traffic volumes are below the capacity of the roadway, when identified as greater than 1.0, the traffic volume has theoretically exceeded the carrying capacity of the roadway.

Washington State Department of Ecology 303(d) List. The federal Clean Water Act (CWA), adopted in 1972, requires states to restore their waters to be "fishable and swimmable." The CWA established a process to identify and clean up polluted waters. Every 2 years, all states are required to prepare a list of water bodies that do not meet water quality standards. This list is called the 303(d) list because the process is described in Section 303(d) of the CWA.

Appendix C

Environmental Justice Analysis

APPENDIX C – ENVIRONMENTAL JUSTICE ANALYSIS

C.1. INTRODUCTION

This appendix describes the analysis and public outreach conducted to identify potential environmental justice issues related to the construction and operation of the Lynnwood Link Extension. Environmental justice has been addressed in compliance with Presidential Executive Order 12898, Federal Actions to Address Environmental Justice to Minority Populations and Low-Income Populations (February 11, 1994); the U.S. Department of Transportation (USDOT) Order 5610.2, Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (April 15, 1997); and the USDOT Order 5610.2(a) (May 2, 2012) updating the USDOT policy to consider environmental justice principles in all programs, policies, and activities. The environmental policies of the USDOT agencies, including the Federal Transit Administration (FTA), are summarized below. The agencies are to:

1. Avoid, minimize, and mitigate disproportionately high and adverse effects on minority and low-income populations.
2. Ensure full and fair opportunities for public involvement by members of minority and low-income populations during the planning and development (including the identification of potential effects, alternatives, and mitigation measures).
3. Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

FTA environmental justice policy guidance (FTA Circular C 4703.1) defines a disproportionately high and adverse effect as one that:

- Is predominantly borne by a minority or low-income population, or
- Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

The USDOT Order also provides guidance that "In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures that will be implemented and all offsetting benefits to affected minority and low-income populations may be taken into account, as well as the design, comparative impacts, and the relevant number of similar existing system elements in non-minority and non-low-income areas" (USDOT 5610.2(a) Section 8(b)).

Under USDOT Order 5610.2(a), a minority person includes persons who meet the following criteria:

- Black or African American (a person having origins in any of the Black racial groups of Africa)
- Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent)
- American Indian and Alaskan Native (a person having origins in any of the original people of North and South America [including Central America], and who maintains cultural identification through tribal affiliation or community recognition)
- Native Hawaiian and Other Pacific Islander (a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands)
- Hispanic or Latino (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race)

The USDOT Order 5610.2 and FTA Circular C 4703.1 further define a minority or low-income population as any readily identifiable group or groups of minority or low-income persons who live in geographic proximity, or if circumstances warrant, geographically dispersed or transient persons…who will be similarly affected by a proposed Department of Transportation project, policy, or activity.

A low-income person is identified as:

- A person whose median household income is at or below the Department of Health and Human Services poverty guidelines

The U.S. Census Bureau updates poverty thresholds each year for use by the Department of Health and Human Services using the change in the average annual Consumer Price Index for All Urban Consumers. As such, separate poverty guidelines do not exist for different regions, states, counties, or cities in the United States.

The Lynnwood Link Extension would traverse the cities of Seattle and Shoreline in King County, and Mountlake Terrace and Lynnwood in Snohomish County. As of 2010, nearly 126,000 residents and an estimated 60,000 jobs were located in census tracts within 0.5 mile of the project corridor, which is anchored by major regional commercial centers at Northgate and Lynnwood. With preparation of the Lynnwood Link Extension *Alternatives Analysis Report and SEPA Addendum* (Sound Transit 2011a), Sound Transit's research has shown that neighborhoods in the project corridor have higher percentages of minority persons than the Sound Transit service district for the urbanized Snohomish, King, and Pierce counties. The occurrence of low-income populations in the corridor is similar to the Sound Transit service district. These demographic characteristics are presented in the *Title VI*

Demographic and Service Profile Maps and Charts (Sound Transit 2013). Attachment C-1 briefly describes the 18 neighborhoods that are adjacent to the project corridor. Attachments C-2 through C-12 provide demographic characteristics of the study area, and Attachment C-13 describes station access to nearby community facilities.

The following sections are provided in the rest of this appendix:

Section C.2, Regulatory Framework

Section C.3, Methodology and Approach

Section C.4, Minority and Low-income Populations

Section C.5, Outreach to Minority and Low-income Populations

Section C.6, Environmental Justice Analysis

Section C.7, Conclusions

Section C.8, References

C.2. REGULATORY FRAMEWORK

The analysis of potential impacts on minority and low-income populations was prepared following the federal, state, and regional government regulations, policy, and guidance listed below:

Federal

- Title VI of the Civil Rights Act of 1964
- Age Discrimination Act of 1975
- Americans with Disabilities Act of 1990 (ADA)
- Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended
- Presidential Executive Order 12898—Federal Actions to Address Environmental Justice to Minority Populations and Low-Income Populations
- Presidential Executive Order 13166—Improving Access to Services for Persons with Limited English Proficiency
- U.S. Department of Transportation Order 5610.2—Order to Address Environmental Justice in Minority Populations and Low-Income Populations
- Title 42 United States Code (USC) Section 4601, Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended
- Title 49 of the Code of Federal Regulations (CFR) Part 21, Nondiscrimination in Federally Assisted Programs of the Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964
- USDOT FTA, Circular FTA C 4702.1B, Title VI Requirements and Guidelines for Federal Transit Administration Recipients (October 1, 2012)
- USDOT FTA, Final Circular FTA C 4703.1, Environmental Justice Policy Guidance for FTA Recipients (August 15, 2012)
- Community Impact Assessment: A Quick Reference for Transportation, Publication No. FHWA-PD-96-036 (September 1996)

State of Washington

- Washington Relocation Assistance—Real Property Acquisition Policy Act of 1971, as amended
- Governor's Executive Order 93-07, Affirming Commitment to Diversity and Equity in the Service Delivery and in the Communities of the State

Sound Transit

- Sound Transit/Washington State Department of Transportation (WSDOT)/Federal Highway Administration (FHWA)/FTA Environmental Action Team Issue Paper No. 36, Implementing Environmental Justice Pursuant to Executive Order 12898 and the Department of Transportation Order to Address Environmental Justice in Minority Populations and Low-Income Populations (October 4, 2001)
- Sound Transit Resolution 98-20-1: A resolution of the Board of the Central Puget Sound Regional Transit Authority adopting revised Real Property Acquisition and Relocation Policies, Procedures and Guidelines and superseding Resolution 98-20 (Adopted November 14, 2002)

C.3. METHODOLOGY AND APPROACH

For the analysis of potential impacts, Sound Transit identified a study area that extends 0.5 mile from the project alternative alignments. This area includes neighborhoods adjacent to the project corridor, but their boundaries may extend beyond 0.5 mile from the alternatives. The 0.5-mile area of effect is consistent with the project's transportation analysis and it encompasses the study areas used for other environmental topics covered in the Final Environmental Impact Statement (Final EIS).

C.3.1 Data Sources

Sound Transit used existing reports and documentation to develop the discussion of the affected environment. Much of this information was obtained from local, state, and federal agency Web pages. The following is a list of the key data sources used in the analysis:

- U.S. Census Bureau 2010 decennial census data on racial and ethnic minority populations, household types, and age, as well as basic information about housing in adjacent neighborhoods and within 0.5 mile of the alternative alignments and stations
- U.S. Census Bureau 2006–2010 American Community Survey data on languages spoken at home, limited English proficiency, country of origin of persons born outside of the United States, transit-dependency, and low-income populations for adjacent neighborhoods and populations within 0.5 mile of the alternative alignments and stations
- Washington State Office of the Superintendent of Public Instruction demographic statistics, enrollment in transitional English language programs, and participation in the federal free or subsidized lunch program for elementary school attendance in areas located wholly or partially within 0.5 mile of the project corridor
- Information about existing and planned low-income housing projects within about 0.5 mile of the project corridor from study area public housing authorities (Seattle Housing Authority, King County Housing Authority, Senior Services of Snohomish County, and Snohomish County Housing Authority)
- Location of community facilities within about 0.5 mile of the project corridor from local government Web pages as well as other Internet sites
- Information about other baseline environmental conditions from project technical analysts for transportation; land use; economics; noise and vibration; air quality and greenhouse gases; visual and aesthetics; public services, safety, and security; and parks and recreational resources

- Conceptual horizontal and vertical alignment and engineering drawings for project alternative alignments and stations from the project design engineers

Based on the U.S. Census Bureau data, minority or low-income populations were identified within 0.5-mile buffer areas or within census geographies. For reference, the 2013 Sound Transit Title VI Demographic and Service Profile Maps and Charts document shows the Sound Transit district averages are 31.13 percent minority and 11.24 percent low income. The analysis also identified more localized areas where low-income or minority populations were present, based on a combination of census information, field evaluation and community outreach. This combination of sources reflects federal environmental justice guidance highlighting the need to consider impacts on minority and low-income populations, regardless of size.

As described in Section C.5, Outreach to Minority and Low-income Populations, Sound Transit also contacted agencies, groups, and individuals as part of the project's public involvement program, and received information on the project corridor neighborhoods, historic development, demographics, and community character and resources. This information helped to identify community values, needs, and key activity centers.

C.3.2 Impact Assessment and Potential Mitigation

In Chapter 5, Section E of FTA Circular C 4703.1 (August 15, 2012), FTA recommends National Environmental Policy Act (NEPA) environmental documents include the following in their environmental justice analysis:

A. A description of the low-income and minority populations within the study area affected by the project, if any, and a discussion of the method used to identify them.

B. A discussion of all adverse effects of the project both during and after construction that would affect the identified minority and low-income populations.A description of the project's mitigation and environmental enhancement actions that will avoid or minimize potential effects (e.g., relocation program that go beyond the Uniform Relocation Act and address adverse community effects such as separation or cohesion; measures to replace community resources removed by the project).

C. A discussion of the remaining effects, if any, and why further mitigation is not proposed.

D. A discussion of all positive effects for the identified minority and low-income populations, such as an improvement in transit service, mobility, or accessibility.

E. For projects that travel through predominately minority and low-income and predominately non-minority and non-low income areas, a comparison of mitigation and environmental enhancement actions that could affect these different populations.

The analysis of potential disproportionately high and adverse effects on minority and low-income populations considers the No Build Alternative and the light rail alternatives. Direct construction and long-term effects, indirect and secondary effects, and cumulative effects were examined for all elements of the environment. The analysis also examined project benefits accruing to minority and low-income populations, which may offset effects that could not be avoided or otherwise mitigated. The primary sources for this analysis were the technical reports and the Draft and Final EIS sections prepared for transportation and other environmental elements. The analysis also considered public comments Sound Transit and FTA received on the Draft EIS, as well as information Sound Transit received through its outreach and public involvement program, which included notices to potentially affected property owners.

The effects of each environmental element were reviewed to determine if the alternatives would result in adverse effects notwithstanding proposed mitigation measures. Project impacts that were effectively mitigated would not cause disproportionately high and adverse effects.

C.4. MINORITY AND LOW-INCOME POPULATIONS

This section describes the presence of racial and ethnic minority populations as well as low-income populations in the project corridor's adjacent neighborhoods and populations within 0.5 mile of the alternatives.

C.4.1 Study Area

The study area comprises 18 neighborhoods adjacent to the project corridor (Figure C-1). Except for the Hazelwood neighborhood, they are officially designated by local governments, primarily for planning purposes. Many also have active community councils or recognized neighborhood contacts. As shown in Figure C-1, ten neighborhoods in Seattle and Shoreline are adjacent to Segment A, eight neighborhoods are adjacent to Segment B, and three are adjacent to Segment C. An estimated 126,000 residents live in the project corridor based on 2010 census tracts within 0.5 mile of the project corridor. Attachment C-1 contains brief land use, character, and demographic statistics for each neighborhood.

C.4.2 Minority Populations

The study area population is racially and ethnically diverse. Attachments C-2 through C-7 present the demographic characteristics of neighborhoods in the study area, and Attachments C-7 through C-12 provide demographic data for populations within approximately 0.5 mile of the alternative alignments and stations. Figure C-2 shows the distribution of minorities within the project corridor based on the 2010 decennial census. The map is colored to show the geographic distribution of 2010 census blocks for different proportions of minorities.

Minorities (non-White and Hispanic persons) comprise 37 percent of the study area population. Some neighborhood elementary schools reflect even higher proportions of non-White and Hispanic groups; over 19 percent of students are enrolled in transitional bilingual programs, particularly Spanish, Chinese, Korean, Vietnamese, Tagalog, and several African languages (WOSPI 2012).

Sound Transit and FTA invited federally recognized tribes to be involved in the project, and to suggest areas or facilities of particular interest or concern. Section C.5.3 discusses tribal outreach. Census data for the corridor show Native Americans comprise about 1.6 percent of the population.

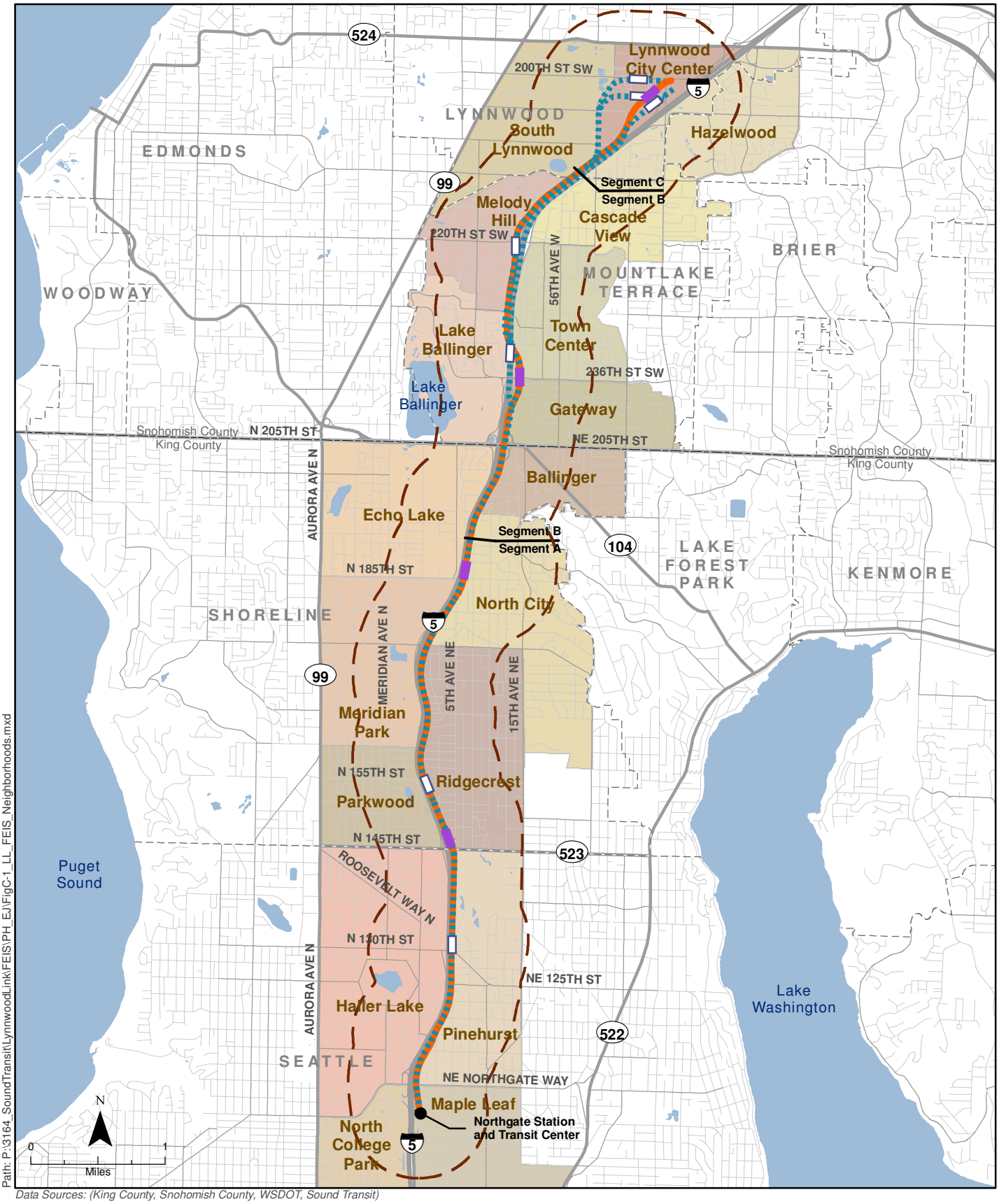


Figure C-1
Neighborhoods

Lynnwood Link Extension

The community facilities represent the racial, ethnic, and low-income populations residing in the project corridor neighborhoods. Examples include the Korean Catholic School, Berhane Hiwot Eritrean Church, Evangelical Chinese Church, Saint Mary's Coptic Orthodox Church (Egyptian), and the Vietnamese Alliance Church. These religious institutions serve families within the project corridor and the region. Some also function as ethnic cultural centers with co-located elementary schools and calendars of events that include recreational programs, craft and language classes, and folk dancing. Several of the Catholic churches have Spanish-language services and church schools with scholarship funds available for low-income students. Attachment C-13 lists community facilities close to proposed light rail transit stations.

The highest concentrations of minority populations are in the Lynnwood City Center and South Lynnwood neighborhoods, where minorities comprise more than 50 percent of the population in these neighborhoods (see Attachment C-2). Asians are by far the dominant non-White race in most neighborhoods. The proportion of populations of one other race alone or mixed race exceeding Asian populations occurs in only four neighborhoods. These racially diverse characteristics appear to be correlated with sizable Hispanic populations.[1]

In addition, Sound Transit recently conducted a Title VI analysis of the transit agency's service district (urbanized areas of Snohomish, King, and Pierce counties). Using 2010 decennial census data, this analysis determined that 31.13 percent of the district's population is minority (Sound Transit 2013).

[1] The reason for the high proportions of persons reporting in the census data that they are of some other race alone is because Hispanic persons often consider their Hispanic ethnicity a race.

Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_EJ\FigC-2_LL_FEIS_MinorityPopulations2010_Regional.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives

2010 Census Blocks

- 0 - 25%
- 26 - 50%
- 51 - 75%
- 76 - 100%

- Non-Populated Park Area
- 1/2 Mile Station Buffer
- Study Area

Figure C-2
Minority Populations
2010 Census
(Percentage of Minority Individuals)

Lynnwood Link Extension

C.4.3 Foreign-born and Limited English-proficient Populations

To help identify racial and ethnic minority populations, research was conducted to identify foreign-born and limited English-proficient populations. While not all such populations would be considered a minority group under the Executive Order for Environmental Justice, their communication needs were considered as the project's outreach staff developed the project's communication and public involvement plans. Foreign-born individuals comprise an estimated 21 percent of the population in census tracts adjacent to the project corridor (Census 2010b) and where data also indicate minority populations are present. Slightly more than half (54 percent) of these foreign-born individuals were born in Asian countries, mainly from China (14 percent), the Philippines (11 percent), Korea (8 percent), and Vietnam (7 percent). These population groups are sizable, each comprising over 1,000 individuals. An additional 20 percent are from Latin American countries, with nearly three-quarters from Mexico. African-born individuals, particularly from Ethiopia and Eritrea, comprise approximately 10 percent of the foreign-born population. These foreign-born individuals live throughout the study area.

About 75 percent of the study area population speaks only English, but an estimated 13 percent do not speak English very well (Attachment C-4). In some census tracts, larger proportions (exceeding 20 percent) have difficulty with English. For comparison, Sound Transit's recent Title VI analysis of the transit agency's service district determined that only 4.86 percent of the district's population either does not speak English or does not speak English well (Sound Transit 2013).

Of all persons who speak a foreign language, the largest proportion includes those who speak Spanish—an estimated 25 percent. Individual census tracts, however, have foreign-language-speaking populations exceeding 35 percent. Chinese is the most common of the Asian languages spoken, at 16 percent. Korean and Vietnamese represent 8 percent and 5 percent, respectively. An additional 10 percent speak an African language, particularly Ethiopian and Eritrean, based on statistics concerning the place of birth of foreign-born individuals. An estimated 9 percent speak Tagalog. The foreign languages in each of these six language groups are spoken by an estimated 1,000 or more persons.

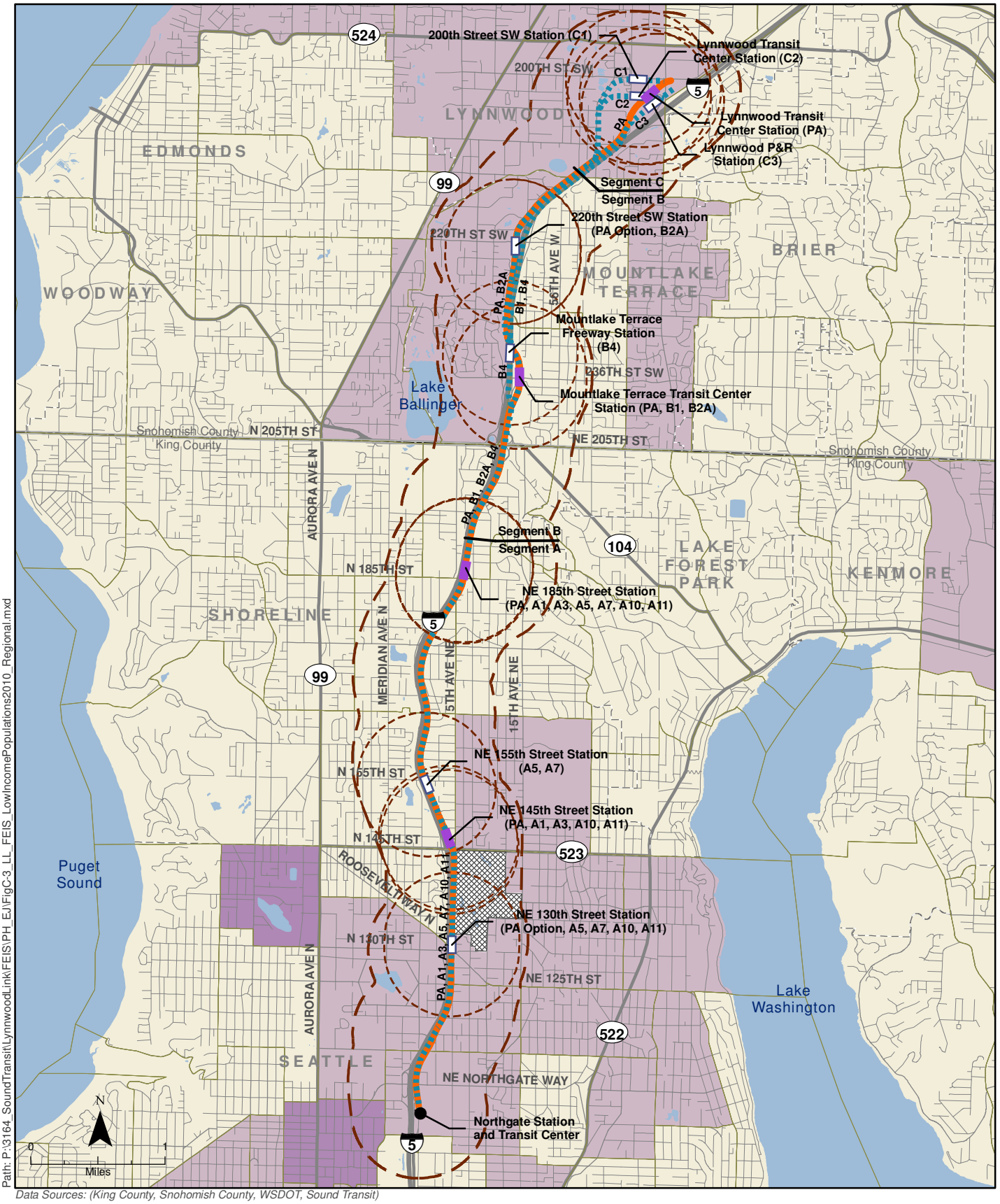
Sound Transit also contacted public elementary schools to identify the three most common languages spoken by students enrolled in the school's Transitional Bilingual Program (Attachment C-12). In addition to the languages indicated above, the survey confirmed the students speak Russian, Ukrainian, and Somali.

C.4.4 Low-income Populations

Median household income (2009) was $56,300, although 11.3 percent of the study area population lives at or below the poverty level (Census 2010a, 2010b). For comparison, the recently completed Sound Transit Title VI analysis of the transit agency's service district determined that 11.24 percent of the district's population is low income (Sound Transit 2013).

Figure C-3 shows the geographic distribution of low-income populations in the study area based on 2010 census tract data. The highest densities of low-income persons are found east of I-5 at about NE 145th Street and west of I-5 between NE 205th Street and the Lynnwood City Center. Attachment C-7 lists poverty characteristics by corridor neighborhood. None of the census tracts in the corridor are predominantly low-income populations.

An additional analysis was conducted using finer-grained 2000 census block group data (Figure C-4) because the 2010 American Community Survey did not publish reliable income information at the census block group level. Figure C-4 shows the geographic distribution of different proportions of low-income populations. The older data retain value because low-income populations tend to live in clusters rather than spread broadly across the study area (Census 2011). Low-income populations are correlated geographically to the 2010 census tracts that also have higher levels of low-income populations. However, Figures C-2 and C-4 show only a loose correlation between the 2000 lower income block groups and the 2010 census blocks with more minority populations; the Lynnwood area is the only exception. Areas with higher percentages of low-income populations in 2000 block groups are generally the same as the 2010 census tracts. Areas with minority populations do not tend to greatly overlap with low-income areas, except in Lynnwood.



Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_EJ\FigC-3_LL_FEIS_LowIncomePopulations2010_Regional.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

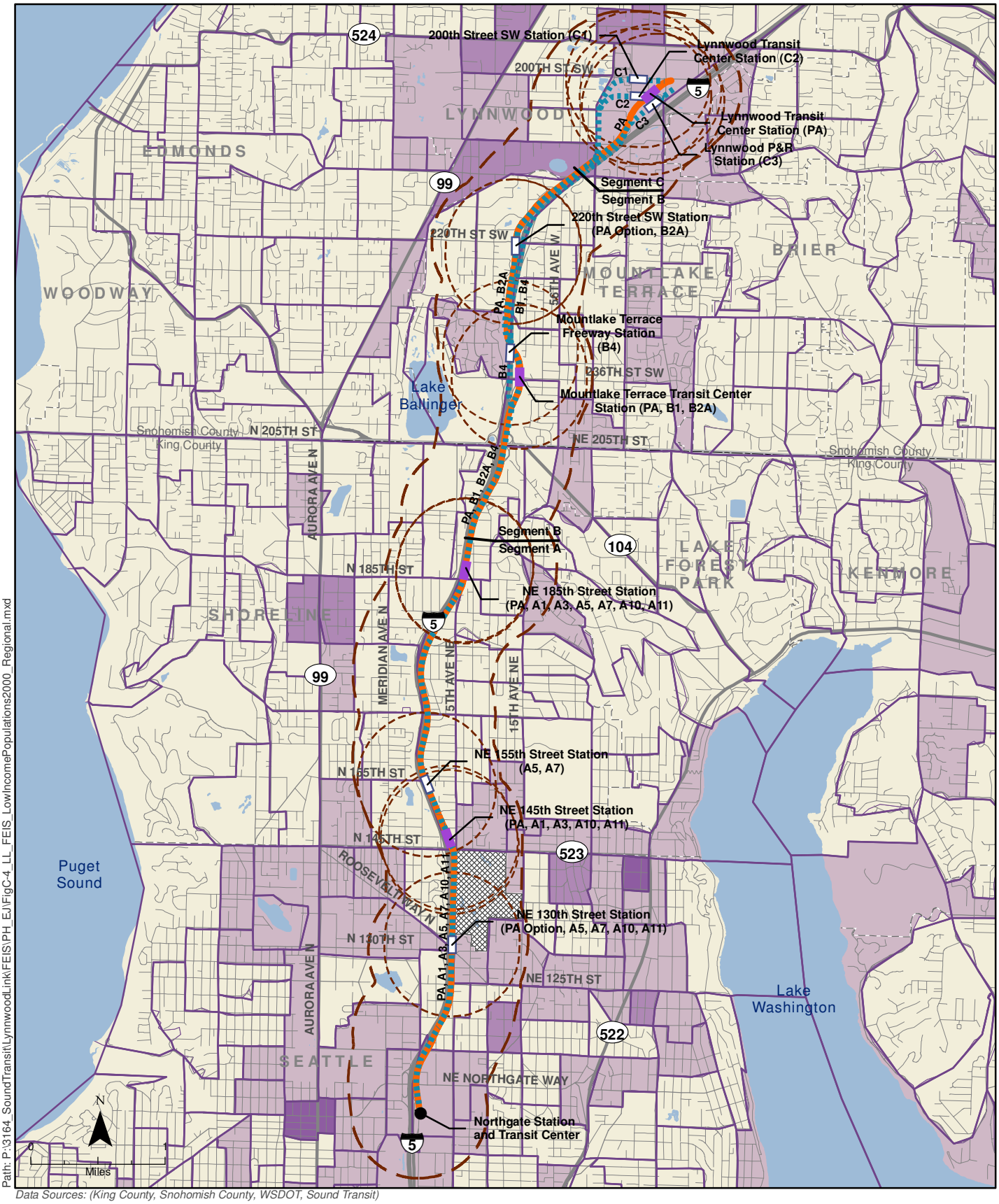
- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives

2010 Census Tracts

- 0 - 10%
- 11 - 20%
- 21 - 30%
- 31 - 100%

- Non-Populated Park Area
- 1/2 Mile Station Buffer
- Study Area

Figure C-3
Low-income Populations 2010 Census
(Percentage of Individuals Below Poverty Level)
Lynnwood Link Extension



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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives

2000 Census Block Groups

- 0 - 10%
- 11 - 20%
- 21 - 30%
- 31 - 100%

- Non-Populated Park Area
- 1/2 Mile Station Buffer
- Study Area

Figure C-4
Low-income Populations 2000 Census
(Percentage of Individuals Below Poverty Level)
Lynnwood Link Extension

C.5. OUTREACH TO MINORITY AND LOW-INCOME POPULATIONS

With minorities and low-income persons in the study area, Sound Transit's public outreach program includes a targeted effort to engage these populations in the public decision-making process for the Lynnwood Link Extension. The following sections describe the targeted public involvement plan, project scoping, outreach program, and resulting Draft EIS comments from minority and low-income populations. Additional information is in the project's *Early Scoping Summary Report* (Sound Transit 2010), which was developed during the Alternatives Analysis phase of the project, and in the *Environmental Scoping Summary Report* (Sound Transit 2011c), which covered the project's public involvement activities at the initiation of the Draft EIS. Outreach to minority and low-income populations preceding the publication of the Draft EIS is described in Section C.5.3. A summary of comments on the Draft EIS is in Section C.5.4. A description of the targeted outreach to minority and low-income populations since the publication of the Draft EIS is in Sections C.5.5 and C.5.6. The Final EIS Appendix L, Public Involvement and Agency Coordination, has further detail.

C.5.1 Public Involvement Planning

In addition to the formal public meetings and outreach conducted during early scoping and environmental scoping, Sound Transit conducted over 30 stakeholder interviews with public and community service organizations at the start of the project outreach activities in late 2010. The stakeholders described a corridor that is diverse in terms of race, ethnicity, income, employment, language, culture, and knowledge and use of existing transit services. Stakeholders commented they had difficulties accessing some transit services (such as east-west, non-peak period, non-peak direction, and third-shift services). The stakeholders recommended several outreach tools and communication methods to engage community members, and they helped Sound Transit identify community organizations operating in the project corridor that are likely to represent minority and low-income individuals (Table C-1).

The *Public Involvement Plan* (Sound Transit 2011b) presents additional information on the stakeholder interviews and other outreach activities and techniques Sound Transit is using to engage the corridor's populations. Appendix D of the *Public Involvement Plan* is the *Plan for Involving Hard-to-Reach Populations*, which addresses targeted environmental justice outreach activities for minorities and low-income persons. These public involvement plan elements are considered "living" documents that will be updated as the project progresses and as those in the corridor learn more about the project and its potential impacts.

Table C-1. Community Organizations

Alliance of People with Disabilities	North Seattle Family Center
Arab Center of Washington	Northgate Community Services for the Blind
Catholic Community Services	Northwest Paralyzed Veterans
Center for Human Services	Refugee and Immigrant Services Northwest
Washington State Department of Social and Health Services (DSHS), Department of Vocational Rehabilitation	Seattle Deaf Blind Service Center Seattle Goodwill
Everett Housing Authority	Senior Services of Snohomish County
Familias Unidas	Shoreline Senior Center
Housing Hope	Snohomish County Housing Authority
Islamic Idriss Mosque	United Way Snohomish County
King County Housing Authority	Washington DSHS, Alderwood Office
Korean Women's Association	Worksource Lynnwood
Lake City North Helpline Food Bank	

Source: Sound Transit 2011a

C.5.2 Project Scoping

C.5.2.1 Early Scoping

On September 27, 2010, the FTA and Sound Transit published an early public and agency scoping notice in the Federal Register to advise government agencies and members of the public that they intended to explore alternatives for improving transit service between Northgate and Lynnwood. The early scoping process was part of the Alternatives Analysis then required under Title 49 USC 5309. The *Early Scoping Summary Report* (Sound Transit 2010), published in December 2010, documents the public's comments, as well as Sound Transit's advertising, public notice, and outreach efforts.

C.5.2.2 Environmental Scoping

On September 29, 2011, Sound Transit and FTA published in the Federal Register a Notice of Intent (NOI) to prepare an EIS and initiate environmental scoping for a light rail project. The NOI invited public and agency comments on the scope of the EIS and announced the public scoping meetings. Sound Transit published the *Environmental Scoping Summary Report* (Sound Transit 2011c) in December 2011, which describes Sound Transit's outreach and the public and agency comments received during scoping. Notifications were published in the following publications: La Raza, Korean Daily, Seattle Chinese Times, Russian World Newspaper, Seattle Chinese Post, and tu Decides. Translated posters and comment forms were available in Korean, Russian, Chinese, and Spanish at the three mid-October scoping meetings.

C.5.3 Targeted Outreach Activities and Comments Prior to the Draft EIS

Since the start of the public outreach activities, Sound Transit has conducted special targeted outreach activities to engage minority and low-income populations. The following paragraphs describe these activities and the major themes of comments received.

Cinco de Mayo Festival Events

In May 2011 and 2012, the public involvement team attended the Familias Unidas Latina Resource Center and South Everett Neighborhood Center Cinco de Mayo festival events. The annual events attracted an estimated 300 to 500 attendees. With a sizable number of Spanish-speaking attendees, booth materials (fact sheet and e-newsletter) were translated into Spanish and a Spanish interpreter was present to answer questions. Most people commented that they were excited about the planned Northgate Station and light rail extension to Lynnwood. Specific comments, however, raised the following concerns: safety and security of transit users, earthquake preparedness, transit use by disabled persons, use of transit midday, noise impacts, and the importance of providing shelter at transit stations. People asked about the project routes, stations, and implementation schedule; project staff added names and contact information to the stakeholders list for future e-newsletter updates (English/Spanish versions). The translated materials were essential because approximately a quarter to half of the interactions were conducted in Spanish.

Ethnic Elders Resources Fair

On October 1, 2011, and September 29, 2012, the public involvement team attended the annual Ethnic Elders Resources Fair at the Everett Community College. Interpreters were available at the 2011 event, and a Spanish-speaking staff member assisted at the booth. The 2012 fair included workshops in Tagalog, Chinese, Vietnamese, Korean, Spanish, Russian, and English to accommodate the diverse elderly residents. Most booth visitors were identified as Korean, Vietnamese, or Russian; many spoke limited English but were aided by translators. The project team mostly fielded inquiries on how to get to and from various destinations using existing transit services.

Drop-in Meetings, Community Briefings, and Project Updates

Additional targeted outreach activities focused on going directly to centers, public venues and events within the communities to help reach individuals that might not be reached through other approaches, and to make it easier for all members of the community to participate in project planning and decision-making. Many of the informal comments on the project during meetings and community briefings in areas

with low-income or minority populations pertained to the final decision-making process, parking at the proposed stations, construction noise and traffic, and property acquisition. This included the following:

- In March 2012, the public involvement team organized drop-in meetings to be held in conjunction with community classes. One meeting was held at the Lynnwood Library at the same time as a Korean computing class; another meeting was held at the Mountlake Terrace Library concurrent with an English as a Second Language class.
- In December 2012, project posters were distributed to a number of organizations providing services to minority and low-income populations in the project corridor. Based on new corridor analysis, the number of languages used to translate printed matter increased from four (Spanish, Korean, Chinese, and Russian) to six (Spanish, Korean, Chinese, Traditional Vietnamese, Tagalog, and Amharic). These same languages were used in three traveling displays placed at various community centers during December 2012. The public involvement team also offered community briefing meetings to over 70 study area community organizations. These included ethnic, faith, neighborhood, and veterans groups; senior centers and public housing authorities; and social service agencies. Some community groups declined offers for briefings, but requested information by email such as copies of briefing meeting materials, newsletters, and links to the project Web site. Others asked to be contacted again in the future. Translations were provided for six foreign languages at some meetings.
- In April 2013, Sound Transit prepared a new project flier that was posted to the project's Web page, mailed to over 83,000 businesses and residents, and emailed to over 2,400 email subscribers. The flier noted the upcoming publication of the Draft EIS and announced the pending comment period and public hearings to be held during the summer of 2013, and included messages in six languages. The flier also stated that property owners who would be affected by potential acquisitions would receive a special letter in advance of the Draft EIS publication and provided with an opportunity to contact or meet with Sound Transit staff.
- Prior to Draft EIS publication, Sound Transit sent letters to all property owners that could be impacted by a full or partial acquisition by any of the alternatives. More than half of those affected contacted Sound Transit staff, and community outreach specialists as well as members of Sound Transit's real estate group worked directly with the potentially affected parties to review the impacts of various alternatives. Staff encouraged them to participate by

making public comments, and they explained the property acquisition process, including Sound Transit's relocation assistance program.

Tribal Outreach

As described in the *Lynnwood Link Extension Coordination Plan* (Sound Transit 2012), FTA and Sound Transit contacted the following federally recognized tribes during environmental scoping: Muckleshoot Indian Tribe, Snoqualmie Tribe, Suquamish Tribe, Tulalip Tribes, and the Yakama Nation. FTA invited these tribes to become participating agencies, but to date, tribal comments have only been received from the Muckleshoot Indian Tribe; the Tribe stated their concerns about impacts on fisheries, habitat, and water quality during scoping, and they also provided comments on an early agency review of the Draft EIS. Sound Transit and FTA met with the Muckleshoot Indian Tribe to further discuss ecosystem and fisheries issues and define additional coordination and analysis for the Draft EIS. In conjunction with the Section 106 process required under the National Historic Preservation Act, Sound Transit and FTA also contacted representatives from the Duwamish Tribe and the Snohomish Tribe, which are not federally recognized.

C.5.4 Publication of the Draft EIS and Comments

The Draft EIS was published July 26, 2013 and was followed by a 60-day comment period ending on September 23, 2013. Sound Transit held public meetings at transit and ADA-accessible public locations in each of the four cities in the project corridor. (See Chapter 6 for more detail on public involvement, and Chapter 7 for a summary of public comments.) Over 600 comment letters were received from government agencies, community organizations, and individuals. Many of the comments expressed a particular preference for one or more of the project alignment and/or station alternatives.

Senior Services, a non-profit agency supported by United Way of King County, submitted comment summaries from two transit planning events held in Shoreline—one for the Korean community (conducted in Korean, not English) and the other for persons of limited incomes, including many disabled persons. Key concerns for the transit facilities included linkage with bicycle and pedestrian trails, ADA-compliance, disabled parking, public safety, and traffic signals to aid vision- and hearing-impaired users. Recommendations for future transit-oriented development near the proposed stations included mixed density and affordable housing, coffee shops, a Korean grocery store, and recreation and fitness facilities.

In addition, the Muckleshoot Indian Tribe sent a comment letter concerning discussion of natural resource issues in the Draft EIS. The Tribe stated Alternative C1 would likely have the fewest impacts to salmon and salmon habitat, and would be preferred by the Tribe. The Tribe requested involvement in future

design efforts related to state-owned culvert replacement and mitigation design to address unavoidable impacts to streams, floodplains, wetlands, and buffers. The Tribe also requested stormwater water quality treatment methods to maximize the removal of heavy metals and oils that may adversely affect salmon.

C.5.5 Targeted Outreach After Publication of the Draft EIS

Sound Transit continued its outreach activities following the Draft EIS release and the subsequent public comment period. These efforts included further outreach to potentially impacted property owners; outreach accompanying fieldwork along the corridor; flyers and newsletters; booths at fairs and festivals throughout the communities; briefings at community group meetings; displays and kiosks at various community venues, with regularly updated project information; and four community drop-in events at libraries and community centers. The kiosks were first displayed in December 2012 and will continue to be displayed at least up to final design of the project.

Following the Sound Transit Board identification of the Preferred Alternative and its subsequent preliminary engineering, Sound Transit sent letters to all property owners newly identified as potentially affected by the refined alternatives. Similarly, with the release of the Final EIS, Sound Transit did an additional mailing to all potentially affected property owners for all of the alternatives evaluated in the Final EIS; this mirrored Sound Transit's mailings prior to the Draft EIS publication.

C.5.6 Publication of the Final EIS and Future Outreach

Public notices alerted the public to the availability of the Final EIS. The notices will be mailed to project area residents and businesses. Sound Transit also notified all commenters and sent a Final EIS Summary and CD to them. The Final EIS will be available for public review in a variety of formats and locations, including the Sound Transit offices and the project Web site (www.soundtransit.org/Projects-and-Plans/Lynnwood-Link-Extension). For additional information, see the Final EIS Fact Sheet.

Targeted outreach activities will continue after the publication of this Final EIS through project final design, construction, and start of operations.

C.6. ENVIRONMENTAL JUSTICE ANALYSIS

This section discusses anticipated adverse and beneficial effects on minority and low-income populations and neighborhoods.

C.6.1 Summary of Potential Impacts

The analysis of potential environmental impacts follows the methodology described in Section C.3.3, Environmental Justice Impacts. Table C-2 identifies potential adverse project effects on human health and the environment and describes impacts on minority and low-income populations. The proposed mitigation and enhancement measures listed in Table C-2 would reduce or minimize the effects on the population as a whole as well as minority and low-income populations. In addition, Table C-2 indicates offsetting benefits for minority and low-income populations. As shown in Table C-2, the project is not anticipated to result in high and adverse effects after mitigation. The impacts are expected to be similar in kind and magnitude as those that would be experienced by the general population living or working along the corridor. Sound Transit's mitigation commitments would avoid and minimize potential high and adverse environmental impacts.

Table C-2. Environmental Impacts, Potential Mitigation, and Benefits for Minority and Low-income Populations

Element of the Environment	Impacts	Impacts on Minority and Low-income Population(s)	Potential Design Measures, Mitigation and Enhancement	Benefit(s) to Minority and Low-income Population(s)
Transportation - Streets - Transit - Bicycle and Pedestrian	• For the Preferred Alternative and other alternatives, increased local street congestion, and increases in bicycle and pedestrian activity around transit stations, particularly with passenger drop-off/pick-up activity, nearby bus stops, and park-and-ride facilities at some transit stations. • Local and arterial intersections affected (below acceptable level of service [LOS]). • Existing on-street and off-street parking removed. • Spillover parking in neighborhoods near stations may occur. • Temporary construction impacts from reduced highway and local roadway capacity, truck traffic, loss of parking, road and nighttime closures, changes in bus routes, reduced capacity of transit park-and-ride bicycle and pedestrian facilities, and changes to property access. • Temporary closure of the existing pedestrian bridge over I-5 at NE 195th Street.	Same as for general populations in the affected neighborhoods.	• Reconfiguration of the northbound NE 130th Street off-ramp under the Preferred Alternative and Alternatives A1, A5, and A10 to improve highway operations; similar improvements for the NE 145th Street interchange. • Mitigation for congestion impacts on local and arterial street intersections includes improvements to No Build conditions or better. • Parking management strategies would be coordinated in station areas to minimize spillover parking in neighborhoods. • Bicycle and pedestrian improvements would be implemented at transit stations consistent with system access plans to accommodate projected increase in bicycle and pedestrian travel associated with the proposed project.	• Regional reduction in automobile travel; similar reduction in bus transit in the high-occupancy vehicle (HOV) lanes would increase capacity and/or improve operations. • Increased person throughput (up to 10 percent) in the I-5 corridor, particularly in evening peak periods. • Direct rail service from Lynnwood to Northgate, the University District, Capitol Hill, downtown Seattle, the Rainier Valley, and Seattle-Tacoma International Airport. • Substantially improved transit service reliability in the corridor, increased frequency throughout the day (5- to 10-minute headways), and daily service extended to19 hours. • Travel time savings to regional destinations, e.g., from Lynnwood to Northgate and downtown Seattle—an estimated 10 to 17 minutes, respectively. • A new ADA-compliant bicycle/pedestrian bridge from 232nd Street SW to the Mountlake Terrace Freeway Station (Alternative B4) in the I-5 median (none now).

Table C-2. Environmental Impacts, Potential Mitigation, and Benefits for Minority and Low-income Populations

Element of the Environment	Impacts	Impacts on Minority and Low-income Population(s)	Potential Design Measures, Mitigation and Enhancement	Benefit(s) to Minority and Low-income Population(s)
Acquisition, Displacement, and Relocation	• Segment A full acquisitions of 65 to 81 parcels and displacement to 109 to 126 residences. • Segment B full acquisition of 1 to 6 parcels and displacement of 0 to 5 residences. • Segment C full acquisitions of 1 to 80 parcels and displacement of 0 to 77 residences, 1 to 31 business or other. • For the Preferred Alternative and all Segment A alternatives, 49 of the 124 residential displacements would be single-occupancy rooming house units.	• Properties to be acquired are in areas where low-income and/or minority populations are present, and some individuals from these populations are likely to be affected the same as the general population.	• Property owners and displaced residents and businesses would receive compensation and relocation assistance consistent with federal and state regulations, and Sound Transit's Real Estate Property Acquisition and Relocation Policy. • Relocation policies require replacement housing to be affordable for the displaced resident. • Market research indicates there would be opportunities for residents and businesses to successfully relocate within the general area, including lower-cost, owner-occupied, and rental housing.	None.
Land Use	No adverse impacts.	No adverse impacts.	None required.	None.
Economics	• Property acquisition would displace between 9 and 31 businesses, with 60 to 108 employees, in Segment C. • Property tax reductions: 0.1percent in Segment A, 0 to 0.4 percent in Segment B, and 0.2 to 1.1 percent of city revenues. • Temporary increase in construction impacts on traffic congestion and reroutes, noise, vibration, dust, and visual obstruction that would affect nearby businesses, particularly near the proposed stations at 220th Street SW and the existing Lynnwood Transit Center.	• Businesses that would be displaced in Segment C are located in a neighborhood that is 58.3 percent minority and 18.6 percent low income. • Based on the types of businesses displaced and the demographic characteristics of the corridor, some employees of displaced businesses could be minority and/or low-income persons.	• See potential mitigation for transportation (Chapter 3); acquisitions, displacements, and relocations (Section 4.1); and noise and vibration (Section 4.7) in the Final EIS. • Other construction impact mitigation measures detailed in Section 4.3, but include programs and outreach with businesses to develop a detailed mitigation plan and to coordinate with businesses during construction to minimize impacts that could disrupt business activities. • Maintain access as much as possible to each business and coordinate with businesses during times of limited access during construction.	• Opportunities for redevelopment in station areas, particularly at 220th Street SW and near the Lynnwood Transit Center, may attract new businesses and jobs to neighborhoods near station areas. • Improved access to employment centers and expanded employment opportunities for minority and low-income persons residing in the project corridor. • Federal expenditures associated with construction could result in over $1.233 billion in direct expenditure and annual employment of over 1,200 jobs in the region. • Positive construction effects include construction worker

Table C-2. Environmental Impacts, Potential Mitigation, and Benefits for Minority and Low-income Populations

Element of the Environment	Impacts	Impacts on Minority and Low-income Population(s)	Potential Design Measures, Mitigation and Enhancement	Benefit(s) to Minority and Low-income Population(s)
				expenditures at nearby businesses.
Social and Neighborhood	• Few to minor effects on community facilities and services. • No cohesion impacts because alternative alignments would not create neighborhood barriers or otherwise divide communities. • No displacement of community facilities. • Temporary construction impacts, including dust, light/glare, noise, and traffic congestion.	• Same as those experienced by the general population.	• See potential mitigation under Acquisitions, Displacements, and Relocations (Section 4.1) in the Final EIS. • Potential mitigation for other elements of the environment (air quality, noise, visual, transportation, etc.) would reduce construction impacts affecting access or the quality of life in adjacent neighborhoods.	• Improved access to some community located in the project corridor as well as other neighborhoods served by the Link system.
Visual and Aesthetics	• Light rail alternatives would have areas with high visual impacts. • Removal or thinning of mature trees and dense vegetation currently screening I-5; changed views from the highway; views where the light rail facility or stations would dominate, or where new parking structures are near single-family residences; new and/or taller noise barriers or retaining walls; and lighting. • Temporary construction impacts include clearing, demolition, construction of new facilities, equipment use and storage, material hauling and storage, construction staging areas, and lighting along the corridor.	• Same as those experienced by the general population.	• Aesthetic plans with detailed options for applying various impact minimization measures, including replacement landscaping, would be developed in consultation with affected jurisdictions and communities. • Construction mitigation measures would include shielding light sources and designing construction screens or barriers to limit visibility of work areas.	None.

Table C-2. Environmental Impacts, Potential Mitigation, and Benefits for Minority and Low-income Populations

Element of the Environment	Impacts	Impacts on Minority and Low-income Population(s)	Potential Design Measures, Mitigation and Enhancement	Benefit(s) to Minority and Low-income Population(s)
	• Although areas along the guideway and station areas would be landscaped, it would be 15-20 years before mature landscaping would characterize the corridor and 30 or more years before evergreen trees would mature to current screening conditions.			
Air Quality and Greenhouse Gases	• No operational impacts. • Temporary construction impacts include increased levels of pollutants, particularly emissions from construction equipment and trucks, and fugitive dust and particulates associated with grading and excavation.	Same as those experienced by the general population.	• No mitigation is required or proposed for light rail operation. • Potential construction mitigation includes mitigation measures and best management practices (BMPs) to control particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and emissions of carbon monoxide and nitrogen oxides.	Improved air quality in the longer term due to reduced criteria pollutants and mobile source air toxics compared with No Build Alternative conditions.
Noise and Vibration	• There are noise- and vibration-sensitive properties along the entire corridor. • Without mitigation, noise impacts would occur. The affected sites are mostly in Segment A. No vibration impacts are expected in either Segment B or C. • Construction-related noise and vibration.	No adverse impacts are expected with project design and mitigation measures that control and limit noise and vibration levels.	• Adverse noise and vibration effects would be mitigated by installing noise walls, special trackwork, sound insulation and other noise abatement measures. • Construction activities would implement a variety of measures to comply with local regulatory requirements and ordinances. Any nighttime construction activities would comply with local government ordinances and nighttime noise variances.	New and relocated noise barriers that mitigate transit noise could also reduce noise levels from traffic on I-5 and other nearby roadways, potentially reducing noise levels to below existing ambient levels.

Table C-2. Environmental Impacts, Potential Mitigation, and Benefits for Minority and Low-income Populations

Element of the Environment	Impacts	Impacts on Minority and Low-income Population(s)	Potential Design Measures, Mitigation and Enhancement	Benefit(s) to Minority and Low-income Population(s)
Ecosystem Resources	• Low potential for adverse effects on vegetation, wildlife or fish habitat after mitigation. • Limited wetland and wetland buffer impacts. • Stream crossings are all elevated, and most construction is outside of stream channels. • The project would be designed to comply with all federal, state, and local regulations controlling potential risks to ecosystem resources.	No adverse impacts to active fisheries, including fishing areas used by tribes or others.	• Project design measures would avoid and minimize impacts on environmentally sensitive resources and provide compensatory mitigation measures where adverse effects are unavoidable for no net loss of ecosystem functions. • Construction BMPs would minimize impacts such that no additional mitigation measures would be required.	None.
Water Resources	The project would result in temporary construction and long-term increased pollution-generating and non-pollution-generating impervious surfaces, changes in water quality and flow control facilities, and placement of columns supporting elevated tracks in stream buffers and Scriber Creek flood plain.	No adverse impacts.	• Project would be designed to comply with all federal, state, and local regulations, which would prevent or minimize potential impacts to water resources through project planning, design, and the application of required BMPs (see Appendix I-4.9). • Measures for mitigating construction impacts include compliance with the NPDES permit program. • Construction BMPs.	None.
Energy Impacts	• The light rail alternatives would result in lower energy consumption regionally. • No adverse energy construction impacts.	No adverse impacts.	None required.	Overall reduction in energy consumption compared to the No Build Alternative would benefit all populations.
Geology and Soils	• Low risks for adverse impacts from steep slope and landslide hazard areas. • Corridor located in seismically active region. • Some construction risks from erosion, slope instability, seismic ground-shaking, vibration, settlement, temporary excavations, and dewatering.	No adverse impacts.	Geology and soils risks would be avoided or minimized with the use of engineering design standards and BMPs.	None.

Table C-2. Environmental Impacts, Potential Mitigation, and Benefits for Minority and Low-income Populations

Element of the Environment	Impacts	Impacts on Minority and Low-income Population(s)	Potential Design Measures, Mitigation and Enhancement	Benefit(s) to Minority and Low-income Population(s)
Hazardous Materials	• Segment C alternatives require acquisition of all or parts of three to four parcels with higher risk for remaining hazardous materials. • Contamination may be encountered during construction. • Construction activities could cause accidental release or spill of hazardous materials along the project corridor.	Same as those experienced by the general population.	• Environmental due diligence for properties before acquisition, and where hazardous materials are present, management plans and actions would be implemented. • Contractors would be required to develop plans to implement BMPs to ensure management of hazardous materials during construction is consistent with state and federal regulations.	In some neighborhoods with minority and low-income populations, acquired parcels with hazardous materials could be cleaned up.
Electromagnetic Fields	• No adverse effects because no sensitive equipment would be in operation within 1,000 feet of alternative alignments and stations. • Electromagnetic fields would be below exposure guidelines for human health.	No adverse impacts.	None required.	None.
Public Services, Safety, and Security	Potential construction effects on emergency response times and routes, particularly near Shoreline Fire Department Fire Station No. 65 on NE 155th Street.	Same as experienced by the general population.	Minimize construction impacts through coordination with police, fire, and local emergency response services.	None.
Utilities	• No long-term impacts on utilities under any segment alternative, although some utility facilities may be relocated during construction to ensure long-term access. • Short-term temporary construction impacts on utilities.	Same as for the general population.	• Coordination with utilities during final design. • Design measures to minimize the effects of stray current. • Potholing and preconstruction surveys during final design. • Construction of temporary utility lines, if needed, to ensure continuous service or to minimize disruptions.	None.
Cultural, Archaeological, and Historic Resources	None.	No adverse impacts.	Develop Inadvertent Discovery Plan prior to ground-disturbing construction activities.	None.

Table C-2. Environmental Impacts, Potential Mitigation, and Benefits for Minority and Low-income Populations

Element of the Environment	Impacts	Impacts on Minority and Low-income Population(s)	Potential Design Measures, Mitigation and Enhancement	Benefit(s) to Minority and Low-income Population(s)
Parks and Recreational Resources	• Jackson Park Golf Course and a nearby trail affected by changed views for elevated alternatives. Northacres Park and Twin Ponds Park could be impacted by transit patrons parking under some alternatives. • Ridgecrest Park affected by acquisition of a sliver of property, changed views, and partial removal of a berm and mature trees, but park and facility activities can continue. • Shoreline Stadium affected by a sliver parcel acquisition for the Preferred Alternative and A1; reduced parking and removal of a small space adjacent to the track, but no change in use.The Interurban and Scriber Creek trails in the Lynnwood area would each be crossed overhead by elevated guideways, but trail functions would not change. • Scriber Creek Park affected by elevated guideway columns in the park under Alternative C1; alignment over wetland area adjacent and south of park under Alternative C2 would affect views from the park. • Temporary construction impacts would include visual, noise, traffic congestion, and temporary trail detours or modified park access.	Same as experienced by the general population.	• Sound Transit would work with the park owner or manager to minimize operation and construction impacts and provide compensation where parkland must be acquired. • Potential unauthorized parking at Northacres Park and Twin Ponds Park would be addressed by signage and parking control and management measures. • Restoration of affected park and trail areas. • For temporary trail and partial park closures during construction, Sound Transit would coordinate with appropriate local jurisdictions to develop detours or alternate access and provide public information and signage to allow for continued use.	Several of the parks would receive improvements as part of the proposed mitigation developed to address impacts that would benefit minority and low-income populations to the same degree as the general population.

C.6.2 Transit Service Benefits

Overview

The Lynnwood Link Extension would improve transportation for people living, working, and shopping in the study area. The new light rail line would particularly provide transit benefits for people living and working within 0.5 mile of the proposed transit stations, which could be easily accessed by foot. For others, transit station connections would be provided by bicycle, bus service, taxi, and private vehicle.

As discussed in the *Lynnwood Link Extension Transportation Technical Report*, project transportation benefits include the following:

- Increased transit access to regional employment opportunities, activity centers, and retail shopping districts
- Increased person throughput within the project corridor, particularly transit users
- Increased reliability for travel by transit
- Increased transit services with increased frequency compared to bus transit services

Increased transit services through extended hours of operation throughout the corridorThe following subsections discuss these benefits to minority and low-income populations, many of whom are dependent upon transit.

Improved Access to Regional Activity Centers

The Lynnwood Link Extension connects the major communities of north Seattle and the cities of Shoreline, Mountlake Terrace, and Lynnwood. Moreover, the light rail extension connecting to the Central Link light rail system provides service to regional activity centers at Northgate, the University District, downtown Seattle, communities to the south, and the Seattle-Tacoma International Airport. The East Link extension to Mercer Island, Bellevue, and Overlake, as well as the Federal Way Link extension, further expand the number of regional activity centers accessible by rail when the Lynnwood Link Extension opens for operation.

The light rail system improves access to many community and regional activity centers. The Lynnwood Link, Central Link, and East Link extensions together have light rail stations within 0.5-mile walking distances of the following:

- Higher education: North Seattle Community College, University of Washington, Seattle Central Community College

- Health facilities: Group Health Lynnwood Medical Center, UW Medical Center, UW Neighborhood Shoreline and Northgate Clinics, Polyclinic at Northgate, Group Health at Bellevue, Overlake Medical Center and Hospital, University Hospital, and other downtown Seattle hospitals and clinics
- Shopping: Lynnwood City Center, Mountlake Terrace Town Center, Northgate Mall, University District, and downtown Seattle
- Sports stadiums: Husky Stadium, Century Link Field and Event Center, and Safeco Field
- Museums and cultural venues: Burke Museum of Natural History, Henry Art Gallery, Meany Hall for the Performing Arts, Floyd and Delores Jones Playhouse, Seattle Art Museum, Frey Art Museum, Benaroya Hall, 5th Avenue Theatre, Paramount Theatre, and Washington State Convention Center

Minority and low-income populations, especially those who are transit-dependent, would benefit from the more reliable, frequent, and faster access by light rail to these many community and regional activity centers. They would also have improved access to employment opportunities associated with the regional activity centers in Lynnwood, Northgate, University District, downtown Seattle, East King County including Bellevue and Overlake, and the Seattle-Tacoma International Airport. Attachment C-13 indicates the station access to nearby community facilities.

Improved Access to Transit

Walking to the new transit stations would provide residents within 0.5 mile of the station the most reliable access to the new light rail service because they could control their departure and travel times, and would not be dependent on making connections with other modes of transportation.

Table C-3 lists the total population residing within 0.5 mile of the proposed light rail stations for the segment alternatives and the proportions of the population estimated to be minority and low income. Based on this analysis, all of the alternatives would improve access to transit services for minority and low-income populations. In Segment B, the Preferred Alternative optional station and Alternative B2A would provide access to greater numbers of minority populations than the other Segment B alternatives due to the station at 220th Street SW. The alternatives in Segment C would substantially improve access to transit services to minority and low-income populations due to the substantially higher concentration of these populations within 0.5 mile of any of the three transit station locations in Lynnwood.

Table C-3. Access to Light Rail Stations for Minority and Low-income Populations

Segment	Number of Stations	Total Census Block Population Within 0.5 Mile of Stations	Percent Minority	Percent Low Income
Segment A				
Preferred Alternative	2	12,300	36.1	10.1
Alternative A1	2	12,300	36.1	10.1
Alternative A3	2	12,300	36.1	10.1
Alternative A5	3	18,900	35.8	10.3
Alternative A7	3	18,900	35.8	10.3
Alternative A10	3	17,300	36.6	10.3
Alternative A11	3	17,300	36.6	10.3
Segment B				
Preferred Alternative	1	4,800	31.1	9.7
Alternative B1	1	4,800	31.1	9.7
Alternative B2	1	4,800	31.1	9.7
Alternative B2A	2	8,800	33.4	12.4
Alternative B4	1	5,000	28.3	10.0
Segment C				
Preferred Alternative	1	4,900	48.1	11.8
Alternative C1	1	4,200	47.7	11.8
Alternative C2	1	4,200	48.6	11.8
Alternative C3	1	4,600	48.7	11.8

Source: U.S. Census Bureau, 2010 Decennial Census and 2006-2010 American Community Survey.
Note: Calculations of the total population residing within 0.5 mile of the stations for each alternative excludes overlapping areas where residents may be within 0.5 mile of more than one station. In addition, the 2010 census blocks have been aggregated to best fit the 0.5-mile buffer area surrounding the stations. Estimates of portions of the census block populations residing within 0.5 mile of the stations were not calculated.

Improved Transit Service Hours and Headways

Currently, three bus transit agencies operate in the Lynnwood Link corridor—King County Metro, Community Transit, and Sound Transit (express buses). Several King County Metro bus routes operate during peak, non-peak, and evening hours in King County. Community Transit primarily operates peak-direction, peak-period buses that serve portions of the corridor, including local buses that provide service in Snohomish County communities during peak and non-peak periods, but not during the evening hours. Sound Transit's ST Express regional bus service provides two-direction, all-day service between major regional destinations with no more than two buses per hour. Midday, off-peak, and weekend transit service is less frequent than during the peak periods.

In contrast, light rail service would serve the entire corridor during peak, daytime, and evening hours with at least four trains per hour from about 5 am to 12 midnight—an estimated 19 hours per day. The light rail would operate with midday headways of 5 to 10 minutes, compared to 15 minutes for the most frequent bus routes and 30- to 60-minute headways for most non-peak bus routes. The light rail

service would be available for more hours of the day than existing bus service, particularly in the northern portion of the corridor in Snohomish County. This improved transit service would benefit all patrons, including low-income and transit-dependent persons, particularly those traveling to and from jobs during non-peak periods, to and from multiple places of employment each day, or to and from jobs with swing and graveyard shifts.

Comparative Costs of Transit Service Fares

Light rail fares have not yet been established for the Lynnwood Link Extension. Existing fare formulas for the light rail service on Link are less expensive than equivalent bus services, and Sound Transit anticipates that Link fares will remain similar to or less expensive than typical bus fares. As of March 2015, low-income residents may qualify for reduced fare transit passes on King County Metro and Sound Transit.

Transit Travel Time Savings

On average, 2035 peak period transit travel time for the Preferred Alternative and other light rail alternatives for trips between Lynnwood and Shoreline to downtown Seattle would provide an estimated 5- to 16-minute travel time savings compared to the No Build Alternative.

For the Final EIS, Sound Transit updated the analysis of the specific transit travel time savings benefitting minority and low-income populations. The measure of travel time savings is an output of the Sound Transit Ridership Model (2011) and is referred to as user benefits. The updated modeling analysis incorporates the Puget Sound Regional Council's new July 2013 Land Use Baseline. The model measures the total number of annual person-hours of travel time savings for the model forecast analysis zones (FAZs). For example, if the user benefit is 1,000, then transit users residing in the FAZ as a group benefitted by saving 1,000 hours of travel time over 1 year. Figure C-5 illustrates travel time savings in forecast year 2035 in the project corridor for the Preferred Alternative, other alternatives would be similar.

The travel time saving benefits were divided into four categories of annual person-hours: 0 to 25,000; greater than 25,000 to 50,000; greater than 50,000 to 75,000; and greater than 75,000. The 2035 average for the 165 FAZs was approximately 37,000 annual person-hours for the study area as calculated by the travel demand forecast model. The FAZs with greater than 75,000 annual person-hours represent the highest benefits attributable to the light rail alternatives.

Transit Travel Time Savings for Minority Populations

To assess the potential effects on travel time savings, or user benefits, for minority populations, Figure C-2 was visually compared to the map of corridor 2035 travel time savings shown in Figure C-5. A review of the literature indicates that it is reasonable to assume the 2010 locations of minority populations represent the locations of these populations in the future. Figures C-2 and C-5 show that the minority populations are located in FAZs with the two highest categories of travel time savings. Together, this analysis confirms that transit travel time benefits for minority populations are positive throughout the project corridor and generally are among the highest category of user benefits.

Transit Travel Time Savings for Low-income Populations

A similar analysis was conducted to assess potential effects on transit travel time savings for low-income populations. Figure C-5, which shows travel time savings in 2035, was compared to Figures C-3 and C-4 showing the distribution of low-income populations based on the 2010 decennial census and the 2006–2010 American Community Survey, respectively. Moreover, neighborhoods low income populations correlate to those with transit dependent populations, i.e., households with no access to a personal vehicle (Attachment C-7). In particular, the Pinehurst, South Lynnwood, and Lynnwood City Center neighborhoods have more than 17 percent of the population at or below poverty level, and the transit dependent populations also make up more than twice the study area average. Again, comparison to the travel time savings map shows benefits for low-income populations are positive throughout the corridor and generally are among the highest category of user benefits.

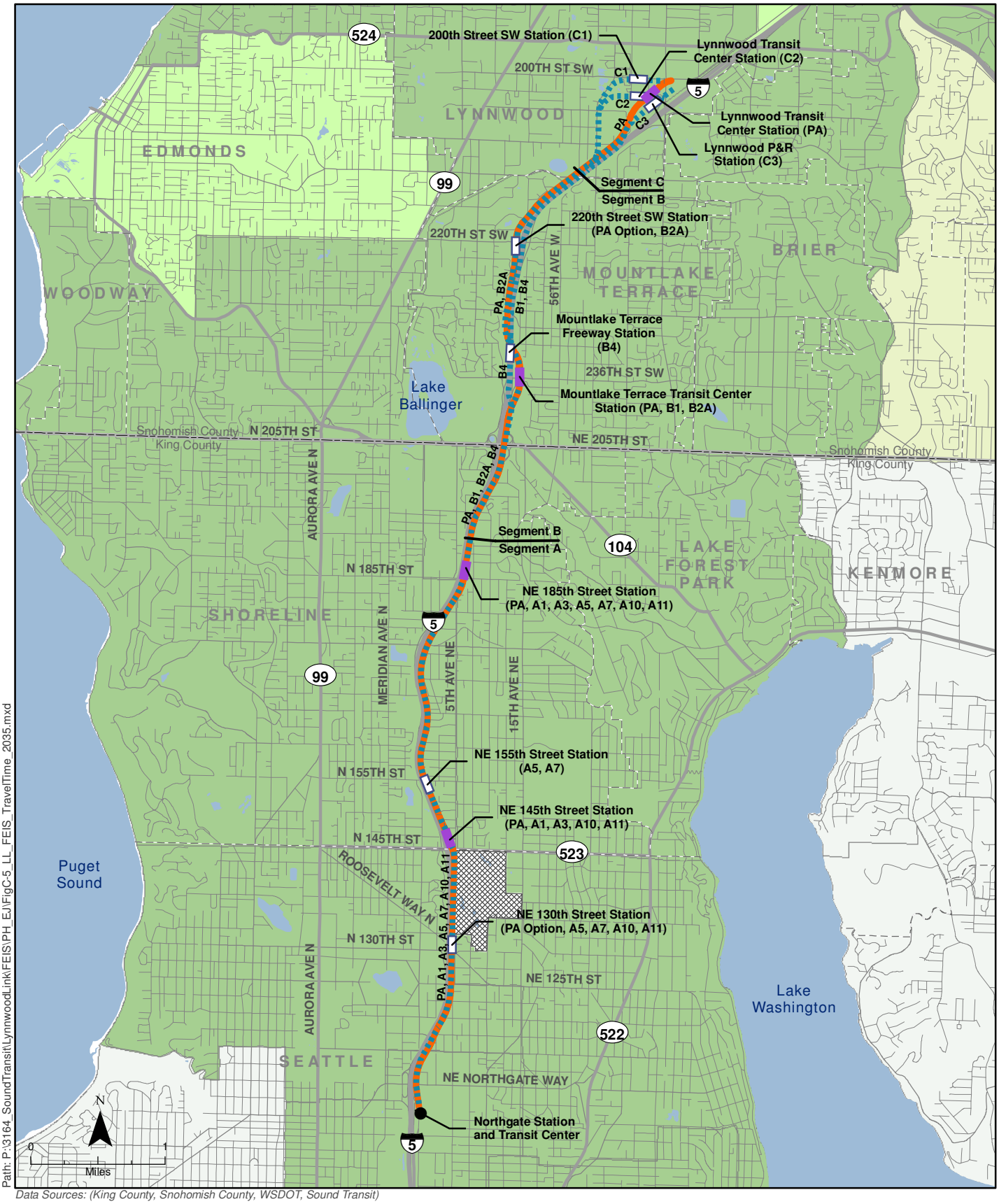

Figure C-5
Travel Time Savings in 2035 for the Preferred Alternative

Lynnwood Link Extension

C.7. CONCLUSIONS

FTA and Sound Transit have assessed the potential for the Lynnwood Link Extension to have disproportionately high and adverse effects on minority and low-income populations, in accordance with Executive Order 12898 and USDOT Order 5610.2.

Based on the findings of impacts described in the Final EIS and considering the mitigation measures identified, project impacts would not be high and adverse, and they would not alter the character, functions, or interactions of any of the corridor neighborhoods. Design measures, BMPs, and mitigation commitments would reduce the severity of individual or cumulative impacts on all populations, including minority and low-income populations, to levels that would not be high and adverse. The impacts would not be predominantly borne by, or appreciably more severe for minority and low-income populations. In addition, the project has offsetting benefits to all populations.

The 18 neighborhoods in the study area are diverse. Minority and low-income populations reside all along the corridor. The highest concentrations of these populations are in the South Lynnwood and Lynnwood City Center neighborhoods, both of which have predominantly minority populations (greater than 50 percent).

The primary impacts of the project affecting individuals or businesses would be from property acquisition and displacement, but compensation and relocation assistance in accordance with federal regulations and Sound Transit policies would prevent these impacts from being high and adverse. Sound Transit anticipates some low-income and minority individuals would be affected by residential and business acquisitions, based on demographic information for the corridor communities and as a result of public outreach including meetings with property owners. While property acquisitions and the resulting displacements would be unavoidable, they would be mitigated through Sound Transit's real property acquisition policy, including its compensation and relocation assistance program.

Moreover, the Lynnwood Link Extension would have offsetting benefits. The light rail alternatives would improve access to regional activity centers and employment opportunities. Light rail transit would be more reliable and more frequent, with increased hours of service. These improvements would particularly benefit transit-dependent persons, including those having more than one job, or working swing and graveyard shifts due to extended operating hours of the light rail system compared to the bus transit systems. The light rail extension would reduce air quality criteria pollutants and mobile source air toxic pollutants compared to the No Build Alternative. Ambient noise levels may be reduced, particularly where no noise barriers currently exist or where replacement noise barriers would be constructed. Because of recent planned and proposed changes

in municipal comprehensive and neighborhood plans, proposed stations in Mountlake Terrace, Shoreline, and especially Lynnwood could result in more intensive land uses, economic development, and mixed land uses to support neighborhood livability and sustainability. The project would benefit the same individuals and businesses that are likely to experience the project's adverse effects.

FTA has concluded that Sound Transit's Lynnwood Link Extension would not result in disproportionately high and adverse effects on minority and low-income populations.

C.8. REFERENCES

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APPENDIX C ATTACHMENTS

Attachment C-1. Neighborhood Descriptions

There are 18 neighborhoods adjacent to the Lynnwood Link Extension corridor. With the exception of one neighborhood, the names and boundaries of these neighborhoods are defined by local governments—the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood. The boundaries of the Hazelwood neighborhood, which is located east of I-5 at the north terminus of the corridor, was defined by Sound Transit, and reflects the neighborhood's common name. The demographic characteristics are based on U.S. Census data for minorities (Census 2010a) and low income (Census 2010b).

Maple Leaf

The Maple Leaf neighborhood is located south of Northgate Way between I-5 and 15th Avenue NE, Lake City Way, and NE 85th Street. The northwestern corner of the neighborhood is dominated by the Northgate Mall and higher density residential development and offices. Single-family residential housing dominates the remainder of the neighborhood. The neighborhood population totals about 9,400, and is less diverse racially and ethnically than most of the corridor neighborhoods with 27.7 percent minority.

North College Park

The North College Park neighborhood is located south of Northgate Way between I-5, Aurora Avenue, and NE 85th Street. The western edge of the neighborhood is highway-oriented commercial development along Aurora Avenue. Higher density townhouse development projects have been constructed as infill replacing older single-family residential development. The eastern portion of the neighborhood is dominated by the North Seattle Community College and the northeastern area encompasses medical office buildings and high-density residential complexes surrounding Northwest Hospital. This neighborhood population is about 6,700. It is 38.3 percent minority with over 18 percent Asian and approximately 6 percent Black, and 17.1 percent of the population are at or below poverty level.

Haller Lake

The Haller Lake neighborhood is located between I-5 and Aurora Avenue and extends from Northgate Way to NE 145th Street. The private Lakeside School campus is located in the northeast corner of the neighborhood. The southern portion is dominated by the Northwest Hospital and the Evergreen-Washelli Cemetery. The remainder of the neighborhood is largely single-family residential. The population is about 8,200 with 38.0 percent minority; approximately 15 percent is Asian, almost 11 percent other races, and over 7 percent Black. Ten percent of the population lives at or below the poverty level.

Pinehurst

The Pinehurst neighborhood is located east of I-5 between NE Northgate Way and NE 145th Street (the Seattle city limits). The Jackson Park Golf Course dominates the northern one-third section of the neighborhood, while the southern edges are commercial developments north of the Northgate Mall that include several higher density residential complexes. In addition, there are several higher density residential complexes on the south side of NE 125th Street west of the neighborhood commercial district. The neighborhood population totals over 7,800 with minorities comprising over 41 percent (17 percent Asian and 9 percent Black). About 14 percent of the population lives at or below the poverty level.

Parkwood

To the west of I-5, the Parkwood neighborhood extends west to Aurora Avenue between NE 145th and NE 160th Streets. Twin Ponds Park and two elementary schools are key neighborhood community facilities. The King County Metro North Base bus maintenance yard is located in the northeast corner of the neighborhood adjacent to I-5. A highway-oriented commercial district extends along Aurora Avenue south of the Aurora Square Shopping Center at NE 155th Street. The central portion of this neighborhood is single-family residential. This small neighborhood has a population of about 3,400 with minorities comprising approximately 39 percent (over 17 percent Asian, 10 percent other races, and almost 10 percent Hispanic). About 8 percent of the population lives at or below the poverty level.

Meridian Park

The Meridian Park neighborhood west of I-5 extends from NE 165th Street north to NE 185th Street and west to Aurora Avenue. The neighborhood contains several neighborhood parks as well as highway-oriented commercial development along Aurora Avenue. The City of Shoreline has just completed a major streetscape project along this portion of Aurora Avenue. The Shoreline School District Room Nine Community School and the Meridian Elementary School are centrally located in the neighborhood. The population is about 5,400 with over 38 percent minority (over 19 percent Asian and 7 percent Black), and 7 percent at or below poverty level.

Ridgecrest

The Ridgecrest neighborhood extends east of I-5 from NE 145th to NE 175th Streets and is largely single-family residential in character. The Shoreline Fire Station No. 65 is at NE 155th Street just east of I-5. The Ridgecrest Elementary School is located on NE 165th Street. The NE 175th Street corridor is a major arterial with several churches and a library. The neighborhood commercial district is at the

intersection of NE 175th Street and 15th Avenue NE. The population is about 6,400, over 36 percent minority, including 17 percent Asian. About 15 percent of the neighborhood population is at or below poverty level.

North City

The North City neighborhood east of I-5 is bounded by NE 175th and NE 195th Streets. The neighborhood is primarily single-family residential. A neighborhood commercial district is located on 15th Avenue NE between NE 175th and NE 185th Streets. The North City Park and a closed elementary school are located in the northwesterly corner of the neighborhood, immediately east of I-5. The closed school is occupied by two preschools. The neighborhood is less diverse than other neighborhoods with less than 34 percent minority. Asians comprise about 15.5 percent of the approximate 6,400 residents. The population living in poverty is about 9 percent.

Echo Lake

The Echo Lake neighborhood on the west side of I-5 extends from NE 185th Street north to the county boundary at NE 205th Street. This major arterial is SR 104 and connects Lake Forest Park, Ballinger Way, I-5, and Edmonds. The western edge of the neighborhood is characterized by highway-oriented commercial development along Aurora Avenue. The southeast corner of the intersection of Aurora Avenue and SR 104 is the Aurora Village and Costco shopping center. The Shoreline Conference Center, Shoreline School District athletic fields, and the Shoreline Pool are located in the southeastern corner of the neighborhood off NE 185th Street. Most of the north-central portion of the neighborhood is dominated by two large residential subdivision developments and the Holyrood Cemetery. The population is about 5,800 with total minorities comprising 36.9 percent—largely Asian at over 20 percent, and 9.5 percent of the neighborhood population is at or below the poverty level.

Ballinger

Located east of I-5 and straddling SR 104 (Ballinger Way) is the Ballinger neighborhood, which extends from NE 195th to NE 205th Streets. This neighborhood encompasses the I-5/SR 104 interchange where there is considerable commercial and office development east of the interchange. Some multifamily residential developments are north of this commercial district. Farther east, Ballinger Way divides single-family residential development. With a population of just over 3,000 and 37.7 percent minority, the Ballinger neighborhood is diverse with over 9 percent Black and over 13 percent Asian. The population living in poverty is about 9 percent.

Lake Ballinger

The Lake Ballinger neighborhood encompasses Lake Ballinger and is located west of I-5. The Lake Ballinger Golf Course, Lake Ballinger Park, and Nile Temple Country Club and Golf Course are northeast of the lake. Highway-oriented commercial development characterizes the western edge of the neighborhood along Aurora Avenue. North of 220th Street SW, the neighborhood is mixed higher density housing with small pockets of single-family residences. This neighborhood is the second least populated neighborhood with a total population of about 2,100. It is less diverse than other corridor neighborhoods with more than 78 percent White and total minorities (race and ethnicity) comprising less than 26 percent of the population. More than 15 percent of the population lives in poverty.

Gateway

The Gateway neighborhood on the east side of I-5 extends between 212th and 236th Streets SW. Except for the commercial and office development in the immediate proximity of the I-5/244th Street SW interchange, the neighborhood is characterized by single-family residential development with several small parks. With a population of about 3,000, the neighborhood is racially diverse with 35.0 percent minority, including more than 12 percent Hispanic. About 4 percent of the neighborhood population lives in poverty.

Town Center

The Town Center neighborhood is bounded by 236th and 220th Streets SW east of I-5. Key community facilities in the neighborhood include the Terrace Creek Park and Mountlake Terrace Public Library. The City's civic center, fire and police stations, and library are adjacent to the Veterans Memorial Park and northeast of the existing Mountlake Terrace Transit Center. The Mountlake Terrace Recreation Pavilion and Evergreen Playfield Complex are in the center of the neighborhood. The Terrace Park School and Jack Long Park are located in the northwest portion of the neighborhood immediately east of I-5 and surrounded by single-family residences. With a population of about 3,500, this neighborhood is about 29 percent minority, including 10 percent Hispanic. About 4 percent of the population lives at or below the poverty level.

Melody Hill

The Melody Hill neighborhood is west of I-5 between 226th and 212th Streets SW. The western portion of the neighborhood is dominated by commercial and office development, particularly the large Premera Blue Cross office complex. A small single-family residential area is located immediately south of Halls Lake. Another commercial development is located immediately west of I-5 between 226th and

220th Streets SW. With a total population of about 2,300 with approximately 42 percent minority, the neighborhood is diverse with about 18 percent Hispanic. The population living in poverty exceeds 15 percent.

Cascade View

East of I-5, the Cascade View neighborhood extends from 220th to 212th Streets SW and is largely medium-density multifamily residential in character. The southeast corner of the neighborhood is anchored by the Mountlake Terrace High School. Mountain View Villa in the eastern portion of the neighborhood is a manufactured home community. This neighborhood has a total population of almost 4,800 that is diverse (37.9 percent minority) comprising Asian (more than 15 percent) and Hispanic populations (almost 10 percent). About 9 percent of the population lives at or below the poverty level.

Hazelwood

The Hazelwood neighborhood encompasses portions of incorporated Lynnwood and unincorporated Snohomish County west of I-5 between 212th and 196th Streets SW. The Hazelwood Elementary School is centrally located within the neighborhood. A highway-oriented commercial development is in the southeast quadrant of the 44th Avenue West intersection and single-family residences are west of the arterial. A shopping center is in the northeast quadrant of the neighborhood at the intersection of 44th Avenue West and 212th Street SW. The 28th Avenue West intersection is characterized by highway commercial development (e.g., Lowes, Whole Foods, and two hotels). The population of this neighborhood is 3,700 with over 38 percent minority including approximately 22 percent Asian and 6.6 percent Hispanic. Less than 7 percent of the population lives at or below the poverty level.

South Lynnwood

The South Lynnwood neighborhood extends from 212th Street SW at the Lynnwood city boundary north to 196th Street SW between Aurora Avenue and 52nd Avenue West. Scriber Lake and park are located in the northwest corner of the neighborhood. Substantial highway-oriented commercial development and offices are located along this portion of Aurora Avenue as well as the north side of 212th Street SW. In addition, light industrial and multifamily residential complexes are found in this area. There are a few sizable undeveloped parcels in the neighborhood and several mobile home or manufactured housing communities. The neighborhood has a large Group Health medical clinic. Non-residential development is located west of I-5. The neighborhood population is almost 5,500 with over 51 percent minority (about 15 percent Asian, over 7 percent Black, and almost 24 percent Hispanic). About 19 percent of the population lives at or below the poverty level.

Lynnwood City Center

The Lynnwood Transit Center is located in the very southern portion of the Lynnwood City Center neighborhood, which extends from I-5 north to 192nd Street SW and east of 52nd Avenue West. Except for a small area of higher density multifamily residential development immediately north and west of the Lynnwood Transit Center, the remainder of the neighborhood is largely commercial. Uses include restaurants, big box retail stores, hotels, and banks. The Lynnwood Convention Center is located in the northwest corner of the neighborhood. Other major uses include several medical centers, the Lynnwood municipal court, the City's police department offices, and several churches. Alderwood Mall is located several blocks north of the neighborhood boundary. With many non-residential land uses, the population of this neighborhood is the smallest of any of the corridor neighborhoods at only 1,600, though it is very diverse with the minority populations comprising over 58 percent, including 22.6 percent mixed races and 30 percent Hispanic. The percentage of the population at or below the poverty level is 18 percent.

References

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Census (U.S. Census Bureau). 2010b. 2006-2010 American Community Survey.

Attachment C-2. Neighborhood Population and Demographic Characteristics

Neighborhoods	Total Population	White %	Black or African American %	American Indian and Alaska Native %	Asian %	Hawaiian & Pacific Islander %	Other or Two or More Races %	Hispanic (any race) %	Total Minority %
Lynnwood City Center	1,600	52.2	8.8	1.3	14.7	0.4	22.6	29.8	58.3
South Lynnwood	5,500	57.7	7.5	1.2	15.4	0.8	17.3	23.9	51.5
Hazelwood	3,700	64.6	4.2	1.1	22.5	1.1	6.6	6.6	38.6
Melody Hill	2,300	64.8	7.0	0.7	8.9	0.8	17.9	18.4	41.8
Cascade View	4,800	66.0	5.0	1.1	15.6	0.9	11.4	9.8	37.9
Town Center	3,500	76.1	2.0	1.6	9.8	0.6	9.9	10.8	29.0
Lake Ballinger	2,100	78.3	3.5	0.7	10.1	0.2	7.2	7.7	25.5
Gateway	3,000	69.9	5.3	0.8	10.9	0.9	12.1	12.4	35.0
Echo Lake	5,800	66.5	4.5	0.8	20.6	0.4	7.2	6.1	36.9
Ballinger	3,000	67.3	9.2	0.9	13.4	0.1	9.1	8.2	37.7
North City	6,400	70.7	4.6	0.8	15.5	0.7	7.7	7.7	33.5
Meridian Park	5,400	65.1	7.0	1.0	19.3	0.3	7.2	6.1	38.4
Parkwood	3,400	64.8	5.2	1.1	17.5	1.0	10.4	9.7	38.8
Ridgecrest	6,400	67.9	6.0	0.9	17.0	0.2	8.0	7.7	36.3
Haller Lake	8,200	65.5	7.3	1.1	15.0	0.4	10.7	9.0	38.0
Pinehurst	7,800	63.0	9.2	0.9	16.9	0.8	9.2	8.9	41.3
North College Park	6,700	65.0	5.8	0.9	18.8	0.3	9.1	7.3	38.3
Maple Leaf	9,400	75.1	3.4	0.7	12.2	0.3	8.1	5.6	27.7
Study Area	**88,900**	**67.0**	**5.9**	**1.0**	**15.8**	**0.5**	**9.9**	**9.6**	**37.3**

Source: U.S. Census Bureau, 2010 Decennial Census.

Notes: Neighborhoods are generally listed north to south and east to west to reflect location in the project corridor. Census blocks have been aggregated to best fit the boundaries of the neighborhoods using 2010 Census data. Sums may not total due to rounding.

Attachment C-3. Elementary School Demographic Characteristics

School District	Elementary School	Total Pop.	White %	Black African American %	American Indian and Alaska Native %	Asian %	Hawaiian and Pacific Islander %	Two or More %	Hispanic %	Free or Reduced-Price Lunch %	Transitional Bilingual %
Edmonds	Lynnwood	525	44	7	0	20	0	9	16	44.4	21.2
Edmonds	Hilltop	570	58	3	1	20	0	8	9	23.8	9.7
Edmonds	Hazelwood	426	53	4	1	14	0	12	17	38.6	17.1
Edmonds	Cedar Valley Community	430	25	5	0	13	0	12	52	83.1	42.9
Edmonds	Cedar Way	378	53	6	0	15	0	12	14	38.3	15.4
Edmonds	College Place	472	27	10	1	8	0	11	45	73.9	40.5
Edmonds	Chase Lake	359	49	10	1	6	0	13	21	57.8	19.9
Edmonds	Mountlake Terrace	439	54	5	0	8	0	11	22	56.3	16.8
Edmonds	Terrace Park	326	49	5	1	9	0	16	20	42.1	15.5
Edmonds	Westgate	461	51	8	0	9	0	10	19	35.6	12.7
Shoreline	Echo Lake	486	48	6	0	20	0	10	16	36.3	15.2
Shoreline	Meridian Park	553	46	10	0	20	0	9	13	30.4	12.6
Shoreline	Parkwood	427	43	10	2	18	0	12	11	48.7	19.6
Shoreline	Ridgecrest	533	50	7	0	17	0	9	11	23.5	1.2
Seattle	Olympic Hills	267	28	25	1	14	0	19	24	74.9	24.0
Seattle	Northgate	231	10	24	2	10	0	22	45	88.4	38.8
Seattle	Olympic View	469	57	11	1	13	0	11	9	29.9	2.3

Source: October Enrollment Report for Public Schools – School Level Data 12/20/11 http://www.k12.wa.us/dataAdmin/ and http://reportcard.ospi.k12.wa.us/summary.aspx?schoolId=2512&OrgType=4&reportLevel=School&year=2010-11. The free or reduced-price lunch and transitional bilingual program participation rates date from May 2010.

Note: The elementary schools are listed north to south and east to west to generally reflect location in the corridor. In addition, a total percent of minority population is not calculated because the school district's report race and ethnicity different than data reported by the U.S. Census Bureau.

Attachment C-4. Limited English Proficiency Characteristics

Census Tract	City	Total Population	Speak Only English	Speak English Less Than Very Well	Percent of Those Who Speak a Foreign Language					
					Spanish	Chinese	Korean	Vietnamese	Tagalog	African
519.05	Lynnwood	8,000	71%	13%	14%	12%	16%	16%	10%	1%
517.01	Lynnwood	4,700	67%	19%	31%	9%	10%	7%	3%	8%
517.02	Lynnwood	5,600	62%	18%	31%	24%	7%	8%	0%	2%
514	Lynnwood	7,500	57%	24%	48%	9%	7%	1%	3%	6%
513	MLT	7,200	76%	12%	22%	2%	20%	12%	1%	0%
512	MLT	4,200	79%	9%	34%	6%	0%	9%	12%	9%
511	MLT	3,700	86%	5%	16%	8%	5%	12%	6%	15%
510	MLT	4,400	72%	16%	43%	19%	18%	1%	0%	7%
509	MLT	3,200	78%	7%	27%	3%	15%	0%	4%	12%
203	Shoreline	6,400	80%	11%	4%	21%	14%	2%	24%	8%
204.01	Shoreline	3,400	78%	8%	13%	10%	4%	0%	24%	11%
205	Shoreline	6,300	76%	8%	30%	12%	11%	4%	11%	15%
206	Shoreline	3,700	72%	9%	21%	15%	3%	3%	13%	23%
210	Shoreline	5,600	72%	16%	20%	18%	0%	3%	32%	9%
211	Shoreline	4,100	71%	10%	18%	14%	4%	2%	11%	17%
2	Seattle	7,600	77%	14%	30%	22%	2%	5%	6%	2%
3	Seattle	2,600	80%	11%	19%	44%	0%	0%	7%	0%
6	Seattle	7,600	67%	13%	14%	29%	4%	6%	6%	23%
7	Seattle	4,400	72%	17%	11%	15%	3%	7%	5%	22%
11	Seattle	2,500	79%	5%	11%	32%	0%	0%	5%	25%
12	Seattle	6,500	68%	16%	19%	19%	6%	2%	25%	7%
13	Seattle	4,300	69%	17%	31%	26%	3%	0%	10%	12%
18	Seattle	4,500	90%	3%	32%	4%	8%	12%	12%	0%
19	Seattle	4,200	83%	5%	31%	2%	9%	4%	3%	18%
20	Seattle	3,400	88%	5%	19%	7%	2%	11%	0%	0%
Study Area	**-**	**125,800**	**74%**	**13%**	**25%**	**16%**	**8%**	**5%**	**9%**	**10%**

Source: U.S. Census Bureau, 2006-2010 American Community Survey.

MLT = Mountlake Terrace

Notes: The above 2006–2010 American Community Survey data have not been adjusted for margins of error; and at census tract (CT) geographies, the margins of error can exceed 35%, which is considered acceptable in social research. Based on 2006–2010 American Community Survey data for the place of birth for those not born in the United States, the two largest groups born in Africa were from Ethiopia and Eritrea. Sums may not total due to rounding.

Attachment C-5. Neighborhood Household Characteristics

		Age	Types of Households			
Neighborhoods	Total Population	Children/Elderly %	1-Person Households %	Husband-Wife Family Households %	Family Households with Children %	Non-Family Households %
Lynnwood City Center	1,600	26/7	39	13	29	9
South Lynnwood	5,500	13/9	38	17	27	10
Hazelwood	3,700	23/9	19	30	33	9
Melody Hill	2,300	26/7	26	20	36	10
Cascade View	4,800	23/7	35	17	29	11
Town Center	3,500	22/12	28	26	29	9
Lake Ballinger	2,100	17/17	36	25	21	10
Gateway	3,000	22/10	27	26	27	10
Echo Lake	5,800	18/14	39	22	21	11
Ballinger	3,000	20/9	34	21	26	12
North City	6,400	19/12	32	26	25	10
Meridian Park	5,400	21/13	25	27	29	10
Parkwood	3,400	19/17	32	25	23	11
Ridgecrest	6,400	20/12	25	27	29	9
Haller Lake	8,200	19/11	30	25	23	14
Pinehurst	7,800	14/17	47	17	16	13
North College Park	6,700	12/7	38	17	15	23
Maple Leaf	9,400	17/9	37	20	21	16
Study Area	**88,900**	**19/11**	**34**	**22**	**24**	**12**

Source: U.S. Census Bureau, 2010 Decennial Census.

Notes: Neighborhoods are generally listed north to south and east to west to reflect location in the corridor. Census blocks have been aggregated to best fit the boundaries of the neighborhoods using 2010 Census data. Other types of households are included in the census data, so percentages cannot be summed to get 100 percent of household types. Sums may not total due to rounding.

Attachment C-6. Neighborhood Housing Characteristics

Neighborhoods	Dwelling Units	Owner-Occupied Dwelling %	Renter-Occupied Dwelling %	Single Family/Mobile Home %
Lynnwood City Center	700	9	91	26/2
South Lynnwood	2,500	39	61	26/2
Hazelwood	1,400	61	39	71/1
Melody Hill	900	45	55	36/0
Cascade View	2,200	49	51	63/0
Town Center	1,400	72	28	85/5
Lake Ballinger	1,000	70	30	36/0
Gateway	1,200	77	23	85/5
Echo Lake	2,800	50	50	55/0
Ballinger	1,400	44	56	59/2
North City	2,800	67	33	67/0
Meridian Park	2,100	67	33	76/0
Parkwood	1,500	62	38	78/0
Ridgecrest	2,500	71	29	69/1
Haller Lake	3,700	63	37	60/3
Pinehurst	4,200	33	67	36/0
North College Park	3,500	39	61	33/1
Maple Leaf	4,900	57	43	69/0
Study Area	**41,000**	**54**	**46**	**55/1**

Source: U.S. Census Bureau, 2010 Decennial Census and 2006-2010 American Community Survey.

Notes: Neighborhoods are generally listed north to south and east to west to reflect location in the corridor. Census blocks have been aggregated to best fit the boundaries of the neighborhoods for dwelling unit, owner-occupied dwelling, and renter-occupied dwelling data from the 2010 Census. Census tracts have been aggregated to best fit the boundaries of the neighborhoods for single-family and mobile-home housing data from the 2006-2010 American Community Survey. Sums may not total due to rounding.

Attachment C-7. Neighborhood Income and Poverty Characteristics

Neighborhoods	Median Household Income (rounded)	Households with Public Assistance %	Population Below Poverty %	Other Means of Travel to Work due to No Personal Vehicle Available in Household %
Lynnwood City Center	$34,000	6	18.6	8
South Lynnwood	$34,000	6	18.6	8
Hazelwood	$75,000	6	6.6	2
Melody Hill	$56,000	4	15.8	1
Cascade View	$58,000	6	8.5	4
Town Center	$58,000	1	3.7	1
Lake Ballinger	$56,000	4	15.8	1
Gateway	$58,000	1	3.7	1
Echo Lake	$55,000	1	9.5	2
Ballinger	$63,000	2	9.3	3
North City	$62,000	6	9.1	3
Meridian Park	$67,000	6	7.2	2
Parkwood	$68,000	4	8.2	0
Ridgecrest	$58,000	4	14.8	0
Haller Lake	$58,000	3	10.4	4
Pinehurst	$46,000	3	14.6	7
North College Park	$57,000	2	17.1	2
Maple Leaf	$65,000	1	9.5	2
Study Area	**$58,000**	**4**	**11.3**	**3**

Source: U.S. Census Bureau, 2006-2010 American Community Survey.

Notes: Neighborhoods are generally listed north to south and east to west to reflect location in the corridor. Census tracts have been aggregated to best fit the boundaries of the neighborhoods using data from the 2006-2010 American Community Survey. Sums may not total due to rounding.

Attachment C-8. Racial and Ethnic Characteristics of the Alternatives (0.5-mile buffer area)

Segment and Stations	Pop.	White %	Black %	American Indian or Alaska Native %	Asian %	Native Hawaiian or Pacific Islander %	Other Races %	Hispanic (any race) %	Total Minority %
Segment A									
Alignment A – all alternatives	35,200	65.4	6.3	0.9	18.5	0.5	8.4	7.4	38.4
Stations – Preferred Alternative	12,300	67.7	6.0	0.8	16.9	0.5	8.0	7.1	36.1
Stations A1	12,300	67.7	6.0	0.8	16.9	0.5	8.0	7.1	36.1
Stations A3	12,300	67.7	6.0	0.8	16.9	0.5	8.0	7.1	36.1
Stations A5	18,900	68.0	5.0	0.9	17.6	0.5	8.1	6.9	35.8
Stations A7	18,900	68.0	5.0	0.9	17.6	0.5	8.1	6.9	35.8
Stations A10	17,300	67.3	5.9	0.8	17.5	0.5	8.1	7.0	36.6
Stations A11	17,300	67.3	5.9	0.8	17.5	0.5	8.1	7.0	36.6
Segment B									
Alignment – Preferred Alternative	25,100	67.3	5.4	0.9	14.4	0.7	11.3	11.7	37.9
Alignment B1	23,200	67.9	5.3	1.0	14.2	0.6	11.1	11.4	37.2
Alignment B2A	25,100	67.3	5.4	0.9	14.4	0.7	11.3	11.7	37.9
Alignment B4	26,700	67.0	5.4	1.0	14.5	0.7	11.5	12.2	38.4
Stations – Preferred Alternative	4,800	73.3	5.1	1.1	10.5	0.5	9.5	9.5	31.1
Stations B1	4,800	73.3	5.1	1.1	10.5	0.5	9.5	9.5	31.1
Stations B2A	8,800	71.6	4.9	1.1	10.2	0.5	11.7	12.1	33.4
Stations B4	5,000	75.9	3.5	1.1	10.0	0.6	9.0	9.4	28.3
Segment C									
Alignment – Preferred Alternative	12,100	59.9	6.3	1.3	16.6	1.1	8.9	16.9	46.1
Alignment C1	13,100	60.9	6.0	1.3	16.1	0.9	14.7	17.3	45.4
Alignment C2	12,800	60.8	6.1	1.2	16.2	1.0	14.8	17.5	45.6
Alignment C3	12,400	60.3	6.2	1.3	16.6	0.9	14.7	16.5	45.6
Stations – Preferred Alternative	4,900	57.9	6.7	1.4	19.8	0.6	8.6	16.5	48.1
Stations C1	4,200	58.6	6.4	1.2	18.9	0.5	14.5	17.5	47.7
Stations C2	4,200	58.1	6.5	1.1	19.8	0.6	14.0	17.9	48.6
Stations C3	4,600	57.7	7.0	1.4	19.3	0.7	13.8	17.2	48.7

Source: U.S. Census Bureau, 2010 Decennial Census.

Notes: Segment alternative alignments and stations are listed south to north. Census blocks have been aggregated to best fit the 0.5-mile buffer area surrounding the alignments and stations using 2010 Census data. Sums may not total due to rounding.

Attachment C-9. Household Characteristics of the Alternatives (0.5-mile buffer area)

		Age	Types of Households			
Segment and Stations	Total Population	Children/Elderly %	1-Person Households %	Husband-Wife Family Households %	Family Households with Children %	Non-Family Households %
Segment A						
Alignment A – all alternatives	35,200	18/13	34	23	22	13
Stations – Preferred Alternative	12,300	20/13	29	27	26	10
Stations A1	12,300	20/13	29	27	26	10
Stations A3	12,300	20/13	29	27	26	10
Stations A5	18,900	19/13	28	27	25	11
Stations A7	18,900	19/13	28	27	25	11
Stations A10	17,300	18/13	30	26	25	11
Stations A11	17,300	18/13	30	26	25	11
Segment B						
Alignment – Preferred Alternative	25,100	21/10	30	23	28	11
Alignment B1	23,200	21/10	31	23	27	11
Alignment B2	25,100	21/10	30	23	28	11
Alignment B2A	25,100	21/10	30	23	28	11
Alignment B4	26,700	21/10	31	22	27	11
Stations – Preferred Alternative	4,800	19/14	33	23	25	10
Stations B1	4,800	19/14	33	23	25	10
Stations B2	4,800	19/14	33	23	25	11
Stations B2A	8,800	21/11	31	22	28	11
Stations B4	5,000	19/15	33	23	25	10
Segment C						
Alignment – Preferred Alternative	12,100	23/8	33	19	30	10
Alignment C1	13,100	23/9	34	19	28	10
Alignment C2	12,800	23/8	33	19	28	10
Alignment C3	12,400	23/9	32	19	29	10
Stations – Preferred Alternative	4,900	23/12	34	21	28	9
Stations C1	4,200	22/13	36	20	27	9
Stations C2	4,200	23/9	32	21	29	10
Stations C3	4,600	23/9	30	22	29	9

Source: U.S. Census Bureau, 2010 Decennial Census.

Notes: Segment alternative alignments and stations are listed south to north. Census blocks have been aggregated to best fit the 0.5-mile buffer area surrounding the alignments and stations using 2010 Census data. Other types of households are included in the census data, so percentages cannot be summed to get 100 percent of household types. Sums may not total due to rounding.

Attachment C-10. Housing Characteristics of the Alternatives (0.5-mile buffer area)

Segment and Stations	Dwelling Units	Owner-Occupied Dwelling %	Renter-Occupied Dwelling %	Single Family/Mobile Home %
Segment A				
Alignment A – all alternatives	16,400	55	45	56/1
Stations – Preferred Alternative	5,100	66	34	66/0
Stations A1	5,100	66	34	66/0
Stations A3	5,100	66	34	66/0
Stations A5	8,000	68	32	64/1
Stations A7	8,000	68	32	64/1
Stations A10	7,400	65	35	64/1
Stations A11	7,400	65	35	64/1
Segment B				
Alignment – Preferred Alternative	10,800	58	42	55/1
Alignment B1	10,100	58	42	55/1
Alignment B2A	10,800	58	42	55/1
Alignment B4	11,600	57	43	57/1
Stations – Preferred Alternative	2,100	68	32	59/2
Stations B1	2,100	68	32	59/2
Stations B2A	3,800	62	38	48/2
Stations B4	2,200	69	31	59/2
Segment C				
Alignment – Preferred Alternative	5,300	40	60	49/2
Alignment C1	5,900	42	58	49/2
Alignment C2	5,700	42	58	49/2
Alignment C3	5,400	40	60	49/2
Stations – Preferred Alternative	2,100	36	64	47/3
Stations C1	1,900	36	64	47/3
Stations C2	1,800	36	64	47/3
Stations C3	2,000	37	63	47/3

Source: U.S. Census Bureau, 2010 Decennial Census and 2006-2010 American Community Survey.

Notes: Segment alternative alignments and stations are listed south to north. Census blocks have been aggregated to best fit the 0.5-mile buffer area surrounding the alignments and stations for dwelling unit, owner-occupied dwelling, and renter-occupied dwelling data from the 2010 Census. Census tracts have been aggregated to best fit the 0.5-mile buffer area surrounding the alternative alignments and stations for single-family and mobile-home data from the 2006-2010 American Community Survey. Sums may not total due to rounding.

Attachment C-11. Income and Poverty Characteristics of the Alternatives (0.5-mile buffer area)

Segments and Stations	Median Household Income (rounded)	Households with Public Assistance %	Population Below Poverty %	Other Means of Travel to Work due to No Personal Vehicle Available in Household %
Segment A				
Alignment A – all alternatives	$57,000	3	11.3	3
Stations – Preferred Alternative	$62,000	3	10.1	2
Stations A1	$62,000	3	10.1	2
Stations A3	$62,000	3	10.1	2
Stations A5	$61,000	3	10.3	2
Stations A7	$61,000	3	10.3	2
Stations A10	$61,000	3	10.3	2
Stations A11	$61,000	3	10.3	2
Segment B				
Alignment – Preferred Alternative	$55,000	4	11.1	3
Alignment B1	$55,000	4	11.1	3
Alignment B2	$55,000	4	11.1	3
Alignment B2A	$55,000	4	11.1	3
Alignment B4	$57,000	4	10.5	3
Stations – Preferred Alternative	$59,000	3	9.7	2
Stations B1	$59,000	3	9.7	2
Stations B2	$59,000	3	9.7	2
Stations B2A	$51,000	4	12.4	4
Stations B4	$57,000	4	10.0	2
Segment C				
Alignment – Preferred Alternative	$54,000	5	12.3	3
Alignment C1	$54,000	5	12.3	3
Alignment C2	$54,000	5	12.3	3
Alignment C3	$54,000	5	12.3	3
Stations – Preferred Alternative	$44,000	5	11.8	4
Stations C1	$54,000	5	11.8	4
Stations C2	$44,000	5	11.8	4
Stations C3	$44,000	5	11.8	4

Source: U.S. Census Bureau, 2006-2010 American Community Survey.

Notes: Segment alternative alignments and stations are listed south to north. Census tracts have been aggregated to best fit the 0.5-mile buffer area surrounding the alignments and stations using data from the 2006-2010 American Community Survey. Sums may not total due to rounding.

Attachment C-12. Most Common Languages Spoken by Students in Transitional Bilingual Programs at Study Area Elementary Schools

Schools	Addresses	Telephone	Languages	Contact	Date
Cedar Valley Community School	19200 56th Ave W, Lynnwood	425.431.7390		No response	05/04/12
Cedar Way Elementary School	22222 39th Ave W, Mountlake Terrace	425.431.7864	Spanish, Vietnamese, Ukrainian, Korean	Cheryl Schultz, Office Assistant	05/04/12
Chase Lake Elementary School	21603 84th Ave W, Edmonds	425.431.7495	Spanish, Korean, Russian	Connie Mo, Registrar	05/04/12
College Place Elementary	20401 76th Ave W, Lynnwood	425.431.7620	Spanish	Laura, Office Assistant	05/04/12
Echo Lake Elementary School	19345 Wallingford N, Shoreline	206.393.4338	Korean, Spanish, Vietnamese	Linda Boykon, Registrar	05/04/12
Hazelwood Elementary School	3300 204th SW, Lynnwood	425.431.7884	Spanish, Vietnamese	Dr. K. Parnell, Principal	05/11/12
Hilltop Elementary	20425 Damson Rd, Lynnwood	425.431.7604	Spanish, Vietnamese, Korean	Ruth, Registrar	05/11/12
Lynnwood Elementary School	18638 44th Ave W, Lynnwood	425.431.7615	Spanish, Vietnamese Russian	Dawn, Office Manager	05/11/12
Meridian Park Elementary School	17077 Meridian Ave N, Shoreline	206.393.4251	Spanish, Korean Vietnamese, Cantonese, Russian, Tagalog, Amharic	Chris Geginger, Communications Manager	05/11/12
Mountlake Terrace Elementary School	22001 52nd Ave W, Mountlake Terrace	425.431.7894		No response	05/11/12
Northgate Elementary School	11725 1st Ave NE, Seattle	206.252.4180	Spanish, Somali, Tagalog	Janice Brown, Office Manager	05/11/12
Olympic View Elementary School	504th NE 95th St, Seattle	206.252.5500		No response	05/11/12
Parkwood Elementary	1815 N 155th, Shoreline	206.393.4150	Spanish, Vietnamese, Korean, Cantonese	Rosanne, Registrar	05/11/12
Ridgecrest Elementary	16516 10th NE, Shoreline	206.393.4272	Cantonese, Vietnamese	Vickie, Registrar	05/11/12
Terrace Park School	5409 228th St SW, Mountlake Terrace	425.431.7482	Spanish, Vietnamese Tagalog	Debbie, Office Manager	05/11/12
Westgate Elementary	9601 220th St SW, Edmonds	425.431.7470		No response	05/11/12

Source: Telephone survey conducted by Parsons Brinckerhoff, May 2012.

Attachment C-13. Station Access to Nearby Community Facilities

Stations	Alternatives	Community and Municipal	Low- and Lower-Cost Housing	Schools+	Religious*	Retail and Medical
SEGMENT A						
NE 130th Street Station	PA Opt., A5, A7, A10, A11	Northacre Park Thornton Creek Park Helene Madison Pool Jackson Park Golf Course	Pinehurst Court Senior Housing	Ingraham High School Lakeside Upper & Middle School Seattle Jewish Community School	North Seattle Alliance Church Haller Lake United Methodist Church North Seattle Church of the Nazarene St. Matthew Church & School Grace Chinese Lutheran Church International Full Gospel Fellowship (Indonesian) Eritrean Kidisti Selassie	Neighborhood retail districts: 125th & Roosevelt Way NE 125th & 15th Ave NE 135th & Roosevelt Way N
NE 145th Street Station	PA, A1, A3, A10, A11	Jackson Park Golf Course Twin Ponds Park Paramount Open Space Paramount School Park Shoreline Fire Dept. #65	Colonial Garden Apartments	Lakeside Upper & Middle School Evergreen Elementary School Parkwood Elementary School	Haller Lake United Methodist Church Vineyard Community Church Shoreline Unitarian Universalist Church Phillippi Presbyterian Church St. Barnabas Anglican Church North Seattle Church of God Shoreline Full Gospel Fellowship Church City Calvary Church	Neighborhood retail district: 145th & 15th Ave NE
NE 155th Street Station	A5, A7	Twin Ponds Park Northcrest Park Paramount School Park Paramount Open Space		Lakeside Upper School Evergreen Elementary School Parkwood Elementary School	Vineyard Community Church Shoreline Unitarian Universalist Church Phillippi Presbyterian Church	

Attachment C-13. Station Access to Nearby Community Facilities

Stations	Alternatives	Community and Municipal	Low- and Lower-Cost Housing	Schools+	Religious*	Retail and Medical
					North Seattle Church of God	
SEGMENT A (cont.)						
NE 155th Street Station (cont.)		McCormick Park Ridgecrest Park Shoreline Fire Dept. #65 Shoreline Eastside Neighborhood Police Center			Shoreline Full Gospel Fellowship Church St. Barnabas Anglican Church Trinity United Presbyterian Church Seattle Grace Presbyterian Church Tabernacle Baptist Church	
NE 185th Street Station	PA, A1, A3, A5, A7, A10, A11	North City Park Cromwell Park Shoreline Park & Pool King County District Court Shoreline Library Shoreline School District Admin Facility, Stadium, Spartan Recreation Center, Shoreline Conference Center, Shoreline and Lake Forest Park Senior Center	Arabella Apartments Northridge Senior Housing Polaris Apartments	Wonderland Developmental Center North City Cooperative Preschool	Shoreline Free Methodist Church St. David Emmanuel Episcopal Church Korean Zion Presbyterian Church Seattle Central Mission Church Berean Bible Church Shoreline Community Church Bethel Lutheran Church St. Mark Catholic Church, Parish, and School Evergreen Baptist Church Salvation Army	

Attachment C-13. Station Access to Nearby Community Facilities

Stations	Alternatives	Community and Municipal	Low- and Lower-Cost Housing	Schools+	Religious*	Retail and Medical
SEGMENT B						
Mountlake Terrace Transit Center Station *and* Mountlake Terrace Freeway Station	PA, B1, B2, B2A B4	Ballinger Lake Park, Boat & Fishing Access Veterans Memorial Park Mountlake Terrace Police and Fire Mountlake Terrace Public Library Mountlake Terrace Senior Center Mountlake Terrace Recreation Pavilion	Young's Mobile Home Park* Tall Firs Senior Housing	Terrace Park School/Challenge Elementary School	Bethel Chapel Calvary Fellowship First Baptist Church Price Evangelistic Church Cedar Park Christian School Church of Jesus Christ of Latter-Day Saints Bethesda Lutheran Church Muslim Association of the Northwest Mountlake Terrace Christian Church Calvary Tabernacle United Church Korean Presbyterian Church The Expedition Christian Church Cornerstone Christian School	UW Neighborhood Shoreline Clinic* Commercial districts: NE 205th & Ballinger Way NE Mountlake Town Center
220th Street SW Station	PA Opt., B2A	Mountlake Terrace Recreation Pavilion Mountlake Terrace City Hall South Lynnwood Neighborhood Park Interurban Trail Jack Long Park Evergreen Park	Brentwood Apartments Marks Mobile Home Park	Terrace Park School Challenge Elementary School Mountlake Terrace Elementary School	Creekside Church First Baptist Church St. Pius X Catholic Church and School Kings Temple Christian School	Commercial district: 220th SW & 66th Avenue W

Attachment C-13. Station Access to Nearby Community Facilities

Stations	Alternatives	Community and Municipal	Low- and Lower-Cost Housing	Schools+	Religious*	Retail and Medical
SEGMENT C						
Lynnwood P&R Station (south of 48th Avenue W)	PA	Interurban Trail Wilcox Park Scriber Creek Park	Robin Park Apartments Pepperwood	Cedar Valley Community School^	St. Mary Coptic Orthodox Christian Church	Group Health Lynnwood Medical Center
and		Mini Park at Sprague Pond	Woodland Greens Apts		Christ Heritage Church	Commercial districts: Lynnwood City Center
200th Street SW Station	C1	Veterans Park^	Oxford Square Apts		Harvest Time Church	Lynnwood Regional Commercial
and		Mesika Trail and Open Space^	Smithwright Services			
Lynnwood Transit Center Station	C2	Lynnwood Library^	Trinity Place Transitional			
and		Lynnwood Civic Center^	Place 44 Section 8 Housing			
Lynnwood P&R Station	C3	Lynnwood Police Department^	Lynn Woods Senior Apts^			
(diagonally across 46th Avenue W)		Cedar Valley Grange	Lynn Crest Senior Apts^			
			Scriber Pointe Senior Housing			

Notes: PA = Preferred Alternative; PA Opt. = Preferred Alternative option; P&R = Park-and-Ride.

\+ "Schools" includes public and private non-denominational schools, whereas "Religious" includes religious institutions and affiliated schools.

* Facilities are not located within 0.5 mile of the proposed Mountlake Terrace Freeway Station.

^ Facilities are located within 0.5 mile of the proposed 200th Street SW Station, but not the other Lynnwood stations.

Appendix D

Section 4(f) and Section 6(f) Correspondence

U.S. Department
of Transportation
**Federal Transit
Administration**

REGION X
Alaska, Idaho, Oregon,
Washington

915 Second Avenue
Federal Bldg. Suite 3142
Seattle, WA 98174-1002
206-220-7954
206-220-7959 (fax)

July 25, 2014

Paul Krauss, Director
Community Development Department
City of Lynnwood
PO Box 5008
Lynnwood, WA 98046

Re: Lynnwood Link Extension Project
Request for Agreement with Determination of Temporary Occupancy

Dear Mr. Krauss:

As part of the Lynnwood Link Extension Environmental Impact Statement (EIS) documentation process, the Federal Transit Administration (FTA), as the lead federal agency, is finalizing the Section 4(f) evaluation of the potential impacts of the project on public parks and recreational facilities, including the Interurban Trail and the Scriber Creek Trail, both in the City of Lynnwood. Based on our review, we believe these are significant recreational resources for purposes of Section 4(f).

Under Section 4(f) of the U.S. Department of Transportation Act of 1966, FTA cannot approve a transportation project such as Lynnwood Link Extension that requires the use of publicly-owned land from a significant public park, recreation area, or wildlife and waterfowl refuge, or any land from a significant historic site, unless it determines that there is no "feasible and prudent avoidance alternative"[1] to the use of land from the property; and that the action includes "all possible planning" to minimize harm to the property resulting from such use.

Please note that the project's elevated guideway would cross above the trails. This would require air rights, but no physical property would be acquired. For purposes of Section 4(f), FTA distinguishes the need for air rights from the acquisition of land, so that there is no use as long as the aerial structure does not substantially impair the utility of the trail.

However, the law exempts temporary occupancies of land that are so minimal as to not constitute a use. In order to qualify as a temporary occupancy, the following conditions must be satisfied (23 CFR 774.13(d)):

[1] Definitions are found at 23 CFR § 774.17

- The duration of the use must be less than the time needed for construction of the project, and there should be no change in the ownership of the land;
- Both the nature and magnitude of the changes to the Section 4(f) property must be minimal;
- There must be no anticipated permanent adverse physical impacts, nor interference with the protected activities, features, or attributes of the property on either a temporary or permanent basis; and
- The land being used must be fully restored.

Federal guidance encourages early coordination with officials with jurisdiction over the Section 4(f) resource. Before publishing the Draft EIS, Sound Transit and FTA consulted with the City regarding the potential impacts to the trails and possible mitigation of these impacts.

The table below summarizes the Lynnwood Link project's anticipated impacts on the trails as well as Sound Transit's proposed mitigation.

Evaluation of Project's Use of Lynnwood Trails

Resource	Relevant Alternatives	Impacts on Resource	Mitigation Measures/ Enhancement	4(f) Impacts After Mitigation
Interurban Trail	Preferred Alternative	Construction: temporary trail closure of 6 to 12 months.	Detours with public information and signage directing users to detours; restoration of affected areas after construction	Temporary occupancy
Scriber Creek Trail	Preferred Alternative	Construction: temporary trail closure of 6 to 12 months.	Detours with public information and signage directing users to detours; restoration of affected areas after construction	Temporary occupancy

FTA intends to make a finding of temporary occupancy regarding the project's impacts on the two trails, and we are requesting the City's agreement with this finding.

Federal regulations stipulate that officials with jurisdiction over the Section 4(f) resource must document their agreement with a temporary occupancy finding (23 CFR 774.13(d)(5)). We ask that you sign and return this letter, or your own letter in its place, to confirm the City's concurrence with the temporary occupancy determination based on the four criteria and its

agreement with the potential mitigation. Your letter of concurrence, along with FTA's complete Section 4(f) analysis, will be included in the project's Final EIS.

As the project is further refined during final design, Sound Transit will continue to coordinate with the City regarding detour plans and the restoration of the affected areas.

If you have any questions, please contact Dan Drais (Daniel.Drais@dot.gov; (206) 220-4465).

Sincerely,

for Rick Krochalis, Administrator
Region 10

ACKNOWLEDGING CONCURRENCE
FOR THE CITY OF LYNNWOOD:

10/1/14

Paul Krauss, Community Development Director
City of Lynnwood

cc: Lynn Sordel, Director
City of Lynnwood Parks, Recreation, and Cultural Arts

DD

U.S. Department
of Transportation
**Federal Transit
Administration**

REGION X
Alaska, Idaho, Oregon,
Washington

915 Second Avenue
Federal Bldg. Suite 3142
Seattle, WA 98174-1002
206-220-7954
206-220-7959 (fax)

July 25, 2014

Dick Deal, Director
Parks, Recreation and Cultural Services Department
City of Shoreline
17500 Midvale Ave N
Shoreline, WA 98133

Re: Lynnwood Link Extension Project
Request for Concurrence with Determination of *De Minimis* Use

Dear Mr. Deal:

As part of the Lynnwood Link Extension Environmental Impact Statement (EIS) documentation process, the Federal Transit Administration (FTA), as the lead federal agency, is finalizing the Section 4(f) evaluation of the potential impacts of the project on public parks and recreational facilities, which includes Ridgecrest Park in the City of Shoreline (Exhibit 1). We understand that the City has determined this to be a significant park.

Under Section 4(f) of the U.S. Department of Transportation Act of 1966, FTA cannot approve a transportation project such as Lynnwood Link Extension that requires the use of publicly-owned land from a significant public park, recreation area, or wildlife and waterfowl refuge, or any land from a significant historic site, unless it determines that:

- There is no "feasible and prudent avoidance alternative"[1] to the use of land from the property; and
- The action includes "all possible planning" to minimize harm to the property resulting from such use; or
- The Administration determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures), will have a *de minimis* impact. A *de minimis* impact is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

Federal guidance encourages early coordination with officials with jurisdiction over the Section 4(f) resource. Before publishing the Draft EIS, Sound Transit and FTA consulted with the City

[1] Definitions are found at 23 CFR § 774.17

of Shoreline regarding the potential impacts to Ridgecrest Park and possible mitigation of these impacts. In March 2013, the City signed a letter indicating its preliminary concurrence with a *de minimis* determination.

Federal regulations stipulate that "officials with jurisdiction over the Section 4(f) resource must concur in writing" with a *de minimis* finding (23 CFR 774.5(2)). The regulations also require that an opportunity for public review and comment concerning the effects of the project on the Section 4(f) resource be provided prior to such written concurrence. The distribution of the Draft EIS for review and comment by the public, agencies, and organizations has satisfied this requirement.

With the comment period on these documents completed, and based on the City's 2013 letter, FTA intends to make a *de minimis* finding on Ridgecrest Park, and we are requesting the City's final concurrence with this finding. Its letter of concurrence will be included in the project's Final EIS. FTA's final Section 4(f) determination will also be included in the Final EIS.

The table below summarizes the Lynnwood Link project's anticipated impacts on Ridgecrest Park and Sound Transit's proposed mitigation.

City of Shoreline Determination of Section 4(f) Use of Ridgecrest Park

Purpose of Park	Relevant Alternatives	Impacts on Resource	Mitigation Measures/ Enhancement	4(f) Impacts After Mitigation
Sporting events/active recreation	Preferred Alternative; all segment A alternatives	Operational: Use of about 0.3 acres at western edge, removing berm and trees; additional visual impacts. Construction: potential temporary construction easement of area along proposed right of way.	Landscaping/ restoration of affected area; barrier installed between light rail and park to function like existing berm in buffering I-5 noise and views of I-5; design and rebuilding of 1st Avenue from NE 159th to NE 161st Street, in coordination with the City; transfer of replacement property at the south end of the park, or other property as agreed to with the City, consistent with the requirements of Forward Thrust, and developed to a level comparable to displaced park area; and outreach in adjacent neighborhood to inform roadway and park design, in coordination with the City.	*de minimis*

As Sound Transit has discussed with the City, the project would rebuild 1st Avenue NE from NE 159th Street to NE 161st Street. This area would be City right-of-way and is not included in the

calculations to replace the acquired park property. The remainder of the impacted non-park parcels after roadway construction (parcels 770, 775, and 776) constitutes the currently proposed replacement area for the acquired property in Ridgecrest Park, assuming that complies with Forward Thrust requirements. Per the City's email dated June 10, 2014 and verification with King County Department of Natural Resources, parcel 764 is not owned by the City of Shoreline or King County, is not a park property, and does not require replacement.

Sound Transit will continue to work with King County to prepare the land conversion process and to ensure that the requirements of Forward Thrust are met.

We ask that the appropriate City official sign and return this letter, or your own letter in its place, to confirm the City's concurrence with the Section 4(f) *de minimis* determination and its agreement with the potential mitigation, and also the City's concurrence that the Lynnwood Link Extension will not adversely affect the features, attributes, or activities qualifying the park for protection under Section 4(f).

As the project is further refined during final design, Sound Transit will continue to coordinate with the City of Shoreline to review and finalize design for restoration of the affected area and for the replacement property at the properties currently identified or other property as agreed to by the City.

If you have any questions, please contact Dan Drais (Daniel.Drais@dot.gov; (206) 220-4465).

Sincerely,

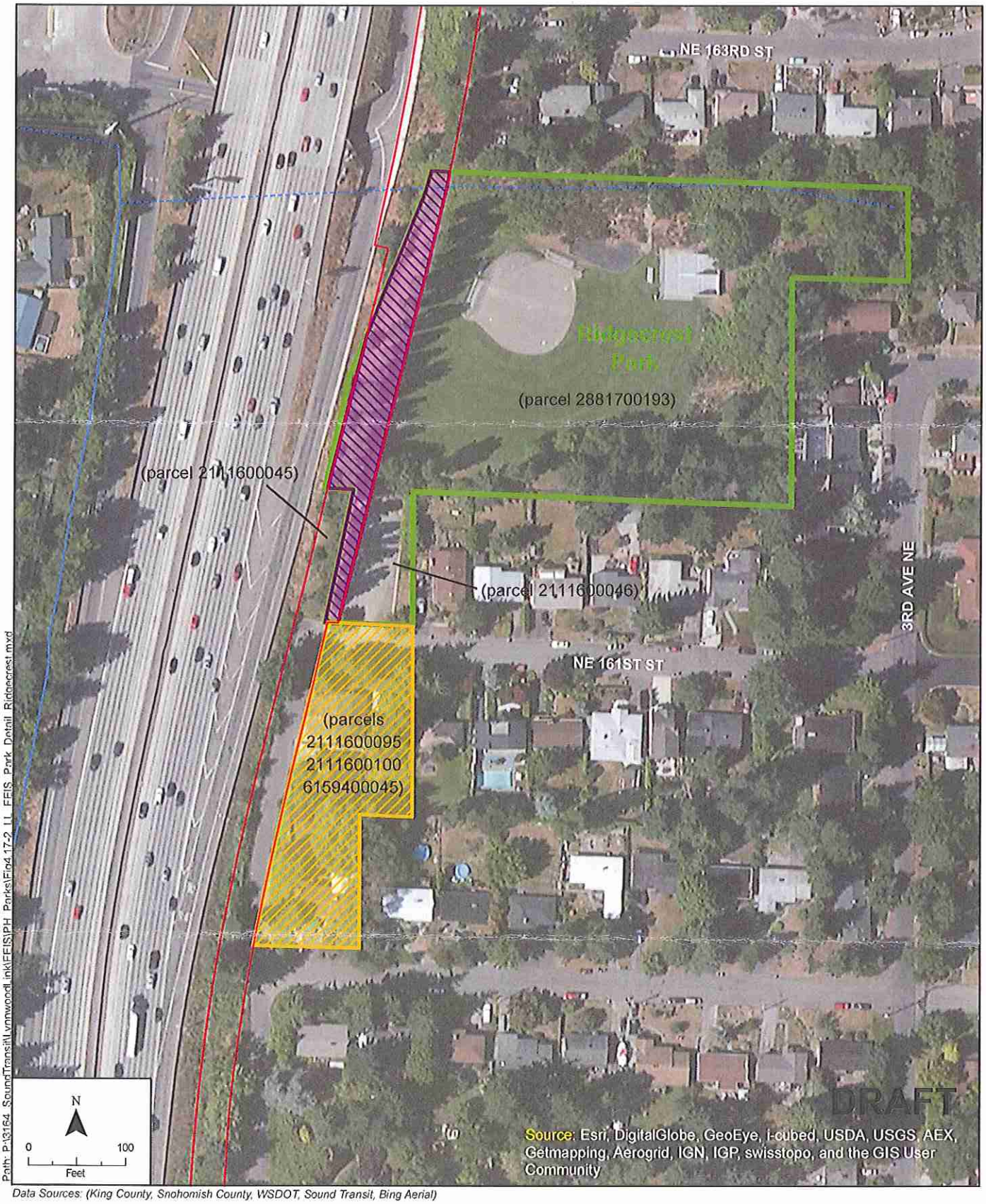
for Rick Krochalis, Administrator
Region 10

ACKNOWLEDGING CONCURRENCE
FOR THE CITY OF SHORELINE:

By: Richard Deal

Its: PRCS Director

cc: Alicia McIntire, Senior Transportation Planner



Path: P:\3164_SoundTransit\Lynnwood Link\FEIS\PH_Parks\Fig4.17-2_11_FEIS_Park_Detail_Ridgecrest.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit, Bing Aerial)

- All Light Rail Alternatives
- Area of Affected Park and Recreation Facility
- Area of Impact
- Proposed Area for Realigned Roadway with Adjacent Park Elements

Exhibit 1
Ridgecrest Park Impact Area and Replacement Property

Lynnwood Link Extension

U.S. Department
of Transportation
**Federal Transit
Administration**

REGION X
Alaska, Idaho, Oregon,
Washington

915 Second Avenue
Federal Bldg. Suite 3142
Seattle, WA 98174-1002
206-220-7954
206-220-7959 (fax)

July 24, 2014

Marla Miller, Deputy Superintendent
Shoreline Public Schools
18560 1st Ave NE
Shoreline, WA 98155

Re: Lynnwood Link Extension Project
Request for Concurrence with Determination of *De Minimis* Use

Dear Ms. Miller:

As part of the Lynnwood Link Extension Environmental Impact Statement (EIS) documentation process, the Federal Transit Administration (FTA), as the lead federal agency, is finalizing the Section 4(f) evaluation of the potential impacts of the project on public parks and recreational facilities, which includes the Shoreline School District's Shoreline Stadium (Exhibit 1). We understand that the District has determined this to be a significant park.

Under Section 4(f) of the U.S. Department of Transportation Act of 1966, FTA cannot approve a transportation project such as Lynnwood Link Extension that requires the use of publicly-owned land from a significant public park, recreation area, or wildlife and waterfowl refuge, or any land from a significant historic site, unless it determines that:

- There is no "feasible and prudent avoidance alternative"[1] to the use of land from the property; and
- The action includes "all possible planning" to minimize harm to the property resulting from such use; or
- The Administration determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures), will have a *de minimis* impact. A *de minimis* impact is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

Federal guidance encourages early coordination with officials with jurisdiction over the Section 4(f) resource. Before publishing the Draft EIS, Sound Transit and FTA consulted with the

[1] Definitions are found at 23 CFR § 774.17

District regarding the potential impacts to the stadium property and possible mitigation of these impacts. In March 2013, the District signed a letter indicating its preliminary concurrence with a *de minimis* determination.

Federal regulations stipulate that "officials with jurisdiction over the Section 4(f) resource must concur in writing" with a *de minimis* finding (23 CFR 774.5(2)). The regulations also require that an opportunity for public review and comment concerning the effects of the project on the Section 4(f) resource be provided prior to such written concurrence. The distribution of the Draft EIS for review and comment by the public, agencies, and organizations has satisfied this requirement.

With the comment period on these documents completed, and based on the District's 2013 letter, FTA intends to make a *de minimis* finding on Shoreline Stadium, and we are requesting the District's final concurrence with this finding. Its letter of concurrence will be included in the project's Final EIS. FTA's final Section 4(f) determination will also be included in the Final EIS.

The table below summarizes the Lynnwood Link project's anticipated impacts on Shoreline Stadium and Sound Transit's proposed mitigation.

Shoreline School District's Determination of Section 4(f) Use of Shoreline Stadium

Purpose of Recreational Resource	Relevant Alternatives	Impacts on Resource	Mitigation Measures/ Enhancement	4(f) Impacts After Mitigation
Sporting events/active recreation	**Preferred Alternative;** Alternative A1	Operational: Relocated road would require use of about 0.2 acres of parking lot and stadium area on east side of property. No impact to use of stadium facility. Construction: Potential additional temporary parking reduction, visual and noise impacts.	Restoration of area after construction and facility access improvements to be defined in coordination with Shoreline Public Schools during final design.	*de minimis*

We ask that the appropriate District official sign and return this letter, or your own letter in its place, to confirm the District's concurrence with the Section 4(f) *de minimis* determination and its agreement with the potential mitigation, and also the District's concurrence that the Lynnwood Link Extension will not adversely affect the features, attributes, or activities qualifying the Stadium for protection under Section 4(f).

As the project is further refined during final design, Sound Transit will continue to coordinate with the Shoreline School District s regarding restoration of the affected area and finalize the design of the parking area and access to the Stadium.

If you have any questions, please contact Dan Drais (Daniel.Drais@dot.gov; (206) 220-4465).

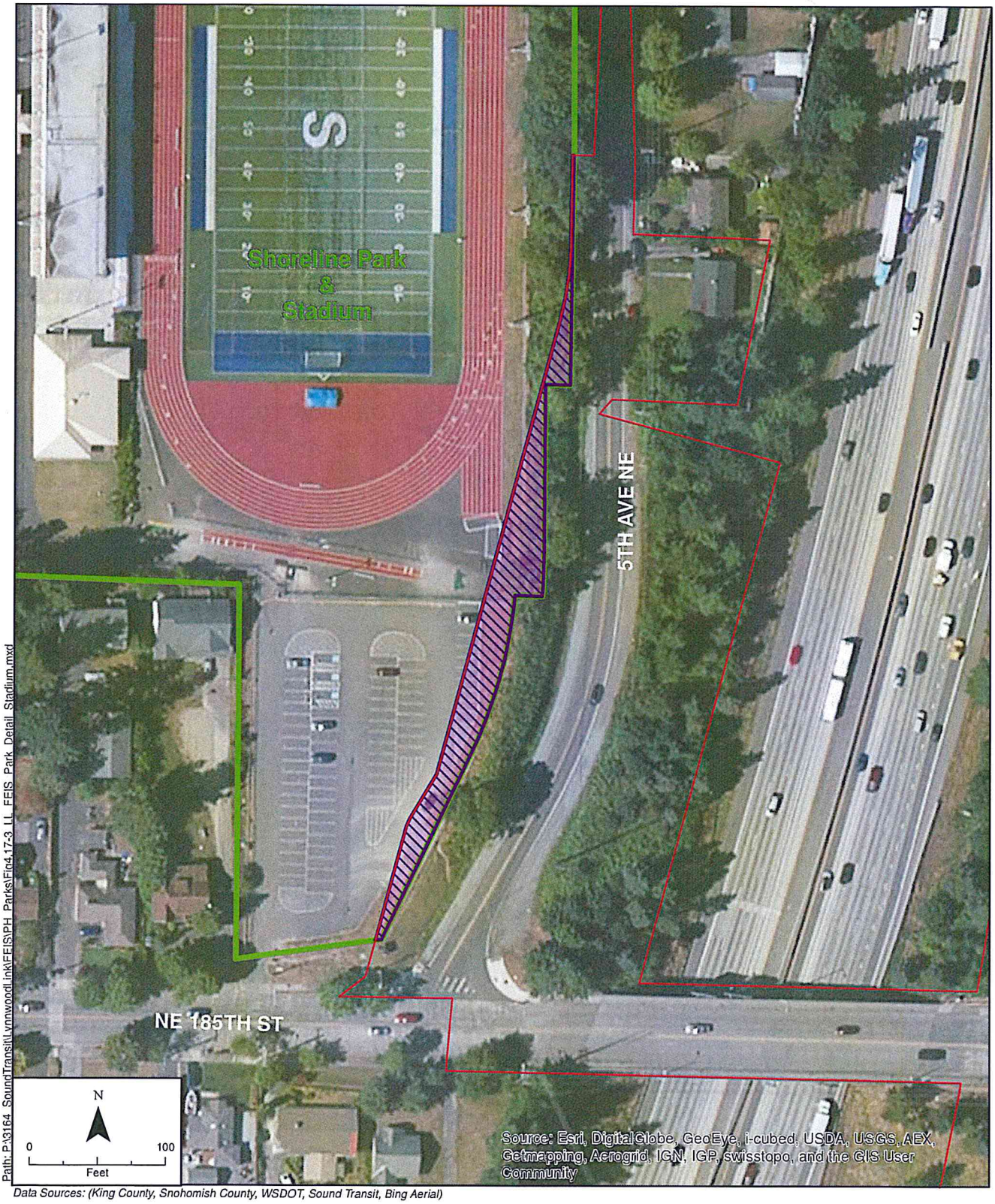
Sincerely,

for Rick Krochalis, Administrator
Region 10

ACKNOWLEDGING CONCURRENCE
FOR THE SHORELINE SCHOOL DISTRICT:

By: MARLA S. MILLER

Its: DEPUTY SUPERINTENDENT



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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit, Bing Aerial)

Preferred Alternative
Area of Affected Park and Recreation Facility
Area of Impact

Exhibit 1
Shoreline Stadium Impact Area

Lynnwood Link Extension

SOUNDTRANSIT

Shoreline School District
MAR 05 2013
Deputy Superintendent

February 22, 2013

Marla Miller, Deputy Superintendent
Shoreline Public Schools
18560 1st Ave NE
Shoreline, WA 98155

Dear Ms. Miller:

As part of the Lynnwood Link Extension Draft Environmental Impact Statement (DEIS) documentation process, Sound Transit and the Federal Transit Administration (FTA), as the lead federal agency, are evaluating the potential impacts of the project on public parks and recreational facilities. Sound Transit is working with the FTA to prepare a draft Section 4(f) Evaluation that describes the impacts of the project on these facilities. The draft Section 4(f) Evaluation will be included in the DEIS and is expected to be distributed to the public and agencies for comment in the spring of 2013.

The U.S. Department of Transportation Act of 1966 requires a Section 4(f) Evaluation. Under the Act, FTA cannot approve a transportation project such as Lynnwood Link Extension that requires the use of publicly-owned land from a significant public park, recreation area, or wildlife and waterfowl refuge, or any land from a significant historic site, unless a determination is made that:

- There is no feasible and prudent avoidance alternative, as defined in § 774.17, to the use of land from the property; and
- The action includes all possible planning, as defined in § 774.17, to minimize harm to the property resulting from such use; or
- The Administration determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures), will have a *de minimis* impact. A *de minimis* impact (23 CFR 774.17) is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

Federal guidance encourages early coordination with officials with jurisdiction of the Section 4(f) resource to ascertain the position of the officials to obtain their preliminary views. The intent of our letter is to continue that early coordination and confirm previous discussions between Sound Transit and Shoreline Public Schools staff regarding the project's potential impacts to parks and recreation resources. Throughout the EIS process and project design, should Alternative A1 be identified as the preferred alternative, Sound Transit and FTA will continue to consult with the school district to detail specific mitigation plans.

Federal regulations stipulate that "officials with jurisdiction over the Section 4(f) resource must concur in writing" with a *de minimis* finding (23 CFR 774.5(2)). The regulations also require that an opportunity for public review and comment concerning the effects of the project on the Section 4(f) resource be provided prior to such written concurrence. As per 23

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King County Councilmember

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Sumner Mayor

Paula J. Hammond, P.E.
Washington State Secretary of Transportation

John Marchione
Redmond Mayor

Joe McDermott
King County Councilmember

Mike McGinn
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Lakewood Councilmember

Larry Phillips
King County Councilmember

Paul Roberts
Everett Councilmember

Marilyn Strickland
Tacoma Mayor

Peter von Reichbauer
King County Councilmember

CHIEF EXECUTIVE OFFICER
Joni Earl

CFR 774.5, this requirement will be met with the distribution of the Draft EIS for review and comment by the public, agencies, and organizations. FTA will request final concurrence in writing by Shoreline Public Schools on the *de minimis* finding following the comment period for the Draft EIS. At that time, it is anticipated that Shoreline Public Schools will provide final concurrence on *de minimis* determinations for Lynnwood Link Extension. Following the Shoreline Public School's written concurrence, FTA will make final Section 4(f) and *de minimis* determinations, and the Final EIS will include documentation of the Shoreline Public School's concurrence and FTA's determination.

The table below lists Shoreline Park and Stadium as a Shoreline Public School park facility that the Lynnwood Link Extension project would impact. Based on Sound Transit's review, this park resource is considered significant for purposes of Section 4(f). Given the potential project impacts and the proposed potential mitigation, Sound Transit believes that a preliminary *de minimis* determination can be made for Shoreline Park and Stadium.

Shoreline Public Schools Facility and Preliminary Determination of Section 4(f) Use

Resource	Purpose of Resource	Project Alternative	Impact on Resource	Potential Mitigation	Preliminary 4(f) Findings after Mitigation
Shoreline Park and Stadium	Sporting events/active recreation	A1	Operations: Relocated local road would require use of 0.18 acre of stadium area and parking lot on east side of property. Reduced parking, no impact to use of stadium facility. Construction: Potential additional temporary parking reduction, visual and noise impacts.	Restoration of area after construction and facility access improvements to be defined.	*de minimis*

We ask that you provide your signature on this letter to confirm:

- Shoreline Public Schools agrees Shoreline Park and Stadium is a significant park and recreation resource; and
- Shoreline Public Schools does not object to considering a potential Section 4(f) *de minimis* finding for Shoreline Park and Stadium, and Shoreline Public Schools may provide a letter of concurrence with a *de minimis* finding after further public review and discussion of the Draft EIS and Draft Section 4(f) evaluation, and with general agreement upon appropriate mitigation measures.

This letter will assist Sound Transit as the project progresses toward a preferred alternative that would avoid a Section 4(f) use. Sound Transit acknowledges that a formal concurrence from the Shoreline Public Schools will require further discussions with Shoreline Public Schools staff.

Sincerely,

Steve Kennedy
Senior Planner

Marla Miller, Deputy Superintendent
Shoreline Public Schools
Signature for Preliminary Concurrence

SOUNDTRANSIT

February 6, 2013

Dick Deal, Director
Parks, Recreation and Cultural Services Department
City of Shoreline
17500 Midvale Ave N
Shoreline, WA 98133

Dear Mr. Deal:

As part of the Lynnwood Link Extension Draft Environmental Impact Statement (DEIS) documentation process, Sound Transit and the Federal Transit Administration (FTA), as the lead federal agency, are evaluating the potential impacts of the project on public parks and recreational facilities. Sound Transit is working with the FTA to prepare a draft Section 4(f) Evaluation that describes the impacts of the project on these facilities. The draft Section 4(f) Evaluation will be included in the DEIS and is expected to be distributed to the public and agencies for comment in the spring of 2013.

The U.S. Department of Transportation Act of 1966 requires a Section 4(f) Evaluation. Under the Act, FTA cannot approve a transportation project such as Lynnwood Link Extension that requires the use of publicly-owned land from a significant public park, recreation area, or wildlife and waterfowl refuge, or any land from a significant historic site, unless a determination is made that:

- There is no feasible and prudent avoidance alternative, as defined in § 774.17, to the use of land from the property; and
- The action includes all possible planning, as defined in § 774.17, to minimize harm to the property resulting from such use; or
- The Administration determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures), will have a *de minimis* impact. A *de minimis* impact (23 CFR 774.17) is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

Federal guidance encourages early coordination with officials with jurisdiction of the Section 4(f) resource to ascertain the position of the officials to obtain their preliminary views. The intent of our letter is to continue that early coordination and confirm previous discussions between Sound Transit and City of Shoreline staff regarding the project's potential impacts to parks and recreation resources. Throughout the EIS process and project design, Sound Transit and FTA will continue to consult with the school district to detail specific mitigation plans.

Federal regulations stipulate that "officials with jurisdiction over the Section 4(f) resource must concur in writing" with a *de minimis* finding (23 CFR 774.5(2)). The regulations also require that an opportunity for public review and comment concerning the effects of the project on the Section 4(f) resource be provided prior to such written concurrence. As per 23CFR 774.5, this requirement will be met with the distribution of the Draft EIS for review and comment by the public, agencies, and organizations. FTA will request final concurrence in

CHAIR
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Lakewood Councilmember

Larry Phillips
King County Councilmember

Paul Roberts
Everett Councilmember

Marilyn Strickland
Tacoma Mayor

Peter von Reichbauer
King County Councilmember

CHIEF EXECUTIVE OFFICER
Joni Earl

writing by the City of Shoreline on the *de minimis* finding following the comment period for the Draft EIS. At that time, it is anticipated that the City will provide final concurrence on *de minimis* determinations for Lynnwood Link Extension. Following the City's written concurrence, FTA will make final Section 4(f) and *de minimis* determinations, and the Final EIS will include documentation of the City's concurrence and FTA's determination.

The table below lists Ridgecrest Park as a City of Shoreline park facility that the Lynnwood Link Extension project would impact. Based on Sound Transit's review, this park resource is considered significant for purposes of Section 4(f). Given the potential project impacts and the proposed potential mitigation, Sound Transit believes that a preliminary *de minimis* determination can be made for Ridgecrest Park.

City of Shoreline Park Facility and Preliminary Determination of Section 4(f) Use

Resource	Purpose of Resource	Project Alternative	Impact on Resource	Potential Mitigation/Enhancement	Preliminary 4(f) Findings after Mitigation
Ridgecrest Park	Sporting events/active recreation	All Segment A Alternatives	Operational: Use of 0.3 acres at western edge, removing berm and trees. Property and visual impacts. Construction: potential temporary construction easement of area along proposed right of way.	Landscaping and restoration of affected area, barrier between light rail and park to maintain functionality of existing berm, replacement property in condition consistent with displaced park area as required by Forward Thrust.	*de minimis*

We ask that you provide your signature on this letter to confirm:

the City agrees Ridgecrest Park is a significant park and recreation resource; and

the City does not object to considering a potential Section 4(f) *de minimis* finding for Ridgecrest Park, and the City may provide a letter of concurrence with a *de minimis* finding after further public review and discussion of the Draft EIS and Draft Section 4(f) evaluation, and with general agreement upon appropriate mitigation measures.

This letter will assist Sound Transit as the project progresses toward a preferred alternative that would avoid a Section 4(f) use. Sound Transit acknowledges that a formal concurrence from the City of Shoreline will require further discussions with City staff and the Parks, Recreation and Cultural Services Board.

Sincerely,

Steve Kennedy
Senior Planner

Dick Deal, Director
City of Shoreline, Parks, Recreation and Cultural Services Department
Signature for Preliminary Concurrence

cc: Alicia McIntire, Senior Transportation Planner

Appendix E

List of Preparers

APPENDIX E – LIST OF PREPARERS

Name/Affiliation	Project Role	Education	Years of Experience
Steve Kennedy/Sound Transit	Environmental Manager	BA, Urban Studies (1972) MUP, Urban Planning (1978)	28
Lauren Swift/Sound Transit	Senior Environmental Planner and Environmental Justice	BA, Environmental Studies (1993) MA, Regional Planning (1995)	20
Daryl Wendle/Parametrix	Environmental Analysis Manager	BA, English (1986) MA, English (1988)	27
Maya Hunnewell/Parametrix	Environmental Analysis Deputy Manager; EIS Writer; Acquisitions, Displacements, and Relocations Lead	BA, Government and Legal Studies (2001) MA, Public Administration (2006)	10
Katheryn Seckel/Parametrix	Environmental Planner; EIS Writer	BA, Urban and Regional Planning (1996) Certificate, Wetland Science and Management (2006)	12
Ginette Lalonde/Parsons Brinckerhoff	Air Quality and Greenhouse Gases, Energy	BA, Applied Science and Civil Engineering (2000)	17
Alice Lovegrove/Parsons Brinckerhoff	Air Quality and Greenhouse Gases	BE, Engineering Science (1987) MS, Environmental and Waste Management (1992)	27
Brent Hicks/Historical Research Associates, Inc.	Archaeological Resources	BA, Anthropology (1986) BA, Recreation and Parks Administration (1987) MA, Anthropology (1991)	30
Connie Walker Gray/Gray Lane Preservation and Planning	Archaeological and Historic Resources EIS Section	BA, History and Spanish (1994) MA, Urban Design and Planning (2001) Certificate in Historic Preservation Planning) (2001)	15
Jenny Dellert/Historical Research Associates, Inc.	Archaeological Resources	BA, Anthropology–Archaeology (1996) MA, Anthropology (2001)	15
Tim Bailey/GeoEngineers	Geology and Soils	BS, Civil Engineering (2002) MS, Civil Engineering (2004)	12
Daniel Campbell/ GeoEngineers	Geology and Soils	BS, Civil Engineering (1988) MS, Engineering (1989)	26
Peter Geiger/Parsons Brinckerhoff	Economics Lead	BS, Physics (1984) M.Sc., Physics (1988)	27
Colin Worsley/Parametrix	Ecosystems Lead	BS, Botany (1998) Certificate, Wetland Science and Management (2001)	15
Mike Hall/Parametrix	Ecosystems, Biological Assessment	BA, Music History (1990)	24

Name/Affiliation	Project Role	Education	Years of Experience
Peter Chen/Parametrix	Energy	BA, Environmental Studies (2001) BS, Biology (2001) MS, Transportation Engineering (2006)	12
Craig Hainey/Parametrix	GIS	BS, Political Science (1990)	14
Rick Wadsworth/Parametrix	Hazardous Materials	BS, Environmental Engineering (1994) MS, Environmental Engineering (1995)	19
Jessica Roberts/Parametrix	Hazardous Materials	BS, Environmental Studies (1998) MS, Environmental Engineering (2005)	11
Mimi Sheridan/Sheridan Consulting Group	Historic Resources	BA, History and Political Science (1970) MUP, Urban Planning (1994)	22
Mark Stewart/Parsons Brinckerhoff	Land Use; Social/EJ, Air Quality/GHG and Economics Senior Advisor	BA, Urban Planning (1977) BA, Landscape Architecture, (1982)	28
Hussein Rehmat/Parsons Brinckerhoff	Land Use	BA, Community, Environment, and Planning (2008)	7
Michael Minor/Michael Minor Associates	Noise Analysis	BA, Physics (1988) BA, Mathematics (1988)	27
Lawrence Spurgeon/Parsons Brinckerhoff	Noise and Vibration EIS Section; Noise and Vibration Technical Report Senior Advisor	MSE, Environmental Engineering (1993) BS, Industrial Engineering and Operations Research (1992)	20
Curt Warber/Parametrix	Parks and Recreation; Visual and Aesthetics Senior Advisor	BA, Biology (1985) MLA, Landscape Architecture (1992)	26
Mary Jo Porter/The Underhill Company	Public Services, Safety and Security	BA, Architecture (1972) MS, Transportation Engineering (1974) MBA, Business Administration (1985)	41
Betsy Minden/Parsons Brinckerhoff	Social Resources, Environmental Justice, Land Use	BA, Biological Studies (1978) MUP, Urban Planning (1985)	29
Sybil Gooljar/Parametrix	Technical Editor	BA, English (1974) Scientific and Technical Communications Master's Program (1980)	27
Jill Irwin/ Irwin Writing/Editing	Technical Editor	BA, Art History (1980) Certificate in Technical Writing (1994)	21
David Shelton/Parsons Brinckerhoff	Transportation	BA, Anthropology (1992) MCP, City and Regional Planning (1997)	18
Chris Wellander/Parsons Brinckerhoff	Transportation Planning and Analysis Task Lead and Technical Report Lead; Transportation EIS Section Senior Reviewer	BS, Civil Engineering (1980) MS, Civil Engineering – Urban Transportation Planning (1985)	35
Ryan LeProwse, P.E./Parametrix	Transportation EIS Section	BS, Civil Engineering (1999)	16

Name/Affiliation	Project Role	Education	Years of Experience
Claudia Hischey, P.E./Transportation Consulting Services	Transportation Analysis	BS, Mechanical Engineering (1980) MS Civil Engineering (1985)	29
Katherine Casseday, P.E., P.T.O.E/Casseday Consulting	Transportation Analysis	BS, Civil Engineering (1978)	37
Laura Wojcicki, P.E./Parsons Brinckerhoff	Transportation Analysis	BS, Civil Engineering (2003)	11
Brian Woodburn/Parametrix	Transportation Analysis	BA, Mathematics (2004) BA, Physics (2004) MS, Engineering (2005)	9
Darrell Smith/Perteet	Utilities	BS, Civil Engineering (1991)	24
Rodney Pfiefle/Perteet	Utilities	BS, Civil Engineering (2012)	2
James Phillips/Wilson Ihrig	Vibration Analysis	BS, Aerospace Engineering (1986) MS, Acoustics (1989)	26
David Sherrard/Parametrix	Environmental Planner Visual and Aesthetics	BA, Geography (1976)	38
Julie Brandt/Parametrix	Water Resources	BS, Civil Engineering (1997)	18
Debbie Fetherston/Parametrix	Word Processing Specialist	Ballard High School (1983)	20
Ryan Scally/Parametrix	Publications Manager	BS, Business Administration and Management Information Systems (2003)	10
Patricia Yi/Parametrix	Graphic Designer	BFA, Graphic Design (1996)	18

LYNNWOOD LINK EXTENSION

FINAL ENVIRONMENTAL IMPACT STATEMENT

Conceptual Plans

SOUNDTRANSIT

U.S. Department of Transportation
Federal Transit Administration

APRIL 2015

SOUND TRANSIT
LYNNWOOD LINK EXTENSION

PART 1

CONCEPTUAL PLANS FOR THE PREFERRED ALTERNATIVE

APRIL 2015

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

GHL Consultants
Structural & Civil Engineering Services

GRIJALVA ENGINEERING

HEWITT

paula ITO CADD services, llc

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SOUND TRANSIT LYNNWOOD LINK EXTENSION

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SHEET INDEX

DWG NO. INDX-01

SHEET 1 OF 59

REV. NO.

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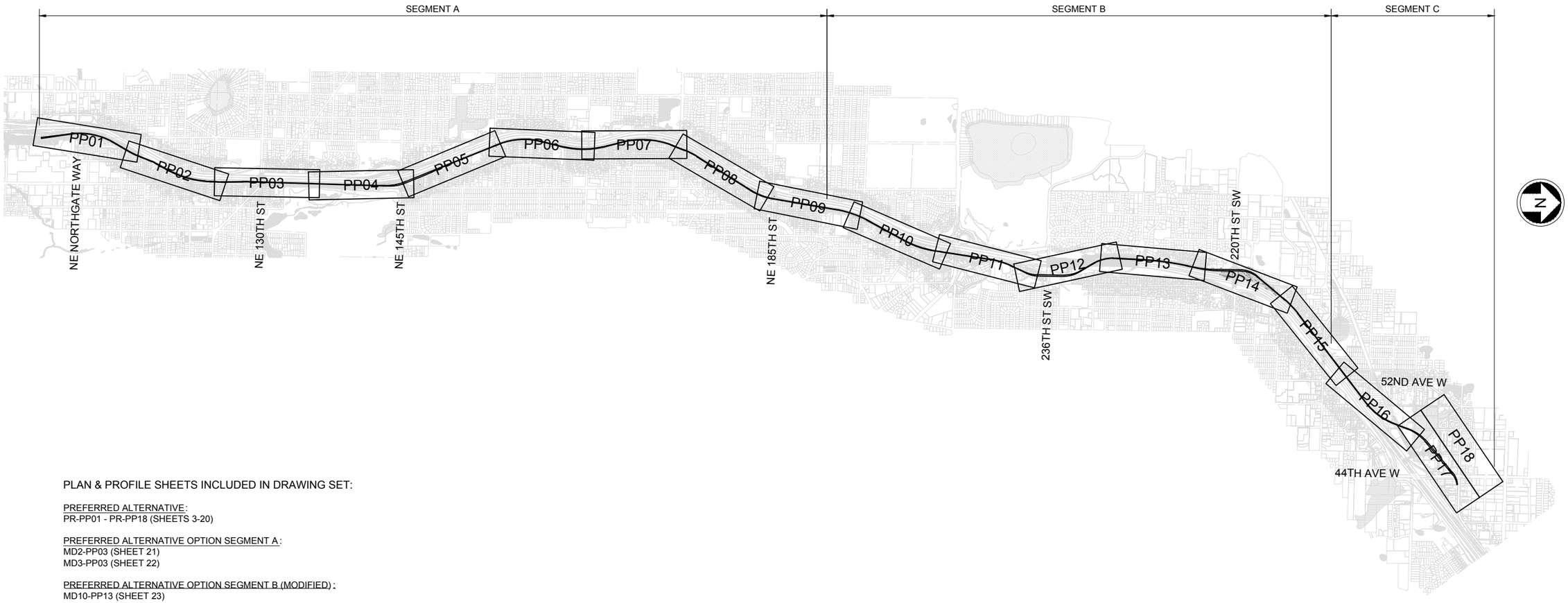

PLAN & PROFILE SHEETS INCLUDED IN DRAWING SET:

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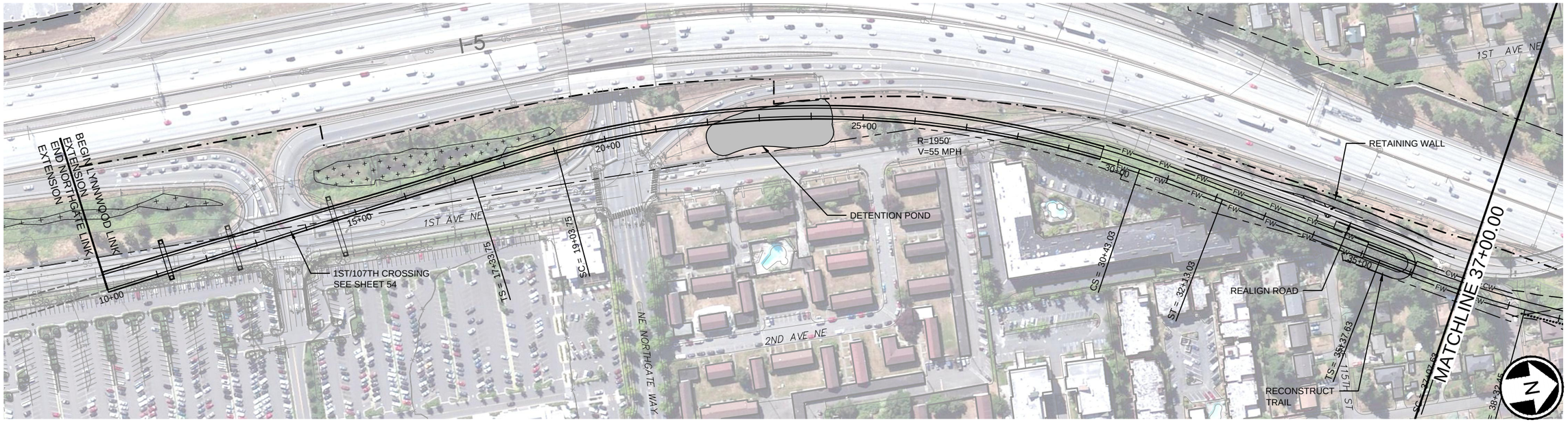
SHEET LAYOUT

DWG NO. SHT-LO

SHEET 2 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



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- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- STRADDLE BENT
- S REVISED OR NEW TRAFFIC SIGNAL

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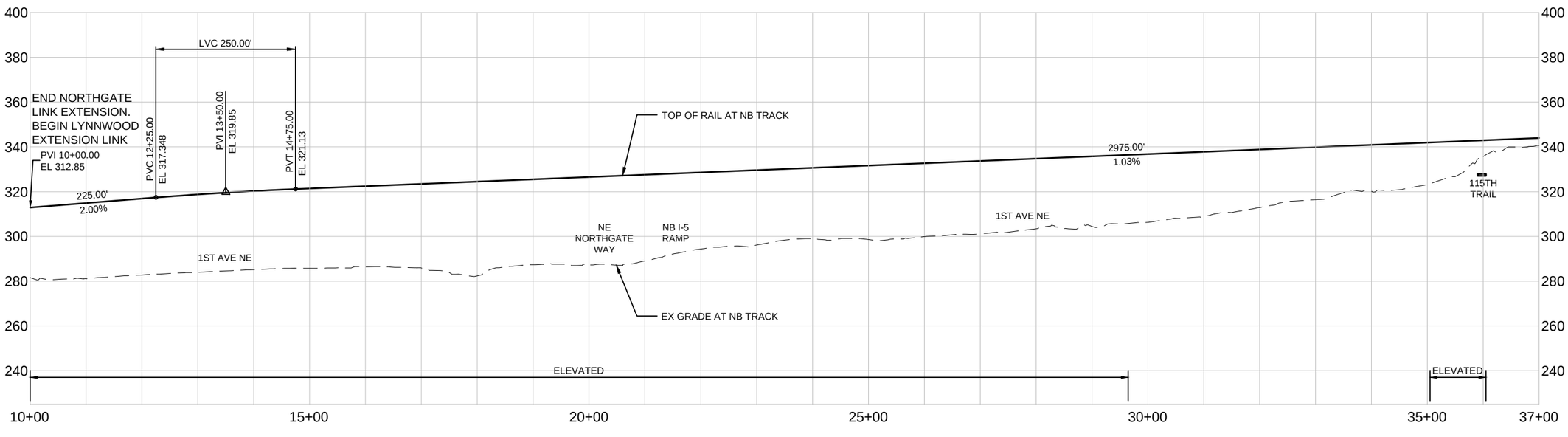

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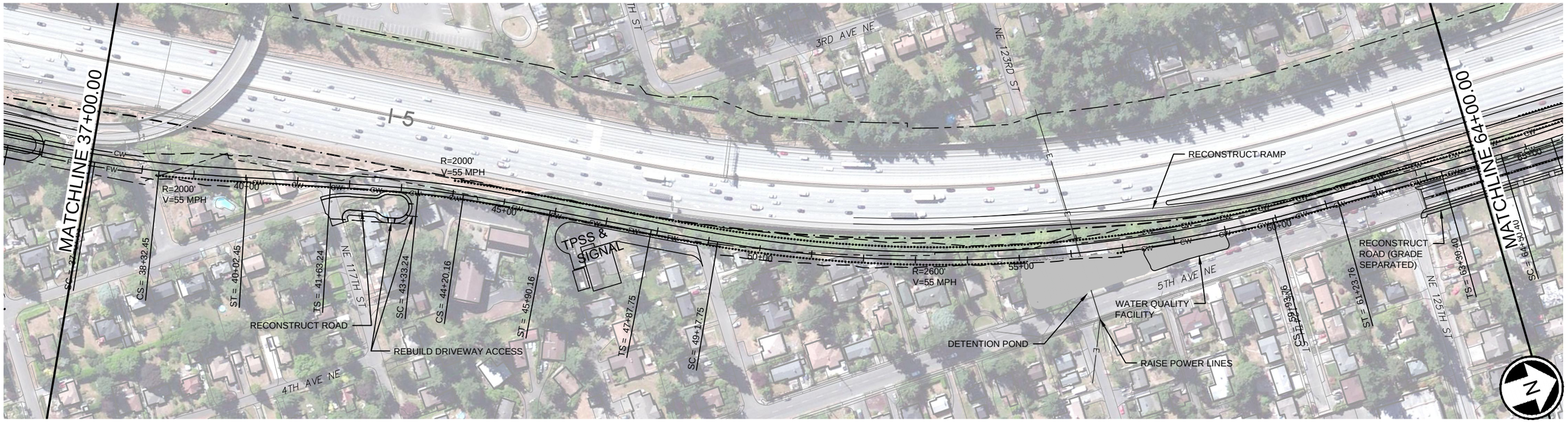
PREFERRED ALTERNATIVE - SEGMENT A
TRACK PLAN & PROFILE

DWG NO. PR-PP01

SHEET 3 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



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- WETLAND
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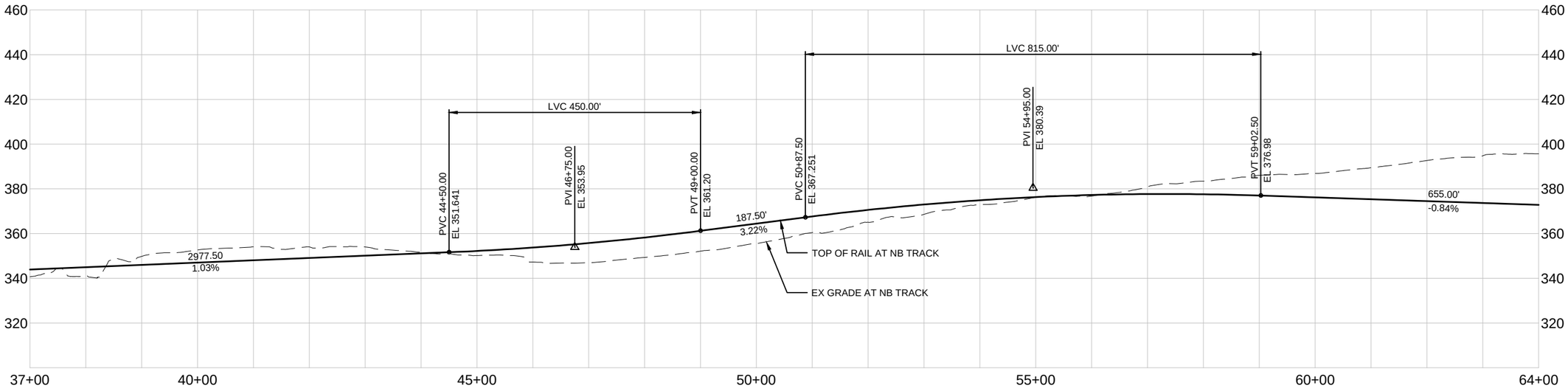

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PREFERRED ALTERNATIVE - SEGMENT A
TRACK PLAN & PROFILE

DWG NO. PR-PP02

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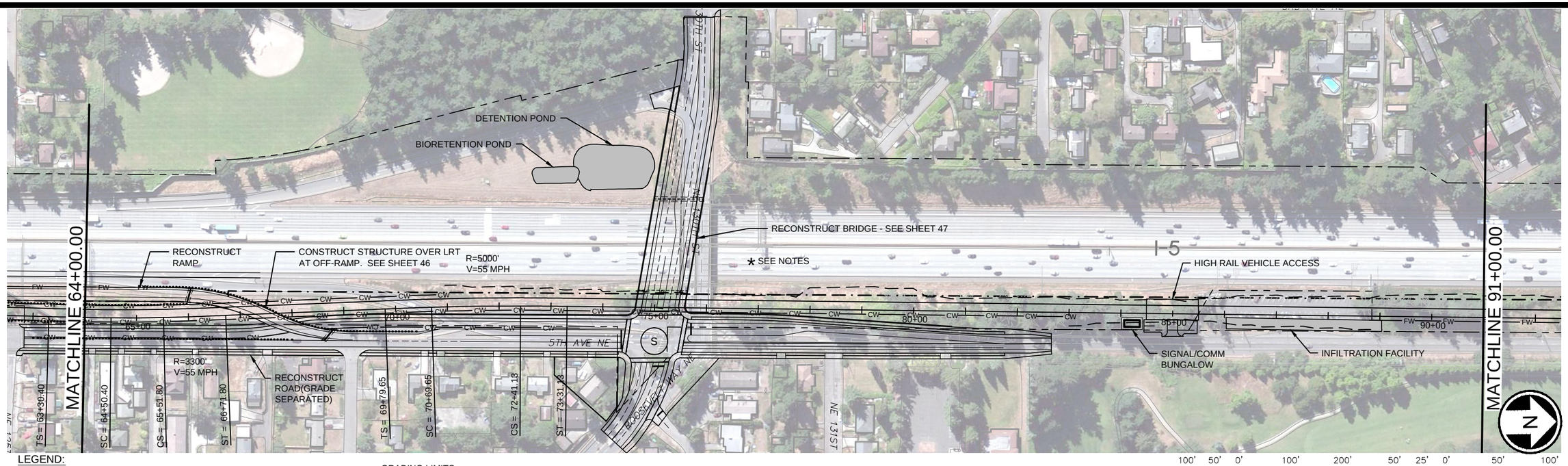

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- WSDOT ROW
- WETLAND
- STRADDLE BENT
- S — REVISED OR NEW TRAFFIC SIGNAL

NOTES:

1. FOR OPTION SEGMENT A, NE 130TH STREET STATION, SEE SHEET 21.
2. FOR OPTION SEGMENT A, NE 130TH STREET FUTURE STATION, SEE SHEET 22.

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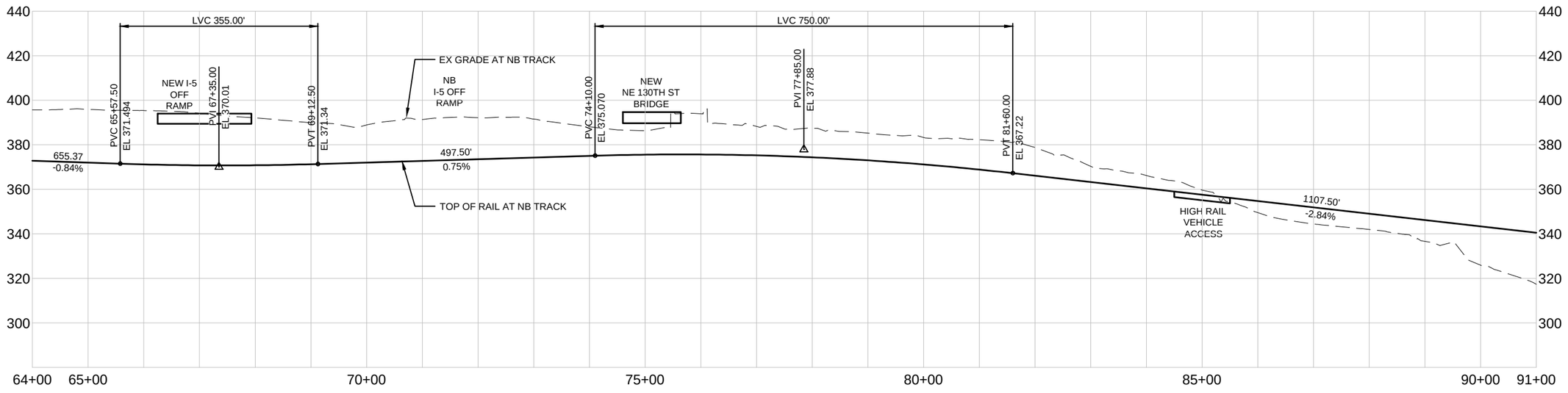

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SOUNDTRANSIT

North Corridor Transit Partners
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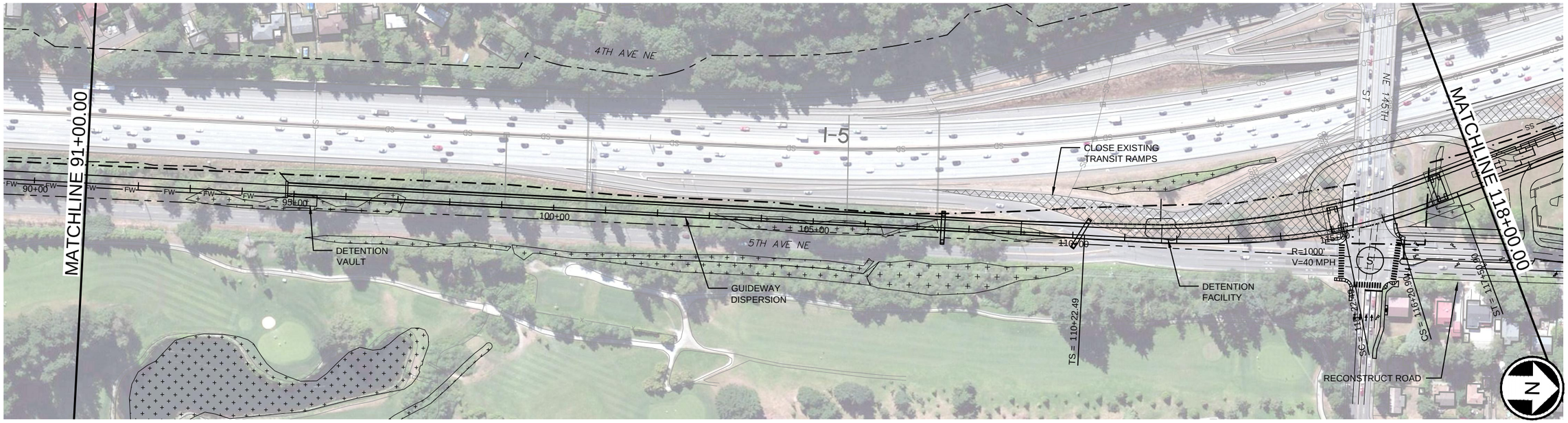
PREFERRED ALTERNATIVE - SEGMENT A TRACK PLAN & PROFILE

DWG NO. PR-PP03

SHEET 5 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



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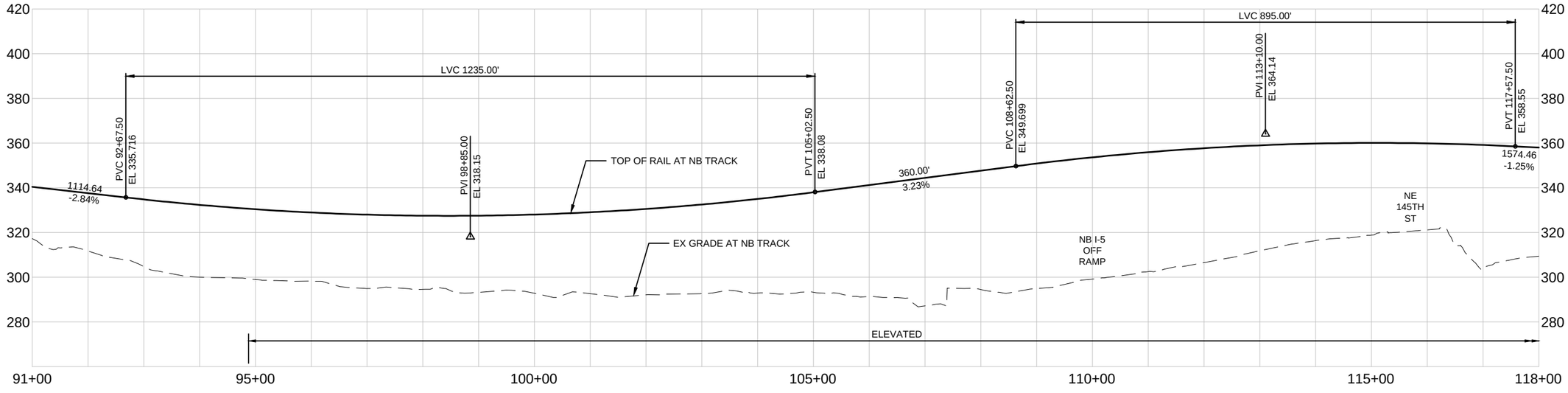

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North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

PREFERRED ALTERNATIVE - SEGMENT A
TRACK PLAN & PROFILE

DWG NO. PR-PP04

SHEET 6 OF 59

REV. NO.

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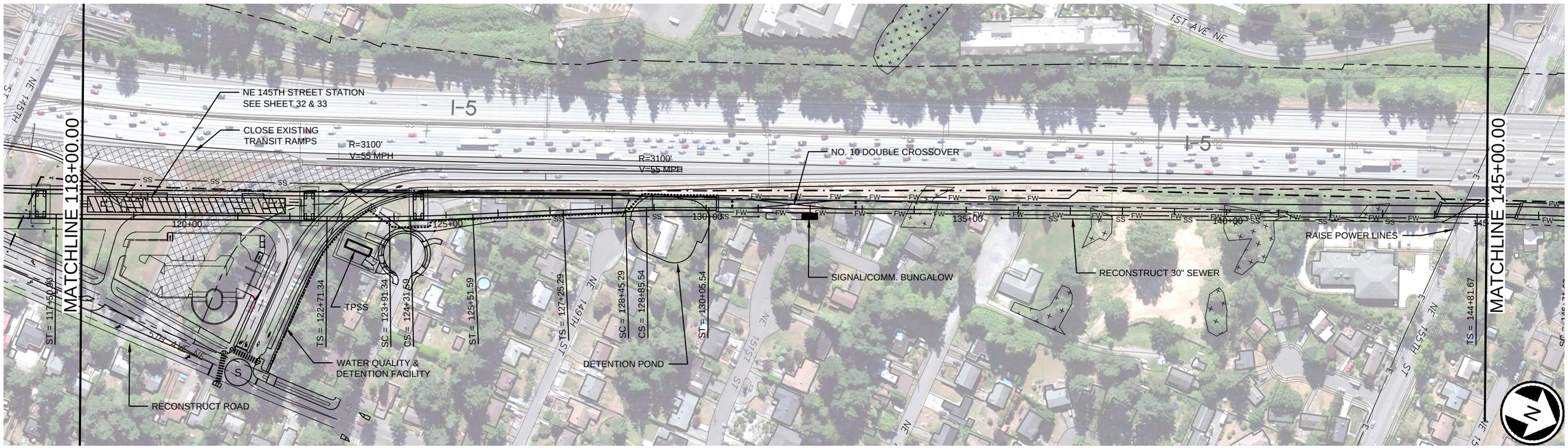

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- S STRADDLE BENT
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- WETLAND

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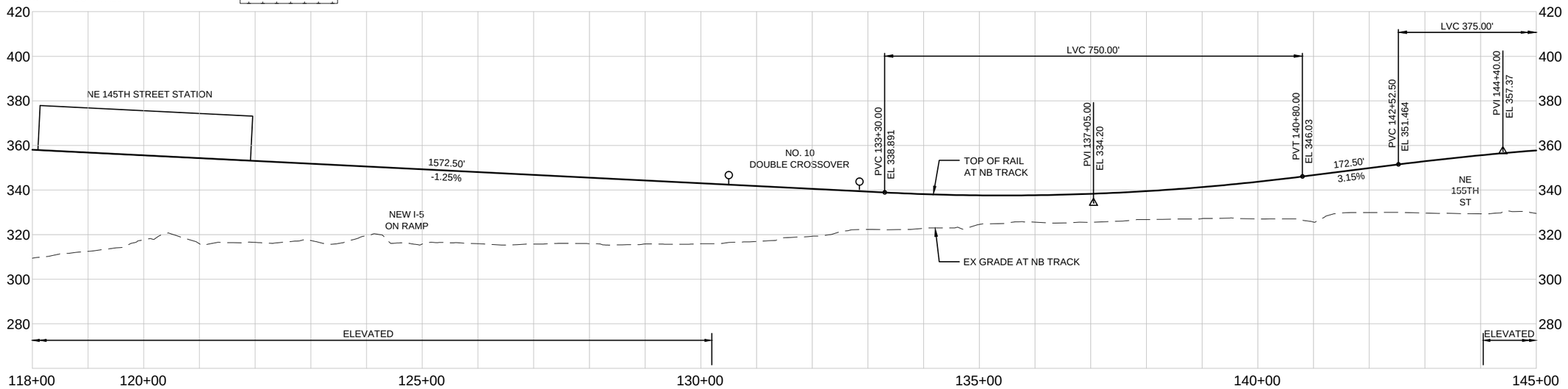

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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

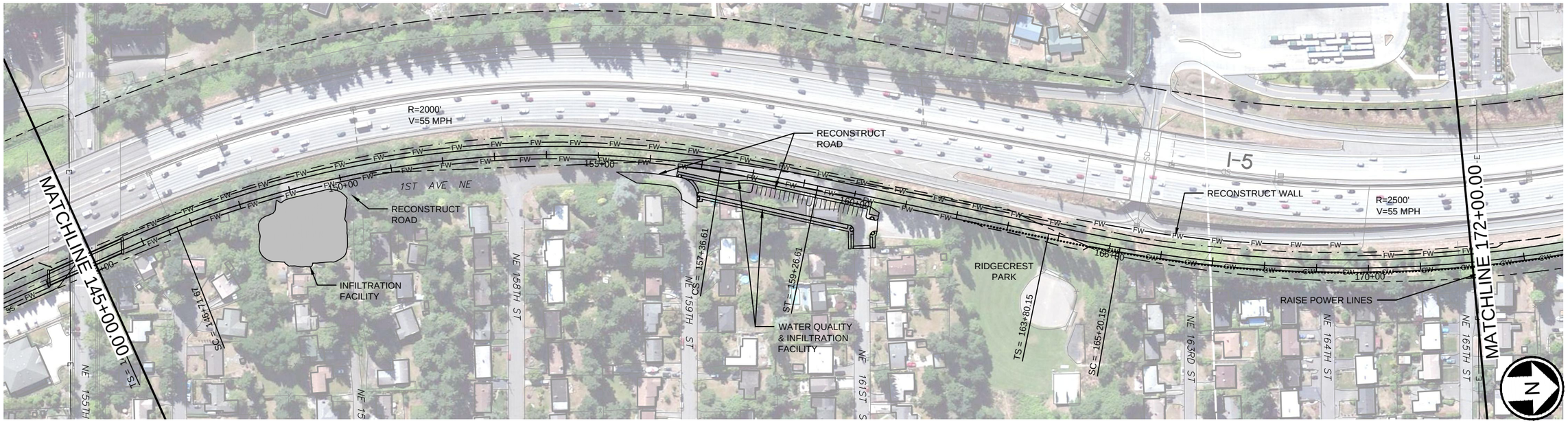
PREFERRED ALTERNATIVE - SEGMENT A
TRACK PLAN & PROFILE

DWG NO. PR-PP05

SHEET 7 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



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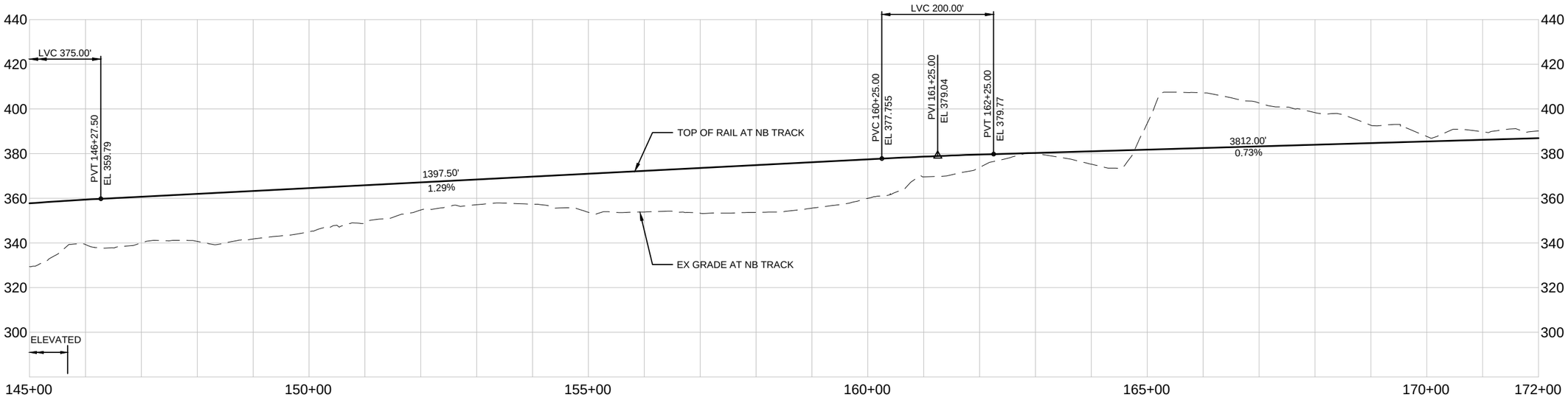

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North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

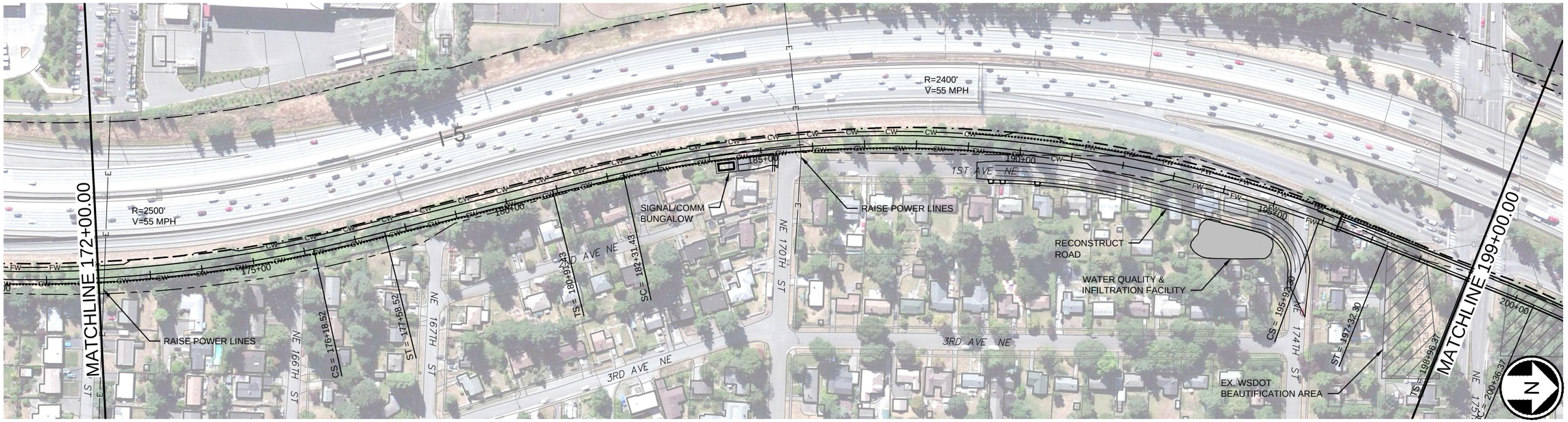
PREFERRED ALTERNATIVE - SEGMENT A
TRACK PLAN & PROFILE

DWG NO. PR-PP06

SHEET 8 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



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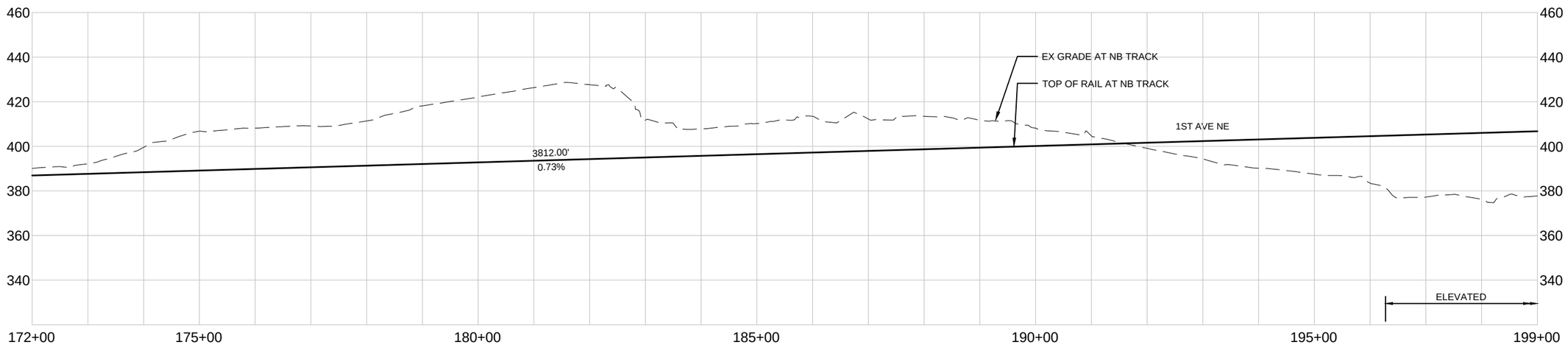

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North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

PREFERRED ALTERNATIVE - SEGMENT A
TRACK PLAN & PROFILE

DWG NO. PR-PP07

SHEET 9 OF 59

REV. NO. 2

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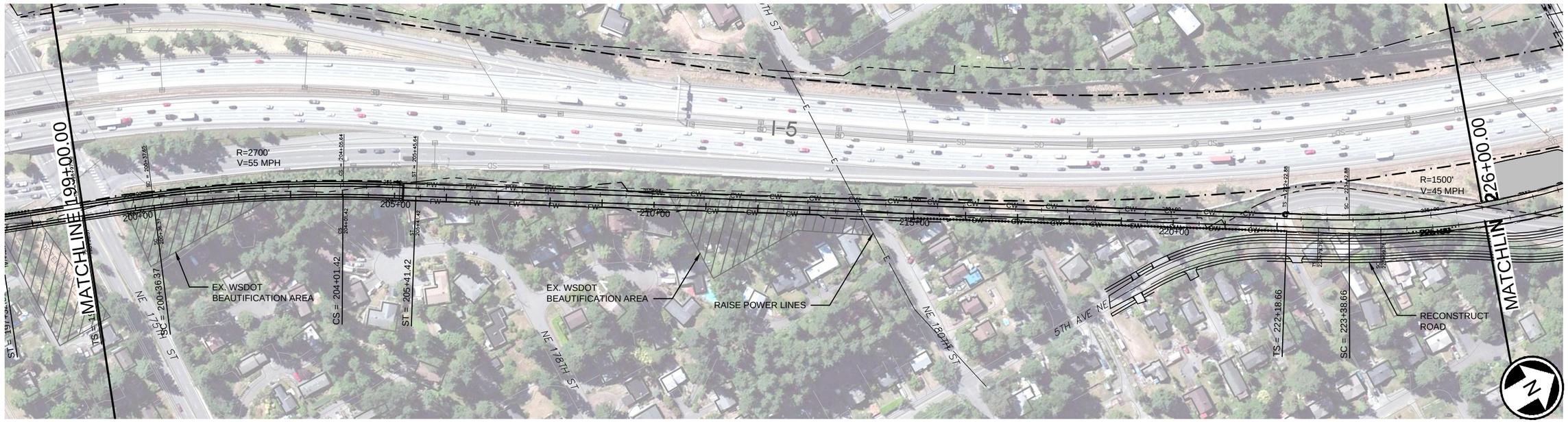

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- S STRADDLE BENT
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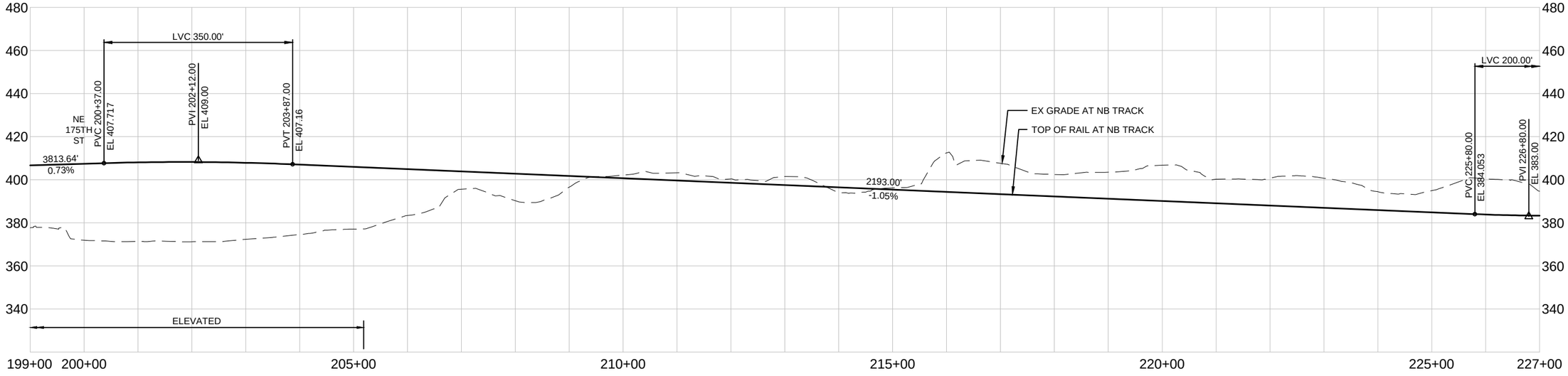

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North Corridor Transit Partners
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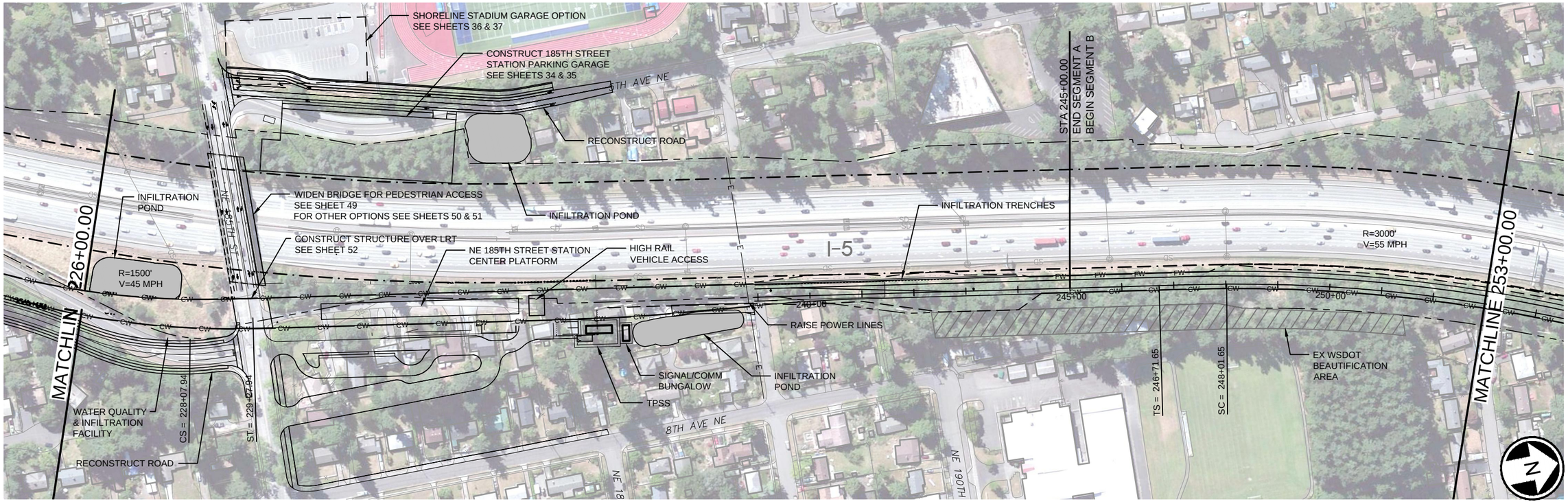
PREFERRED ALTERNATIVE - SEGMENT A
TRACK PLAN & PROFILE

DWG NO. PR-PP08

SHEET 10 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



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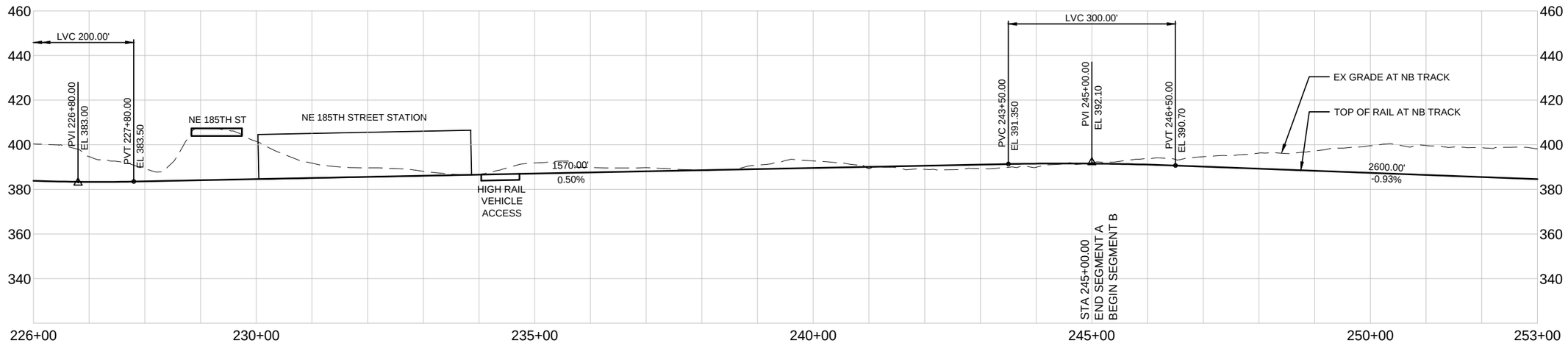
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- STRADDLE BENT
- (S) REVISED OR NEW TRAFFIC SIGNAL

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 50' 25' 0' 50' 100'



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

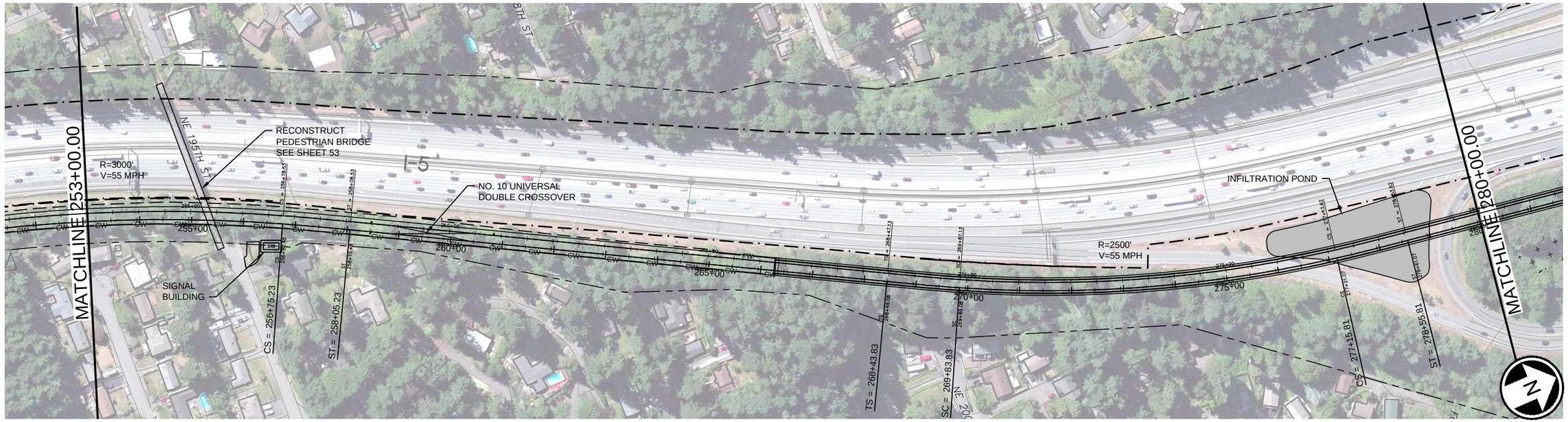
PREFERRED ALTERNATIVE - SEGMENT A
TRACK PLAN & PROFILE

DWG NO. PR-PP09

SHEET 11 OF 59

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

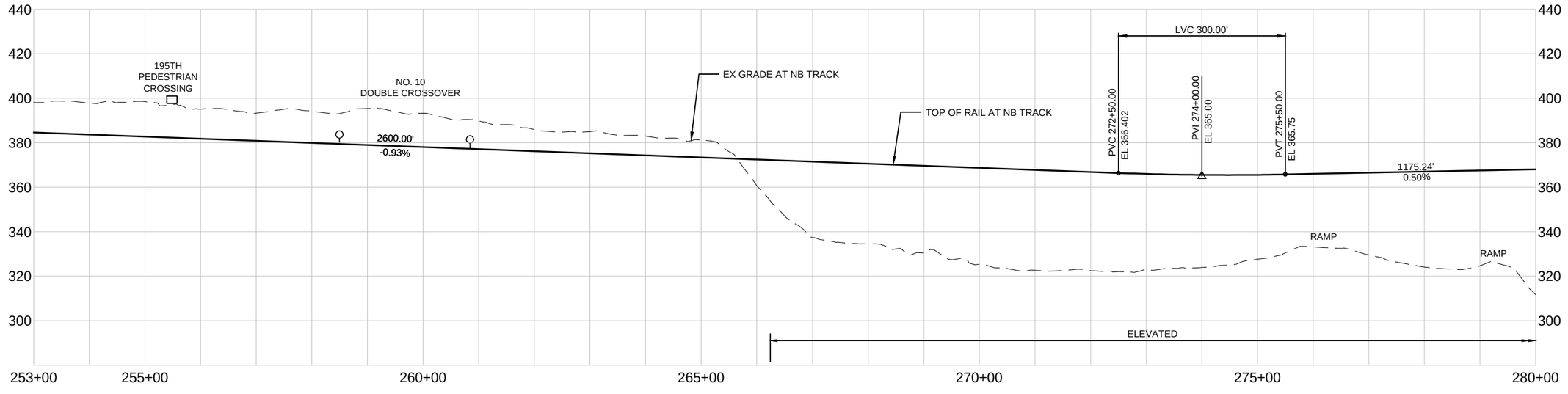


LEGEND:

- SB TRACK CENTERLINE
- NB TRACK CENTERLINE
- 15+00 STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- GRADING LIMITS
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- S STRADDLE BENT
- REVISED OR NEW TRAFFIC SIGNAL

100' 50' 0' 100' 200' HORIZONTAL SCALE

50' 25' 0' 50' 100' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

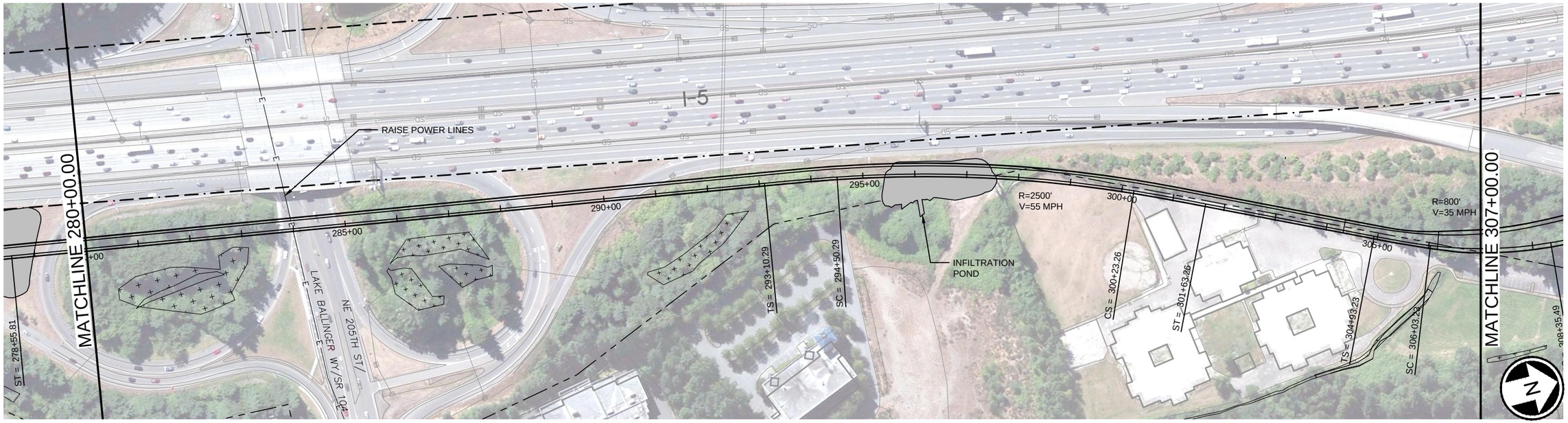
PREFERRED ALTERNATIVE - SEGMENT B2 (MODIFIED)
TRACK PLAN & PROFILE

DWG NO. PR-PP10

SHEET 12 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION

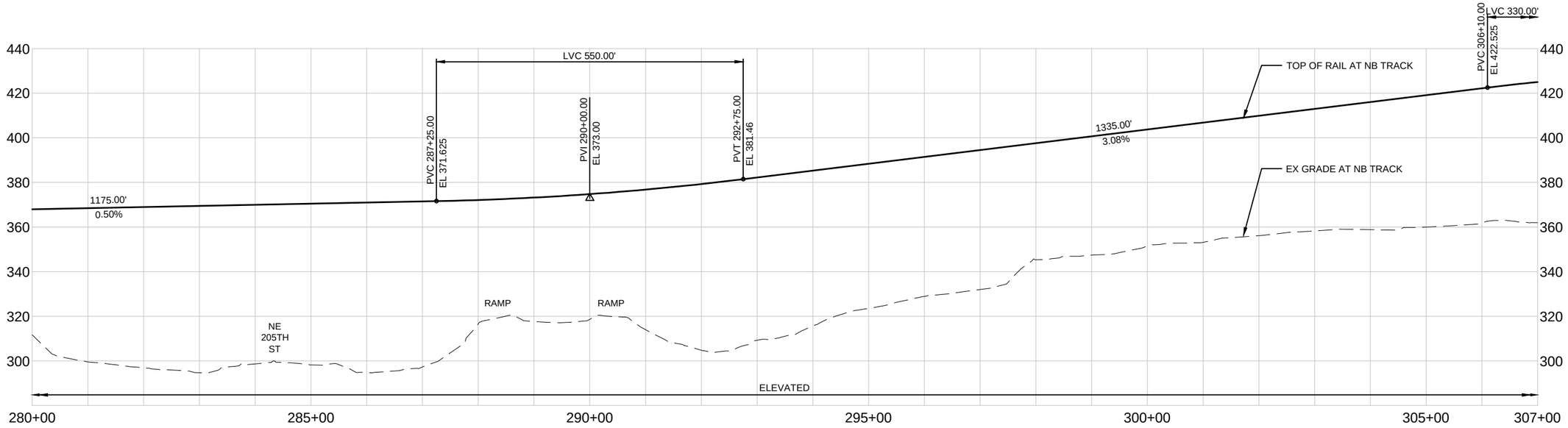


LEGEND:

- SB TRACK CENTERLINE
- NB TRACK CENTERLINE
- 15+00 STRUCTURE
- FW—FW FILL WALL
- CW—CW CUT WALL
- GRADING LIMITS
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- STRADDLE BENT
- (S) REVISED OR NEW TRAFFIC SIGNAL

100' 50' 0' 100' 200' HORIZONTAL SCALE

50' 25' 0' 50' 100' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

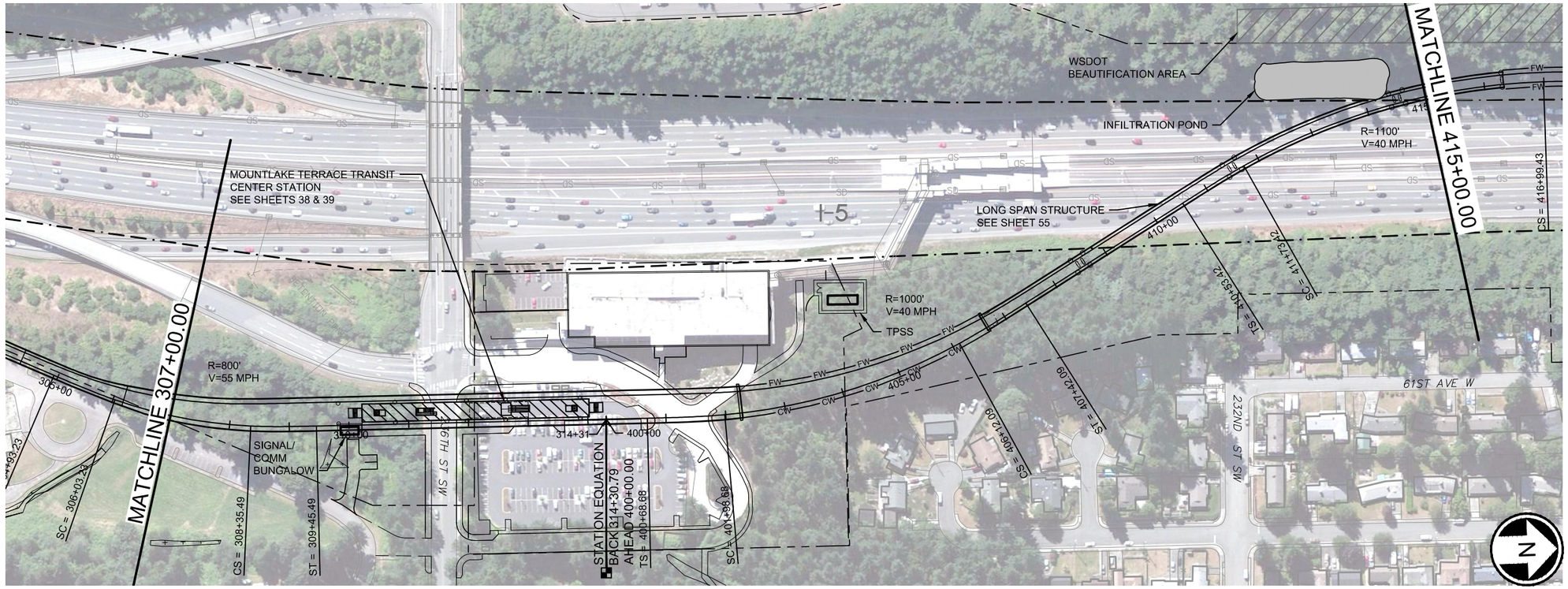
PREFERRED ALTERNATIVE - SEGMENT B
TRACK PLAN & PROFILE

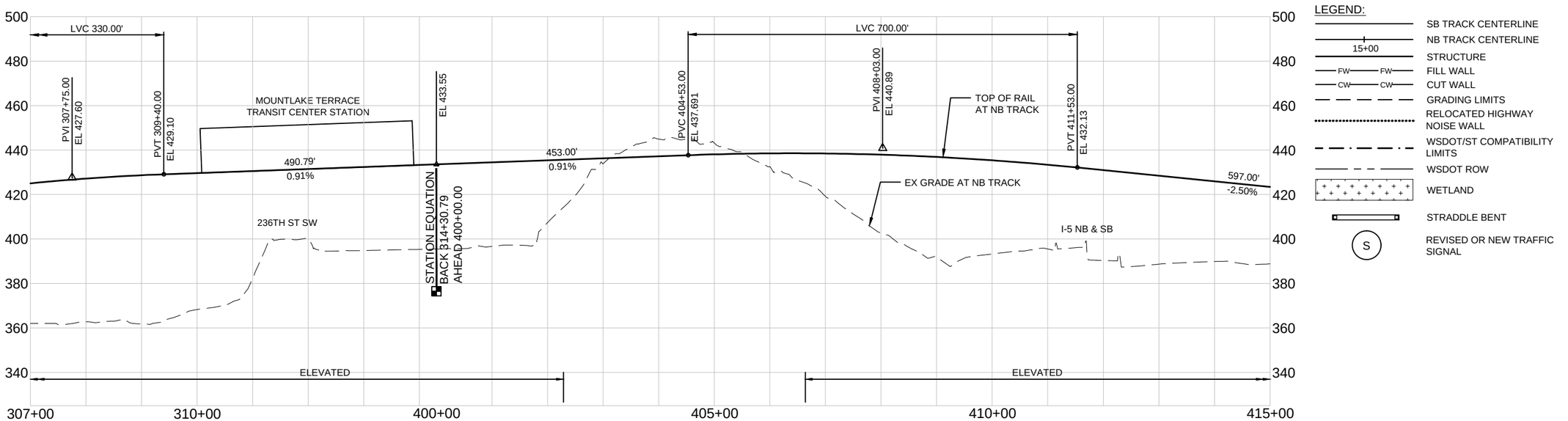
DWG NO. PR-PP11

SHEET 13 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION





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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

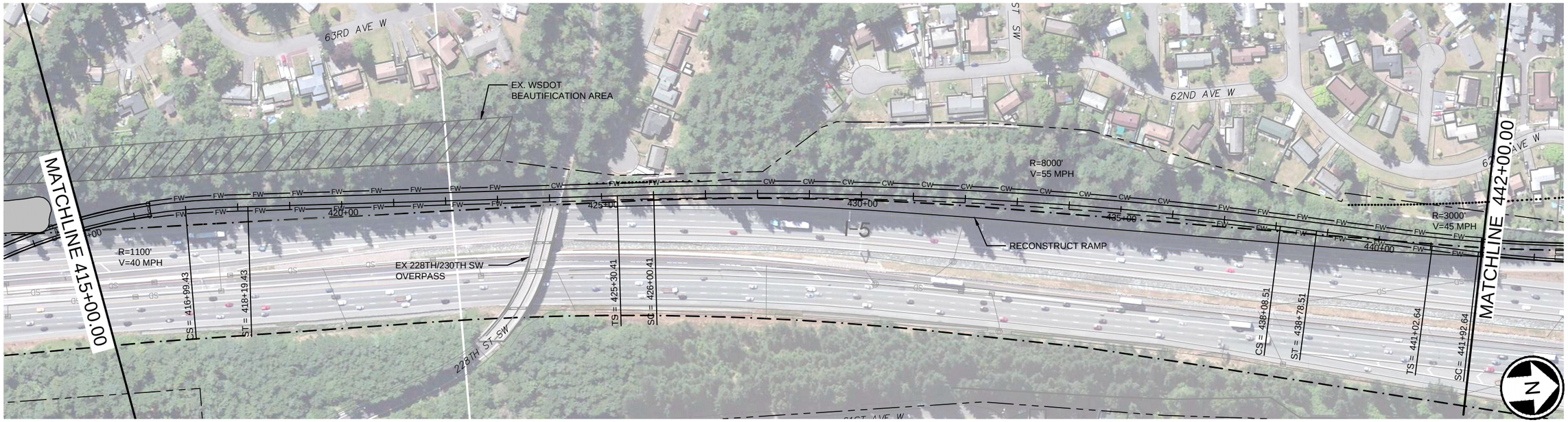
PREFERRED ALTERNATIVE - SEGMENT B
TRACK PLAN & PROFILE

DWG NO. PR-PP12

SHEET 14 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION

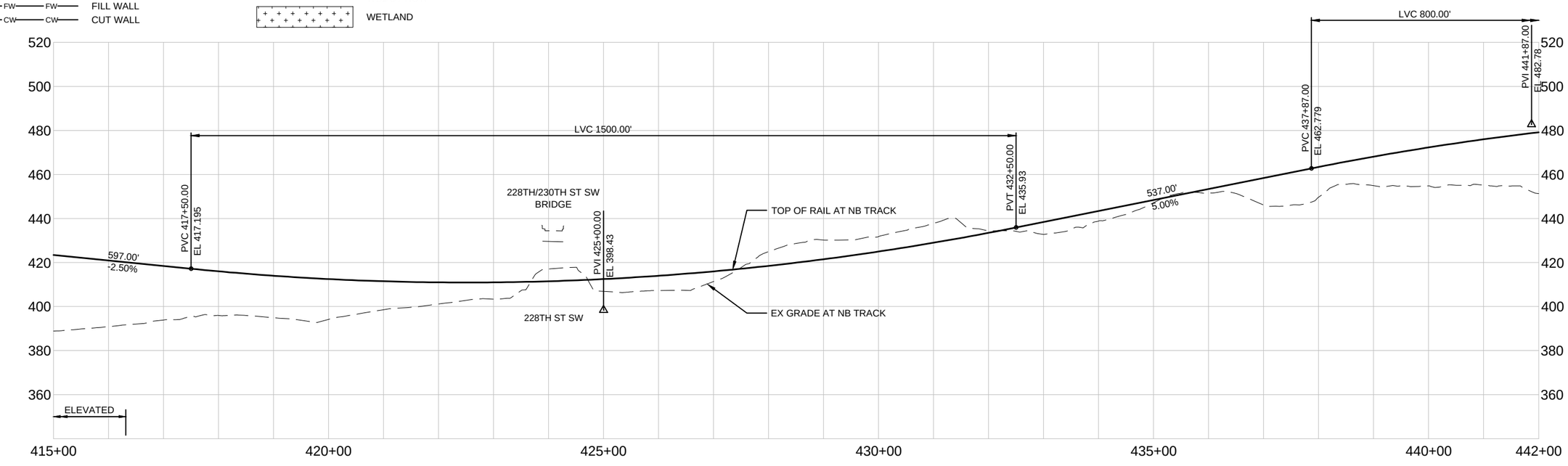


LEGEND:

- SB TRACK CENTERLINE
- NB TRACK CENTERLINE
- 15+00 STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- GRADING LIMITS
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- S STRADDLE BENT
- REVISED OR NEW TRAFFIC SIGNAL

100' 50' 0' 100' 200' HORIZONTAL SCALE

50' 25' 0' 50' 100' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

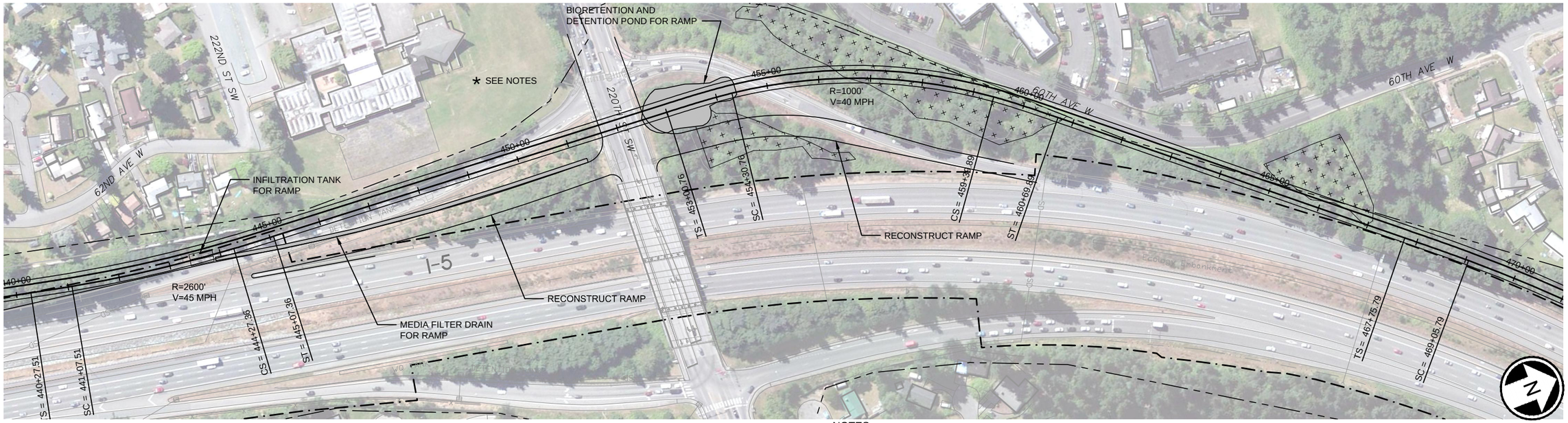
PREFERRED ALTERNATIVE - SEGMENT B
TRACK PLAN & PROFILE

DWG NO. PR-PP13

SHEET 15 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



LEGEND:

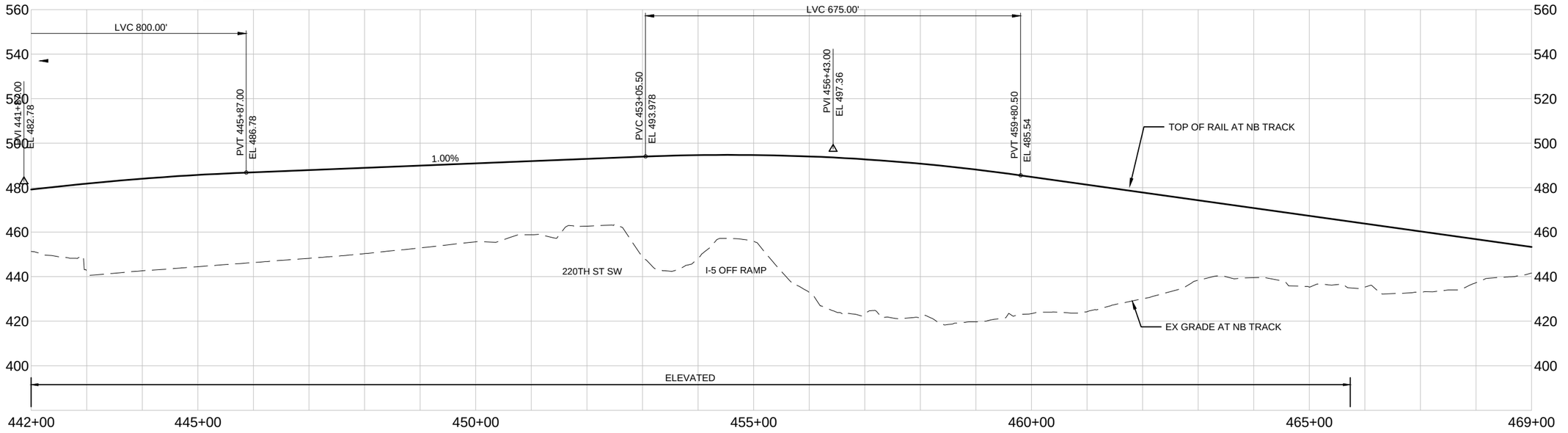
- SB TRACK CENTERLINE
- NB TRACK CENTERLINE
- 15+00 STRUCTURE
- GRADING LIMITS
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- FW FW FILL WALL
- CW CW CUT WALL
- S STRADDLE BENT
- REVISED OR NEW TRAFFIC SIGNAL
- WETLAND

NOTES:

1. FOR PREFERRED ALTERNATIVE OPTION, 220TH STREET SW STATION OPTION, SEE SHEETS 23 & 24.

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 50' 25' 0' 50' 100'



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

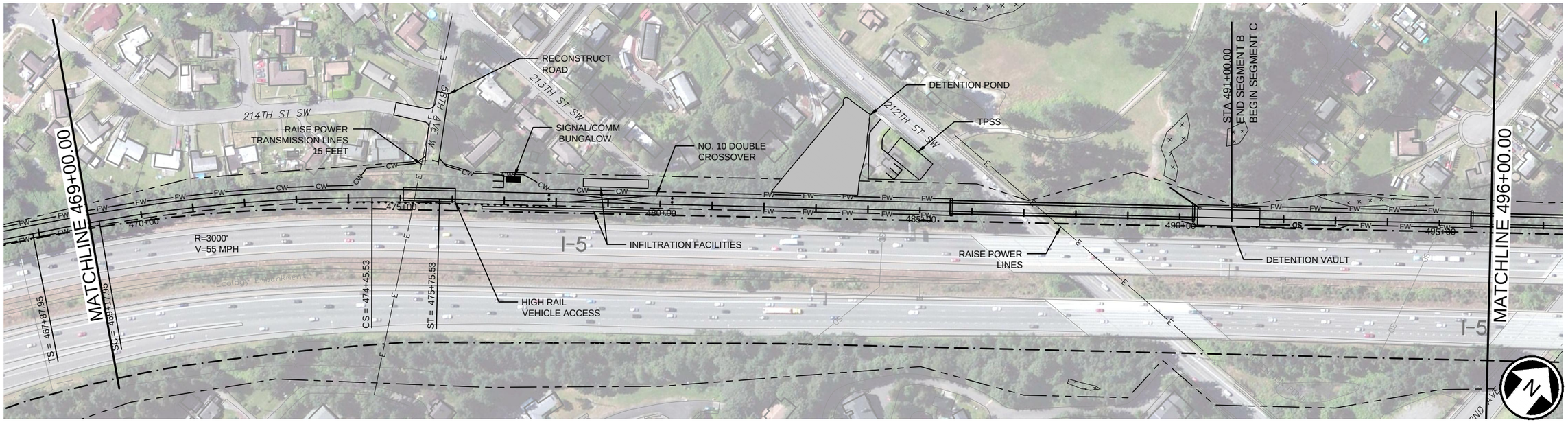
PREFERRED ALTERNATIVE - SEGMENT B
TRACK PLAN & PROFILE

DWG NO. PR-PP14

SHEET 16 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION

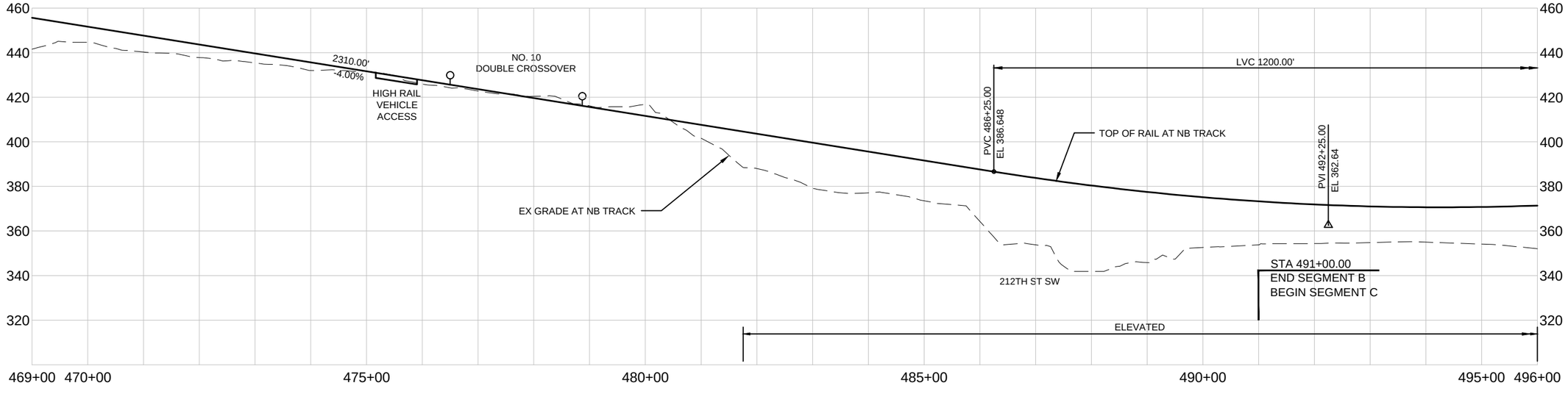


LEGEND:

- SB TRACK CENTERLINE
- NB TRACK CENTERLINE
- 15+00 — STRUCTURE
- FW FW — FILL WALL
- CW CW — CUT WALL
- GRADING LIMITS
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- STRADDLE BENT
- (S) REVISED OR NEW TRAFFIC SIGNAL

100' 50' 0' 100' 200' HORIZONTAL SCALE

50' 25' 0' 50' 100' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

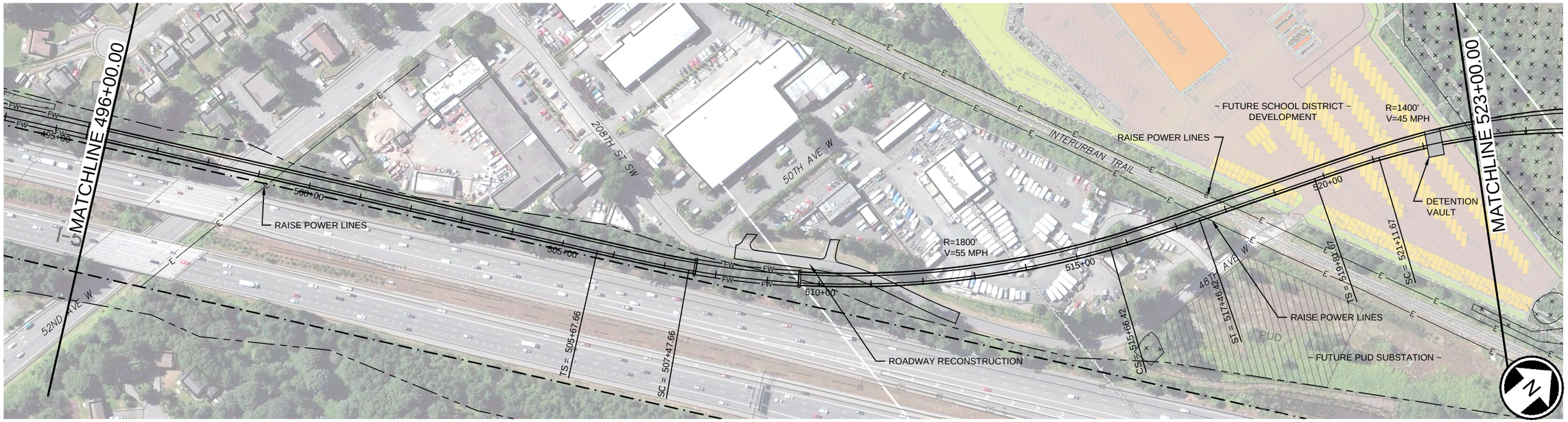
PREFERRED ALTERNATIVE - SEGMENT B
TRACK PLAN & PROFILE

DWG NO. PR-PP15

SHEET 17 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION

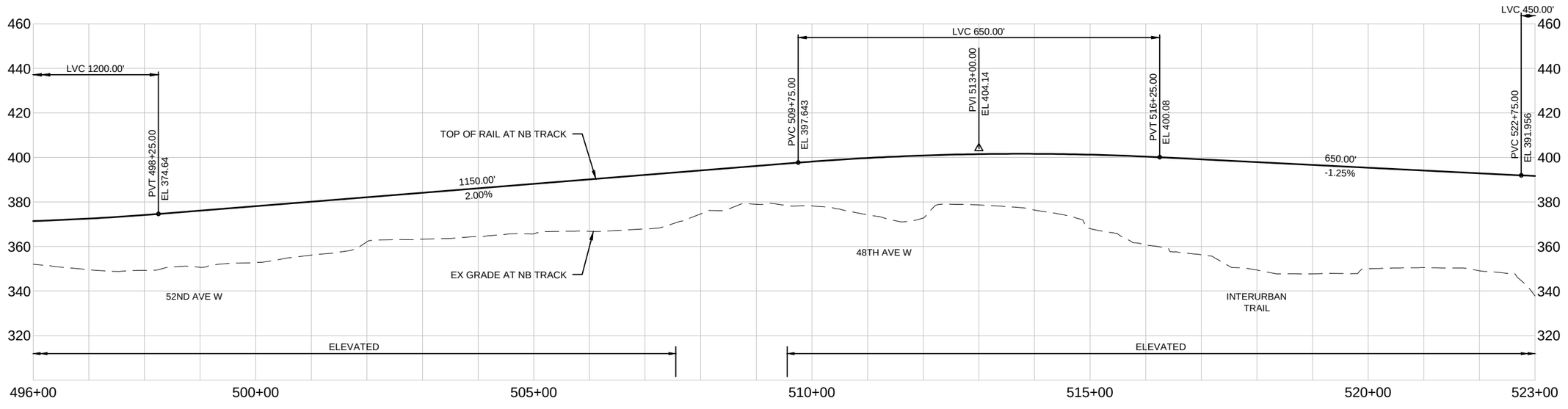


LEGEND:

- SB TRACK CENTERLINE
- NB TRACK CENTERLINE
- 15+00 STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- GRADING LIMITS
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- S STRADDLE BENT
- REVISED OR NEW TRAFFIC SIGNAL

100' 50' 0' 100' 200' HORIZONTAL SCALE

50' 25' 0' 50' 100' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

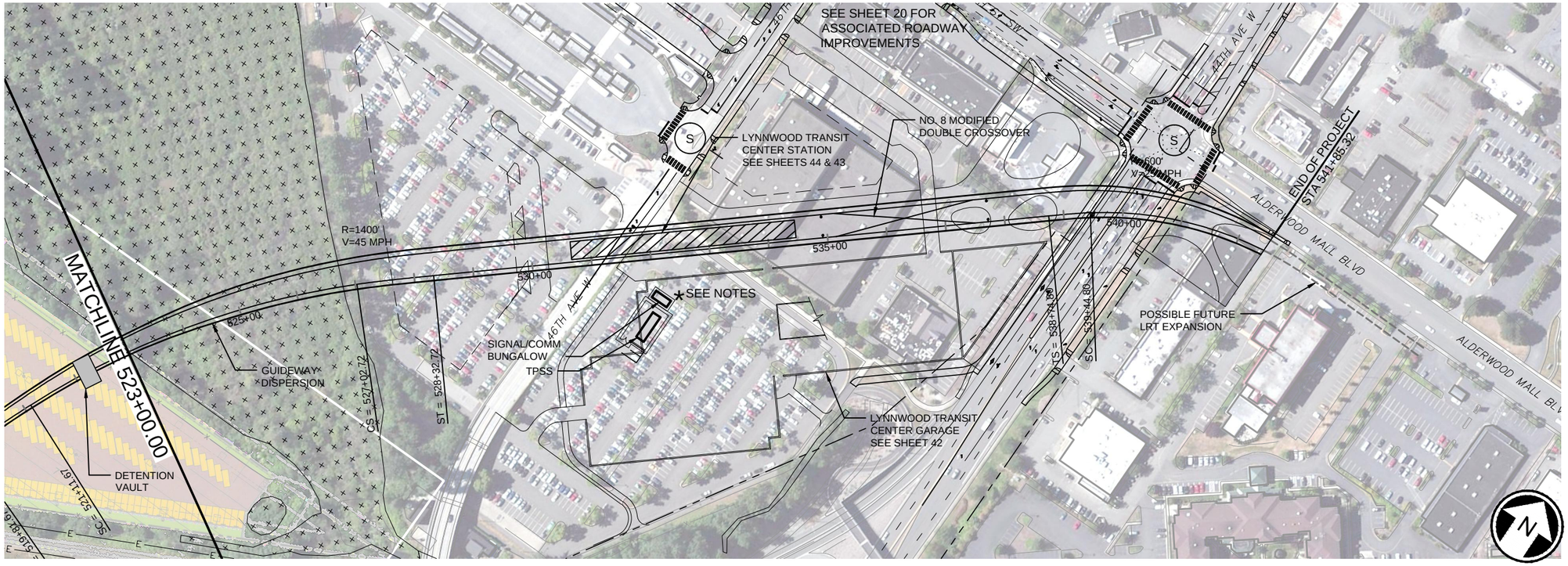
PREFERRED ALTERNATIVE - SEGMENT C
TRACK PLAN & PROFILE

DWG NO. PR-PP16

SHEET 18 OF 59

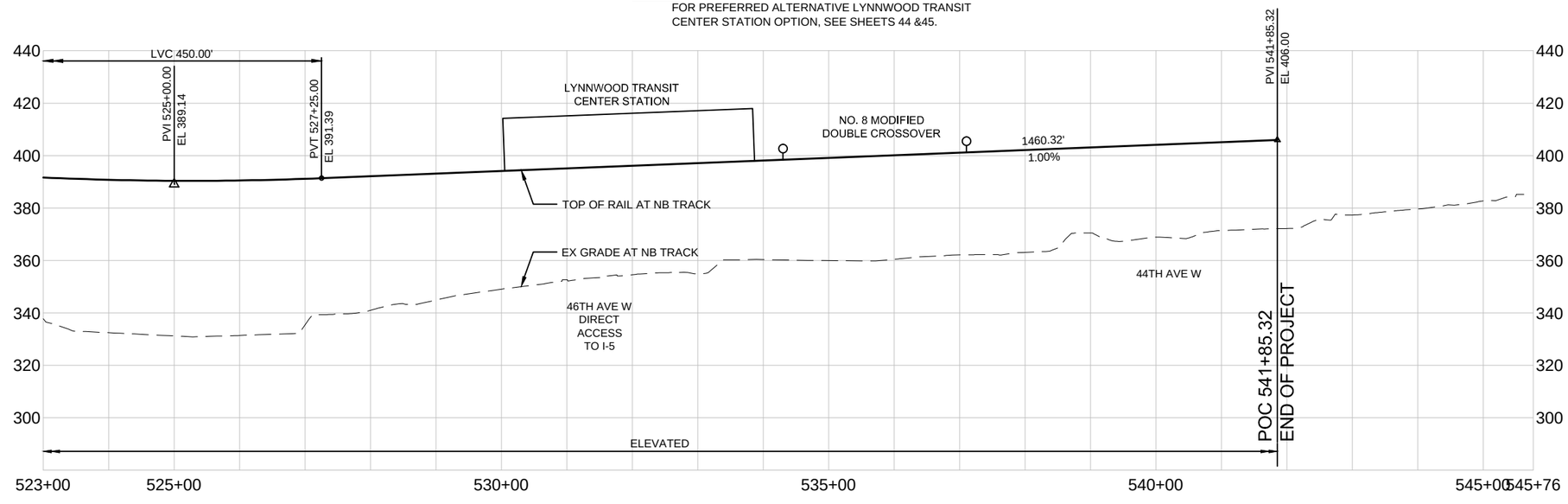
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



NOTES:

FOR PREFERRED ALTERNATIVE LYNNWOOD TRANSIT CENTER STATION OPTION, SEE SHEETS 44 &45.



LEGEND:

- SB TRACK CENTERLINE
- NB TRACK CENTERLINE
- 15+00 STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- GRADING LIMITS
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- STRADDLE BENT
- S REVISED OR NEW TRAFFIC SIGNAL

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\FEIS\19 PR-PP17.dwg Mar 02, 2015 - 1:13pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

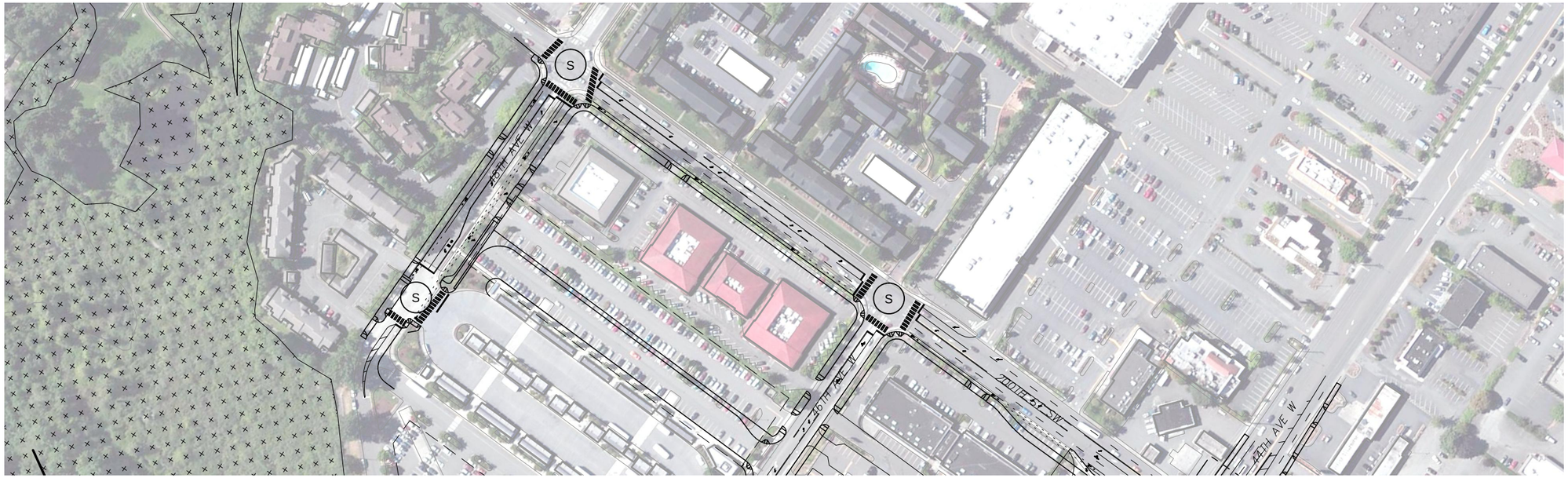
PREFERRED ALTERNATIVE - SEGMENT C
TRACK PLAN & PROFILE

DWG NO. PR-PP17

SHEET 19 OF 59

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SEE SHEET 19 FOR TRACK/STATION DETAILS

100' 50' 0' 100' 200'

HORIZONTAL SCALE

LEGEND:

- SB TRACK CENTERLINE
- NB TRACK CENTERLINE
- 15+00 STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- GRADING LIMITS
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- STRADDLE BENT
- S REVISED OR NEW TRAFFIC SIGNAL

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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

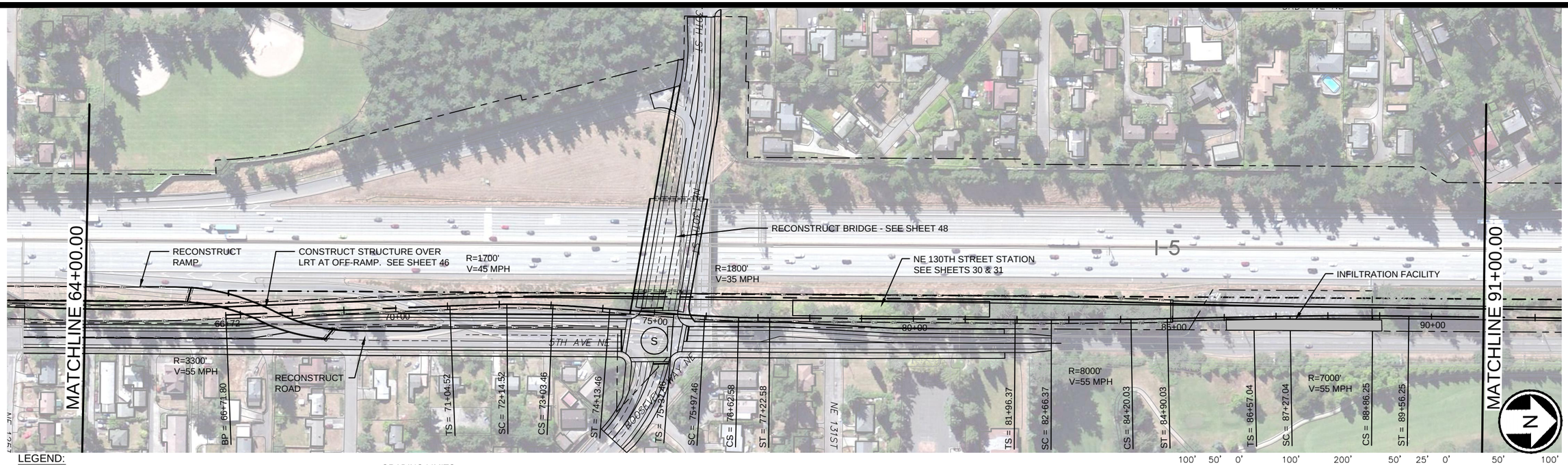
PREFERRED ALTERNATIVE - SEGMENT C
ASSOCIATED ROADWAY IMPROVEMENTS

DWG NO. PR-PP18

SHEET 20 OF 59

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

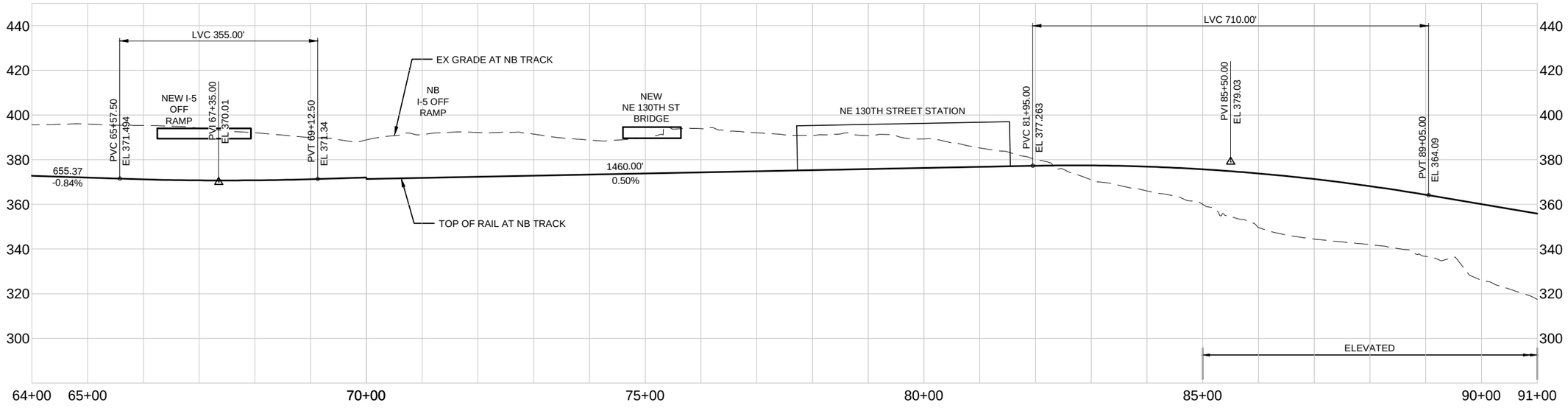


LEGEND:

- SB TRACK CENTERLINE
- NB TRACK CENTERLINE
- 15+00 STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- GRADING LIMITS
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- S STRADDLE BENT
- REVISED OR NEW TRAFFIC SIGNAL

100' 50' 0' 100' 200' HORIZONTAL SCALE

50' 25' 0' 50' 100' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

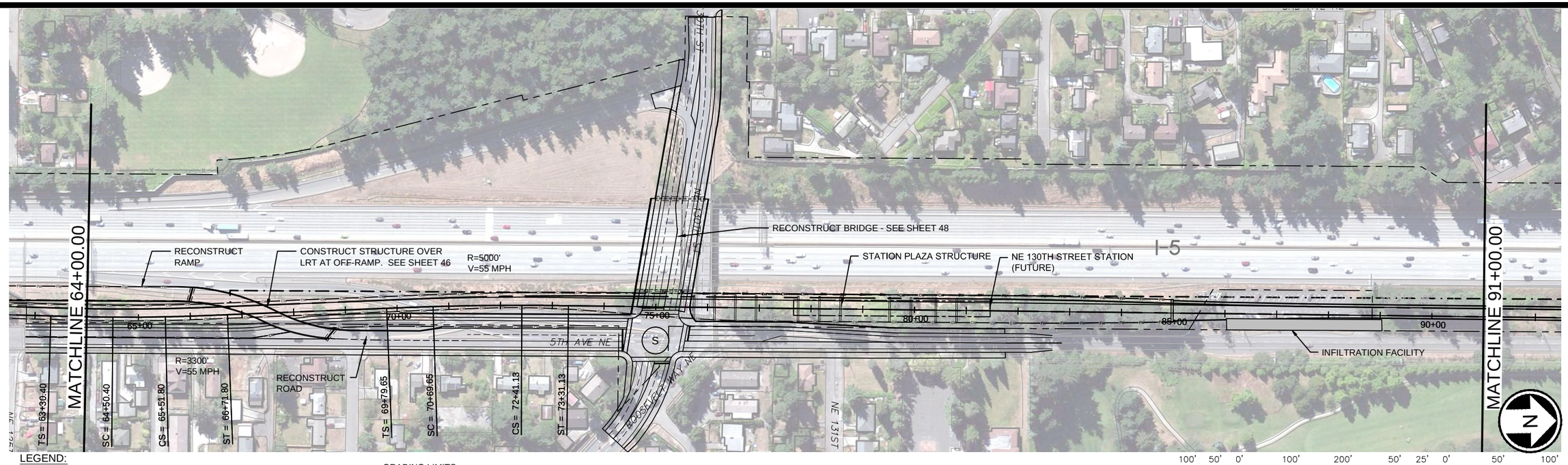
PREFERRED ALTERNATIVE OPTION SEGMENT A
NE 130TH STREET STATION OPTION - TRACK PLAN & PROFILE

DWG NO. MD2-PP03

SHEET 21 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION

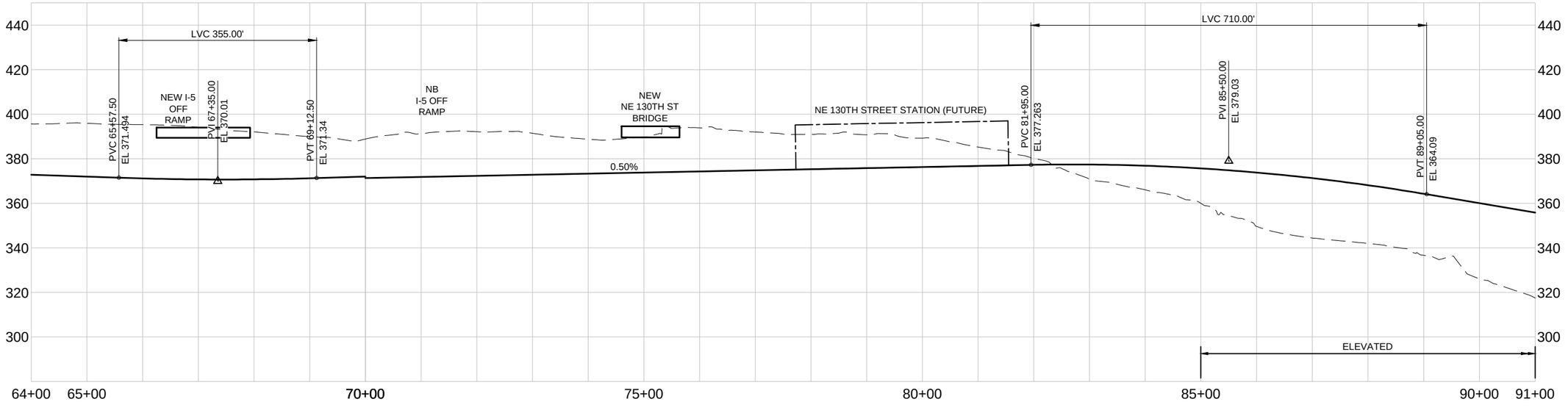


LEGEND:

- SB TRACK CENTERLINE
- NB TRACK CENTERLINE
- 15+00 STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- GRADING LIMITS
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- STRADDLE BENT
- S REVISED OR NEW TRAFFIC SIGNAL

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 50' 25' 0' 50' 100'



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

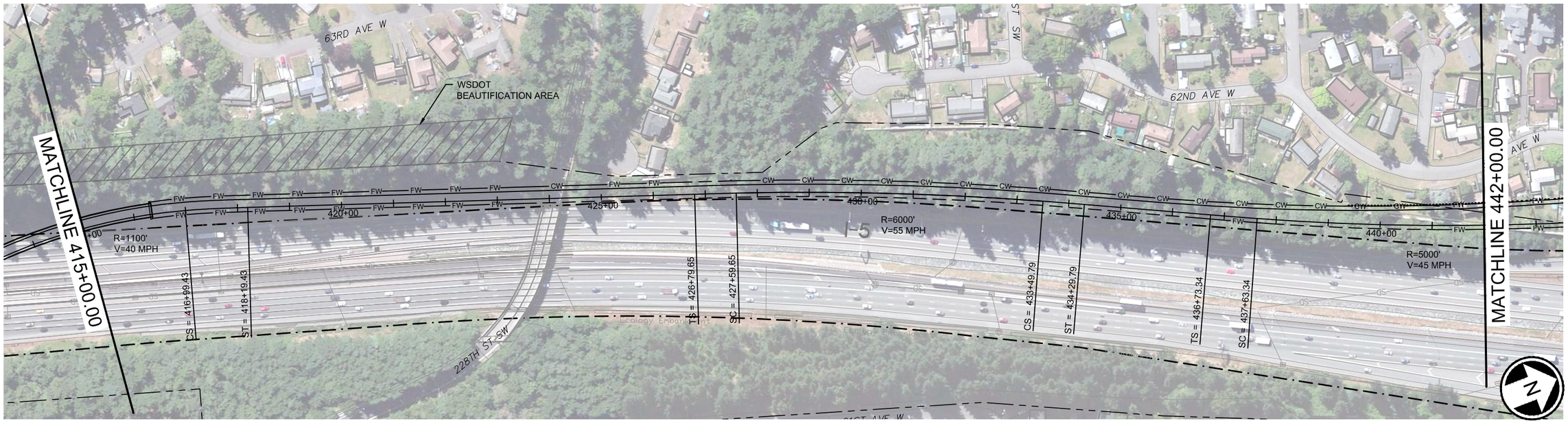
PREFERRED ALTERNATIVE OPTION SEGMENT A
NE 130TH STREET OPTION (FUTURE) STATION
TRACK PLAN & PROFILE

DWG NO. MD3-PP03

SHEET 22 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION

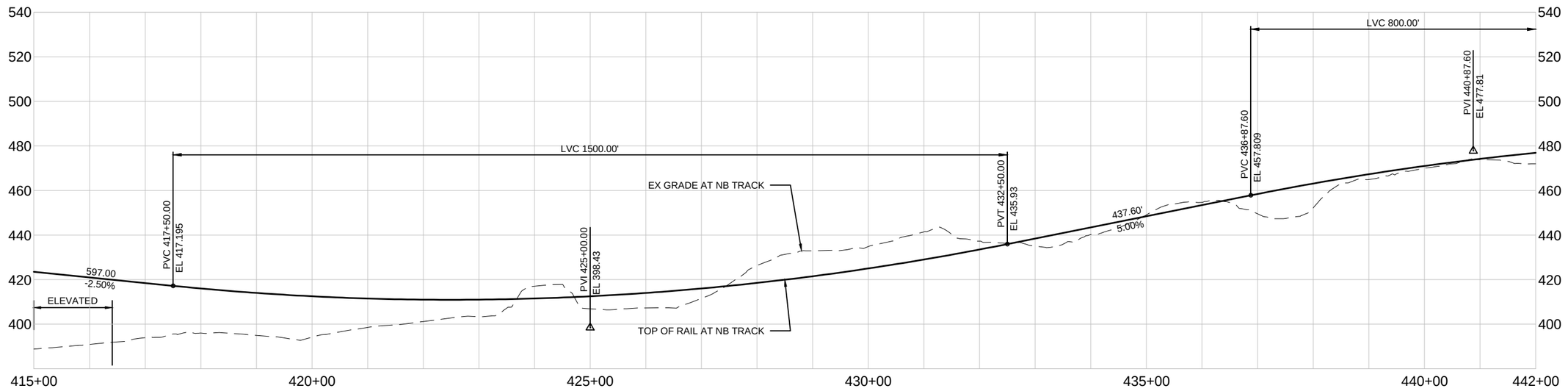


LEGEND:

- SB TRACK CENTERLINE
- NB TRACK CENTERLINE
- 15+00 STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- GRADING LIMITS
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- S STRADDLE BENT
- REVISED OR NEW TRAFFIC SIGNAL

100' 50' 0' 100' 200' HORIZONTAL SCALE

50' 25' 0' 50' 100' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

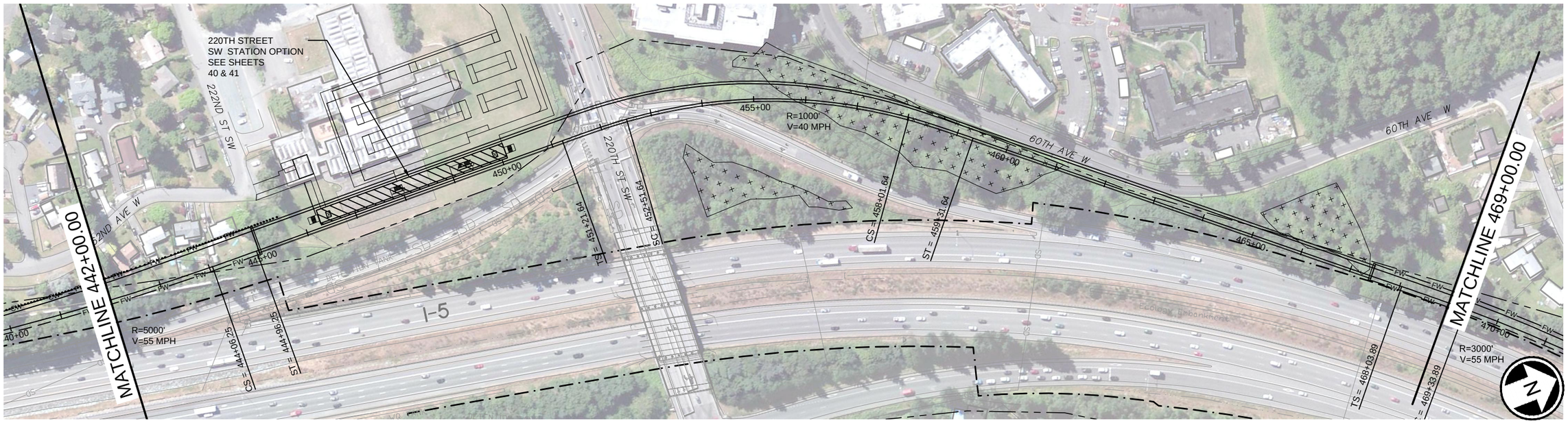
PREFERRED ALTERNATIVE OPTION SEGMENT B
220TH STREET SW STATION OPTION - TRACK PLAN & PROFILE

DWG NO. MD10-PP13

SHEET 23 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION

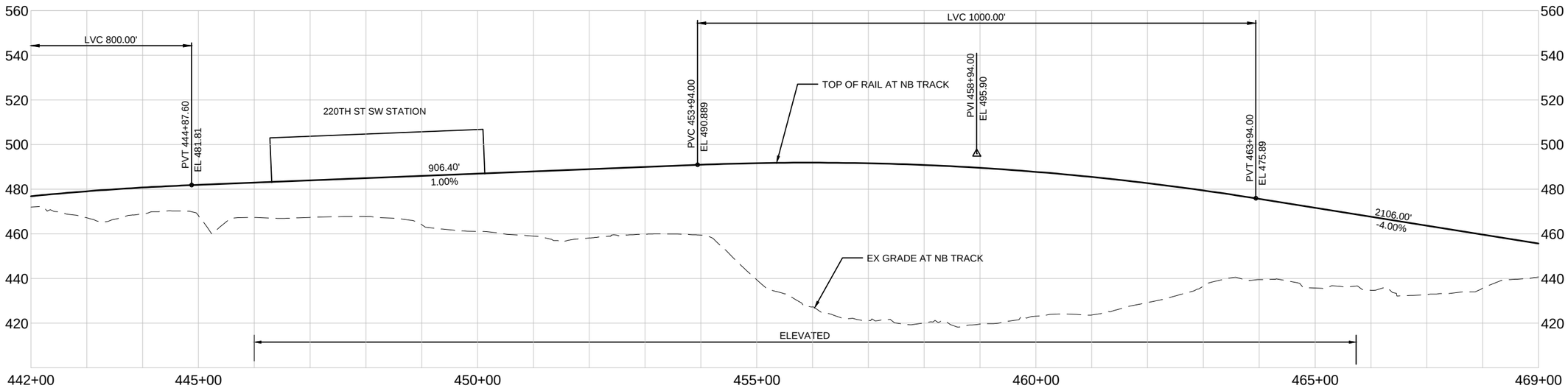


LEGEND:

- SB TRACK CENTERLINE
- NB TRACK CENTERLINE
- 15+00 STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- GRADING LIMITS
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- S STRADDLE BENT
- REVISED OR NEW TRAFFIC SIGNAL

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 50' 25' 0' 50' 100'



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SOUNDTRANSIT

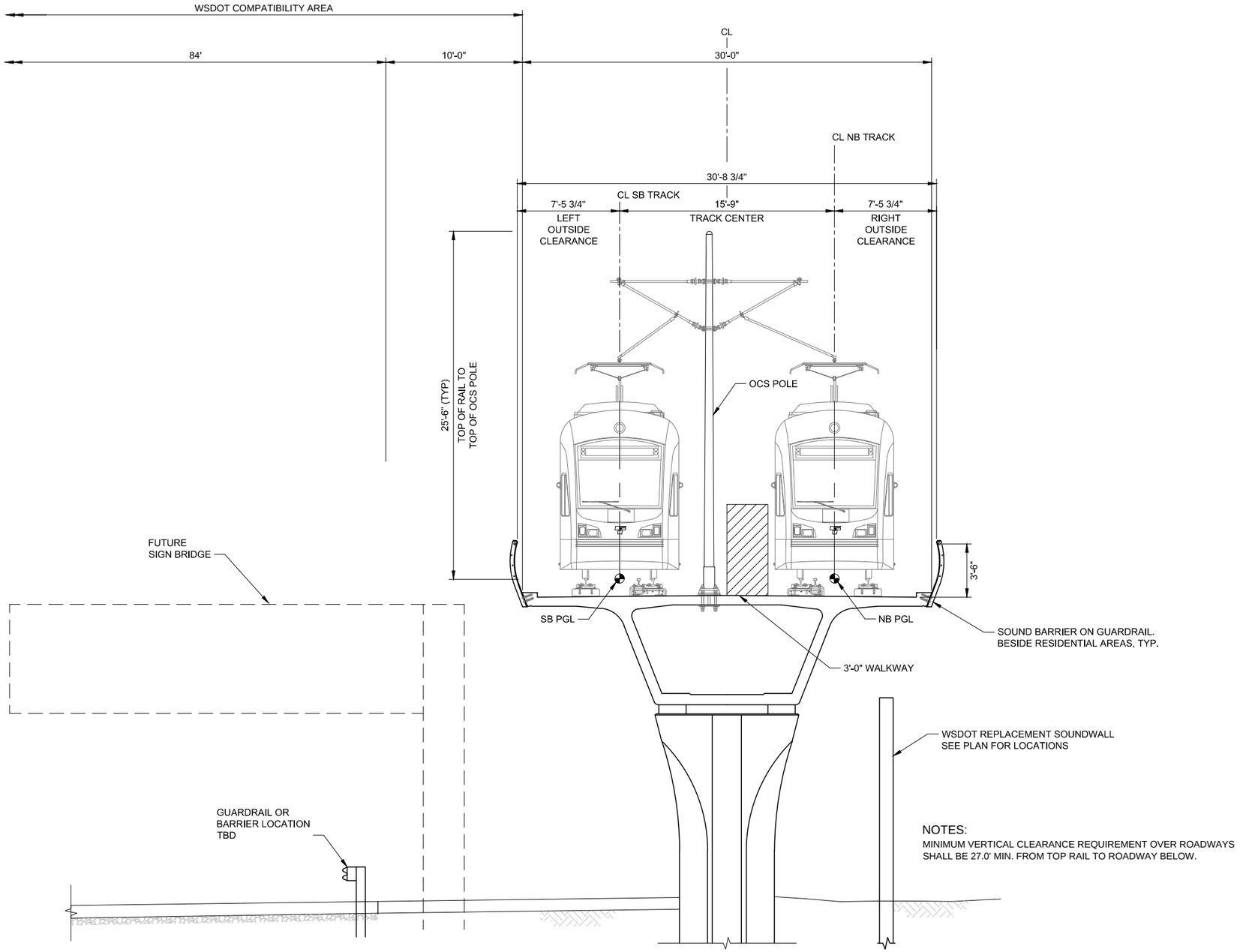
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

PREFERRED ALTERNATIVE OPTION SEGMENT B
220TH STREET SW STATION OPTION - TRACK PLAN & PROFILE

DWG NO. MD10-PP14

SHEET 24 OF 59

REV. NO.



NOTES:
MINIMUM VERTICAL CLEARANCE REQUIREMENT OVER ROADWAYS SHALL BE 27.0' MIN. FROM TOP RAIL TO ROADWAY BELOW.

ELEVATED TYPICAL SECTION - DUAL TRACK

NTS

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SOUNDTRANSIT

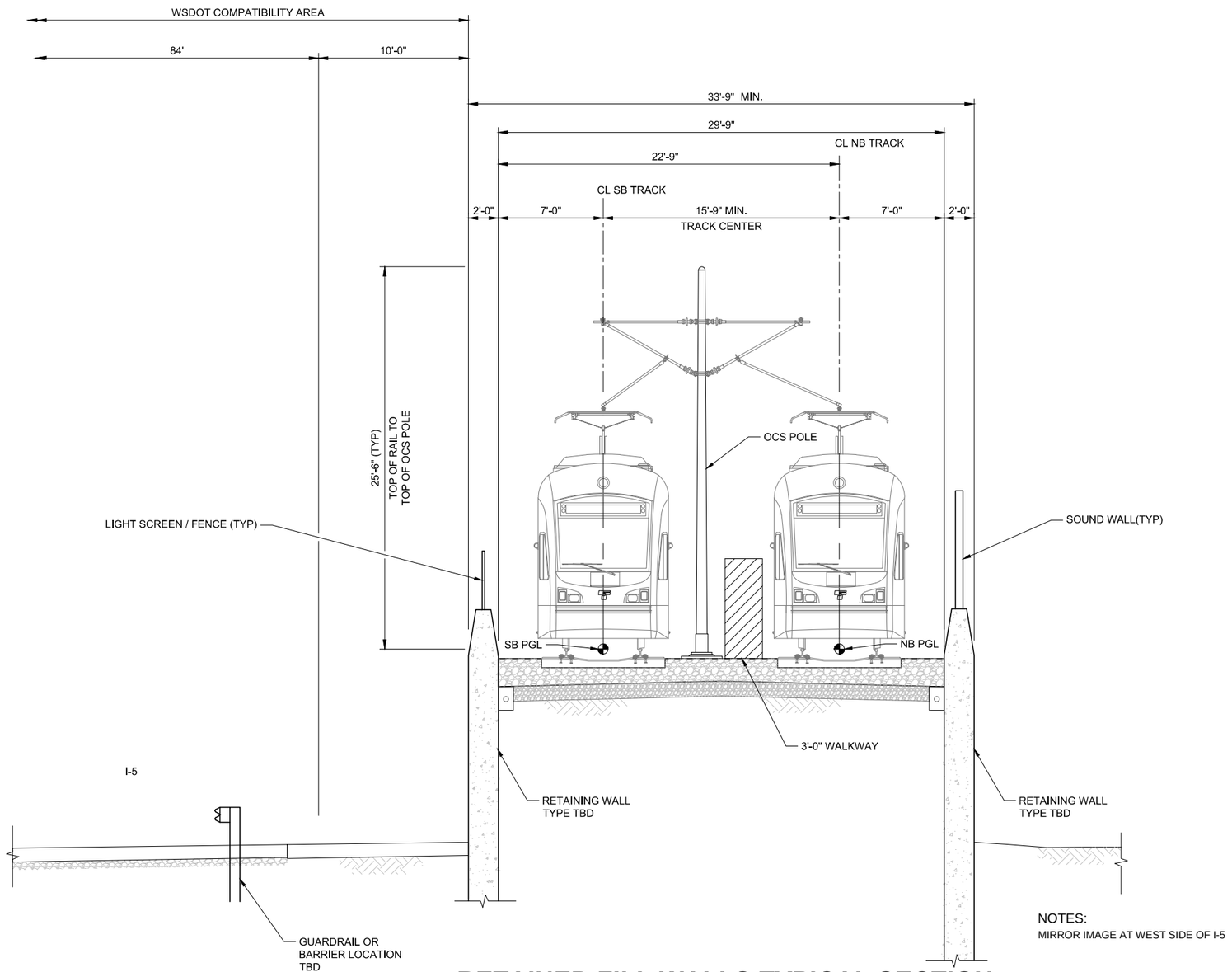
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

PREFERRED ALTERNATIVE TYPICAL SECTONS

DWG NO. SECT-1

SHEET 25 OF 59

REV. NO.



NOTES:
MIRROR IMAGE AT WEST SIDE OF I-5

RETAINED FILL WALLS TYPICAL SECTION

NTS

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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

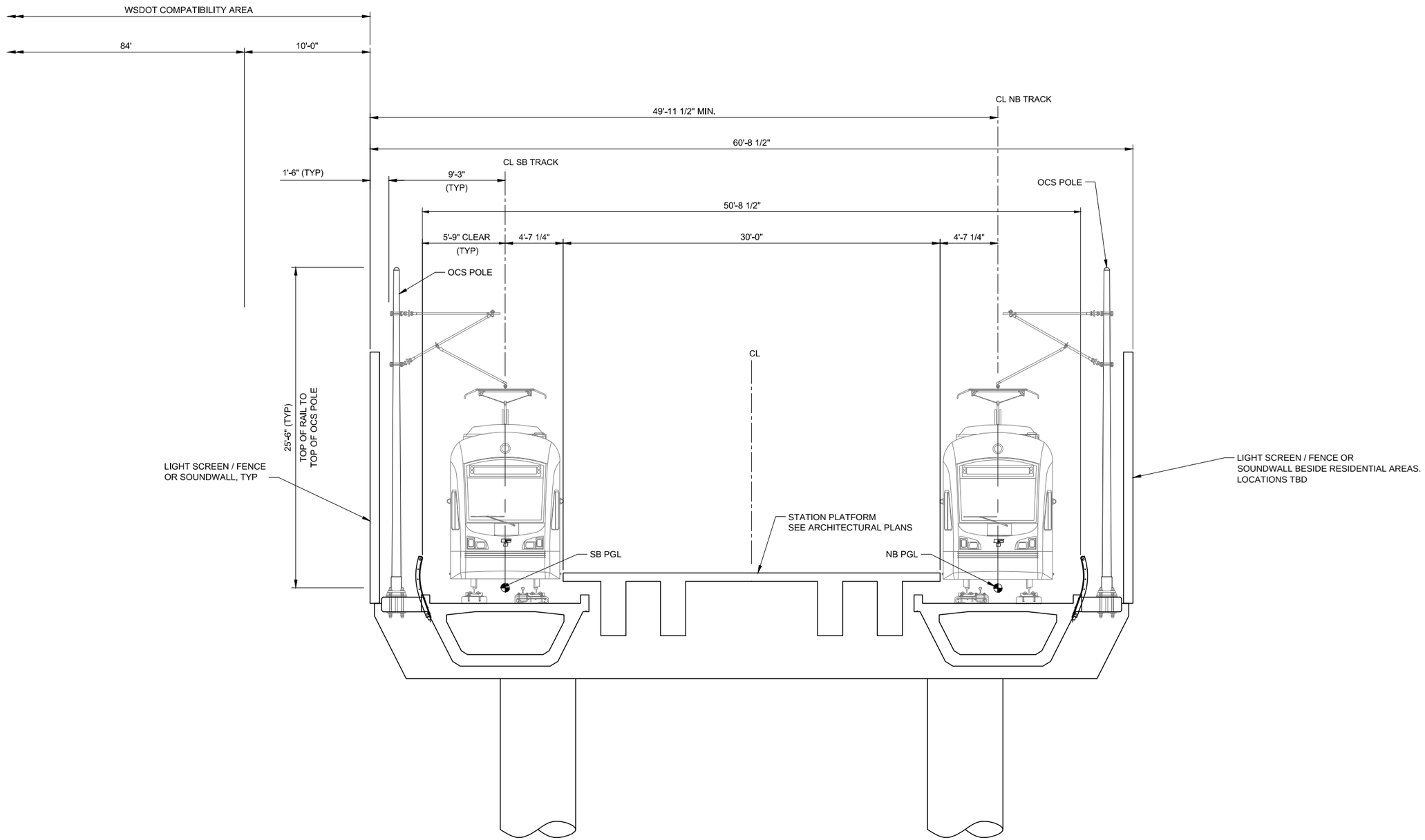
PREFERRED ALTERNATIVE TYPICAL SECTIONS

DWG NO. SECT-2

SHEET 26 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



ELEVATED CENTER STATION TYPICAL SECTION

NTS

NE 145TH STREET STATION
MOUNTLAKE TERRACE TRANSIT CENTER STATION
LYNNWOOD TRANSIT CENTER STATION

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SOUNDTRANSIT

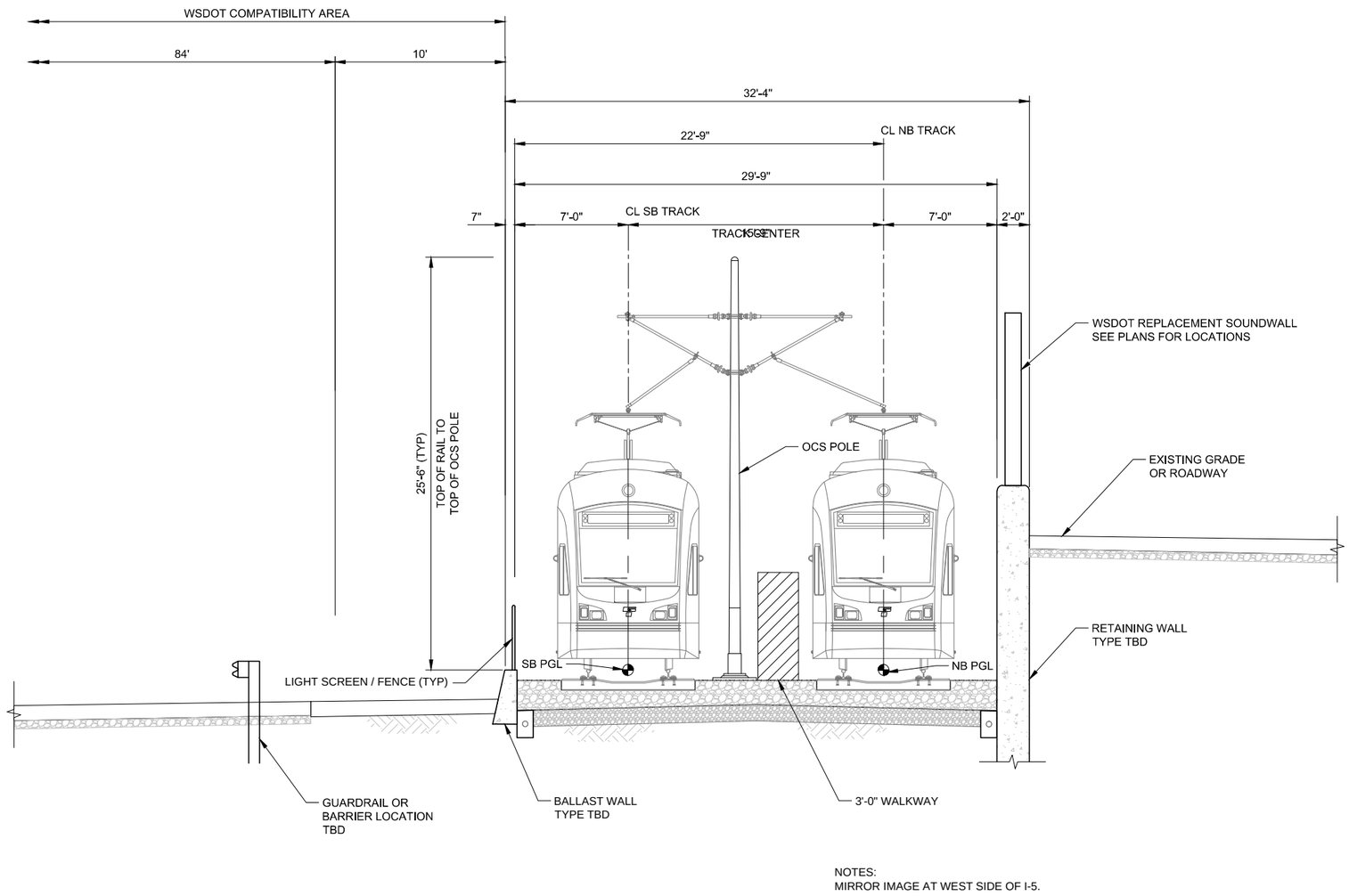
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

PREFERRED ALTERNATIVE
TYPICAL SECTIONS

DWG NO. SECT-3

SHEET 27 OF 59

REV. NO.



NOTES:
MIRROR IMAGE AT WEST SIDE OF I-5.

AT-GRADE/RETAINED CUT TYPICAL SECTION

NTS

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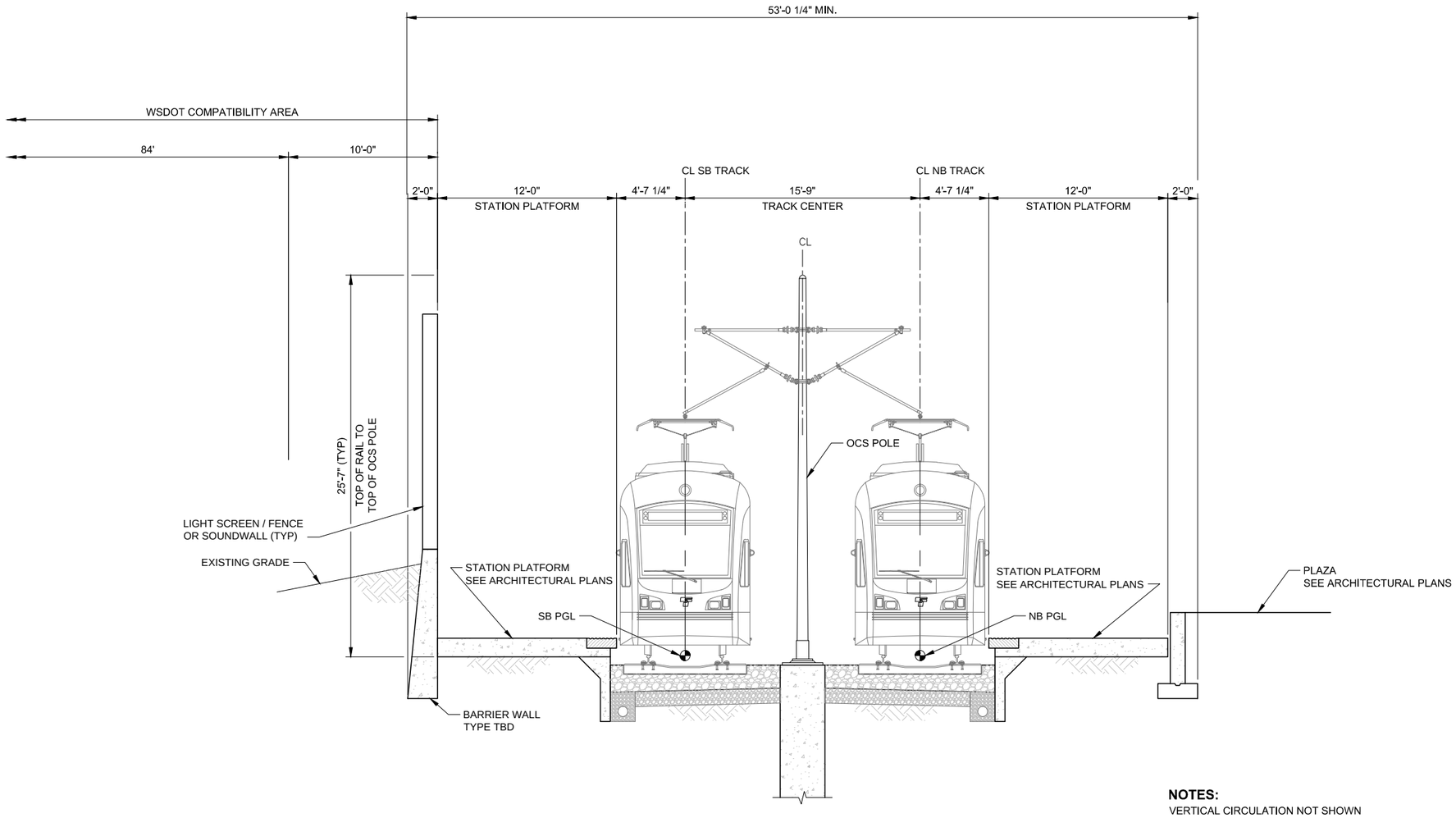

NOTES:
VERTICAL CIRCULATION NOT SHOWN

AT GRADE SIDE PLATFORM STATION

NTS

185TH STATION

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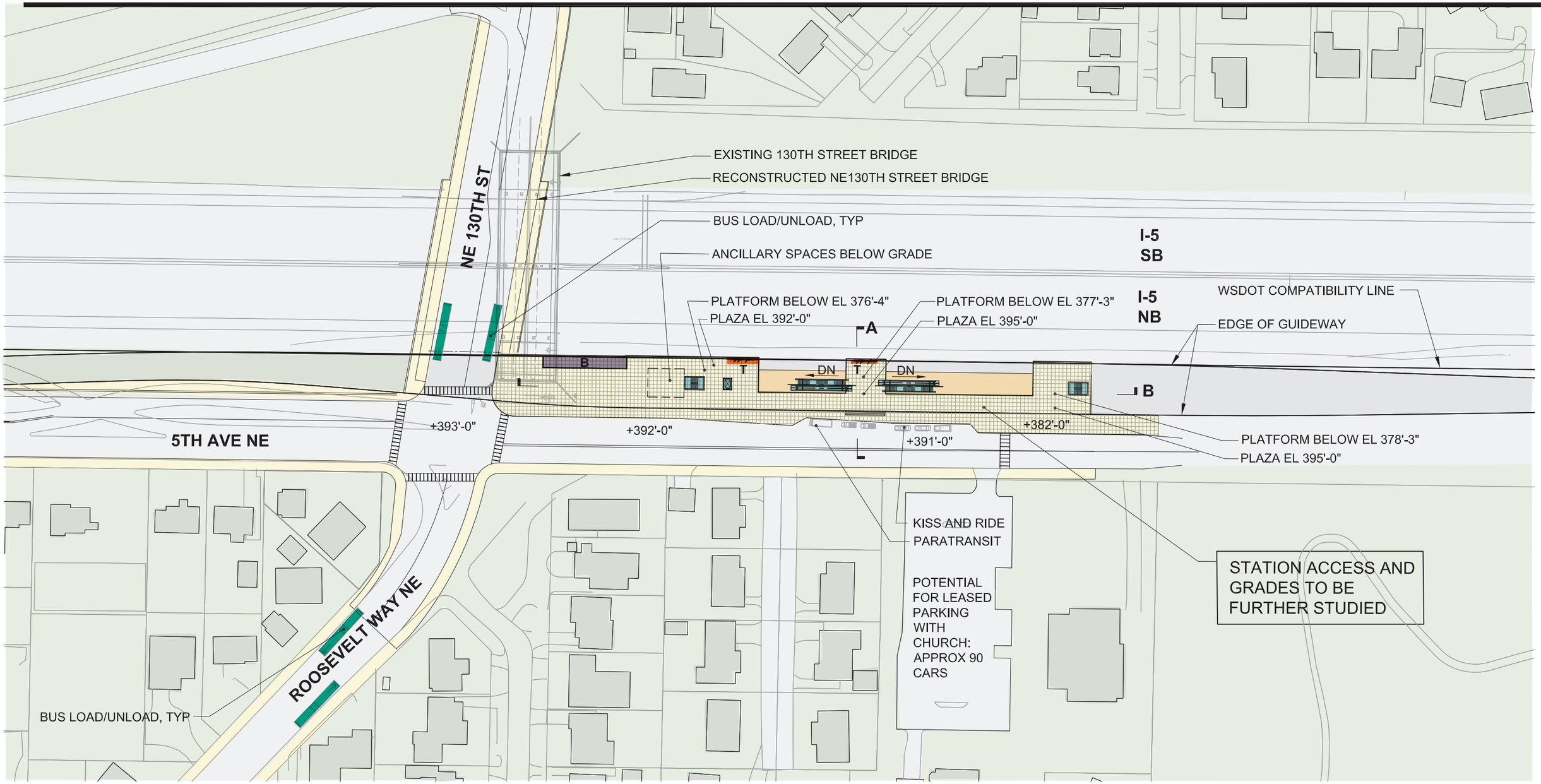
SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alternative	Bus Facilities	Park & Ride	Kiss & Ride	Bicycle Parking
Retained Cut, Center Platform	On-street stops: 1 westbound and 1 eastbound on NE 130th, 1 westbound and 1 eastbound on Roosevelt Way NE	Leased parking for up to 90 cars	Located on 5th Ave NE	50 bike spaces, plus 50 expansion

50 25 0 50 100
SCALE IN FEET

N

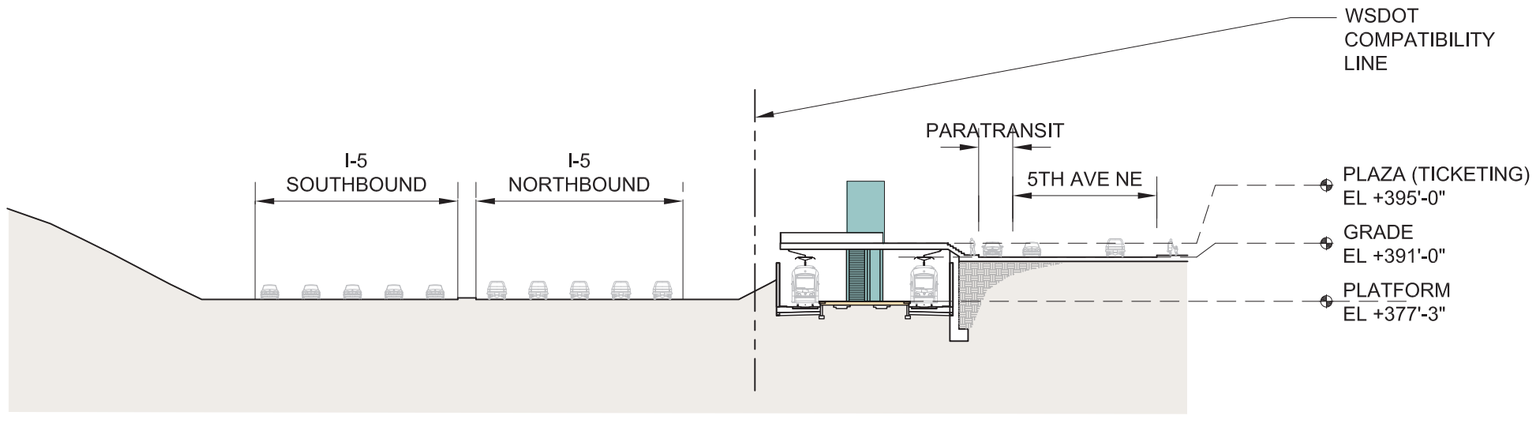
SoundTransit

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

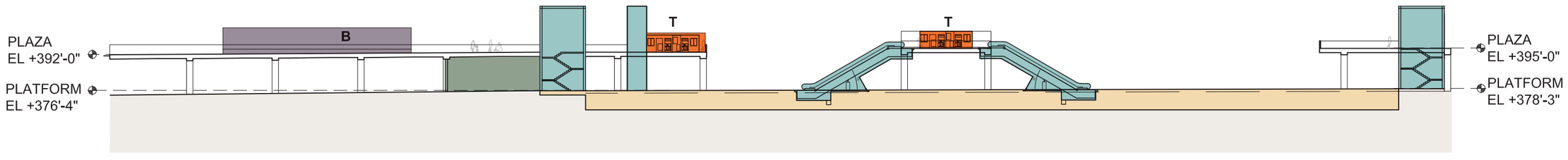
PREFERRED ALTERNATIVE
NE 130TH STREET STATION OPTION
SITE PLAN

DWG NO. N12–AAP001
SHEET 30 OF 59
REV. NO.



SECTION A-A

STATION ACCESS AND GRADES TO BE FURTHER STUDIED



SECTION B-B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

25 12.5 0 25 50
SCALE IN FEET

SoundTransit

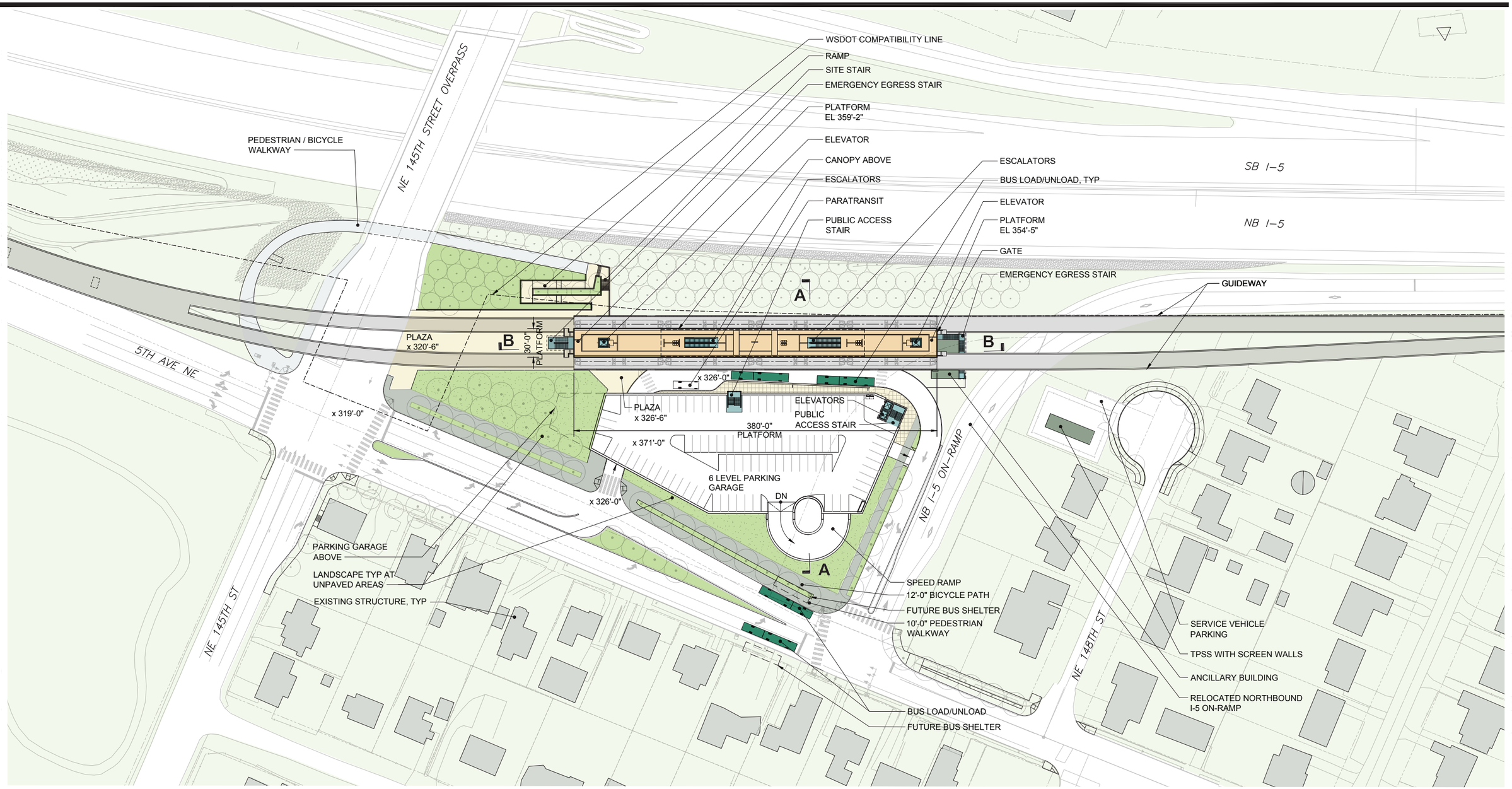
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

PREFERRED ALTERNATIVE
NE 130TH STREET STATION OPTION
SECTIONS

DWG NO. N12–ASX101
SHEET 31 OF 59
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



STATION CONFIGURATION & ALIGNMENT	BUS FACILITIES	PARK-AND-RIDE	PICK-UP AND DROP-OFF	BICYCLE PARKING
ELEVATED, CENTER PLATFORM	2 ON-STREET BUS BAYS, 1 SOUTHBOUND AND 1 NORTHBOUND ON 5TH AVENUE NE, 1 OFF-STREET BUS BAY	PARKING GARAGE FOR UP TO 492 CARS	3 SPACES ON LEVEL 2 OF PARKING GARAGE	50 BIKE SPACES, PLUS 50 EXPANSION

PLATFORM/MEZZANINE
PLAZA
VERTICAL CIRCULATION
BUS LOAD/UNLOAD
BUS LAYOVER
TICKETING/INFORMATION
ANCILLARY AREA
BIKE STORAGE
LANDSCAPE PLANTING AREA

50 25 0 50 100
SCALE IN FEET

N

SoundTransit

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

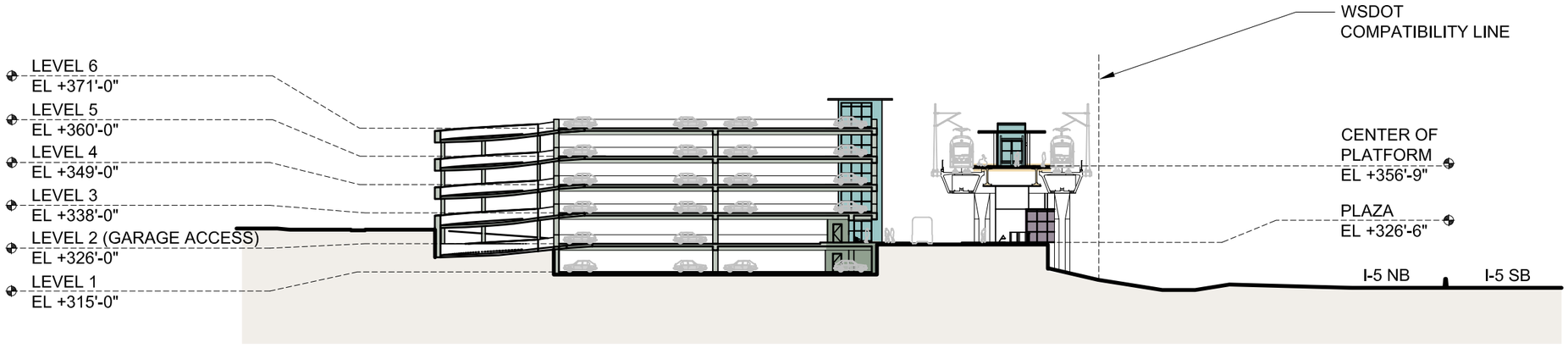
HEWITT

PREFERRED ALTERNATIVE
NE 145TH STREET STATION
SITE PLAN

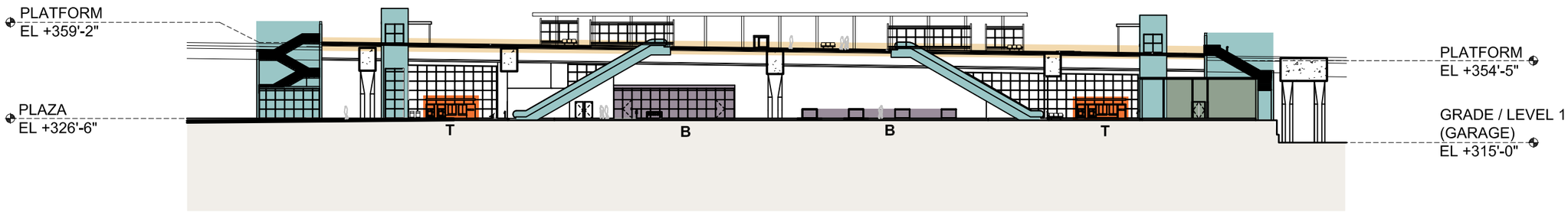
DWG NO. N13–AAP001

SHEET 32 OF 59

REV. NO.



SECTION A-A



SECTION B-B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

25 12.5 0 25 50
SCALE IN FEET

SoundTransit

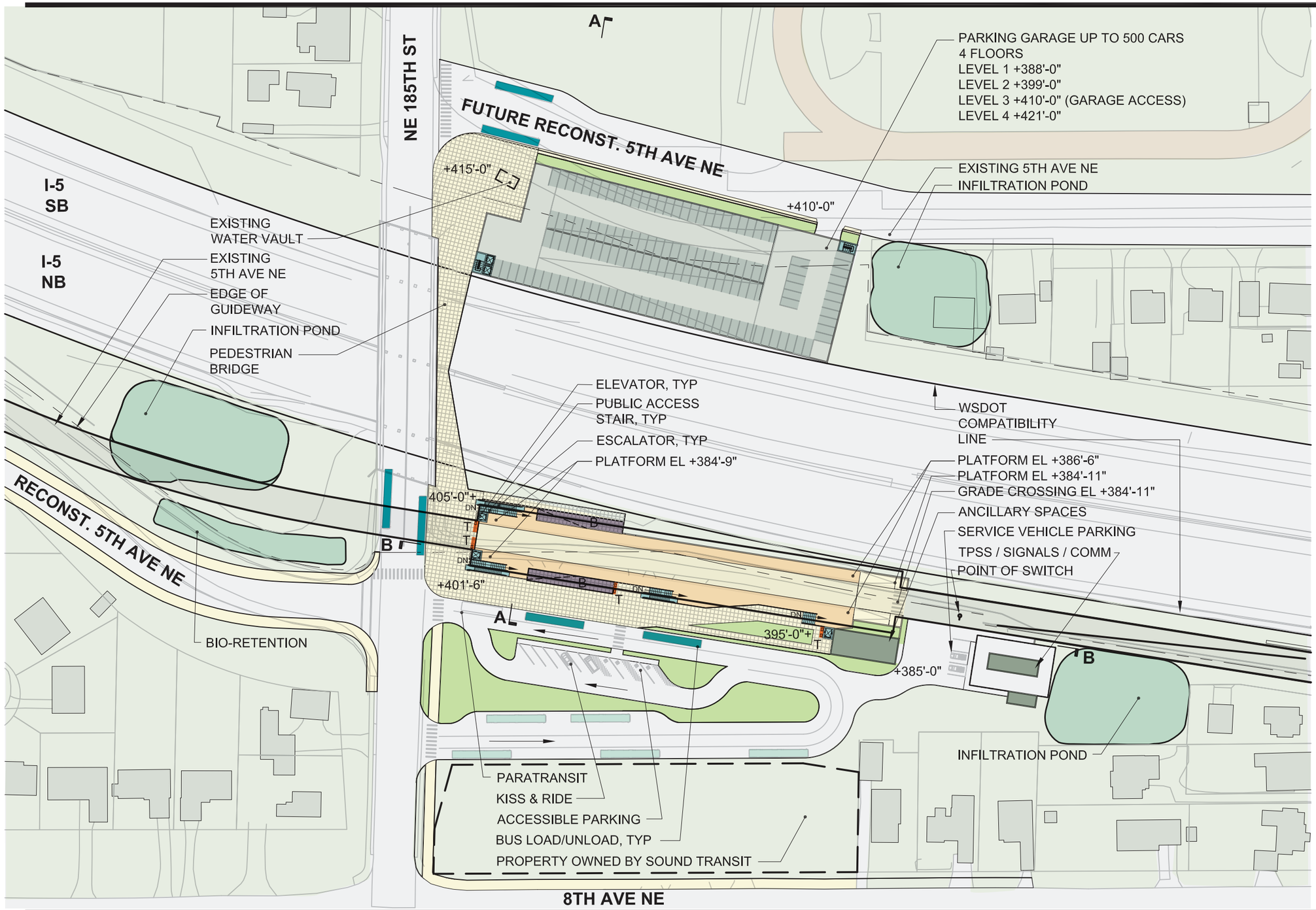
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

PREFERRED ALTERNATIVE
NE 145TH STREET STATION
SECTIONS

DWG NO. N13–ASX101
SHEET 33 OF 59
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alternative	Retained Cut, Side Platforms
Bus Facilities	2 off-street bus bays & 5 off-street layovers; 2 on-street bus bays: 1 westbound & 1 eastbound on NE 185th St. and 2 on-street bus bays on 5th Ave NE
Park & Ride	Parking Garage for up to 500 cars West of I-5
Kiss & Ride	Near station
Bicycle Parking	50 bike spaces, plus 50 expansion

50 25 0 50 100
SCALE IN FEET

N

SOUNDTRANSIT

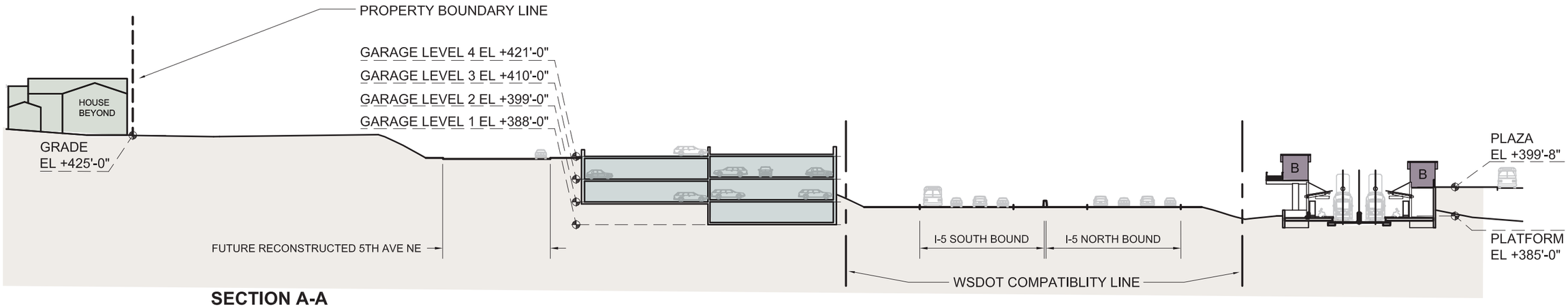
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

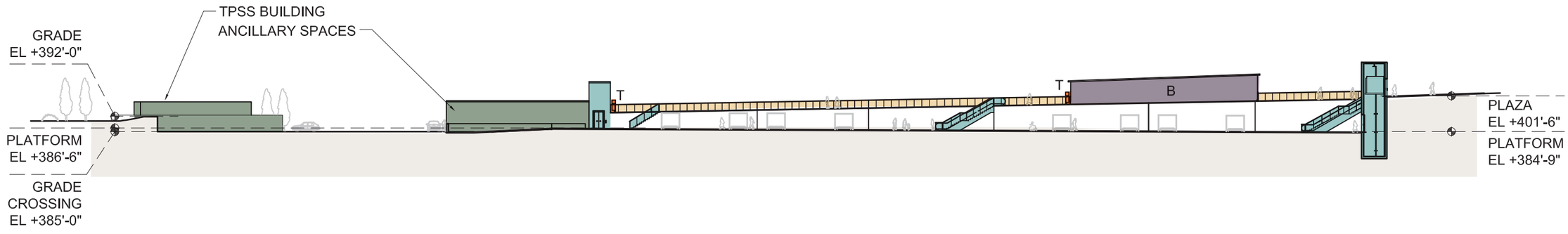
PREFERRED ALTERNATIVE
NE 185TH STREET STATION
SITE PLAN

DWG NO. N15–AAP001
SHEET 34 OF 59
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SECTION A-A



SECTION B-B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

25 12.5 0 25 50
SCALE IN FEET

SoundTransit

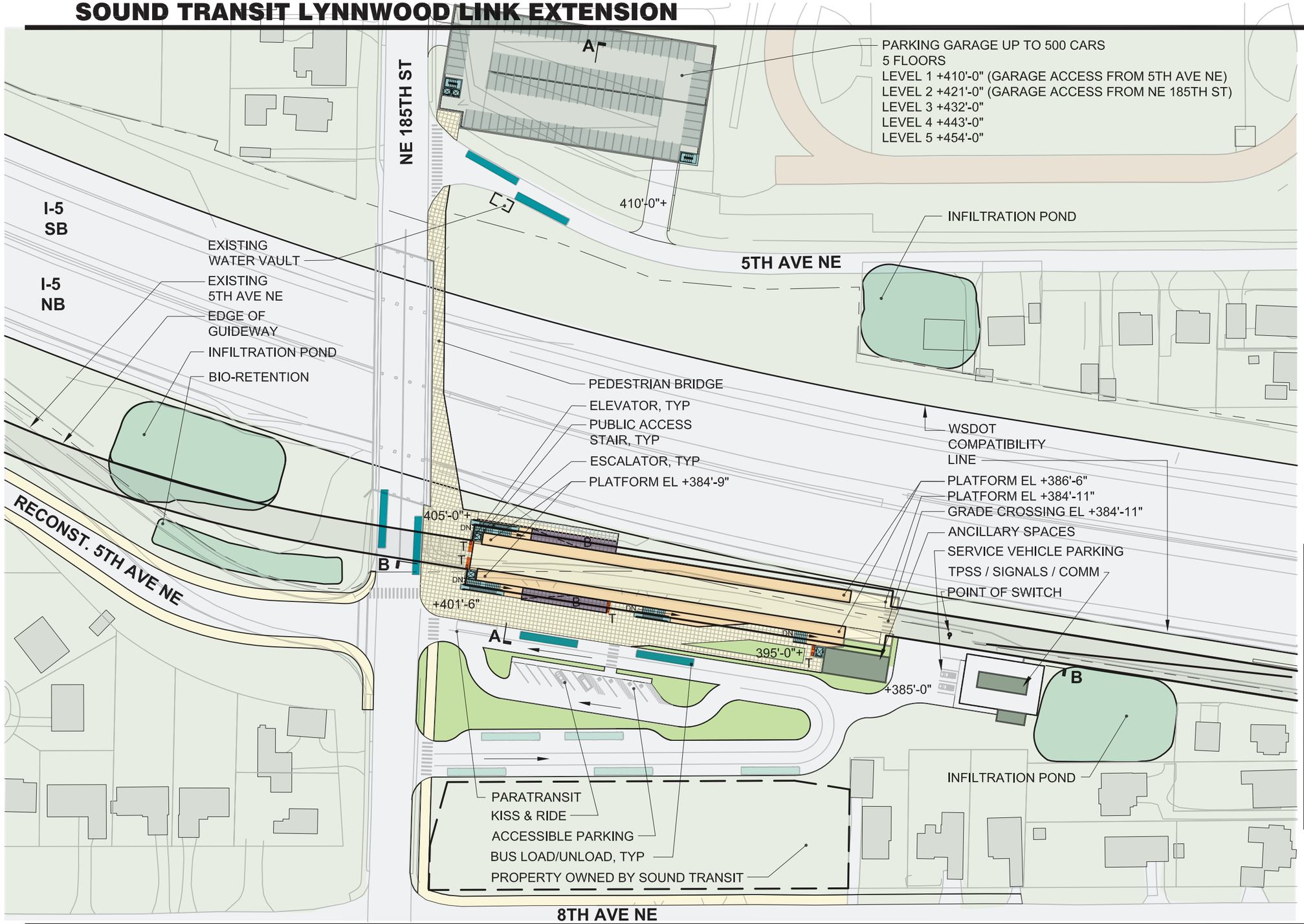
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

PREFERRED ALTERNATIVE
NE 185TH STREET STATION
SECTIONS

DWG NO. N15–ASX101
SHEET 35 OF 59
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alternative	Retained Cut, Side Platforms
Bus Facilities	2 off-street bus bays & 5 off-street layovers; 2 on-street bus bays: 1 westbound & 1 eastbound on NE 185th St. and 2 on-street bus bays on 5th Ave NE
Park & Ride	Parking Garage for up to 500 cars West of I-5
Kiss & Ride	Near station
Bicycle Parking	50 bike spaces, plus 50 expansion

50 25 0 50 100
SCALE IN FEET

N

SOUNDTRANSIT

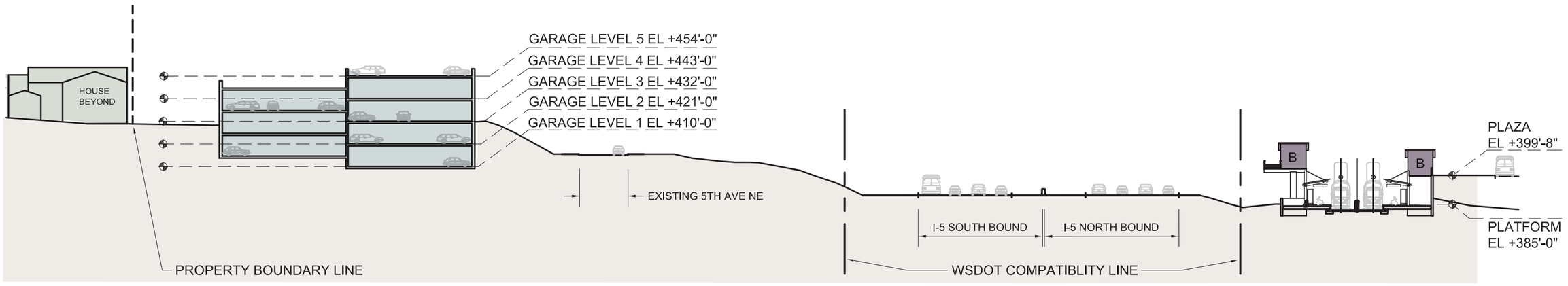
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

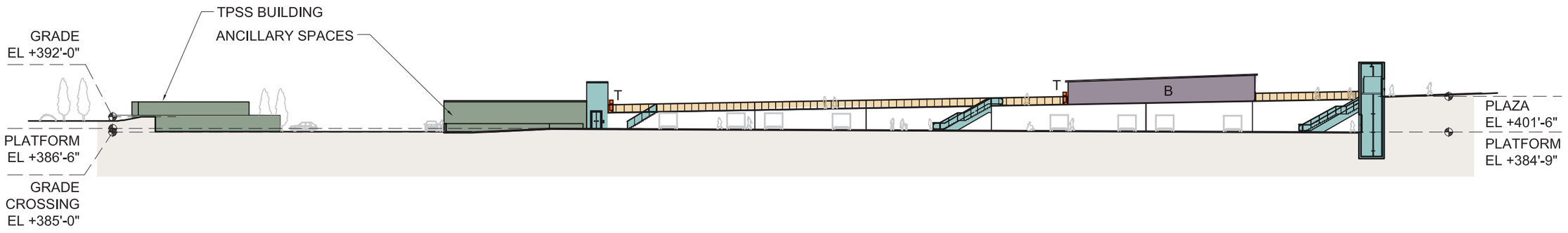
PREFERRED ALTERNATIVE
NE 185TH STREET STATION - SHORELINE STADIUM GARAGE OPTION 1
SITE PLAN

DWG NO. N15-AAP001-ALT
SHEET 36 OF 59
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SECTION A-A



SECTION B-B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

25 12.5 0 25 50
SCALE IN FEET

SoundTransit

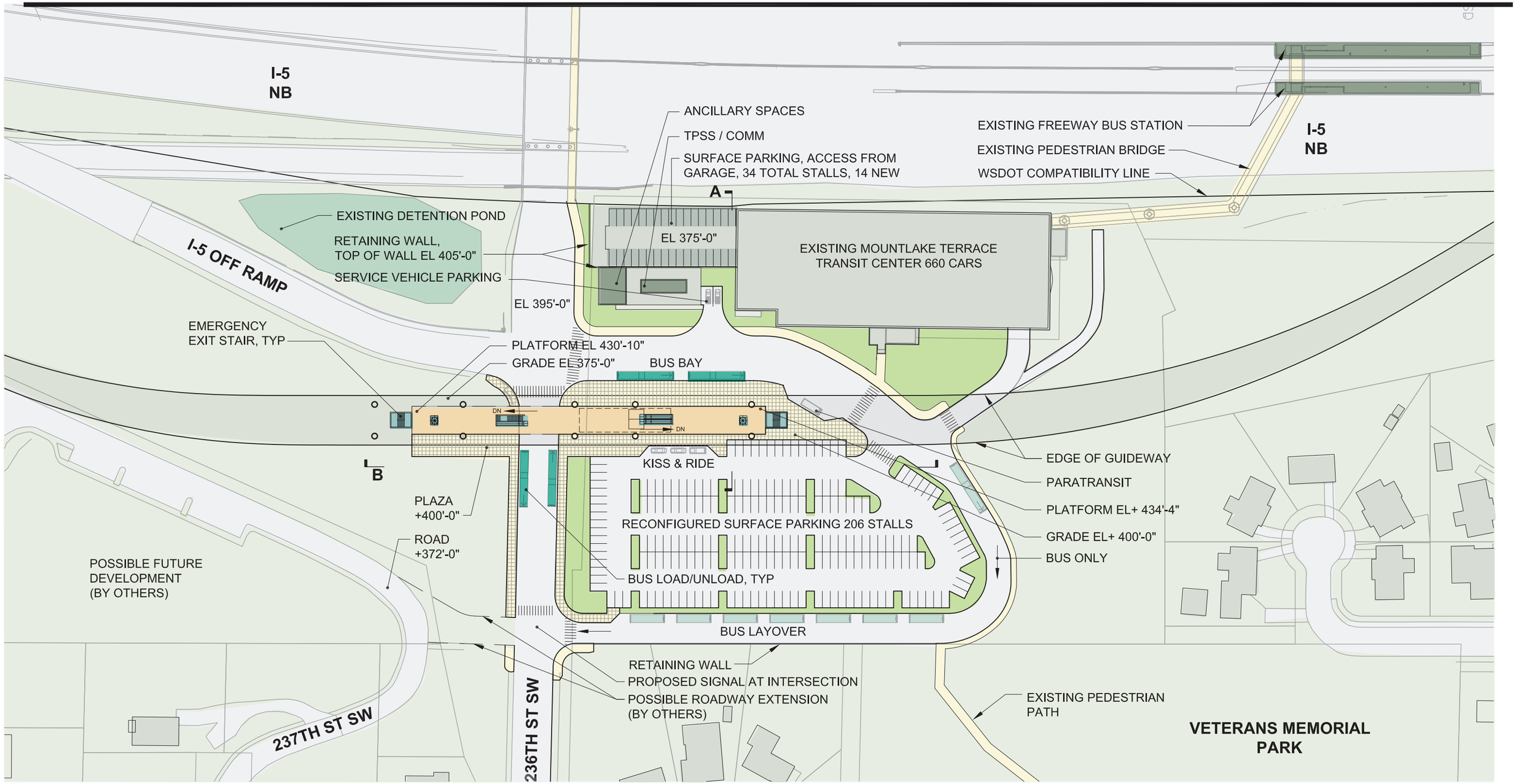
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

PREFERRED ALTERNATIVE
NE 185TH STREET STATION - SHORELINE STADIUM GARAGE OPTION 1
SECTIONS

DWG NO. N15–ASX101–ALT
SHEET 37 OF 59
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alternative	Bus Facilities	Park & Ride	Kiss & Ride	Bicycle Parking
Elevated Center Platform	2 Off-street bus bays & 8 off-street layovers; 2 On-street bus bays: 1 westbound & 1 eastbound on 236th St SW	Maintain existing parking for 880 cars	Integrated with surface parking	50 bike spaces, plus 50 expansion

50 25 0 50 100
SCALE IN FEET

N

SOUNDTRANSIT

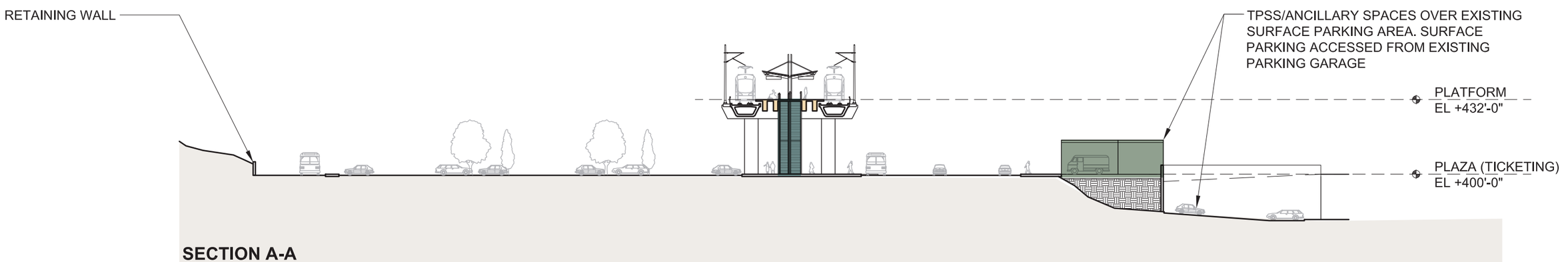
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

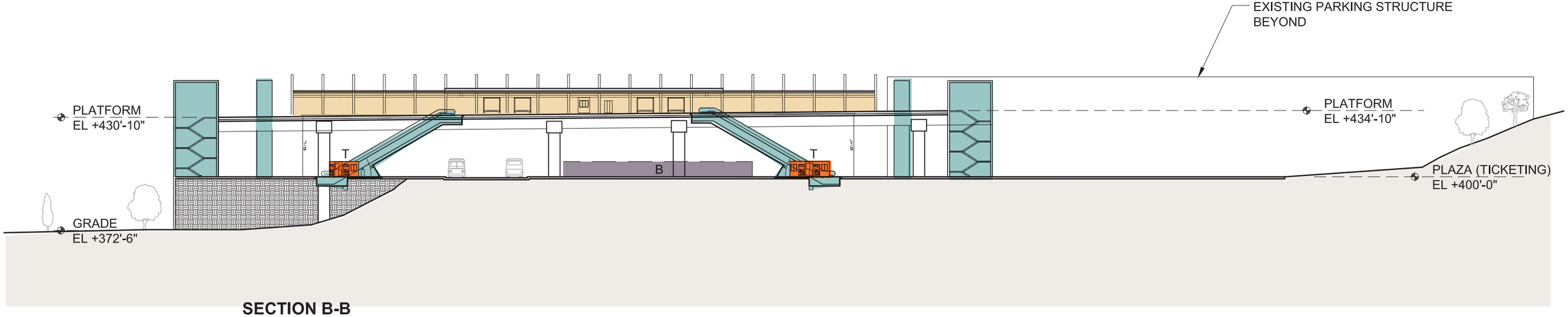
PREFERRED ALTERNATIVE
MOUNTLAKE TERRACE TRANSIT CENTER STATION
SITE PLAN

DWG NO. N17–AAP001
SHEET 38 OF 59
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SECTION A-A



SECTION B-B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

25 12.5 0 25 50
SCALE IN FEET

SOUNDTRANSIT

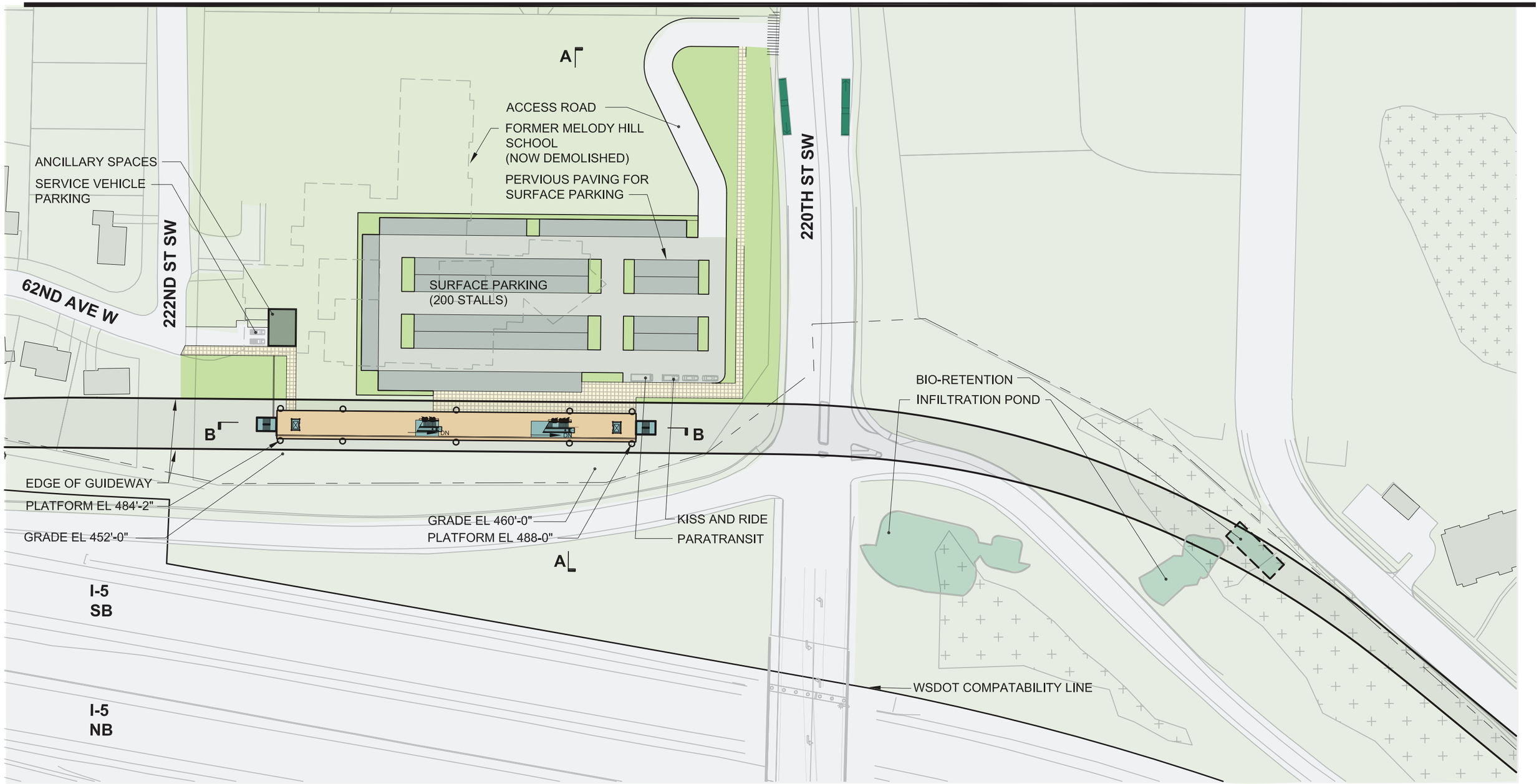
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

PREFERRED ALTERNATIVE
MOUNTLAKE TERRACE TRANSIT CENTER STATION
SECTIONS

DWG NO. N17–ASX101
SHEET 39 OF 59
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alternative	Bus Facilities	Park & Ride	Kiss & Ride	Bicycle Parking
Elevated Center Platform	2 On-street bus bays: 1 westbound & 1 eastbound on 220th St SW	Surface parking for up to 200 cars	Integrated with surface parking	50 bike spaces, plus 50 expansion

50 25 0 50 100
SCALE IN FEET

N

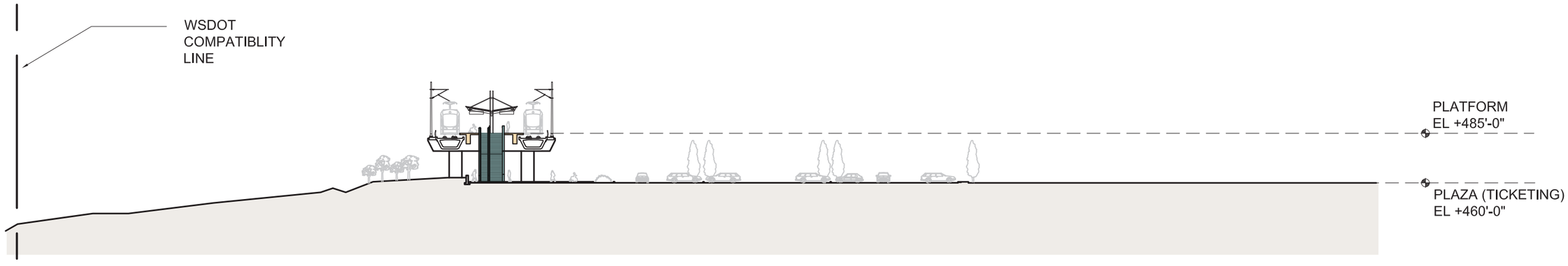
SoundTransit

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

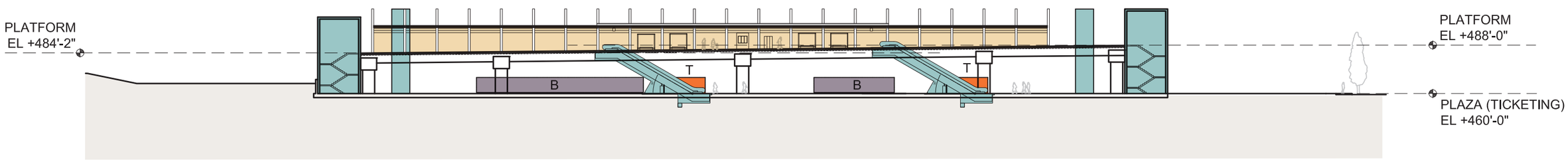
HEWITT

PREFERRED ALTERNATIVE
220TH STREET SW STATION OPTION
SITE PLAN

DWG NO. N18–AAP001–ALT
SHEET 40 OF 59
REV. NO.



SECTION A-A



SECTION B-B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

25 12.5 0 25 50
SCALE IN FEET

SOUNDTRANSIT

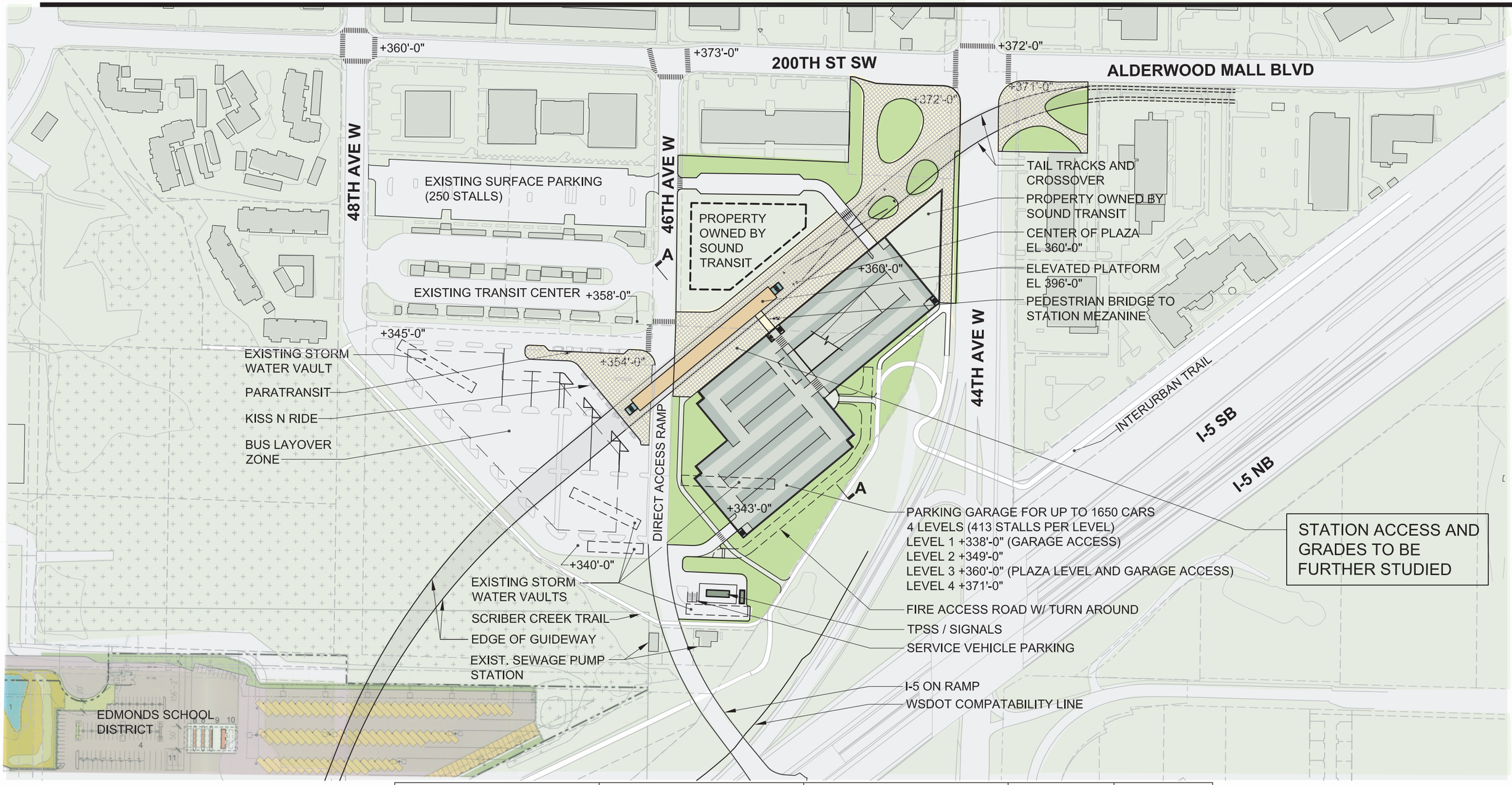
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

PREFERRED ALTERNATIVE
220TH STREET SW STATION OPTION
SECTIONS

DWG NO. N18–ASX101–ALT
SHEET 41 OF 59
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alignment	Bus Facilities	Park & Ride	Kiss & Ride	Bicycle Parking
Elevated Center Platform with Mezzanine, Alignment C3 Modified	Maintain existing Transit Center for 20 active bus bays, and add 20 layover bus bays	Maintain existing surface parking for 250 cars and add parking garage for 1650 cars for a total of up to 1900 cars	Adjacent to Station	200 bike spaces, plus 200 expansion

100 50 0 100 200
SCALE IN FEET

N

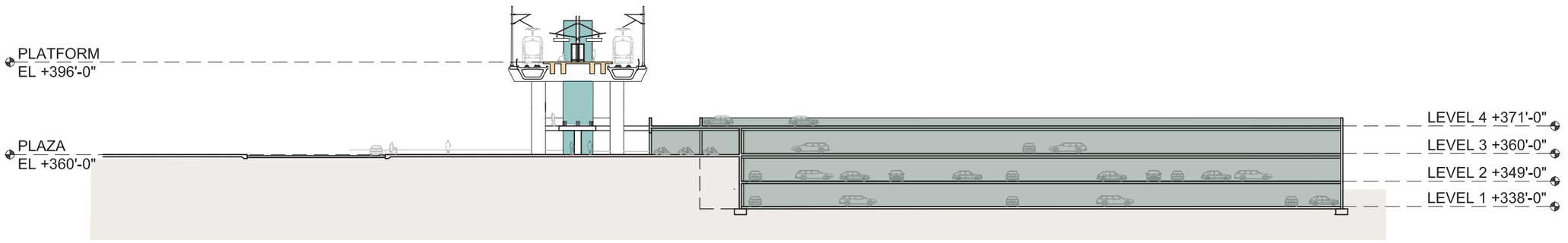
SoundTransit

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

PREFERRED ALTERNATIVE
LYNNWOOD TRANSIT CENTER STATION
SITE PLAN

DWG NO. N19–AAP001
SHEET 42 OF 59
REV. NO.



SECTION A-A

STATION ACCESS AND GRADES TO BE FURTHER STUDIED

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

25 12.5 0 25 50
SCALE IN FEET

SOUNDTRANSIT

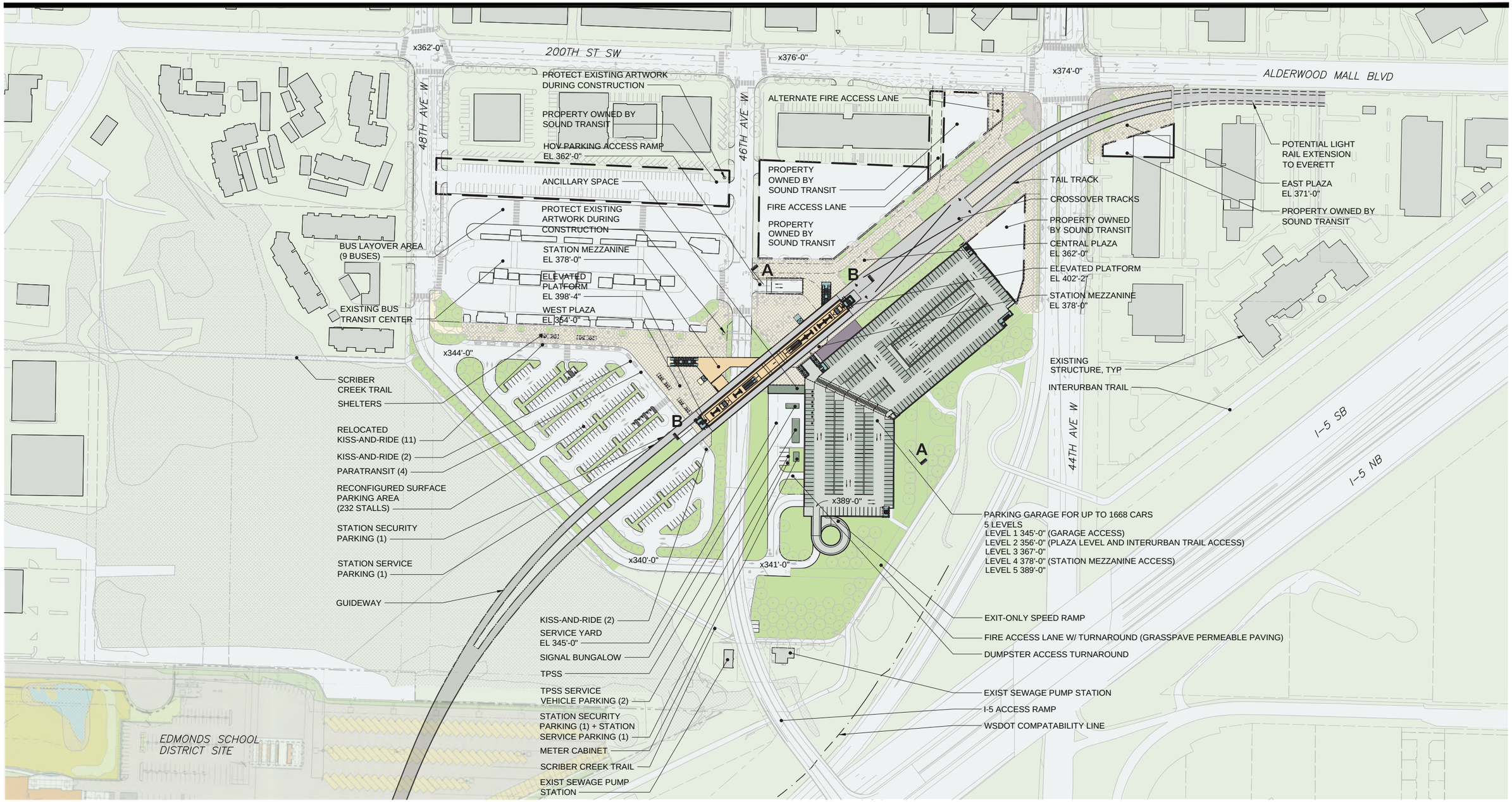
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

PREFERRED ALTERNATIVE
LYNNWOOD TRANSIT CENTER STATION
SECTIONS

DWG NO. N19–ASX101
SHEET 43 OF 59
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



STATION CONFIGURATION & ALIGNMENT	BUS FACILITIES	PARK-AND-RIDE	PICK-UP AND DROP-OFF	BICYCLE PARKING
ELEVATED CENTER PLATFORM WITH MEZZANINE	MAINTAIN EXISTING TRANSIT CENTER, AND ADD 9 LAYOVER BUS BAYS NORTH OF EXISTING BUS TRANSIT CENTER	REWORK EXISTING SURFACE PARKING FOR 232 CARS AND ADD PARKING GARAGE WITH 1668 CARS FOR A TOTAL OF UP TO 1900 CARS	11 SPACES RELOCATED FROM EXISTING BUS TRANSIT CENTER WITH 4 ADDITIONAL SPACES FOR NEW STATION	200 BIKE SPACES, PLUS 200 EXPANSION

PLATFORM / MEZZANINE
PLAZA
VERTICAL CIRCULATION
BUS LOAD / UNLOAD
BUS LAYOVER
TICKETING / INFORMATION
ANCILLARY AREA
BIKE STORAGE
LANDSCAPE PLANTING AREA

100 50 0 100 200
SCALE IN FEET

N

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

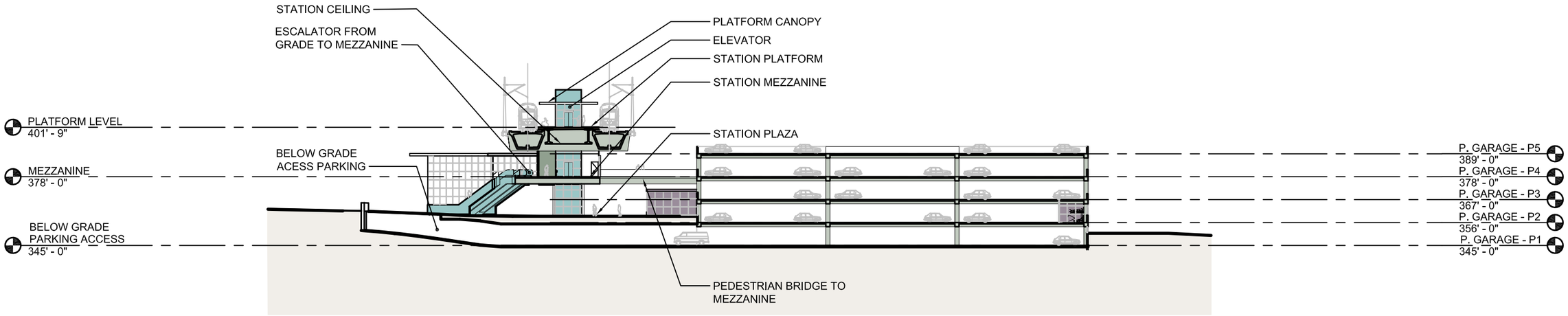
PREFERRED ALTERNATIVE
LYNNWOOD TRANSIT CENTER STATION OPTION
SITE PLAN

DWG NO. N19-AAP001-ALT

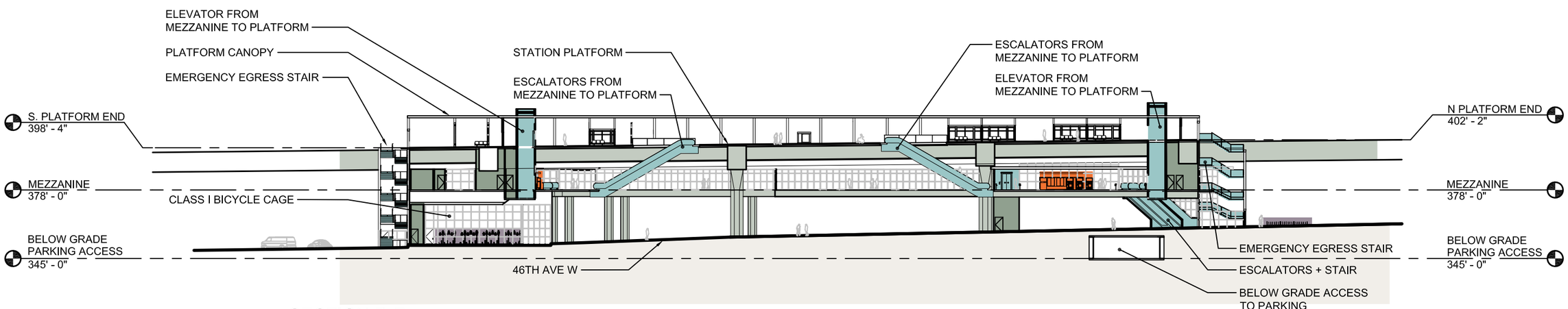
SHEET 44 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SECTION A-A



SECTION B-B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

25 12.5 0 25 50
SCALE IN FEET

SoundTransit

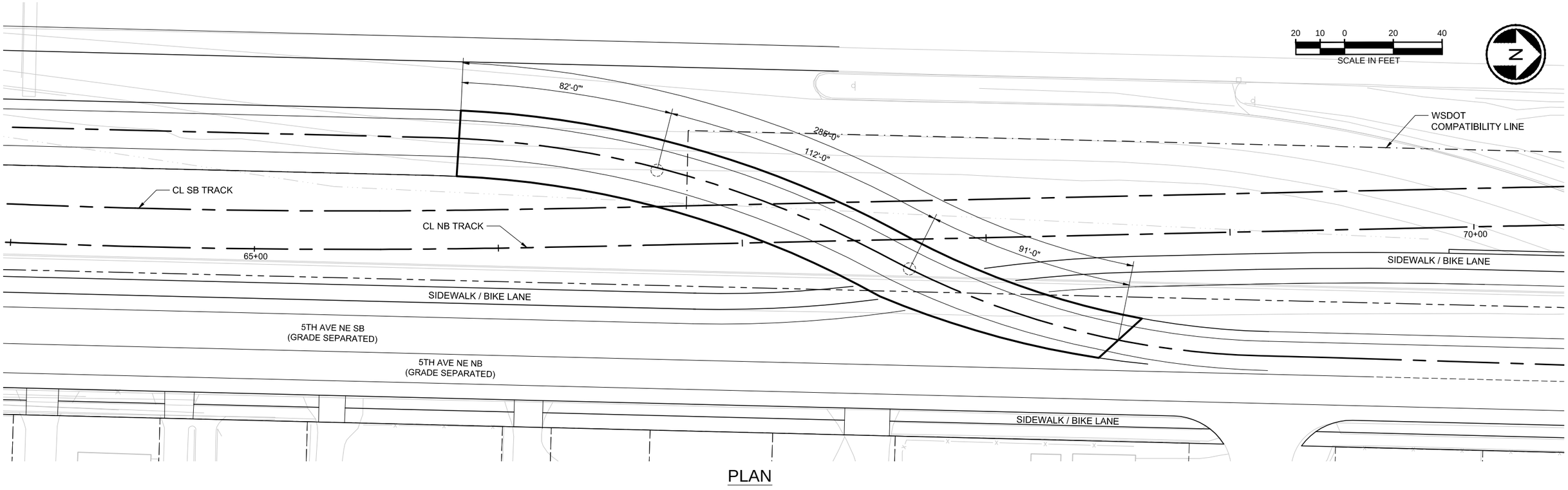
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

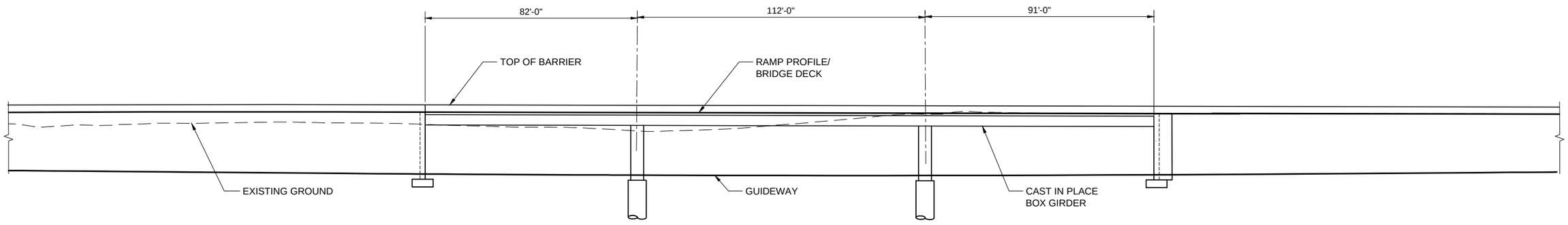
PREFERRED ALTERNATIVE
LYNNWOOD TRANSIT CENTER STATION OPTION
SECTIONS

DWG NO. N19–ASX101–ALT
SHEET 45 OF 59
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



PLAN



ELEVATION

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\46 SBR-01.dwg Mar 02, 2015 - 2:17pm

SOUNDTRANSIT

North Corridor
Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

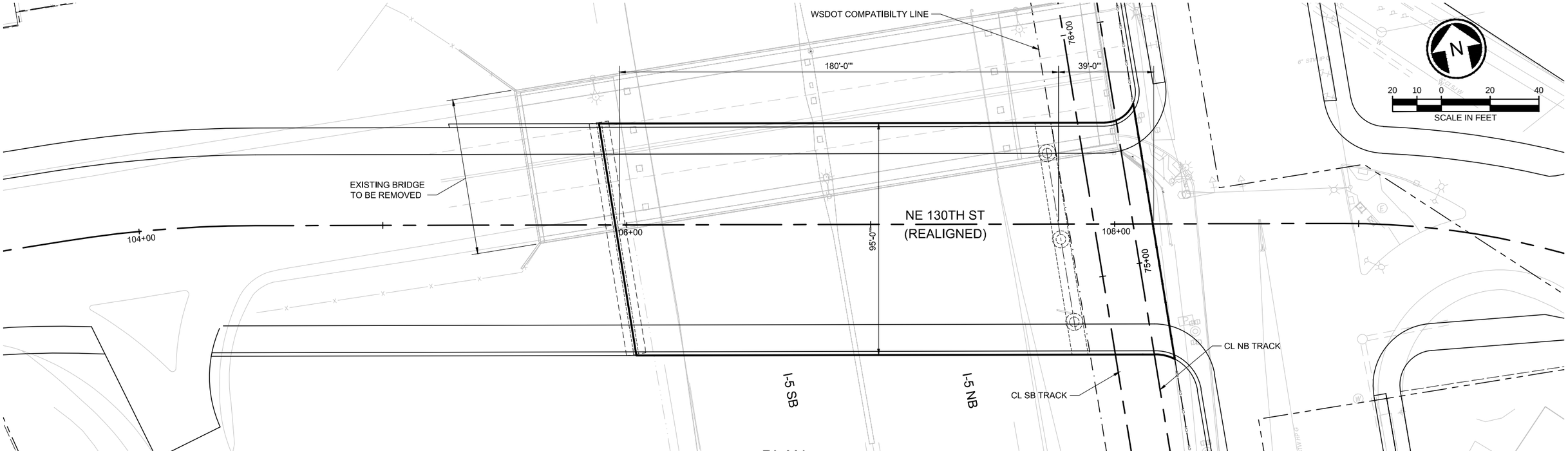
PREFERRED ALTERNATIVE
STRUCTURE OVER LRT AT NE 130TH ST OFF-RAMP

DWG NO. SBR-01

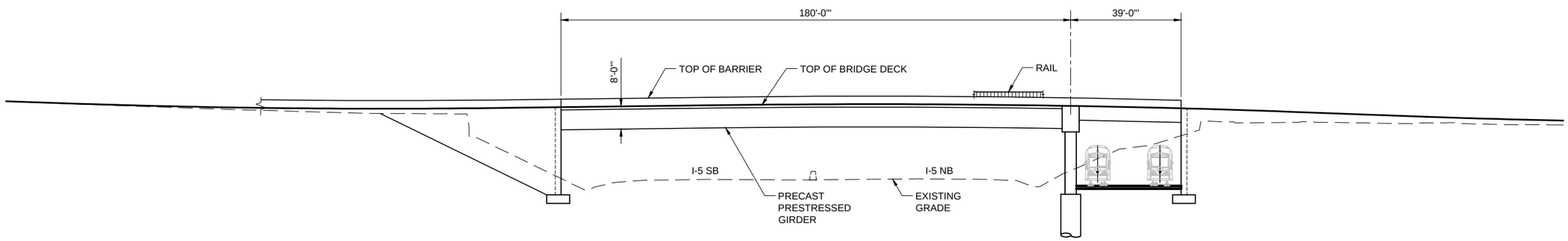
SHEET 46 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



PLAN



ELEVATION

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\47 SBR-02.dwg Mar 02, 2015 - 2:11pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

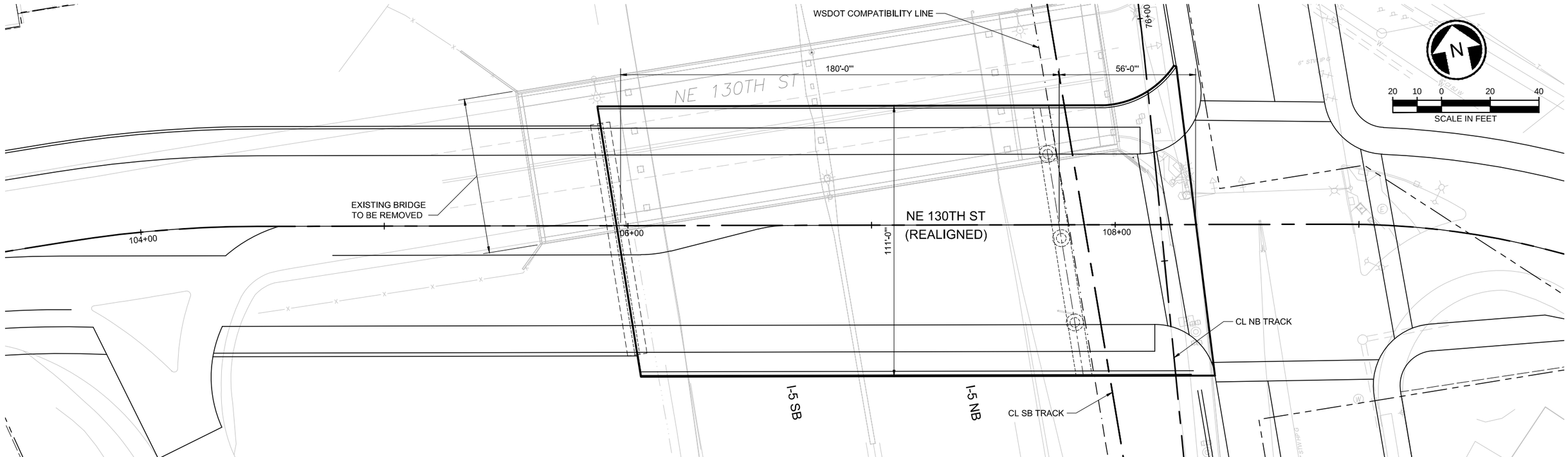
PREFERRED ALTERNATIVE
WSDOT BRIDGE REPLACEMENT AT NE 130TH ST - NO STATION

DWG NO. SBR-02

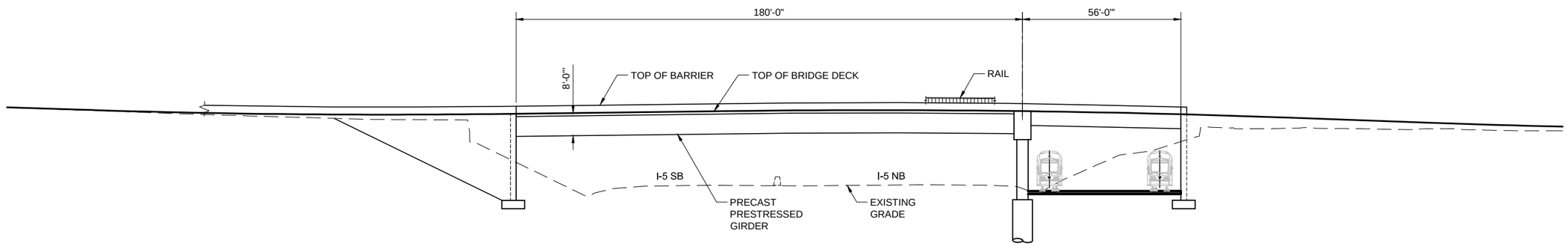
SHEET 47 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



PLAN



ELEVATION

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\50 SBR-03.dwg Mar 02, 2015 - 2:07pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

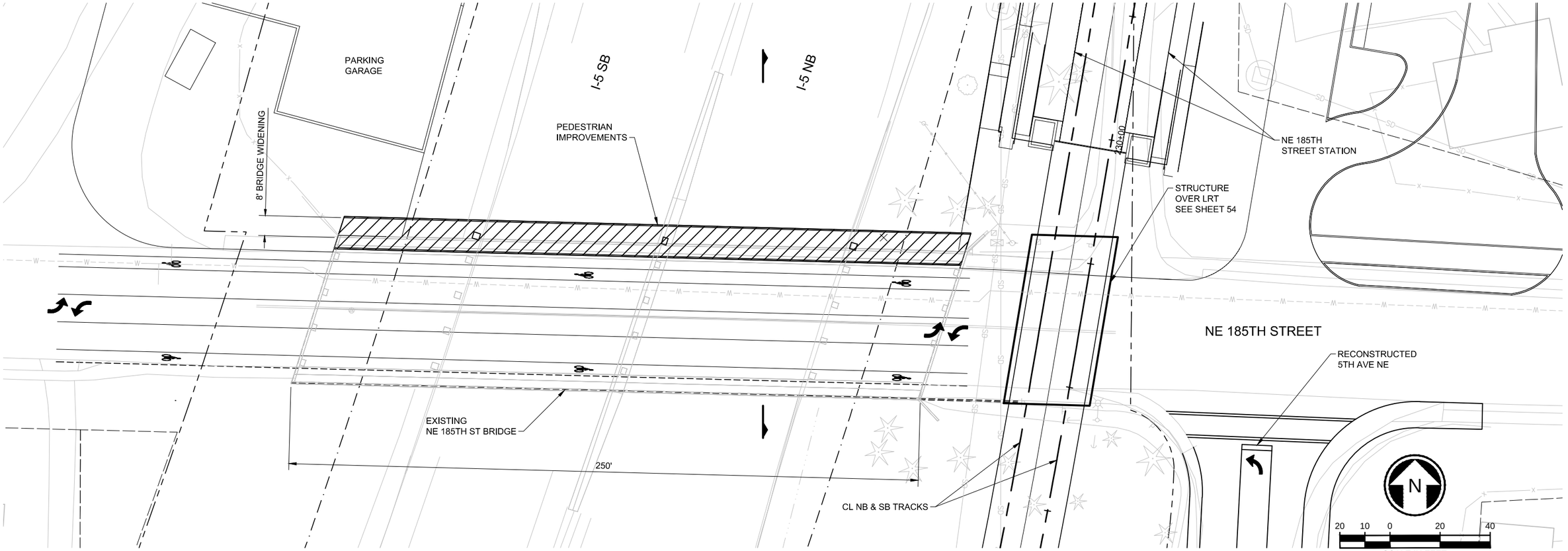
PREFERRED ALTERNATIVE OPTION SEGMENT A
WSDOT BRIDGE REPLACEMENT AT NE 130TH ST - WITH STATION

DWG NO. SBR-03

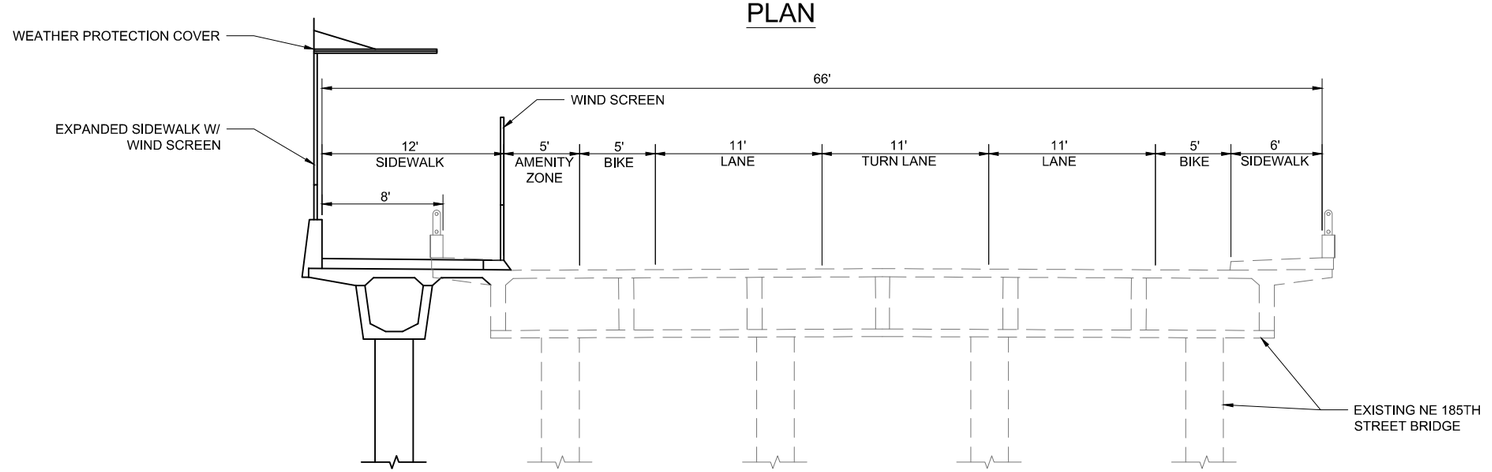
SHEET 48 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



PLAN



TYPICAL SECTION

5 2.5 0 5 10
SCALE IN FEET

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\49 SBR-04.dwg Mar 02, 2015 - 2:32pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

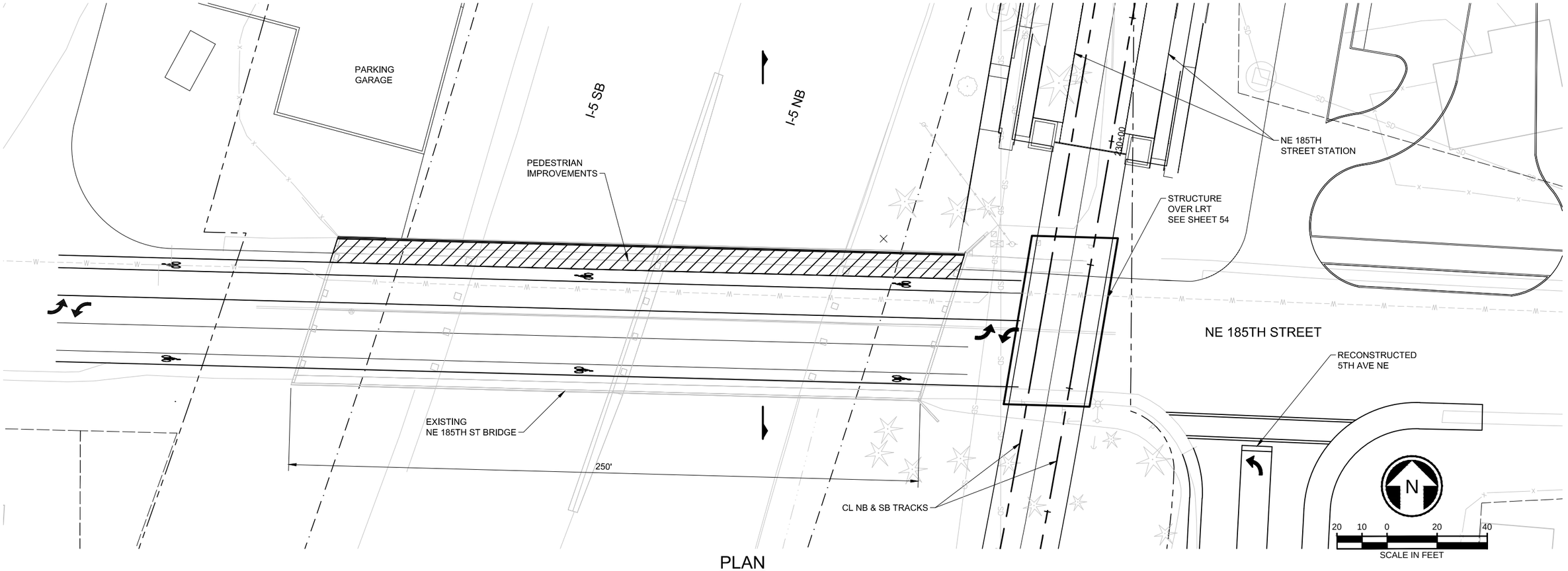
PREFERRED ALTERNATIVE
WSDOT BRIDGE WIDENING AT NE 185TH ST

DWG NO. SBR-04

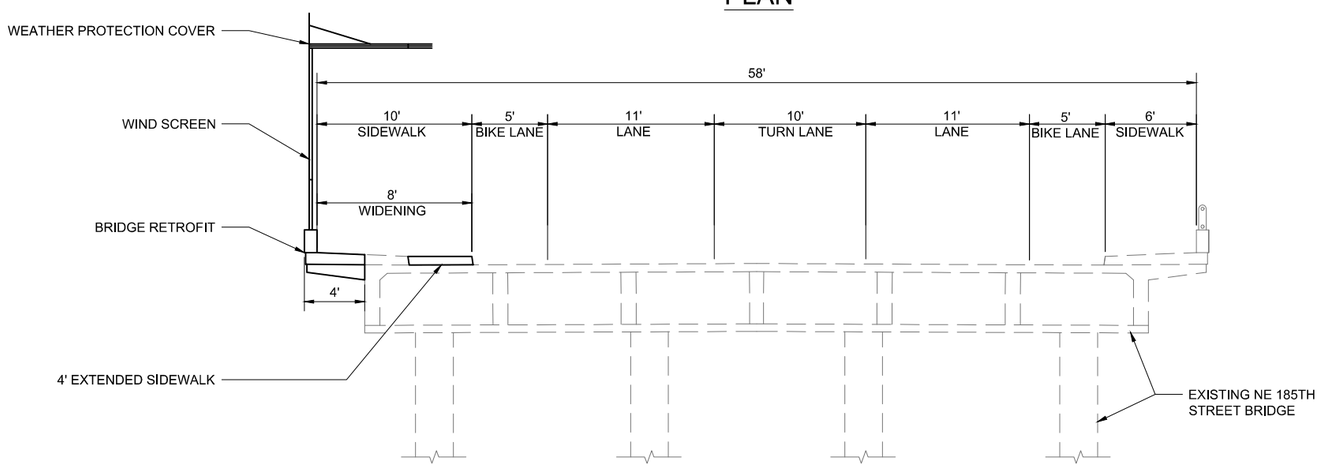
SHEET 49 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



PLAN



TYPICAL SECTION

5 2.5 0 5 10
SCALE IN FEET

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\49 SBR-04.dwg Mar 02, 2015 - 2:27pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

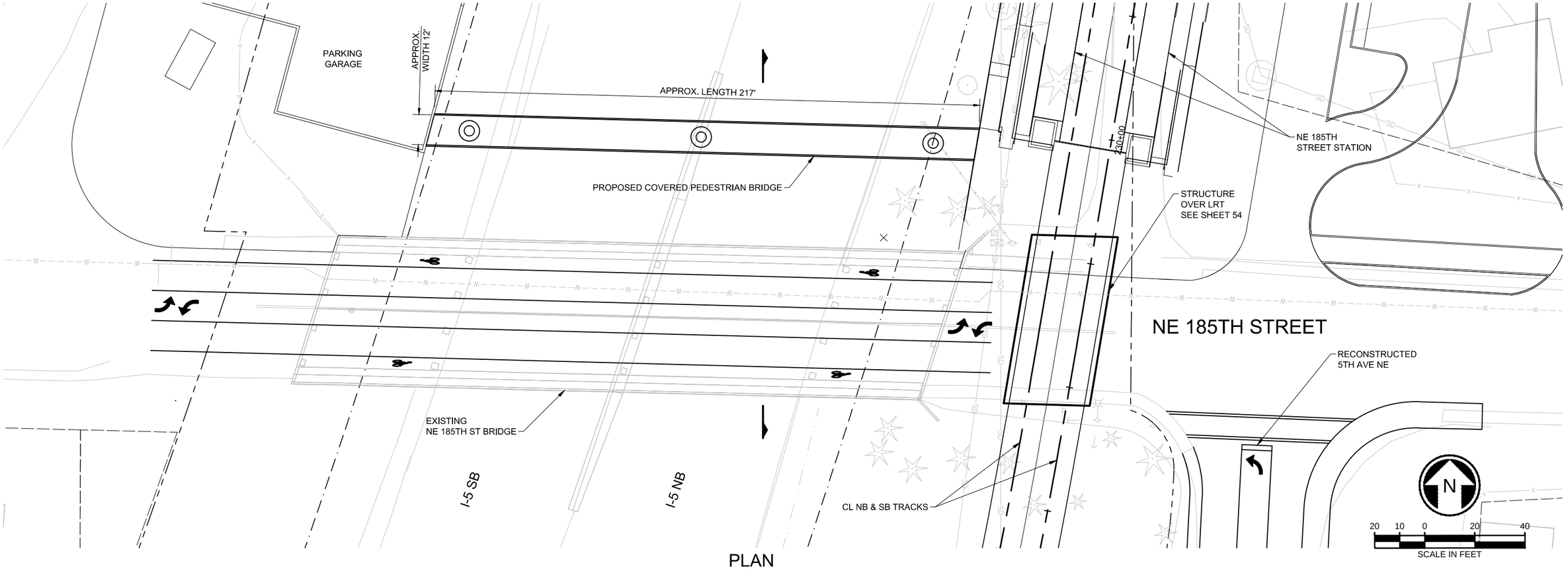
PREFERRED ALTERNATIVE
WSDOT BRIDGE SIDEWALK MODIFICATIONS AT NE 185TH ST

DWG NO. SBR-05

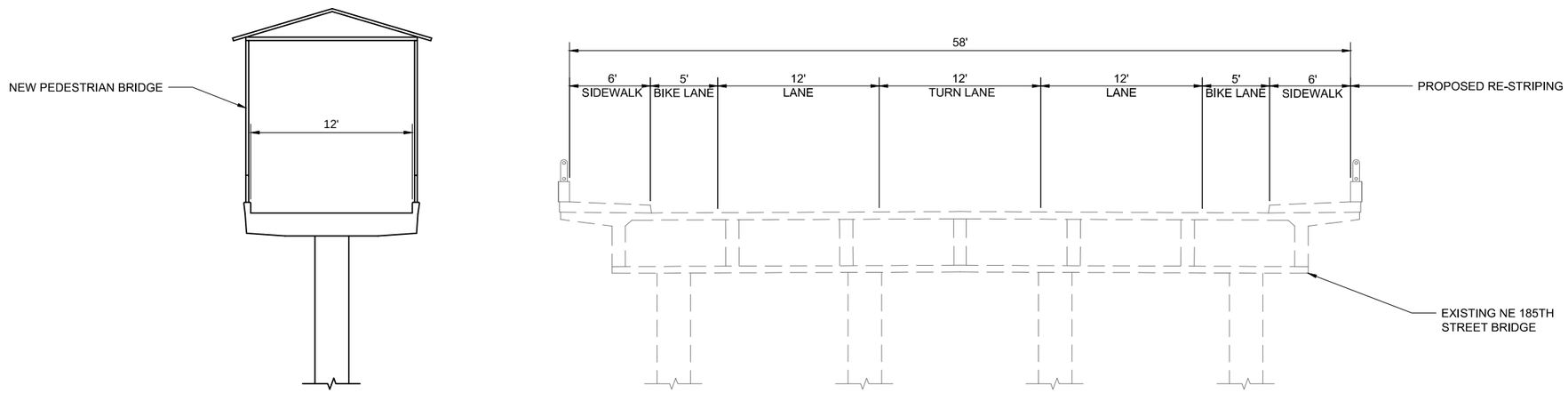
SHEET 50 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



PLAN



TYPICAL SECTION

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\49 SBR-04.dwg Mar 02, 2015 - 2:30pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

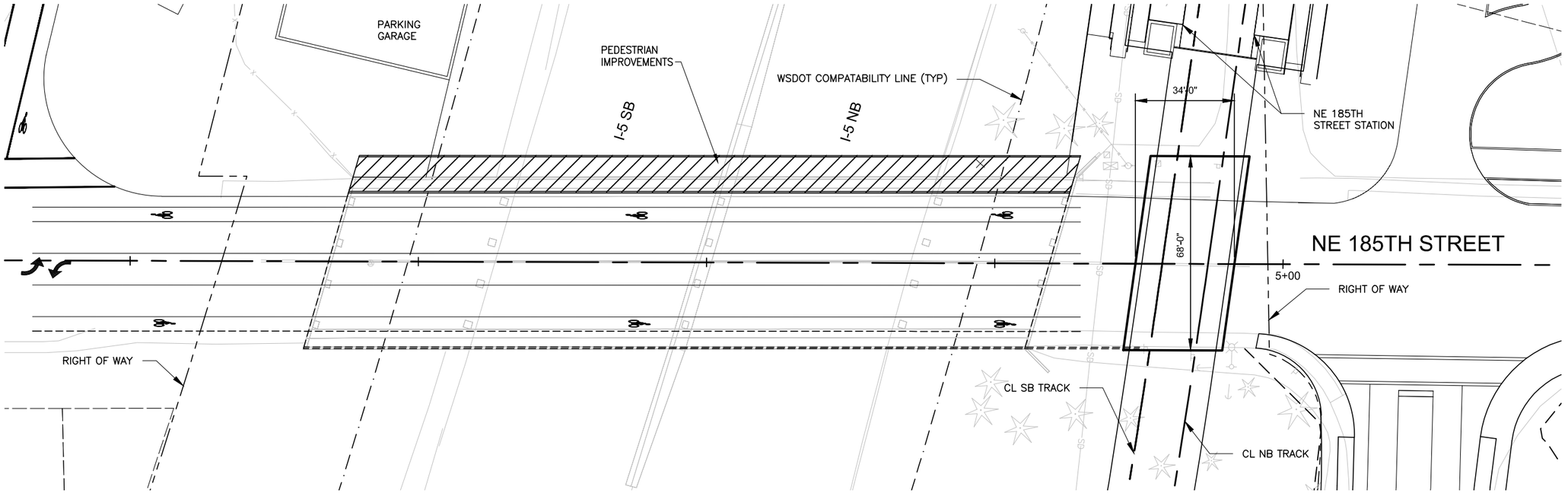
PREFERRED ALTERNATIVE
NEW WSDOT PEDESTRIAN BRIDGE AT NE 185TH ST

DWG NO. SBR-06

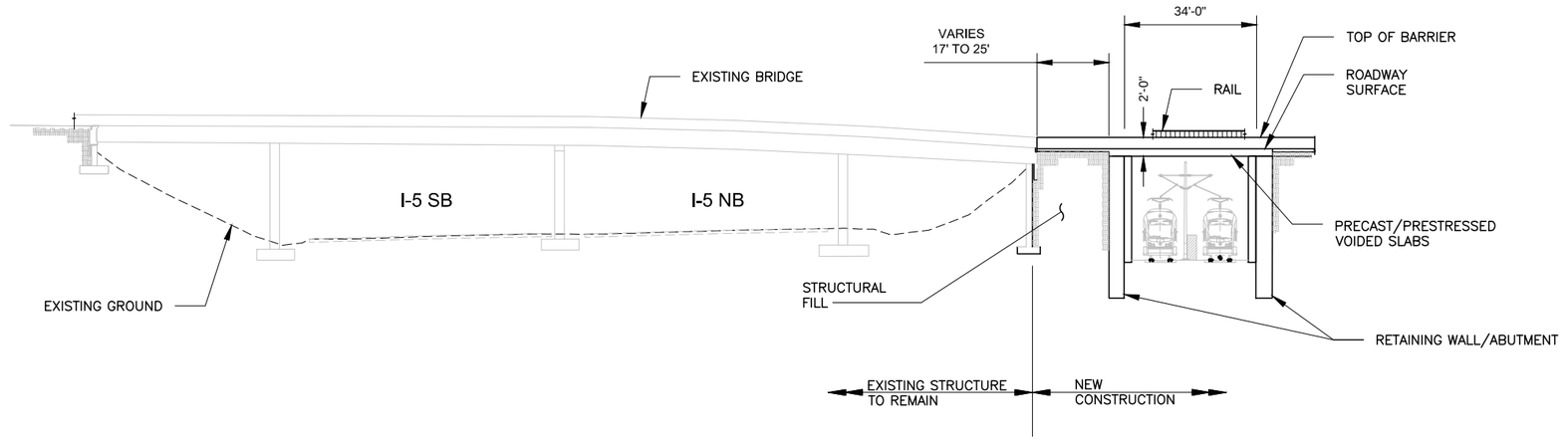
SHEET 51 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



PLAN



ELEVATION

20 10 0 20 40
SCALE IN FEET

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\52 SBR-07.dwg Mar 02, 2015 - 2:36pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

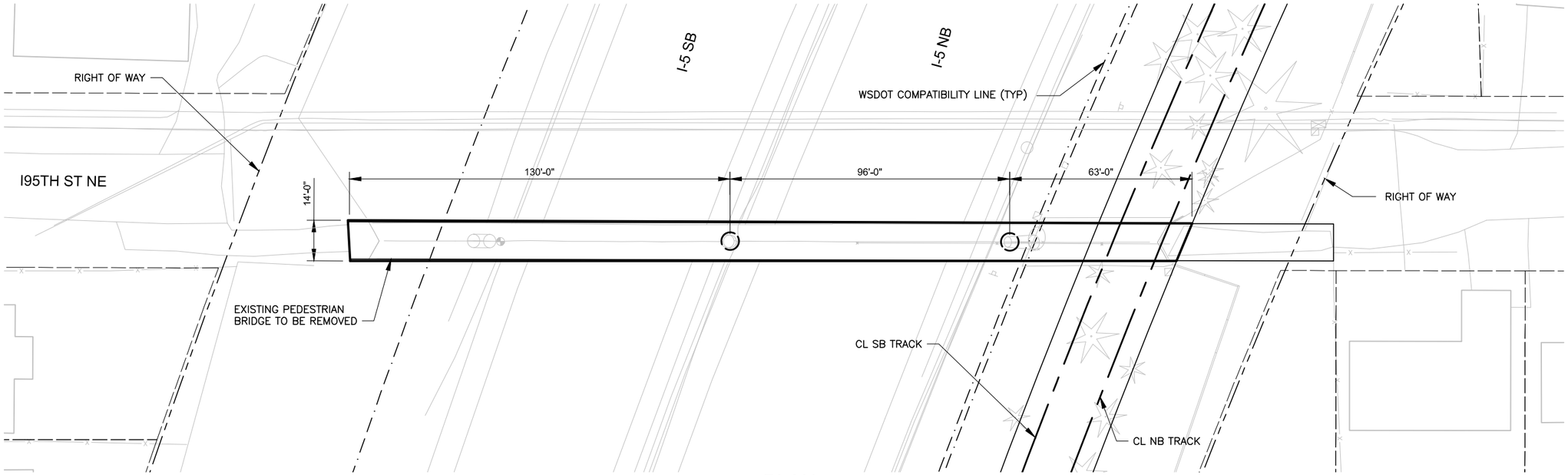
PREFERRED ALTERNATIVE
STRUCTURE OVER LRT AT NE 185TH ST

DWG NO. SBR-07

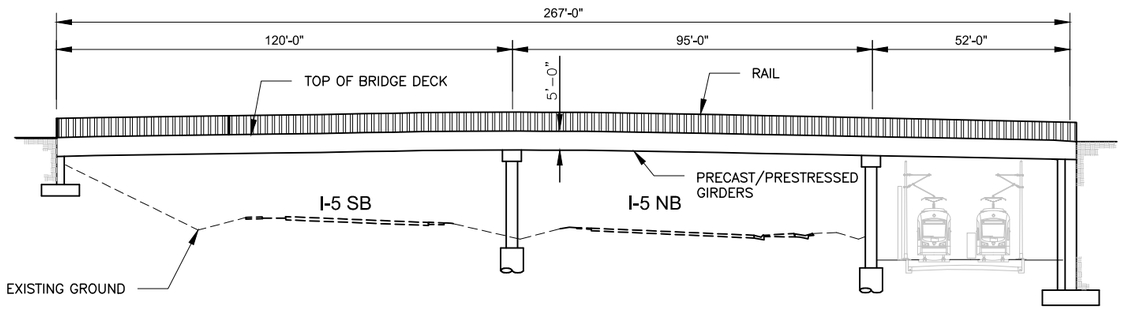
SHEET 52 OF 59

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



PLAN



ELEVATION

20 10 0 20 40
SCALE IN FEET

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\53 SBR-08.dwg Mar 02, 2015 - 2:39pm

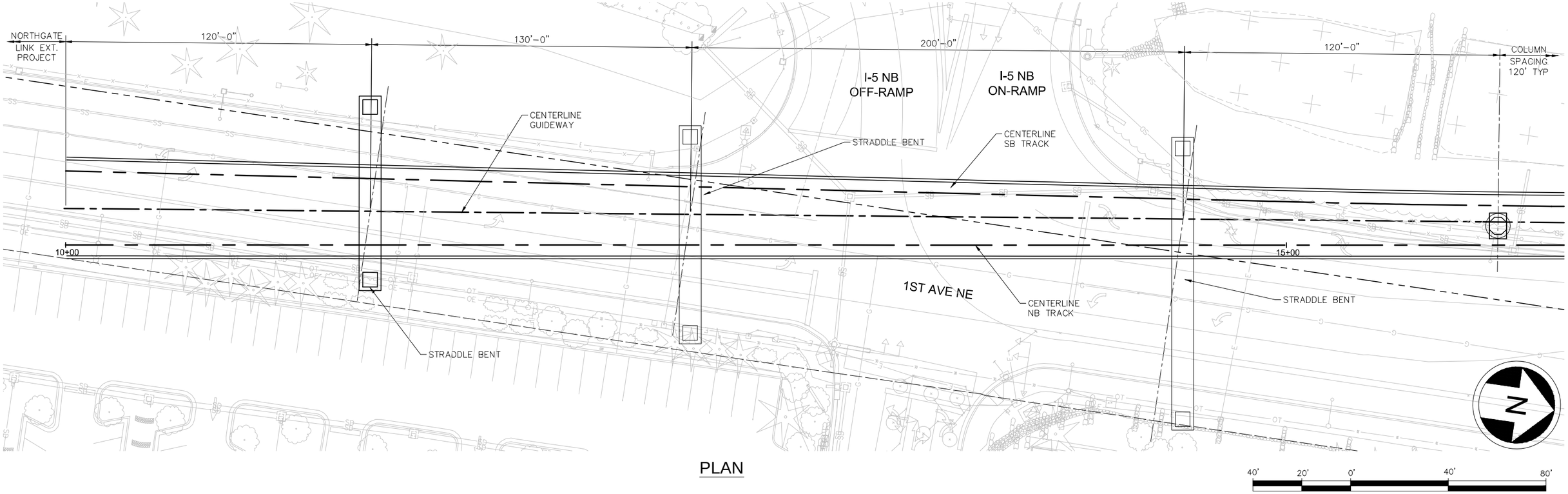
SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

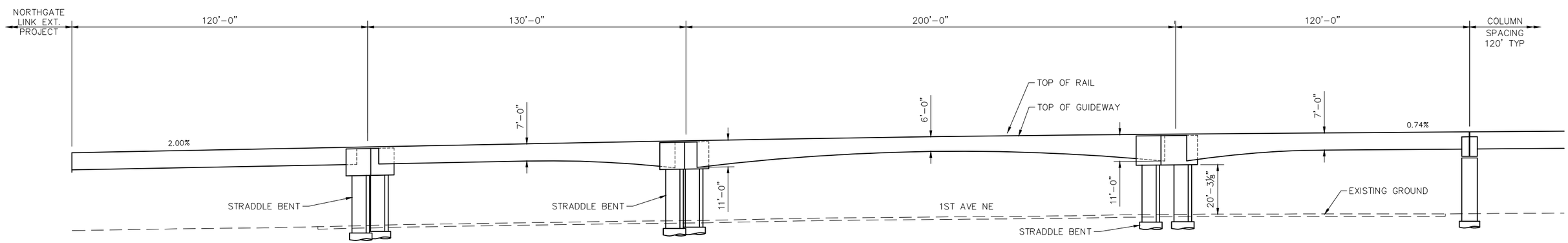
PREFERRED ALTERNATIVE
WSDOT PEDESTRIAN BRIDGE REPLACEMENT AT NE 195TH ST

DWG NO. SBR-08
SHEET 53 OF 59
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



PLAN



ELEVATION

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\54 SPP-01.dwg Mar 02, 2015 - 3:11pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

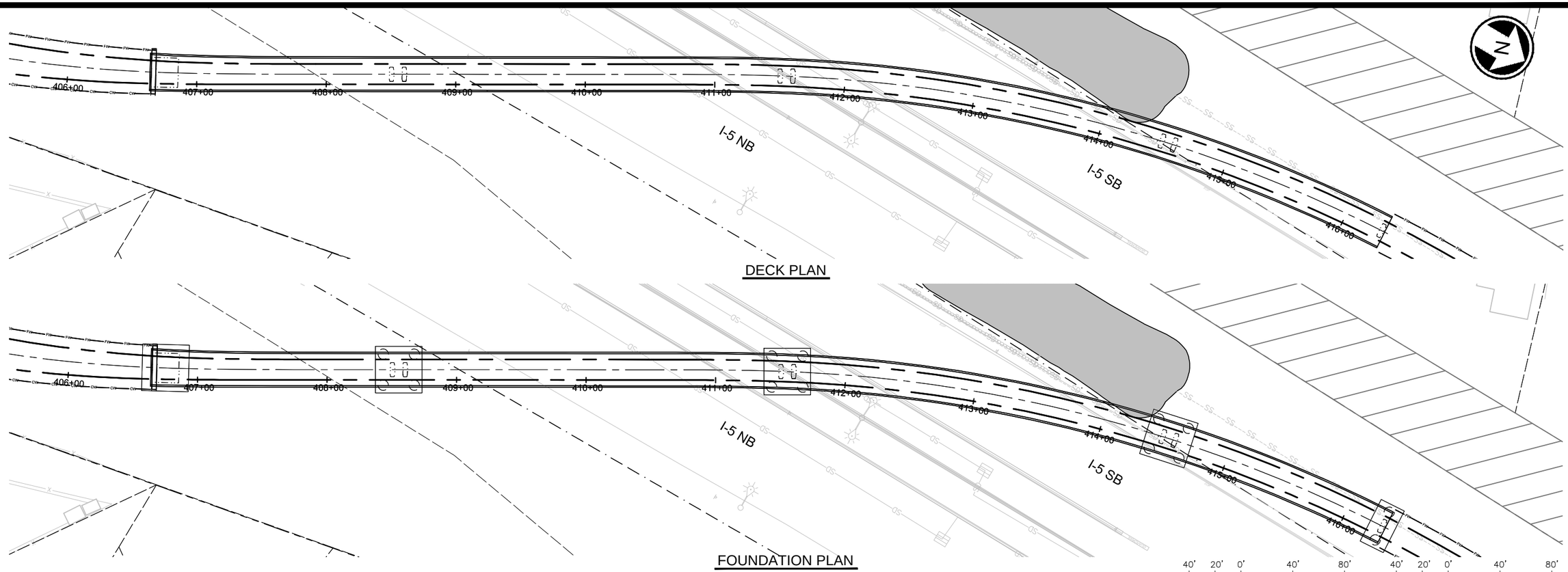
PREFERRED ALTERNATIVE
GUIDEWAY STRUCTURE OVER 1ST AVE NE AT NE 107TH ST

DWG NO. SPP-01

SHEET 54 OF 59

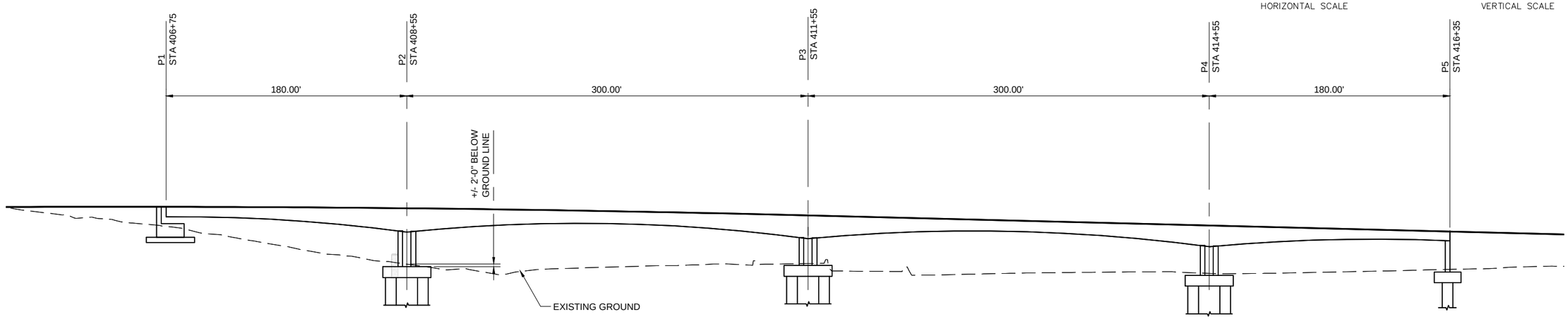
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



DECK PLAN

FOUNDATION PLAN



ELEVATION

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\55 SPP-02.dwg Mar 02, 2015 - 2:48pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

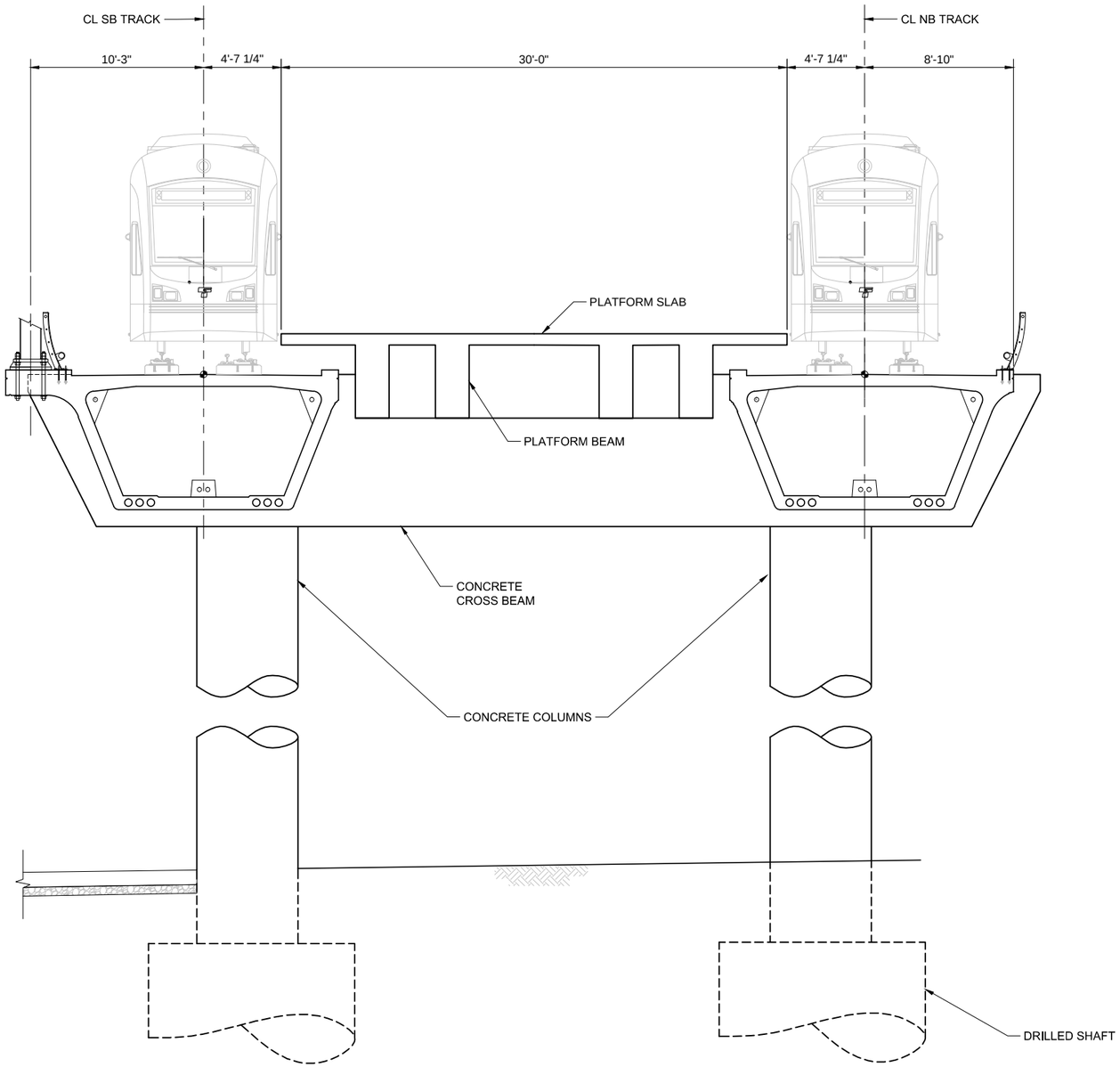
PREFERRED ALTERNATIVE
GUIDEWAY STRUCTURE OVER I-5 NEAR 236TH ST SW

DWG NO. SPP-02

SHEET 55 OF 59

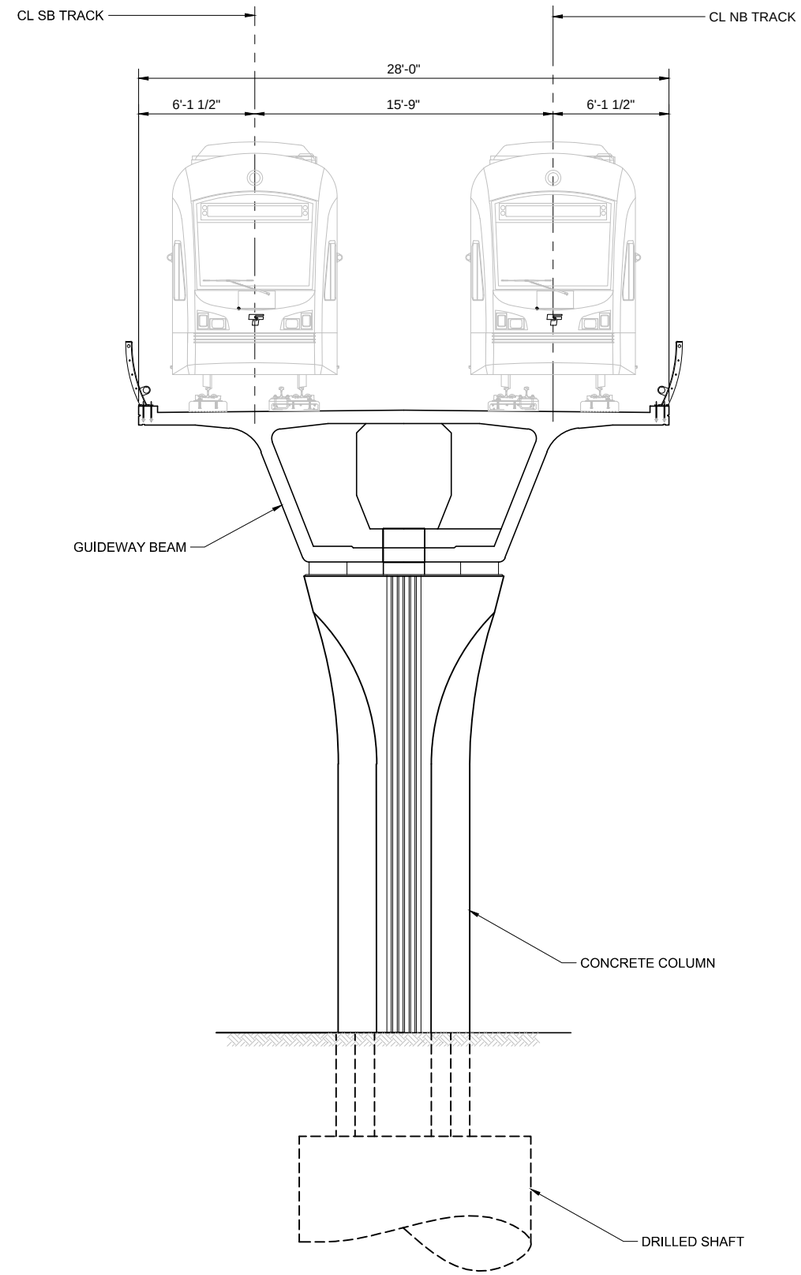
REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



CROSS SECTION OF AERIAL GUIDEWAY AT STATION

SCALE: 1/4" = 1'-0"



CROSS SECTION OF TYPICAL ELEVATED GUIDEWAY

SCALE: 1/4" = 1'-0"

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\56 SSD-01.dwg Mar 02, 2015 - 2:46pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

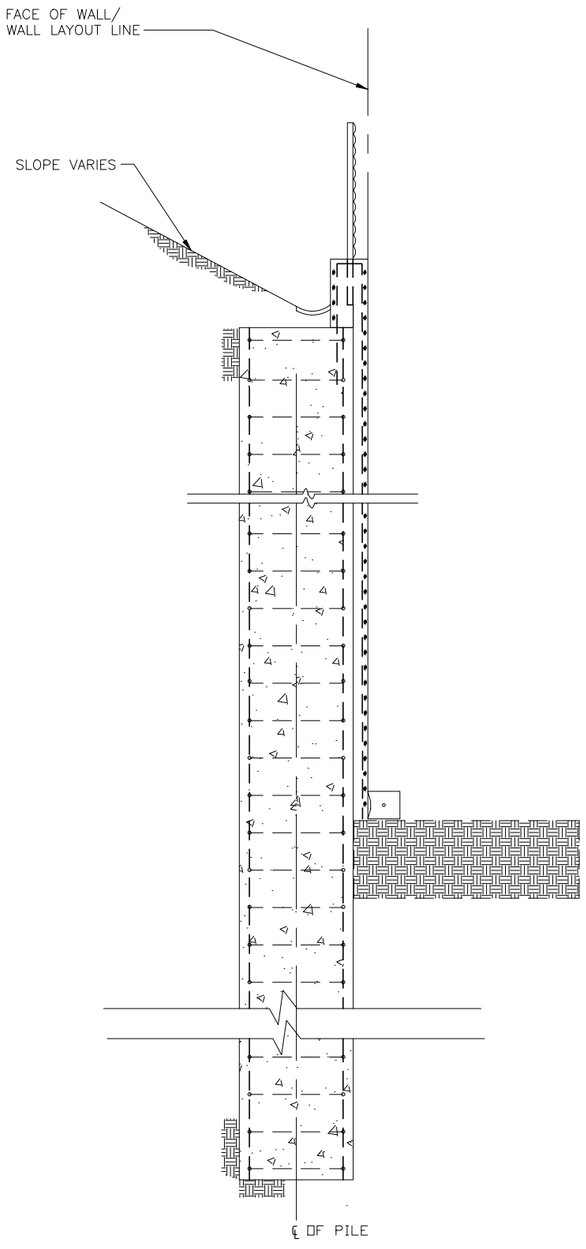
PREFERRED ALTERNATIVE
ELEVATED GUIDEWAY - TYPICAL SECTIONS

DWG NO. SSD-01

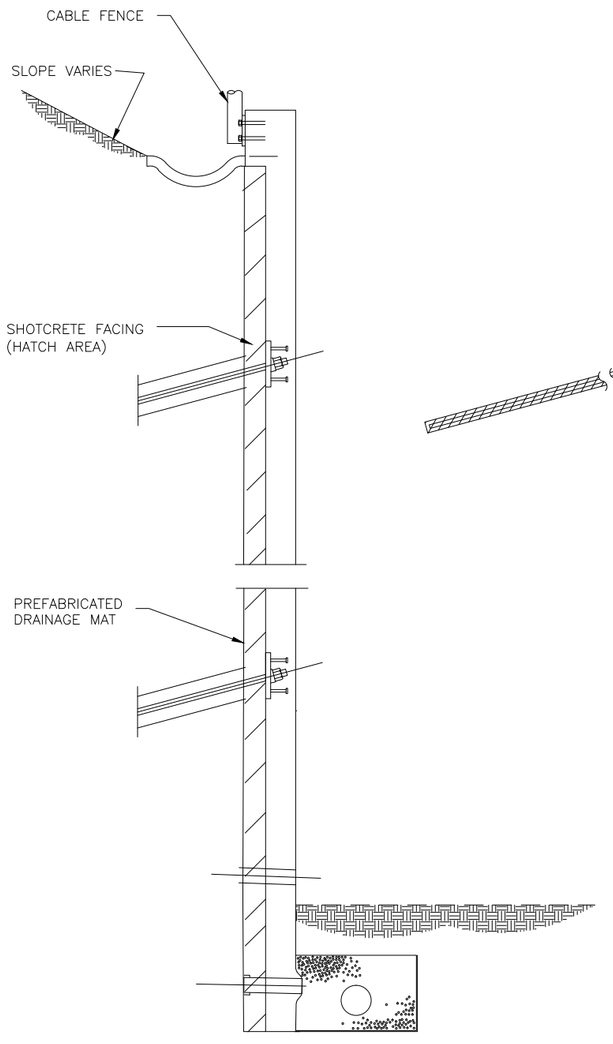
SHEET 56 OF 59

REV. NO.

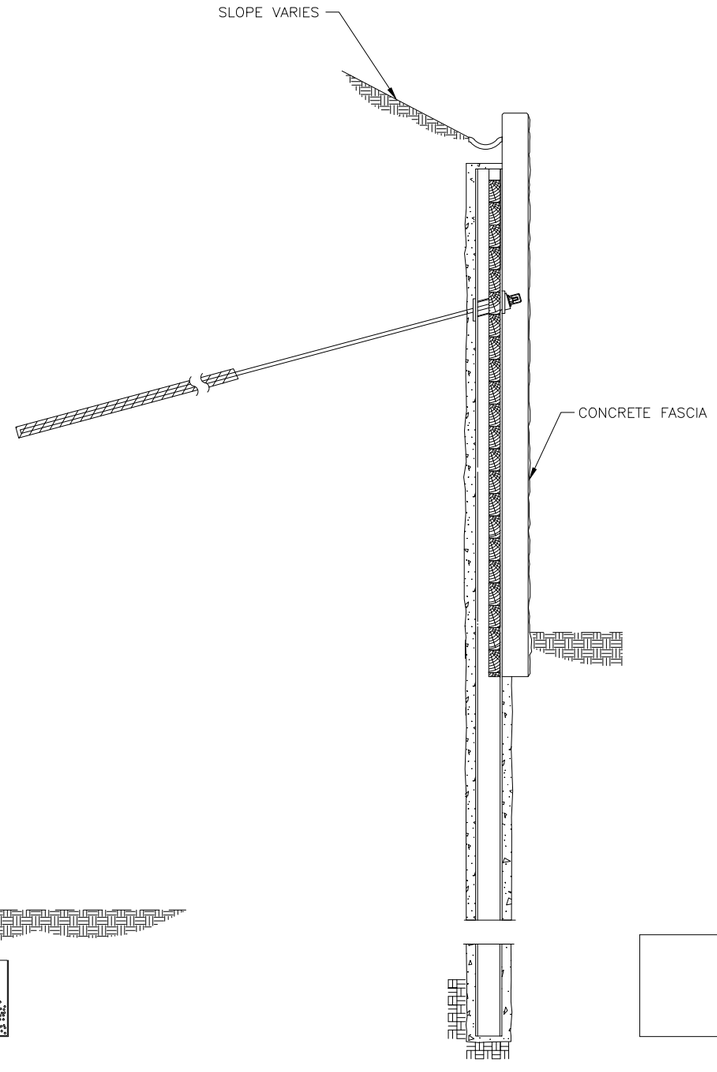
SOUND TRANSIT LYNNWOOD LINK EXTENSION



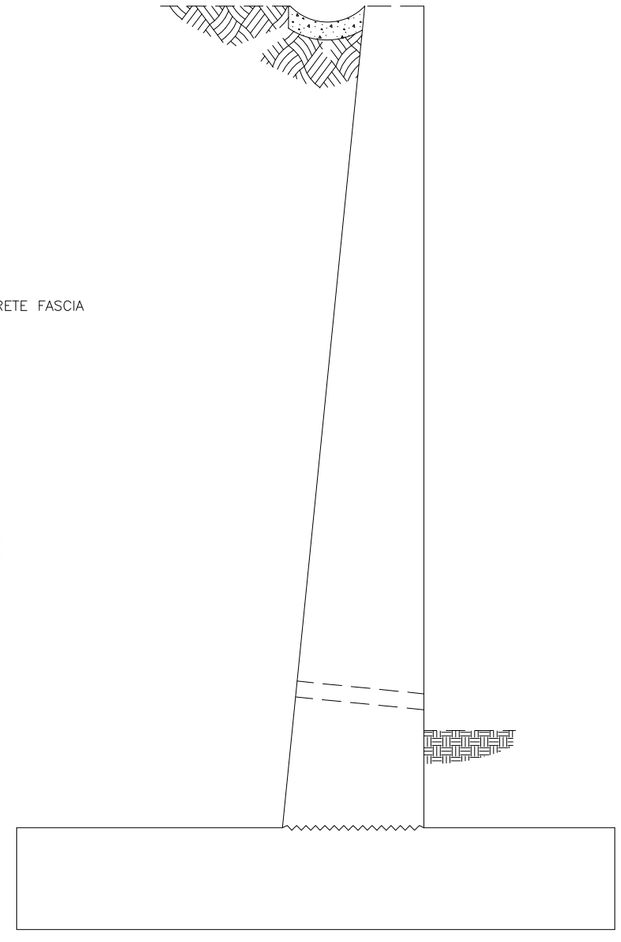
TYPICAL SECTION
TANGENT PILE WALL



TYPICAL SECTION
SOIL NAIL WALL



TYPICAL SECTION
SOLDIER PILE WALL



TYPICAL SECTION
CANTILEVER RETAINING WALL

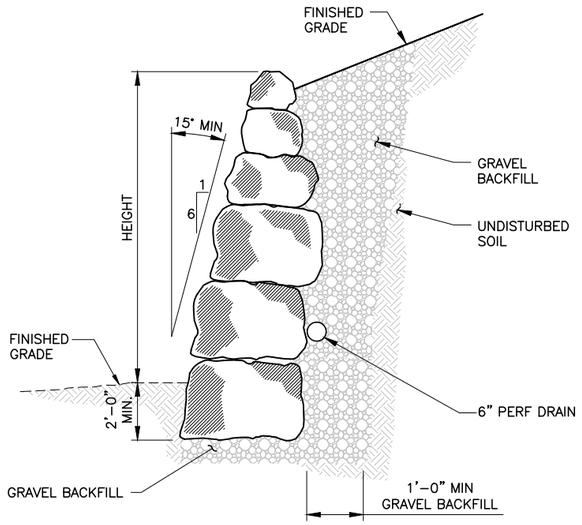
M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\57 SRW-01.dwg Mar 02, 2015 - 2:45pm

SOUNDTRANSIT

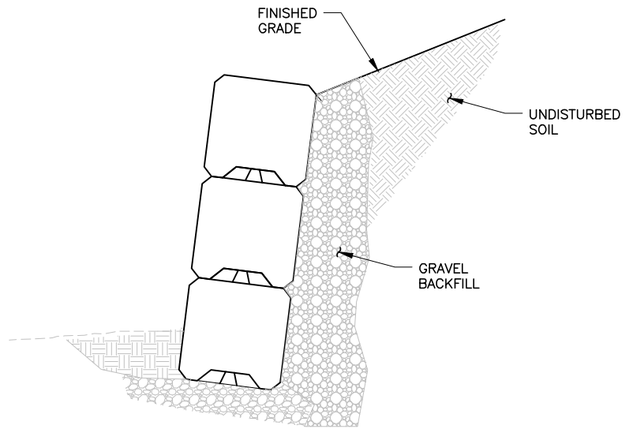
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

PREFERRED ALTERNATIVE
RETAINING WALL - SECTIONS AND DETAILS SHEET 1

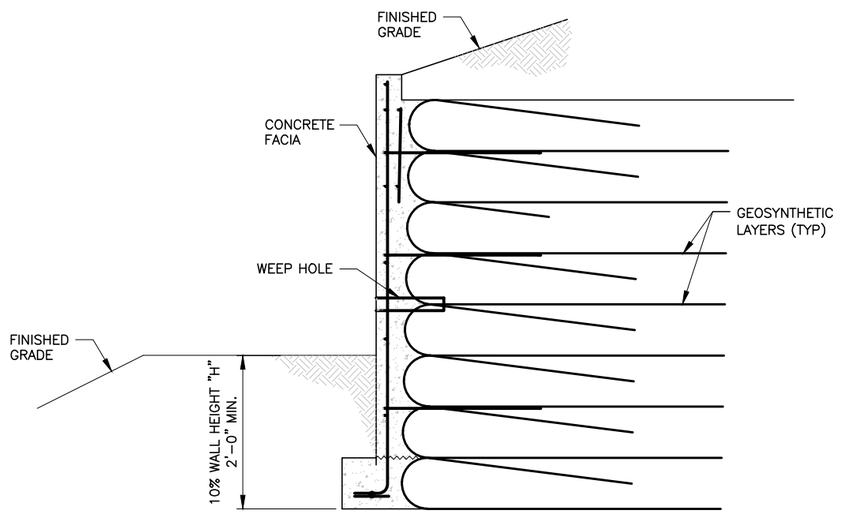
DWG NO. SRW-01
SHEET 57 OF 59
REV. NO.



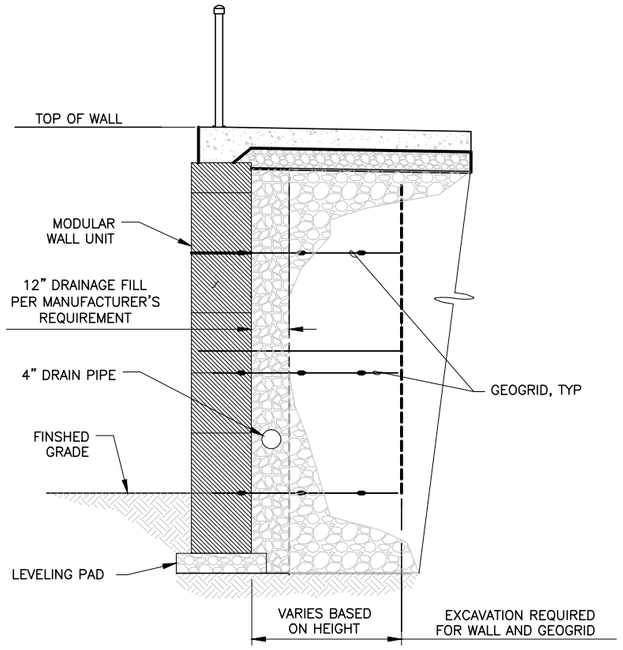
ROCK WALL



GRAVITY BLOCK WALL



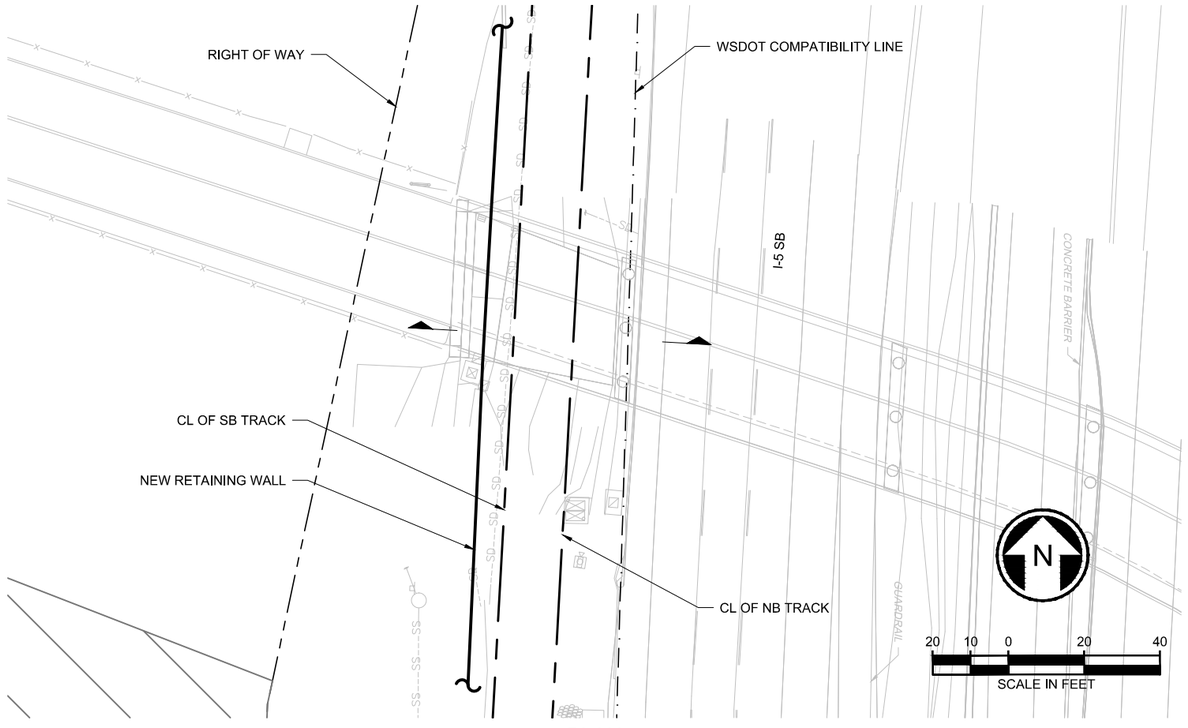
GEOSYNTHETIC WALL



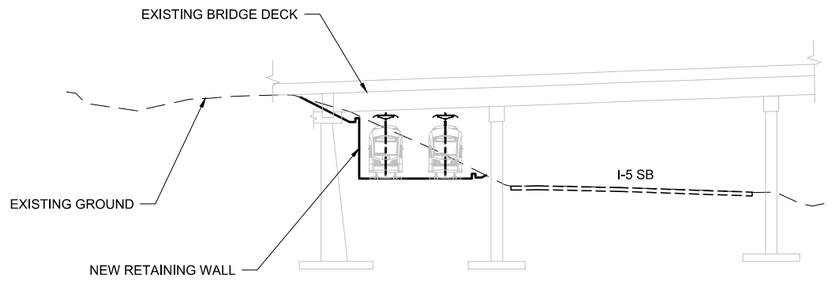
MSE WALL

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\58 SRW-02.dwg Mar 02, 2015 - 2:44pm

SOUND TRANSIT LYNNWOOD LINK EXTENSION



PLAN



ELEVATION

M:\NorthCorridor\CADD\PE-DatumShift\SHEETS\Structures-FEIS\59 SRW-03.dwg Mar 02, 2015 - 2:54pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

PREFERRED ALTERNATIVE
RETAINING WALL UNDERCROSSING AT 228TH ST SW

DWG NO. SRW-03

SHEET 59 OF 59

REV. NO.

SOUND TRANSIT
LYNNWOOD LINK EXTENSION

Part 2
CONCEPTUAL PLANS FOR OTHER ALTERNATIVES

APRIL 2015

REVISION NO.	DATE	SHEETS
0		
1	7–13–2012	ALL
2	10–12–2012	ALL
3	5–2013	4, 26, 42,
		80–83, 102–105

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SOUND TRANSIT LYNNWOOD LINK EXTENSION

DESCRIPTION	SHEET NUMBERS
SHEET LAYOUT	2
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION	
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I-5 - ALT. A3	13-20
I-5 - ALT. A5	21-27
I-5 - ALT. A7	28-30
I-5 - ALT. B1	31-36
I-5 - ALT. B2	37-41
I-5 - ALT. B2A	42
I-5 - ALT. B4	43-46
I-5 - ALT. C1	47-50
I-5 - ALT. C2	51-54
I-5 - ALT. C3	55-57
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NE 145TH STREET STATION, OPTION 1	72-75
NE 145TH STREET STATION, OPTION 2	76-79
NE 155TH STREET STATION	80-83
NE 185TH STREET STATION, OPTION 1	84-86
NE 185TH STREET STATION, OPTION 2	87-90
NE 185TH STREET STATION, OPTION 3	91-94
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MOUNTLAKE TERRACE FREEWAY STATION	99-101
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GUIDEWAY - CROSSING NB & SB I-5 NORTH OF 236TH ST SW	130-131
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See Preferred Alternative Segment B

\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\0_General\NCTP-INDEX-01.dwg Oct 10, 2012 - 3:33pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN

TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION INDEX SHEET

DWG NO. INDEX-01

SHEET 1 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

TABLE - SEGMENT A SHEET LAYOUT MATRIX

LAYOUT / ALTERNATIVE	1	2	3	4	5	6	7	8	9	10	130TH STATION	145TH STATION	155TH STATION	185TH STATION
A1	A1–PP01	A1–PP02	A1–PP03	A1–PP04	A1–PP05	A1–PP06	A1–PP07	A1–PP08	A1–PP09	A1–PP10	–	OPTION 1	–	OPTION 1
A3	A3–PP01	A3–PP02	A3–PP03	A3–PP04	A3–PP05	A3–PP06	SEE A1	SEE A1	A3–PP09	A3–PP10	–	OPTION 2	–	OPTION 2
A5	A5–PP01	A5–PP02	A5–PP03	A5–PP04	A5–PP05	A5–PP06	SEE A1	SEE A1	SEE A1	A5–PP10	OPTION 1	–	155TH	OPTION 3
A7	SEE A3	SEE A3	A7–PP03	A7–PP04	A7–PP05	SEE A5	SEE A1	SEE A1	SEE A3	SEE A3	OPTION 2	–	155TH	OPTION 2
A10	SEE A5	SEE A5	SEE A5	SEE A1	SEE A1	SEE A1	SEE A1	SEE A1	SEE A1	SEE A5	OPTION 1	OPTION 1	–	OPTION 3
A11	SEE A3	SEE A3	SEE A7	SEE A3	SEE A3	SEE A3	SEE A1	SEE A1	SEE A3	SEE A3	OPTION 2	OPTION 2	–	OPTION 2

SHEETS INCLUDED IN DRAWING SET

TABLE - SEGMENT B SHEET LAYOUT MATRIX

LAYOUT / ALTERNATIVE	11	12	13	14	15	16	MOUNTLAKE TERRACE STATION	220TH STATION
B1	B1–PP01	B1–PP02	B1–PP03	B1–PP04	B1–PP05	B1–PP06	MLT TRANSIT CNTR	–
B2	SEE B1	B2–PP02	B2–PP03	B2–PP04	B2–PP05	B2–PP06	MLT TRANSIT CNTR	–
B2A	SEE B1	SEE B2	SEE B2	SEE B2	B2A–PP05	SEE B2	MLT TRANSIT CNTR	220TH
B4	B4–PP01	B4–PP02	B4–PP03	B4–PP04	SEE B1	SEE B1	MLT FREEWAY STN	–

SHEETS INCLUDED IN DRAWING SET

TABLE - SEGMENT C SHEET LAYOUT MATRIX

LAYOUT / ALTERNATIVE	17	18	19	20	21	22	LYNNWOOD STATION
C1M	C1M–PP01	C1M–PP02	C1M–PP03	–	–	–	200TH
C1W	C1W–PP01	SEE C1M	SEE C1M	–	–	–	200TH
C2M	C2M–PP01	C2M–PP02	–	C2M–PP03	–	–	TRANSIT CENTER
C2W	C2W–PP01	SEE C2M	–	SEE C2M	–	–	TRANSIT CENTER
C3M	–	–	–	–	C3M–PP01	C3M–PP02	P&R OPTION 1 P&R OPTION 2
C3W	–	–	–	–	C3W–PP01	SEE C3M	P&R OPTION 1 P&R OPTION 2

SHEETS INCLUDED IN DRAWING SET

\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets–DEIS\0_General\NCTP–KEY–01.dwg Oct 08, 2012 – 12:14pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

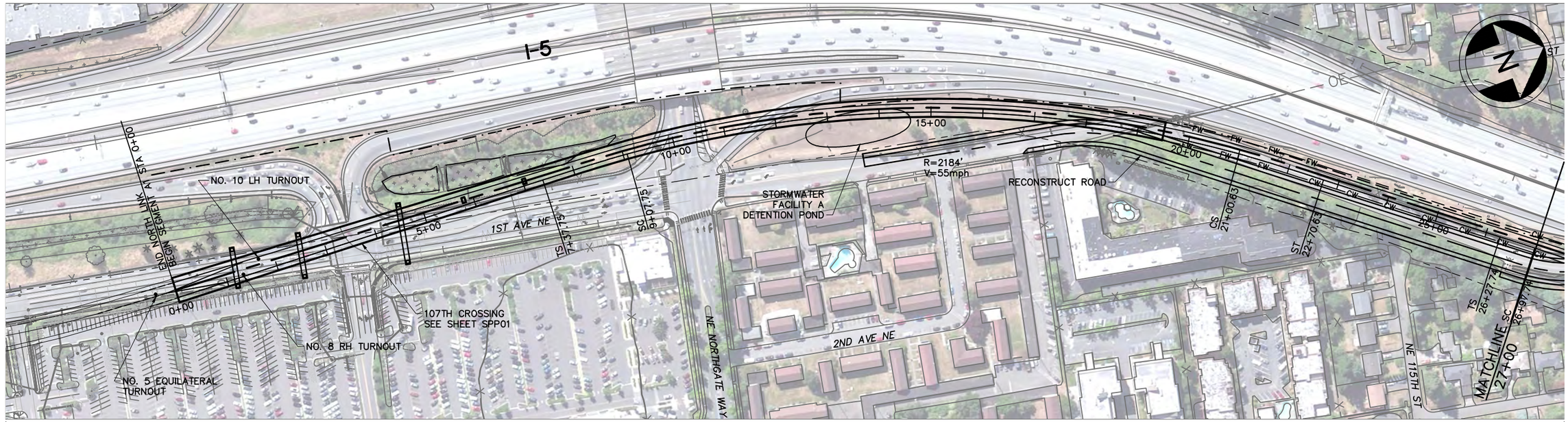
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
SHEET LAYOUT

DWG NO. KEY–01

SHEET 2 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

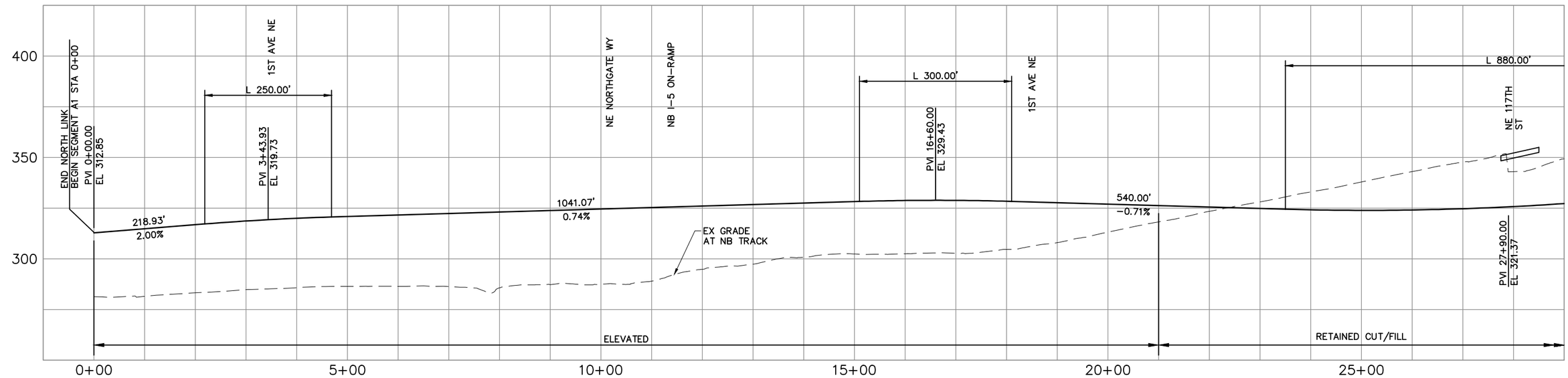


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW — FILL WALL
- CW CW — CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 25' 12.5' 0' 25' 50'



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A1

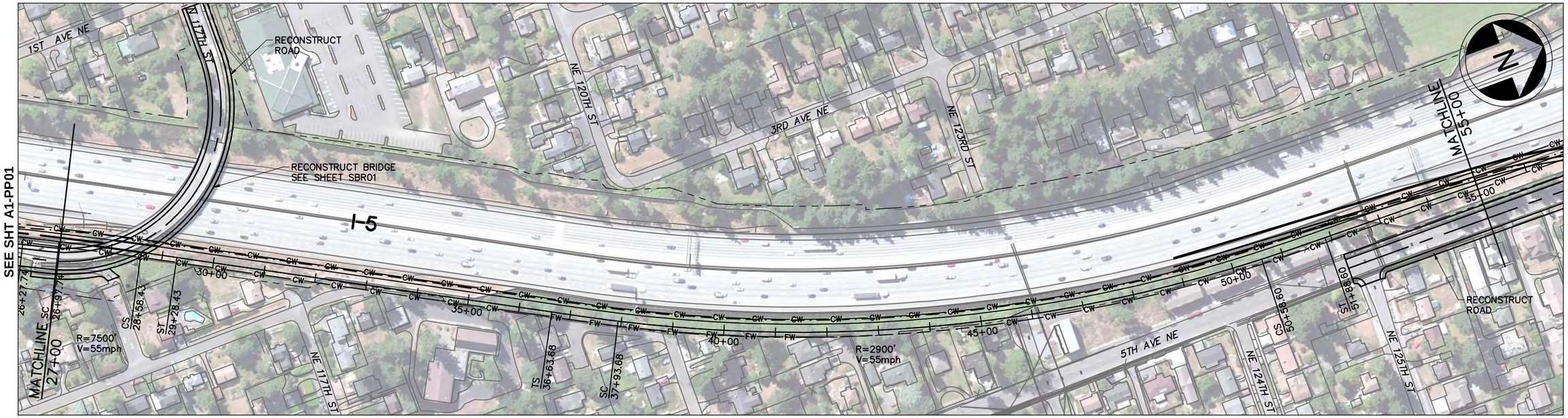
DWG NO. A1-PP01

SHEET 3 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

See Preferred Alternative Sheet 4 for added detail on associated implements

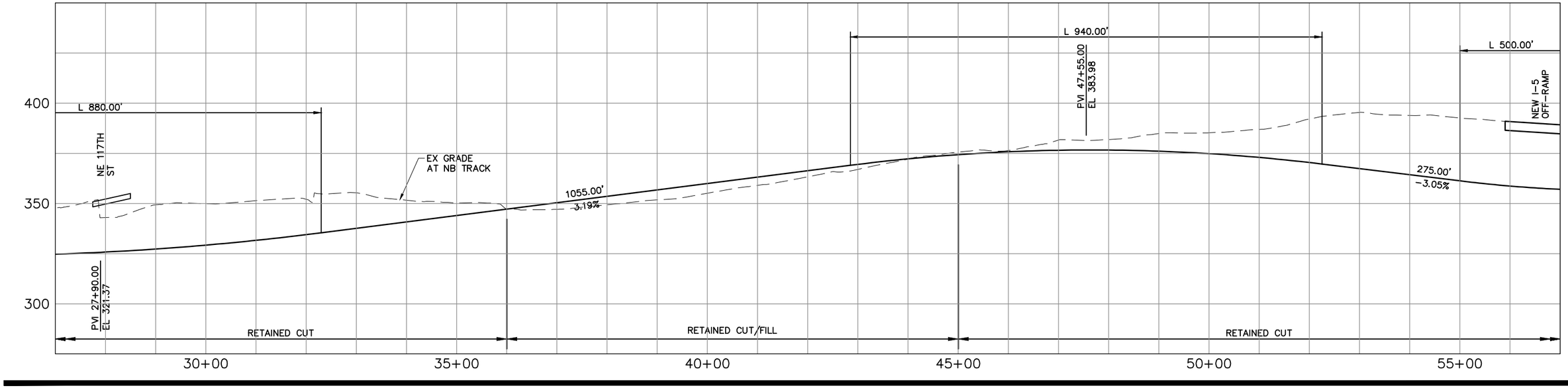


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

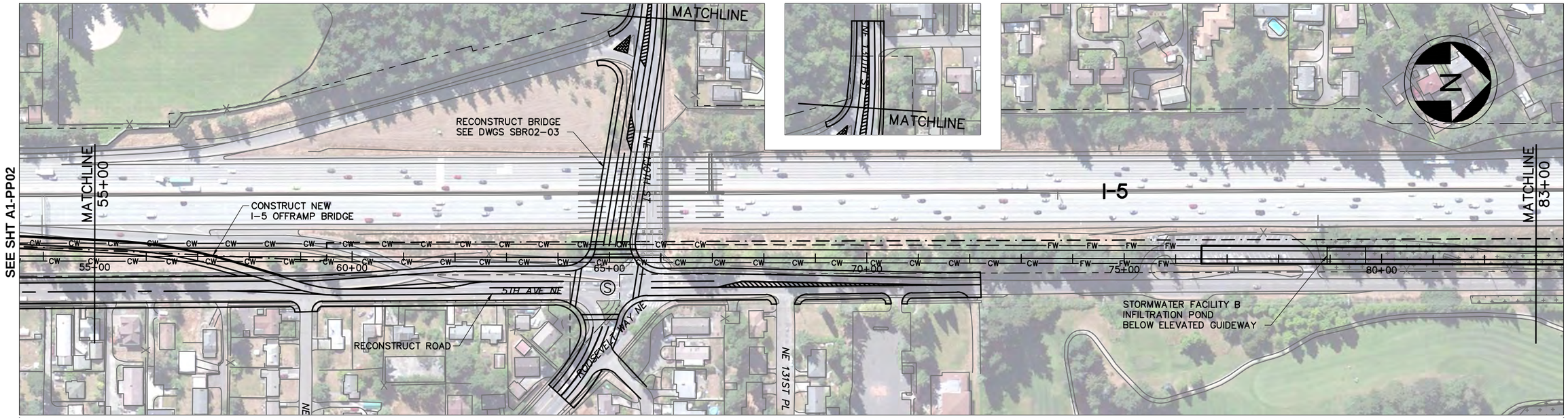
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A1

DWG NO. A1-PP02

SHEET 4 OF 142

REV. NO. 3

SOUND TRANSIT LYNNWOOD LINK EXTENSION

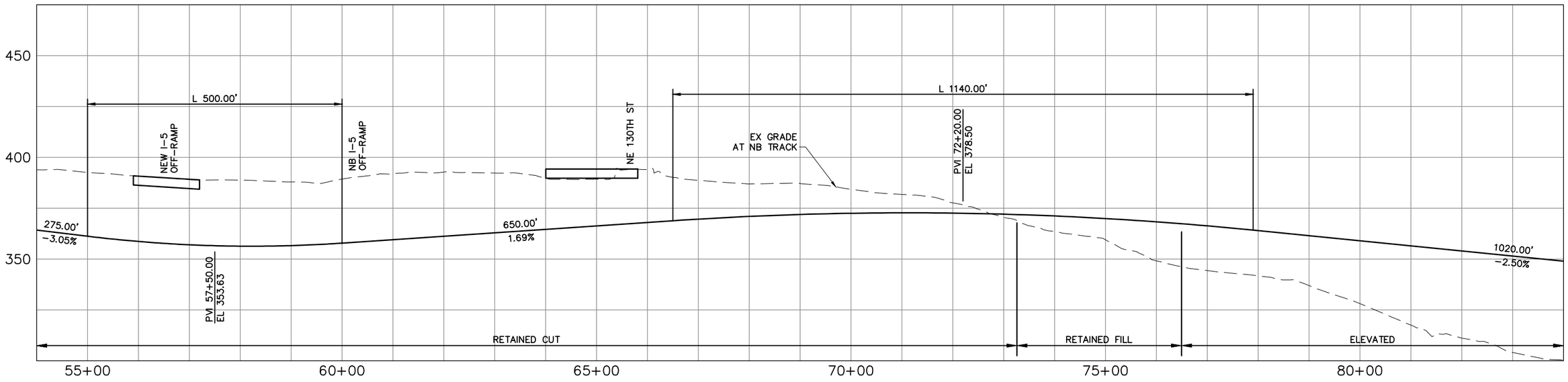


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW — FILL WALL
- CW CW — CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 25' 12.5' 0' 25' 50'



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

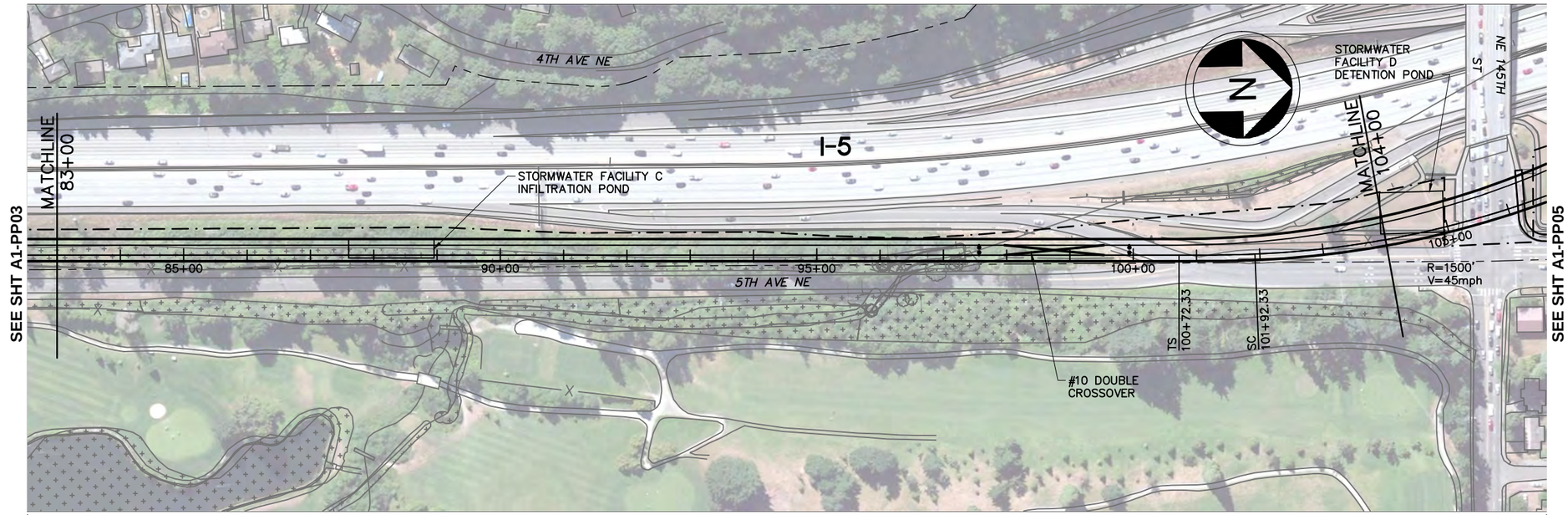
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A1

DWG NO. A1-PP03

SHEET 5 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



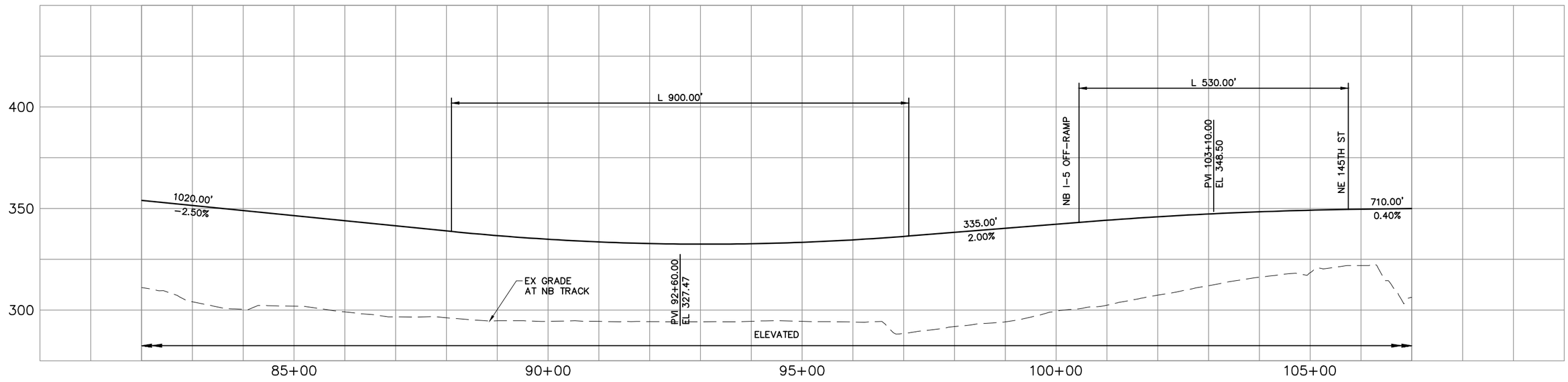
ALTERNATIVES A1, A10

LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW — FILL WALL
- CW CW — CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

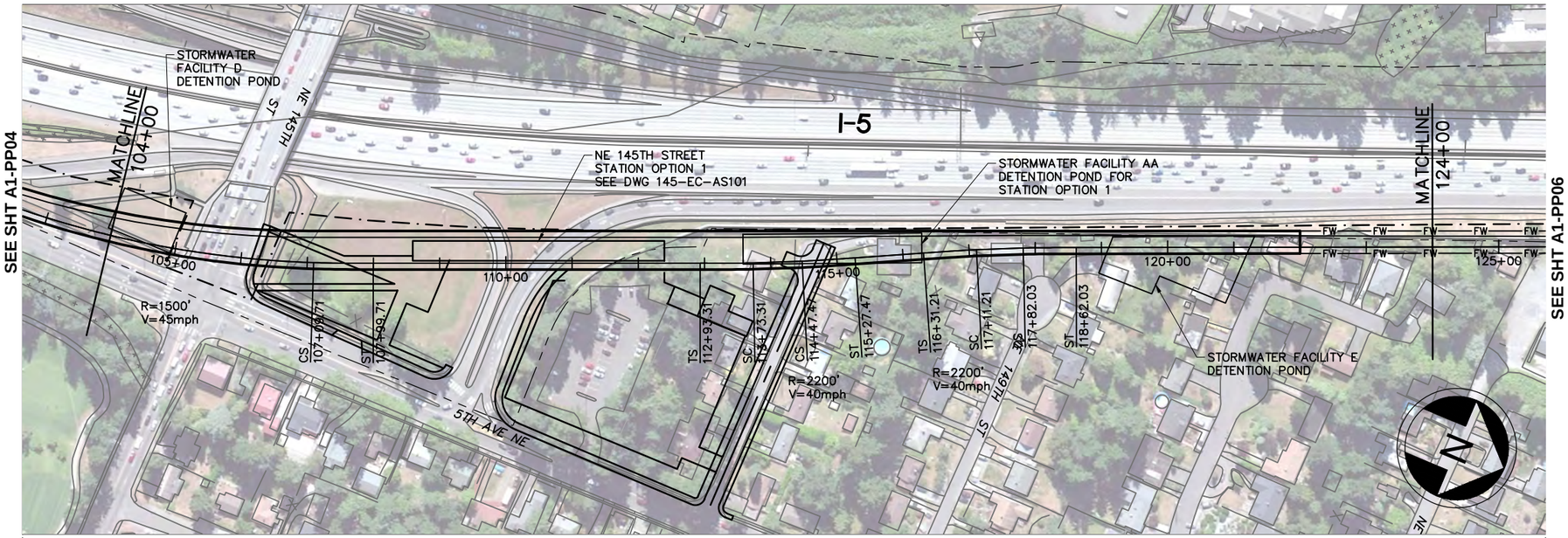
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A1

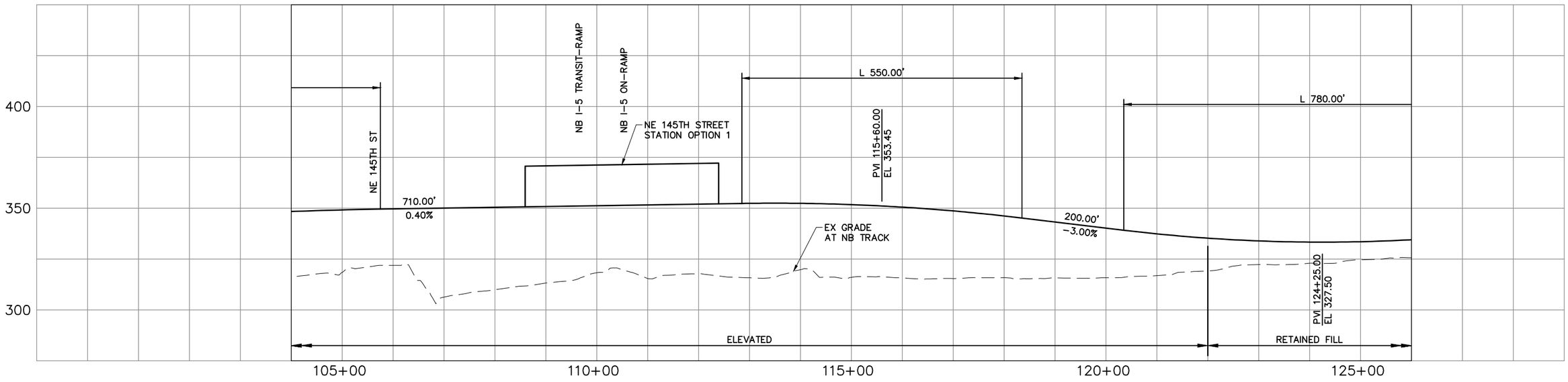
DWG NO. A1-PP04

SHEET 6 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION





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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

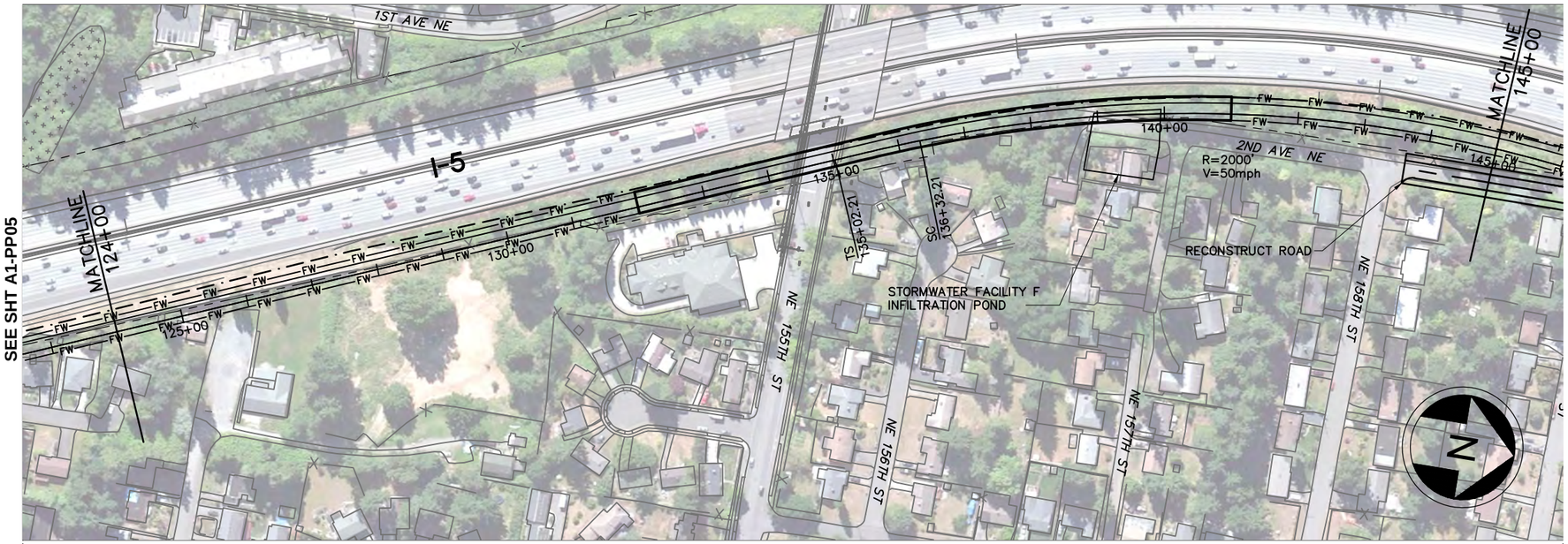
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A1

DWG NO. A1-PP05

SHEET 7 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

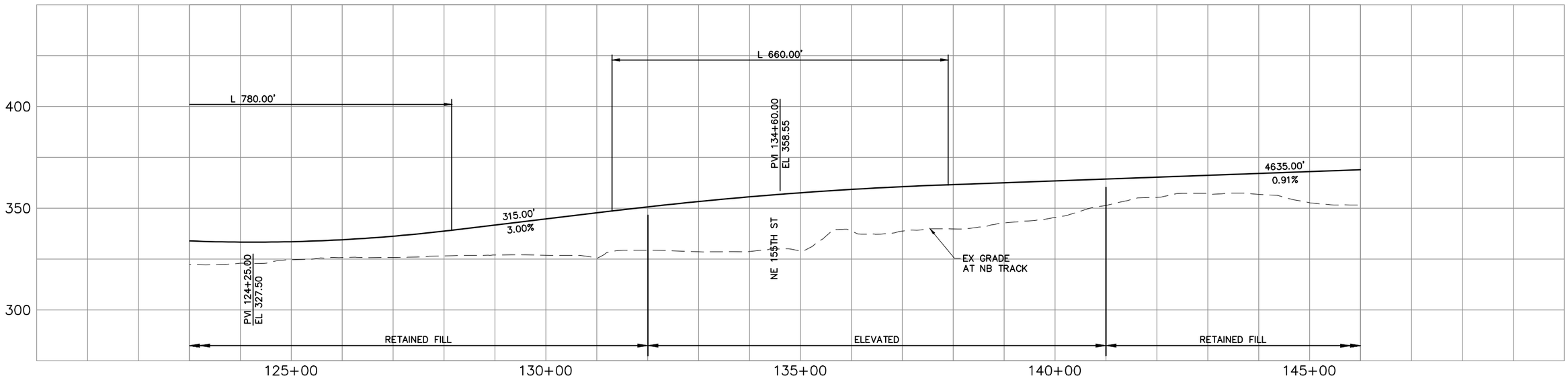


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

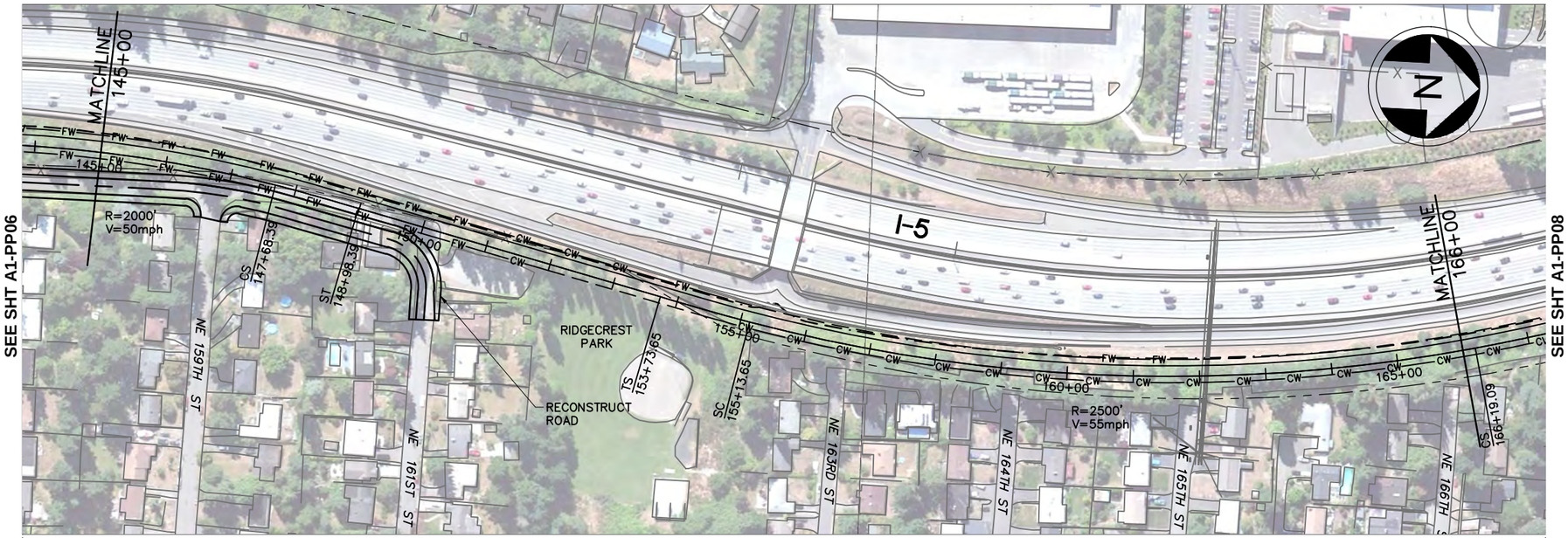
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A1

DWG NO. A1-PP06

SHEET 8 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

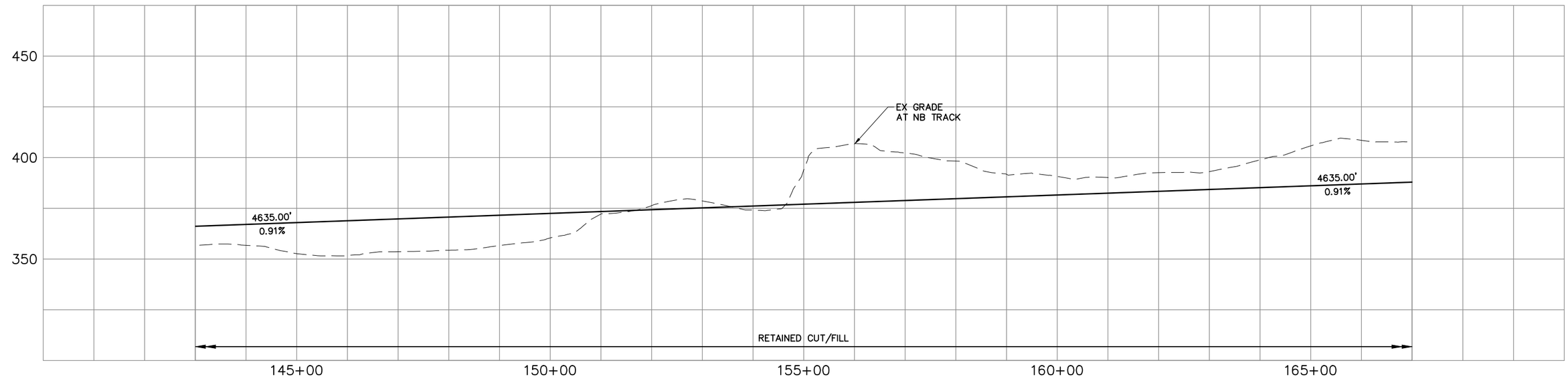


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW — FILL WALL
- CW CW — CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

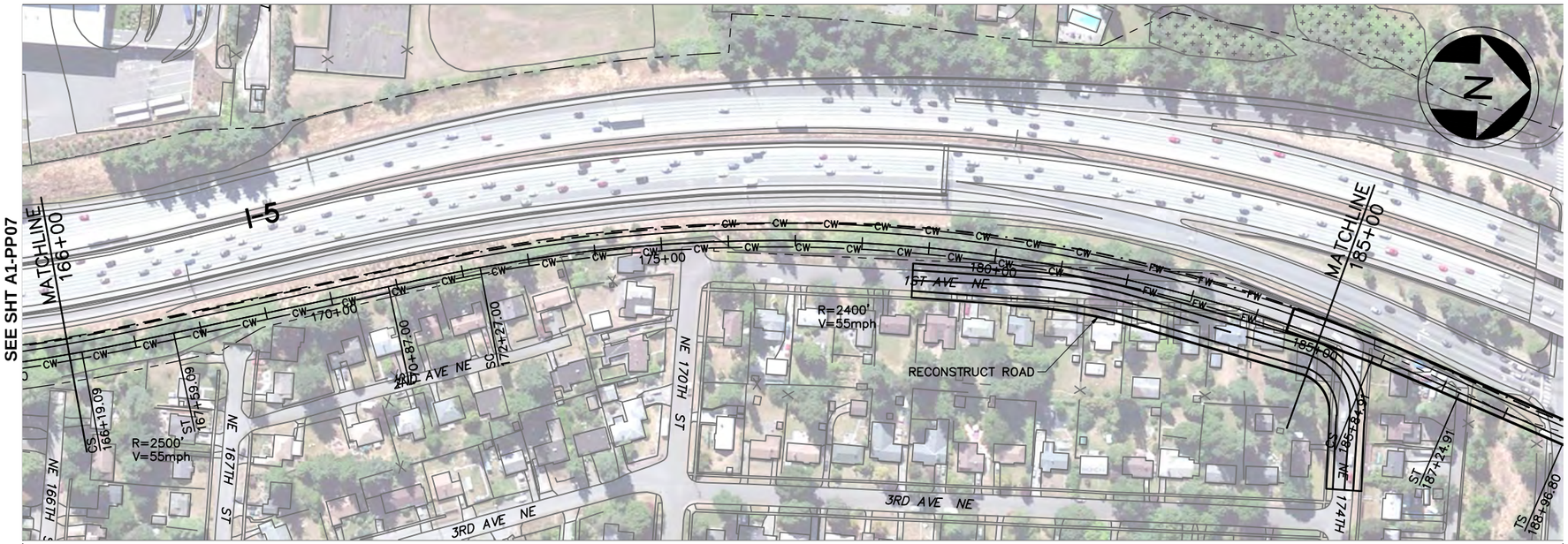
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A1

DWG NO. A1-PP07

SHEET 9 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



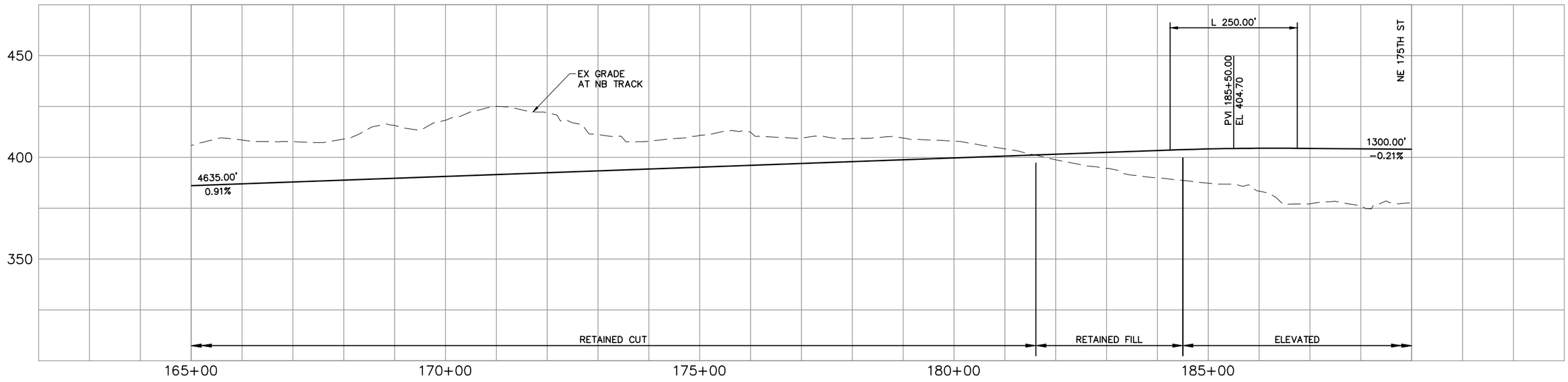
ALTERNATIVES A1, A3, A5, A7, A10, A11

LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW — FILL WALL
- CW CW — CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

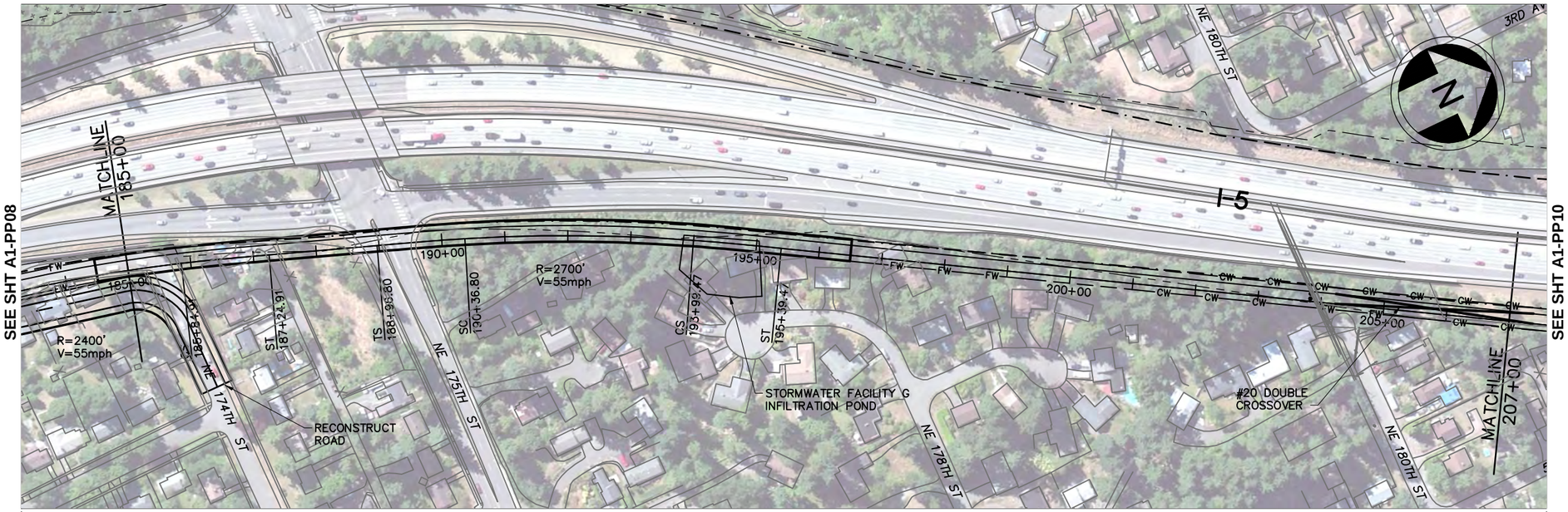
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A1

DWG NO. A1-PP08

SHEET 10 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

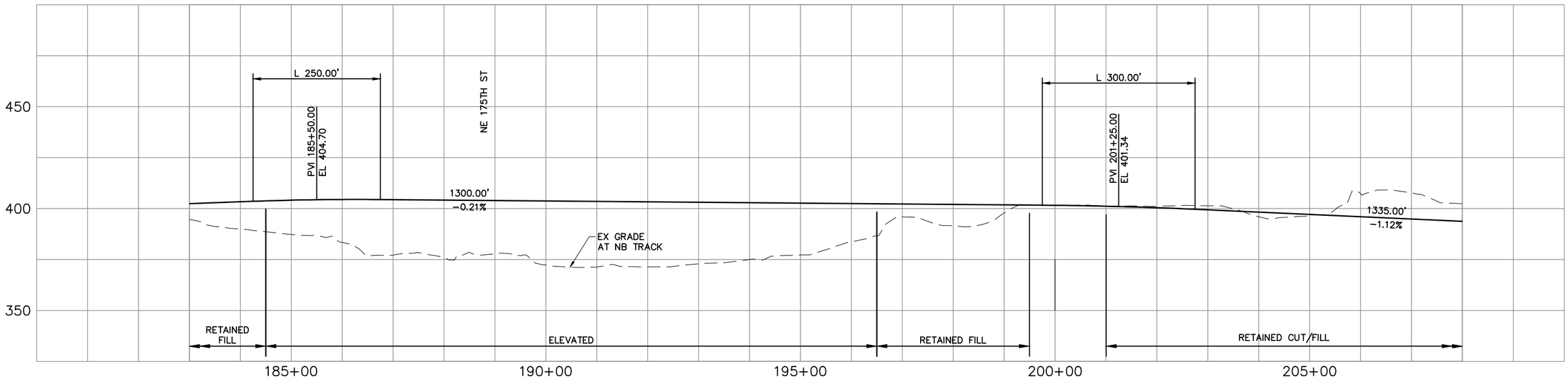


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

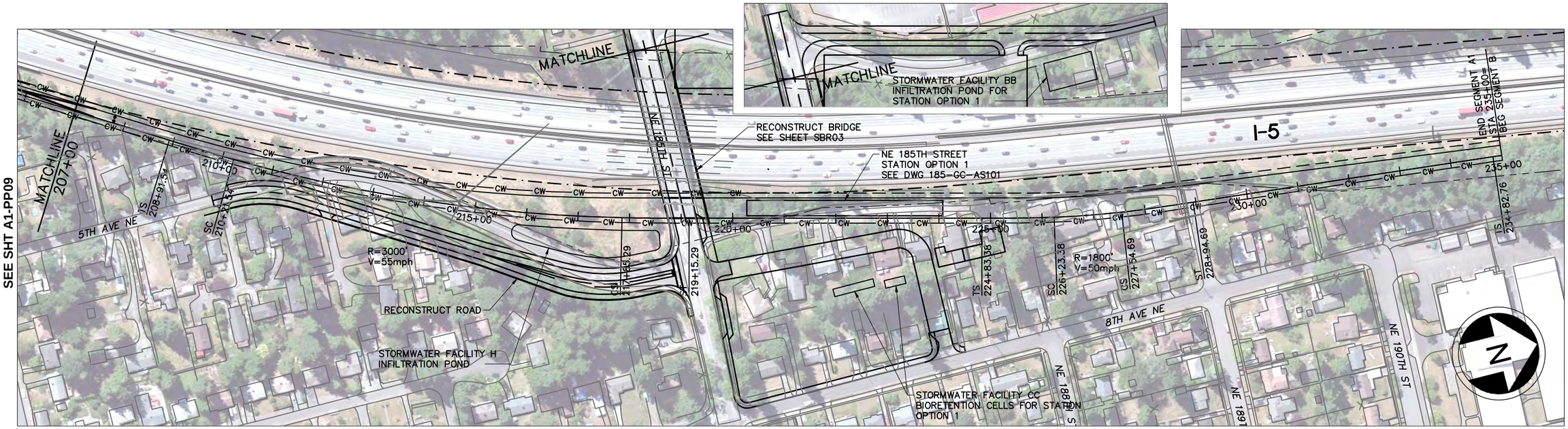
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A1

DWG NO. A1-PP09

SHEET 11 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

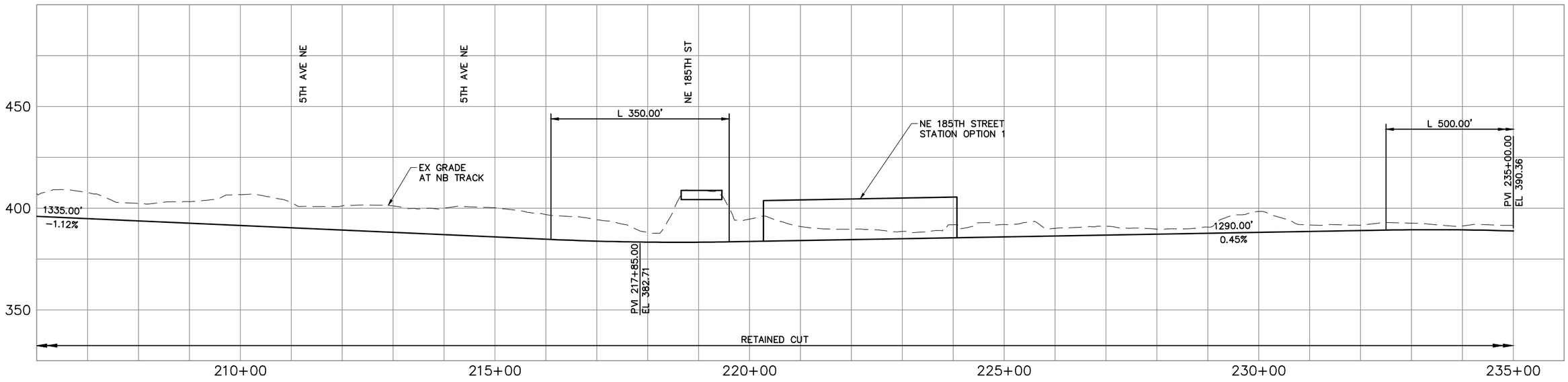


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW — FILL WALL
- CW CW — CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 25' 12.5' 0' 25' 50'



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

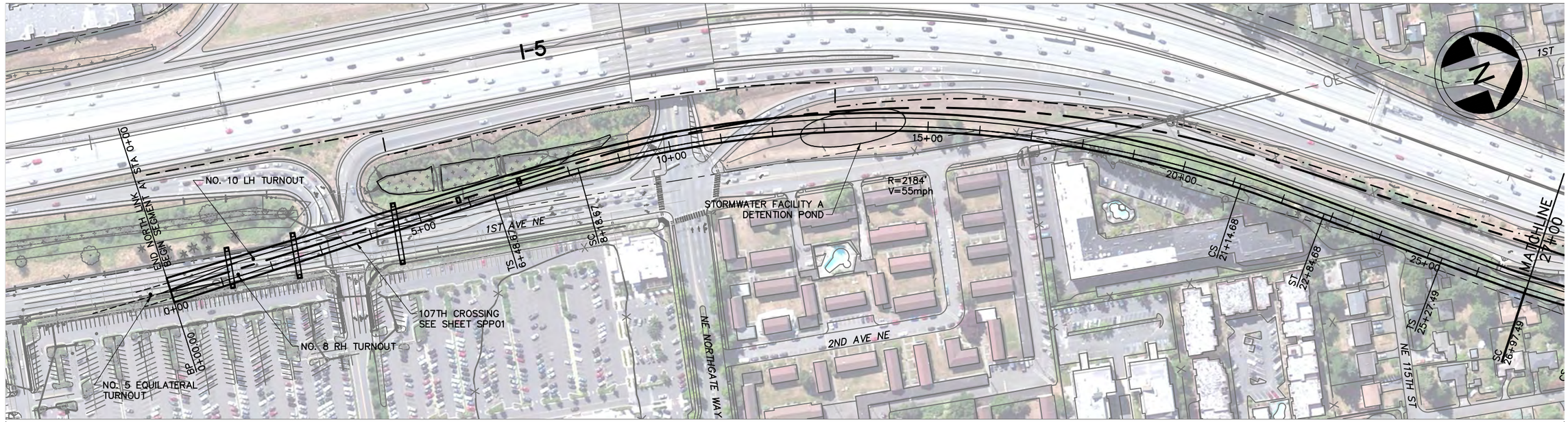
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A1

DWG NO. A1-PP10

SHEET 12 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



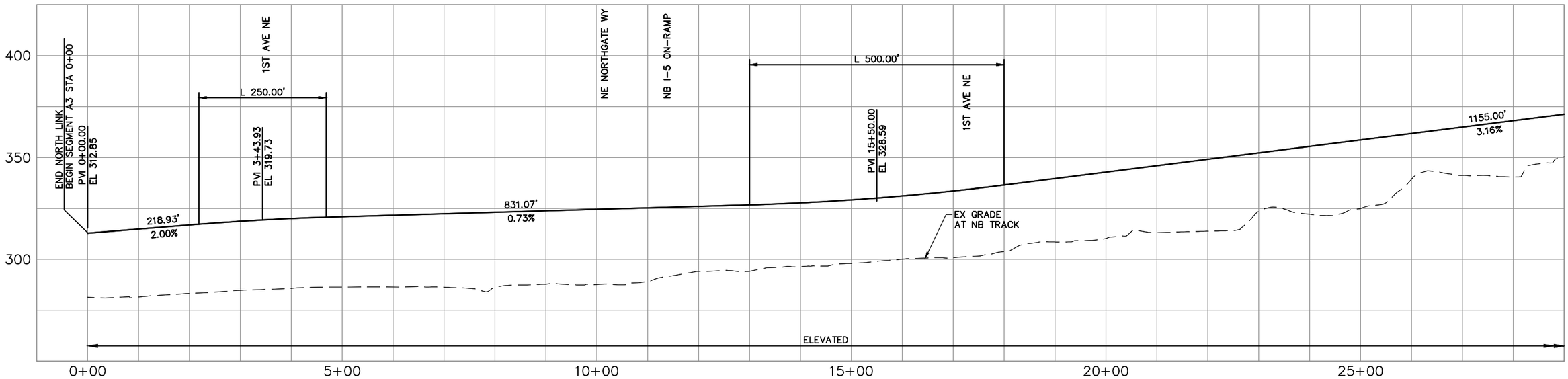
ALTERNATIVES A3, A7, A11

LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW—FW— FILL WALL
- CW—CW— CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

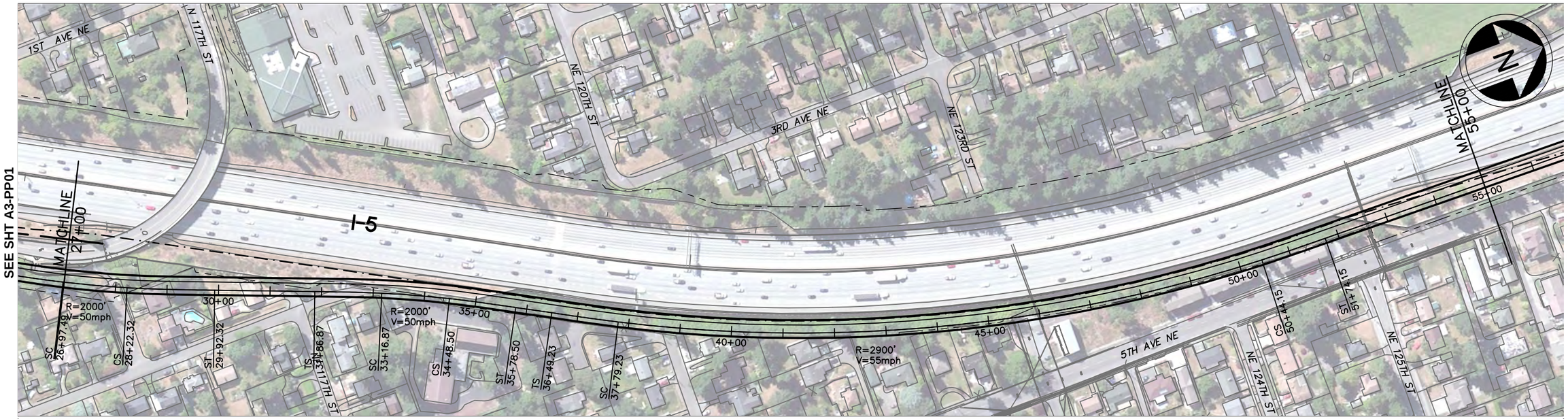
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A3

DWG NO. A3-PP01

SHEET 13 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

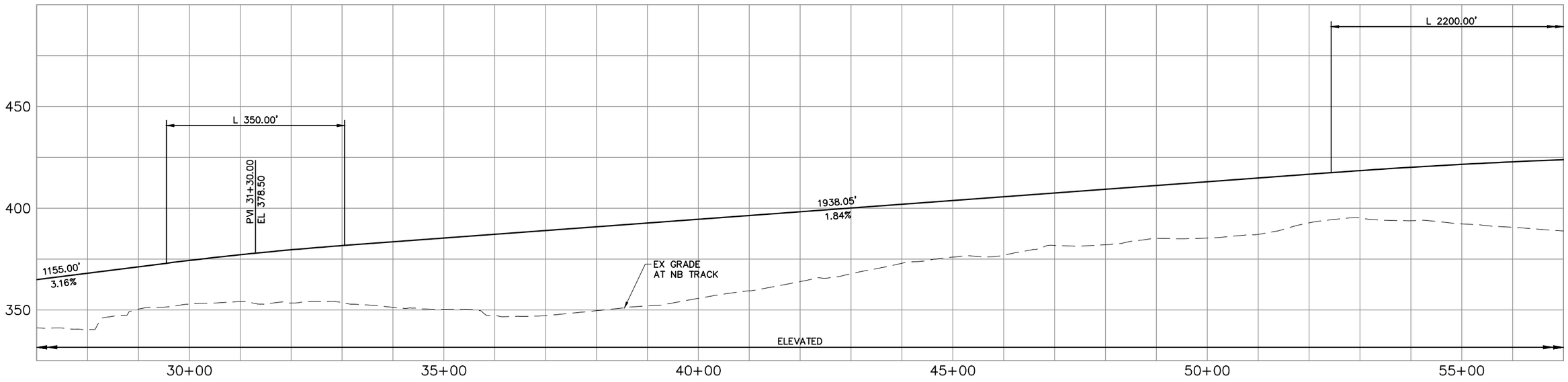


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW—FW FILL WALL
- CW—CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

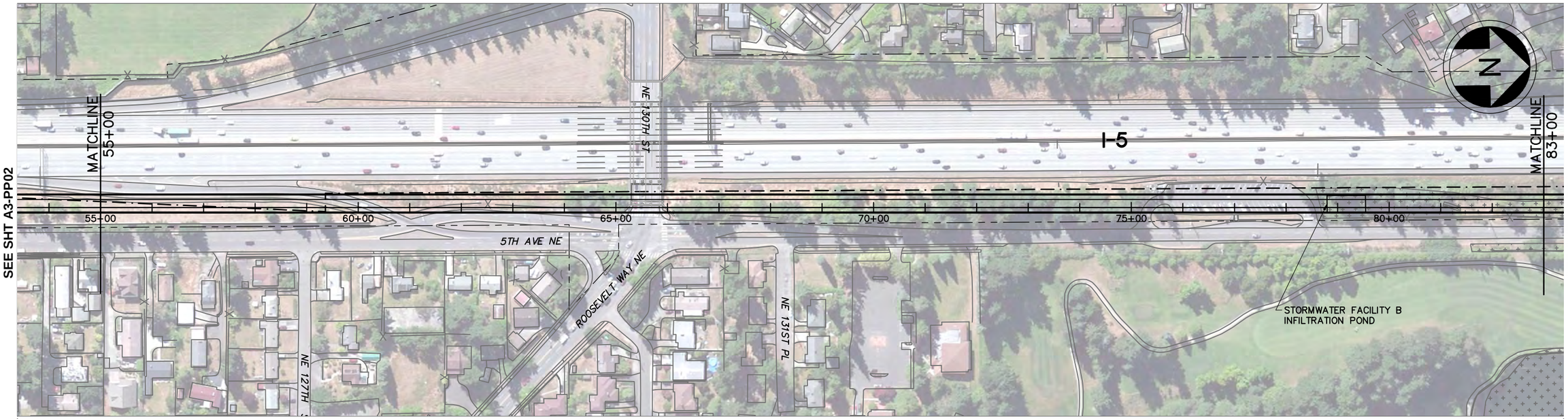
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A3

DWG NO. A3-PP02

SHEET 14 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

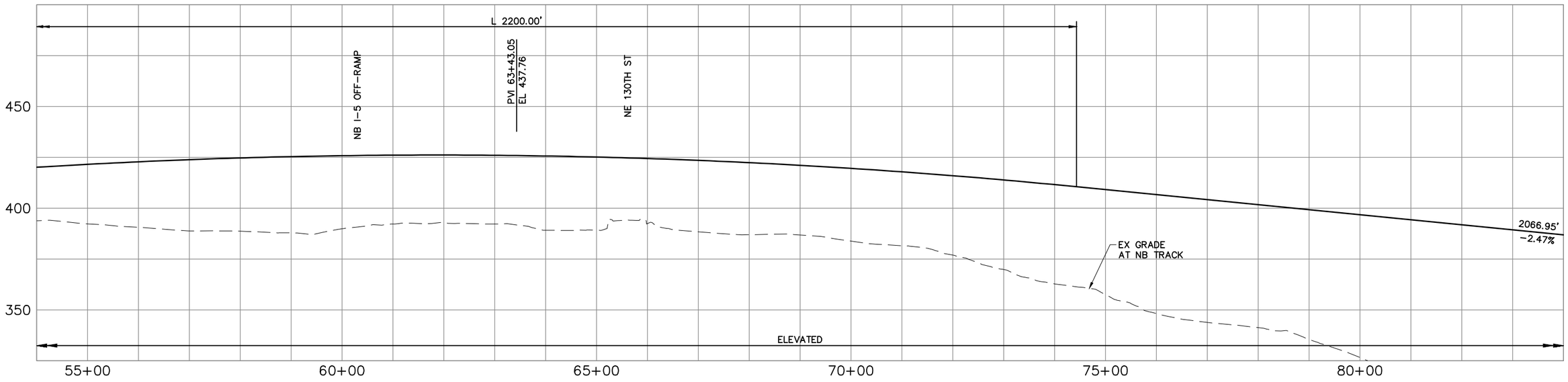


LEGEND:

- NB TRACK CENTERLINE (5+00)
- STRUCTURE
- FW—FW FILL WALL
- CW—CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 25' 12.5' 0' 25' 50'



\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\A-Segment\NCTP-A3-PP03.dwg Oct 08, 2012 - 12:31pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

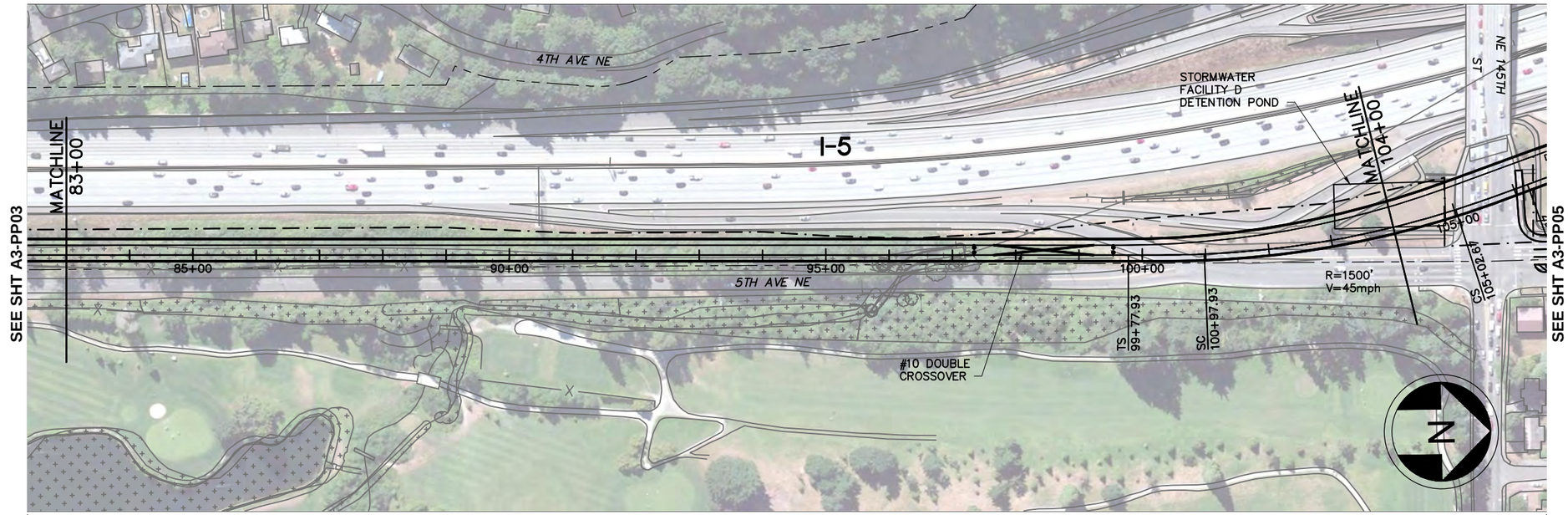
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A3

DWG NO. A3-PP03

SHEET 15 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



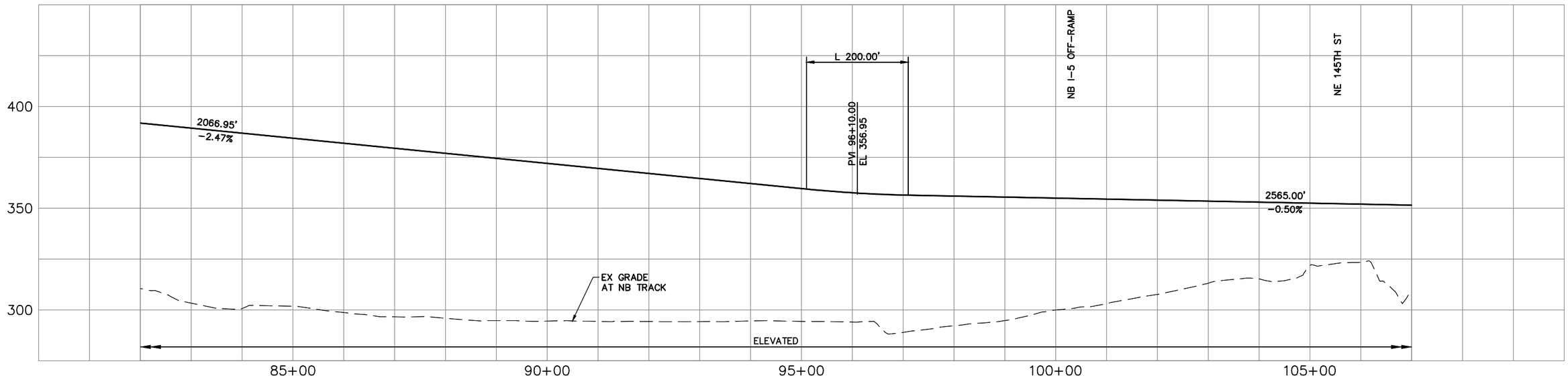
ALTERNATIVES A3, A11

LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW—FW FILL WALL
- CW—CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

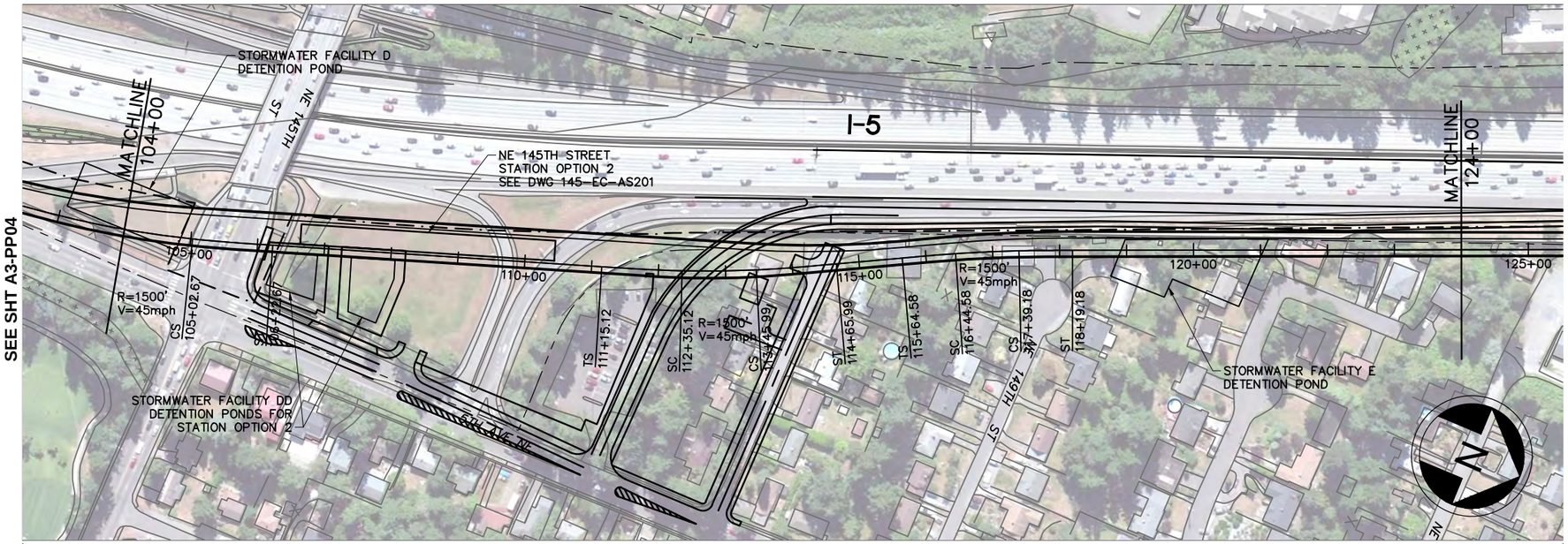
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A3

DWG NO. A3-PP04

SHEET 16 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

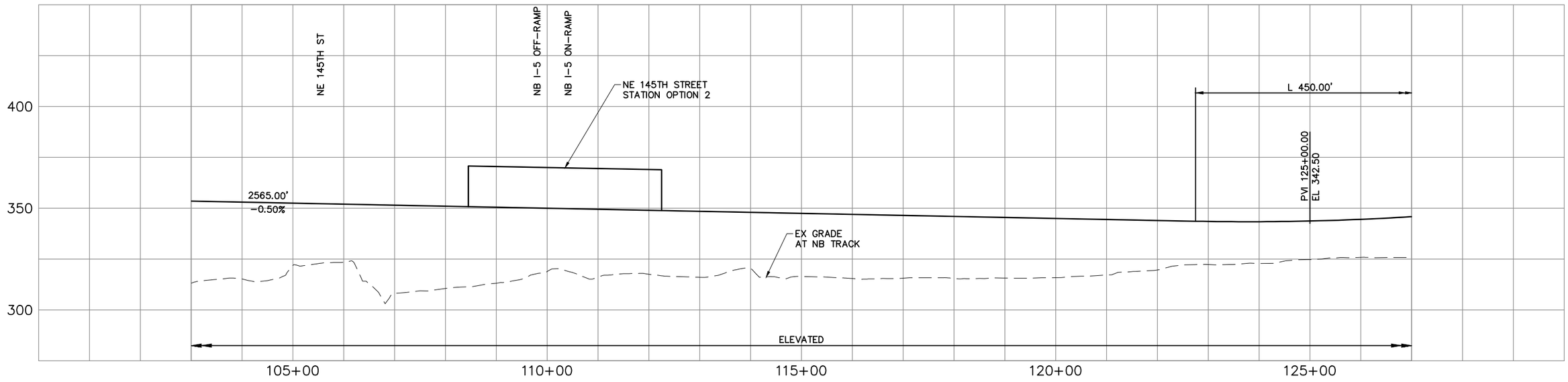


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW—FW FILL WALL
- CW—CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 25' 12.5' 0' 25' 50'



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

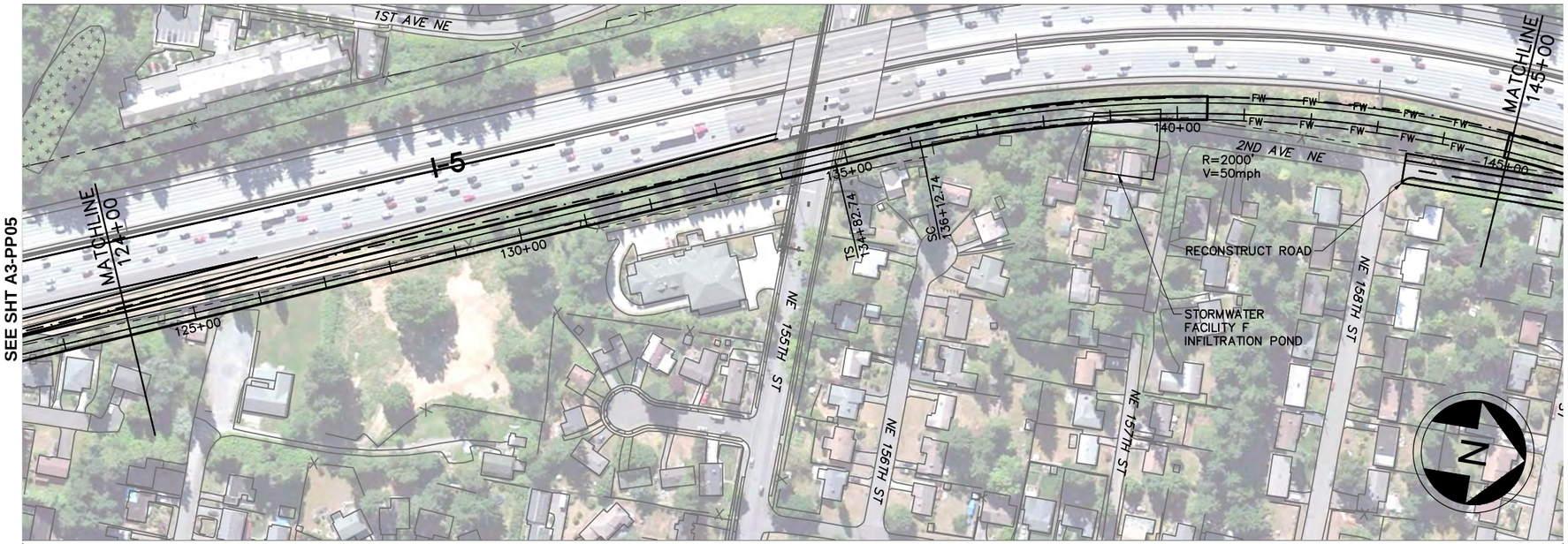
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A3

DWG NO. A3-PP05

SHEET 17 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SEE SHT A3-PP05

SEE SHT A1-PP07

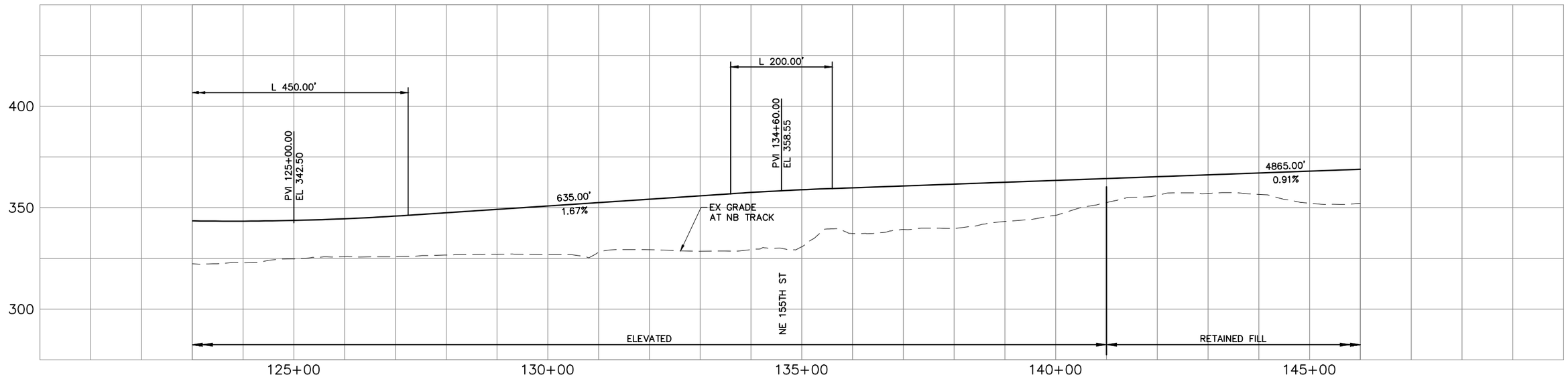
ALTERNATIVES A3, A11

LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW — FILL WALL
- CW CW — CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

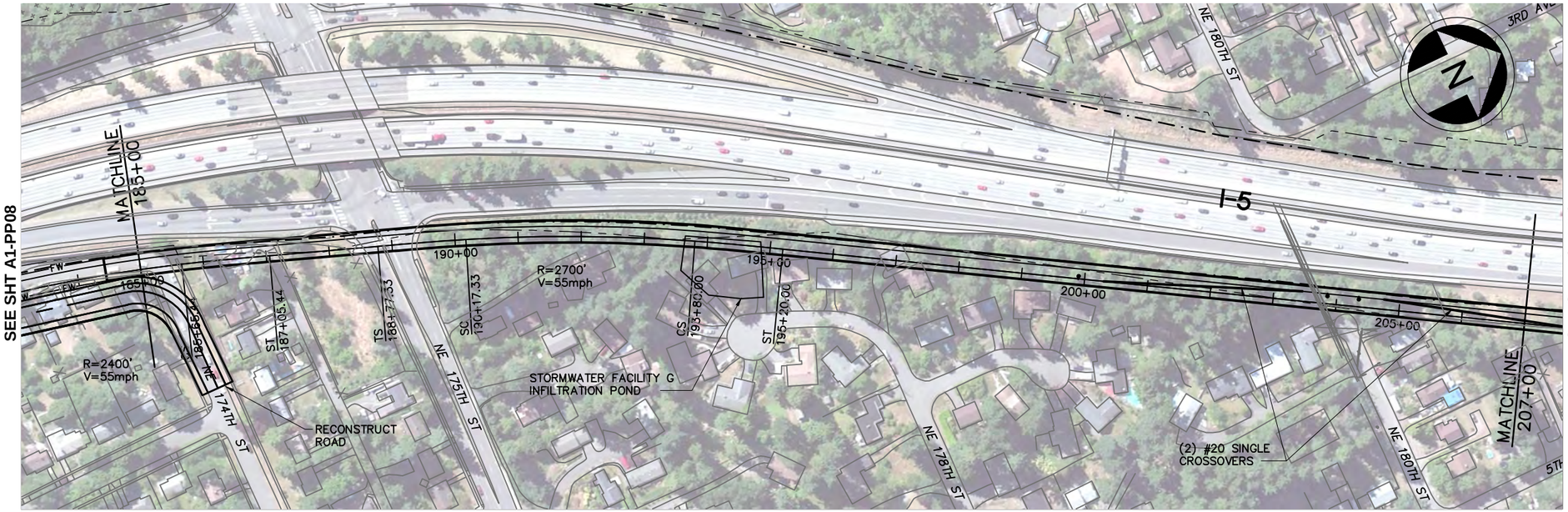
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A3

DWG NO. A3-PP06

SHEET 18 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

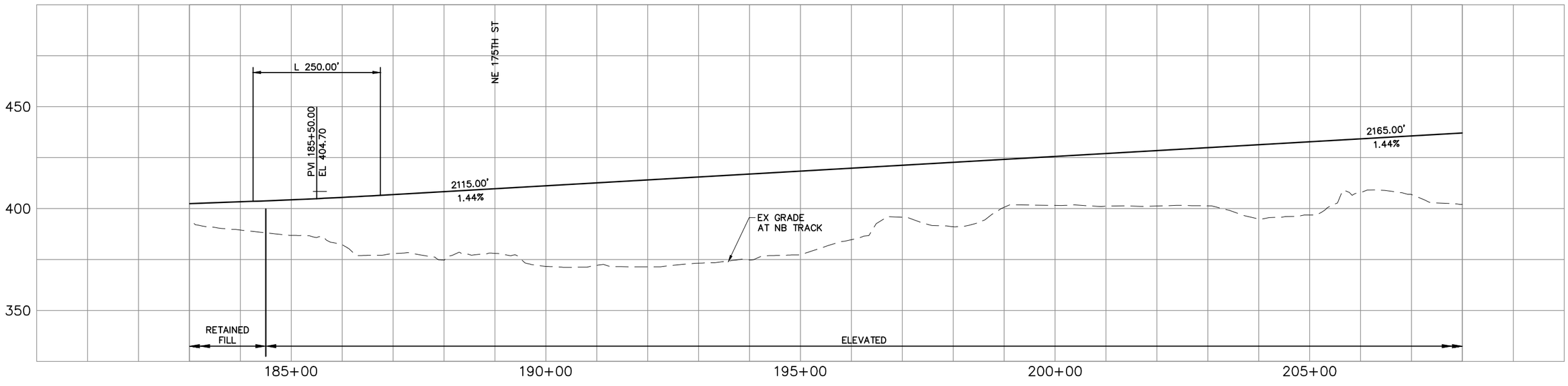


LEGEND:

- 5+00 — NB TRACK CENTERLINE
- STRUCTURE
- FW FW — FILL WALL
- CW CW — CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' — HORIZONTAL SCALE

25' 12.5' 0' 25' 50' — VERTICAL SCALE



SoundTransit

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A3

DWG NO. A3-PP09

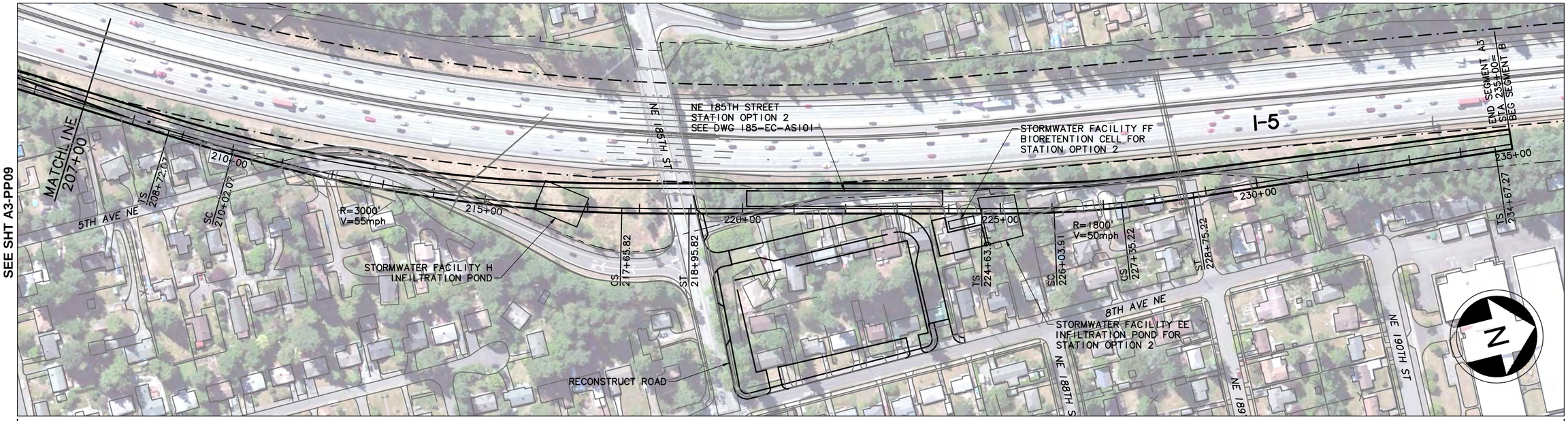
SHEET 19 OF 142

REV. NO. 2

\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\A-Segment\NCTP-A3-PP09.dwg Oct 08, 2012 - 12:35pm

SOUND TRANSIT LYNNWOOD LINK EXTENSION

SEE SHT A3-PP09



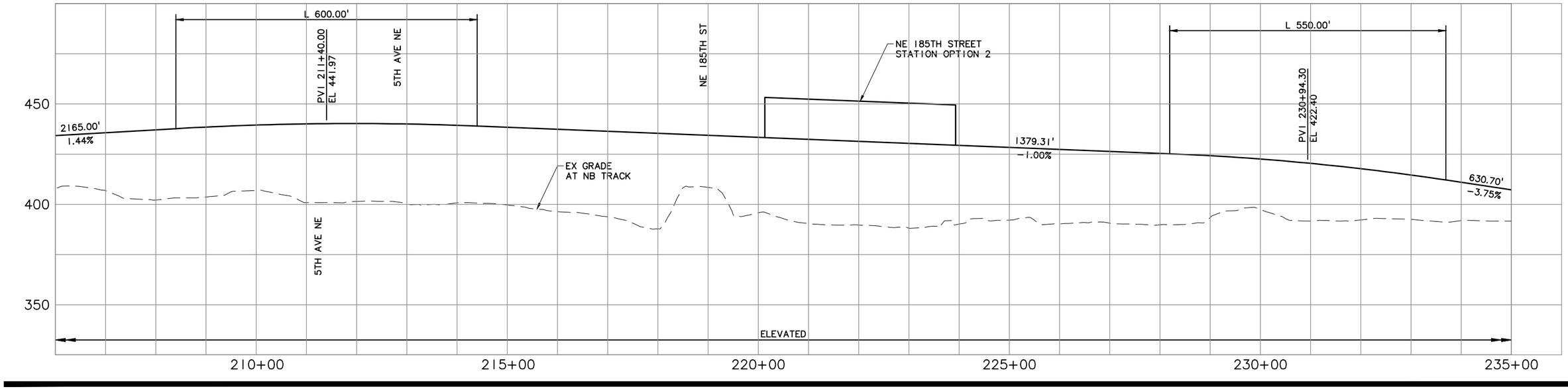
ALTERNATIVES A3, A7, A11

LEGEND:

- NB TRACK CENTERLINE
- 5+00 STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

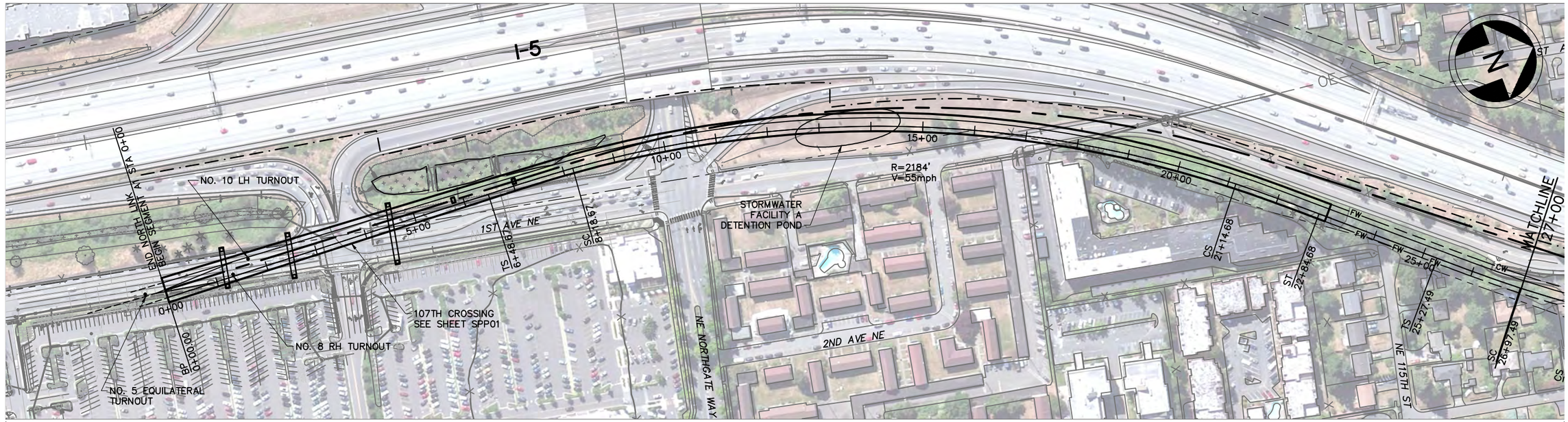
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A3

DWG NO. A3-PP10

SHEET 20 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

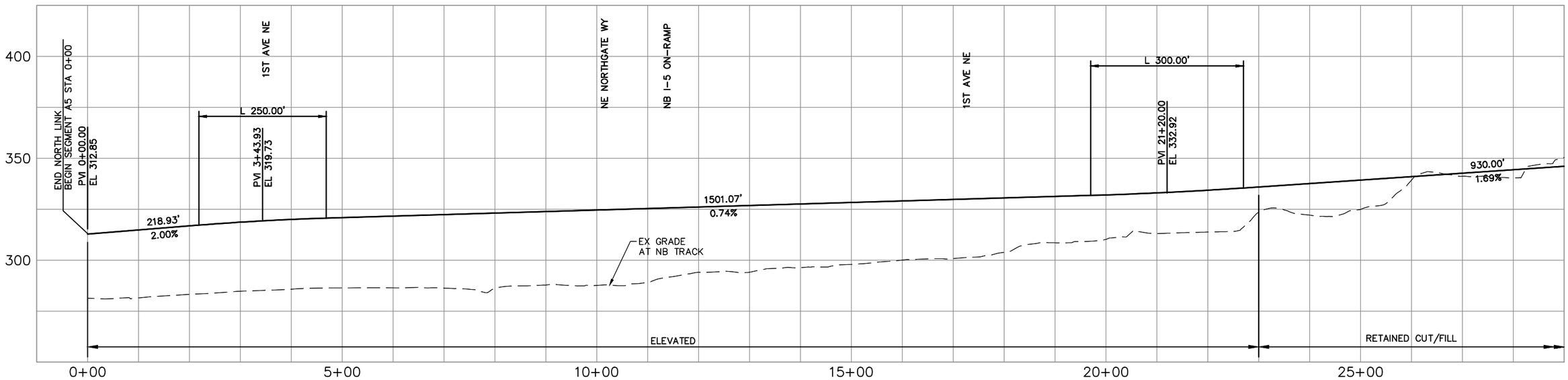


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A5

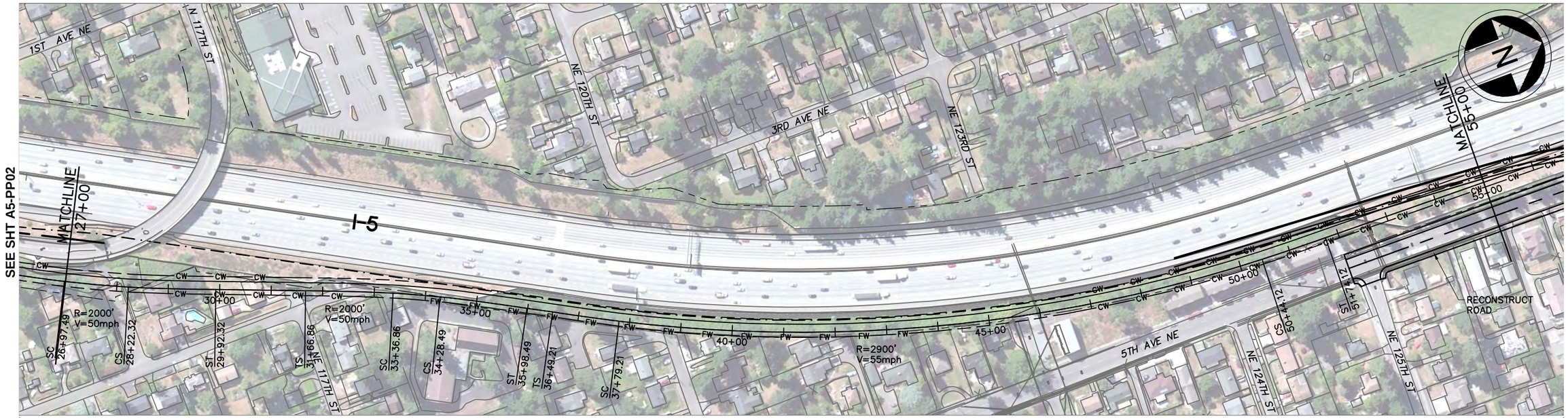
DWG NO. A5-PP01

SHEET 21 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

See Preferred Alternative Sheet 4 for associated street improvements



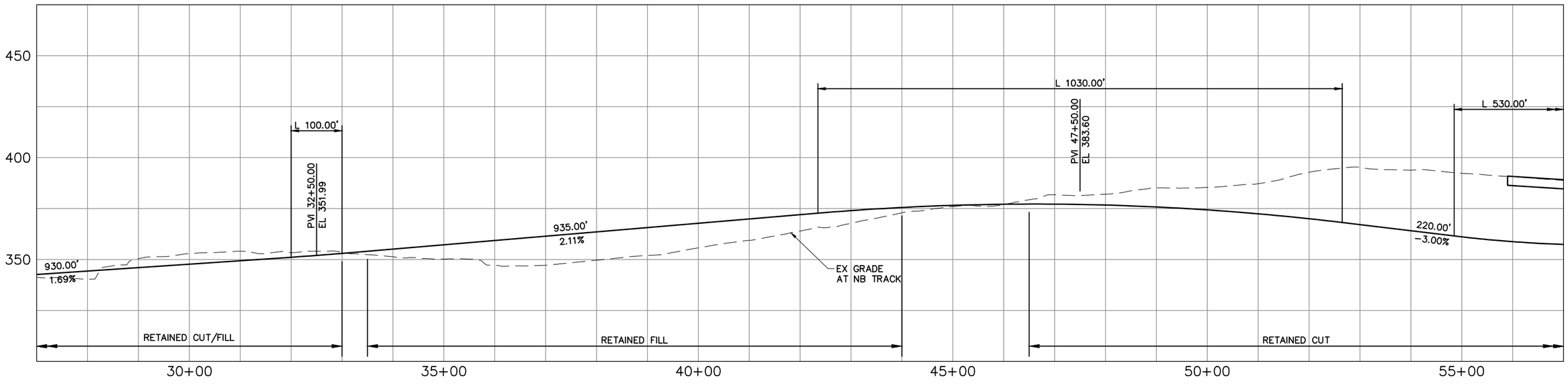
ALTERNATIVES A5, A10

LEGEND:

- NB TRACK CENTERLINE (5+00)
- STRUCTURE
- FILL WALL (FW)
- CUT WALL (CW)
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

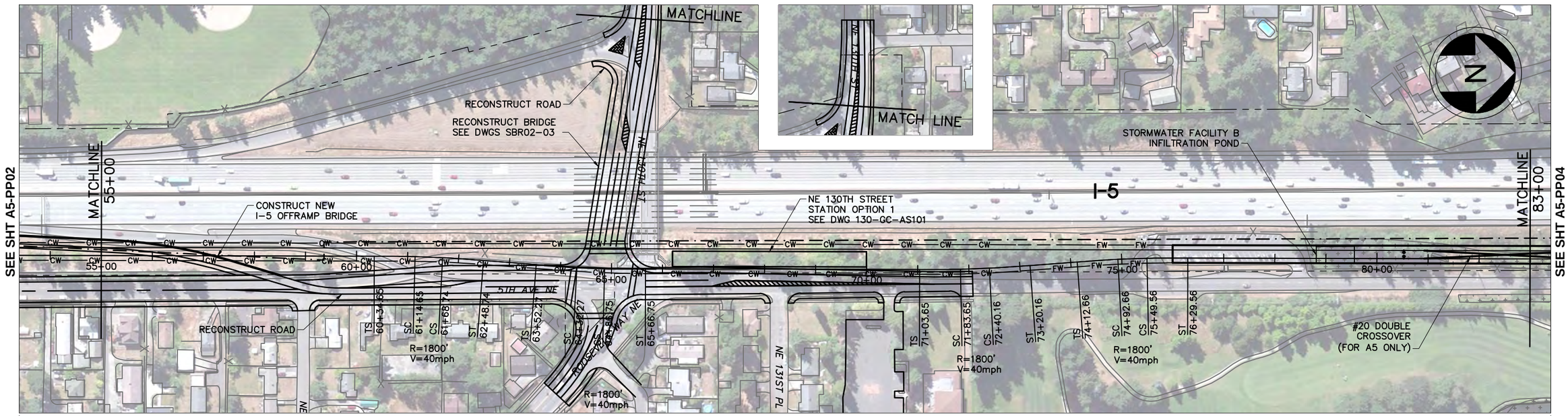
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A5

DWG NO. A5-PP02

SHEET 22 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

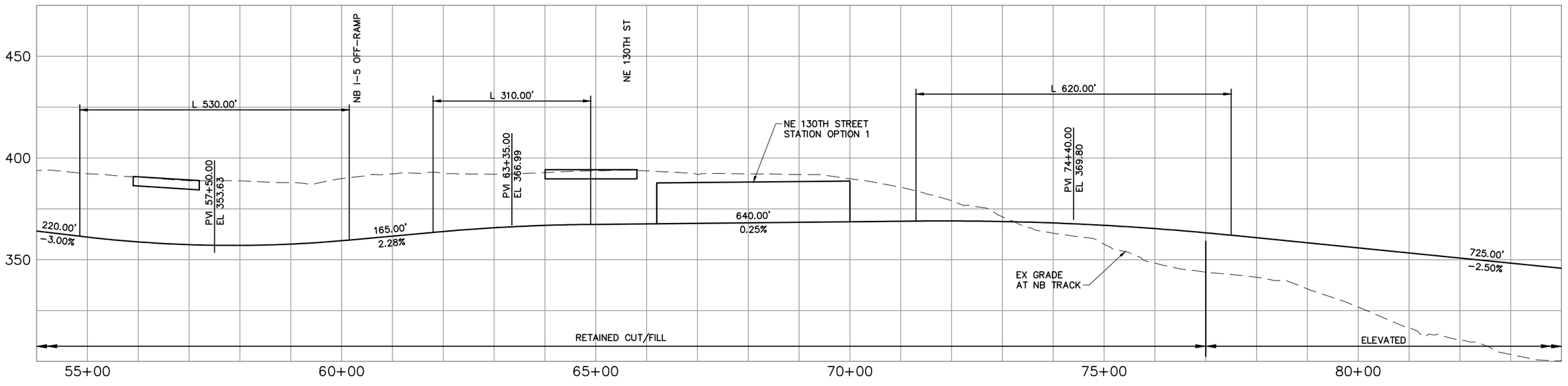


LEGEND:

- NB TRACK CENTERLINE (5+00)
- STRUCTURE
- FILL WALL (FW)
- CUT WALL (CW)
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

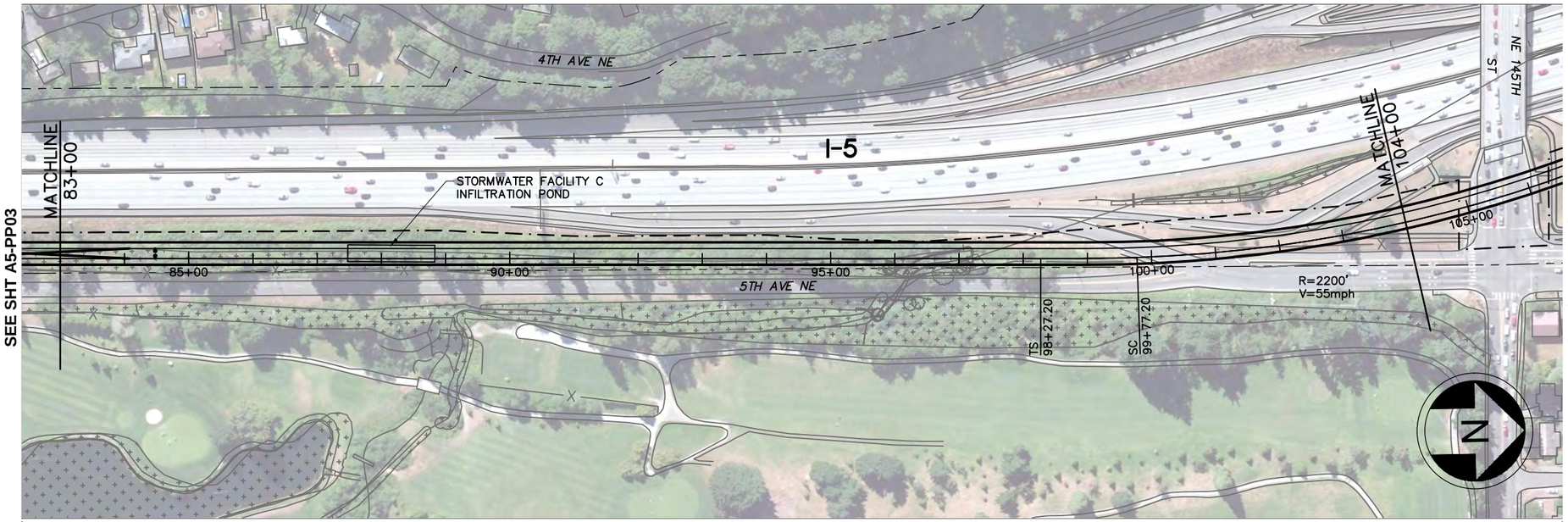
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A5

DWG NO. A5-PP03

SHEET 23 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



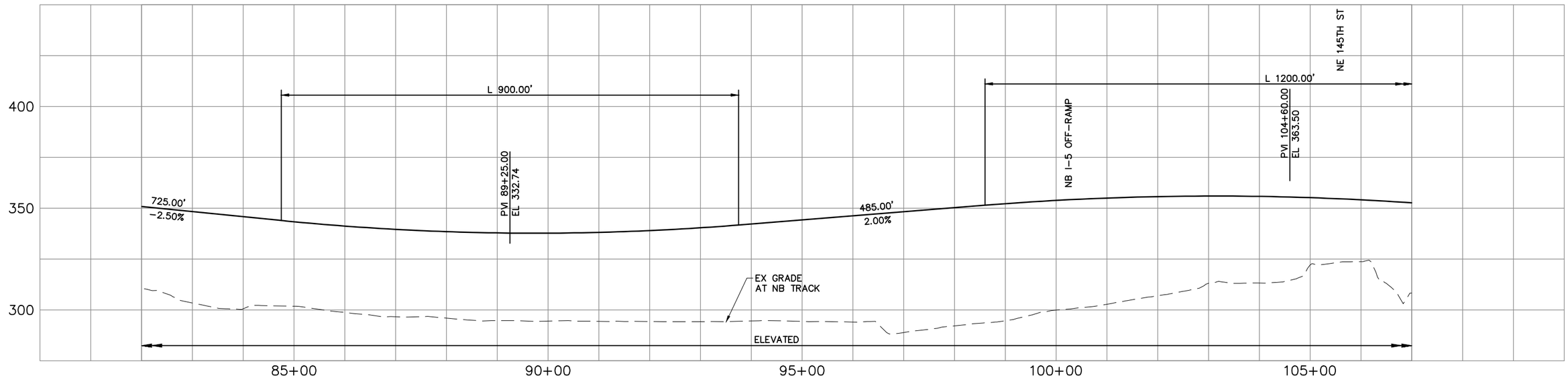
ALTERNATIVE A5

LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW—FW— FILL WALL
- CW—CW— CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A5

DWG NO. A5-PP04

SHEET 24 OF 142

REV. NO. 2

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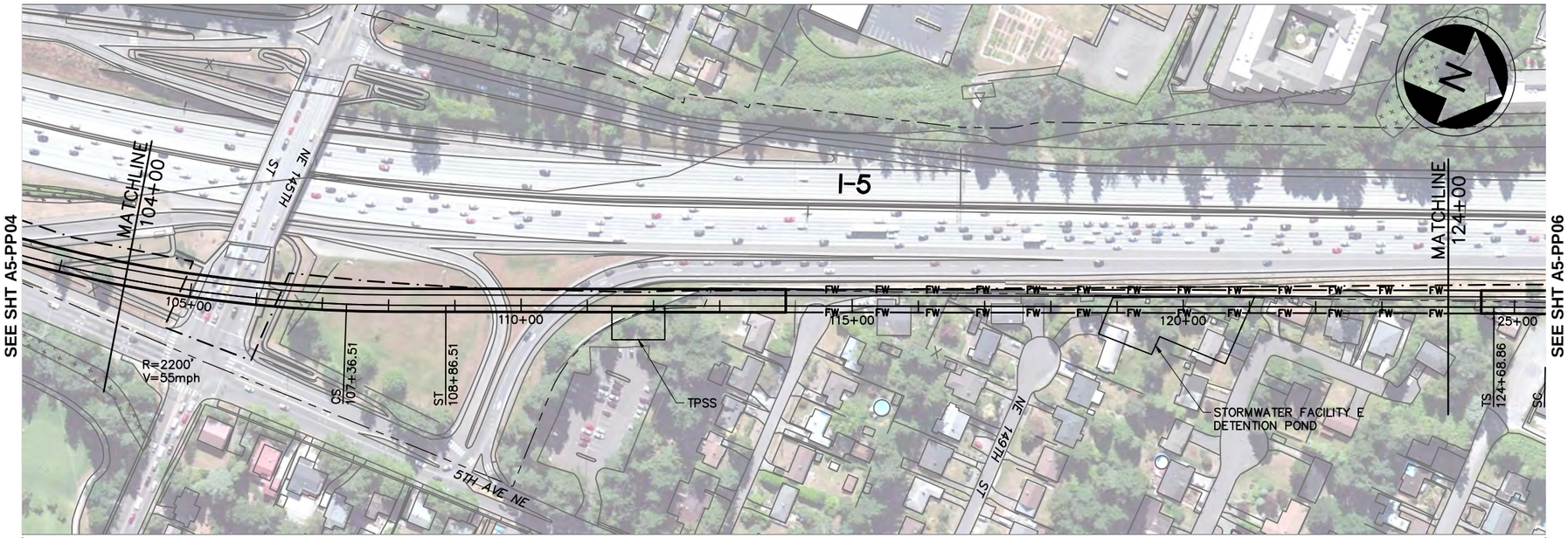
SOUND TRANSIT LYNNWOOD LINK EXTENSION

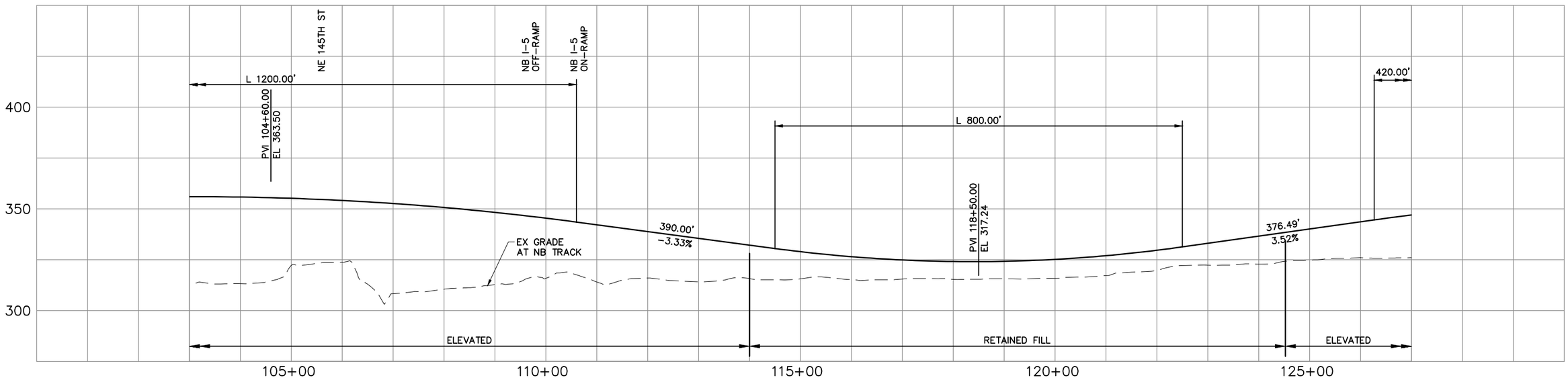


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW — FILL WALL
- CW CW — CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

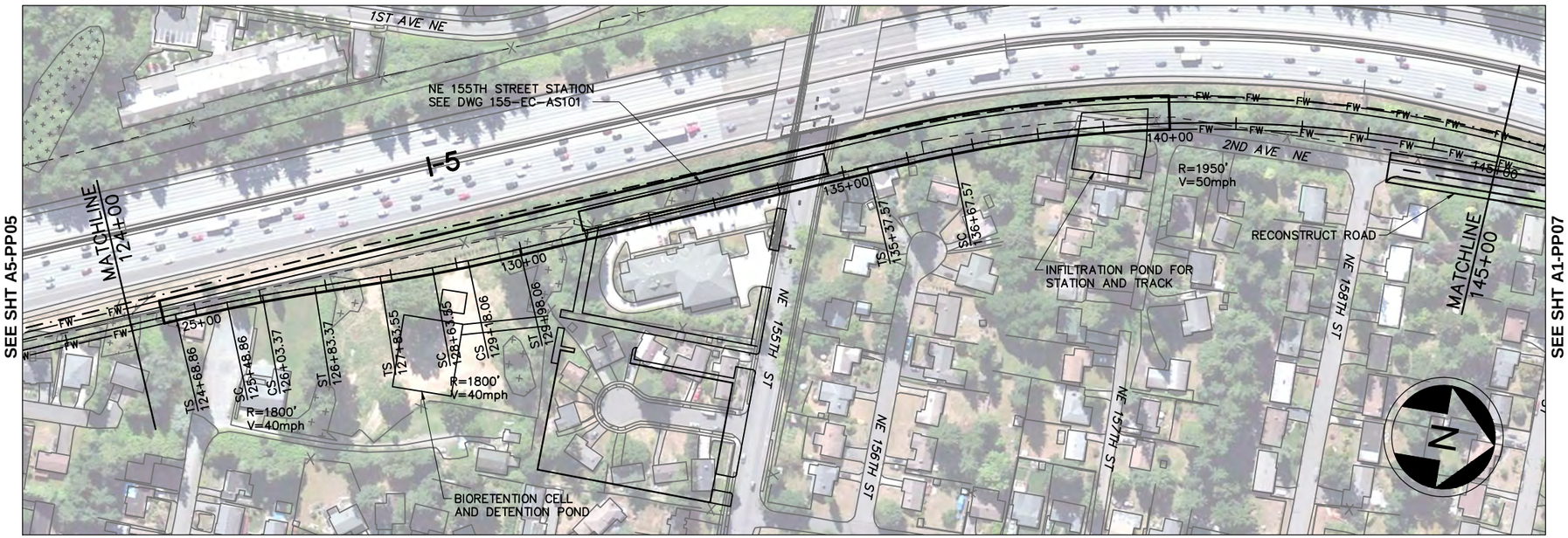
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A5

DWG NO. A5-PP05

SHEET 25 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

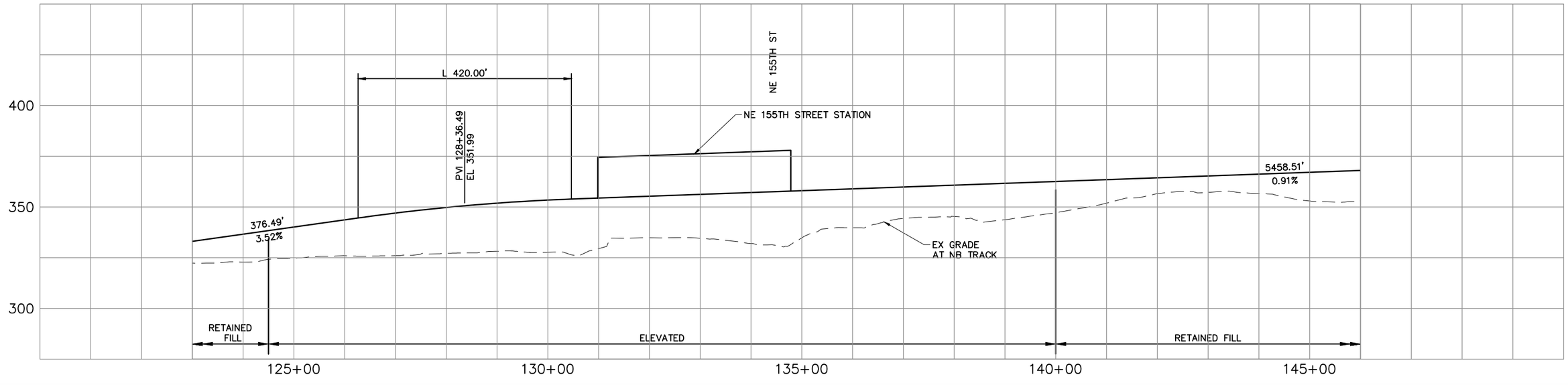


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

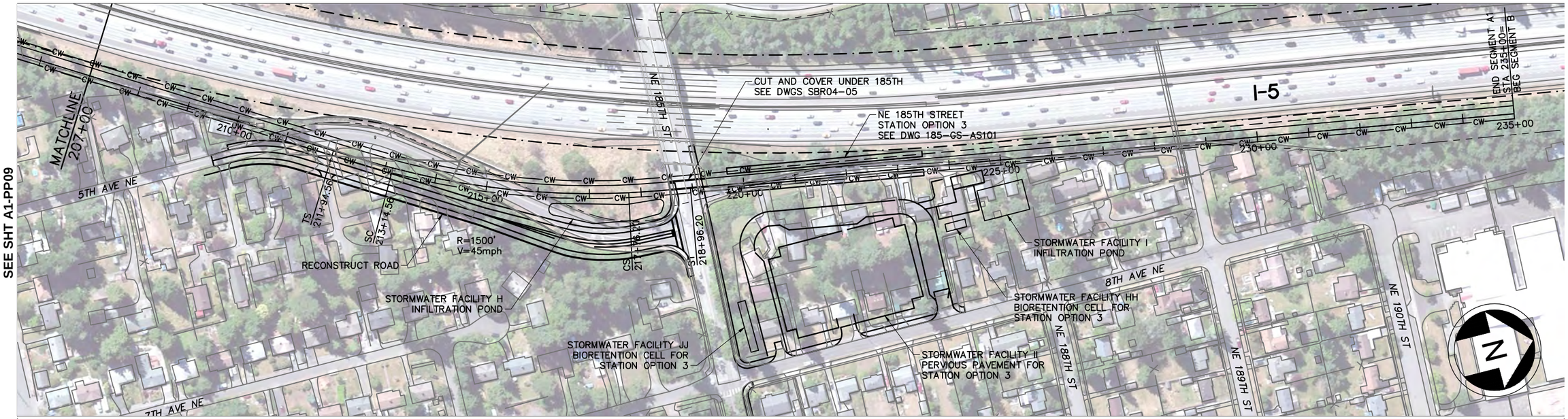
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A5

DWG NO. A5-PP06

SHEET 26 OF 142

REV. NO. 3

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SEE SHT A1-PP09

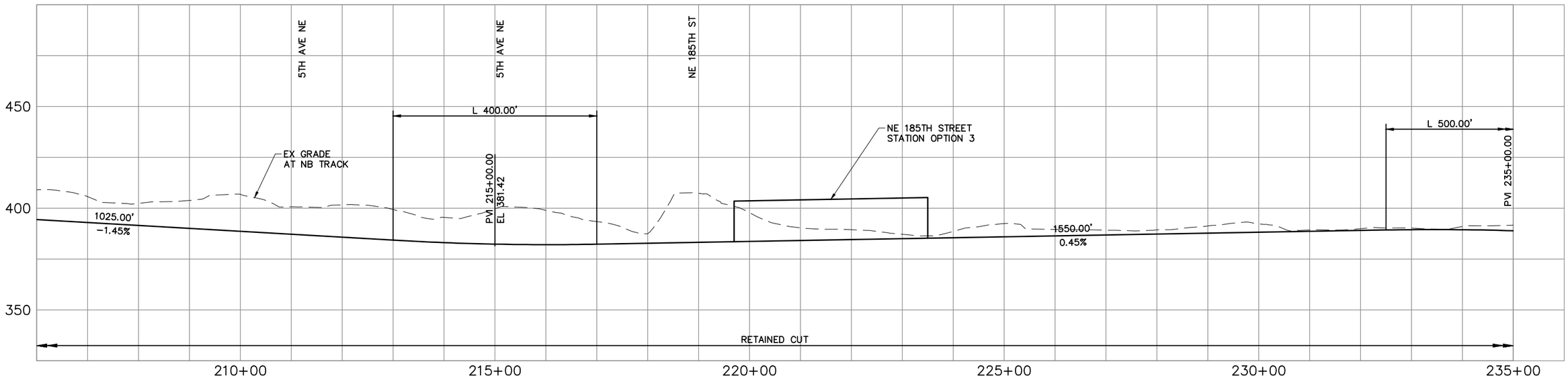
ALTERNATIVES A5, A10

LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW — FILL WALL
- CW CW — CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\A-Segment\NCTP-A5-PP10.dwg Oct 08, 2012 - 12:44pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

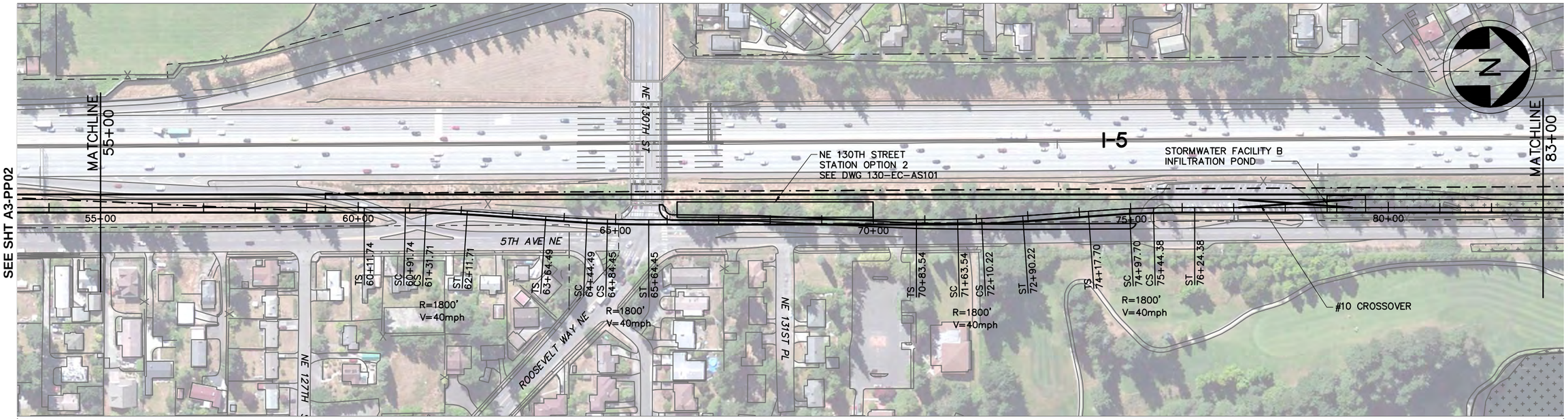
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A5

DWG NO. A5-PP10

SHEET 27 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

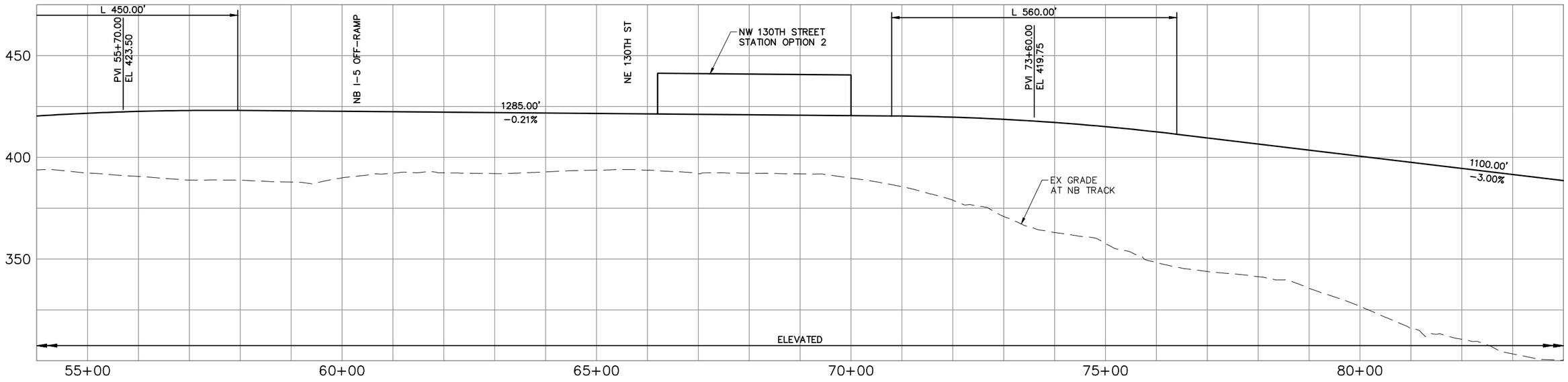


LEGEND:

- NB TRACK CENTERLINE (5+00)
- STRUCTURE
- FILL WALL (FW)
- CUT WALL (CW)
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\A-Segment\NCTP-A7-PP03.dwg Oct 08, 2012 - 12:45pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

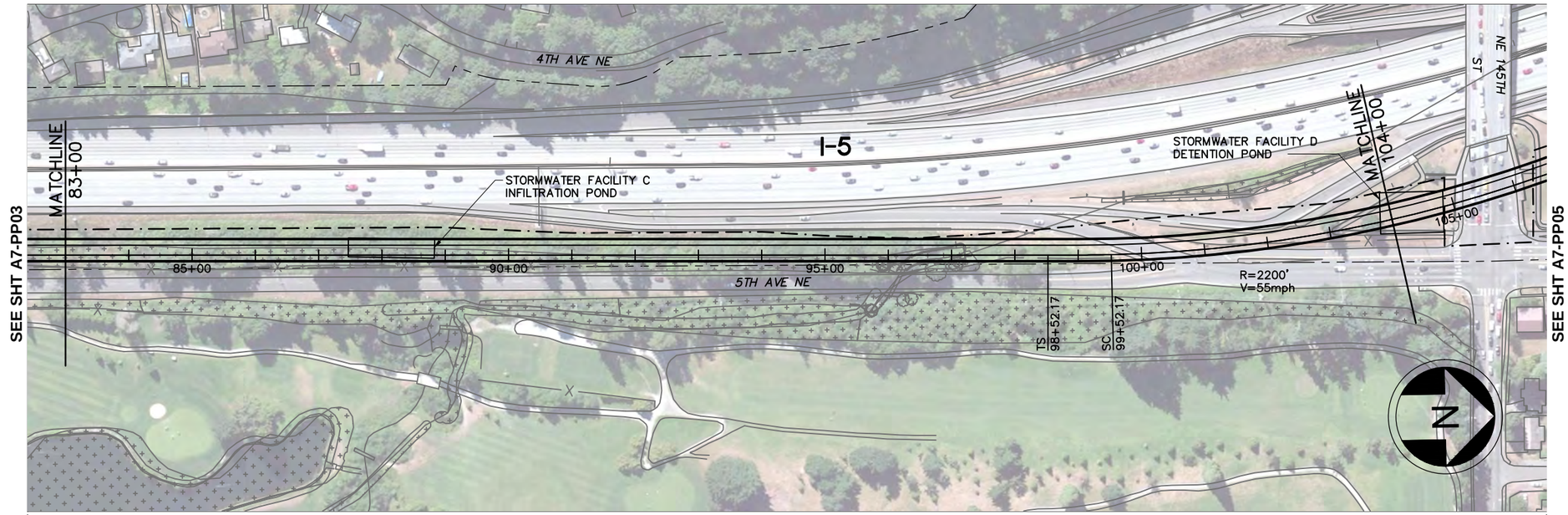
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A7

DWG NO. A7-PP03

SHEET 28 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

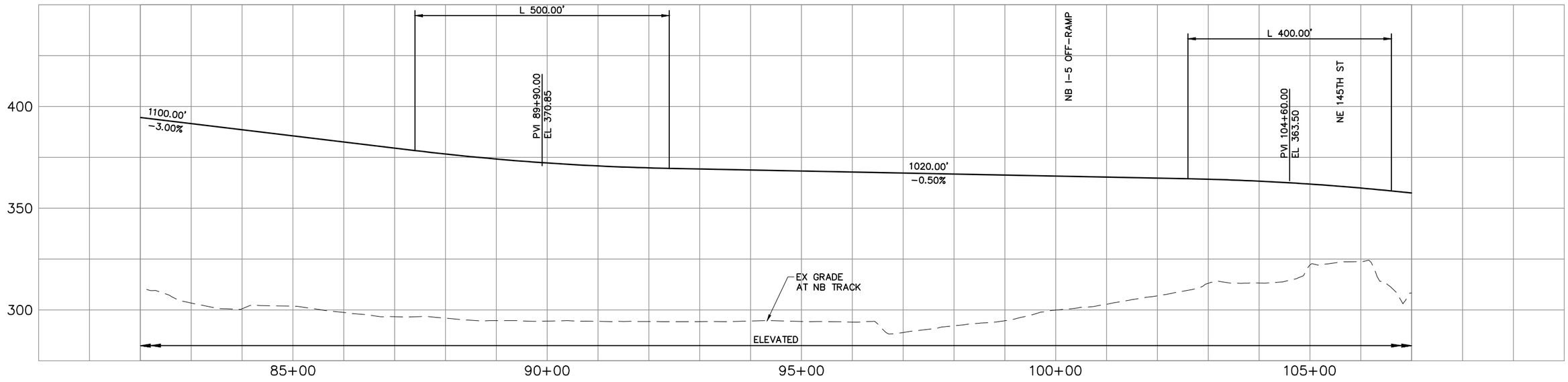


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 25' 12.5' 0' 25' 50'



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

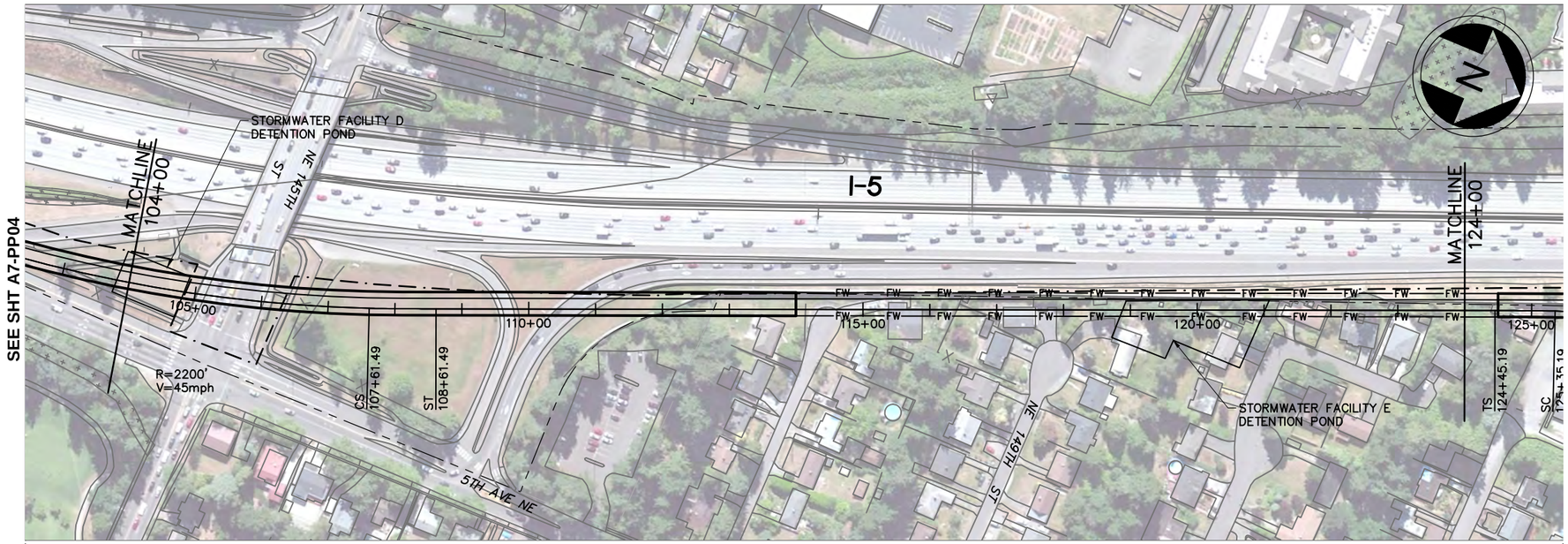
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A7

DWG NO. A7-PP04

SHEET 29 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

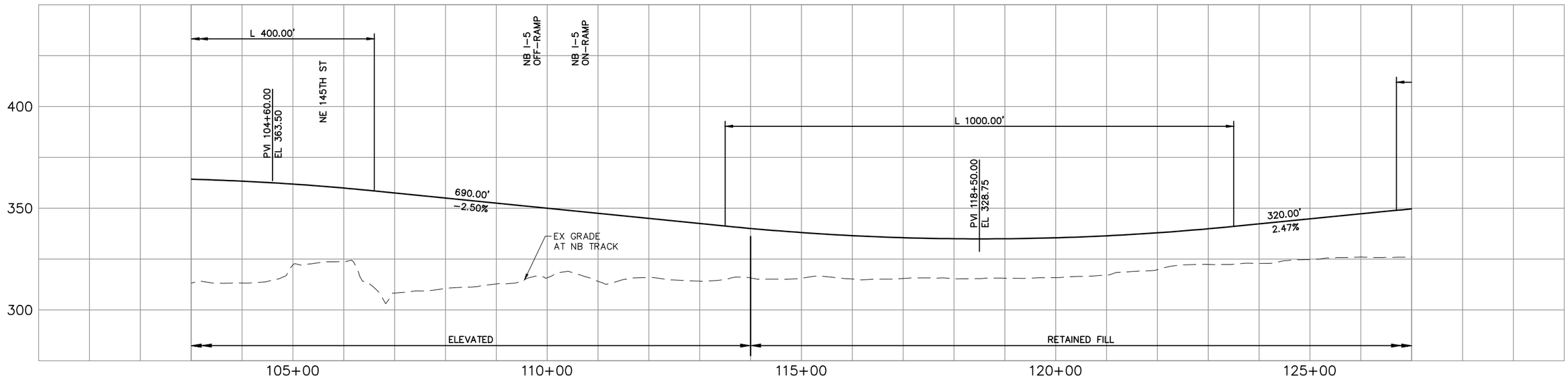


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

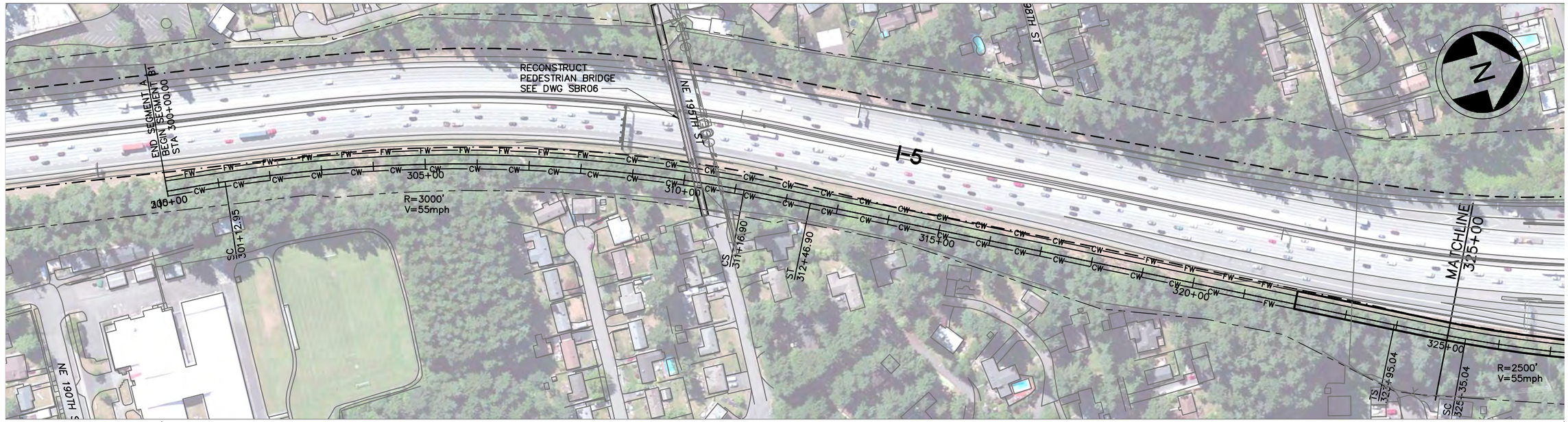
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. A7

DWG NO. A7-PP05

SHEET 30 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



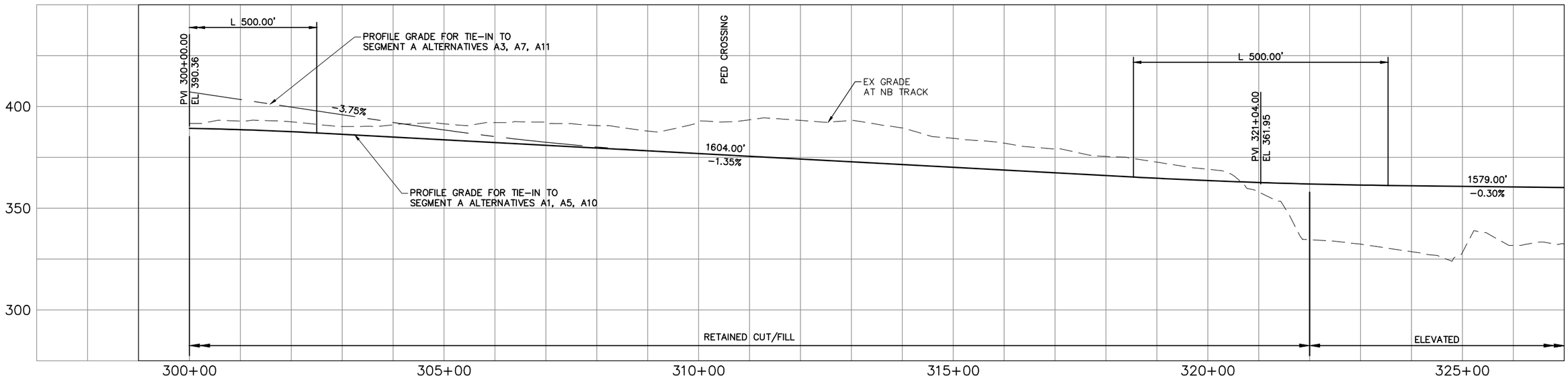
ALTERNATIVES B1, B2, B2A

LEGEND:

- NB TRACK CENTERLINE
- STRUCTURE
- FILL WALL
- CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

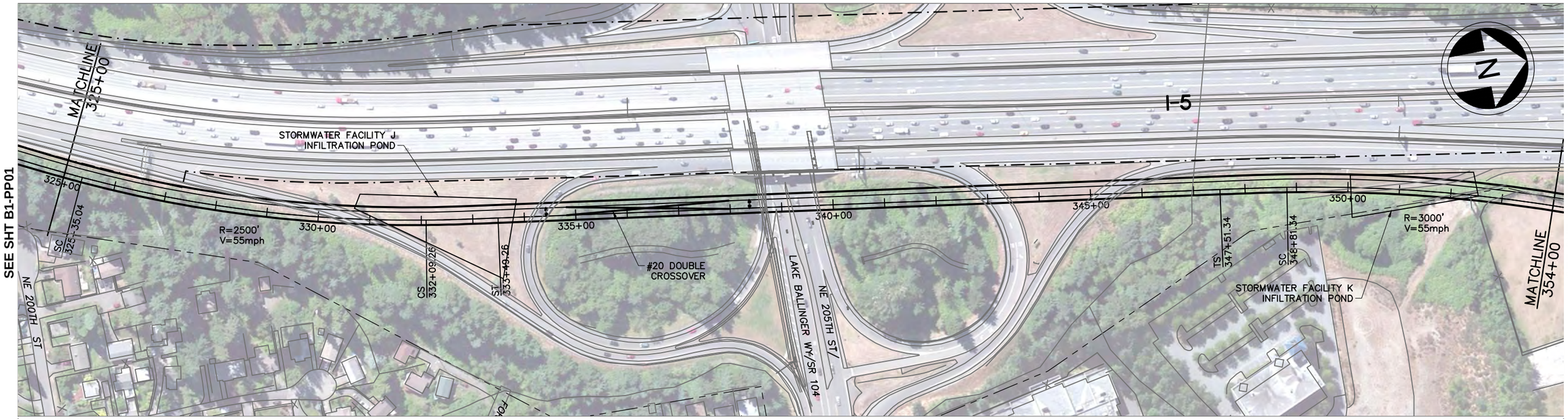
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. B1

DWG NO. B1-PP01

SHEET 31 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

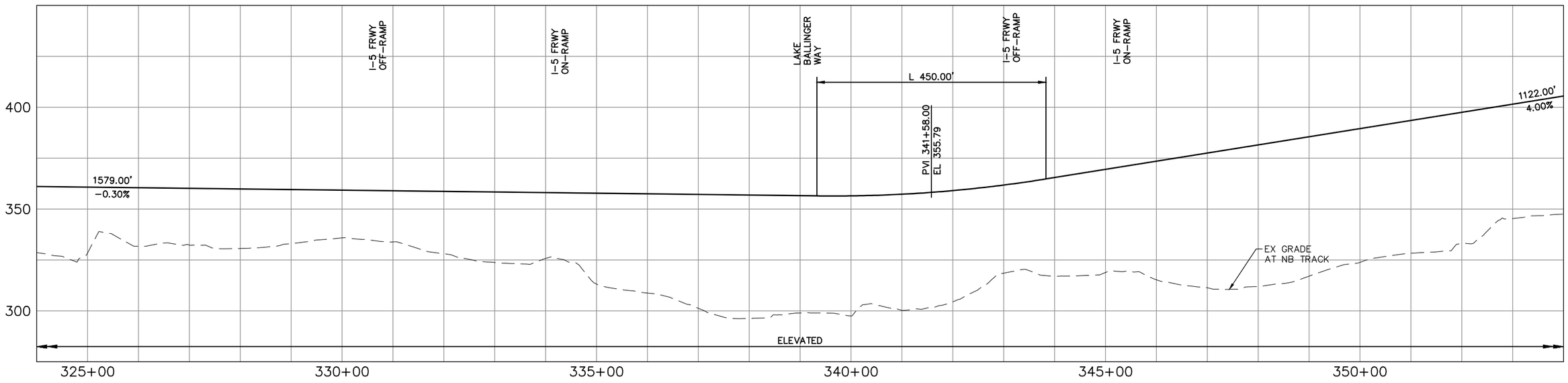


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW—FW FILL WALL
- CW—CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

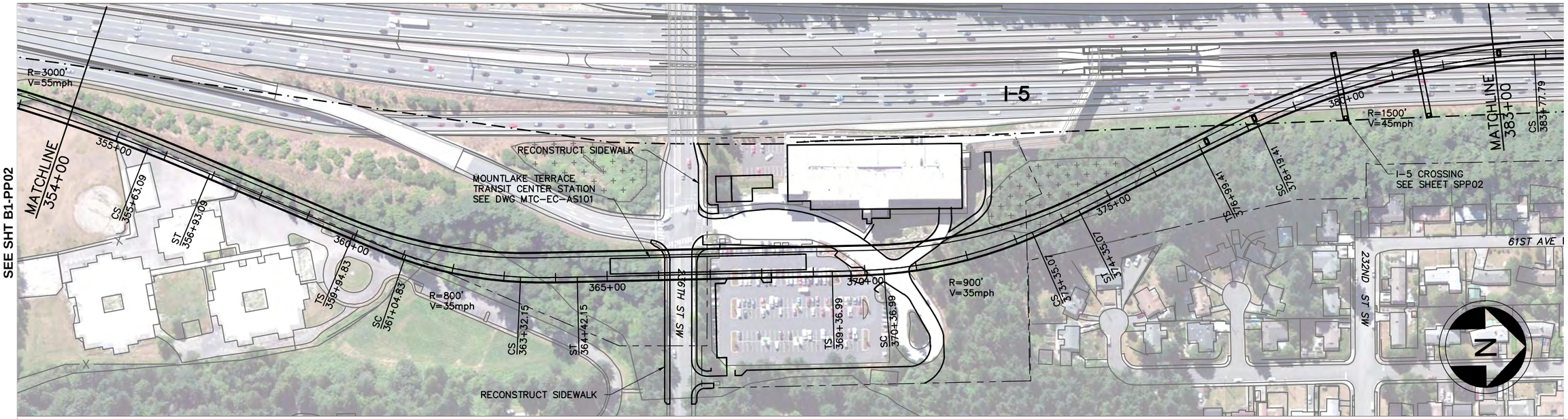
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. B1

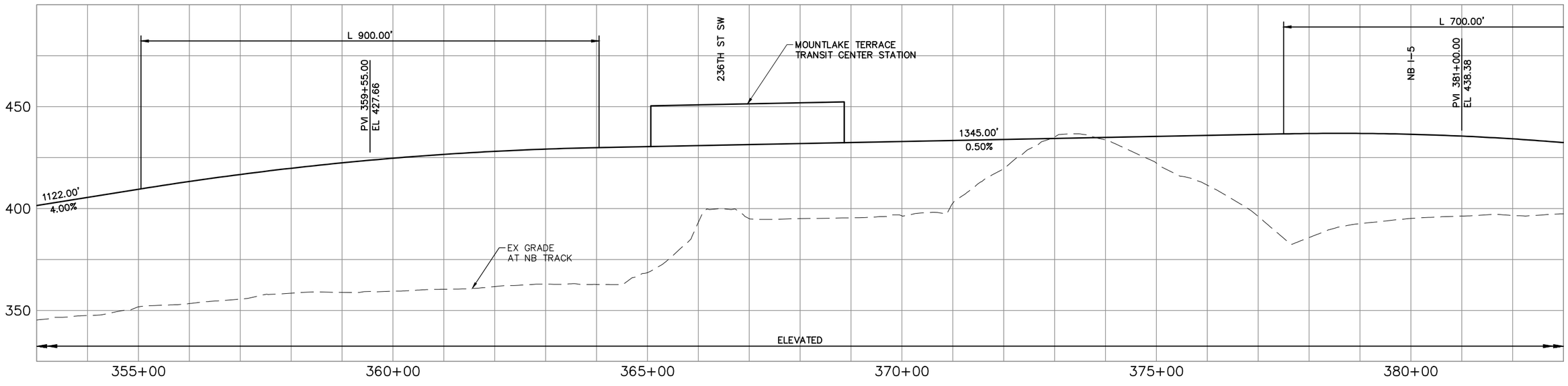
DWG NO. B1-PP02

SHEET 32 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION





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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

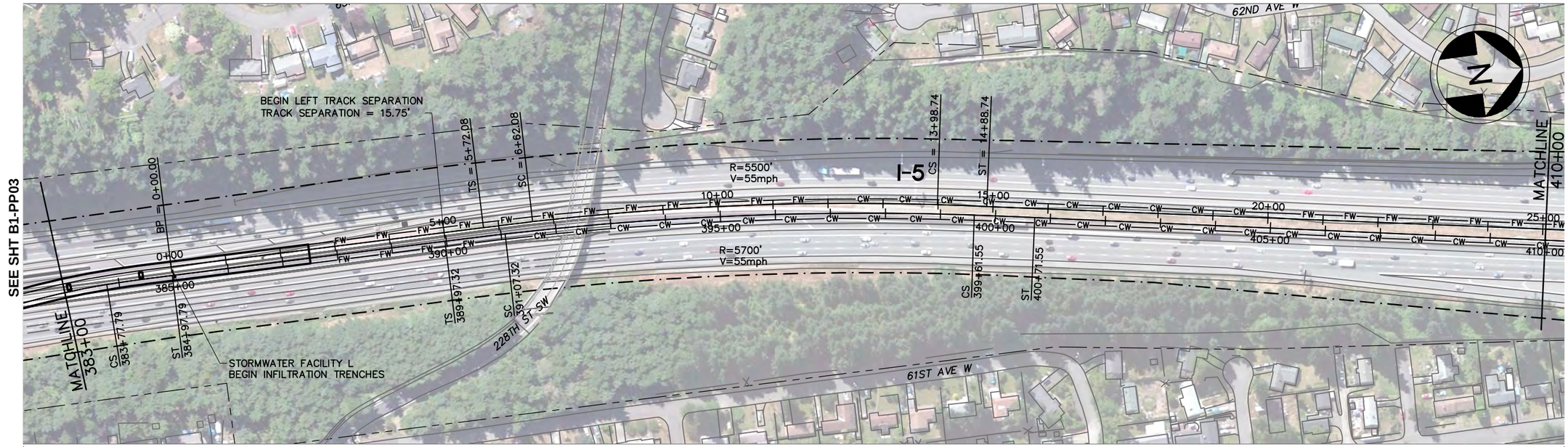
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. B1

DWG NO. B1-PP03

SHEET 33 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



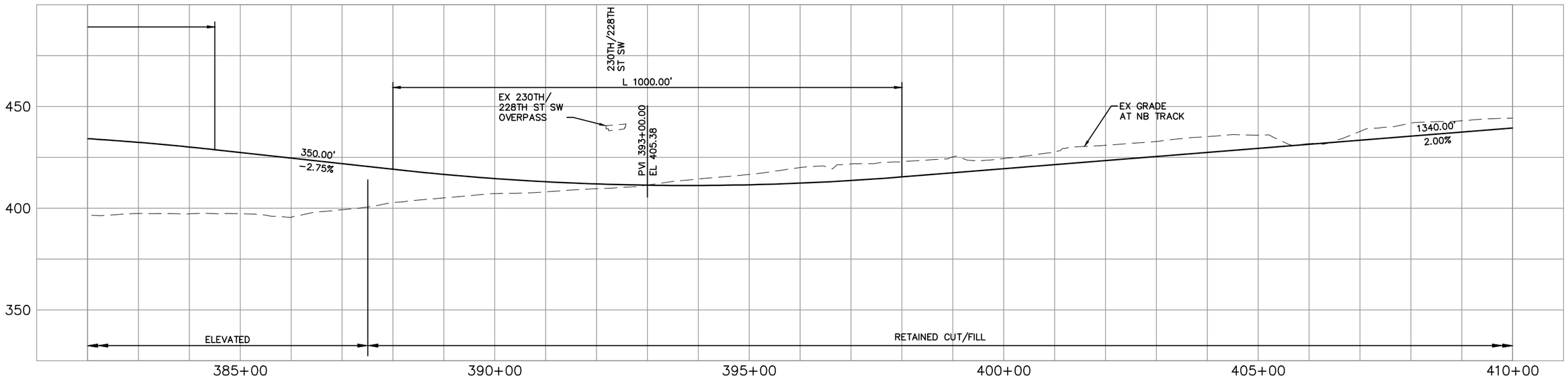
ALTERNATIVE B1

LEGEND:

- NB TRACK CENTERLINE (5+00)
- STRUCTURE
- FILL WALL (FW)
- CUT WALL (CW)
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

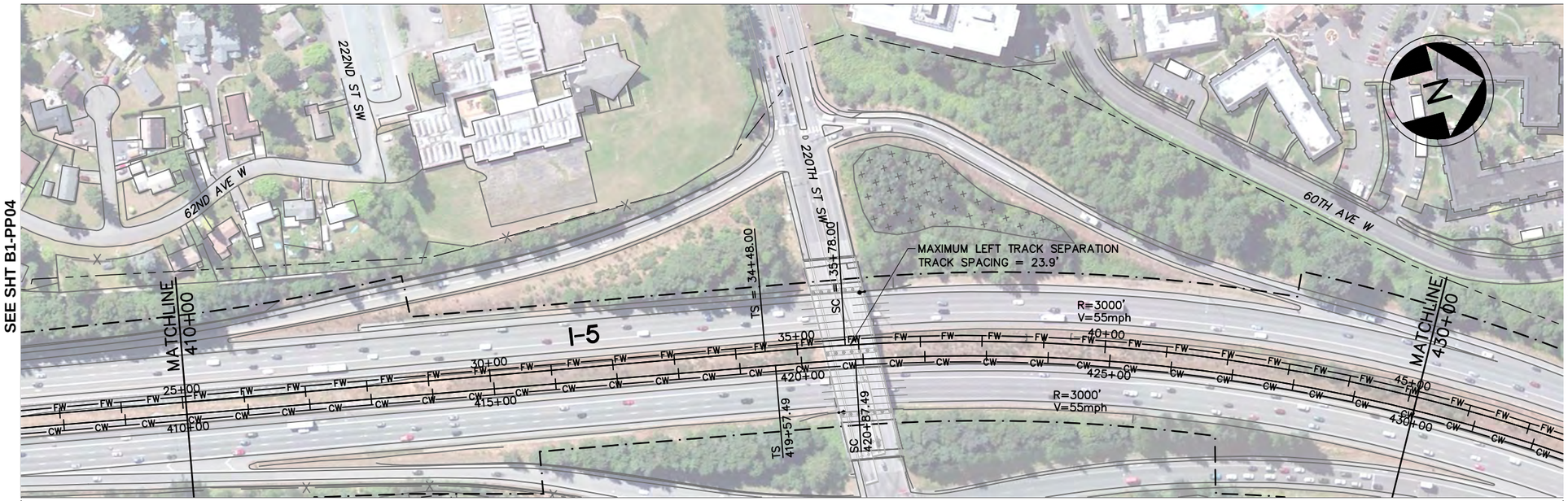
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. B1

DWG NO. B1-PP04

SHEET 34 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SEE SHT B1-PP04

SEE SHT B1-PP06

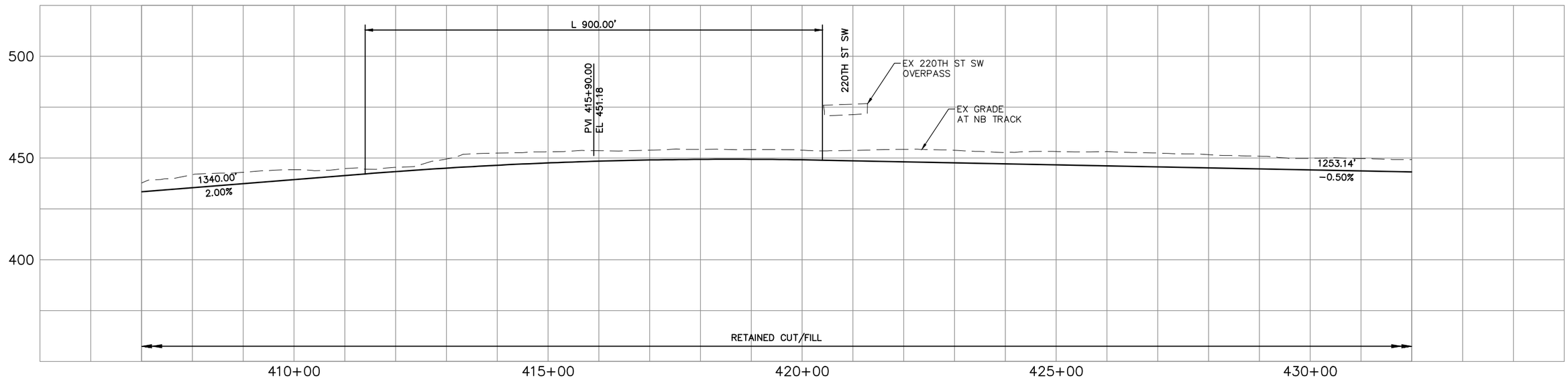
ALTERNATIVES B1, B4

LEGEND:

- 5+00 NB TRACK CENTERLINE
- STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

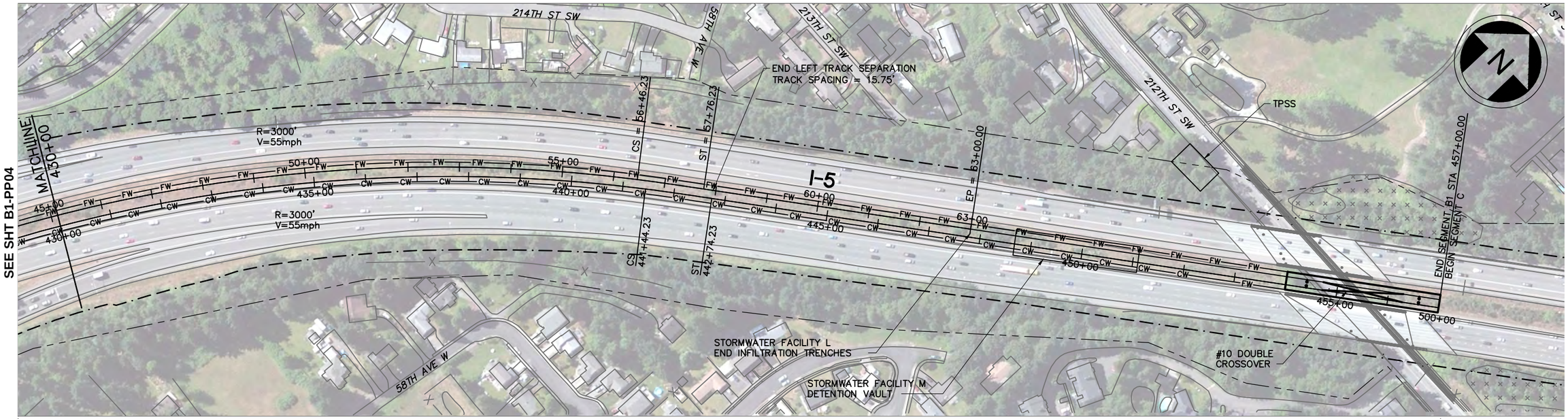
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. B1

DWG NO. B1-PP05

SHEET 35 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

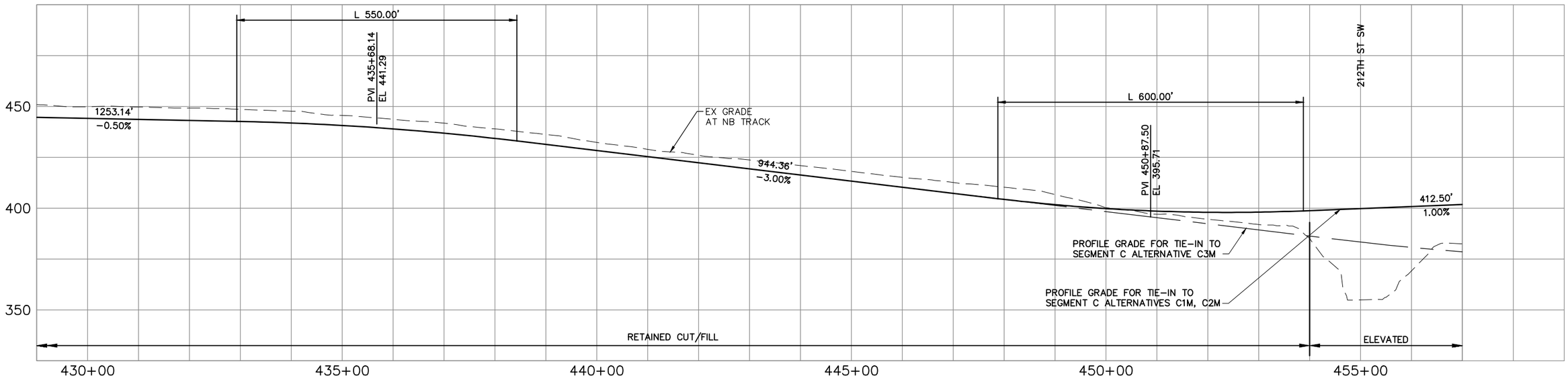


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

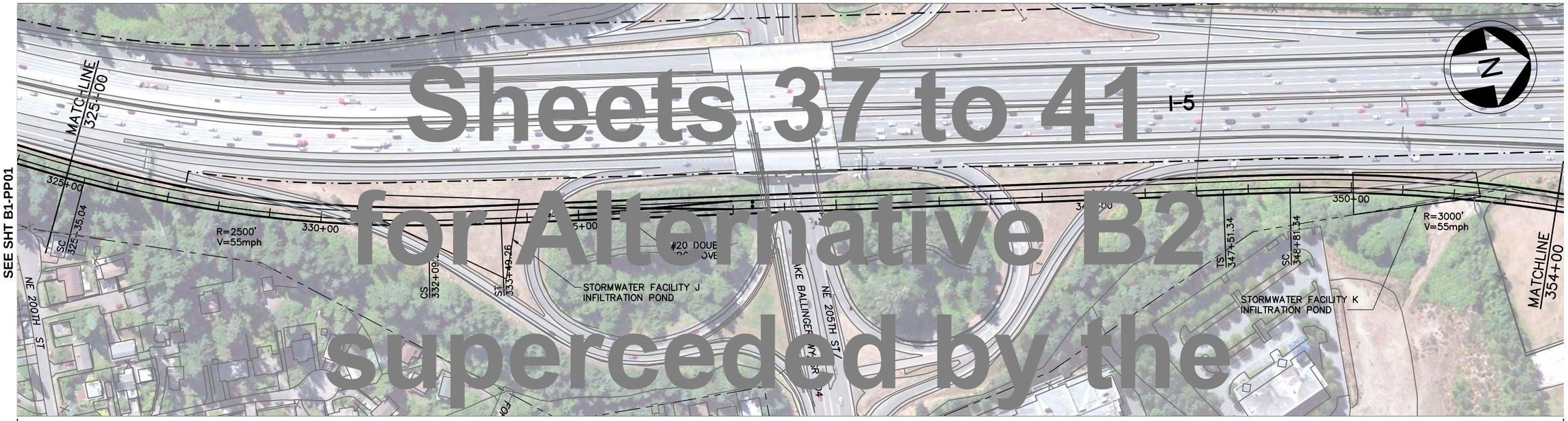
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. B1

DWG NO. B1-PP06

SHEET 36 OF 142

REV. NO. 2

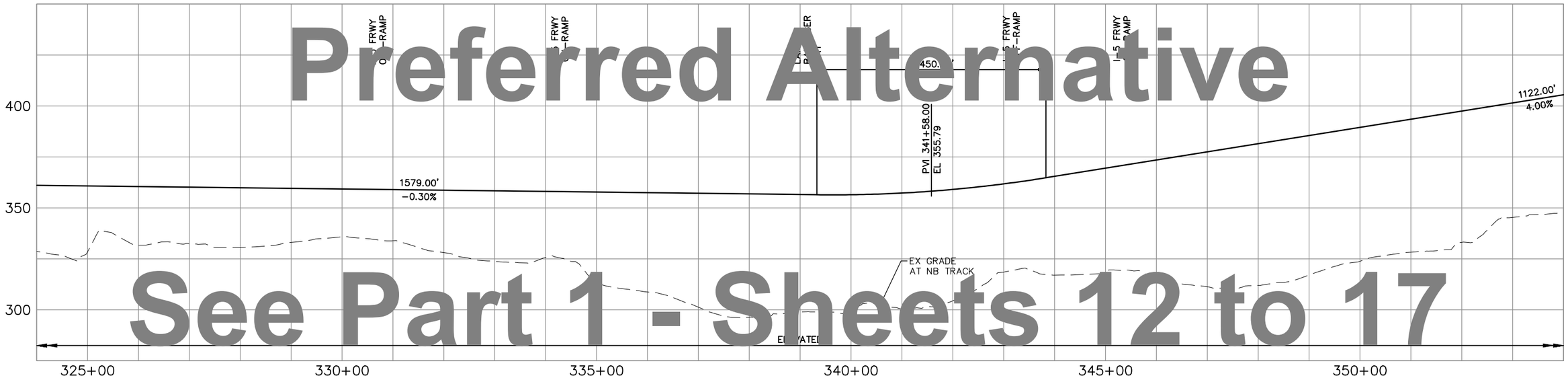


LEGEND:

- 5+00 — NB TRACK CENTERLINE
- STRUCTURE
- FW—FW— FILL WALL
- CW—CW— CUT WALL
- AT-GRADE
- WSDOT … ROW
- STRADDLE BE…
- COLUM…
- TRAFF… SIGN…
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



Sheets 37 to 41 for Alternative B2 superceded by the Segment B Preferred Alternative See Part 1 - Sheets 12 to 17

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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN

TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION

I-5 - ALT. B2

DWG NO. B2-PP02

SHEET 37 OF 142

REV. NO. 2

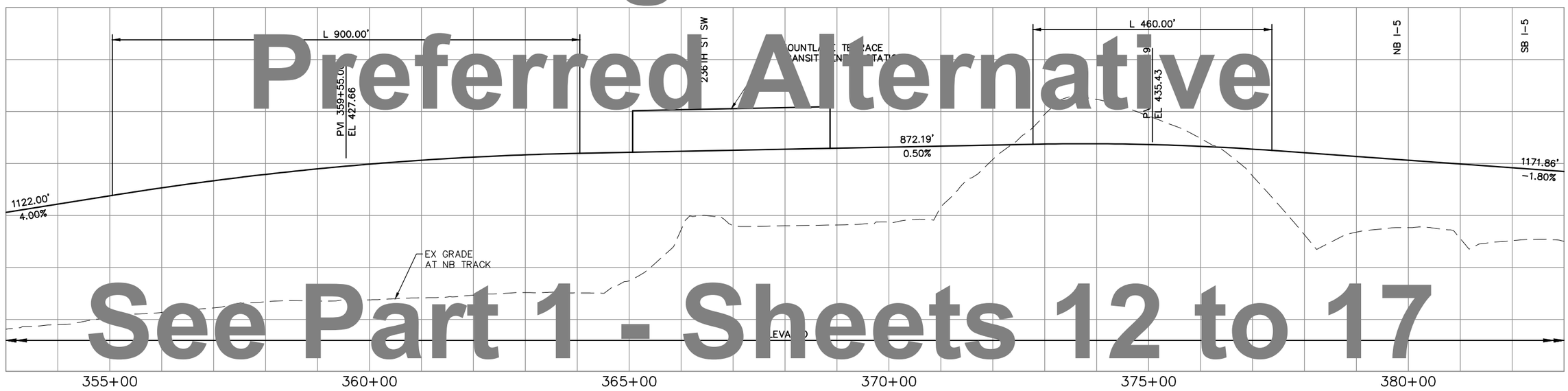
SOUND TRANSIT LYNNWOOD LINK EXTENSION

LEGEND:

- NB TRACK CENTERLINE (5+00)
- STRUCTURE
- FILL WALL (FW)
- CUT WALL (CW)
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WETLAND
- TRAFFIC SIGNAL

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 25' 12.5' 0' 25' 50'



Sheets 37 to 41
for Alternative B2
superceded by the
Segment B
Preferred Alternative
See Part 1 - Sheets 12 to 17

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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN

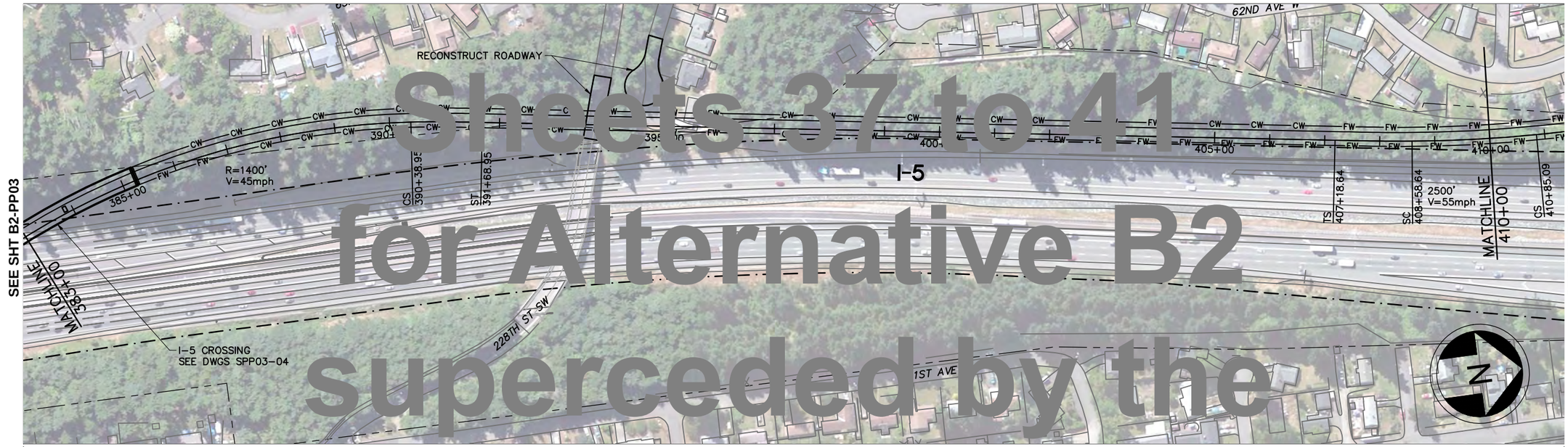
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION

I-5 - ALT. B2

DWG NO. B2-PP03

SHEET 38 OF 142

REV. NO. 2

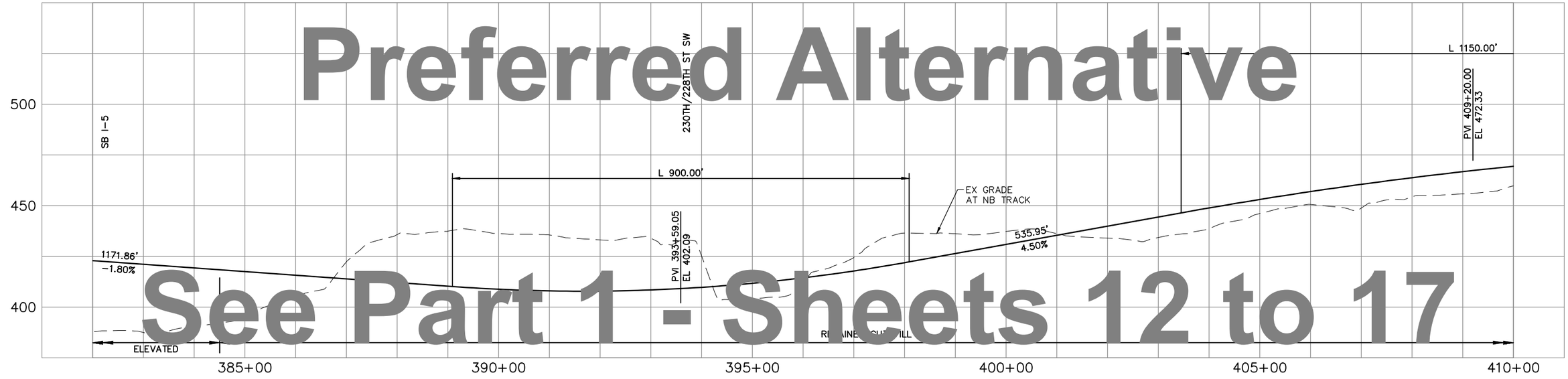


LEGEND:

- 5+00 — NB TRACK CENTERLINE
- STRUCTURE
- FW FW — FILL WALL
- CW CW — CUT WALL
- AT-GRADE
- WSDOT/SR 99 CONFIGURATION LIMIT
- WETLAND
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 25' 12.5' 0' 25' 50'



Sheets 37 to 41
for Alternative B2
superceded by the
Segment B
Preferred Alternative
See Part 1 - Sheets 12 to 17

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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN

TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION

I-5 - ALT. B2

DWG NO. B2-PP04

SHEET 39 OF 142

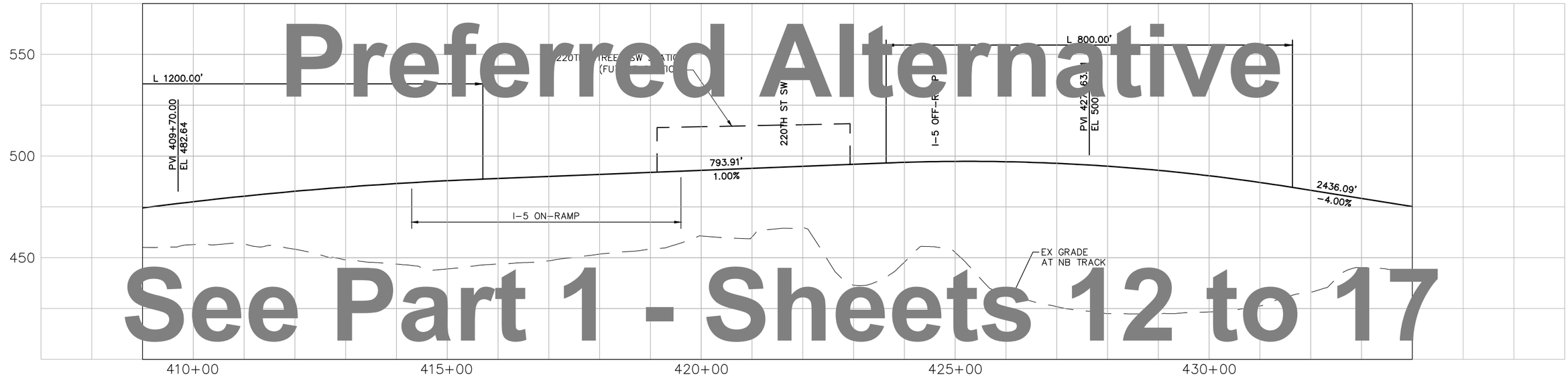
REV. NO. 2

LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW——FW FILL WALL
- CW——CW CUT WALL
- AT-GRADE
- WETLAN
- STRADDLE
- COLUM
- TRA

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



Sheets 37 to 41 for Alternative B2 superceded by the Segment B Preferred Alternative See Part 1 - Sheets 12 to 17

M:\NorthCorridor\CADD\REF\Design-Task 7 Studies\220th\OTHER B2 ALGN STUDIES\c3d_align_B2-ELEV-Side.dwg May 20, 2013 - 4:28pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. B2

DWG NO. B2-PP05
SHEET 40 OF 142
REV. NO. 3

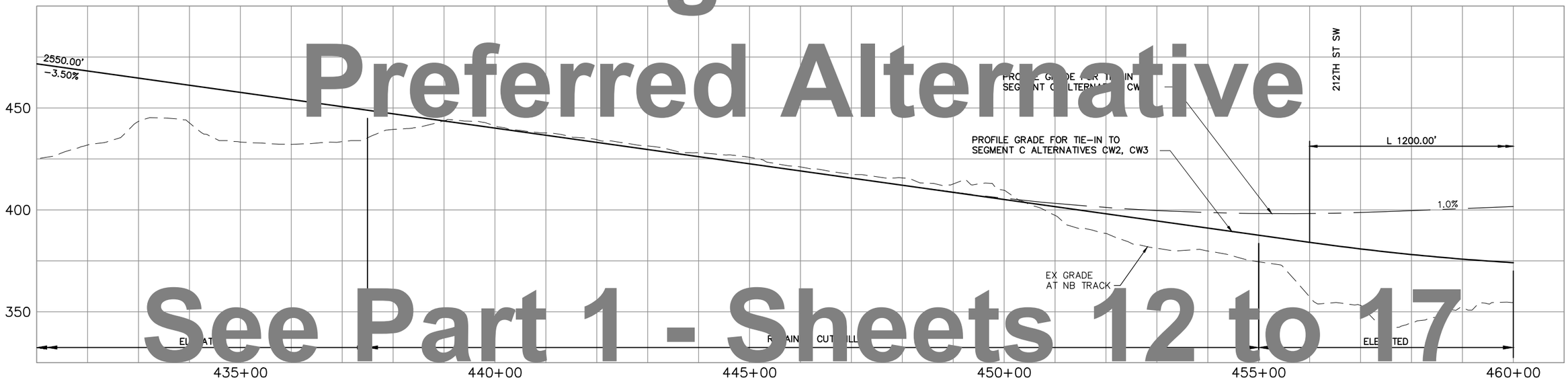
SOUND TRANSIT LYNNWOOD LINK EXTENSION

LEGEND:

- NB TRACK CENTERLINE
- STRUCTURE
- FW — FW — FILL WALL
- CW — CW — CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



Sheets 37 to 41
for Alternative B2
superceded by the
Segment B
Preferred Alternative
See Part 1 - Sheets 12 to 17

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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN

TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION

I-5 - ALT. B2

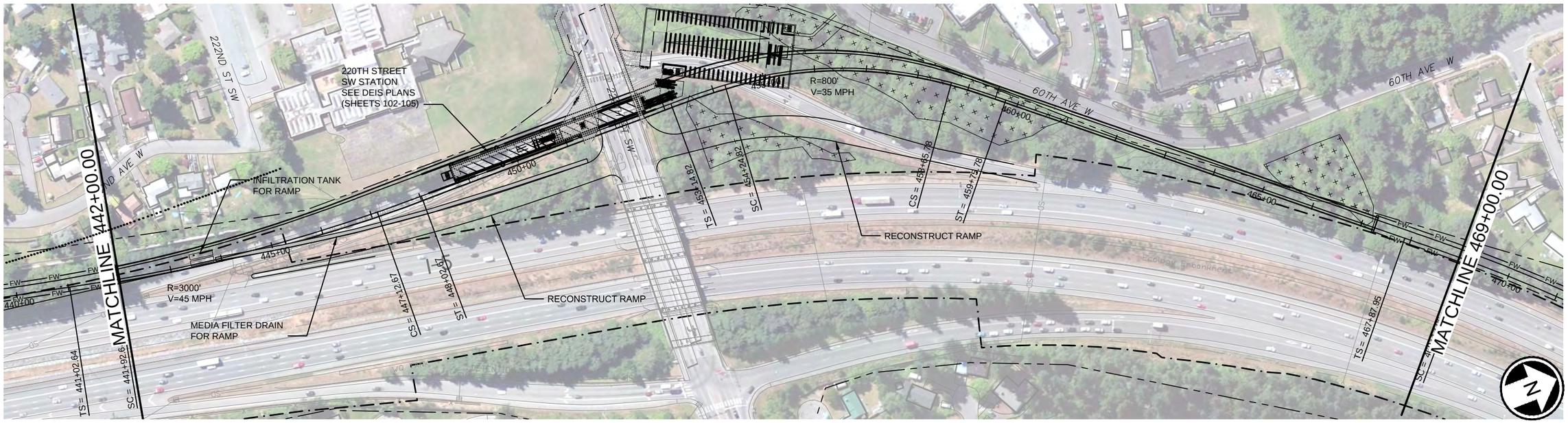
DWG NO. B2-PP06

SHEET 41 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

From south, same as Preferred Alternative See Part 1 Sheets 12-17

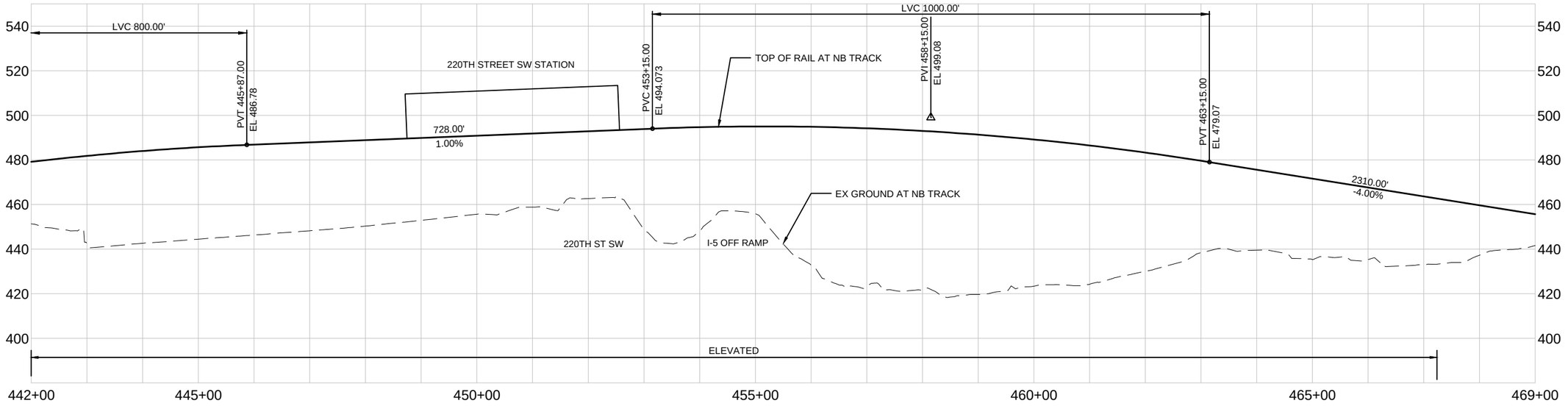


LEGEND:

- SB TRACK CENTERLINE
- NB TRACK CENTERLINE
- 15+00 STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- GRADING LIMITS
- RELOCATED HIGHWAY NOISE WALL
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- WETLAND
- S STRADDLE BENT
- REVISED OR NEW TRAFFIC SIGNAL

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 50' 25' 0' 50' 100'



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

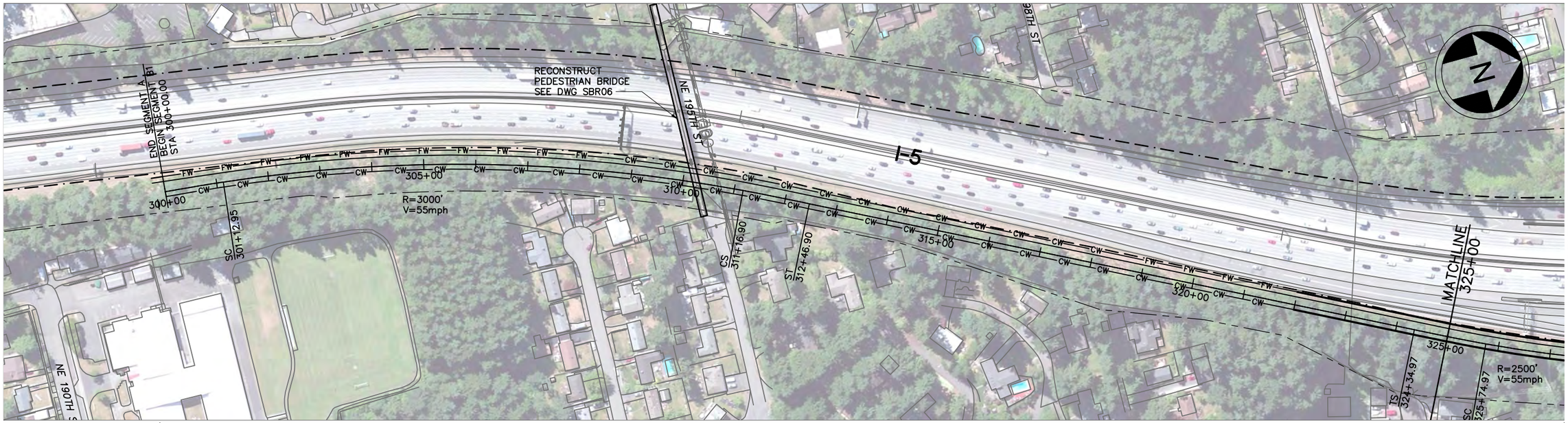
PRELIMINARY DESIGN
ALTERNATIVE B2A
220TH STREET SW STATION - TRACK PLAN & PROFILE

DWG NO. MD8-PP14

SHEET 42 OF 142

REV. NO.

SOUND TRANSIT LYNNWOOD LINK EXTENSION



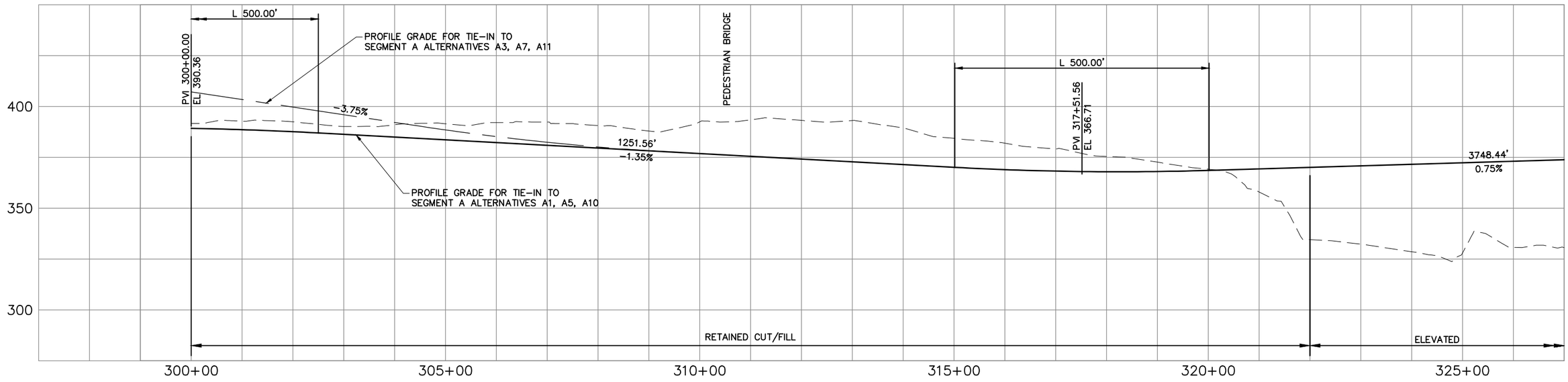
ALTERNATIVE B4

LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW — FW — FILL WALL
- CW — CW — CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 25' 12.5' 0' 25' 50'



\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\B-Segment\NCTP-B4-PP01.dwg Oct 08, 2012 - 1:02pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

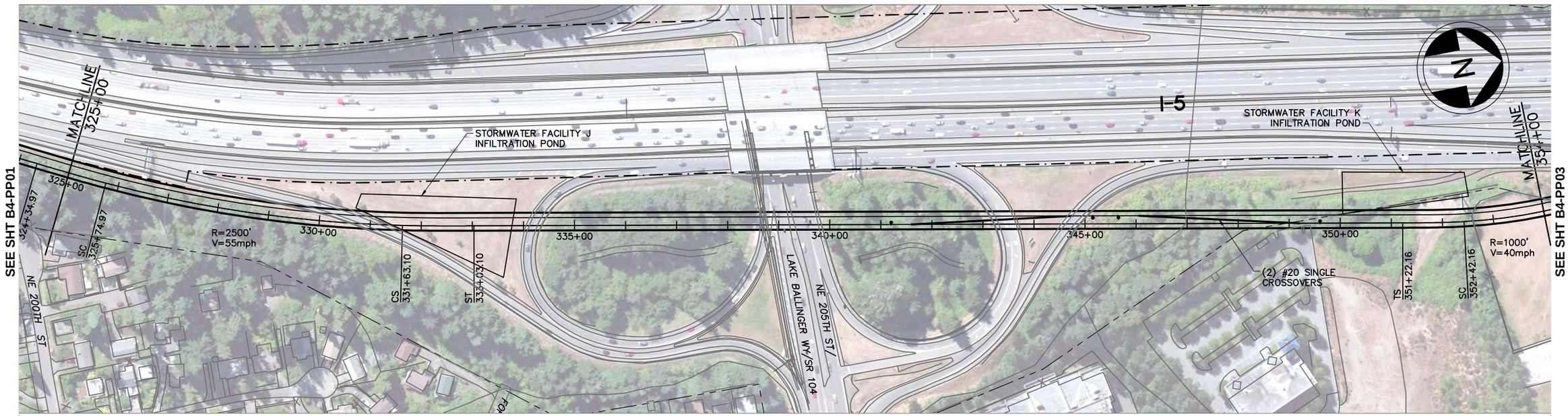
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. B4

DWG NO. B4-PP01

SHEET 43 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

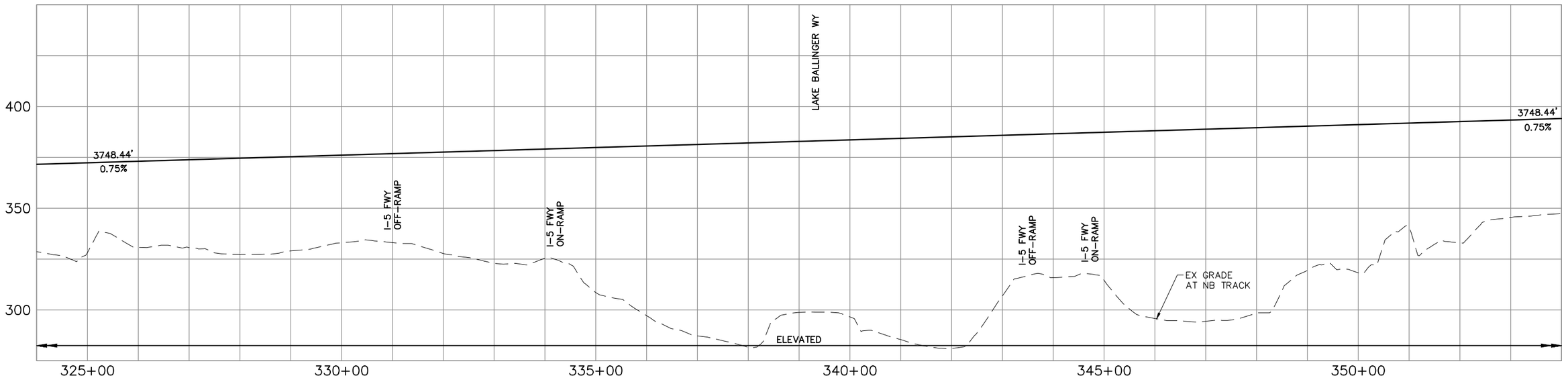


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW—FW FILL WALL
- CW—CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

HORIZONTAL SCALE: 100' 50' 0' 100' 200'

VERTICAL SCALE: 25' 12.5' 0' 25' 50'



\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\B-Segment\NCTP-B4-PP02.dwg Oct 08, 2012 - 1:03pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

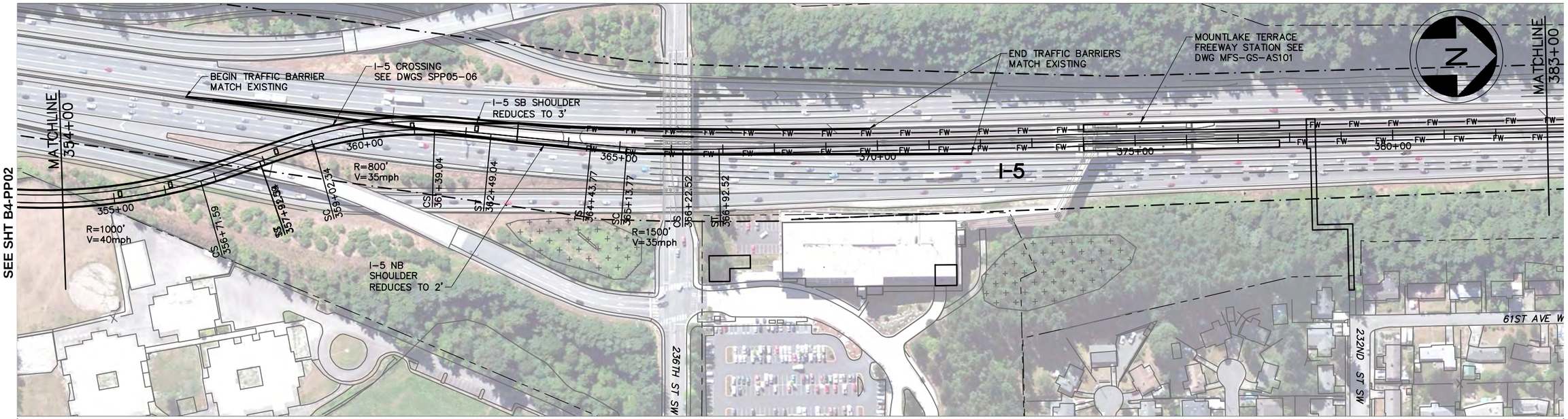
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. B4

DWG NO. B4-PP02

SHEET 44 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

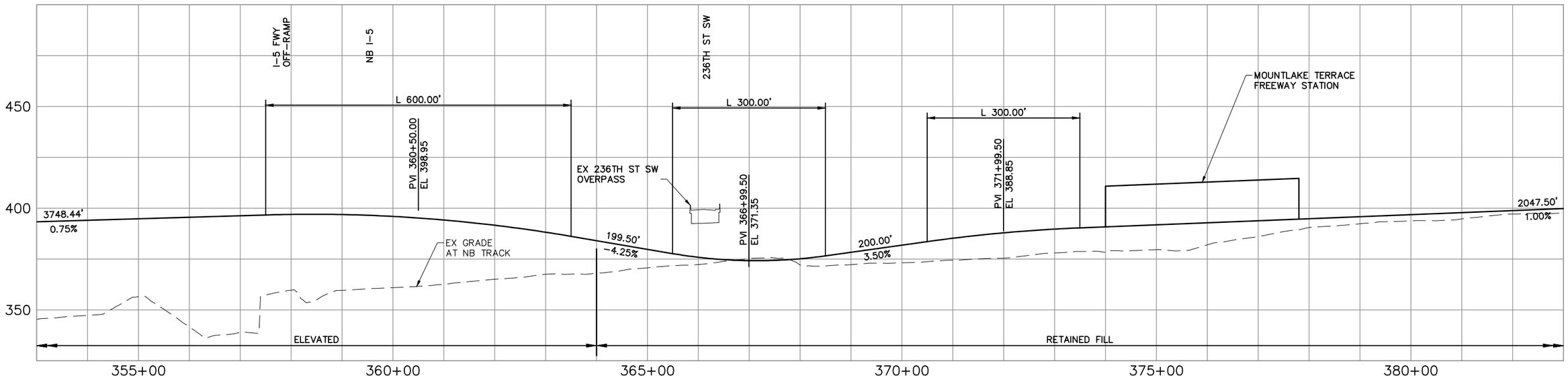


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\B-Segment\NCTP-B4-PP03.dwg Oct 08, 2012 - 1:04pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

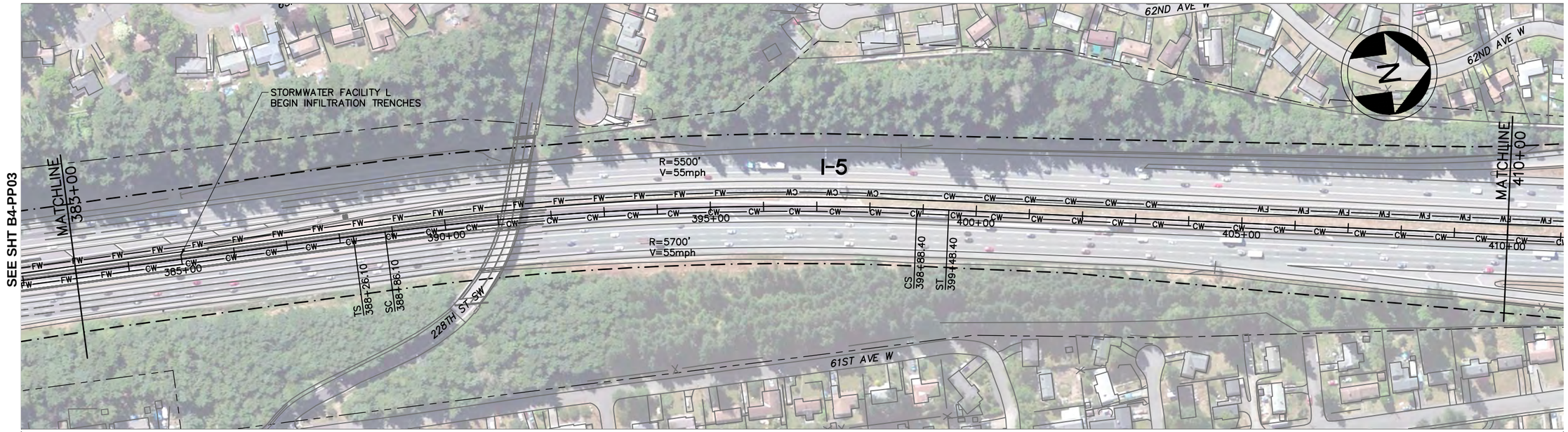
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. B4

DWG NO. B4-PP03

SHEET 45 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

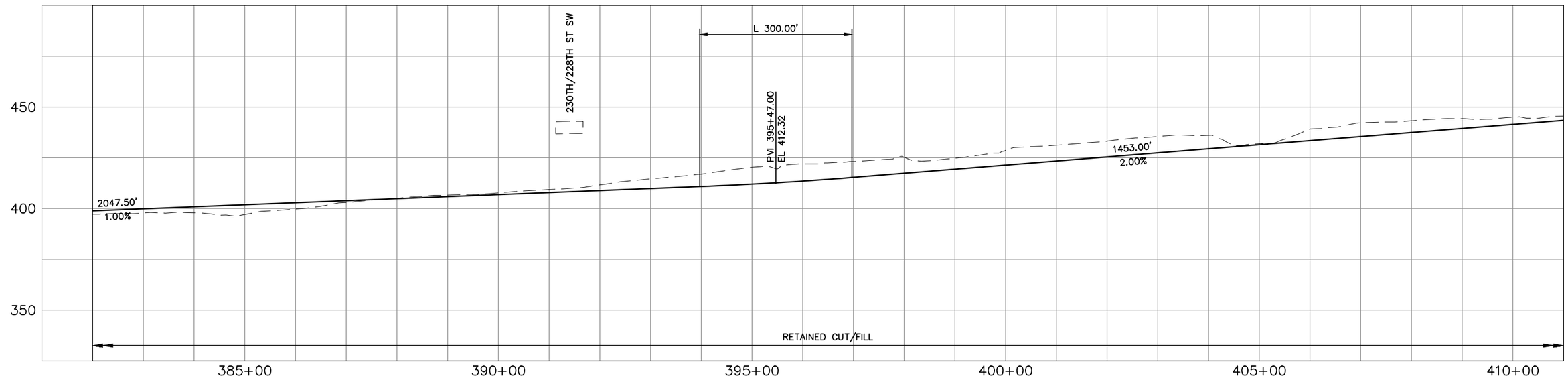


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW — FILL WALL
- CW CW — CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\B-Segment\NCTP-B4-PP04.dwg Oct 08, 2012 - 1:04pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

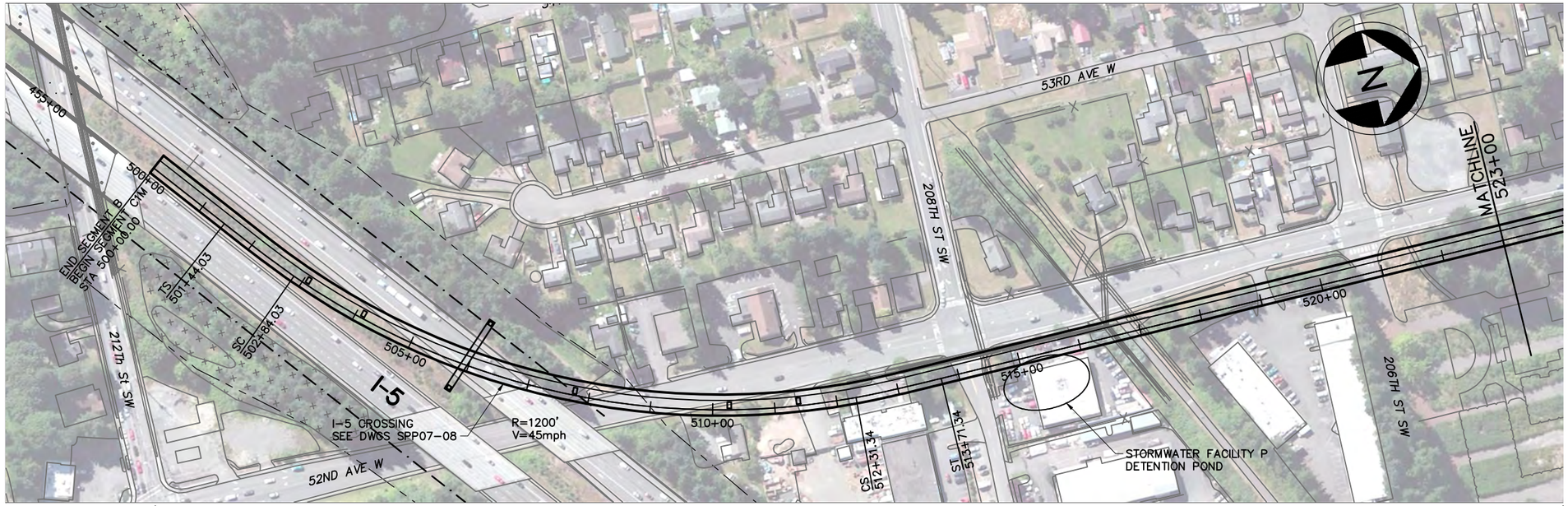
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. B4

DWG NO. B4-PP04

SHEET 46 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SEE SHT C1M-PP02

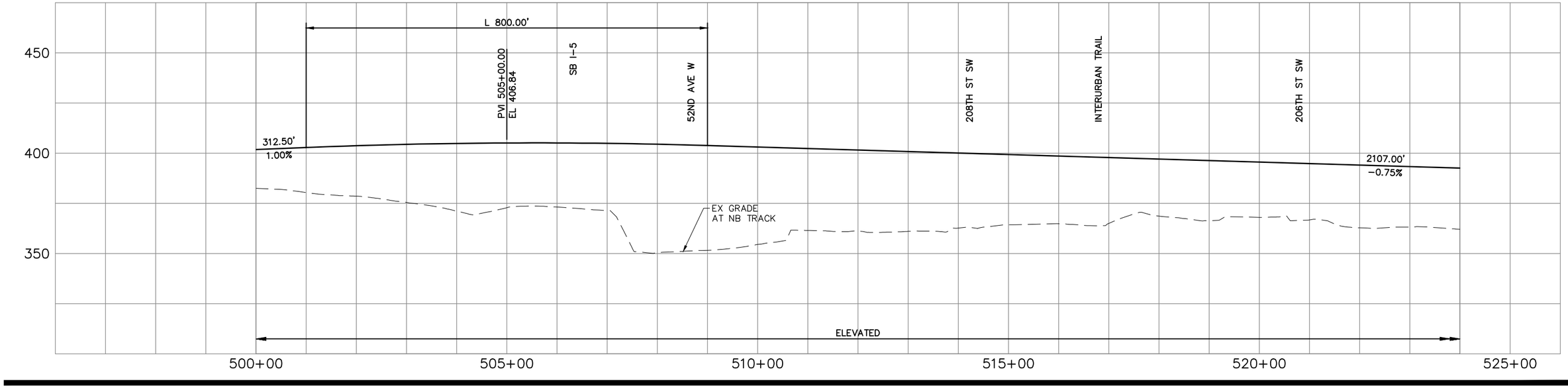
ALTERNATIVE C1M

LEGEND:

- NB TRACK CENTERLINE
- 5+00 STRUCTURE
- FW—FW— FILL WALL
- CW—CW— CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- Ⓢ TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

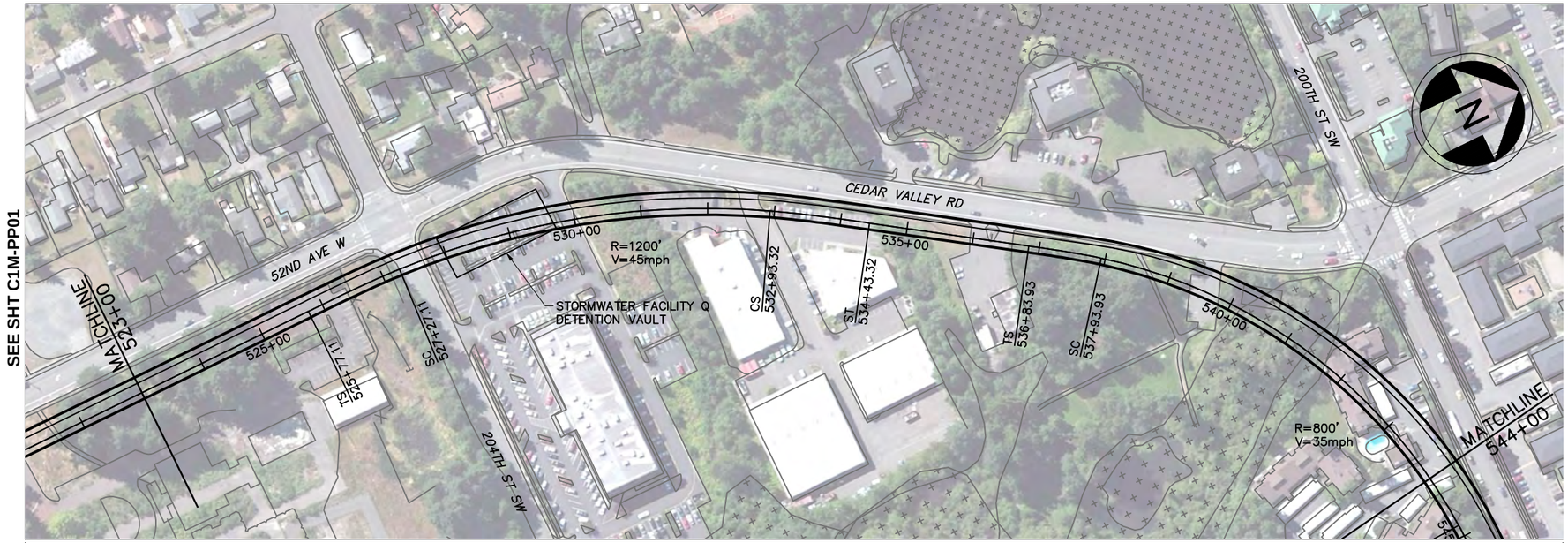
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. C1M

DWG NO. C1M-PP01

SHEET 47 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

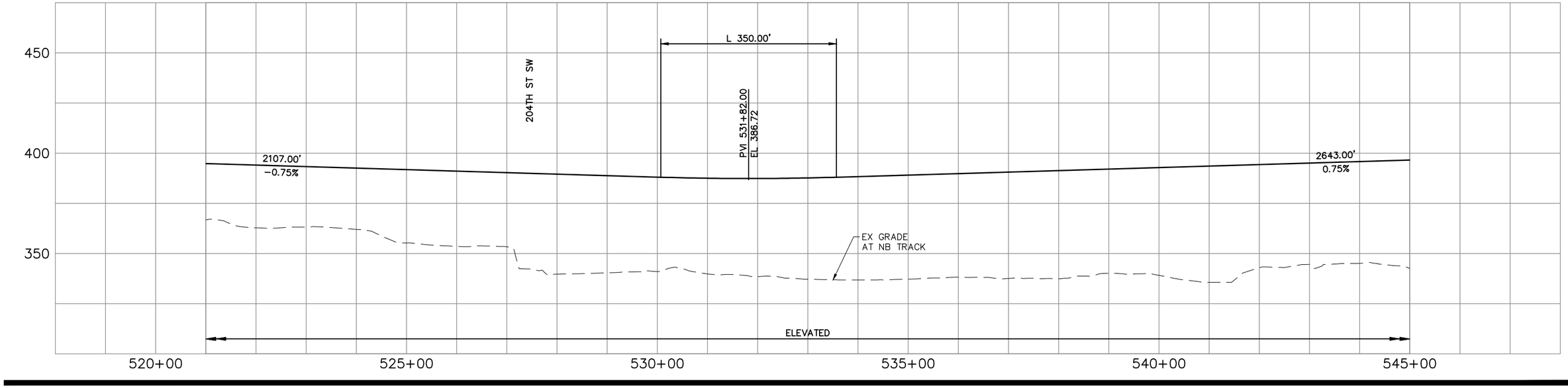


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

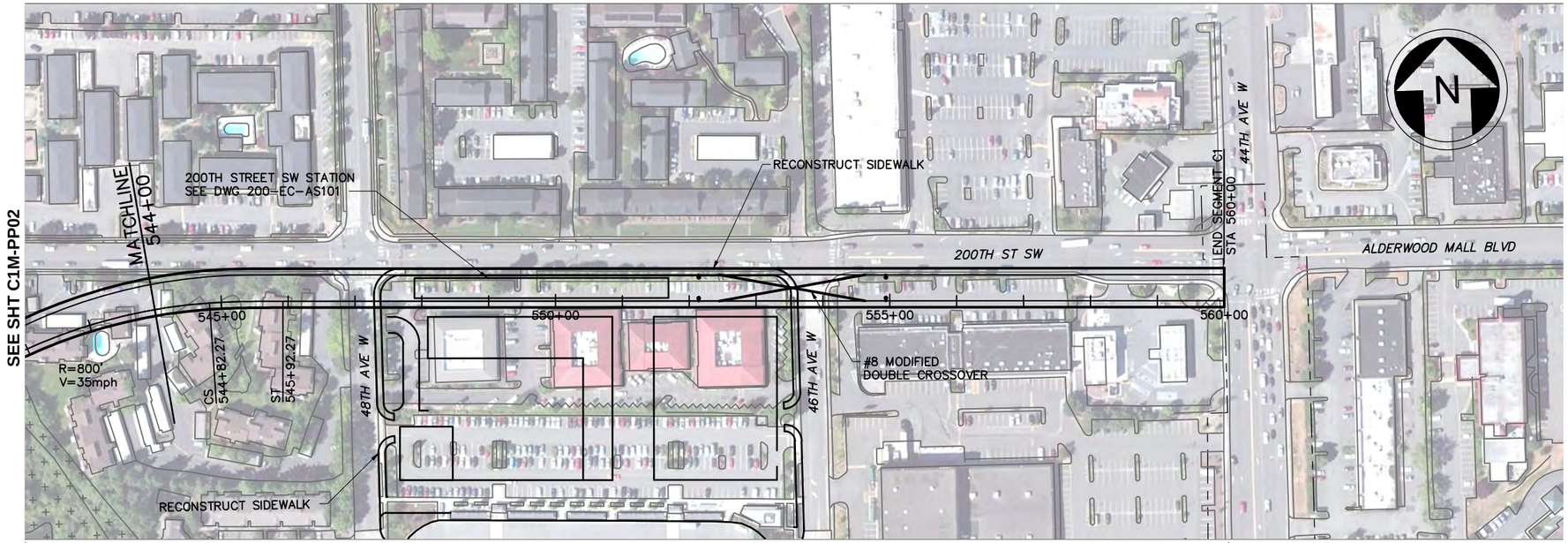
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. C1M

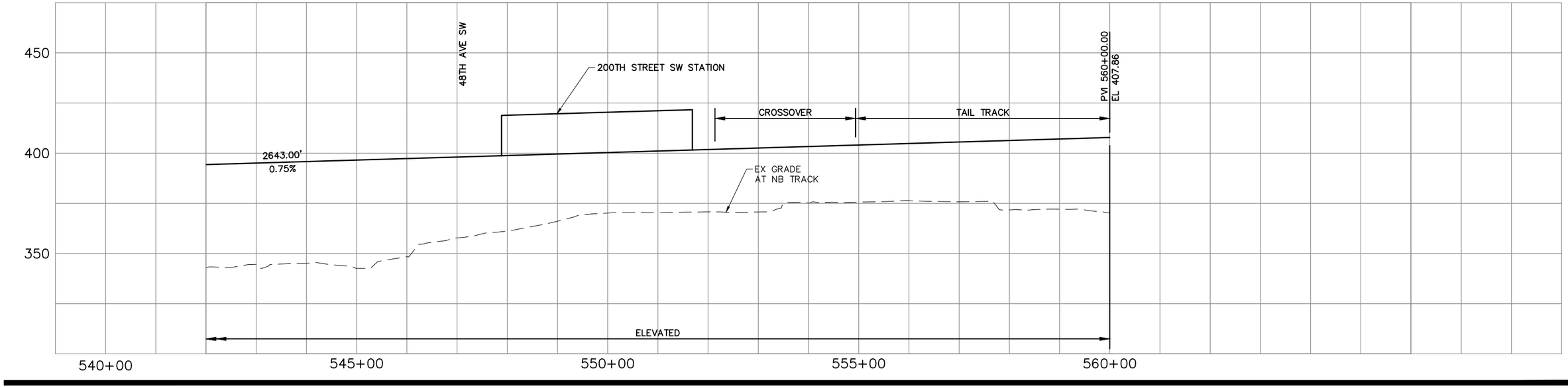
DWG NO. C1M-PP02

SHEET 48 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION





\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\C-Segment\NCTP-C1M-PP03.dwg Oct 08, 2012 - 1:11pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN

TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION

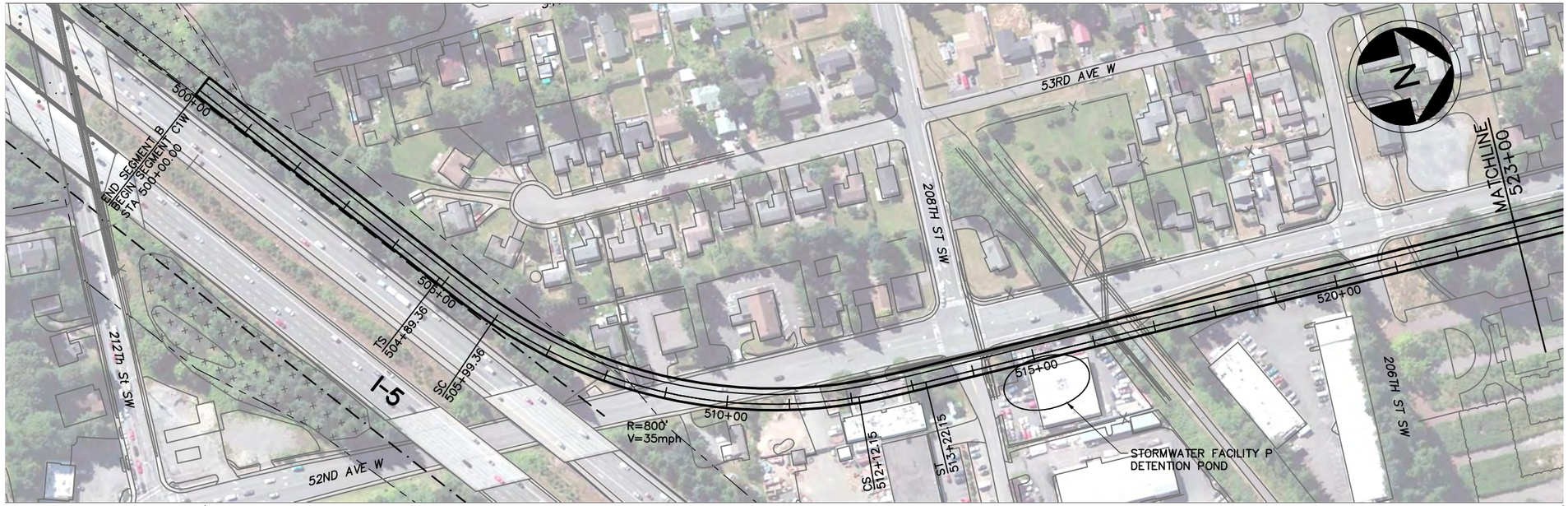
I-5 - ALT. C1M

DWG NO. C1M-PP03

SHEET 49 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SEE SHT C1M-PP02

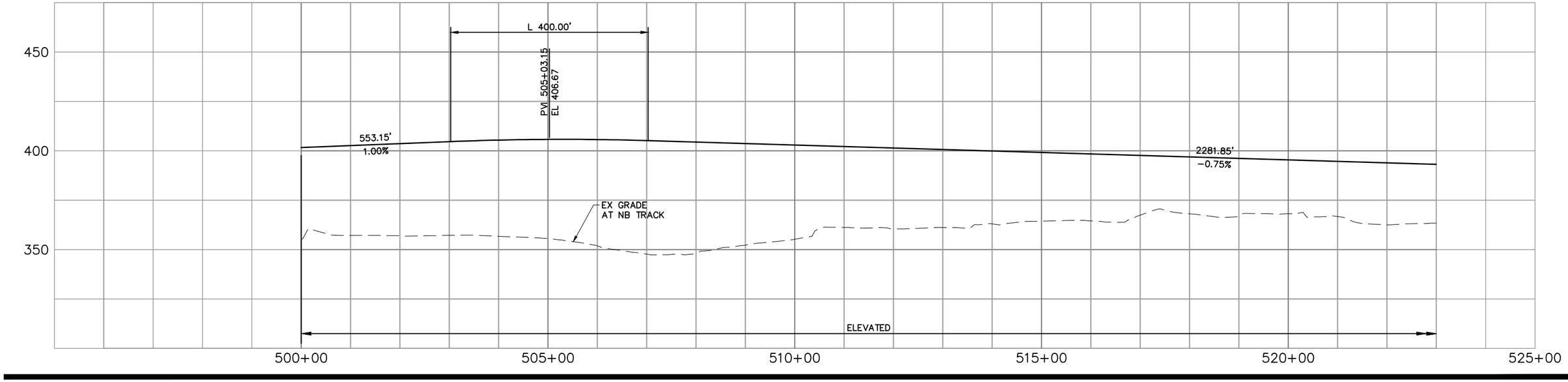
ALTERNATIVE C1W

LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW—FW— FILL WALL
- CW—CW— CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

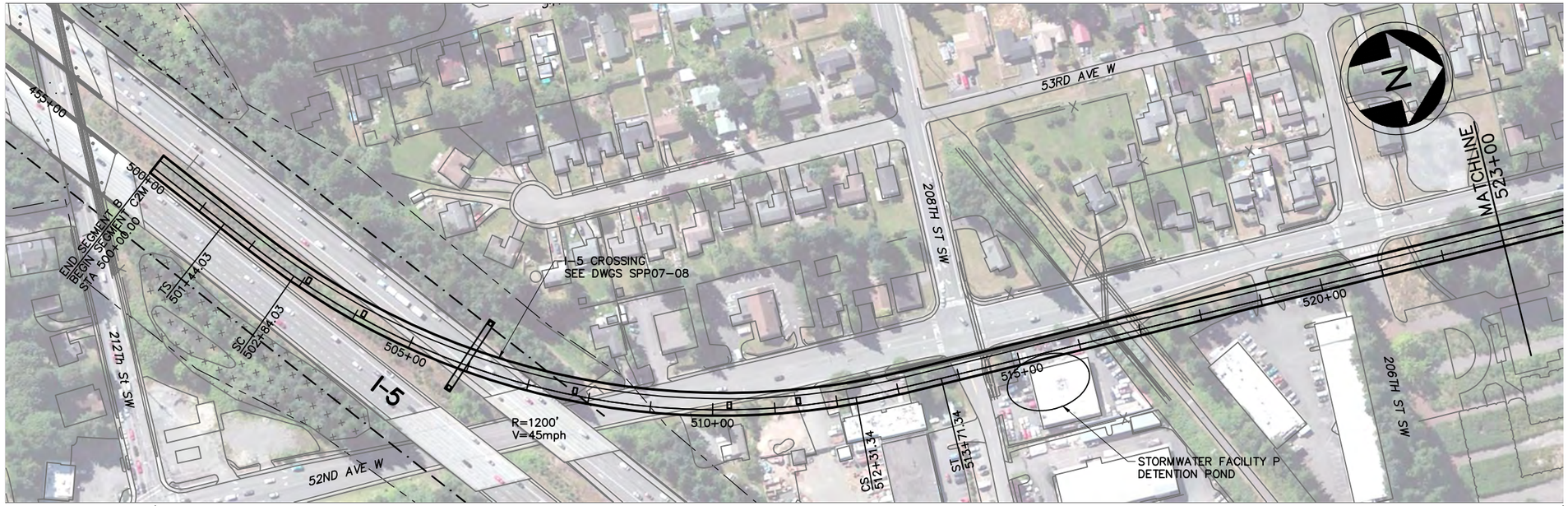
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. C1W

DWG NO. C1W-PP01

SHEET 50 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



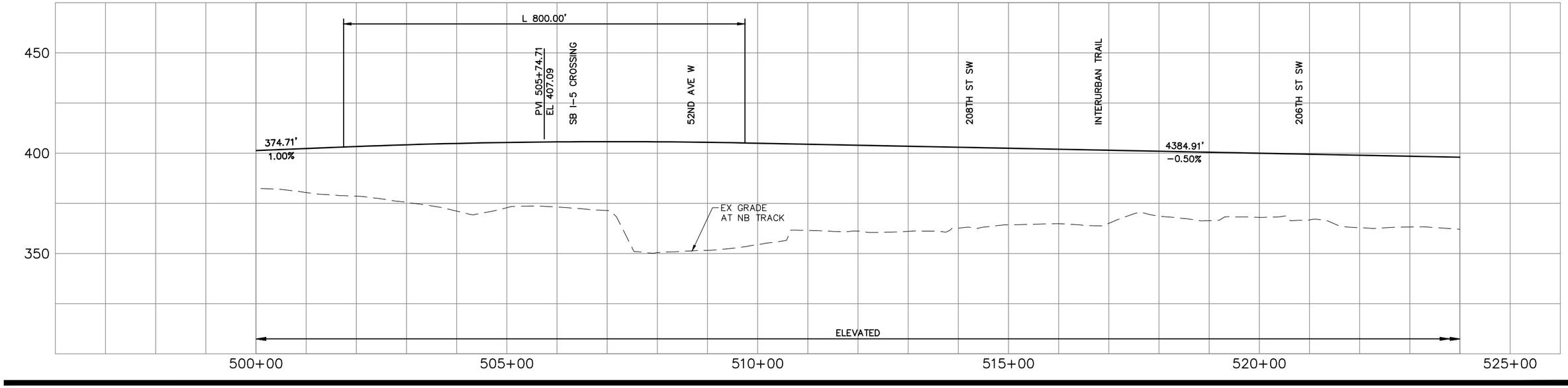
ALTERNATIVE C2M

LEGEND:

- NB TRACK CENTERLINE
- 5+00 STRUCTURE
- FW—FW FILL WALL
- CW—CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

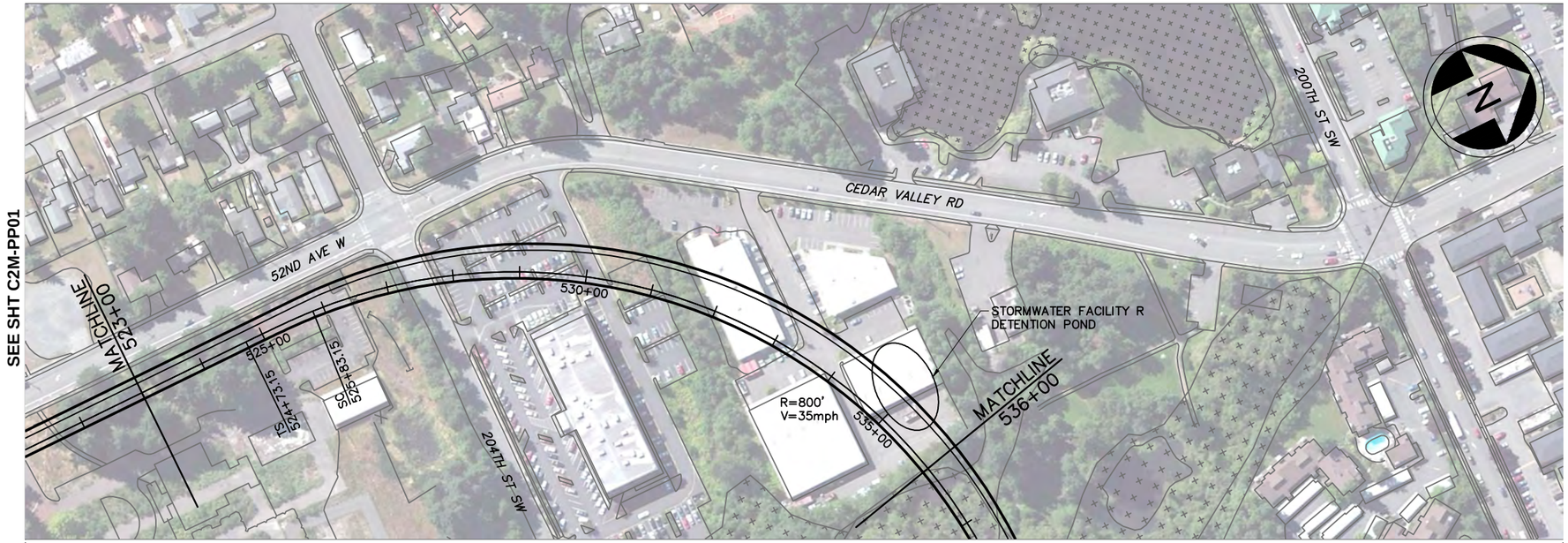
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. C2M

DWG NO. C2M-PP01

SHEET 51 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

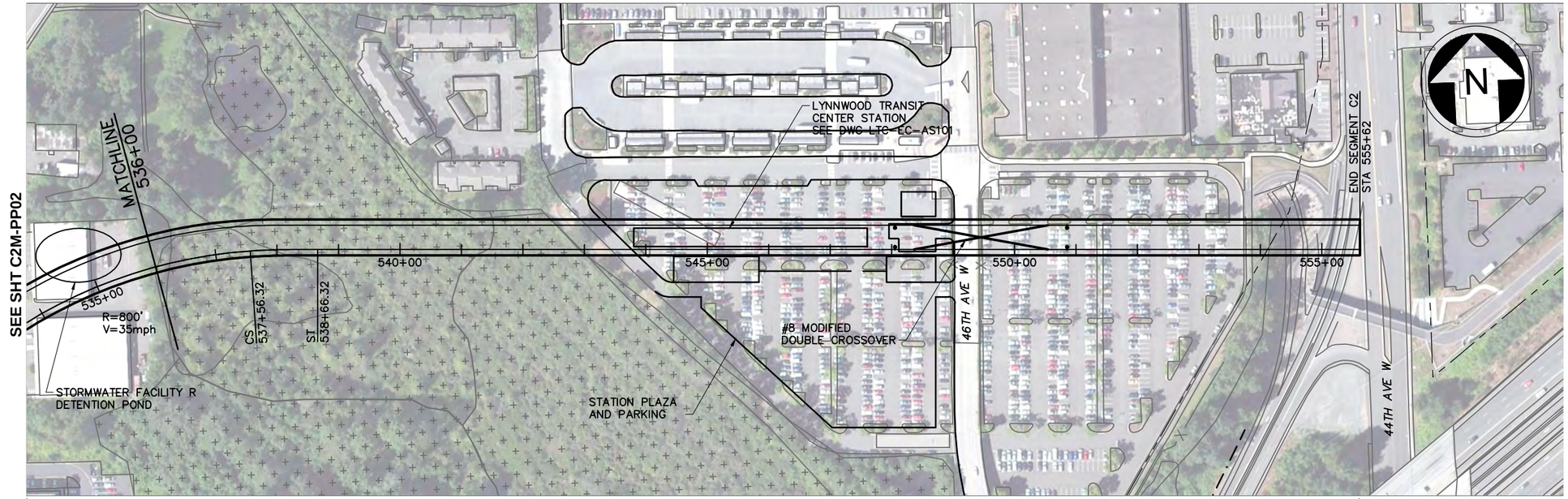
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. C2M

DWG NO. C2M-PP02

SHEET 52 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

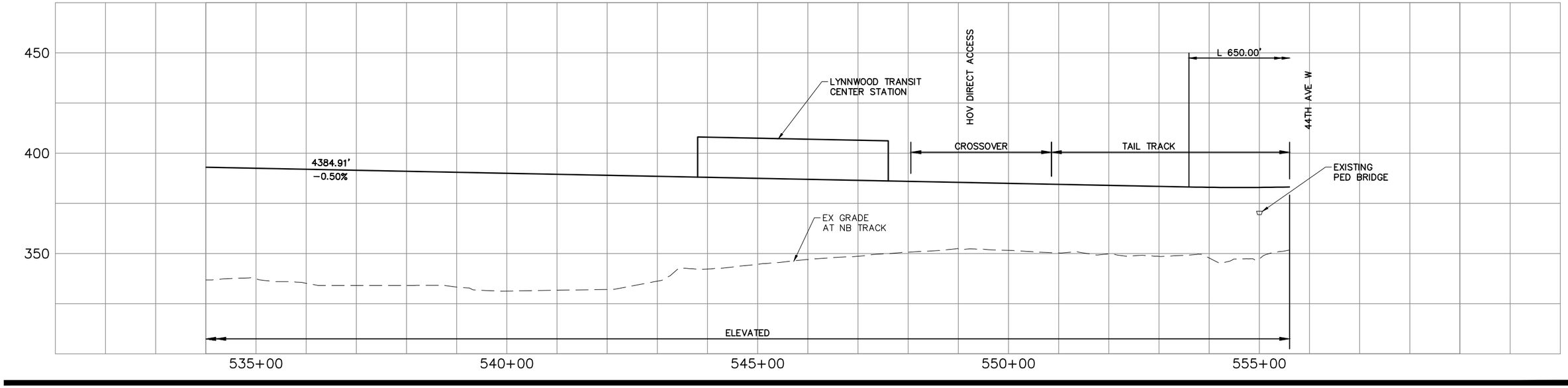


LEGEND:

- NB TRACK CENTERLINE
- 5+00
- STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

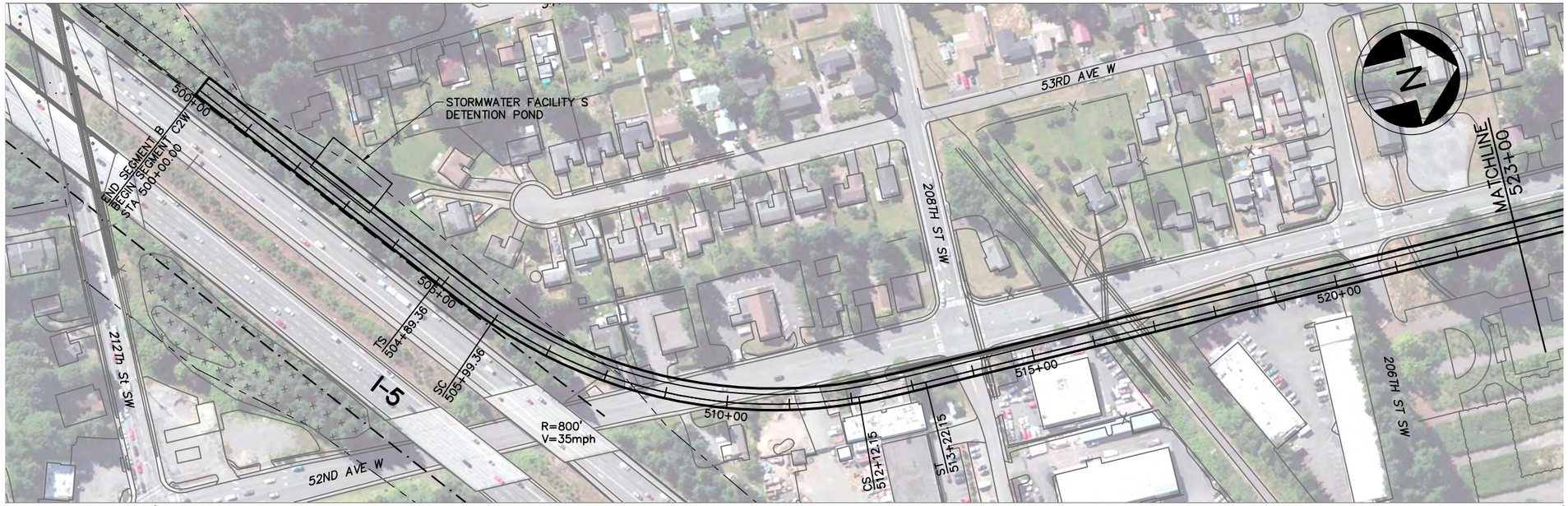
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. C2M

DWG NO. C2M-PP03

SHEET 53 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



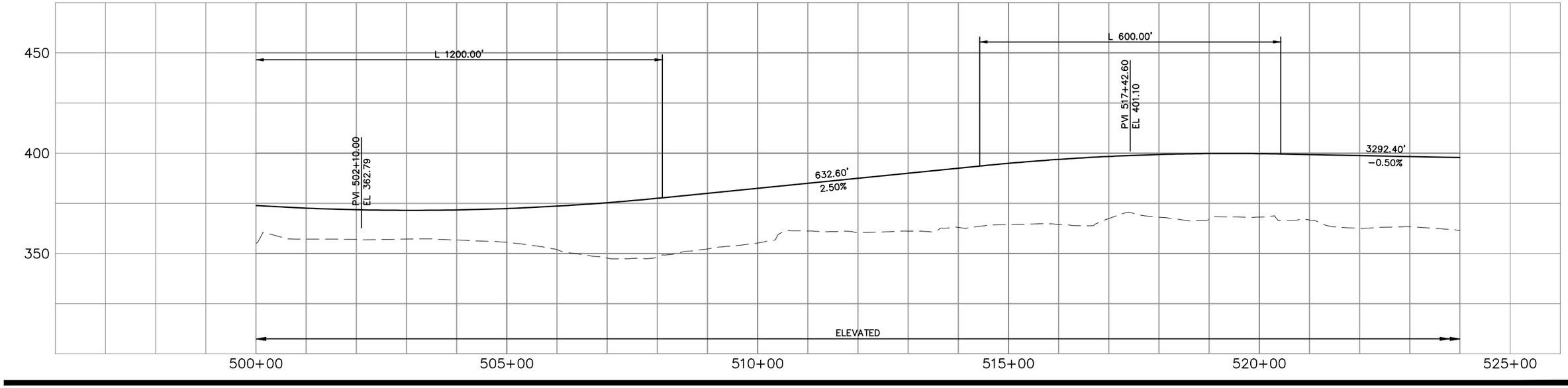
ALTERNATIVE C2W

LEGEND:

- NB TRACK CENTERLINE
- 5+00 STRUCTURE
- FW—FW FILL WALL
- CW—CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

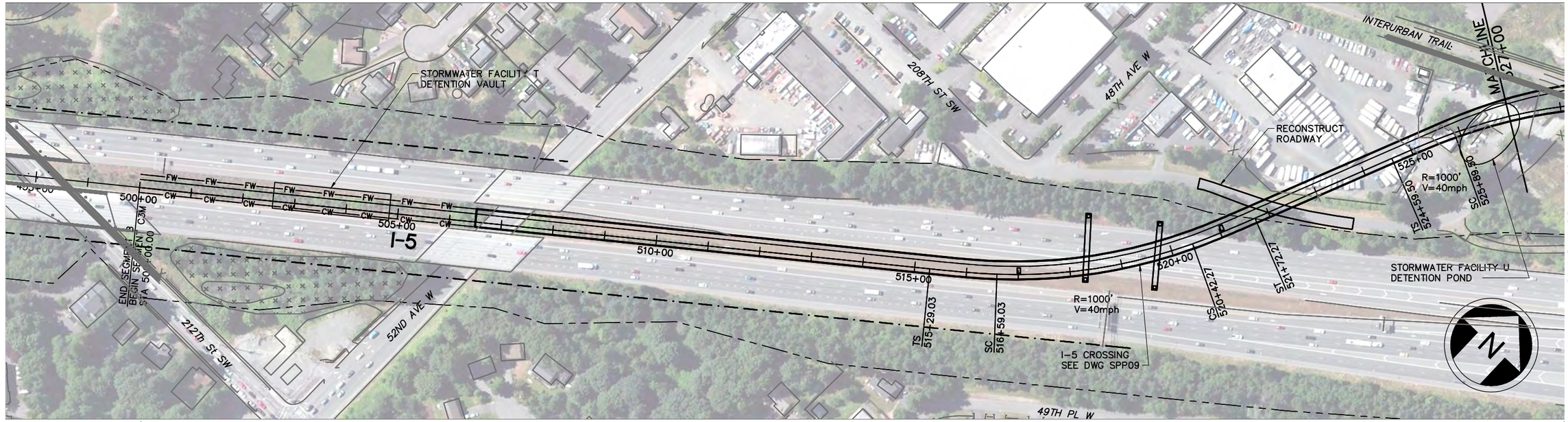
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. C2W

DWG NO. C2W-PP01

SHEET 54 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



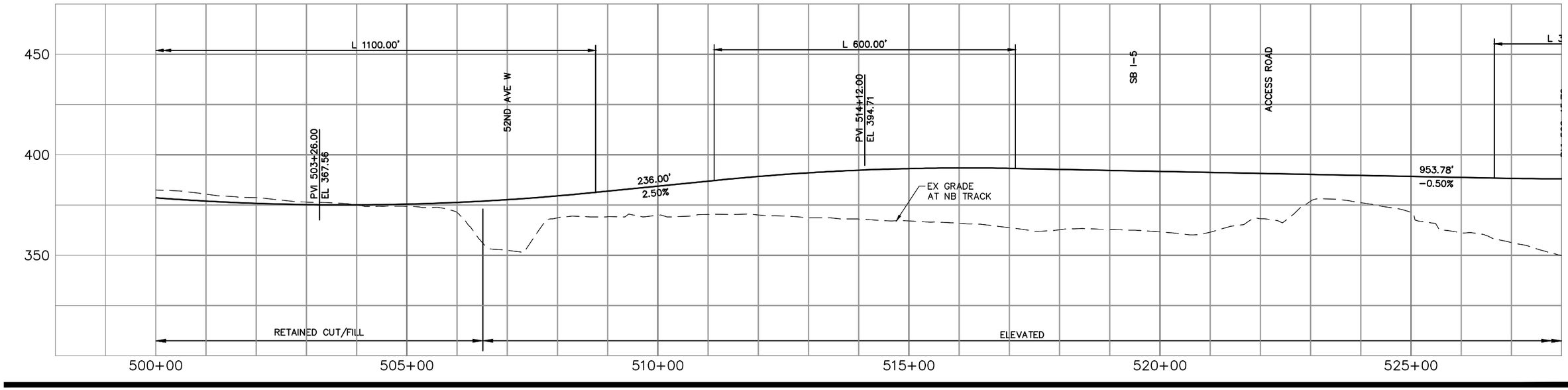
ALTERNATIVE C3M

LEGEND:

- NB TRACK CENTERLINE
- STRUCTURE
- FW FW FILL WALL
- CW CW CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SoundTransit

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

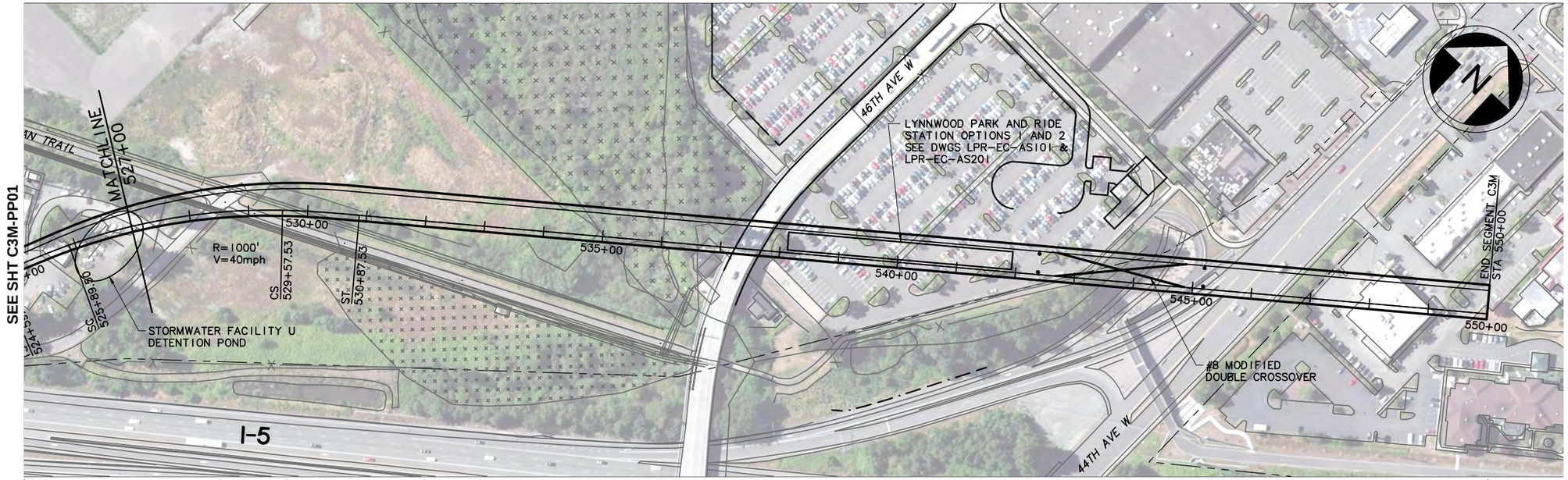
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. C3M

DWG NO. C3M-PP01

SHEET 55 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

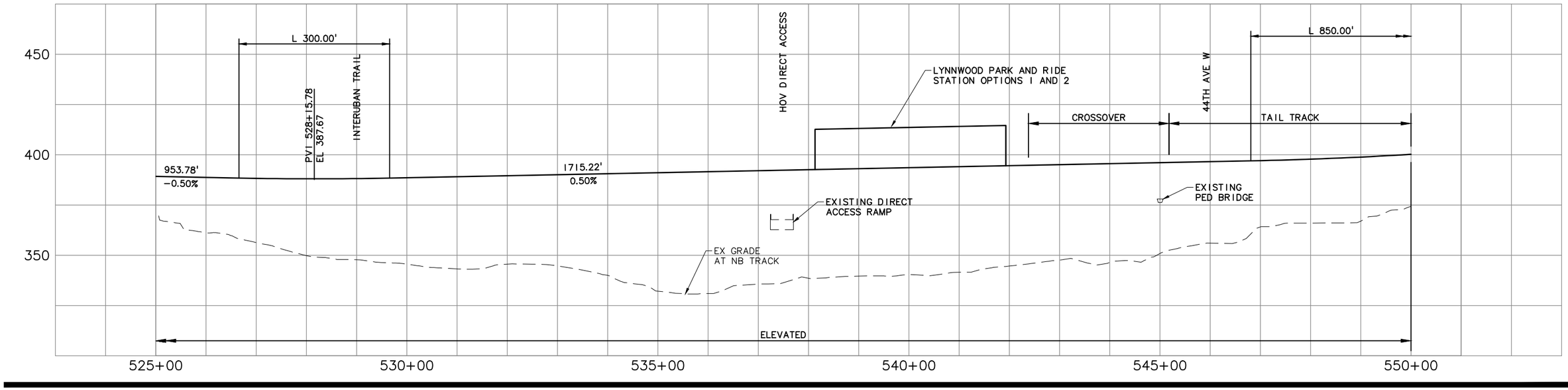


LEGEND:

- NB TRACK CENTERLINE
- STRUCTURE
- FW—FW— FILL WALL
- CW—CW— CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. C3M

DWG NO. C3M-PP02

SHEET 56 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

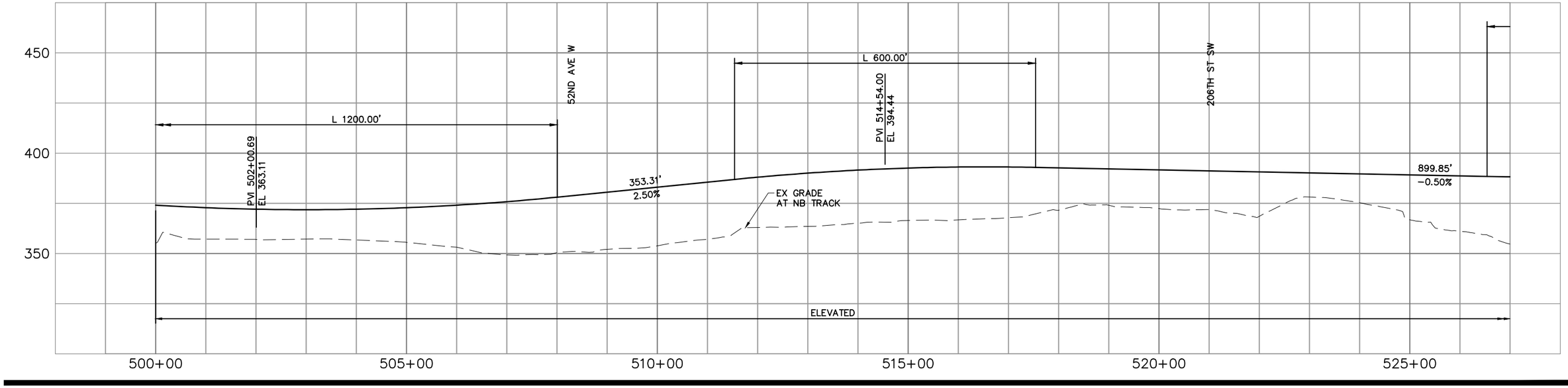
ALTERNATIVE C3W

LEGEND:

- NB TRACK CENTERLINE
- 5+00 STRUCTURE
- FW—FW— FILL WALL
- CW—CW— CUT WALL
- AT-GRADE
- WSDOT/ST COMPATIBILITY LIMITS
- WSDOT ROW
- STRADDLE BENT
- COLUMN
- Ⓢ TRAFFIC SIGNAL
- WETLAND

100' 50' 0' 100' 200' HORIZONTAL SCALE

25' 12.5' 0' 25' 50' VERTICAL SCALE



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SOUNDTRANSIT

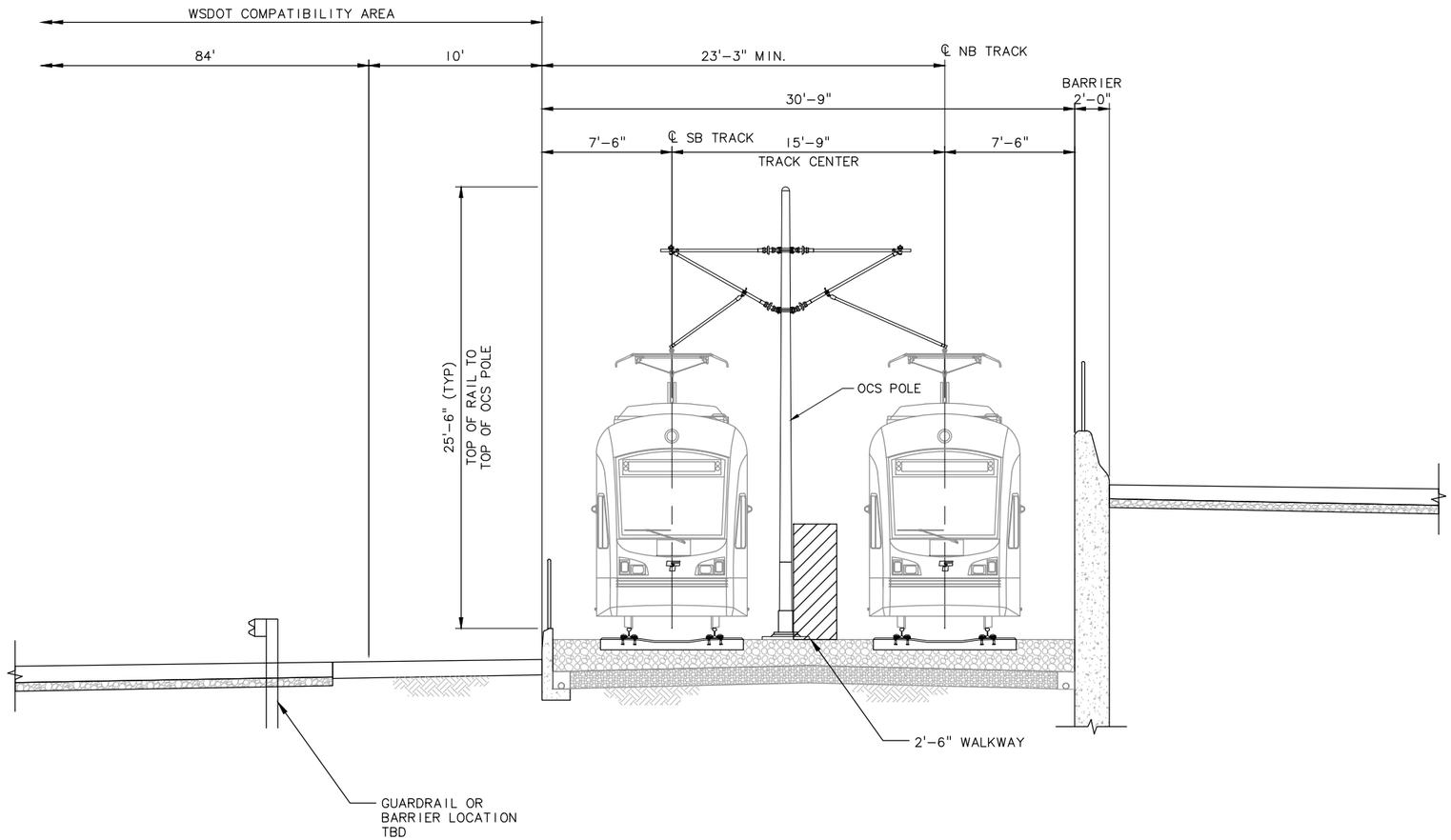
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. C3W

DWG NO. C3W-PP01

SHEET 57 OF 142

REV. NO. 2



AT-GRADE

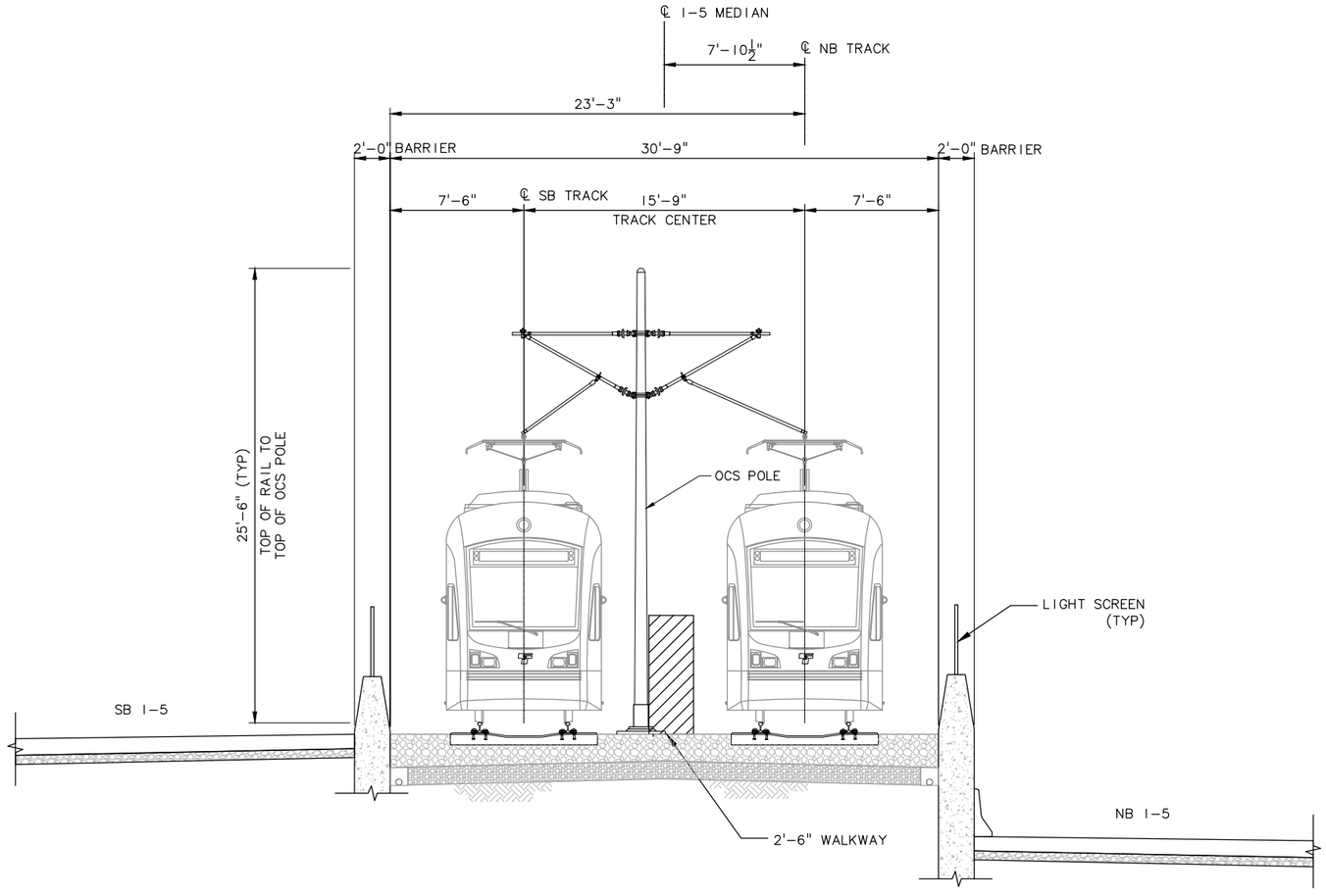
\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\TypSections\NCTP-Typ Sect.dwg Oct 10, 2012 - 3:50pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

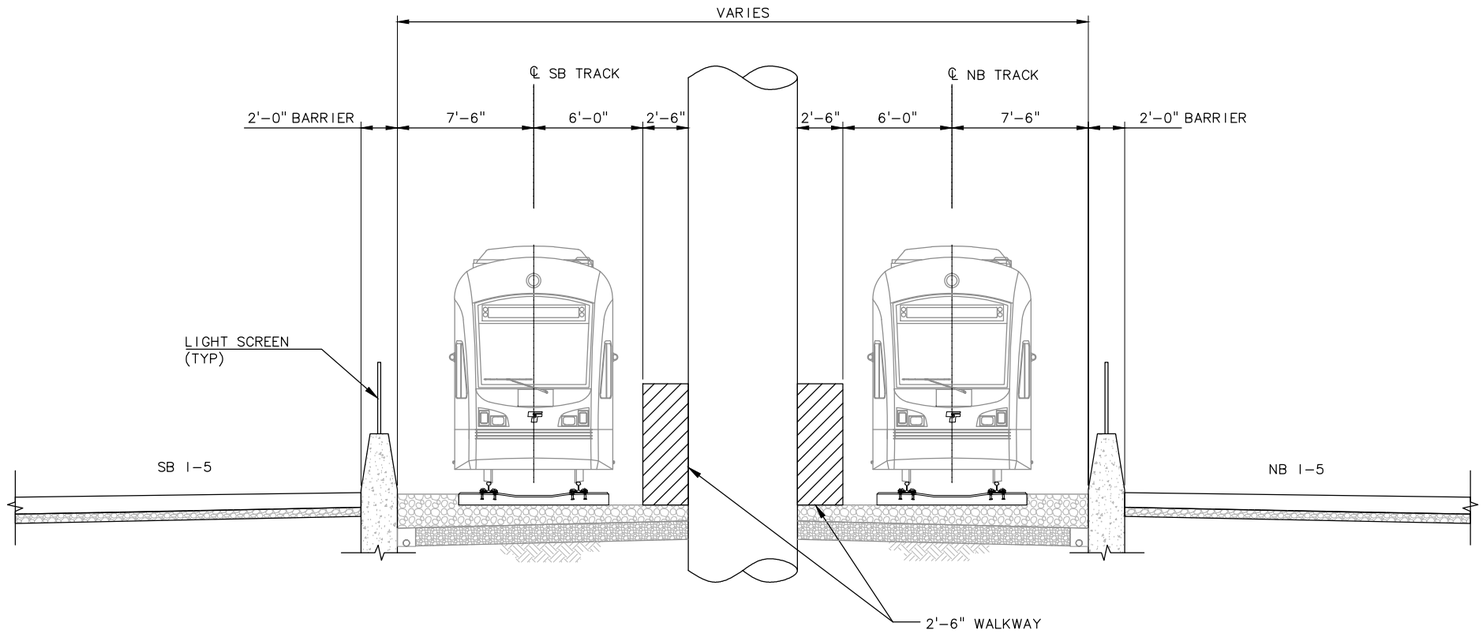
CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
TYPICAL SECTIONS SHEET 1

DWG NO. SECT-1
SHEET 58 OF 142
REV. NO. 2



MEDIAN

\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\TypSections\NCTP-Typ Sect.dwg Oct 10, 2012 - 3:51pm



MEDIAN AT COLUMN

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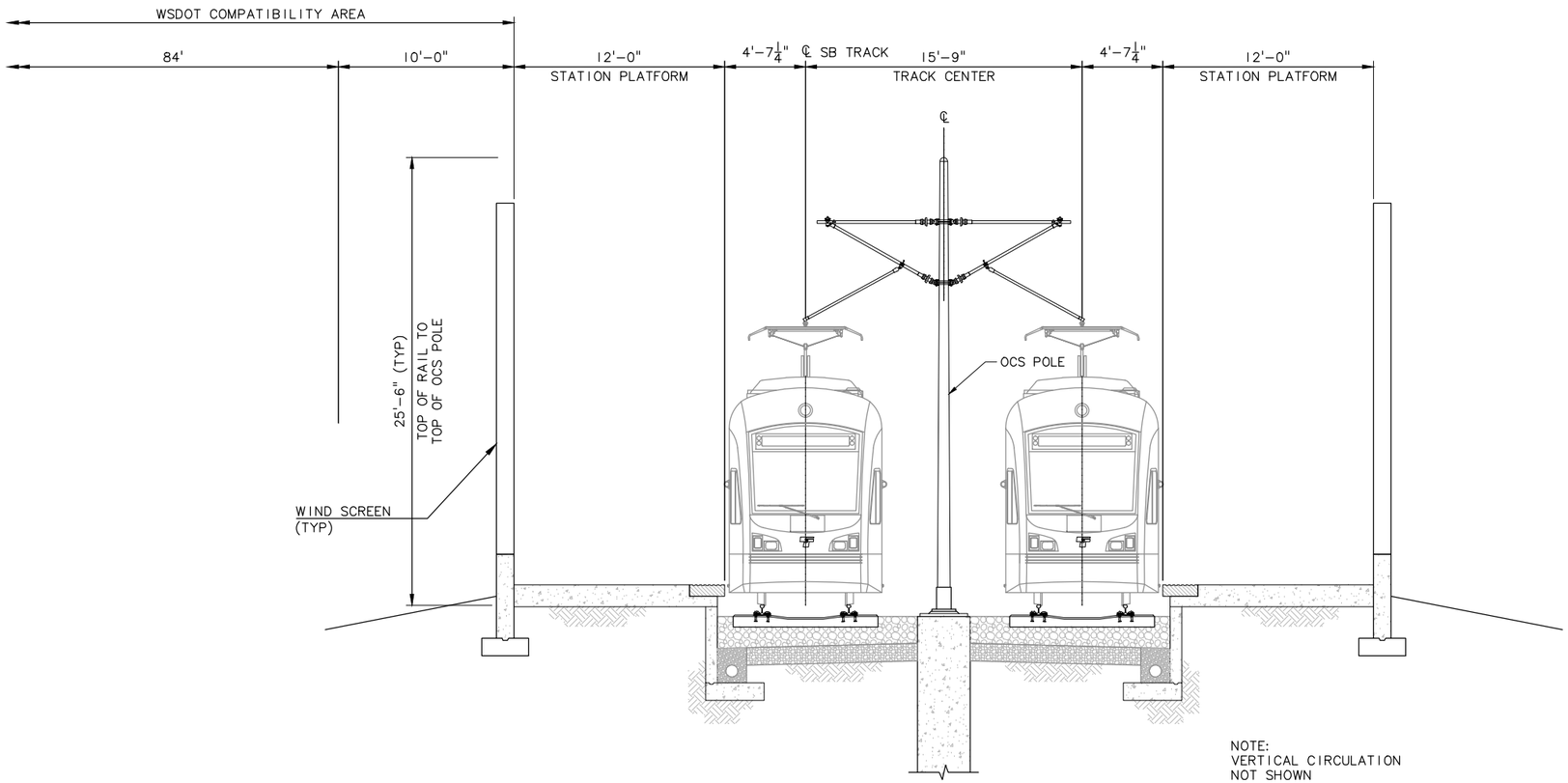
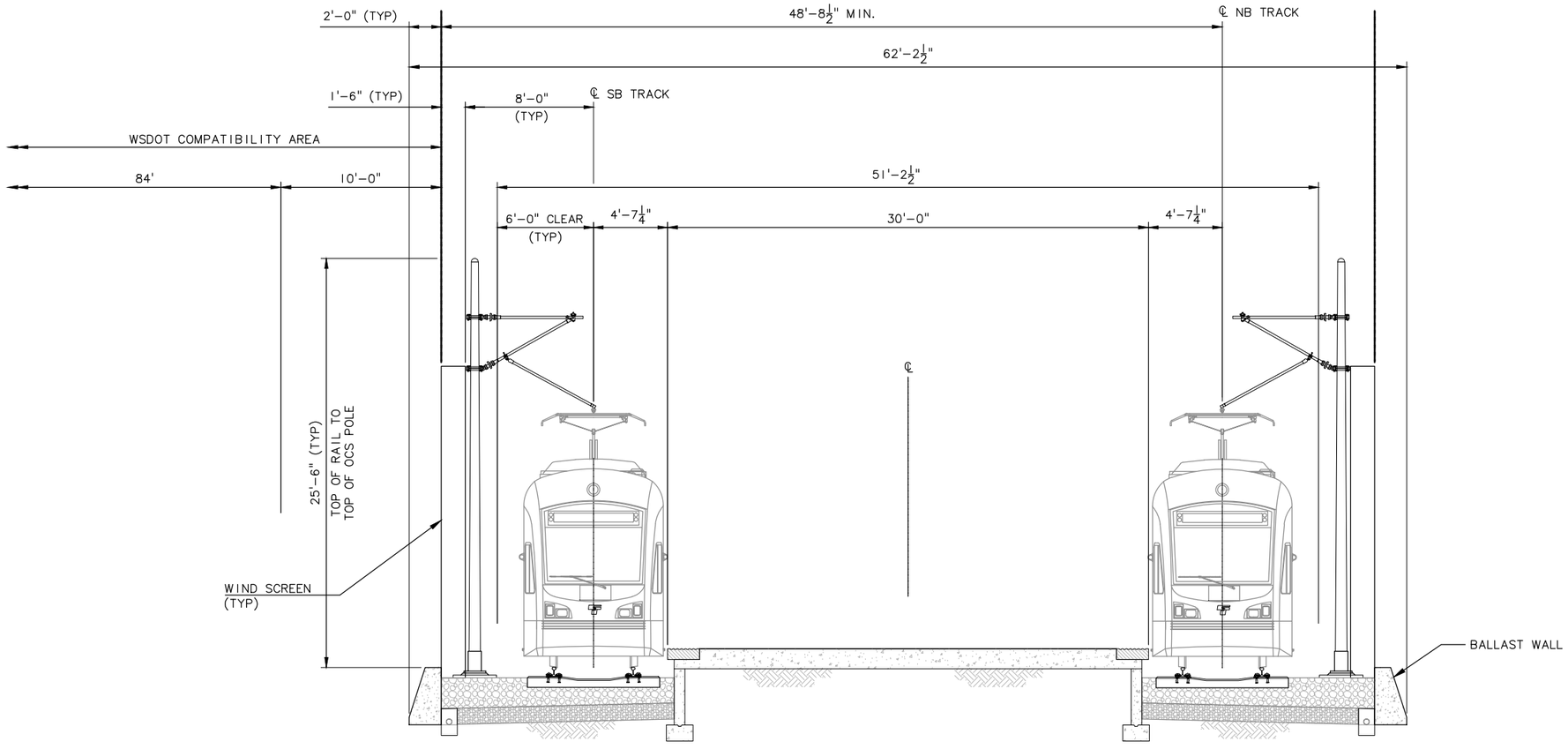


AT-GRADE SIDE PLATFORM STATION

\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\TypSections\NCTP-Typ Sect.dwg Oct 10, 2012 - 3:52pm



AT-GRADE CENTER PLATFORM STATION

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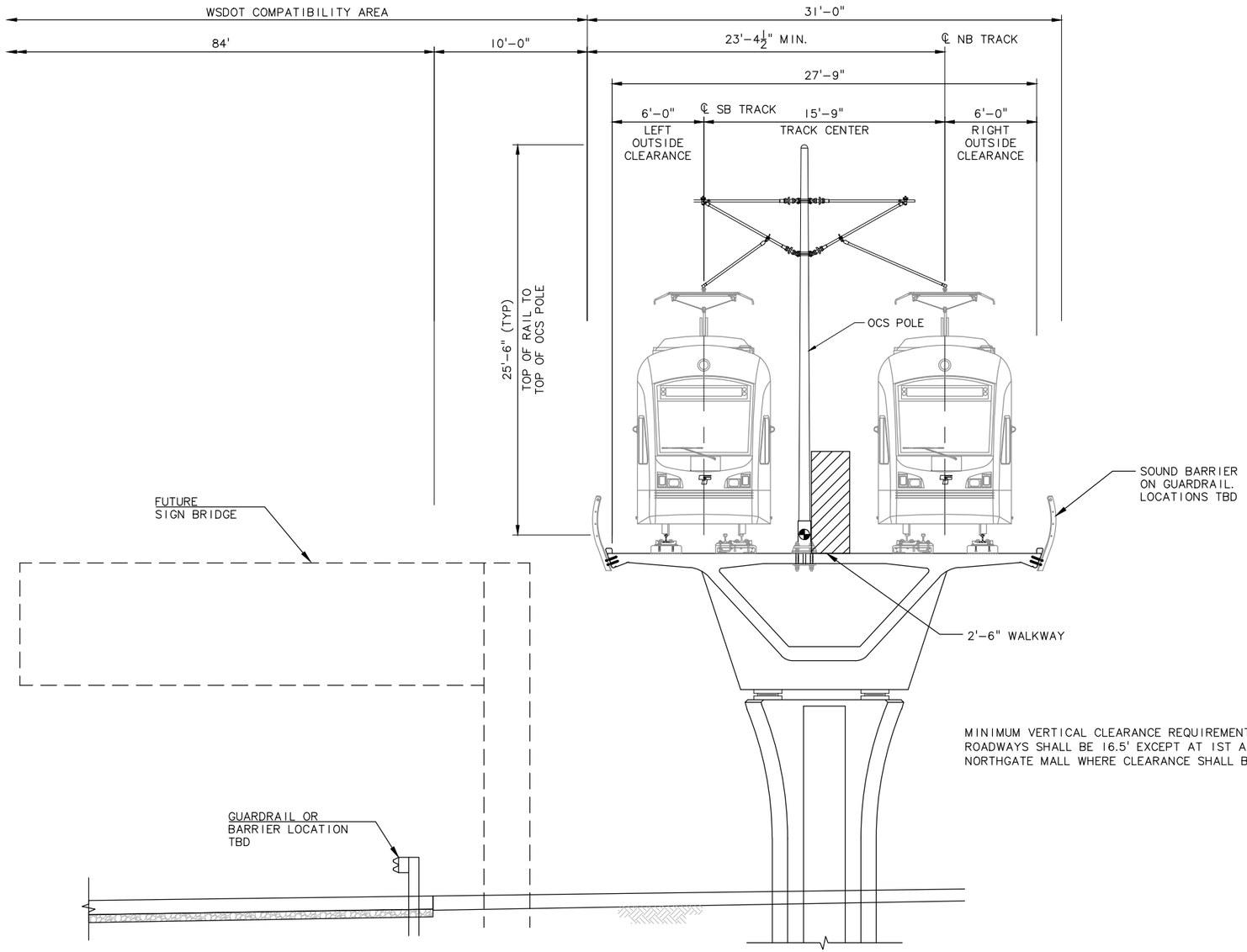


ELEVATED

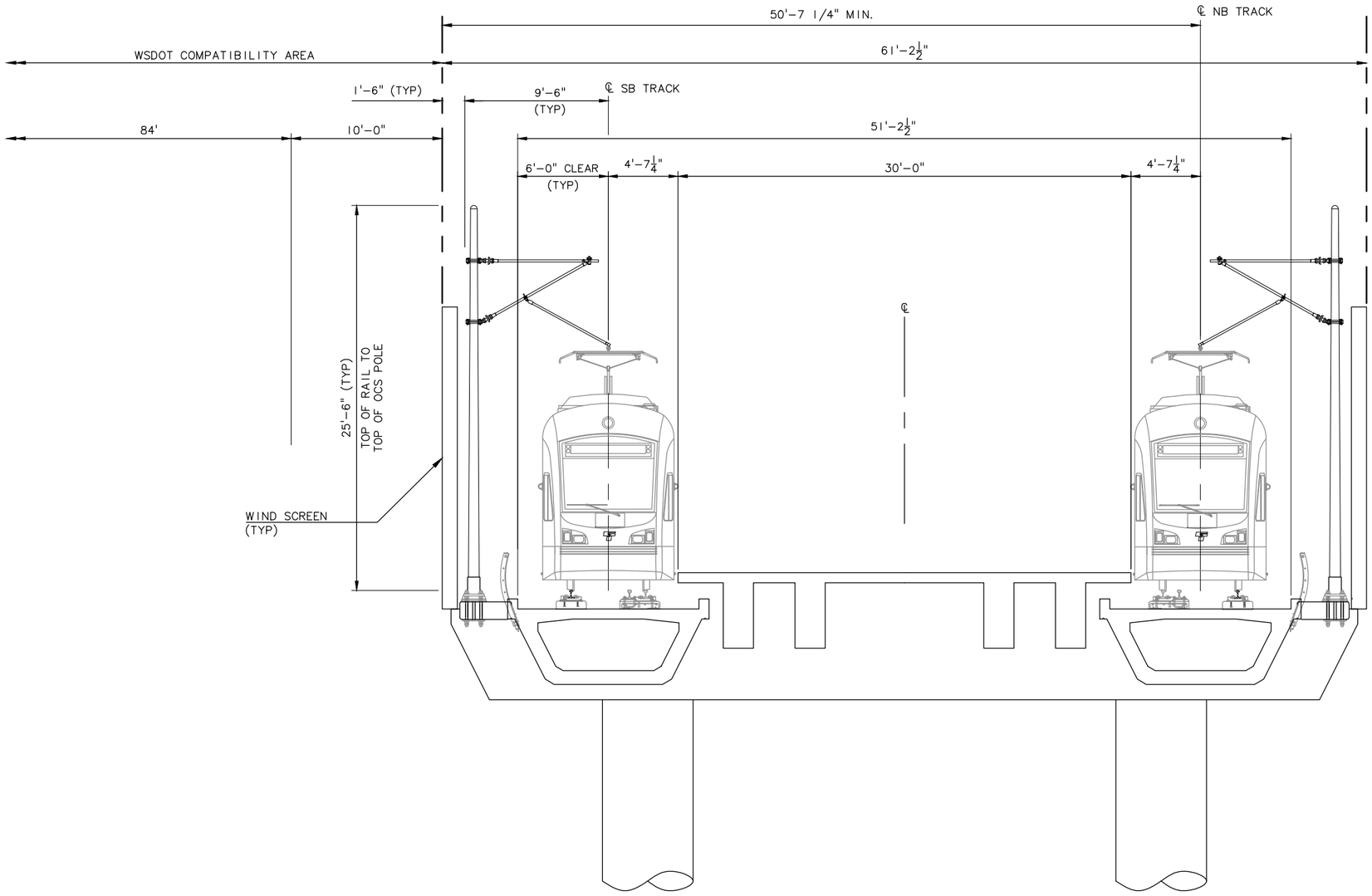
\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\TypSections\NCTP-Typ Sect.dwg Oct 10, 2012 - 3:53pm

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
TYPICAL SECTIONS SHEET 6

DWG NO. SECT-6
SHEET 63 OF 142
REV. NO. 2



ELEVATED STATION

\\hqdata\PEPD\NorthCorridor\CADD\SHEETS\Sheets-DEIS\TypSections\NCTP-Typ Sect.dwg Oct 10, 2012 - 3:53pm

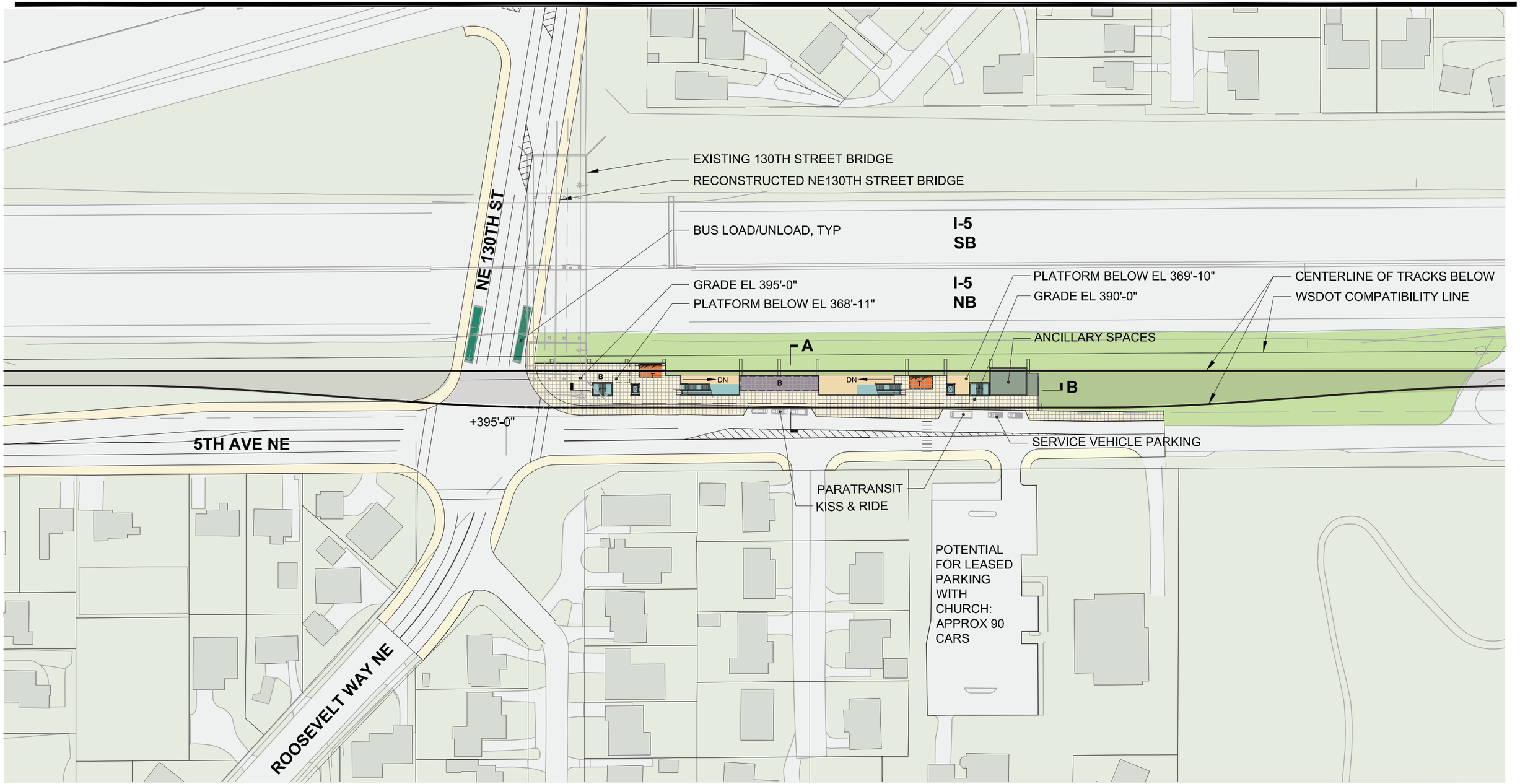
SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
TYPICAL SECTIONS SHEET 7

DWG NO. SECT-7
SHEET 64 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alternative	Bus Facilities	Park & Ride	Kiss & Ride	Bicycle Parking
Retained Cut, Center Platform, Alternative A5, A10	On-street stops, 1 westbound on NE 130th, 1 eastbound on NE 130th	Leased parking for up to 90 cars	Located on 5th Ave NE	50 bike spaces, plus 50 expansion

0 25 50 100 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

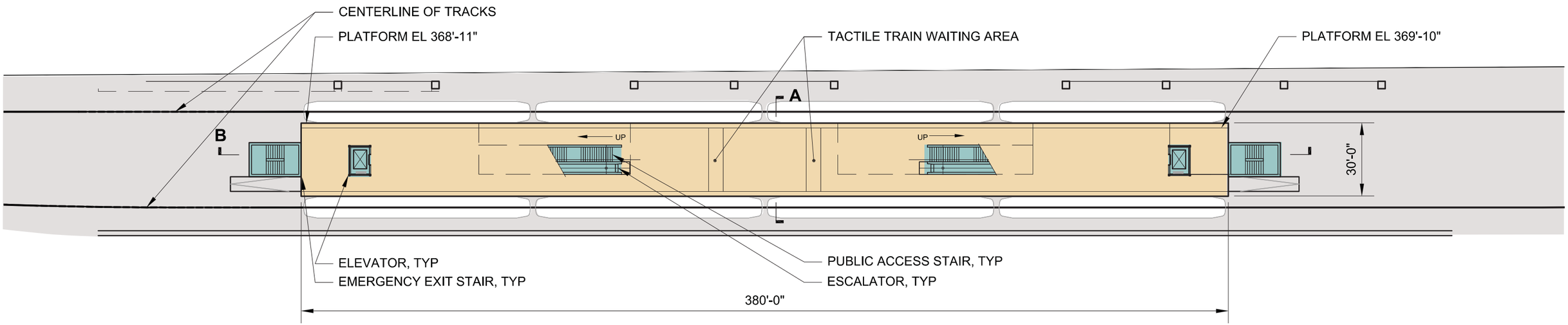
CONCEPTUAL DESIGN
NE 130TH STREET STATION - OPTION 1
SITE PLAN

DWG NO. 130–GC–AS101

SHEET 65 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

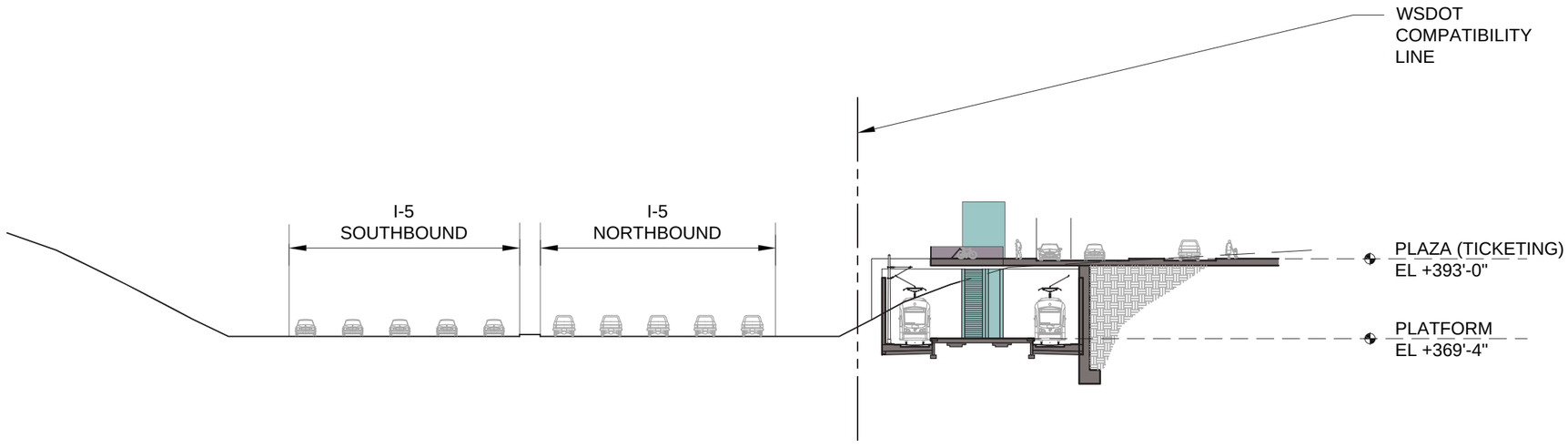
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

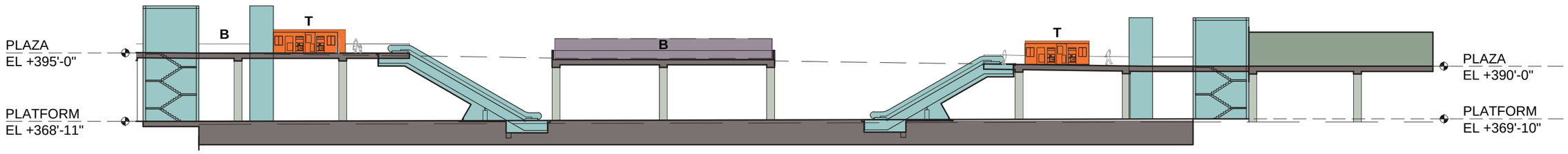
CONCEPTUAL DESIGN
NE 130TH STREET STATION - OPTION 1
PLATFORM LEVEL PLAN

DWG NO. 130–GC–AK101
SHEET 66 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SECTION A



SECTION B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40

SOUNDTRANSIT

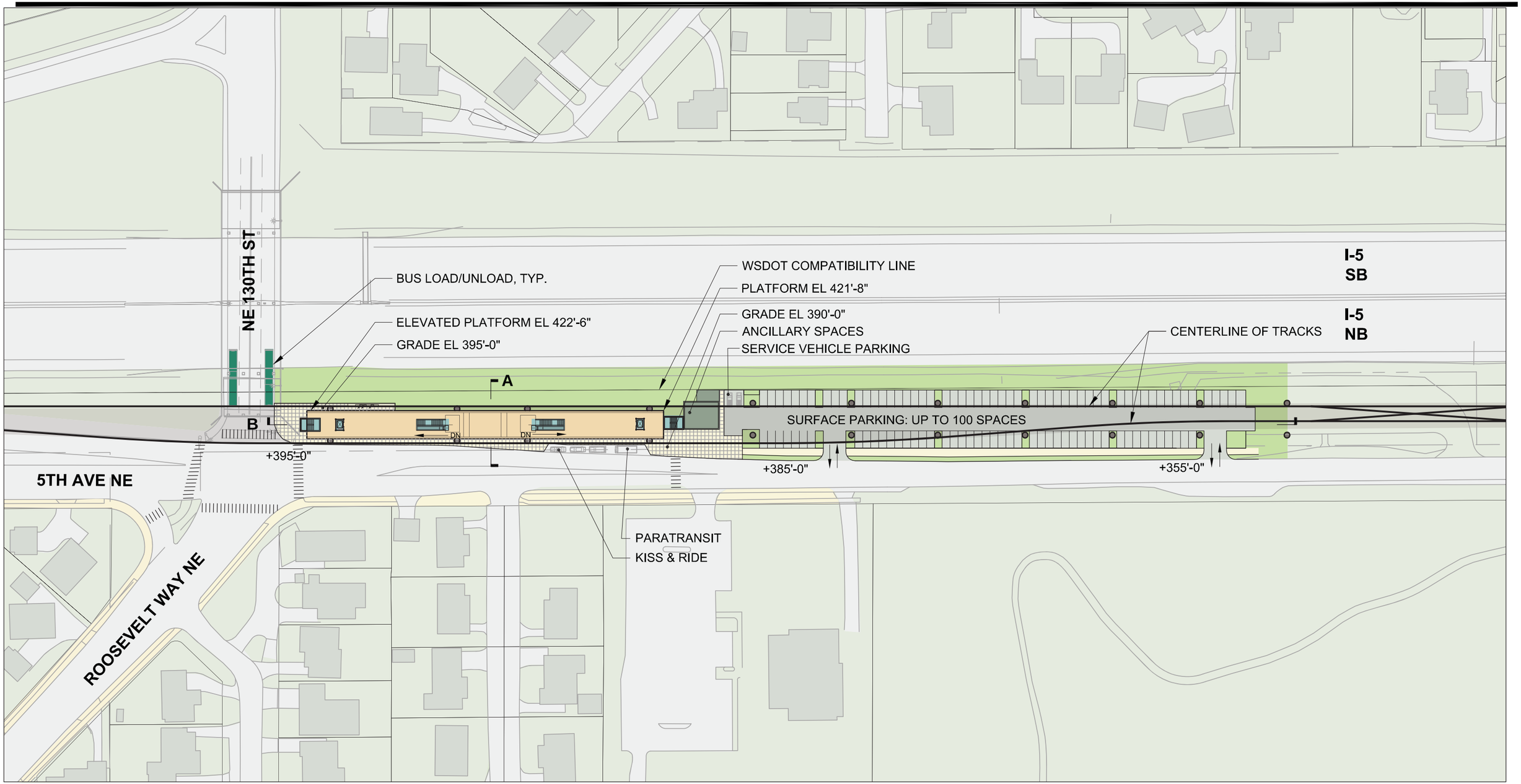
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN
NE 130TH STREET STATION - OPTION 1
SECTIONS

DWG NO. 130–GC–AX101
SHEET 67 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alternative	Bus Facilities	Park & Ride	Kiss & Ride	Bicycle Parking
Elevated Center Platform, Alternative A7 & A11	On-street stops, 1 westbound on NE 130th, 1 eastbound on NE 130th	Surface parking for up to 100 cars	Located on 5th Ave NE	50 bike spaces, plus 50 expansion

0 25 50 100 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

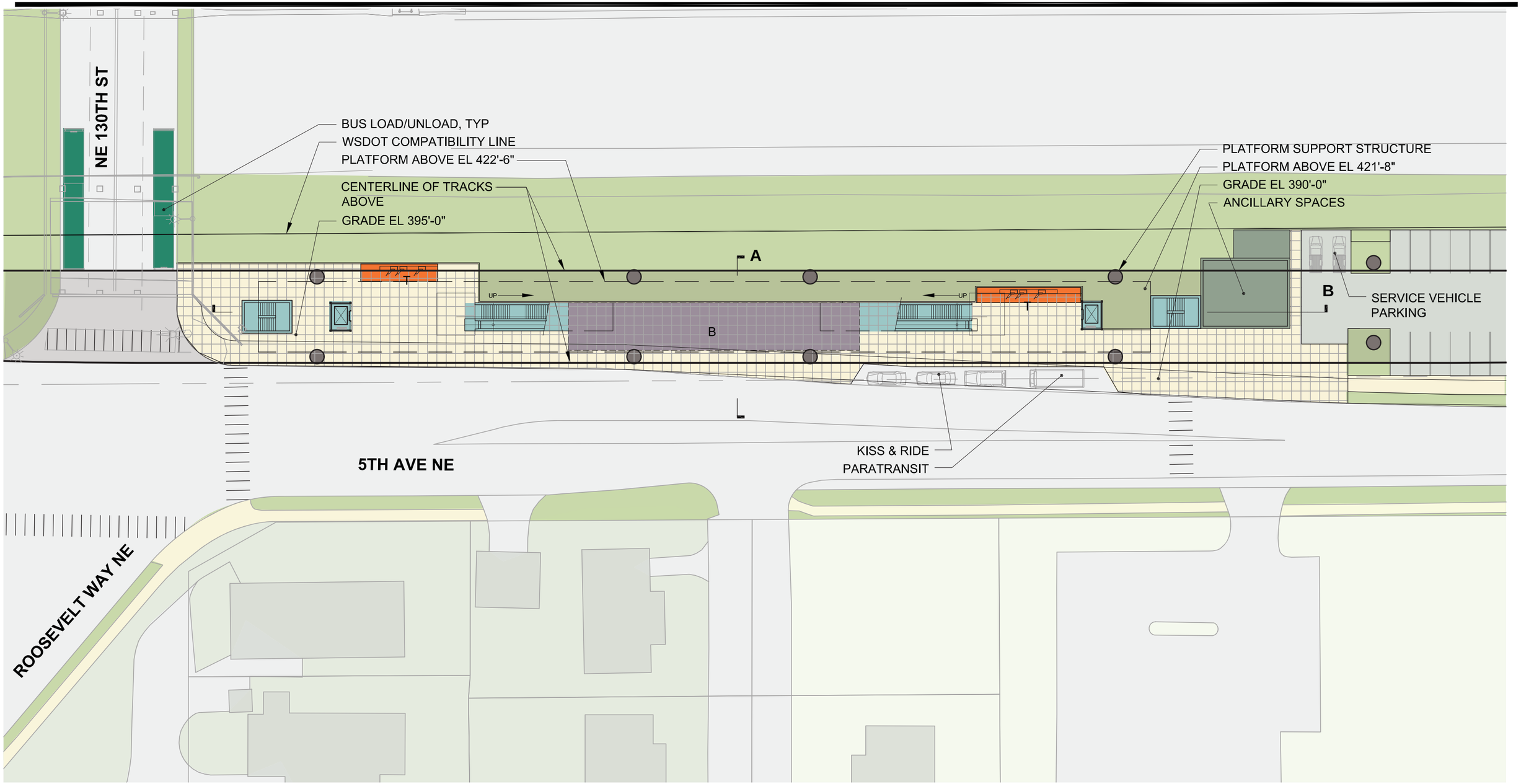
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN
NE 130TH STREET STATION - OPTION 2
SITE PLAN

DWG NO. 130-EC-AS101
SHEET 68 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

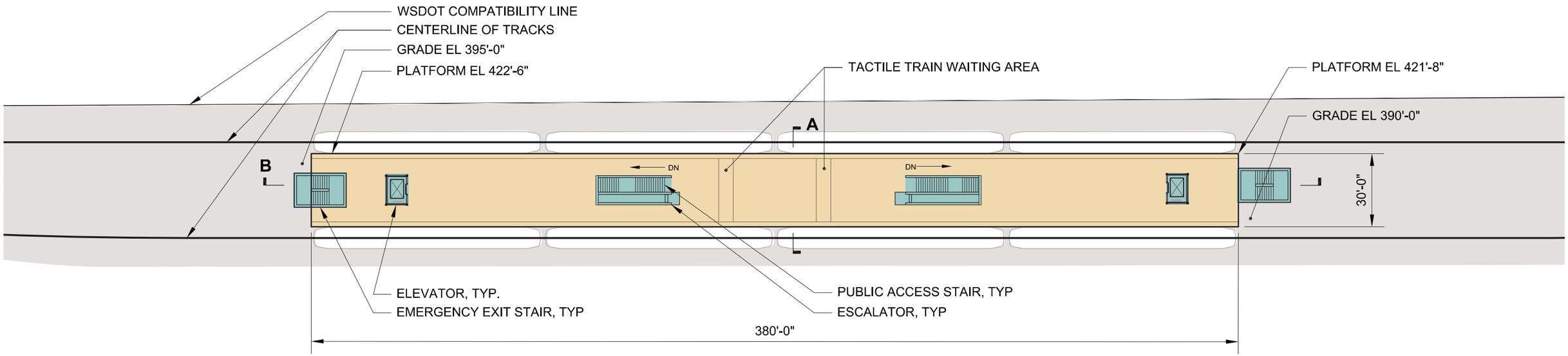
CONCEPTUAL DESIGN
NE 130TH STREET STATION - OPTION 2
PLAZA LEVEL PLAN

DWG NO. 130_EC_APL101

SHEET 69 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

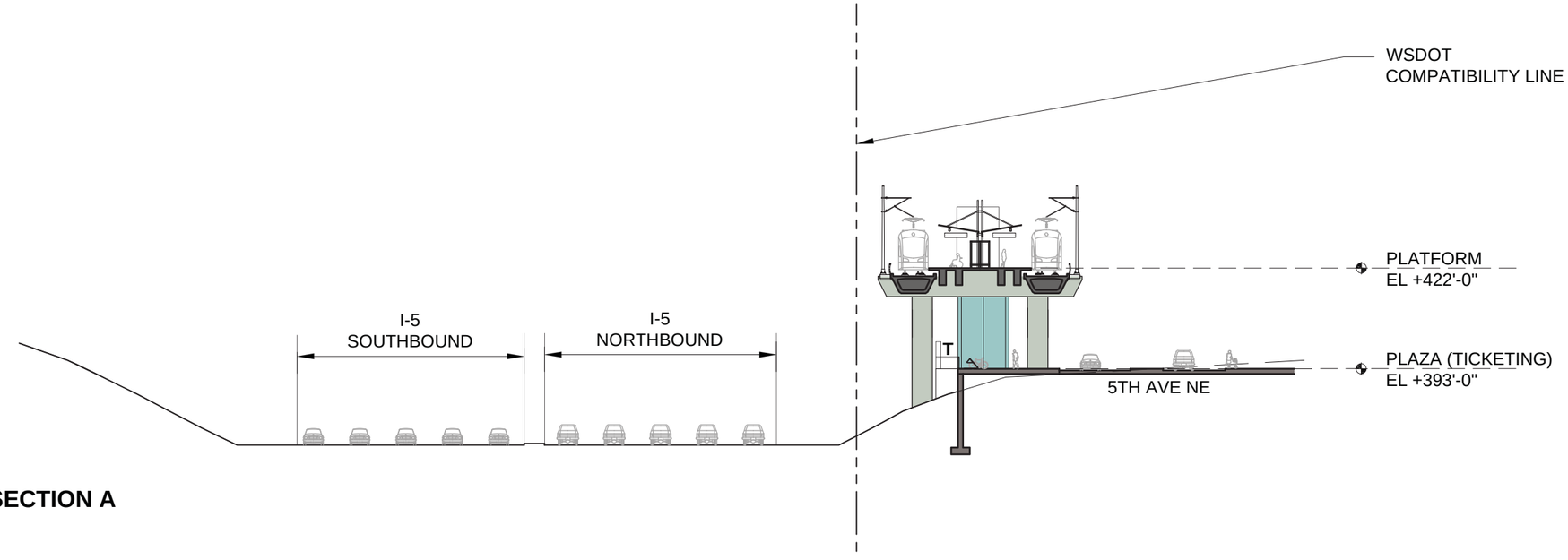
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

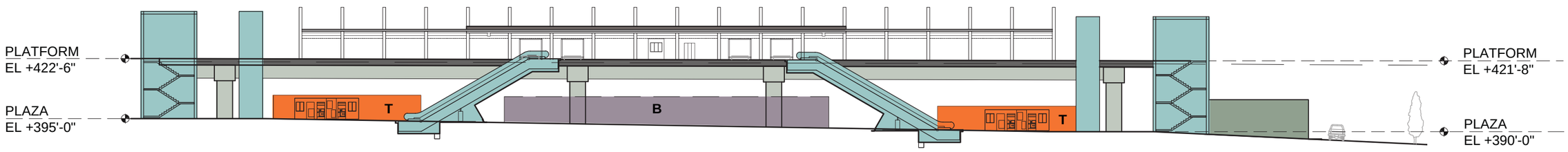
CONCEPTUAL DESIGN
NE 130TH STREET STATION - OPTION 2
PLATFORM LEVEL PLAN

DWG NO. 130–EC–AK101
SHEET 70 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SECTION A



SECTION B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40

SoundTransit

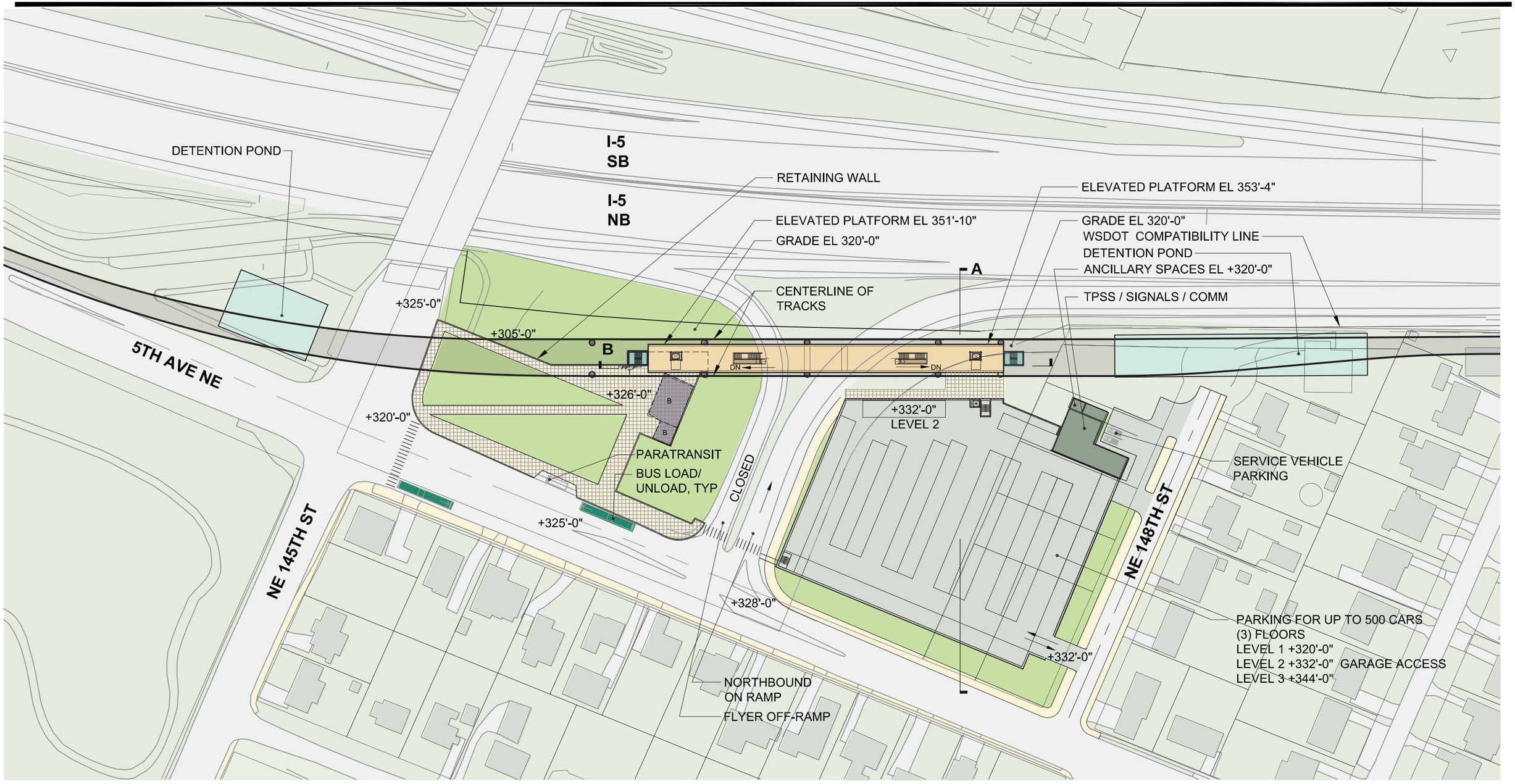
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN
NE 130TH STREET STATION - OPTION 2
SECTIONS

DWG NO. 130–EC–AX101
SHEET 71 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alignment	Bus Facilities	Park & Ride	Kiss & Ride	Bicycle Parking
Elevated Center Platform, Alignment A1, A10	2 On-street bus bays, 1 southbound and 1 northbound on 5th Ave. NE	Parking for up to 500 cars	Integrated with parking	50 bike spaces, plus 50 expansion

0 25 50 100 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

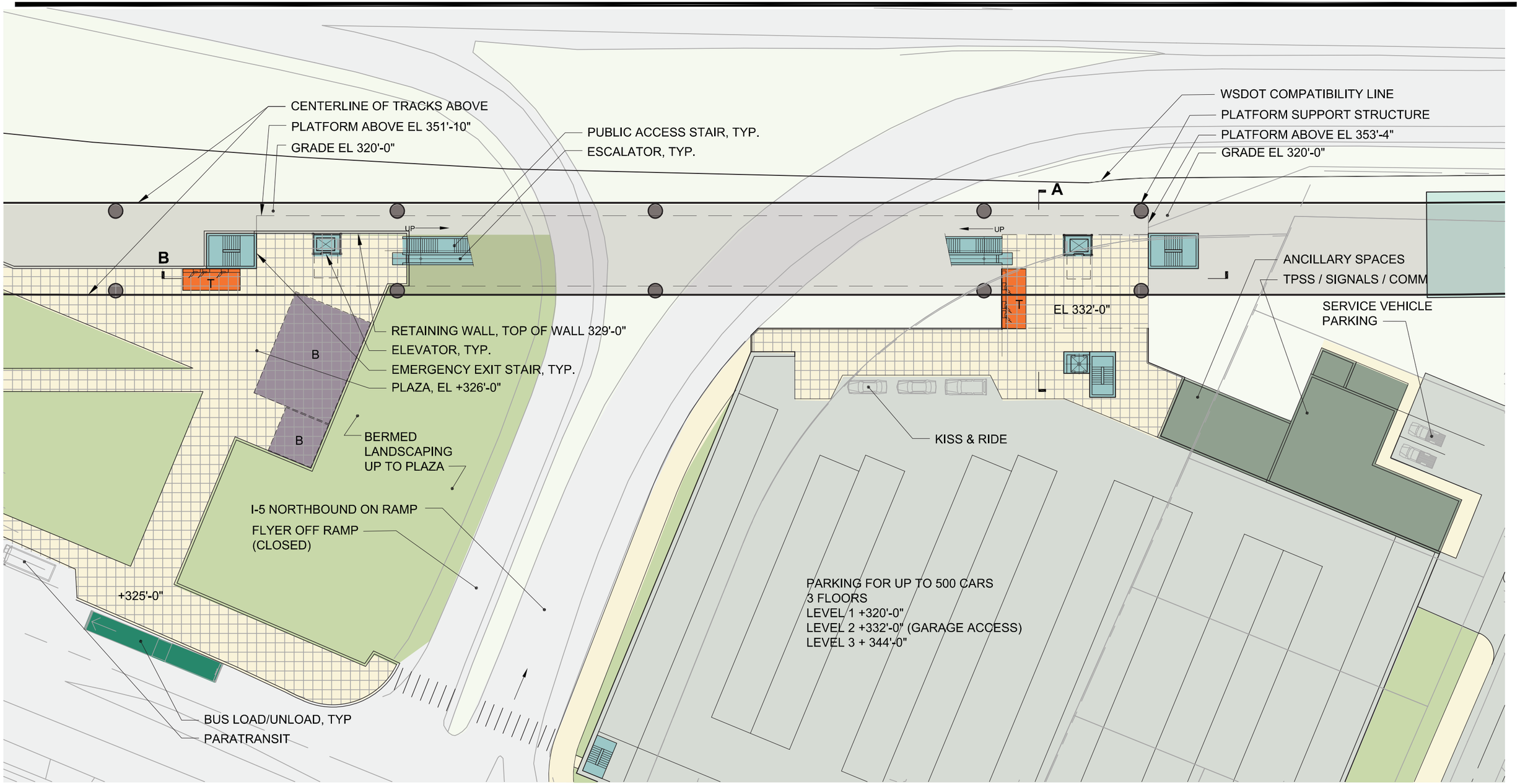
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN
NE 145TH STREET STATION - OPTION 1
SITE PLAN

DWG NO. 145-EC-AS101
SHEET 72 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

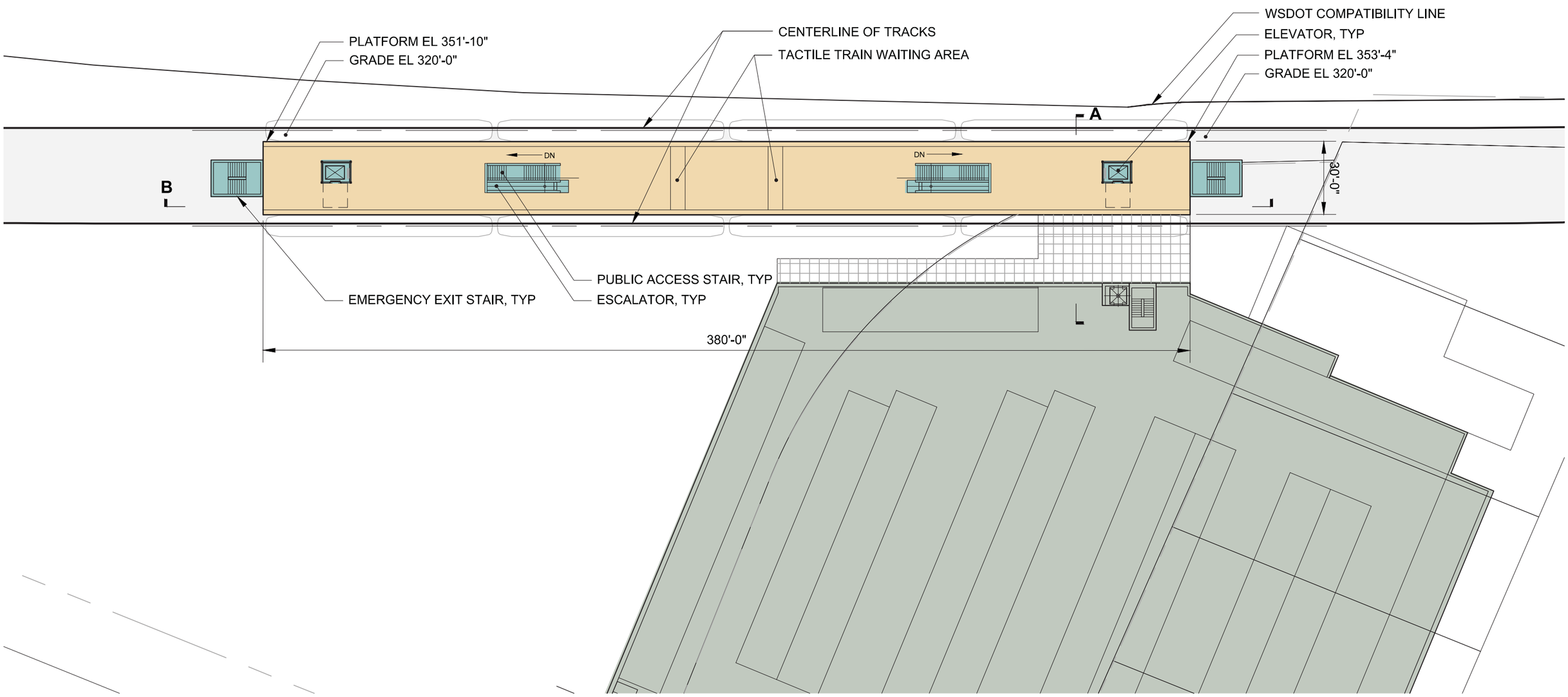
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN
NE 145TH STREET STATION - OPTION 1
PLAZA LEVEL PLAN

DWG NO. 145-EC-APL101
SHEET 73 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

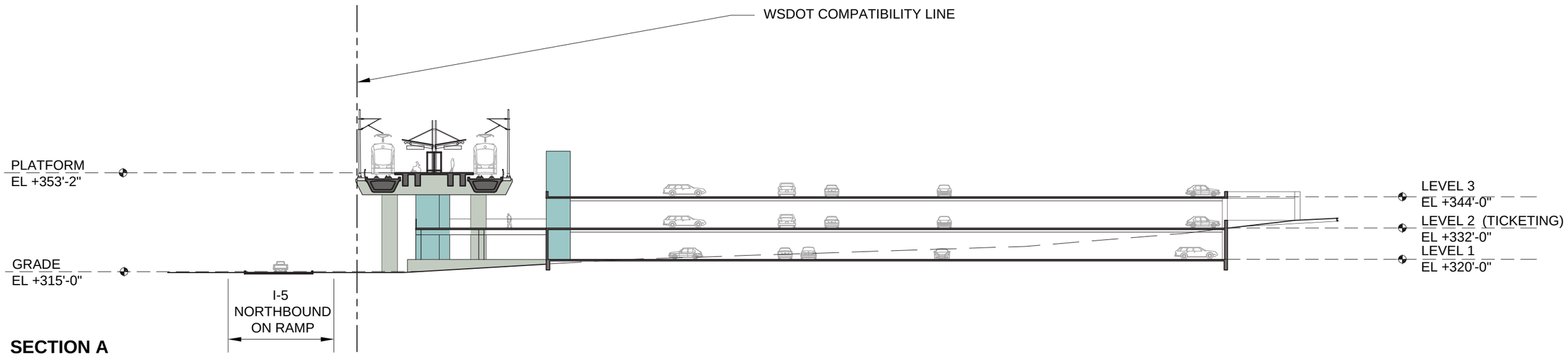
CONCEPTUAL DESIGN
NE 145TH STREET STATION - OPTION 1
PLATFORM LEVEL PLAN

DWG NO. 145–EC–AK101

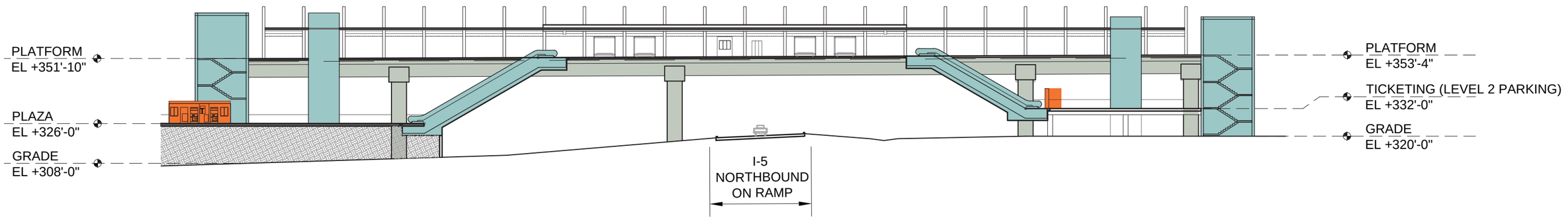
SHEET 74 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SECTION A



SECTION B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40

SOUNDTRANSIT

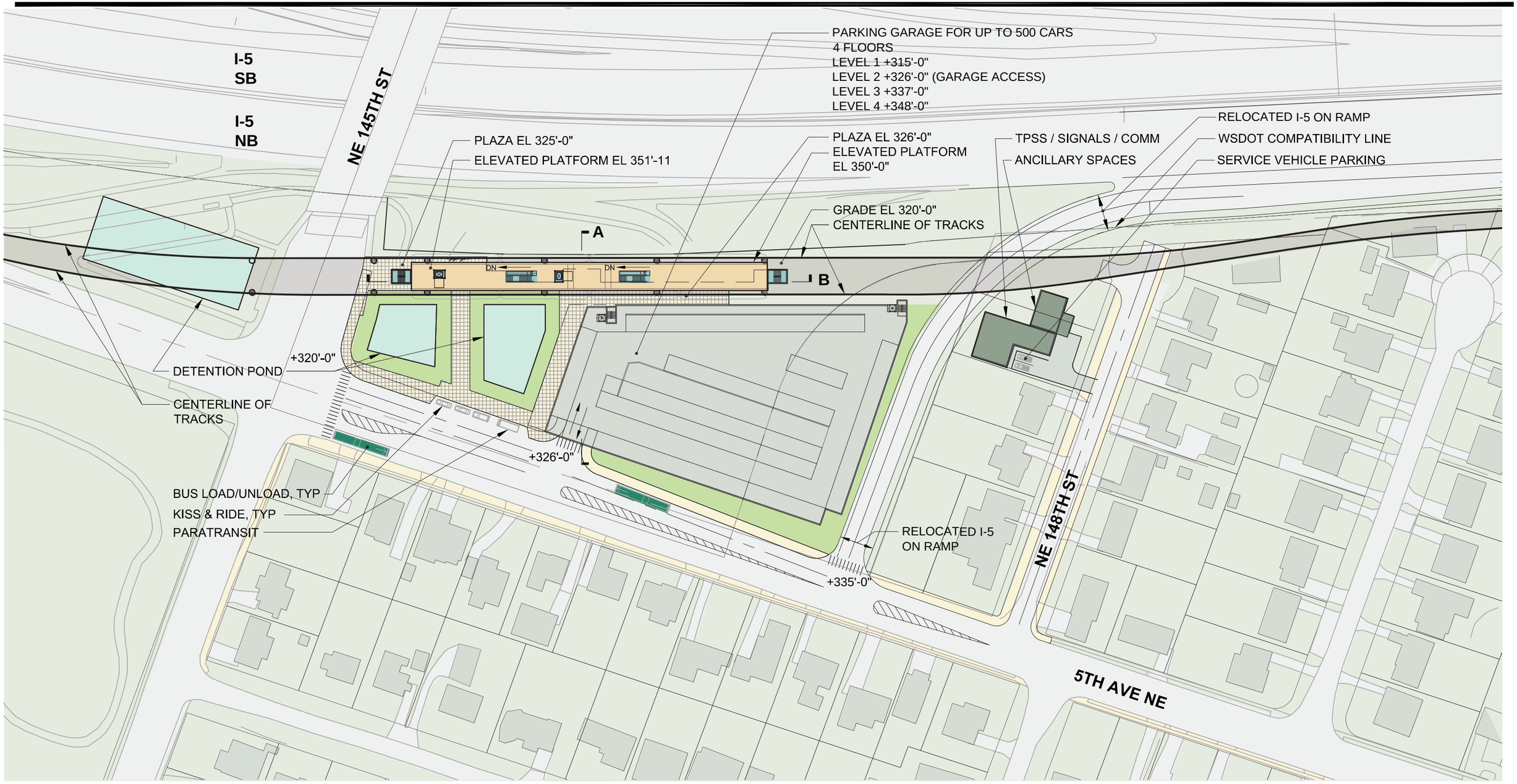
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN
NE 145TH STREET STATION - OPTION 1
SECTIONS

DWG NO. 145-EC-AX101
SHEET 75 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alternative	Bus Facilities	Park & Ride	Kiss & Ride	Bicycle Parking
Elevated Center Platform, Alternative A3 & A11	2 On-street bus bays: 1 southbound & 1 northbound on 5th Ave NE	Parking up for to 500 cars	On 5th Ave NE	50 bike spaces, plus 50 expansion

0 25 50 100 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

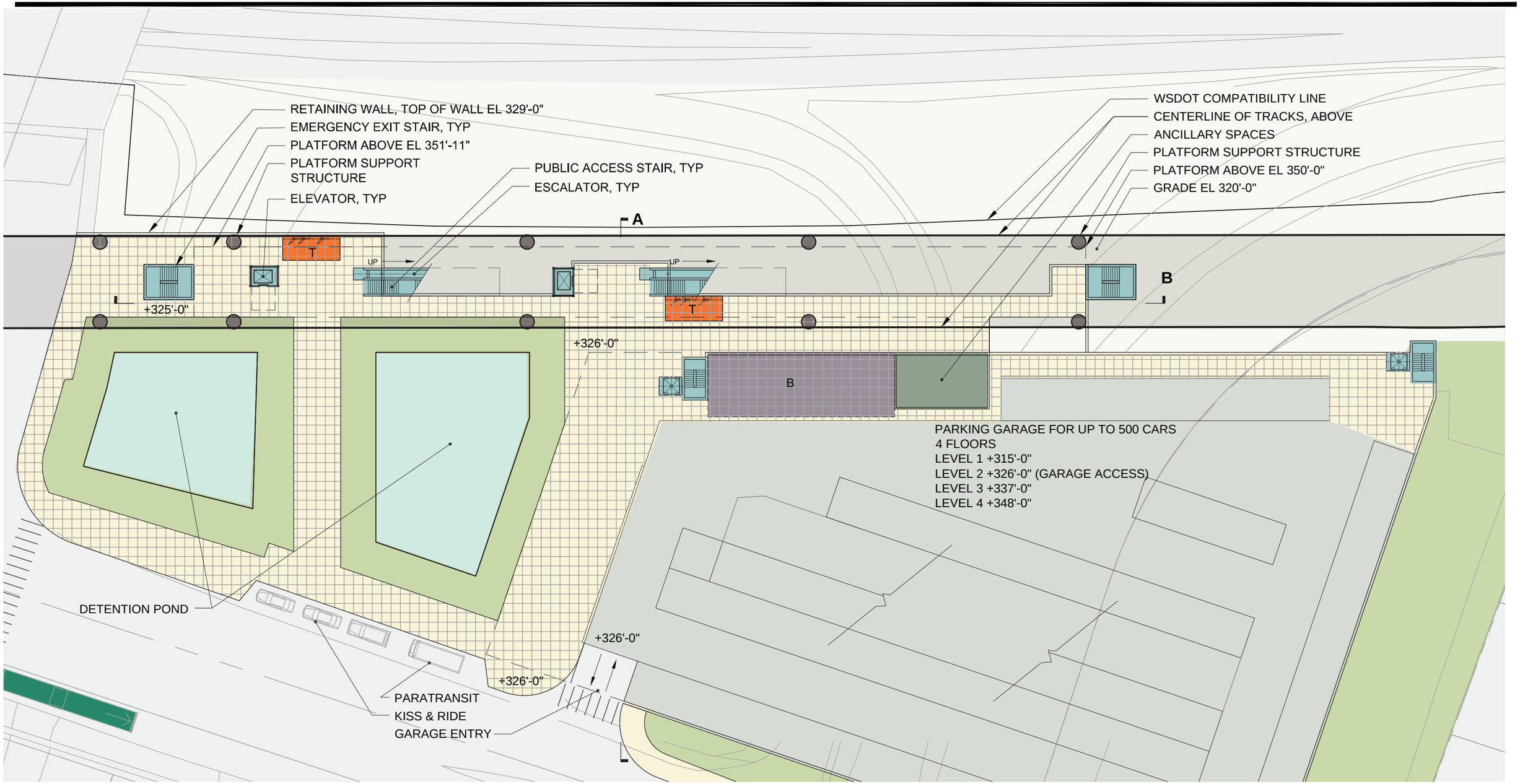
CONCEPTUAL DESIGN
NE 145TH STREET STATION - OPTION 2
SITE PLAN

DWG NO. 145–EC–AS201

SHEET 76 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload

Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

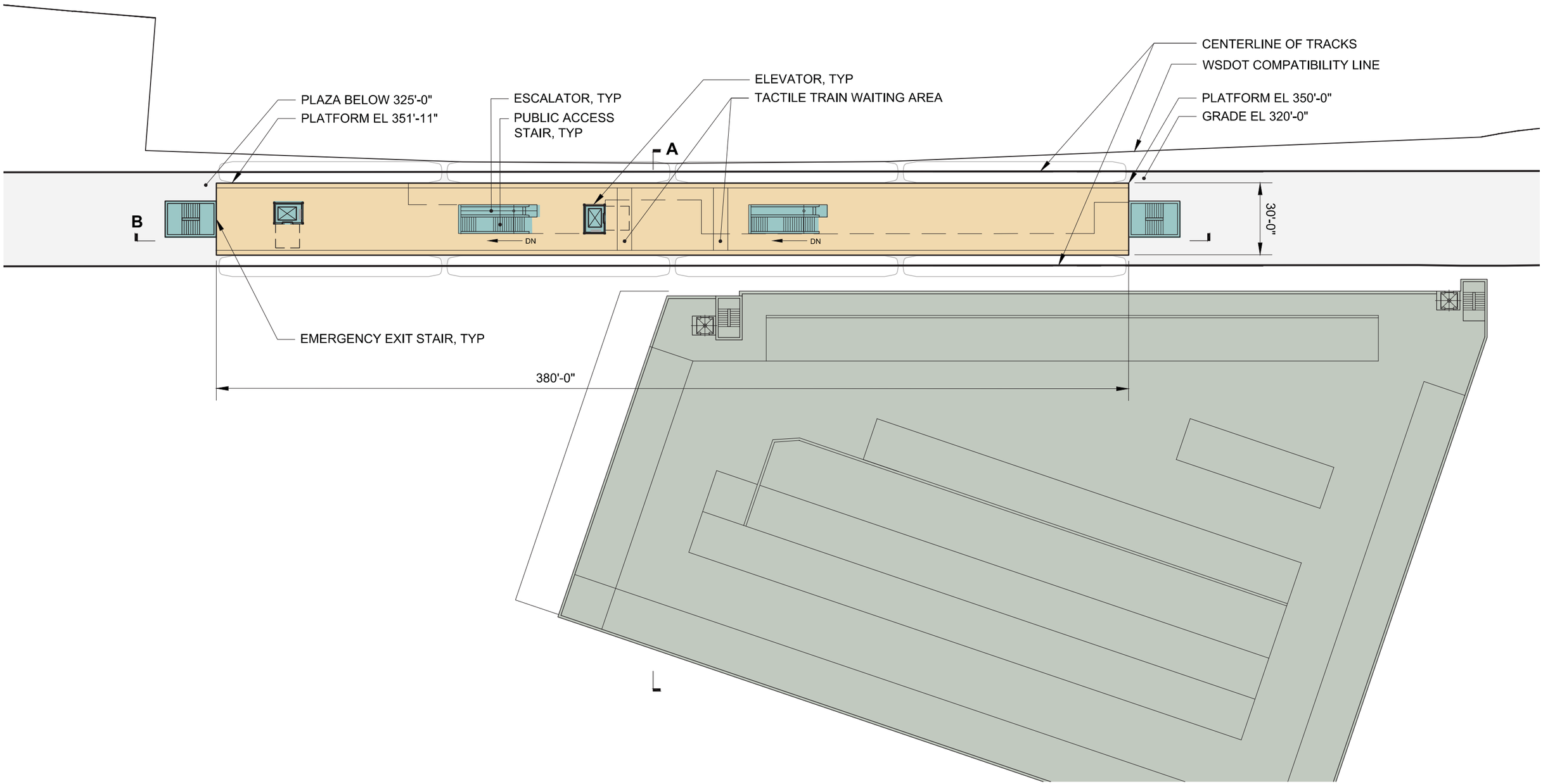
CONCEPTUAL DESIGN
NE 145TH STREET STATION - OPTION 2
PLAZA LEVEL PLAN

DWG NO. 145–EC–APL201

SHEET 77 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

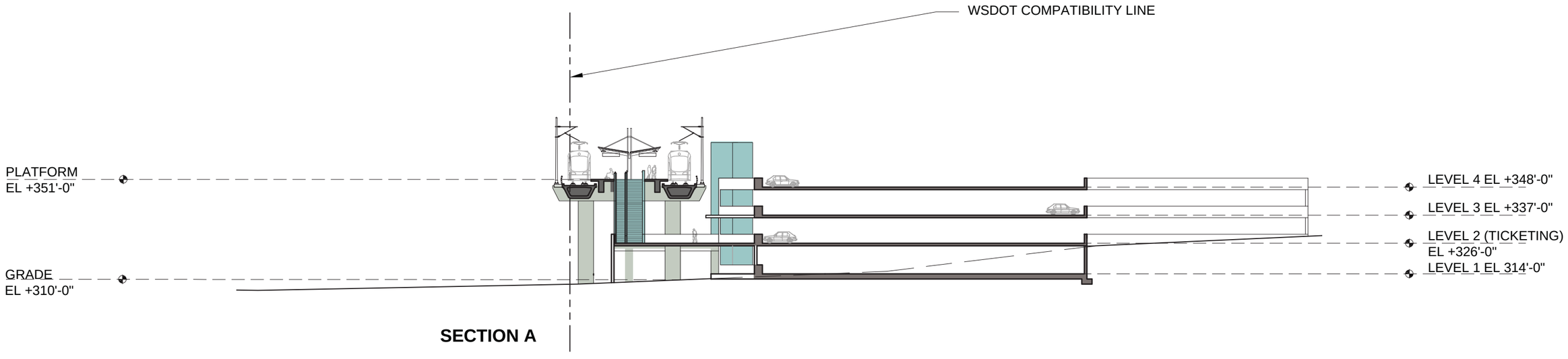
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

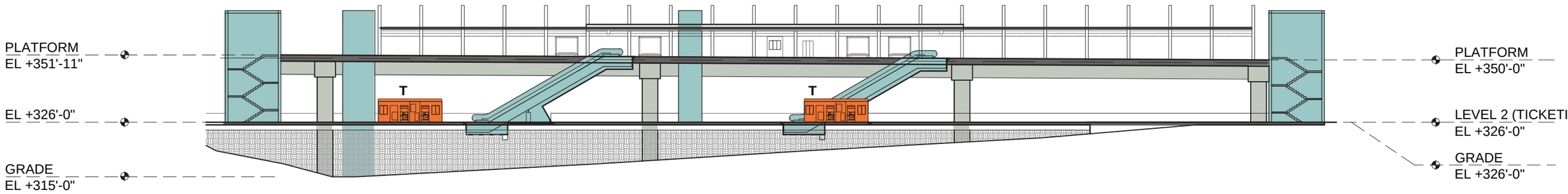
CONCEPTUAL DESIGN
NE 145TH STREET STATION - OPTION 2
PLATFORM LEVEL PLAN

DWG NO. 145-EC-AK201
SHEET 78 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SECTION A



SECTION B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40

SOUNDTRANSIT

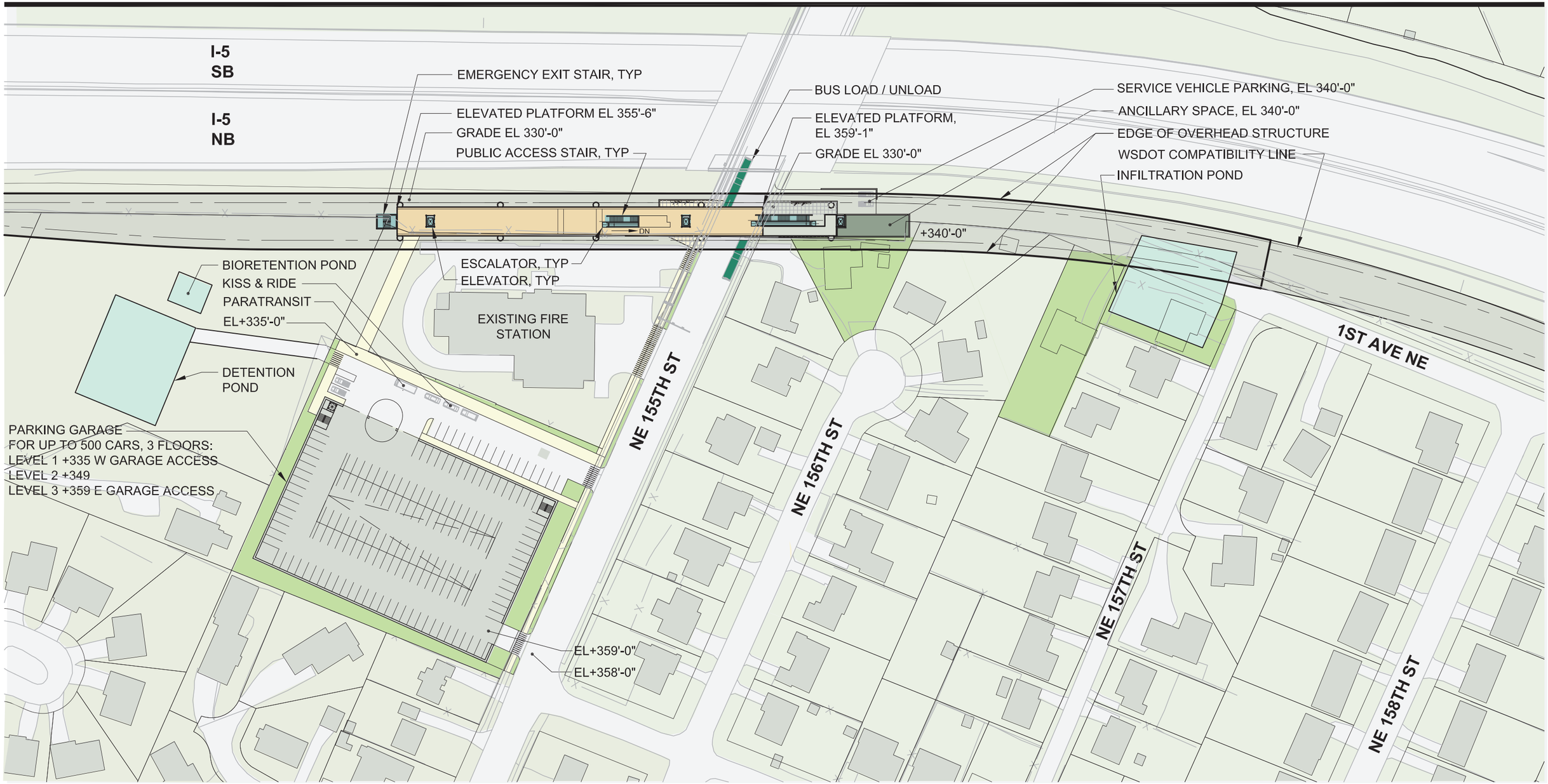
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN
NE 145TH STREET STATION - OPTION 2
SECTIONS

DWG NO. 145–EC–AX201
SHEET 79 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alternative	Bus Facilities	Park & Ride	Kiss & Ride	Bicycle Parking
Elevated Center Platform, Alternative A5 & A7	2 On-street bus bays: 1 westbound & 1 eastbound on NE 155th St	Structured parking for up to 500 cars	Integrated with parking	50 bike spaces, plus 50 expansion

0 25 50 100 N

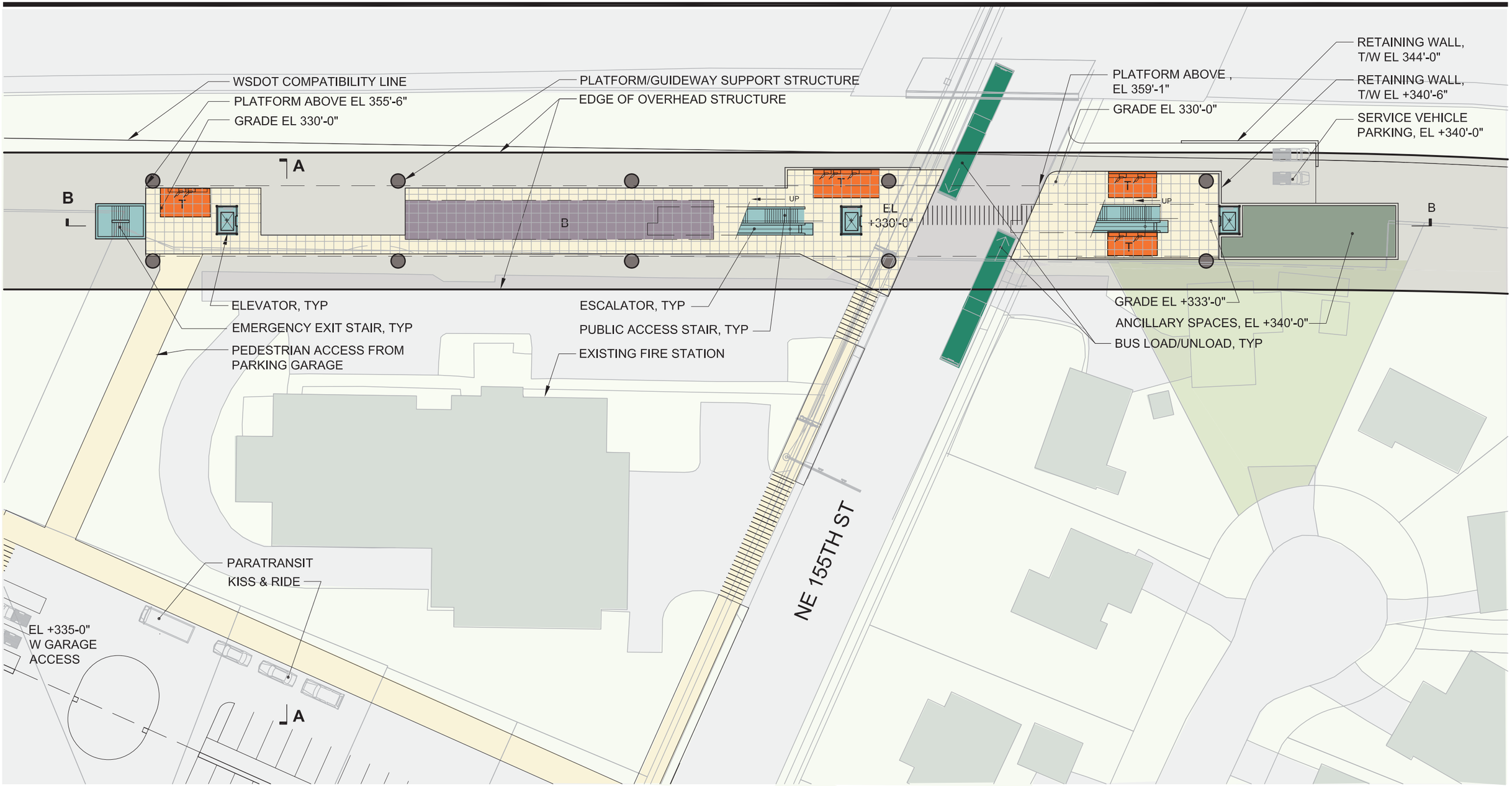
SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX | PARSONS BRINCKERHOFF

CONCEPTUAL DESIGN
155TH STREET STATION
SITE PLAN

DWG NO. 155-EC-AS101
SHEET 80 OF 142
REV. NO. 3

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX | PARSONS BRINCKERHOFF

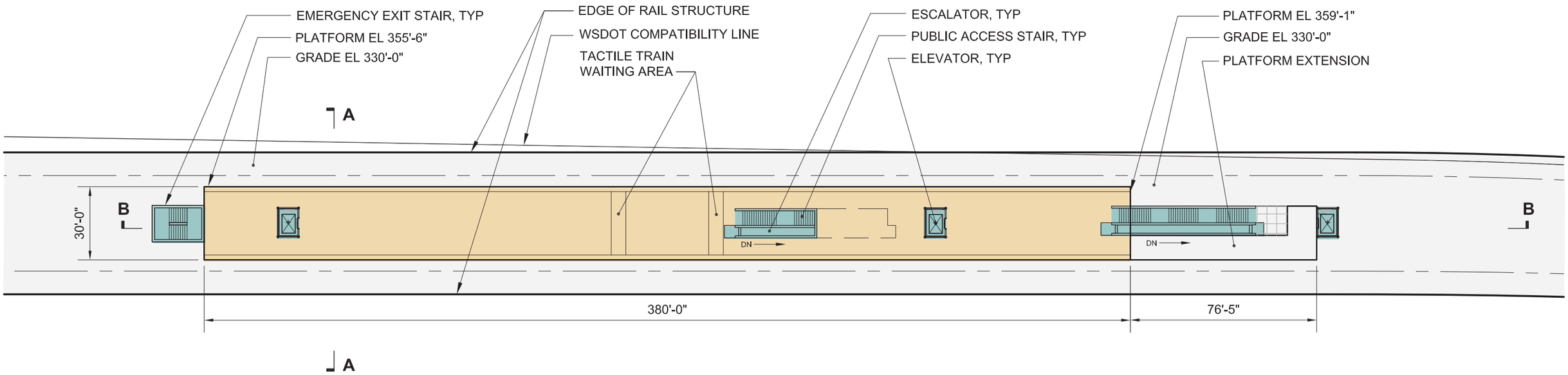
CONCEPTUAL DESIGN
NE 155TH STREET STATION
PLAZA LEVEL PLAN

DWG NO. 155–EC–APL101

SHEET 81 OF 142

REV. NO. 3

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40 N

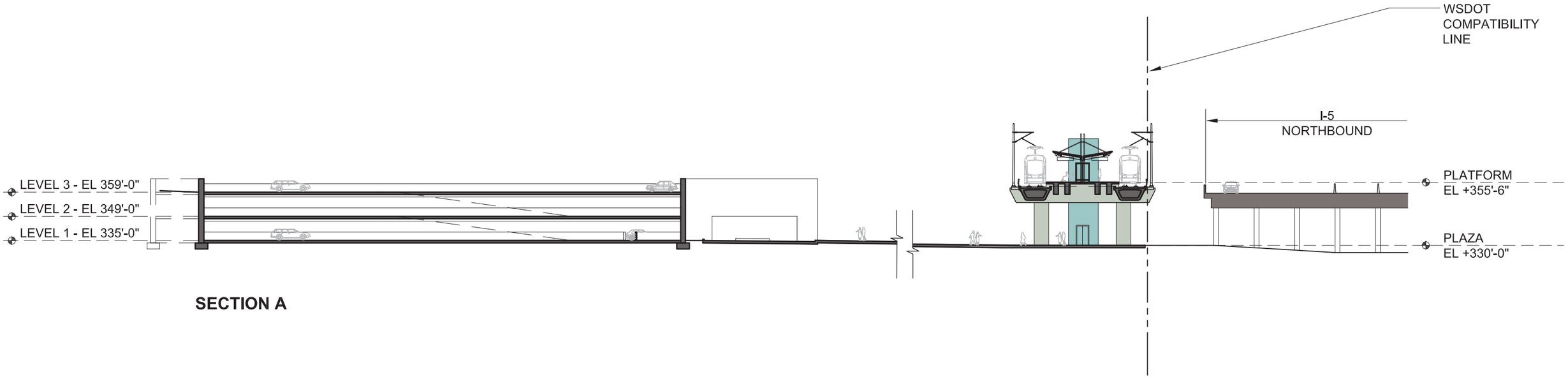
SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX | PARSONS BRINCKERHOFF

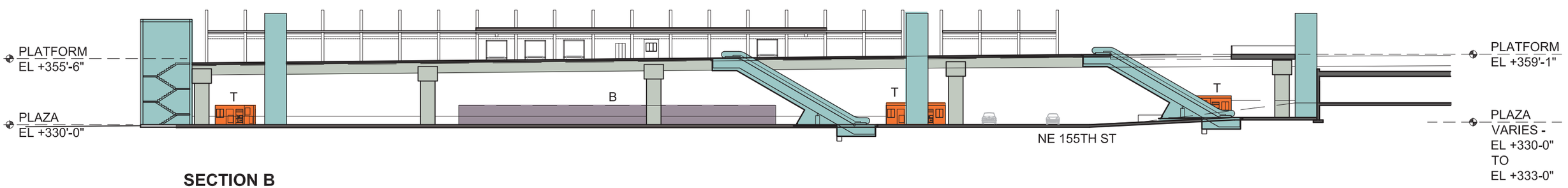
CONCEPTUAL DESIGN
NE 155TH ST STATION
PLATFORM LEVEL PLAN

DWG NO. 155-EC-AK101
SHEET 82 OF 142
REV. NO. 3

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SECTION A



SECTION B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX | PARSONS BRINCKERHOFF

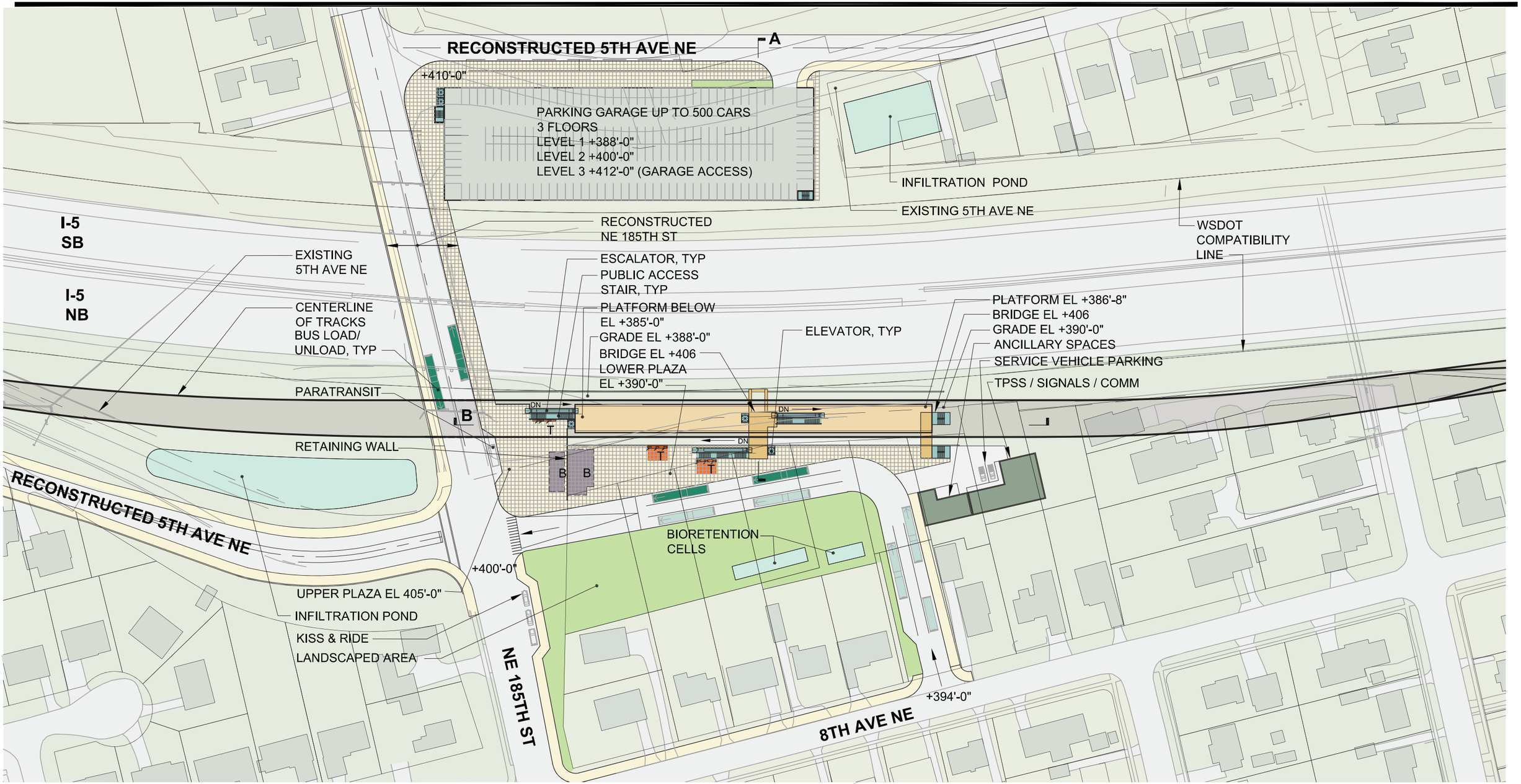
CONCEPTUAL DESIGN
NE 155TH STREET STATION
SECTIONS

DWG NO. 155–EC–AX101

SHEET 83 OF 142

REV. NO. 3

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alternative	Bus Facilities	Park & Ride	Kiss & Ride	Bicycle Parking
At-Grade Center Platform, Alternative A1	2 Off-street bus bays, 5 off-street layovers. 2 on-street bus bays: 1 westbound, 1 eastbound on NE 185th St	Parking garage for up to 500 cars west side of I-5	On NE 185th St	50 bike spaces, plus 50 expansion

0 25 50 100 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

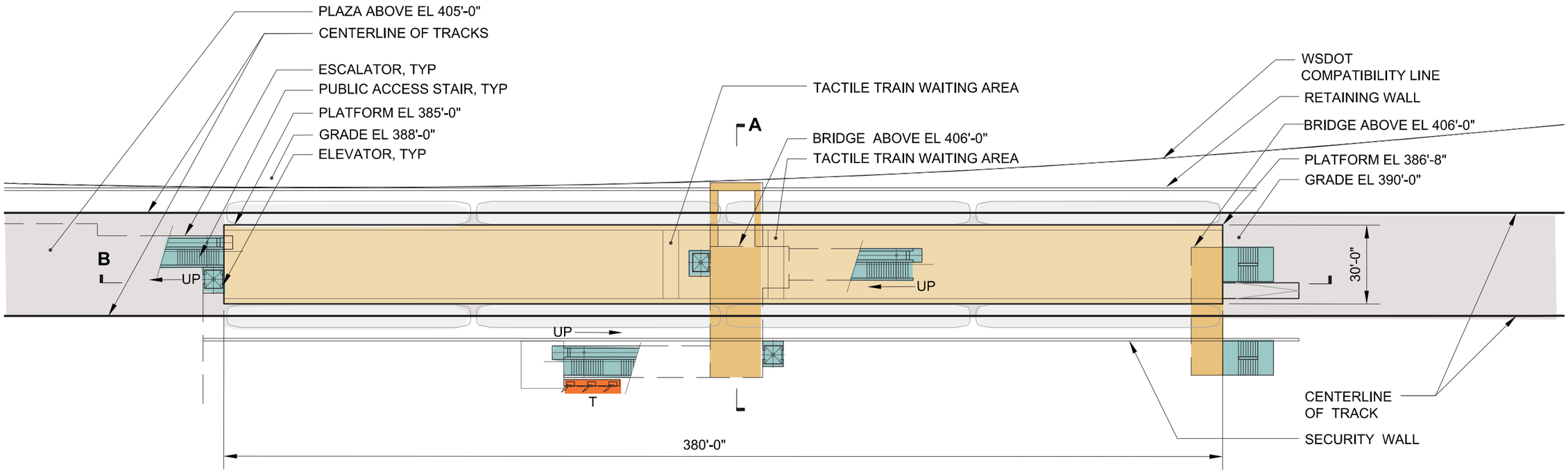
CONCEPTUAL DESIGN
NE 185TH STREET STATION - OPTION 1
SITE PLAN

DWG NO. 185-GC-AS101

SHEET 84 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

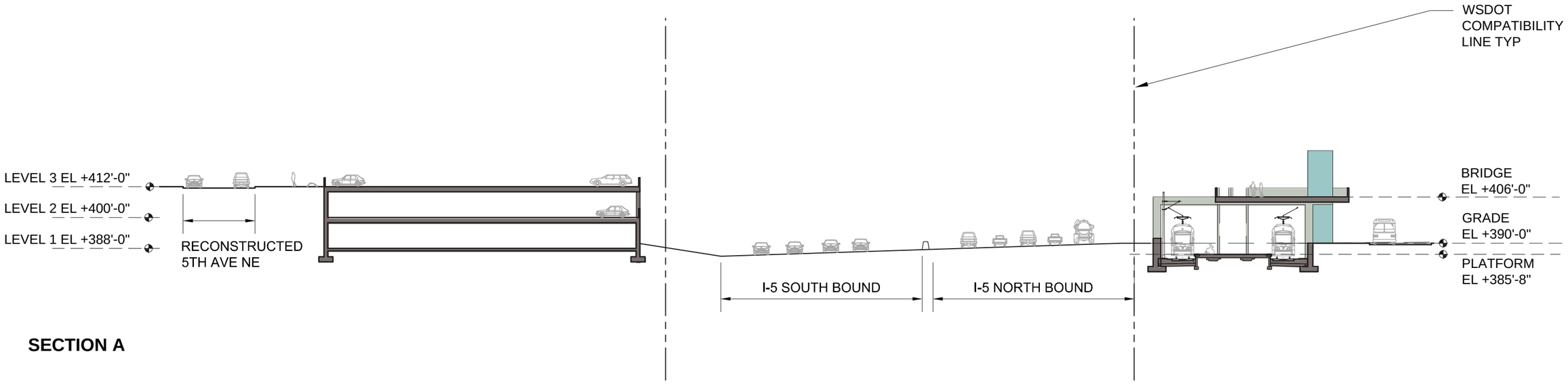
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

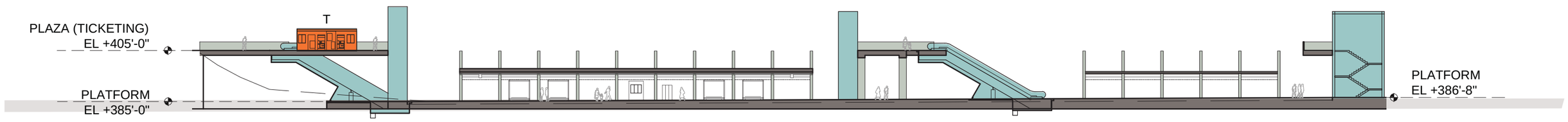
CONCEPTUAL DESIGN
NE 185TH STREET STATION - OPTION 1
PLATFORM LEVEL PLAN

DWG NO. 185-GC-AK101
SHEET 85 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



SECTION A



SECTION B

- Platform
- Plaza
- Vertical Circulation
- Bus Load/Unload
- Bus Layover
- T — Ticketing/Information
- Ancillary Area
- B — Bike Storage

0 10 20 40

SOUNDTRANSIT

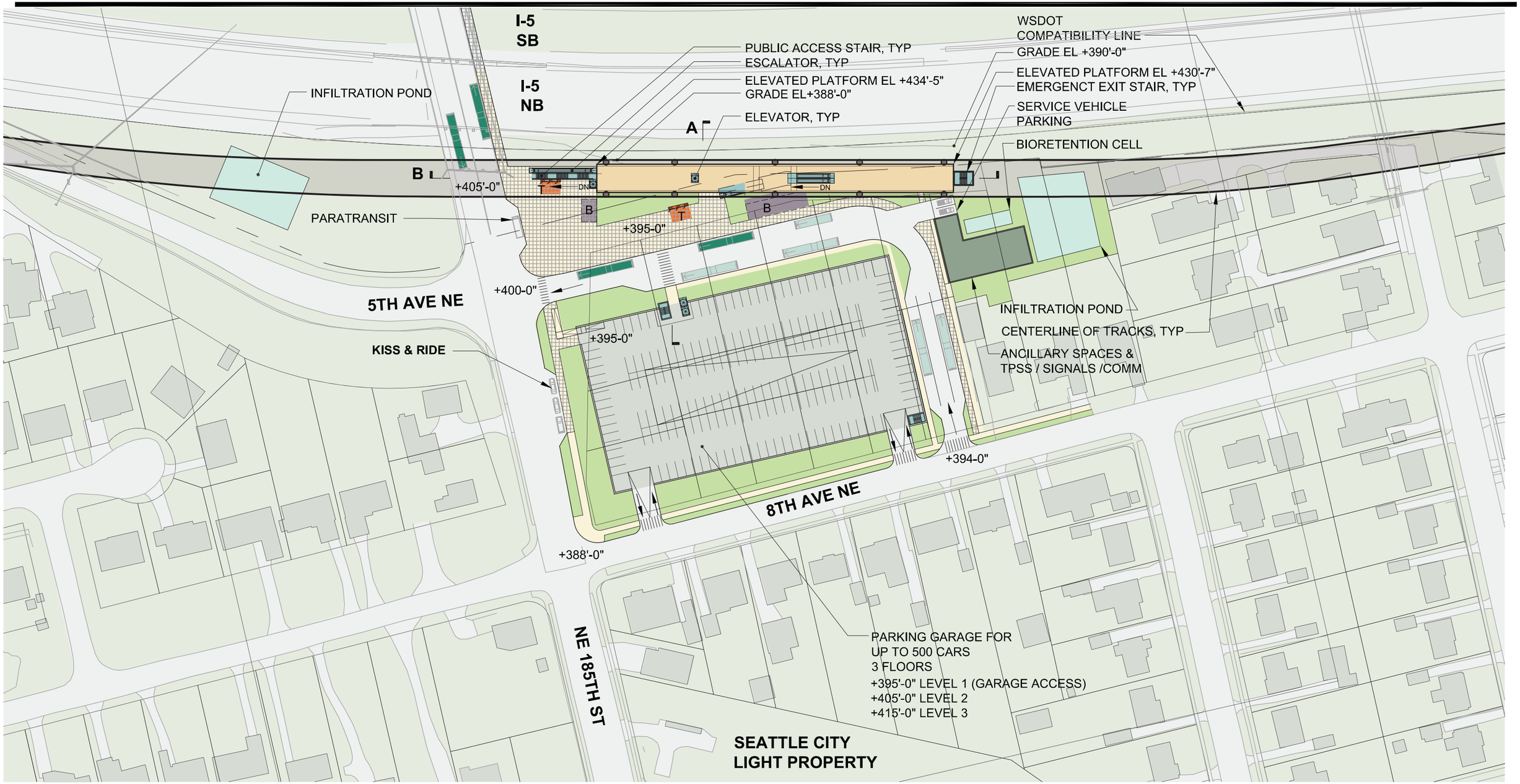
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN
NE 185TH STREET STATION - OPTION 1
SECTIONS

DWG NO. 185-GC-AX101
SHEET 86 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alternative	Bus Facilities	Park & Ride	Kiss & Ride	Bicycle Parking
Elevated Center Platform, Alternative A3, A7, A11	2 Off-street bus bays, 5 off-street layovers. 2 on-street bus bays: 1 westbound, 1 eastbound on NE185th St	Parking garage for up to 500 cars near station	On NE185th Street	50 bike spaces, plus 50 expansion

0 25 50 100 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

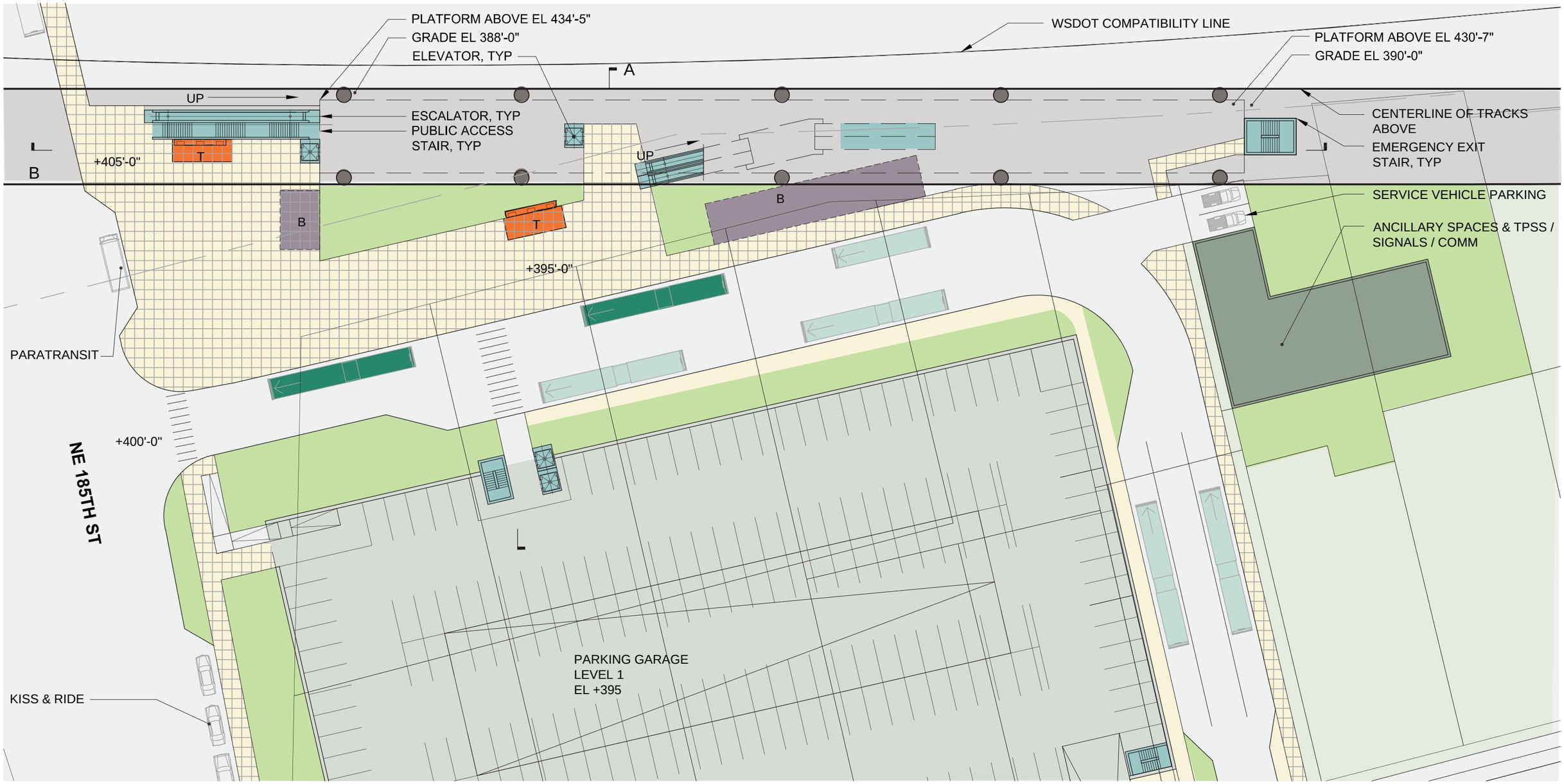
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN
NE 185TH STREET STATION - OPTION 2
SITE PLAN

DWG NO. 185–EC–AS101
SHEET 87 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

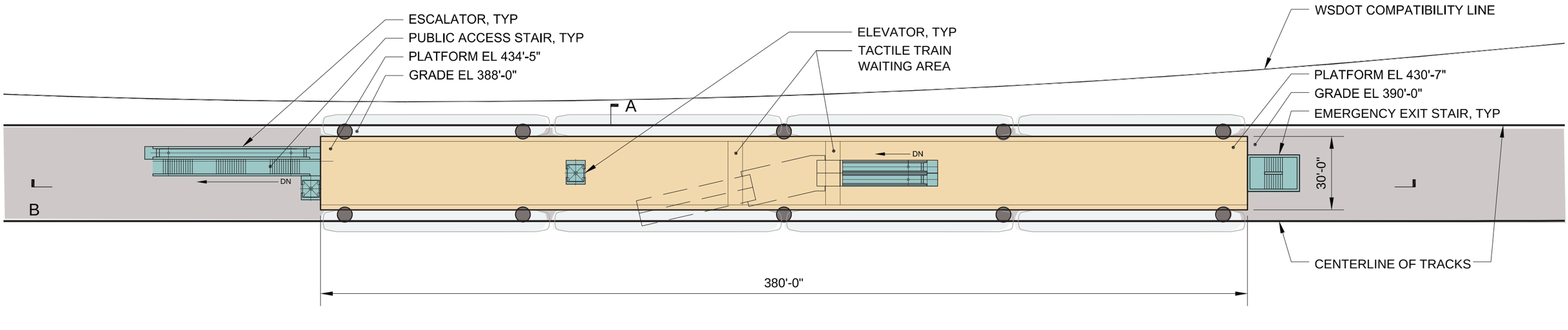
HEWITT

CONCEPTUAL DESIGN
NE 185TH STREET STATION - OPTION 2
PLAZA LEVEL PLAN

DWG NO. 185-EC-AM101

SHEET 88 OF 142

REV. NO. 2



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN

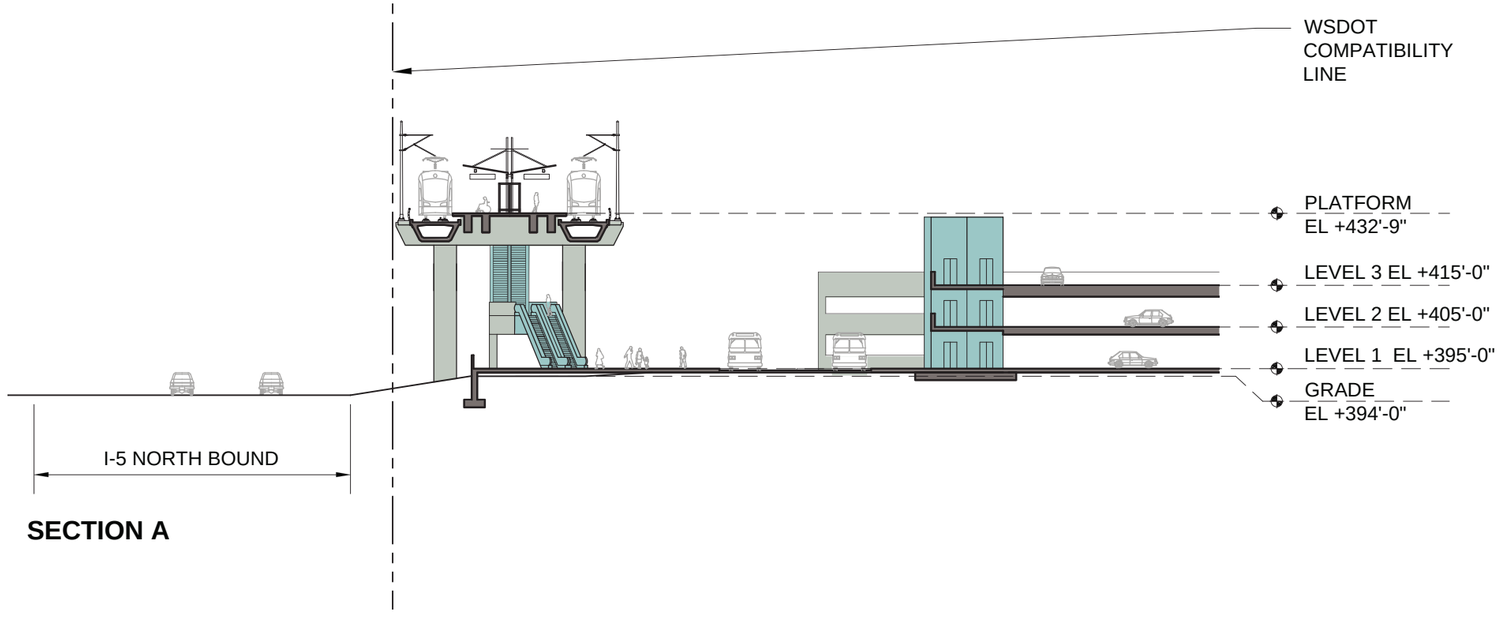
NE 185TH STREET STATION - OPTION 2

PLATFORM LEVEL PLAN

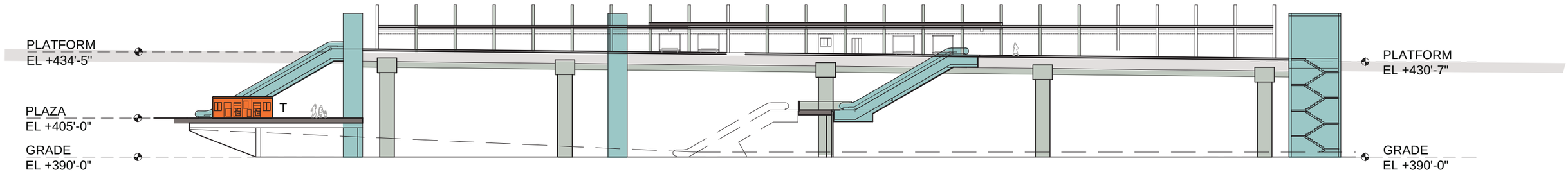
DWG NO. 185–EC–AK101

SHEET 89 OF 142

REV. NO. 2



SECTION A



SECTION B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN

NE 185TH STREET STATION - OPTION 2

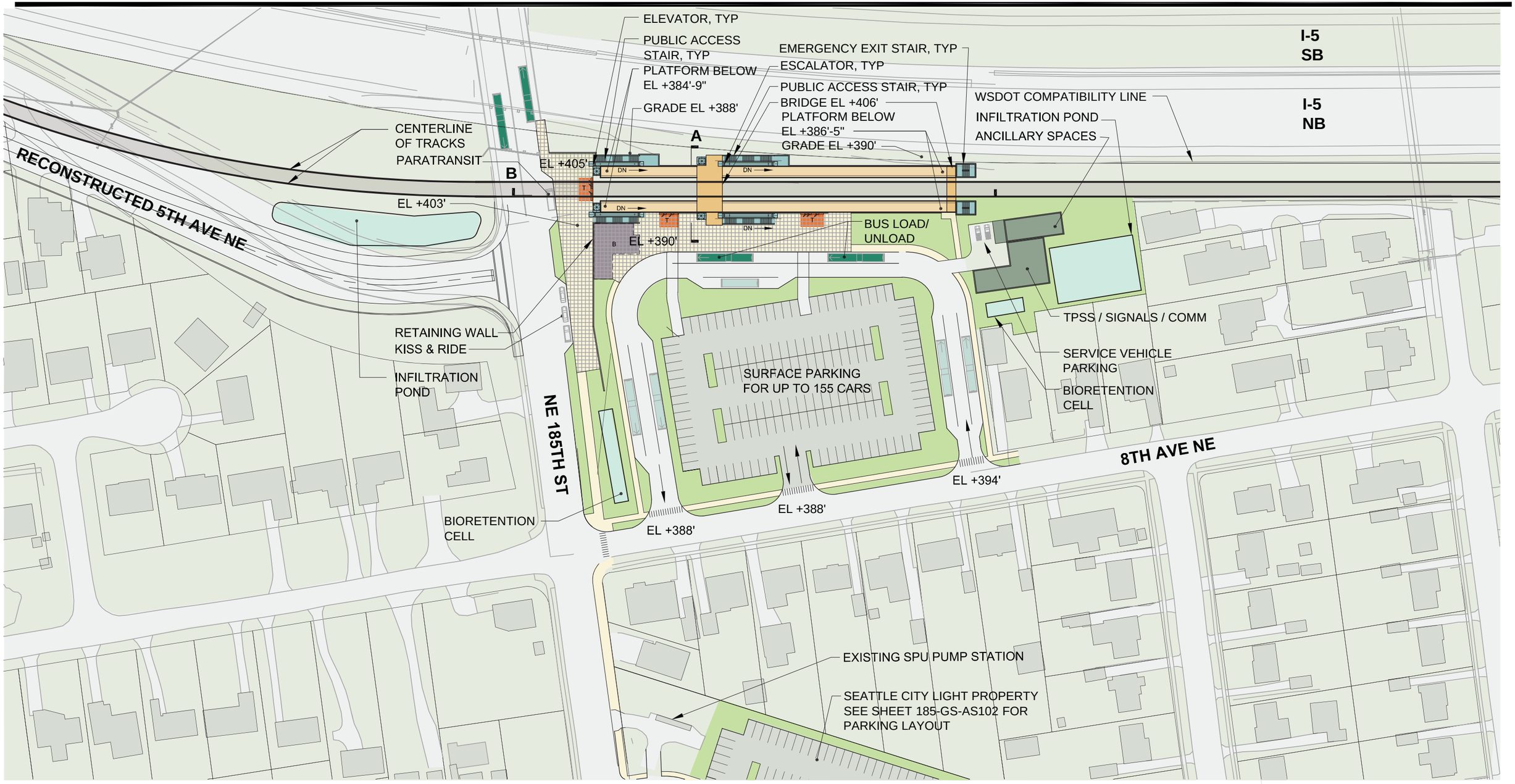
SECTIONS

DWG NO. 185–EC–AX101

SHEET 90 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alignment	Bus Facilities	Park & Ride	Kiss & Ride	Bicycle Parking
At Grade Side Platform, Alignment A5, A10	2 Off-street bus bays, 5 off-street layovers. 2 on-street bus bays: 1 westbound, 1 eastbound on NE 185th St	Surface parking for up to 155 spaces near station and surface parking for 205 cars at SCL; total 360 spaces	On NE 185th Street	50 bike spaces, plus 50 expansion

0 25 50 100 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN
NE 185TH STREET STATION - OPTION 3
SITE PLAN

DWG NO. 185-GS-AS101
SHEET 91 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION

8TH AVE NE

NE 185TH ST

NE 188TH ST

SEE SHEET
185-GS-AS101
FOR STATION
INFORMATION

SPU PUMP
STATION

APPROX LOCATION OF
EXISTING POWER
TRANSMISSION POLES

SURFACE PARKING
UP TO 205 SPACES

10TH AVE NE

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 25 50 100 N

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

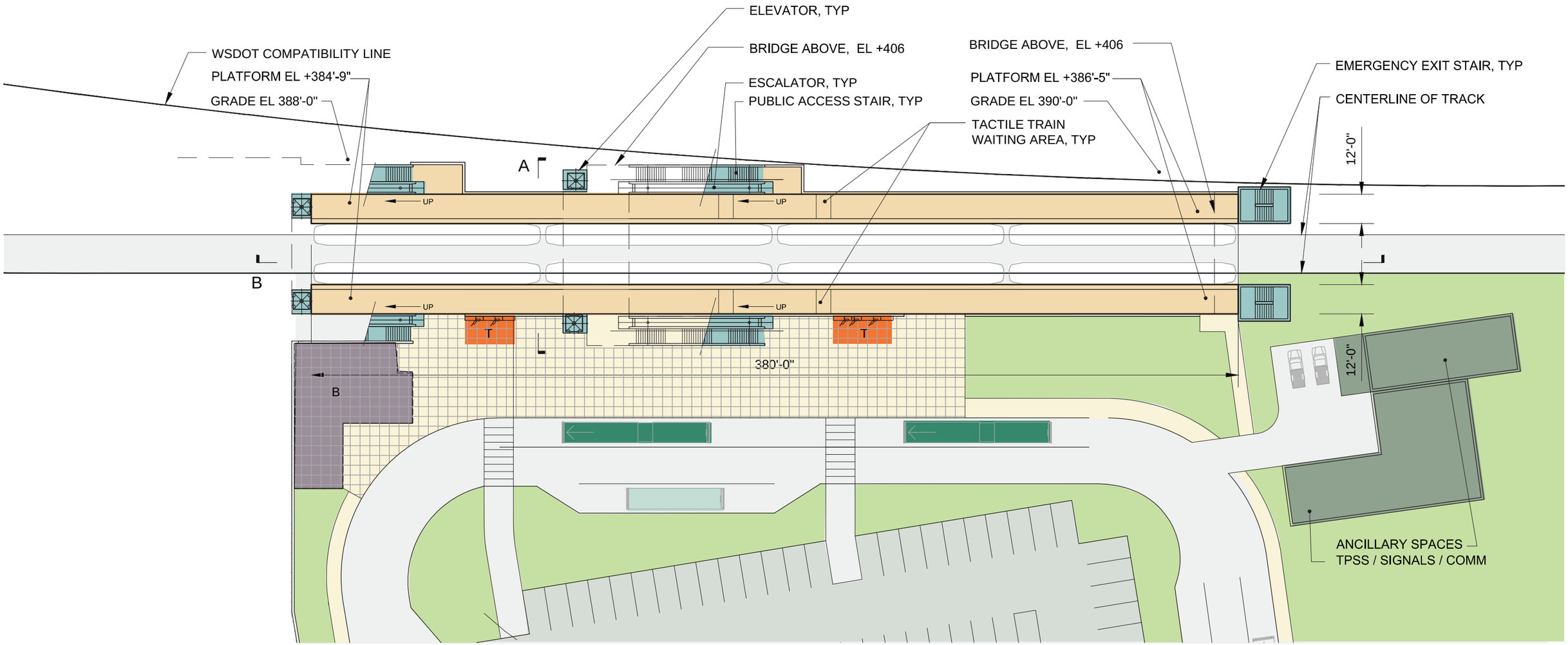
CONCEPTUAL DESIGN
NE 185TH STREET STATION - OPTION 3
PARKING PLAN

DWG NO. 185-GS-AS102

SHEET 92 OF 142

REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN

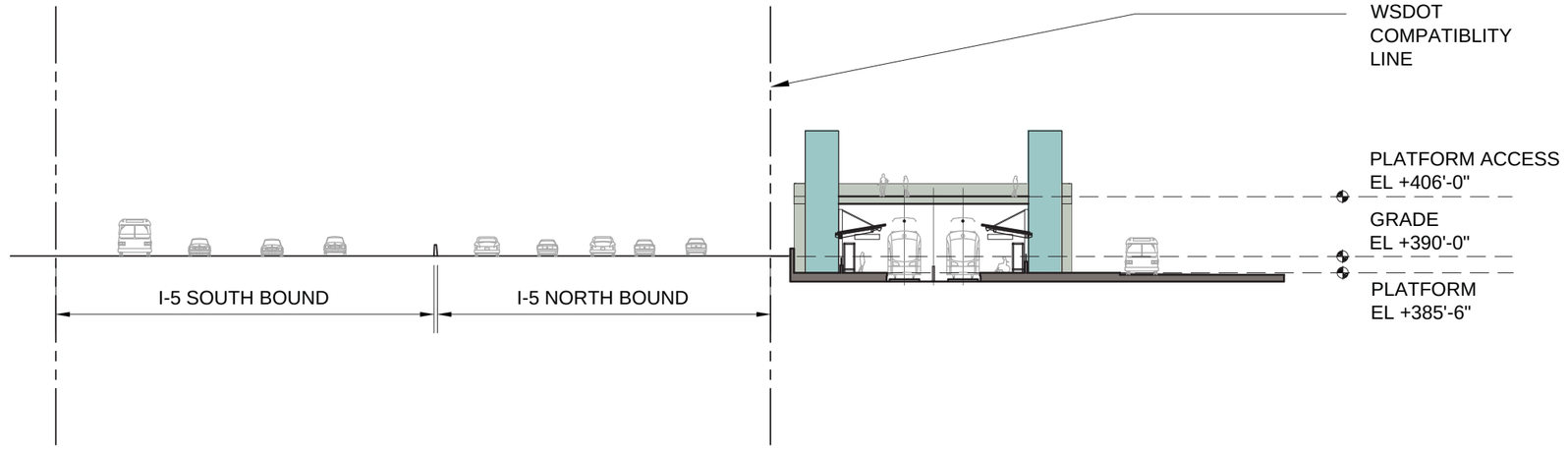
NE 185TH STREET STATION - OPTION 3

PLATFORM LEVEL PLAN

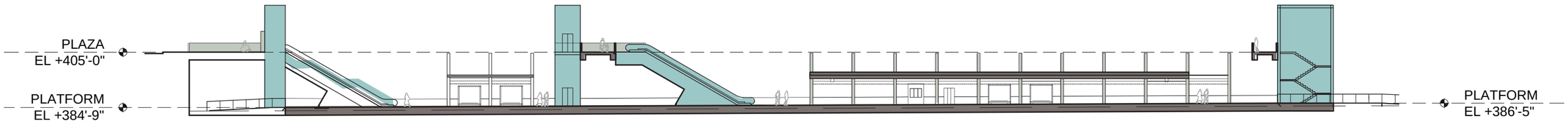
DWG NO. 185-GS-AK101

SHEET 93 OF 142

REV. NO. 2



SECTION A



SECTION B

Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

0 10 20 40

SOUNDTRANSIT

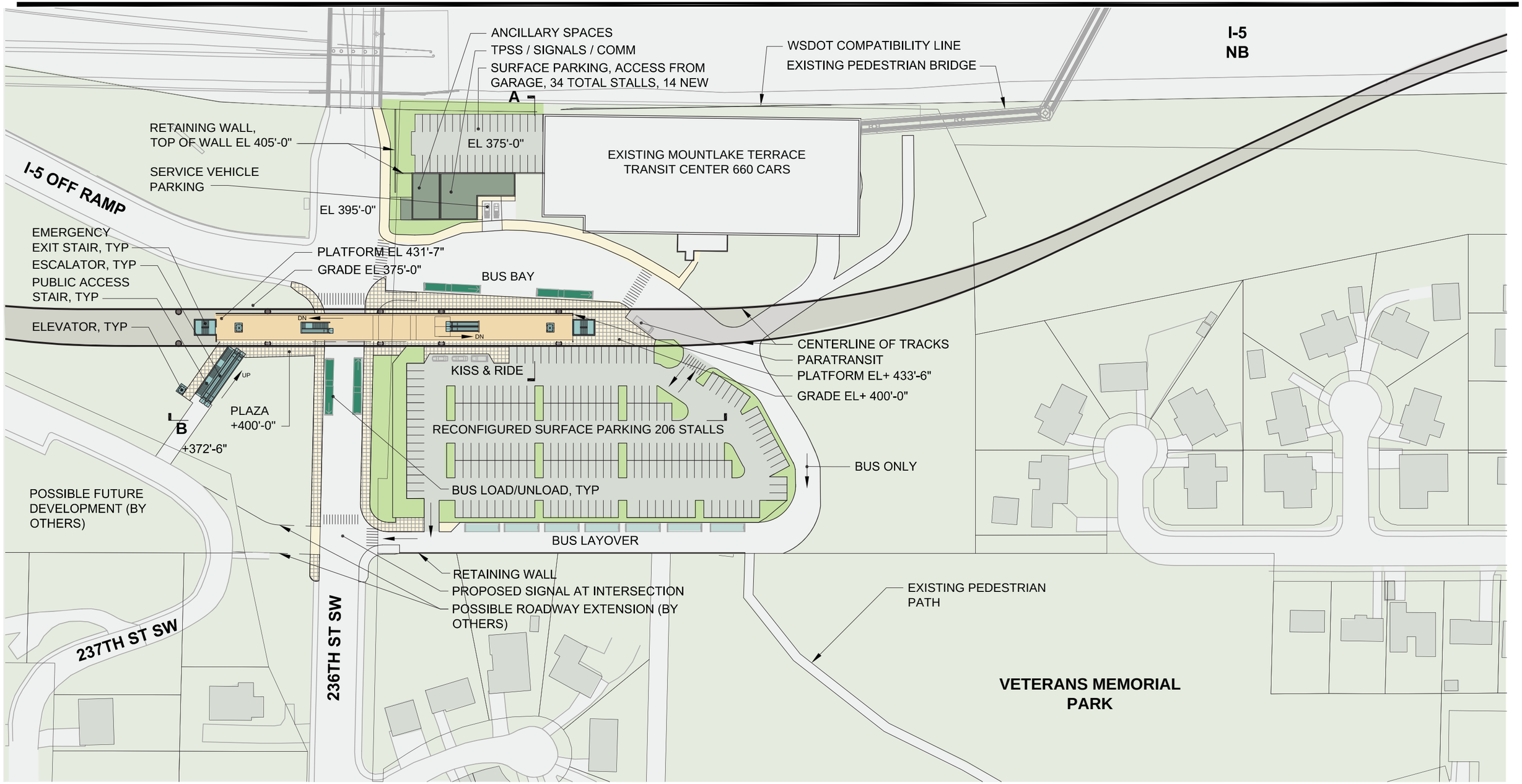
North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

HEWITT

CONCEPTUAL DESIGN
NE 185TH STREET STATION - OPTION 3
SECTIONS

DWG NO. 185-GS-AX101
SHEET 94 OF 142
REV. NO. 2

SOUND TRANSIT LYNNWOOD LINK EXTENSION



Platform
Plaza
Vertical Circulation
Bus Load/Unload
Bus Layover
T Ticketing/Information
Ancillary Area
B Bike Storage

Station Configuration & Alternative	Bus Facilities	Park & Ride	Kiss & Ride	Bicycle Parking
Elevated Center Platform, Alternative B1, B2 & B2A	2 Off-street bus bays & 7 off-street layovers; 2 On-street bus bays: 1 westbound & 1 eastbound on 236th St SW	Maintain existing parking for 880 cars	Integrated with surface parking	50 bike spaces, plus 50 expansion

0 25 50 100 N

GUIDEWAY IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE TRACK PLAN & PROFILE DRAWINGS FOR GUIDEWAY FOOTPRINT.

SOUNDTRANSIT

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

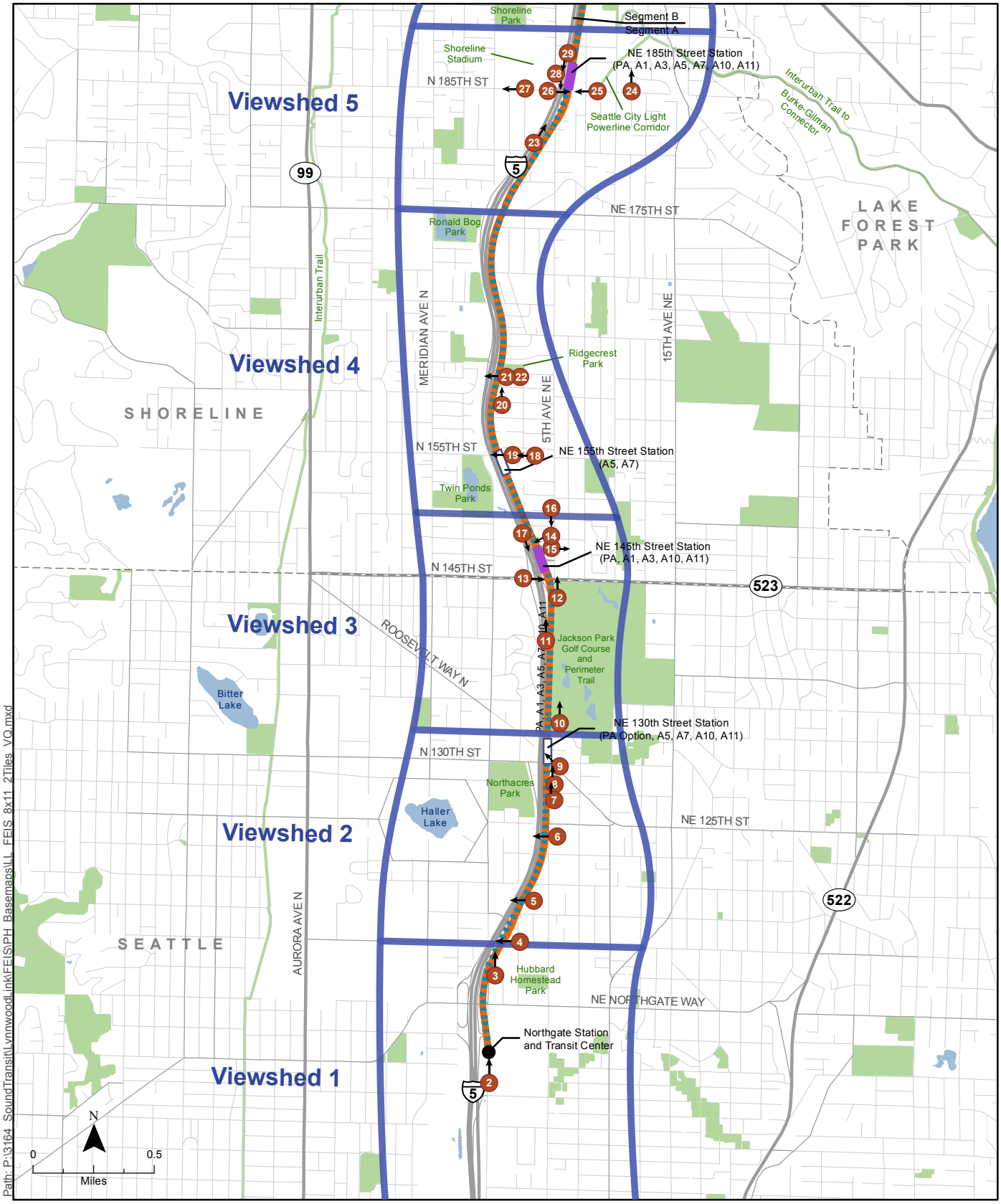
HEWITT

CONCEPTUAL DESIGN
MOUNTLAKE TERRACE TRANSIT CENTER STATION
SITE PLAN

DWG NO. MTC–EC–AS101
SHEET 95 OF 142
REV. NO. 2

Appendix G

Visual Simulations and Illustrations



Preferred Alternative (PA)
Preferred Alternative Station Location
Other Light Rail Alternatives
Other Alternative Station Location
Preferred Alternative and Other Alternatives

Viewshed Lines
Viewpoints

Figure G-1
Viewpoints Segment A

Figure G-2. Viewpoint 1
I-5 Northbound at NE 97th Street
View to the north
Existing View
(does not show pending Northgate Extension)

Figure G-3. Viewpoint 1
I-5 Northbound at NE 97th Street
View to the north
Simulation: All Alternatives
(with Northgate Extension and Lynnwood Link Extension)

Figure G-4. Viewpoint 2
1st Avenue NE at NE 97th Street
View to the north
Existing View
(does not show pending Northgate Extension)

Figure G-5. Viewpoint 2
1st Avenue NE at NE 97th Street
View to the north
Simulation: All Alternatives
(pending Northgate Extension in white and Lynnwood Link Extension in gray)

Figure G-6. Viewpoint 3
1st Avenue NE at NE 113th Street
View to the north
Existing View

Note: Relandscaping or vegetation replacement not yet shown.

Figure G-7. Viewpoint 3
1st Avenue NE at NE 113th Street
View to the north
Simulation: Preferred Alternative

Note: Relandscaping or vegetation replacement not yet shown.

Figure G-8. Viewpoint 3
1st Avenue NE at NE 113th Street
View to the north
Simulation: Alternative A1

Note: Relandscaping or vegetation replacement not yet shown.

Figure G-9. Viewpoint 3
1st Avenue NE at NE 113th Street
View to the north
Simulation: Alternatives A3, A7, and A11

Note: Relandscaping or vegetation replacement not yet shown.

Figure G-10. Viewpoint 3
1st Avenue NE at NE 113th Street
View to the north
Simulation: Alternatives A5 and A10

Figure G-11. Viewpoint 4
NE 115th Street at 3rd Avenue NE
View to the west
Existing View

Figure G-12. Viewpoint 4
NE 115th Street at 3rd Avenue NE
View to the west
Simulation: Preferred Alternative

Figure G-13. Viewpoint 4
NE 115th Street at 3rd Avenue NE
View to the west
Simulation: Alternative A1

Figure G-14. Viewpoint 4
NE 115th Street at 3rd Avenue NE
View to the west
Simulation: Alternatives A3, A7, and A11

Note: Potential landscaping not yet shown.

Figure G-15. Viewpoint 4
NE 115th Street at 3rd Avenue NE
View to the west
Simulation: Alternatives A5 and A10

Figure G-16. Viewpoint 5
Latvian Evangelical Lutheran Church Property
3rd Avenue NE north of NE 117th Street
View to the west
Existing View

Figure G-17. Viewpoint 5
Latvian Evangelical Lutheran Church Property
3rd Avenue NE north of NE 117th Street
View to the west
Simulation: Preferred Alternative and Alternatives A5 and A10

Figure G-18. Viewpoint 5
Latvian Evangelical Lutheran Church Property
3rd Avenue NE north of NE 117th Street
View to the west
Simulation: Alternative A1

Figure G-19. Viewpoint 5
Latvian Evangelical Lutheran Church Property
3rd Avenue NE north of NE 117th Street
View to the west
Simulation: Alternatives A3, A7, and A11

Figure G-20. Viewpoint 6
NE 124th Street east of 5th Avenue NE
View to the west
Existing View

Figure G-21. Viewpoint 6
NE 124th Street east of 5th Avenue NE
View to the west
Simulation: Preferred Alternative and Alternatives A1, A5, and A10

Figure G-22. Viewpoint 6
NE 124th Street east of 5th Avenue NE
View to the west
Simulation: Alternatives A3, A7, and A11

Figure G-23. Viewpoint 7
5th Avenue at NE 125th Street
View to the north
Existing View

Figure G-24. Viewpoint 7
5th Avenue at NE 125th Street
View to the north
Simulation: Preferred Alternative

Figure G-25. Viewpoint 8
5th Avenue NE south of NE 130th Street
View to the north
Existing View

Figure G-26. Viewpoint 8
5th Avenue NE south of NE 130th Street
View to the north
Simulation: Alternative A3

Figure G-27. Viewpoint 8
5th Avenue NE south of NE 130th Street
View to the north
Simulation: Alternatives A7 and A11

Figure G-28. Viewpoint 9
Roosevelt Way NE (NE 130th Street) east of 5th Avenue NE
View to the west
Existing View

Figure G-29. Viewpoint 9
Roosevelt Way NE (NE 130th Street) east of 5th Avenue NE
View to the west
Simulation: Preferred Alternative and Alternative A1

Figure G-30. Viewpoint 9
Roosevelt Way NE (NE 130th Street) east of 5th Avenue NE
View to the west
Simulation: Alternative A3

Figure G-31. Viewpoint 9
Roosevelt Way NE (NE 130th Street) east of 5th Avenue NE
View to the west
Simulation: Alternatives A5 and A10

Figure G-32. Viewpoint 9
Roosevelt Way NE (NE 130th Street) east of 5th Avenue NE
View to the west
Simulation: Alternatives A7 and A11

Figure G-33. Viewpoint 10
Jackson Park Golf Course
View to the north
Existing View

Figure G-34. Viewpoint 10
Jackson Park Golf Course
View to the north
Simulation: Preferred Alternative and Alternatives A1, A5, and A10

Figure G-35. Viewpoint 10
Jackson Park Golf Course
View to the north
Simulation: Alternatives A3, A7, and A11

Figure G-36. Viewpoint 11
I-5 Northbound at NE 143rd Street
View to the north
Existing VIew

Figure G-37. Viewpoint 11
I-5 Northbound at NE 143rd Street
View to the north
Simulation: Preferred Alternative and Alternatives A1 and A10

Figure G-38. Viewpoint 11
I-5 Northbound at NE 143rd Street
View to the north
Simulation: Alternatives A3 and A11

Figure G-39. Viewpoint 12
5th Avenue NE south of NE 145th Street
View to the north
Existing View

Figure G-40. Viewpoint 12
5th Avenue NE south of NE 145th Street
View to the north
Simulation: Preferred Alternative and Alternatives A3 and A11

Figure G-39. Viewpoint 12
5th Avenue NE south of NE 145th Street
View to the north
Existing View

Figure G-40. Viewpoint 12
5th Avenue NE south of NE 145th Street
View to the north
Simulation: Preferred Alternative and Alternatives A3 and A11

Figure G-41. Viewpoint 12
5th Avenue NE south of NE 145th Street
View to the north
Simulation: Alternatives A1 and A10

Figure G-42. Viewpoint 13
N 145th Street at 4th Avenue NE
View to the east
Existing View

Note: Potential landscaping not shown.

Figure G-43. Viewpoint 13
N 145th Street at 4th Avenue NE
View to the east
Simulation: Preferred Alternative and Alternatives A3 and A11

Note: Potential landscaping not shown.

Figure G-44. Viewpoint 13
N 145th Street at 4th Avenue NE
View to the east
Simulation: Alternatives A1 and A10

Note: Potential landscaping not shown.

Figure G-45. Viewpoint 13
N 145th Street at 4th Avenue NE
View to the east
Simulation: Alternative A5

Note: Potential landscaping not shown.

Figure G-46. Viewpoint 13
N 145th Street at 4th Avenue NE
View to the east
Simulation: Alternative A7

Figure G-47. Viewpoint 14
NE 148th Street west of 5th Avenue NE
View to the west
Existing View

Figure G-48. Viewpoint 14
NE 148th Street west of 5th Avenue NE
View to the west
Simulation: Preferred Alternative

Note: Potential landscaping not shown.

Figure G-49. Viewpoint 14
NE 148th Street west of 5th Avenue NE
View to the west
Simulation: Alternatives A1 and A10

Note: Potential landscaping not shown.

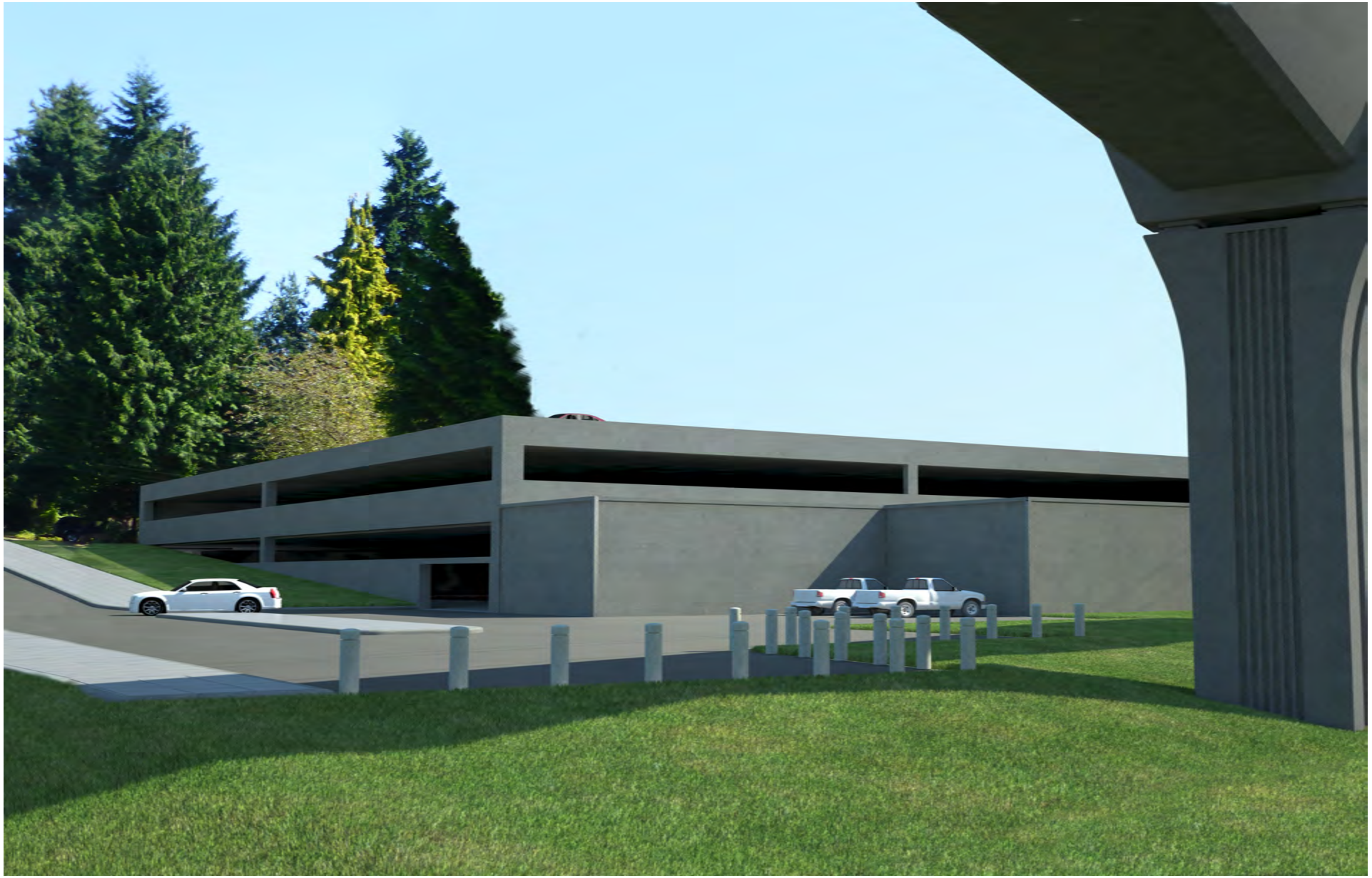
Figure G-50. Viewpoint 14
NE 148th Street west of 5th Avenue NE
View to the west
Simulation: Alternatives A3 and A11

Note: Potential landscaping not shown.

Figure G-51. Viewpoint 14
NE 148th Street west of 5th Avenue NE
View to the west
Simulation: Alternative A7
(Alternative A5 would be similar)

Figure G-52. Viewpoint 15
NE 148th Street west of 5th Avenue NE
View to the southeast
Existing View

Figure G-53. Viewpoint 15
NE 148th Street west of 5th Avenue NE
View to the southeast
Simulation: Preferred Alternative



Note: Potential landscaping not shown.

Figure G-54. Viewpoint 15
NE 148th Street west of 5th Avenue NE
View to the southeast
Simulation: Alternatives A1 and A10

Figure G-55. Viewpoint 16
5th Avenue NE at NE 149th Street
View to the south
Existing View

Figure G-56. Viewpoint 16
5th Avenue NE at NE 149th Street
View to the south
Simulation: Preferred Alternative

Figure G-57. Viewpoint 16
5th Avenue NE at NE 149th Street
View to the south
Simulation: Alternatives A1 and A10

Figure G-58. Viewpoint 17
I-5 Southbound at NE 148th Street
View to the south
Existing View

Figure G-59. Viewpoint 17
I-5 Southbound at NE 148th Street
View to the south
Simulation: Preferred Alternative

Figure G-60. Viewpoint 17
I-5 Southbound at NE 148th Street
View to the south
Simulation: Alternatives A3 and A11

Figure G-61. Viewpoint 17
I-5 Southbound at NE 148th Street
View to the south
Simulation: Alternative A5

Figure G-62. Viewpoint 17
I-5 Southbound at NE 148th Street
View to the south
Simulation: Alternative A7

Figure G-63. Viewpoint 18
NE 155th Street west of 3rd Avenue NE
View to the west
Existing View

Figure G-64. Viewpoint 18
NE 155th Street west of 3rd Avenue NE
View to the west
Simulation: Alternatives A1, A3, A10 and A11

Figure G-65. Viewpoint 18
NE 155th Street west of 3rd Avenue NE
View to the west
Existing View

Figure G-66. Viewpoint 19
NE 155th Street west of 3rd Avenue NE
View to the west
Simulation: Preferred Alternative and Alternatives A5 and A7

Figure G-67. Viewpoint 20
1st Avenue NE south of NE 159th Street
View to the north
Existing View

Figure G-68. Viewpoint 20
1st Avenue NE south of NE 159th Street
View to the north
Simulation: All Alternatives

Figure G-69. Viewpoint 21
Ridgecrest Park, 1st Avenue NE and NE 162nd Street
View to the west from field level
Existing View

Note: Potential re-landscaping not shown.

Figure G-70. Viewpoint 21
Ridgecrest Park, 1st Avenue NE and NE 162nd Street
View to the west from field level
Simulation: All Alternatives

Figure G-71. Viewpoint 22
Ridgecrest Park, 1st Avenue NE and NE 162nd Street
View to the west from field level
Existing View

Figure G-72. Viewpoint 22
Ridgecrest Park, 1st Avenue NE and NE 162nd Street
View to the west from field level
Simulation: All Alternatives

Figure G-73. Viewpoint 23
I-5 Northbound at NE 183rd Street
View to the north
Existing View

Figure G-74. Viewpoint 23
I-5 Northbound at NE 183rd Street
View to the north
Simulation: Preferred Alternative

Figure G-75. Viewpoint 23
I-5 Northbound at NE 183rd Street
View to the north
Simulation: Alternative A1

Figure G-76. Viewpoint 23
I-5 Northbound at NE 183rd Street
View to the north
Simulation: Alternatives A3, A7, and A11

Figure G-77. Viewpoint 23
I-5 Northbound at NE 183rd Street
View to the north
Simulation: Alternatives A5 and A10

Figure G-78. Viewpoint 24
NE 185th Street east of 8th Avenue NE
View of potential parking area to the north
Existing View

Note: Potential re-landscaping not shown.

Figure G-79. Viewpoint 24
NE 185th Street east of 8th Avenue NE
View of potential parking area to the north
Simulation: Alternative A5

Figure G-80. Viewpoint 25
NE 185th Street west of 8th Avenue NE
View to the west
Existing View

Figure G-81. Viewpoint 25
NE 185th Street west of 8th Avenue NE
View to the west
Simulation: Preferred Alternative

Figure G-82. Viewpoint 25
NE 185th Street west of 8th Avenue NE
View to the west
Simulation: Alternative A1

Figure G-83. Viewpoint 25
NE 185th Street west of 8th Avenue NE
View to the west
Simulation: Alternatives A3, A7, and A11

Figure G-84. Viewpoint 25
NE 185th Street west of 8th Avenue NE
View to the west
Simulation: Alternatives A5 and A10

Figure G-85. Viewpoint 26
NE 185th Street west of 8th Avenue NE
View to the east
Existing View

Figure G-86. Viewpoint 26
NE 185th Street west of 8th Avenue NE
View to the east
Simulation: Preferred Alternative

Figure G-87. Viewpoint 26
NE 185th Street west of 8th Avenue NE
View to the east
Simulation: Alternative A1

Figure G-88. Viewpoint 26
NE 185th Street west of 8th Avenue NE
View to the east
Simulation: Alternatives A3, A7, and A11

Figure G-89. Viewpoint 27
NE 185th Street west of 5th Avenue NE
View to the west
Existing View

Figure G-90. Viewpoint 27
NE 185th Street west of 5th Avenue NE
View to the west
Shoreline Stadium Garage Option

Figure G-91. Viewpoint 28
5th Avenue NE (west of I-5) north of NE 185th Street
View to the south
Existing View

Figure G-92. Viewpoint 28
5th Avenue NE (west of I-5) north of NE 185th Street
View to the south
Simulation: Preferred Alternative and A1

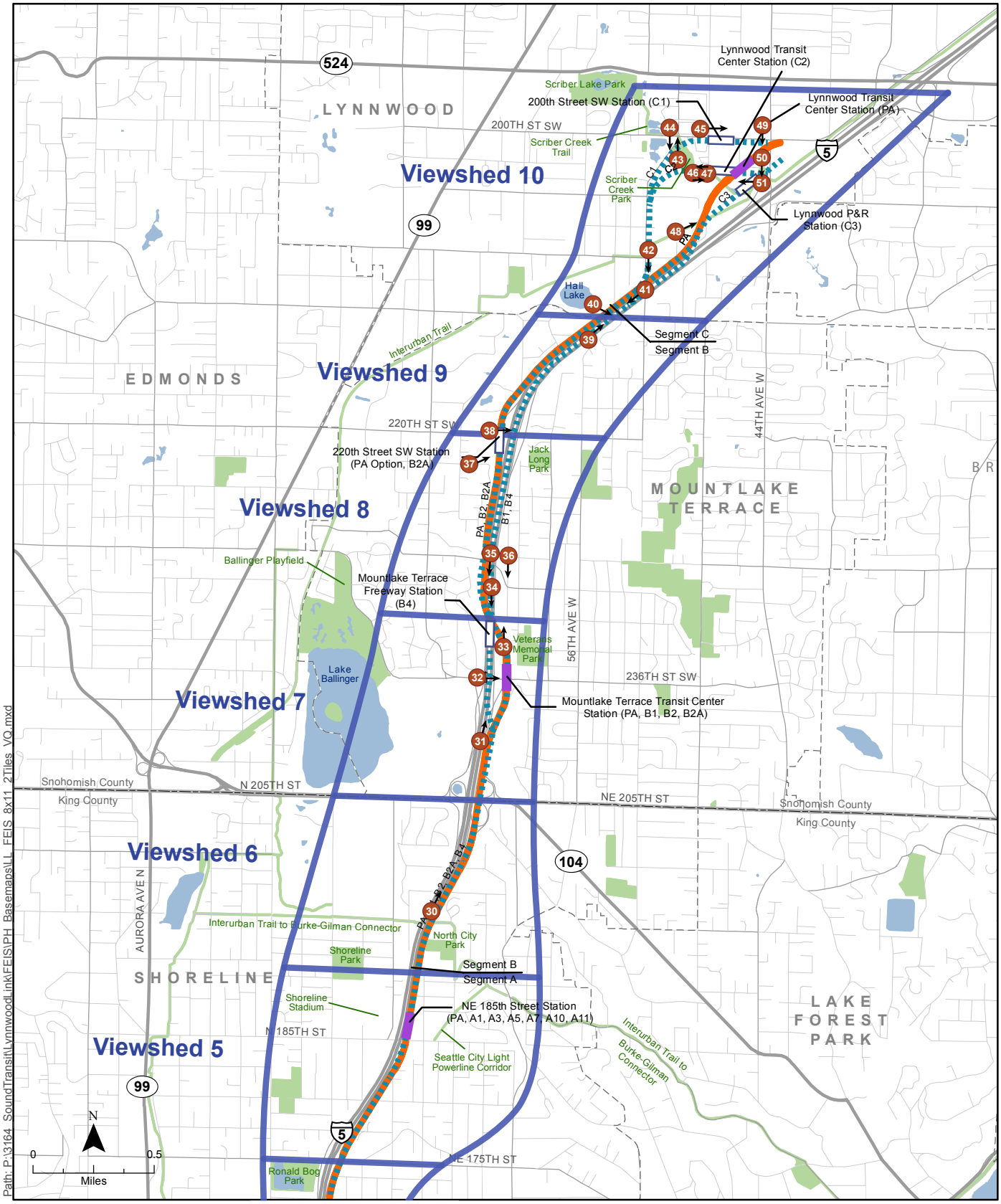
Figure G-93. Viewpoint 29
I-5 Southbound at NE 187th Street
View to the south
Existing View

Figure G-94. Viewpoint 29
I-5 Southbound at NE 187th Street
View to the south
Simulation: Preferred Alternative

Figure G-95. Viewpoint 29
I-5 Southbound at NE 187th Street
View to the south
Simulation: Alternative A1

Figure G-96. Viewpoint 29
I-5 Southbound at NE 187th Street
View to the south
Simulation: Alternatives A3, A7, and A11

Figure G-97. Viewpoint 29
I-5 Southbound at NE 187th Street
View to the south
Simulation: Alternatives A5 and A10



Preferred Alternative (PA)
Preferred Alternative Station Location
Other Light Rail Alternatives
Other Alternative Station Location
Preferred Alternative and Other Alternatives
Viewshed Lines
Viewpoints

Figure G-98
Viewpoints Segments B and C

Figure G-99. Viewpoint 30
I-5 Northbound at NE 195th Street
View to the north
Existing View

Figure G-100. Viewpoint 30
I-5 Northbound at NE 195th Street
View to the north
Simulation: All Alternatives

Figure G-101. Viewpoint 31
I-5 Northbound at 240th Street SW
View to the north
Existing View

Figure G-102. Viewpoint 31
I-5 Northbound at 240th Street SW
View to the north
Simulation: Preferred Alternative and Alternatives B1 and B2A

Figure G-103. Viewpoint 31
I-5 Northbound at 240th Street SW
View to the north
Simulation: Alternative B4

Figure G-104. Viewpoint 32
236th Street SW
View to the east
Existing View

Figure G-105. Viewpoint 32
236th Street SW
View to the east
Simulation: Preferred Alternative and Alternatives B1 and B2A

Figure G-106. Viewpoint 32
236th Street SW
View to the east
Simulation: Alternative B4

Figure G-107. Viewpoint 33
I-5 Northbound at 232nd Street SW
View to the north
Existing View

Figure G-108. Viewpoint 33
I-5 Northbound at 232nd Street SW
View to the north
Simulation: Preferred Alternative and Alternative B2A

Figure G-109. Viewpoint 33
I-5 Northbound at 232nd Street SW
View to the north
Simulation: Alternative B1

Figure G-110. Viewpoint 33
I-5 Northbound at 232nd Street SW
View to the north
Simulation: Alternative B4

Figure G-111. Viewpoint 34
I-5 Southbound at 230th Street SW
View to the south
Existing View

Figure G-112. Viewpoint 34
I-5 Southbound at 230th Street SW
View to the south
Simulation: Preferred Alternative and Alternative B2A

Figure G-113. Viewpoint 34
I-5 Southbound at 230th Street SW
View to the south
Simulation: Alternative B1

Figure G-114. Viewpoint 34
I-5 Southbound at 230th Street SW
View to the south
Simulation: Alternative B4

Figure G-115. Viewpoint 35
I-5 Southbound at 230th Street SW
View to the south
Existing View

Figure G-116. Viewpoint 35
I-5 Southbound at 230th Street SW
View to the south
Simulation: Preferred Alternative and Alternative B2A

Figure G-117. Viewpoint 36
I-5 Southbound at 230th Street SW Overpass
View to the south
Existing View

Figure G-118. Viewpoint 36
I-5 Southbound at 230th Street SW Overpass
View to the south
Simulation: Preferred Alternative and Alternative B2A

Figure G-119. Viewpoint 37
222nd Street SW east of 64th Avenue West
View to the east
Existing View

Figure G-120A. Viewpoint 37
222nd Street SW east of 64th Avenue West
View to the east
Simulation: Preferred Alternative and Alternative B2A

Figure G-120B. Viewpoint 37
222nd Street SW east of 64th Avenue West
View to the east
Simulation: Preferred Alternative with
220th Street SW Station Option

Figure G-121. Viewpoint 38
220th Street SW, west of I-5
View to the east
Existing View

Figure G-122. Viewpoint 38
220th Street SW, west of I-5
View to the east
Simulation: Preferred Alternative

Figure G-123. Viewpoint 38
220th Street SW, west of I-5
View to the east
Simulation: Alternative B2A

Figure G-124. Viewpoint 39
I-5 Northbound at 212th Street SW
View to the north
Existing View

Figure G-125. Viewpoint 39
I-5 Northbound at 212th Street SW
View to the north
Simulation: Preferred Alternative and Alternative B2A
(Transitioning to Segment C alternatives with west side option)

Figure G-126. Viewpoint 39
I-5 Northbound at 212th Street SW
View to the north
Simulation: Alternatives B1 and B4
(Transitioning to Segment C alternatives with a median option)

Figure G-127. Viewpoint 40
Hall Lake
View to the east
Existing View

Figure G-128. Viewpoint 40
Hall Lake
View to the east
Simulation: Preferred Alternative and Alternative B2A

Figure G-129. Viewpoint 40
Hall Lake
View to the east
Simulation: Alternatives B1 and B4

Figure G-130. Viewpoint 41
I-5 Southbound at 50th Avenue West
View to the south
Existing View

Figure G-131. Viewpoint 41
I-5 Southbound at 50th Avenue West
View to the south
Simulation: Preferred Alternative and Alternative C3
with Alignment Option 2 on west side

Figure G-132. Viewpoint 41
I-5 Southbound at 50th Avenue West
View to the south
Simulation: Alternatives C1 and C2 with Alignment Option 1 in Median

Figure G-133. Viewpoint 41
I-5 Southbound at 50th Avenue West
View to the south
Simulation: Alternatives C1 and C2 with Alignment Option 2 on west side

Figure G-134. Viewpoint 42
52nd Avenue West at 208th Street SW
View to the south
Existing View

Figure G-135. Viewpoint 42
52nd Avenue West at 208th Street SW
View to the south
Simulation: Preferred Alternative and Alternative C3 with Alignment Option 2 from west side of I-5

Figure G-136. Viewpoint 42
52nd Avenue West at 208th Street SW
View to the south
Simulation: Alternatives C1 and C2 with Alignment Option 1 from I-5 Median

Figure G-137. Viewpoint 43
Scriber Creek Park
View to the north
Existing View

Figure G-138. Viewpoint 43
Scriber Creek Park
View to the north
Simulation: Alternative C1

Figure G-139. Viewpoint 44
50th Avenue West at 200th Street SW
View to the south
Existing View

Figure G-140. Viewpoint 44
50th Avenue West at 200th Street SW
View to the south
Simulation: Alternative C1

Figure G-141. Viewpoint 45
200th Street SW at 49th Avenue West
View to the east
Existing View

Figure G-142. Viewpoint 45
200th Street SW at 49th Avenue West
View to the east
Simulation: Alternative C1

Figure G-143. Viewpoint 46
Scriber Park Trail
View to the east
Existing View

Figure G-144. Viewpoint 46
Scriber Park Trail
View to the east
Simulation: Alternative C2

Figure G-145. Viewpoint 47
Lynnwood Transit Center
View to the west to Scriber Creek Trail
Existing View

Figure G-146. Viewpoint 47
Lynnwood Transit Center
View to the west to Scriber Creek Trail
Simulation: Alternative C2

Figure G-147. Viewpoint 48
Interurban Trail at 48th Avenue West
View to the west
Existing View

Figure G-148. Viewpoint 48
Interurban Trail at 48th Avenue West
View to the west
Simulation: Preferred Alternative and Alternative C3

Figure G-149. Viewpoint 49
44th Avenue West
View to the south
Existing View

Figure G-150. Viewpoint 49
44th Avenue West
View to the south
Simulation: Alternative C3

Figure G-151. Viewpoint 50
44th Avenue West from west of 200th Street SW
View to the south
Existing View

Figure G-152. Viewpoint 50
44th Avenue West from west of 200th Street SW
View to the south
Simulation: Preferred Alternative

Figure G-153. Viewpoint 51
Interurban Trail at 44th Avenue West
View to the west
Existing View

Figure G-154. Viewpoint 51
Interurban Trail at 44th Avenue West
View to the west
Simulation: Preferred Alternative

Figure G-155. Viewpoint 51
Interurban Trail at 44th Avenue West
View to the west
Simulation: Alternative C2

Figure G-156. Viewpoint 51
Interurban Trail at 44th Avenue West
View to the west
Simulation: Alternative C3

Appendix H

Other Projects Considered for Cumulative Effects

APPENDIX H – OTHER PROJECTS CONSIDERED FOR CUMULATIVE EFFECTS

The National Environmental Policy Act (NEPA) requires that any agency proposing a major federal action, which may significantly affect the environment, consider the environmental impacts of the proposed action, any unavoidable adverse environmental impacts, and the relationship between local short-term uses and long-term productivity of the environment (42 United States Code [USC] § 4332(c)). As part of analyzing cumulative effects and predicting conditions for the future regional transportation system for the Lynnwood Link Extension project, Sound Transit identified other projects that are "reasonably foreseeable." These projects included planned in the Puget Sound region's federally required Metropolitan Transportation Plan (MTP), Puget Sound Regional Council's (PSRC) Transportation 2040, as well as the funded or committed projects identified in the region's Transportation Improvement Plan and the related PSRC travel demand forecast model.

In addition, the Final Environmental Impact Statement (EIS) for the Lynnwood Link Extension has identified other non-transportation projects and actions that are planned or in development that could alter the level of impacts a resource or an area might experience, compared to the impacts defined for the No Build Alternative or light rail alternatives alone. The projects described below are separate actions undertaken even if the Lynnwood Link Extension project is not developed. Under each environmental topic in the Final EIS, the cumulative effects of the Lynnwood Link Extension are discussed in combination with the projects described here and other past, current, or planned projects.

Transportation Projects

- *Northgate Link Extension Project*—Sound Transit is extending Link light rail to Northgate in north Seattle. This project will connect the Northgate, Roosevelt, and University District neighborhoods to downtown Seattle and the Seattle-Tacoma International Airport. Construction of this project is underway, and will be open for service in 2021. The EIS for this project, North Link Final Supplemental Environmental Impact Statement, was completed in 2006, which also covered the University Link project from downtown Seattle to the University District. (This project and other projects by Sound Transit that were authorized by Sound Transit 2 [ST2] are already assumed under the No Build Alternative and light rail alternatives as part of the light rail system anticipated to be in place when the Lynnwood Link Extension begins operation. While the transportation forecasts already take the Northgate Link Extension into account, it is highlighted here

because it involves construction and operation adjacent to where the Lynnwood Link Extension would start.)

- *SR 520 Bridge Replacement and HOV Program*—A new floating bridge will be constructed across Lake Washington with four general purpose lanes and two inside high-occupancy vehicle (HOV) lanes. A reversible transit/HOV ramp will operate from State Route (SR) 520 to the existing Interstate 5 (I-5) Express Lanes. This ramp facilitates westbound SR 520 HOV lane movements to the southbound I-5 Express Lanes in the AM period, and northbound I-5 Express Lanes movements to the eastbound SR 520 HOV lane in the PM period.
- *I-90 Two-Way Transit and HOV Operations Project*—This project will provide two-way transit and HOV operations on I-90 between Bellevue and Seattle by providing HOV lanes on the outer roadways. It will retain the existing reversible operations on the center roadway, with both lanes operating in the same direction—westbound in the AM period and eastbound in the PM period. Single-occupancy vehicles (SOVs) will only be allowed to use the center roadway between Rainier Avenue in Seattle and Island Crest Way on Mercer Island. The center and outer roadway HOV lanes will likely operate with a 2 + occupants per vehicle restriction.
- *SR 99 Alaskan Way Viaduct Seawall Replacement Program*—This project will build a new SR 99 corridor through downtown Seattle. The project includes boring a 2-mile tunnel beneath Seattle, constructing a mile-long stretch of new highway that connects to the south entrance of the tunnel, and constructing a new Alaskan Way surface street along the waterfront that connects SR 99 to downtown.
- *Lakeview Trail, Mountlake Terrace Transit Center to Interurban Trail* (PSRC TIP#: MOU-19)—This project will construct a combination of bicycle lanes, sidewalks, and a new non-motorized trail from the Interurban Trail at 228th Street SW to the west end of the 236th Street SW bridge over I-5, which is adjacent to Community Transit's Mountlake Terrace Transit Center and Sound Transit's Mountlake Terrace Freeway Station.
- *"Main Street" Reconstruction* (PSRC TIP#: MOU-23)—This project includes improvements to 56th Avenue West (236th Street SW to 230th Street SW) and 236th Street SW (transit center to 56th Avenue West). The project will reconstruct existing roadways to allow two travel lanes, bicycle lanes, and curbside parking.
- *Interurban Trail Improvement Project: Missing Links* (PSRC TIP#: LYN-40)—This project will complete two missing links along the Interurban Trail located between 212th Street SW and 52nd Avenue West by constructing a

continuous 12-foot-wide non-motorized bicycle/pedestrian trail that is separated from traffic.

- *196th Street SW (SR 524) Improvement Project (48th Avenue W to 37th Avenue W)* (PSRC TIP#: LYN-43)—This project would add an additional lane in each direction on 196th Street SW (SR 524) extending between 48th Avenue West to 37th Avenue West. The project will improve 196th Street SW (SR 524) by providing additional multimodal capacity, safety, and aesthetic features for a boulevard appearance. Improvements include installation of business access and transit (BAT) lanes in each direction, a planted center median with left-turn and U-turn movements, new curbs, gutters, 12-foot sidewalks, landscaping, undergrounding of overhead utilities, street lighting, and new traffic signals beginning at 48th Avenue West and extending east to 36th Avenue West.
- *Poplar Way Extension Bridge (Poplar Way/196th Street)*—This project would construct an arterial bridge across I-5 to connect the intersections of Poplar Way and 196th Street SW and 33rd Avenue West/Alderwood Mall Boulevard. Intersection modifications would occur at Alderwood Mall Parkway/Poplar Way, 196th Street SW/Poplar Way, and Alderwood Mall Boulevard/33rd Avenue West. The project would include widening portions of Poplar Way, 196th Street SW, Alderwood Mall Boulevard, and 33rd Avenue West. Major elements of the project include a new 600-foot-long, 6-lane bridge with sidewalks and bicycle lanes on both sides.
- *44th Avenue W, I-5 to 194th Street SW Improvement Project* (upcoming project in Lynnwood)—This project plans to widen the roadway to seven lanes, with eight lanes just south of 196th Street SW, including wider sidewalks and landscape features. The improvements are needed to accommodate future growth envisioned for the Lynnwood City Center and to create an enhanced pedestrian environment with a boulevard appearance.
- *200th Street SW, 64th Avenue W to 40th Avenue W Improvement Project* (upcoming project in Lynnwood)—This project plans to add additional lanes (exact locations have not yet been identified), wider sidewalks, landscape features, and bicycle facilities. The improvements are needed to accommodate future growth envisioned for the Lynnwood City Center and the extension of light rail to the Lynnwood Transit Center by 2023.

Other Development Projects

- *Link Operations and Maintenance Satellite Facility*—A NEPA/SEPA EIS is being prepared by Sound Transit and the Federal Transit Administration (FTA) for this project. See Chapter 2, Section 2.9.1 for details. Appendix R has additional information on the OMSF project. Sound Transit is

proposing this facility to provide operations and maintenance capacity for the expanded light rail fleet called for in the ST2 Plan.

- *King County Transit-Oriented Development at Thornton Place, Northgate*—King County is continuing a longer-range program to leverage transit investments by the County and Sound Transit to encourage further transit-oriented development at Thornton Place in Northgate. While development specifics are not in place at this time, higher density developments are anticipated consistent with City of Seattle plans for the Northgate District and the related population and employment growth assumed for the area.
- *Edmonds School District Melody Hill property, 6205 222nd Street SW, Mountlake Terrace*—This site was recently zoned for higher density use by the City of Mountlake Terrace. The school district site, which is now vacant, is being marketed for redevelopment.
- *Edmonds School District, District Support Site*—The Edmonds School District has adopted plans and completed its SEPA review to develop a support center that would relocate all of the District's existing support functions onto one site. The consolidated functions would include administrative offices, a bus base and vehicle maintenance facilities, facilities maintenance, a district warehouse, and a fuel and wash island (with a below-ground tank). A comprehensive plan amendment and rezone application for portions of the property were approved by the Lynnwood City Council in September 2006. The Lynnwood site alternative for the Link Operations and Maintenance Satellite Facility overlaps with the District's planned development. Both of these potential projects are considered in the cumulative effects analysis for the Lynnwood Link Extension.
- *Kings Gate: 240007 56th Avenue W* (land use approved but on hold in Mountlake Terrace)—This project plans to construct a mixed-use (commercial/residential) development in the Town Center District with 3,475 square feet of commercial space and 46 residential units on a 0.93-acre site. The project includes shared open space, landscaping, vehicle/bicycle parking, and a pedestrian activity area. The existing structures will be demolished.
- *Mountlake Terrace Senior Living Apartments: 5525 244th Street SW* (land use approved in Mountlake Terrace)—This project proposes to develop a 0.86-acre vacant lot with approximately 96 units of affordable, independent senior housing (not state licensed). The proposal also includes bicycle and vehicle parking spaces, pedestrian activity area, shared open space, and landscaping. A request to reduce parking requirements has been approved.

- *Mountlake Terrace Town Center*—This project involves an adopted Town Center Plan that calls for development of new stores, restaurants, offices, and housing in a 68-acre downtown zone. Wider sidewalks, street trees, and a public plaza for community use are part of the mix. See Town Center Plan, amended December 2009, on the City's Web site.
- *Mountlake Terrace Gateway Development*— this project south of 236th Street SW and the Mountlake Terrace Transit Center, is in a district the City of Mountlake Terrace has targeted for higher density development. It would include roadway improvements extending Gateway Boulevard to 236th Street SW, with adjacent developments that include 600 apartment units and about 100,000 square feet of commercial space.
- *City of Lynnwood New City Center Planning*—Adopted in 2005 and amended in 2007, the City of Lynnwood Subarea Plan for the City Center calls for upgrades to the city's transportation network and includes new public spaces and parks, housing, cultural attractions, and pedestrian amenities. Plans and projects associated with the City Center are located on the City Center project Web site: http://www.ci.lynnwood.wa.us/City-Services/Planning-and-Development/City-Center/Plans---Projects.htm.
- *Lynnwood City Center Senior Living Development: 19501 40th Avenue West* (development agreement with City of Lynnwood approved August 12, 2013)—This project proposes to develop 308 residential units in an 8-story building.

Appendix I

Chapter 4 Supporting Information on Affected Environment and Environmental Impacts

Provided on CD with the Draft EIS and available on the project website at www.soundtransit.org/lle

I-4.1 Acquisitions, Displacements, and Relocations

I-4.2 Land Use

I-4.5 Visual and Aesthetic Resources

I-4.6 Air Quality and Greenhouse Gases

I-4.9 Water Resources

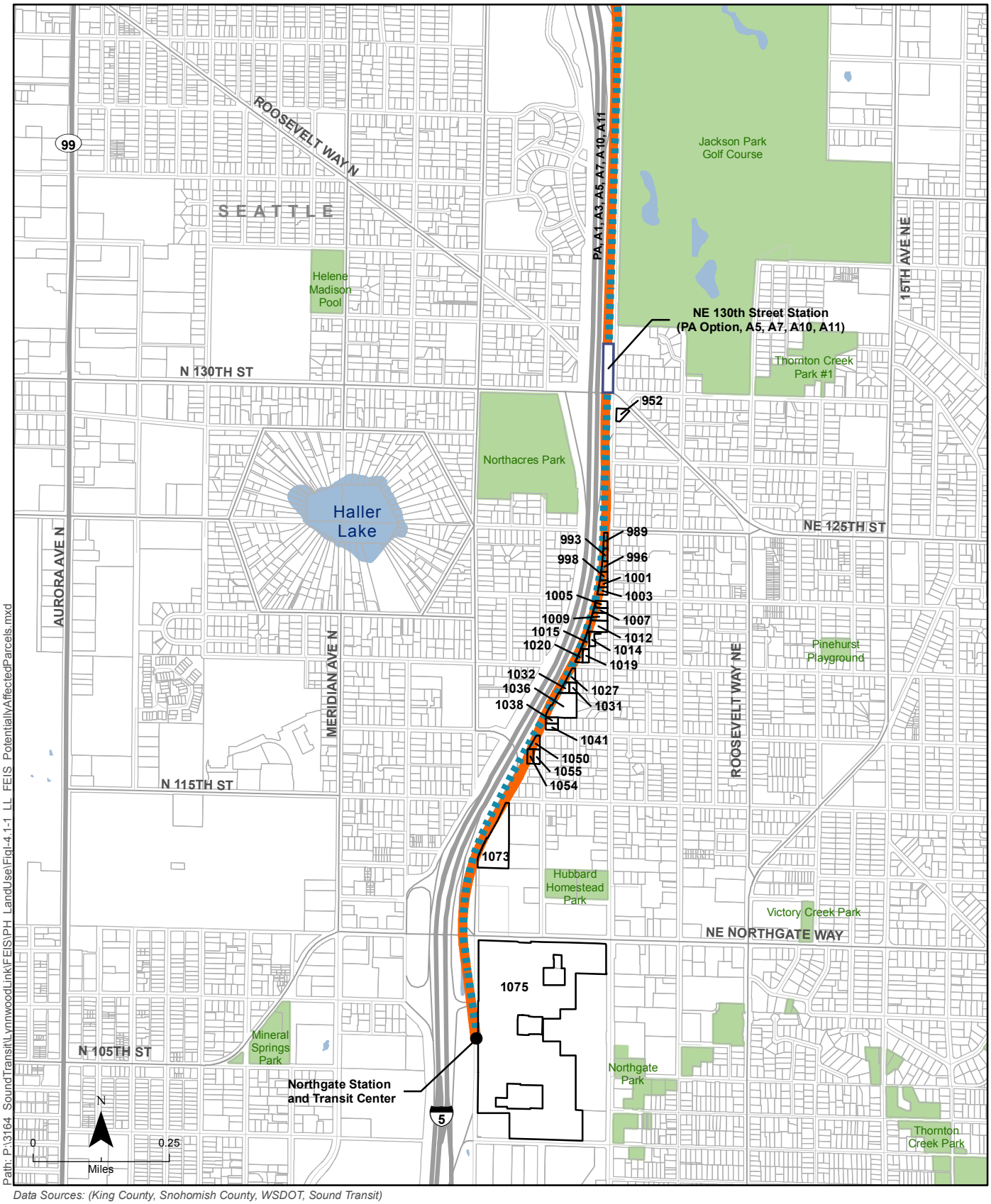
I-4.11 Geology and Soils

I-4.12 Hazardous Materials

I-4.15 Utilities

APPENDIX I-4.1

Acquisitions, Displacements, and Relocations

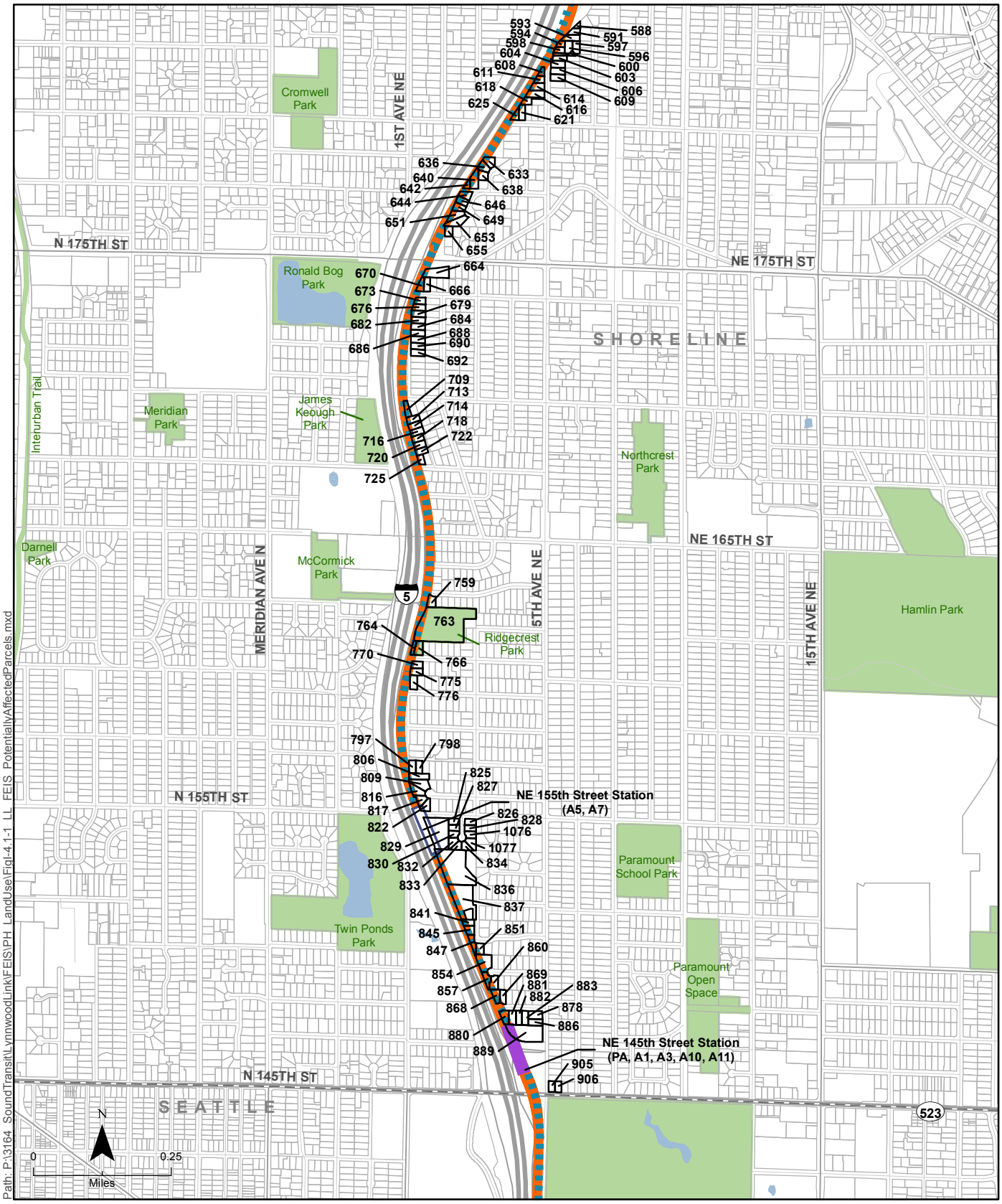


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Potentially Affected Parcel
- Potentially Affected Parcel - 220th St SW Station Option South
- Roadway
- Local Street
- City Boundary
- County Boundary
- Parcel Boundary
- Park
- Waterbody

Figure I-4.1-1a
Potentially Affected Parcels

Lynnwood Link Extension

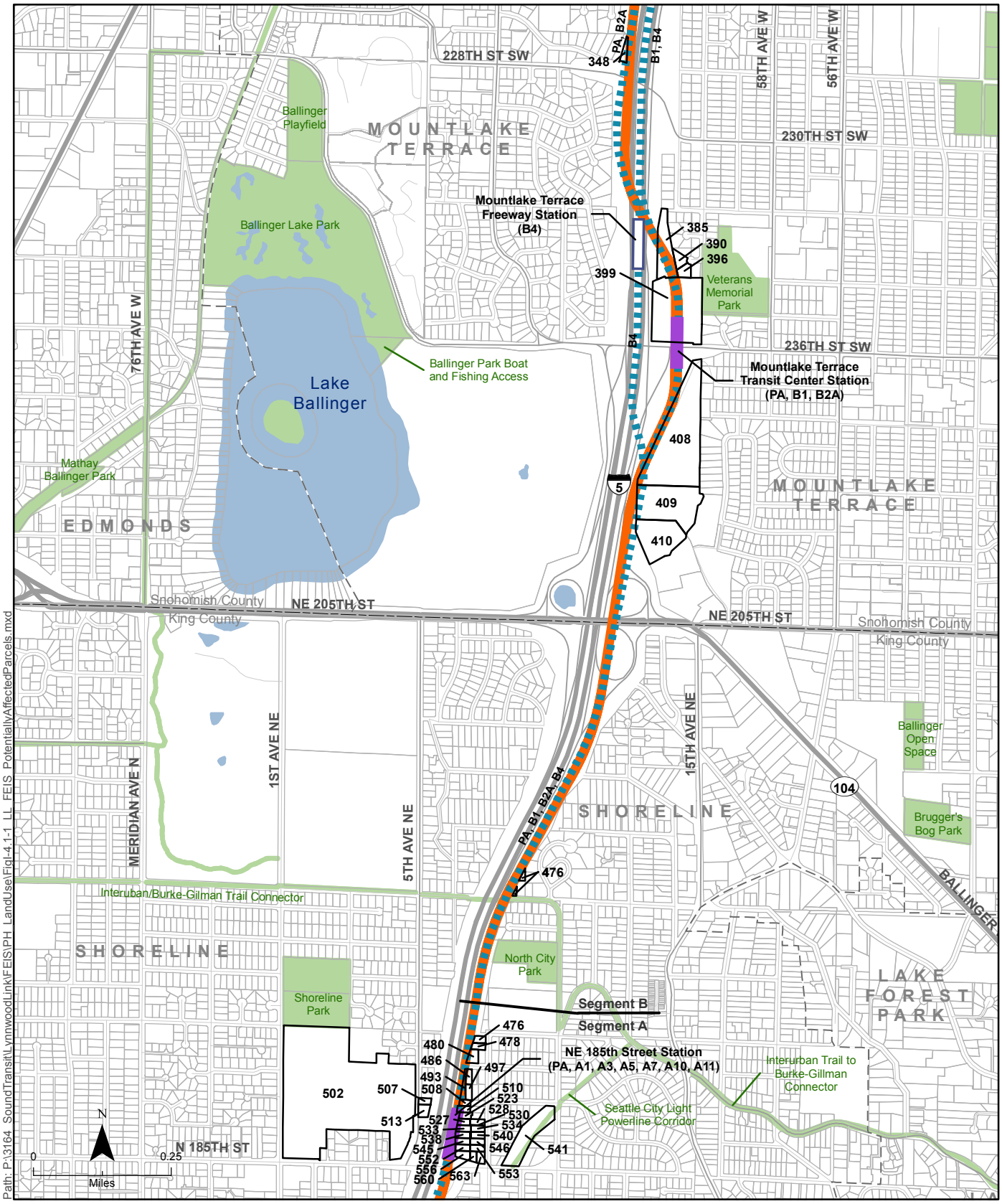


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Potentially Affected Parcel
- Potentially Affected Parcel - 220th St SW Station Option South
- Roadway
- Local Street
- City Boundary
- County Boundary
- Parcel Boundary
- Park
- Waterbody

Figure I-4.1-1b
Potentially Affected Parcels

Lynnwood Link Extension

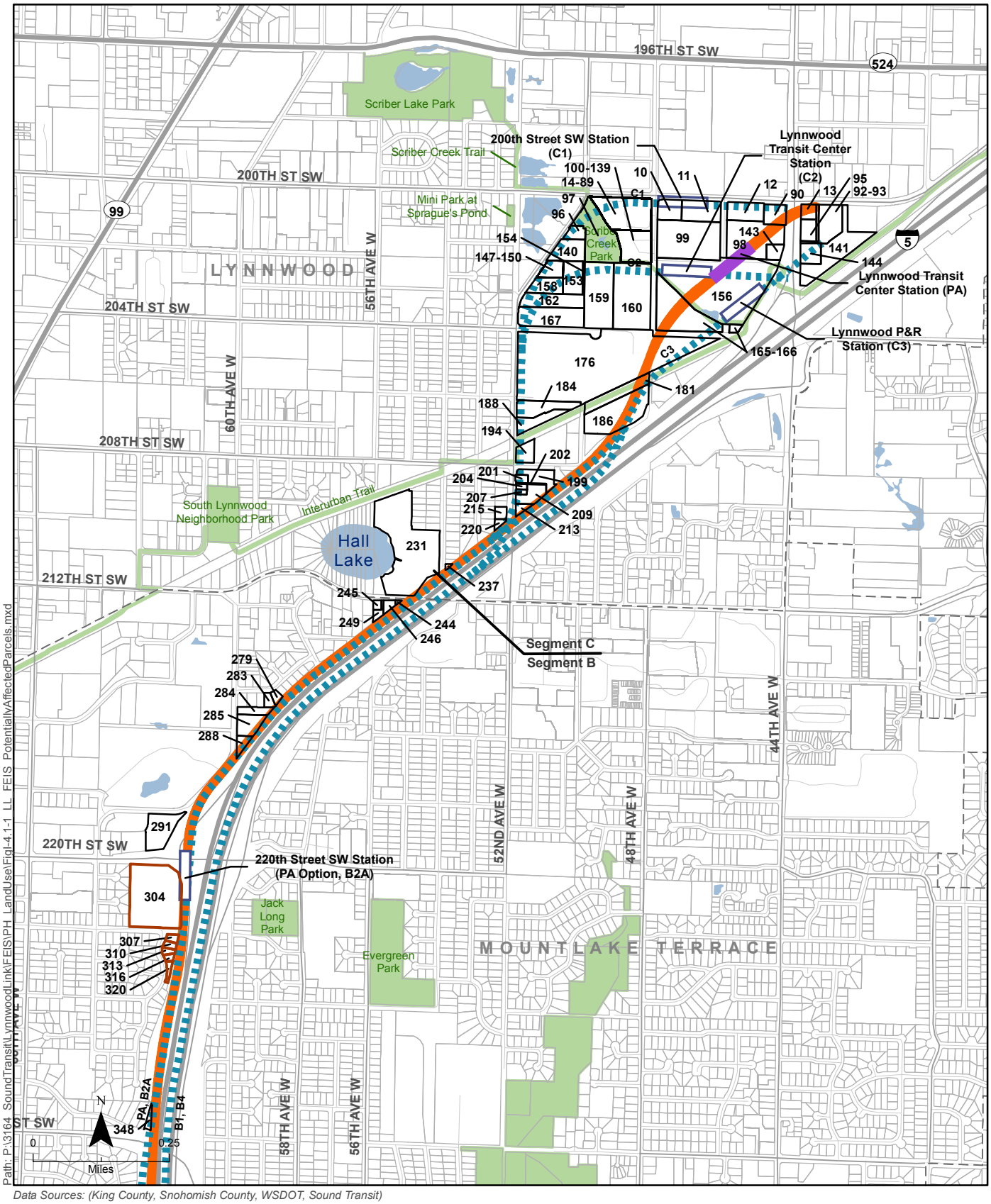


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Potentially Affected Parcel
- Potentially Affected Parcel - 220th St SW Station Option South
- Roadway
- Local Street
- City Boundary
- County Boundary
- Parcel Boundary
- Park
- Waterbody

Figure I-4.1-1c
Potentially Affected Parcels

Lynnwood Link Extension

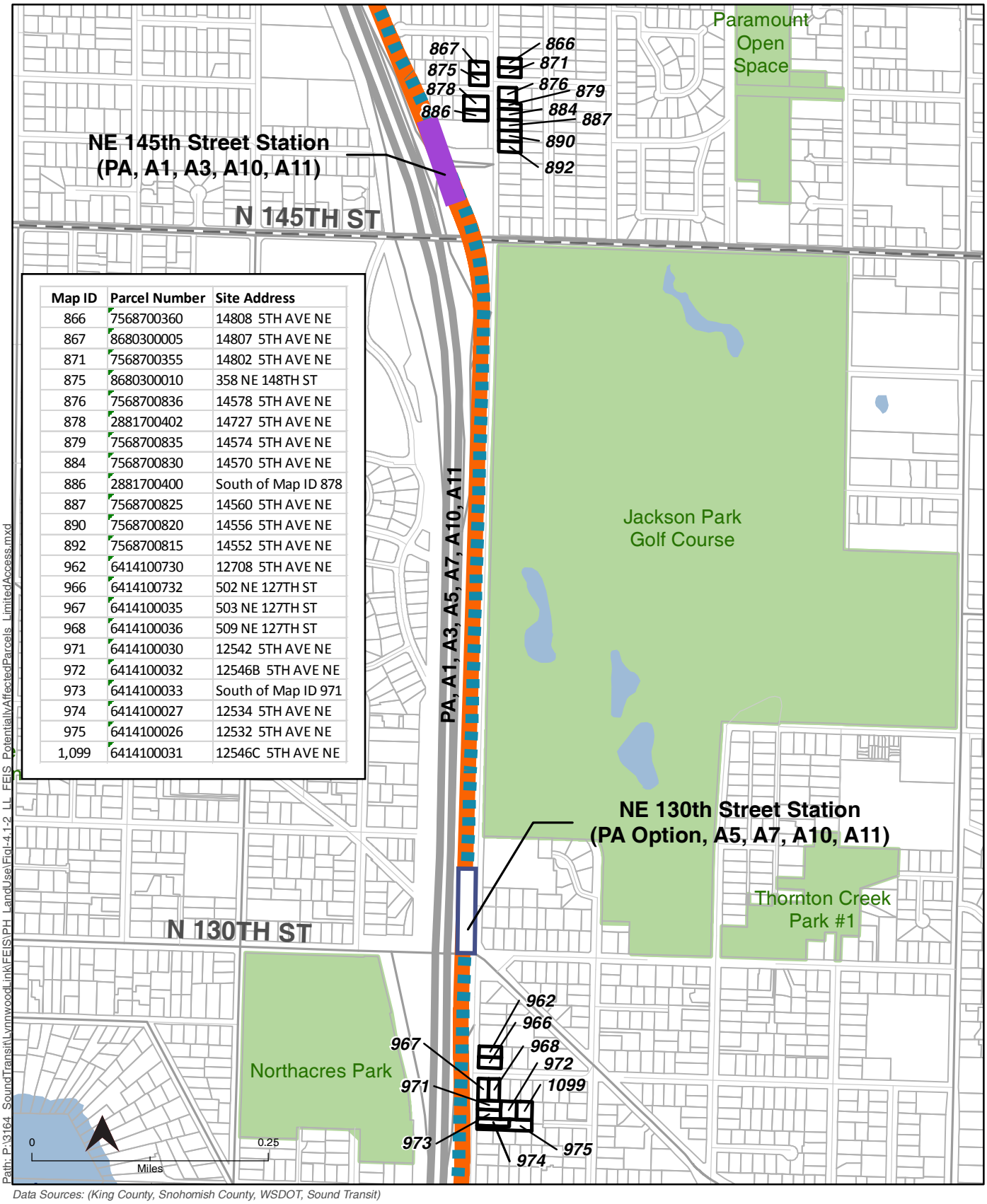


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Potentially Affected Parcel
- Potentially Affected Parcel - 220th St SW Station Option South
- Roadway
- Local Street
- City Boundary
- County Boundary
- Parcel Boundary
- Park
- Waterbody

Figure I-4.1-1d
Potentially Affected Parcels

Lynnwood Link Extension



Map ID	Parcel Number	Site Address
866	7568700360	14808 5TH AVE NE
867	8680300005	14807 5TH AVE NE
871	7568700355	14802 5TH AVE NE
875	8680300010	358 NE 148TH ST
876	7568700836	14578 5TH AVE NE
878	2881700402	14727 5TH AVE NE
879	7568700835	14574 5TH AVE NE
884	7568700830	14570 5TH AVE NE
886	2881700400	South of Map ID 878
887	7568700825	14560 5TH AVE NE
890	7568700820	14556 5TH AVE NE
892	7568700815	14552 5TH AVE NE
962	6414100730	12708 5TH AVE NE
966	6414100732	502 NE 127TH ST
967	6414100035	503 NE 127TH ST
968	6414100036	509 NE 127TH ST
971	6414100030	12542 5TH AVE NE
972	6414100032	12546B 5TH AVE NE
973	6414100033	South of Map ID 971
974	6414100027	12534 5TH AVE NE
975	6414100026	12532 5TH AVE NE
1,099	6414100031	12546C 5TH AVE NE

Path: P:\3164 SoundTransit\LynnwoodLink\FEIS\PH LandUse\Fig1-4.1-2 LL FEIS PotentiallyAffectedParcels LimitedAccess.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative
- Preferred Alternative Station Location
- Other Light Rail
- Other Alternative Station
- Preferred Alternative and Other Alternatives
- Limited
- Roadway
- Local Street
- City Boundary
- County Boundary
- Parcel Boundary
- Park
- Waterbody

Figure I-4.1-2
Parcels Potentially Affected by Interchange Access Modifications

Lynnwood Link Extension

Table I-4.1-1. Potential Property Acquisitions for Segment A Alternatives

Map ID	Parcel Number	Site Address	Land Use	PA	A1	A3	A5	A7	A10	A11
1077	411100020	15408 2nd Avenue NE	Single Family				X	X		
1076	411100015	15414 2nd Avenue NE	Single Family				X	X		
1075	2926049025	301 NE Northgate Way	Commercial	X	X	X	X	X	X	X
1073	6174800000	11300 1st Avenue NE	Multi Family	X		X	X	X	X	X
1055	6411600147	156 NE 116th Street	Single Family	X		X	X	X	X	X
1054	7810300005	150 NE 116th Street	Single Family	X	X	X	X	X	X	X
1050	6411600146	157 NE 117th Street	Single Family	X		X	X	X	X	X
1041	6411600414	308 NE 117th Street	Single Family	X	X	X	X	X	X	X
1038	6411600413	11708 3rd Avenue NE	Single Family	X	X	X	X	X	X	X
1036	6411600420	11710 3rd Avenue NE	Institutional	X	X	X	X	X	X	X
1032	6411600429	323 NE 120th Street	Single Family	X	X	X	X	X	X	X
1031	6411600430	325 NE 120th Street	Single Family	X	X		X		X	
1027	6411600428	327 NE 120th Street	Single Family	X	X	X	X	X	X	X
1020	6412100091	332 NE 120th Street	Single Family	X	X	X	X	X	X	X
1019	6412100097	338 NE 120th Street	Single Family	X						
1015	6412100087	12029 5th Avenue NE	Single Family	X	X	X	X	X	X	X
1014	6412100085	12027 5th Avenue NE	Single Family	X						
1012	6412100080	12035 5th Avenue NE	Single Family	X	X	X	X	X	X	X
1009	6412100082	12045 5th Avenue NE	Single Family	X	X	X	X	X	X	X
1007	6412100081	12049 5th Avenue NE	Single Family	X	X	X	X	X	X	X
1005	6412100084	12051 5th Avenue NE	Single Family	X	X	X	X	X	X	X
1003	6412100280	12301 5th Avenue NE	Single Family*	X	X	X	X	X	X	X
1001	6412100281	12311 5th Avenue NE	Single Family*	X	X	X	X	X	X	X
998	6412100282	12321 5th Avenue NE	Single Family*	X	X	X	X	X	X	X
996	6412100283	12327 5th Avenue NE	Single Family*	X	X	X	X	X	X	X
993	6412100284	12401 5th Avenue NE	Single Family*	X	X	X	X	X	X	X
989	6412100250	12417 5th Avenue NE	Single Family*	X	X	X	X	X	X	X

Table I-4.1-1. Potential Property Acquisitions for Segment A Alternatives (continued)

Map ID	Parcel Number	Site Address	Land Use	PA	A1	A3	A5	A7	A10	A11
952	6414100759	12740 5th Avenue NE	Single Family	X	X		X		X	
906	7568700775	East of Map ID# 905	Single Family	X						
905	7568700780	501 NE 145th Street	Single Family	X						
889	2881700390	14701 5th Avenue NE	Public	X	X	X	X	X	X	X
886	2881700400	West of 5th Avenue NE	Single Family	X	X				X	
883	8680300060	345 NE 148th Street	Single Family		X				X	
882	8680300055	339 NE 148th Street	Single Family		X				X	
881	8680300050	333 NE 148th Street	Single Family	X	X	X			X	X
880	8680300045	327 NE 148th Street	Single Family	X	X	X	X	X	X	X
878	2881700402	14727 5th Avenue NE	Single Family	X	X				X	
869	8680300035	324 NE 148th Street	Single Family	X						
868	8680300040	316 NE 148th Street	Single Family	X	X	X	X	X	X	X
860	2004100050	309 NE 149th Street	Single Family	X	X	X	X	X	X	X
857	2004100052	305 NE 149th Street	Single Family	X	X	X	X	X	X	X
854	2004100045	308 NE 149th Street	Single Family	X	X	X	X	X	X	X
851	3222200030	301 NE 151st Street	Single Family	X	X	X	X	X	X	X
847	2881700323	15101 3rd Avenue NE	Single Family	X	X	X	X	X	X	X
845	2881700322	15109 3rd Avenue NE	Single Family	X	X	X	X	X	X	X
841	2881700321	15117 3rd Avenue NE	Single Family	X	X	X	X	X	X	X
837	2881700310	225 NE 152nd Street	Institutional	X	X	X	X	X	X	X
836	2881700301	West of 3rd Avenue NE	Single Family	X	X	X	X	X	X	X
834	411100025	15404 2nd Avenue NE	Single Family				X	X		
833	411100030	15401 2nd Avenue NE	Single Family				X	X		
832	411100035	15407 2nd Avenue NE	Single Family				X	X		
830	411100040	15419 2nd Avenue NE	Single Family				X	X		
829	411100055	145 NE 155th Street	Public	X	X	X	X	X	X	X
828	411100010	15420 2nd Avenue NE	Single Family				X	X		
827	411100045	15425 2nd Avenue NE	Single Family				X	X		

Table I-4.1-1. Potential Property Acquisitions for Segment A Alternatives (continued)

Map ID	Parcel Number	Site Address	Land Use	PA	A1	A3	A5	A7	A10	A11
826	411100005	301 NE 155th Street	Single Family				X	X		
825	411100050	165 NE 155th Street	Single Family				X	X		
822	2241700045	110 NE 155th Street	Single Family	X			X	X		
817	2881700240	106 NE 155th Street	Single Family	X	X	X	X	X	X	X
816	2241700040	104 NE 156th Street	Single Family	X	X	X	X	X	X	X
809	2241700035	108 NE 156th Street	Single Family	X	X	X	X	X	X	X
806	2881700230	15618 1st Avenue NE	Single Family	X	X	X	X	X	X	X
798	2881700220	111 NE 157th Street	Single Family	X						
797	2881700223	101 NE 157th Street	Single Family	X	X	X	X	X	X	X
776	6159400045	104 NE 159th Street	Single Family	X	X	X	X	X	X	X
775	2111600100	15918 1st Avenue NE	Single Family	X	X	X	X	X	X	X
770	2111600095	15924 1st Avenue NE	Single Family	X	X	X	X	X	X	X
766	2111600046	North of NE 161st Street	Public	X	X	X	X	X	X	X
764	2111600045	North of NE 161st Street	Public	X	X	X	X	X	X	X
763	2881700193	108 NE 161st Street	Public	X	X	X	X	X	X	X
759	7301400120	121 NE 163rd Street	Single Family	X						
725	5727500086	114 NE 167th Street	Single Family	X	X	X	X	X	X	X
722	5727500103	16719 2nd Avenue NE	Single Family	X	X	X	X	X	X	X
720	5727500100	16723 2nd Avenue NE	Single Family	X	X	X	X	X	X	X
718	5727500102	16729 2nd Avenue NE	Single Family	X	X	X	X	X	X	X
716	5727500111	16731 2nd Avenue NE	Single Family	X	X	X	X	X	X	X
714	5727500110	16735 2nd Avenue NE	Single Family	X	X	X	X	X	X	X
713	5727500113	16741 2nd Avenue NE	Single Family	X	X	X	X	X	X	X
709	5727500120	109 NE 170th Street	Single Family	X	X	X	X	X	X	X
692	7305300235	17040 1st Avenue NE	Single Family	X						
690	7305300240	17046 1st Avenue NE	Single Family	X	X	X	X	X	X	X
688	7305300245	17052 1st Avenue NE	Single Family	X	X	X	X	X	X	X
686	7305300250	17058 1st Avenue NE	Single Family	X	X	X	X	X	X	X

Table I-4.1-1. Potential Property Acquisitions for Segment A Alternatives (continued)

Map ID	Parcel Number	Site Address	Land Use	PA	A1	A3	A5	A7	A10	A11
684	7305300255	17204 1st Avenue NE	Single Family	X	X	X	X	X	X	X
682	7305300260	17210 1st Avenue NE	Single Family	X	X	X	X	X	X	X
679	7305300265	17216 1st Avenue NE	Single Family	X	X	X	X	X	X	X
676	7305300270	17222 1st Avenue NE	Single Family	X	X	X	X	X	X	X
673	7305300275	105 NE 174th Street	Single Family	X	X	X	X	X	X	X
670	7305300010	110 NE 174th Street	Single Family	X	X	X	X	X	X	X
666	7305300015	116 NE 174th Street	Single Family	X	X	X	X	X	X	X
664	7305300080	South of NE 175th Street	Public	X	X	X	X	X	X	X
655	1115100235	206 NE 175th Street	Single Family	X	X	X	X	X	X	X
653	7772400150	17733 2nd Place NE	Single Family	X	X	X	X	X	X	X
651	7772400160	17737 2nd Place NE	Single Family	X	X	X	X	X	X	X
649	7772400170	17741 2nd Place NE	Single Family	X	X	X	X	X	X	X
646	7772400180	17747 2nd Place NE	Single Family	X	X	X	X	X	X	X
644	7772400190	17753 2nd Place NE	Single Family	X	X	X	X	X	X	X
642	1115100065	224 NE 178th Street	Single Family	X	X	X	X	X	X	X
640	1115100070	230 NE 178th Street	Single Family	X	X	X	X	X	X	X
638	7772400020	17809 3rd Avenue NE	Single Family	X	X	X	X	X	X	X
636	7772400030	17815 3rd Avenue NE	Single Family	X	X	X	X	X	X	X
633	7772400040	17821 3rd Avenue NE	Single Family	X	X	X	X	X	X	X
625	6084100118	332 NE 180th Street	Single Family	X	X	X	X	X	X	X
621	6084100117	338 NE 180th Street	Single Family	X	X	X	X	X	X	X
618	6084100113	18019 5th Avenue NE	Single Family	X	X	X	X	X	X	X
616	6084100105	18023 5th Avenue NE	Single Family	X	X	X	X	X	X	X
614	6084100100	18027 5th Avenue NE	Single Family	X	X	X	X	X	X	X
611	6084100095	18031 5th Avenue NE	Single Family	X	X	X	X	X	X	X
609	927100082	18036 5th Avenue NE	Single Family	X						
608	6084100086	18041 5th Avenue NE	Single Family	X	X	X	X	X	X	X
606	927100083	504 NE 182nd Court	Single Family	X						

Table I-4.1-1. Potential Property Acquisitions for Segment A Alternatives (continued)

Map ID	Parcel Number	Site Address	Land Use	PA	A1	A3	A5	A7	A10	A11
604	927100085	18210 5th Avenue NE	Single Family	X	X		X		X	
603	927100090	505 NE 183rd Court	Single Family	X	X		X		X	
600	92710TRCT	NE 183rd Court	Single Family	X						
598	927100094	18310 5th Avenue NE	Single Family	X	X		X		X	
597	927100092	520 NE 183rd Court	Single Family		X		X		X	
596	927100093	514 NE 183rd Court	Single Family	X	X		X		X	
594	927100098	18320 5th Avenue NE	Single Family	X	X		X		X	
593	927100105	18326 5th Avenue NE	Single Family	X	X		X		X	
591	927100100	18330 5th Avenue NE	Single Family	X	X		X		X	
588	927100110	East of 5th Avenue NE	Single Family	X	X		X		X	
563	0526049030	18509 8th Avenue NE	Single Family	X		X	X	X	X	X
560	0526049052	18511 8th Avenue NE	Single Family	X		X	X	X	X	X
556	0526049029	18510 7th Avenue NE	Single Family	X	X	X	X	X	X	X
553	0526049028	18517 8th Avenue NE	Single Family	X		X	X	X	X	X
552	0526049060	18516 7th Avenue NE	Single Family	X	X	X	X	X	X	X
546	0526049040	18523 8th Avenue NE	Single Family	X		X	X	X	X	X
545	0526049027	18520 7th Avenue NE	Single Family	X	X	X	X	X	X	X
541	0526049039	804 NE 185th Street	Public				X		X	
540	0526049054	18529 8th Avenue NE	Single Family	X		X	X	X	X	X
538	0526049044	18528 7th Avenue NE	Single Family	X	X	X	X	X	X	X
534	0526049055	18533 8th Avenue NE	Single Family	X		X	X	X	X	X
533	0526049015	18534 7th Avenue NE	Single Family	X	X	X	X	X	X	X
530	0526049026	West of 8th Avenue NE	Single Family	X		X	X	X	X	X
528	0526049050	18539 8th Avenue NE	Single Family	X	X	X	X	X	X	X
527	0526049056	18540 7th Avenue NE	Single Family	X	X	X	X	X	X	X
523	0526049061	18546 7th Avenue NE	Single Family	X	X	X	X	X	X	X
513	0526049022	18556 5th Avenue NE	Single Family	X	X					

Table I-4.1-1. Potential Property Acquisitions for Segment A Alternatives (continued)

Map ID	Parcel Number	Site Address	Land Use	PA	A1	A3	A5	A7	A10	A11
510	0526049032	18552 7th Avenue NE	Single Family	X	X	X	X	X	X	X
508	0526049031	18558 7th Avenue NE	Single Family	X	X	X	X	X	X	X
507	0526049051	18560 5th Avenue NE	Single Family	X	X					
502	2225300360	18560 1st Avenue NE	Public	X	X					
497	3971702321	707 NE 189th Street	Single Family	X	X	X	X	X	X	X
493	3971702325	703 NE 189th Street	Single Family	X	X	X	X	X	X	X
486	3971702320	715 NE 189th Street	Single Family	X	X	X	X	X	X	X
480	3971702295	718 NE 189th Street	Single Family	X	X	X	X	X	X	X
478	3971702210	18915 8th Avenue NE	Single Family		X	X	X	X	X	X
476	3971702215	18921 8th Avenue NE	Single Family		X	X		X		X

Notes: X denotes a potentially affected parcel by the alternative. This table does not include public rights-of-way.

* The King County assessor data reports this parcel as "single family", but the parcel contains a rooming house with several units.

Land use designations developed from King County and Snohomish County assessor data.

Table I-4.1-2. Potential Property Acquisitions for Segment B Alternatives

Map ID	Parcel Number	Site Address	Land Use	PA	B1	B2A	B4
447	3985300330	North of NE 195th Street	Single Family	X			
410	27043200401300	6021 244th Street SW	Commercial				X
409	27043200401600	North of I-5 on ramp at NE 205th Street	Vacant	X	X	X	X
408	27043200400700	6004 237th Street SW	Institutional	X	X	X	X
399	27043200100200	Mountlake Terrace Transit Center	Public	X	X	X	X
396	00524800001400	6004 233rd Place SW	Single Family			X	
390	00524800001300	6005 233rd Place SW	Single Family			X	
385	27043200100500	North of Mountlake Terrace Transit Center	Vacant	X	X	X	X
348	00524000000500	6101 227th Street SW	Single Family			X	
320	00524000005100	22209 62nd Avenue W	Single Family	X[1]		X	
316	00524000005400	22207 62nd Avenue W	Single Family	X[1]			
313	00524000005500	22205 62nd Avenue W	Single Family	X[1]			
310	00524000005600	22203 62nd Avenue W	Single Family	X[1]			
307	00524000005700	22201 62nd Avenue W	Single Family	X[1]			
304	00378200300600	6205 222nd Street SW	Institutional	X[1]			
288	00619900005000	South of 214th Street SW	Vacant	X		X	
285	00619900004800	South of 214th Street SW	Vacant	X		X	
284	00525100002500	21503 60th Avenue W	Single Family	X		X	
283	00525100000800	5906 214th Street SW	Single Family	X		X	
279	00525100000700	5904 214th Street SW	Single Family	X		X	
249	27042800202400	5516 212th Street SW	Single Family	X		X	
246	27042800202200	5522 212th Street SW	Single Family	X		X	
245	27042800202300	5518 212th Street SW	Single Family	X		X	
244	27042800202100	South of 212th Street SW	Vacant		X	X	X
231	27042100305400	54th Avenue W	Single Family	X		X	

Note: X denotes a potentially affected parcel by the alternative. This table does not include public rights-of-way.

[1] Parcel impacted only with 220th Street SW Station South Option.

Land use designations developed from King County and Snohomish County assessor data.

Table I-4.1-3. Potential Property Acquisitions for Segment C Alternatives

Map ID	Parcel Number	Site Address	Land Use	PA	C1	C2	C3
237	27042100306100	North of 212th Street SW	Single Family	X	X	X	X
220	00462601300800	20924 52nd Avenue W	Single Family		X	X	
215	00462601300400	20918 52nd Avenue W	Single Family		X	X	
213	27042100403800	20909 52nd Avenue W	Industrial	X	X	X	X
209	27042100404200	20825 52nd Avenue W	Industrial	X	X	X	X
207	27042100404000	East of 52nd Avenue W	Industrial		X	X	
204	27042100404100	East of 52nd Avenue W	Industrial		X	X	
202	27042100403900	East of 52nd Avenue W	Industrial		X	X	
201	27042100403600	20815 52nd Avenue W	Industrial		X	X	
199	27042100403500	5030 208th Street SW	Industrial	X	X	X	
194	00619500000602	20727 52nd Avenue W	Industrial		X	X	
188	00619500000300	20623 52nd Avenue W	Industrial		X	X	
186	00619500000900	20610 48th Avenue W	Industrial	X			X
184	00619500000301	20621 52nd Avenue W	Industrial		X	X	
181	27042100403700	Interurban Trail	Public	X	X	X	X
176	00619500000102	20525 52nd Avenue W	Industrial	X	X	X	X
167	00608400300402	20311 52nd Avenue W	Industrial		X	X	
166	00372600600902	Lynnwood Transit Center	Public	X		X	X
165	00372600600901	Lynnwood Transit Center	Public	X		X	X
162	00608400300401	20305 52nd Avenue W	Industrial		X	X	
160	00608400400302	West of Lynnwood Transit Center	Industrial			X	
159	00608400400301	West of Lynnwood Transit Center	Industrial			X	
158	01067400000100	East of Cedar Valley Road	Industrial		X	X	
156	00372600600900	Lynnwood Transit Center	Public	X		X	X
154	00608400300303	East of Cedar Valley Road	Industrial			X	
153	00608400300300	20207 Cedar Valley Road	Industrial			X	
150	01082800010400	20201 Cedar Valley Road, Unit 104	Industrial		X	X	

Table I-4.1-3. Potential Property Acquisitions for Segment C Alternatives (continued)

Map ID	Parcel Number	Site Address	Land Use	PA	C1	C2	C3
149	1082800010300	20201 Cedar Valley Road, Unit 103	Industrial		X	X	
148	1082800010200	20201 Cedar Valley Road, Unit 102	Industrial		X	X	
147	1082800010100	20201 Cedar Valley Road, Unit 101	Industrial		X	X	
144	372600702301	20115 44th Avenue W	Commercial				X
143	372600601302	20102 44th Avenue W	Commercial	X			
141	372600702108	4220 200th Street SW	Commercial				X
140	608400300203	20121 Cedar Valley Road	Industrial		X		
99	372600600800	20110 46th Avenue W	Commercial		X		X
98	372600601301	20111 46th Avenue W	Commercial	X			
97	608400300101	20015 Cedar Valley Road	Public		X		
96	608400300201	East of Cedar Valley Road	Industrial		X		
95	372600702101	20101 44th Avenue W	Commercial				X
93	372600702106	4220 Alderwood Mall Boulevard	Commercial				X
92	372600702105	East of 44th Avenue W	Commercial				X
90	372600601401	20000 44th Avenue W	Commercial	X	X		
14-89	Multiple Numbers	Cedar Creek Condominiums	Multi Family	X[a]	X		
13	372600702102	20007 44th Avenue W	Commercial	X			
12	372600601406	4520 200th Street SW	Commercial	X	X		
11	372600600702	4630 200th Street SW	Commercial	X	X		
10	372600600703	4720 200th Street SW	Commercial	X	X		

Note:
X denotes a potentially affected parcel by the alternative. This table does not include public rights-of-way.
Land use designations developed from King County and Snohomish County assessor data.
[a] Affects a common property area of condominium complex, and not specific units.

APPENDIX I-4.2

Land Use

APPENDIX I-4.2 LAND USE — PLANS, GOALS, AND POLICIES

4.2.1 Introduction

Sound Transit reviewed regional, state, local, and major institution master plans to identify goals and/or policies applicable to the Lynnwood Link Extension to determine the project's land use compatibility and conformance. The following sections summarize the applicable plans, as presented in Table 4.2-1, and discuss the proposed project's consistency with these plans. Tables 4.2-2 through 4.2-19 provide information on specific goals and policies in relevant plans, and the consistency of the Lynnwood Link Extension with each. The tables present the text of the applicable plan element and subsections, identify whether the Lynnwood Link Extension is consistent with the goal or policy, and present a brief discussion on how the project would be consistent with the goal or policy. However, many policies are not listed because they were not relevant to Lynnwood Link Extension.

Table 4.2-1. State, Regional, and Locally Adopted Plans and Policies Evaluated for Consistency

State and Regionally Adopted Plans and Policies
Washington State Growth Management Act (GMA), adopted 1990, as amended
Puget Sound Regional Council's (PSRC) VISION 2040, adopted 2008
PSRC *Transportation 2040*, adopted May 2010, updated May 2014
Sound Transit Regional Transit Long-Range Plan, adopted July 2005 (update in progress)
Sound Transit 2 (ST2), the Regional Transit System Plan for Central Puget Sound, adopted May 2007
Locally Adopted Plans and Policies
Sound Transit Transit-oriented Development Strategic Plan, adopted September 2011, updated April 2014 Sound Transit Transit-oriented Development Policy, adopted 2012
City of Seattle
City of Seattle Comprehensive Plan, 2009 (update expected 2015)
City of Seattle Transportation Strategic Plan, 2005
Seattle Department of Transportation Northgate Coordinated Transportation Investment Plan, 2006
Seattle Pedestrian Master Plan, 2009
Seattle Bicycle Master Plan, 2014
City of Seattle Transit Master Plan, 2012
City of Shoreline
City of Shoreline Comprehensive Plan, 2012 (update expected 2015)
City of Shoreline Southeast Neighborhoods Subarea Plan, 2010
City of Shoreline Transportation Master Plan, 2011
City of Shoreline Environmental Sustainability Strategy, 2008
City of Shoreline Light Rail Guiding Principles, 2011
City of Shoreline 185th Street Station Subarea Planned Action Final EIS (2014)*

Table 4.2-1. State, Regional, and Locally Adopted Plans and Policies Evaluated for Consistency

City of Mountlake Terrace
City of Mountlake Terrace Comprehensive Plan, 2011 (update expected 2015)
Mountlake Terrace Town Center Design Standards, 2008
Mountlake Terrace Freeway/Tourist District Design Standards, 2010
Mountlake Terrace Multifamily Design Standards, 2010
Mountlake Terrace Economic Vitality Strategy, 2008
Mountlake Terrace Sustainability Strategy, 2008
Mountlake Terrace Transit Oriented Development Study, 2003
Mountlake Terrace Transit Service Strategy, 2010
Melody Hill Subarea Plan, 2006
City of Lynnwood
City of Lynnwood Comprehensive Plan, 2011 (update expected 2015)
Lynnwood Access Study, 2007
Lynnwood City Center Sub-Area Plan, 2007
Lynnwood City Center Design Guidelines, 2012
City of Lynnwood Mode Split for City Center Street Master Plan, 2009
Lynnwood Local Improvement District (LID) Feasibility Study, 2008

* The City of Shoreline is also preparing a 145th Street Station Subarea Plan, but the study process is behind those associated with the 185th Street Station Subarea Plan. The 145th Street Station Subarea Planned Action Draft EIS is anticipated to be published in January 2015.

4.2.2 State and Regional Plans

From a state and regional perspective, five planning documents establish the framework for local land use:

- Washington State GMA (adopted 1990, as amended)
- PSRC's VISION 2040 (adopted 2008)
- PSRC's *Transportation 2040* (adopted May 2010)
- Sound Transit Regional Transit Long-Range Plan (adopted July 2005)
- Sound Transit 2 (ST2), the Regional Transit System Plan for Central Puget Sound (adopted May 2007)

Washington State Growth Management Act

Plan Summary

The GMA (Revised Code of Washington [RCW] 36.70A), adopted in 1990 to mandate comprehensive planning throughout Washington, provides a comprehensive framework for managing growth and coordinating land use development with the construction of transportation facilities and other infrastructure. Local, county, and regional plans in Washington are required to be consistent with the policies of the GMA. The GMA includes 13 planning goals for

managing urban growth, protecting agricultural lands, reducing sprawl, and encouraging multimodal transportation systems. The overall goals of the GMA encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner. The Act also encourages efficient multimodal transportation systems that are based on regional priorities and are coordinated with county and city comprehensive plans.

Jurisdictions that would be affected by the proposed project, including Seattle, Shoreline, Mountlake Terrace, and Lynnwood, keep pace with land development by making public road and transit improvements to help meet the expected transportation demand. The GMA requires local governments to develop and adopt growth management policies, plans, and regulations. Under the GMA, comprehensive plans must have elements that address land use, housing, capital facilities, utilities, rural lands (counties only), and transportation. In addition, the transportation element is required to be consistent with the land use element. Coordination of land use and transportation is a key component of the GMA. Cities and counties are also mandated by the GMA to establish a process in their comprehensive plans to make the provision for siting essential public facilities, such as airports, state or regional transportation facilities, solid waste handling facilities, mental health facilities, group homes, and secure community transition facilities.

Consistency with Lynnwood Link Extension

The Lynnwood Link Extension is consistent with the GMA in that it would encourage growth within the urban areas, reduce sprawl, and provide a transportation alternative to single-occupancy vehicles. The project's alternatives and stations are located within the cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood, and all have adopted comprehensive plans and regulations consistent with the provisions identified in the GMA. The Lynnwood Link Extension would connect the four cities and their centers of employment and activity and would advance the goals of the GMA.

In addition, the Lynnwood Link Extension is considered an essential public facility and, as such, under GMA, the role of each of the cities (Seattle, Shoreline, Mountlake Terrace, and Lynnwood) is one of collaboration with Sound Transit in the decision-making process. When Sound Transit's routing and station decisions are final, the cities have a "duty to accommodate" the light rail project in their land use plans.

Puget Sound Regional Council VISION 2040

Plan Summary

VISION 2040, adopted in 2008, serves as the region's integrated long-range growth management strategy. It builds from the VISION 2020 plan and expands the focus on sustainability in the incorporation of a projected additional 1.7 million

people in the Puget Sound region by 2040. It promotes the development of a coordinated transportation system that is integrated with and supported by the growth management strategy and builds upon and supports local, countywide, regional, and state planning efforts. Countywide planning policies in each of the counties supply the local framework and provide additional detail for county and city comprehensive plans. VISION 2040's strategies and policies are established within six elements: environment; development patterns; housing; economy; transportation; and public services.

VISION 2040's focus is to contain growth, concentrate new employment in urban centers, and link the centers with a high-quality multimodal transportation system. This strategy is designed to foster a greater mix of land uses and a more complete and efficient network of streets and other public rights-of-way, and to support an urban environment that is more amenable to walking, bicycling, and using transit. VISION 2040 contains many goals and policies that are applicable to the Lynnwood Link Extension.

Consistency with Lynnwood Link Extension

The Lynnwood Link Extension is identified in VISION 2040 and is a key component in linking urban centers. The Preferred Alternative and all other light rail alternatives would support long-range planning and growth management to varying degrees. The Preferred Alternative is generally consistent with regional and local plans and policies in the study area. Some of the other alternatives have alignments or features that are less consistent with some aspects of local policies. However, at the regional level, all alternatives would comply with goals and policies identified in PSRC's VISION 2040 by providing a regional transit system serving a growing transportation need in planned high-density areas, with residential and employment uses within designated urban centers. Also, PSRC's Growing Transit Communities Strategy (2013), which reviewed several of the region's major transit corridors, including the "North Corridor" extending from Lynnwood to Everett, describes regional and local actions to encourage more housing, jobs, and services close to major transit investments.

Table 4.2-2 provides more detailed information on the goals and policies of VISION 2040 and how the Lynnwood Link Extension is consistent with this regional strategy.

Table 4.2-2. Lynnwood Link Extension's Consistency with the Goals and Policies of VISION 2040

Specific Goals and Policies	Discussion
DEVELOPMENT PATTERNS	
Goal: The region will direct growth and development to a limited number of designated regional growth centers. **MPP-DP-5:** Focus a significant share of population and employment growth in designated regional growth centers. **MPP-DP-6:** Provide a regional framework for designing and evaluating regional growth centers. **MPP-DP-7:** Give funding priority—both for transportation infrastructure and for economic development—to support designated regional growth centers. County-level and local funding are also appropriate to prioritize to regional growth centers. **MPP-DP-35:** Develop high quality, compact urban communities throughout the region's urban growth area that impart a sense of place, preserve local character, provide for mixed uses and choices in housing types and encourage walking, bicycling, and transit use.	The Lynnwood Link Extension would support mixed-use (commercial, office, and residential) development to allow growth at greater density where existing land use policies and regulations allow, and provide connections to urban centers with a fast, efficient, and reliable transit system.
Goal: Subregional centers, such as those designated through countywide processes or identified locally, will also play important roles in accommodating planned growth according to the regional vision. These centers will promote pedestrian connections and support transit-oriented uses. **MPP-DP-14:** Preserve and enhance existing neighborhoods and create vibrant, sustainable compact urban communities that provide diverse choices in housing types, a high degree of connectivity in the street network to accommodate walking, bicycling and transit use, and sufficient public spaces. **MPP-DP-17:** Promote transit service to and from existing cities in rural areas.	The Lynnwood Link Extension would support mixed-use development (commercial, office, and residential) in designated urban growth areas and would help focus the majority of growth in station areas where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, allowing for an efficient provision of services and facilities as well as promoting walkable and cohesive neighborhoods. The Lynnwood Link Extension would provide fast, reliable, and efficient connections to the other urban centers in the project corridor and to other urban communities as well as regional destinations. Linking the urban centers with fast, reliable, and efficient transit increases the effectiveness of bus transit services to outer areas of the Puget Sound region.
Goal: The region will permanently sustain the ecological functions, resource value, lifestyle, and character of rural lands for future generations by limiting the types and intensities of development in rural areas. **MPP-DP-21:** Contribute to improved ecological functions and more appropriate use of rural lands by minimizing impacts through innovative and environmentally sensitive land use management and development practices. **MPP-DP-22:** Do not allow urban net densities in rural and resource areas.	The Lynnwood Link Extension would support mixed-use (commercial, office, and residential) development to allow greater density where existing land use policies and regulations allow, and provide connections to urban centers with a fast, efficient, and reliable transit system, which would prevent the need for growth in non-urban areas and allow them to be preserved for these preferred values.

Table 4.2-2. Lynnwood Link Extension's Consistency with the Goals and Policies of VISION 2040

Specific Goals and Policies	Discussion
Goal: The region will use design to shape the physical environment in order to create more livable communities, better integrate land use and transportation systems, and improve efforts to restore the environment. **MPP-DP-35:** Develop high quality, compact urban communities throughout the region's urban growth area that impart a sense of place, preserve local character, provide for mixed uses and choices in housing types, and encourage walking, bicycling, and transit use. **MPP-DP-36:** Provide a wide range of building and community types to serve the needs of a diverse population. **MPP-DP-40:** Design transportation projects and other infrastructure to achieve community development objectives and improve communities. **MPP-DP-42:** Recognize and work with linear systems that cross jurisdictional boundaries—including natural systems, continuous land use patterns, and transportation infrastructure systems—in community planning, development, and design.	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system that would provide an alternative to the use of single-occupancy vehicles. It would also provide linkages to other travel modes, including rail, buses, and walking. This would help the overall transportation system operate more efficiently with fewer cars, and provide more walkable and livable communities with affordable transportation options.
TRANSPORTATION	
Goal: As a high priority, the region will maintain, preserve, and operate its existing transportation system in a safe and usable state. (MPP-T-1 through MPP-T-8) **MPP-T-1:** Maintain and operate transportation systems to provide safe, efficient, and reliable movement of people. **MPP-T-3:** Reduce the need for new capital improvements through investments in operations, pricing programs, demand management strategies, and system management activities that improve the efficiency of the current system, goods, and services. **MPP-T-5:** Foster a less polluting system that reduces the negative effects of transportation infrastructure and operation on the climate and natural environment. **MPP-T-6:** Seek the development and implementation of transportation modes and technologies that are energy efficient and improve system performance.	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system as an alternative to the use of single-occupancy vehicles and would also provide linkages to other travel modes, including rail, buses, and walking. Lynnwood Link would also provide connections among regional growth centers, which would reduce the need to expand other transportation facilities. Overall, less infrastructure development would be needed with this higher density development. The Lynnwood Link Extension would help reduce air pollution and conserve energy. Most of the stations would be located in areas designated for increased density, and Lynnwood Link Extension would provide direct and frequent access to those areas, as well as provide connections to other regional destinations.
Goal: The future transportation system will support the regional growth strategy by focusing on connecting centers with a highly efficient multimodal transportation network. (MPP-T-9 through MPP-T-22) **MPP-T-9:** Coordinate state, regional, and local planning efforts for transportation through the Puget Sound Regional Council to develop and operate a highly efficient,	The Lynnwood Link Extension would support mixed-use development (commercial, office, and residential) in designated urban growth areas and would help focus the majority of growth in station areas where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for efficient provision of services and facilities and promoting walkable and cohesive

Table 4.2-2. Lynnwood Link Extension's Consistency with the Goals and Policies of VISION 2040

Specific Goals and Policies	Discussion
multimodal system that supports the regional growth strategy. **MPP-T-10:** Promote coordination among transportation providers and local governments to ensure that joint- and mixed-use developments are designed in a way that improves overall mobility and accessibility to and within such development. **MPP-T-11:** Prioritize investments in transportation facilities and services in the urban growth area that support compact, pedestrian- and transit-oriented densities and development. **MPP-T-12:** Give regional funding priority to transportation improvements that serve regional growth centers and regional manufacturing and industrial centers. **MPP-T-13:** Make transportation investments that improve economic and living conditions so that industries and skilled workers continue to be retained and attracted to the region. **Context and Design** **MPP-T-20:** Design transportation facilities to fit within the context of the built or natural environments in which they are located. **MPP-T-21:** Apply urban design principles in transportation programs and projects for regional growth centers and high capacity transit station areas. **MPP-T-22:** Implement transportation programs and projects in ways that prevent or minimize negative impacts to low income, minority, and special needs populations.	neighborhoods. The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system that would provide an alternative to the use of single-occupancy vehicles. It would also provide linkages to other travel modes, including rail, buses, and walking. The Lynnwood Link Extension would provide connections among regional growth centers as well as to adjacent communities served by Central Link and East Link light rail.
Goal: The region will invest in transportation systems that offer greater options, mobility, and access in support of the regional growth strategy. **MPP-T-23:** Emphasize transportation investments that provide and encourage alternatives to single-occupancy vehicle travel and increase travel options, especially to and within centers and along corridors connecting centers. **MPP-T-24:** Increase the proportion of trips made by transportation modes that are alternatives to driving alone. **MPP-T-25:** Ensure mobility choices for people with special transportation needs, including persons with disabilities, the elderly, the young, and low-income populations. **MPP-T-26:** Strategically expand capacity and increase efficiency of the transportation system to move goods, services, and people to and within the urban growth area. Focus on investments that produce the greatest net benefits to people and minimize the environmental impacts of	The Lynnwood Link Extension would provide a transportation alternative to single-occupancy vehicles, including for people with special needs. The Lynnwood Link Extension would efficiently move large numbers of people, increase the capacity of existing facilities, and promote more walkable and cohesive neighborhoods. The Lynnwood Link Extension would also provide connections to the other urban centers in the project corridor as well as regional destinations. Completion of the environmental impact statement (EIS) process will enable Sound Transit to preserve right-of-way for the Preferred Alternative for future light rail service.

Table 4.2-2. Lynnwood Link Extension's Consistency with the Goals and Policies of VISION 2040

Specific Goals and Policies	Discussion
transportation. **MPP-T-29:** Promote the preservation of existing rights-of-way for future high-capacity transit.	
ENVIRONMENT	
Goal: The overall quality of the region's air will be better than it is today. **MPP-En-17:** Maintain or do better than existing standards for carbon monoxide, ozone, and particulates. **MPP-En-18:** Reduce levels for air toxics, fine particulates, and greenhouse gases. **MPP-En-19:** Continue efforts to reduce pollutants from transportation activities, including through the use of cleaner fuels and vehicles and increasing alternatives to driving alone, as well as design and land use.	The Lynnwood Link Extension would advance regional policies related to reducing dependence on single-occupancy vehicles and increasing nonmotorized travel modes, especially within urban centers. It would also help reduce air pollution and conserve energy, as discussed in Sections 4.6, Air Quality and Greenhouse Gases, and 4.10, Energy Impacts, of the Final EIS. Most of the stations would be located in areas designated for increased density, and the Lynnwood Link Extension would provide direct and frequent access to those areas, as well as provide connections to regional destinations. Promoting transit and walkable communities would reduce vehicle miles and hours traveled and therefore would help reduce air pollution.
Goal: The region will reduce its overall production of harmful elements that contribute to climate change. **MPP-En-20:** Address the central Puget Sound region's contribution to climate change by, at a minimum, committing to comply with state initiatives and directives regarding climate change and the reduction of greenhouse gases. Jurisdictions and agencies should work to include an analysis of climate change impacts when conducting an environmental review process under the State Environmental Policy Act. **MPP-En-21:** Reduce the rate of energy use per capita, both in building use and in transportation activities. **MPP-En-22:** Pursue the development of energy management technology as part of meeting the region's energy needs. **MPP-En-23:** Reduce greenhouse gases by expanding the use of conservation and alternative energy sources and by reducing vehicle miles traveled by increasing alternatives to driving alone.	See the previous goal and Sections 4.6 and 4.10 of the Final EIS. In addition, the Lynnwood Link Extension would be powered by electricity. In the Puget Sound region and areas that would provide power to the Lynnwood Link Extension, much of the power sources come from hydropower, which is a non-polluting power source. The Lynnwood Link Extension would also reduce greenhouse gases during operation by decreasing vehicle miles and hours traveled. The Lynnwood Link Extension would advance regional policies related to decreasing dependence on single-occupancy vehicles and increasing nonmotorized travel modes, especially within urban centers.

Puget Sound Regional Council's *Transportation 2040*

Plan Summary

Transportation 2040 is the long-range plan for transportation in the central Puget Sound region through 2040 and is the transportation element of VISION 2040. The transportation-related plans of the cities, counties, transit agencies, and the

region form the basis for the *Transportation 2040* plan. The plan looks at the needs of the Central Puget Sound region and identifies what improvements in transportation are needed to meet the anticipated growth. *Transportation 2040* supports a balanced multimodal transportation system that provides options to users and identifies specific projects that have been designed to result in improved roads, transit, and ferry service. To meet recent federal and state mandates, an updated *Transportation 2040* was adopted in May 2014. This minor update reflects changes in the region since the plan was adopted in 2010 and includes completing ongoing work items, meeting statutory obligations, and incorporating planning activities currently underway.

Consistency with Lynnwood Link Extension

The Lynnwood Link Extension is identified in *Transportation 2040* and is a key component in the development of a regional high-capacity transit system linking urban centers. In addition, the Lynnwood Link Extension would allow for jurisdictions to better implement transit- and pedestrian-oriented land use patterns where current zoning allows for such development to occur.

Sound Transit 2005 Regional Transit Long-Range Plan

Plan Summary

The Sound Transit 2005 Regional Transit Long-Range Plan, which was updated in 2005, represents the goals, policies, and strategies for the long-term development of a high-capacity transit system within the Central Puget Sound region. As the Regional Transit Authority (under Chapter 81.104 and 81.112 RCW), Sound Transit is responsible for regional mass transit system planning in the context of *Transportation 2040*. The Sound Transit Long-Range Plan serves as the basis for the next phase of high-capacity transit investments, known as ST2. ST2 builds upon *Sound Move*, the initial implementation phase of the Sound Transit Long-Range Plan, and extends the regional transit network, especially in jurisdictions that are now encouraging increases in land use density in their comprehensive plans and development regulations. The Lynnwood Link Light Rail Transit Project (now the Lynnwood Link Extension) is included in ST2, which was approved by voters in November 2008.

In 2013, Sound Transit initiated an update of its Regional Transit Long-Range Plan to confirm and clarify the long-term vision, make the plan consistent with updated local and regional plans, identify potential modifications to the previously existing plan, and establish Sound Transit's priorities for a future system plan and the next phase of high-capacity transit improvements beyond ST2. An updated plan was adopted by the Sound Transit Board of Directors in December 2014.

Consistency with Lynnwood Link Extension

The Lynnwood Link Extension is an extension of the region's existing light rail system and is consistent with the current Sound Transit Long-Range Plan.

4.2.3 Sound Transit Transit-oriented Development Program

A summary of Sound Transit's transit-oriented development program strategic plan and transit-oriented development policy, as well as a brief discussion of the Lynnwood Link Extension's compatibility and conformance with the strategic plan are presented below.

Sound Transit Transit-oriented Development Strategic Plan and Transit-oriented Development Policy

Plan Summary

Sound Transit's Transit-oriented Development Strategic Plan, which was adopted in September 2011 and updated in April 2014, describes Sound Transit's vision, goals, and strategy for creating transit-oriented development on and around its stations, transit centers, and park-and-ride lots. Transit-oriented development is compact public and private development that supports transit use by emphasizing pedestrian and transit access, such as clustering development and mixing land uses and activities at and around transit facilities. Generally, the purpose of this strategy is to assist in integrating land use and transit in an environmentally responsible way. Specifically, this plan outlines an implementation strategy for Sound Transit's transit-oriented development program, recognizing that interagency, intra-agency, and public collaboration and support are critical factors in the achievement of Sound Transit's transit-oriented development policies. Of particular importance is the transformation of light rail transit station areas into livable transit communities. Recent updates to the plan focus on the role of transit-oriented development in long-range and project planning. Sound Transit's Transit-oriented Development Policy, adopted by the Sound Transit Board in 2012, establishes a framework in which Sound Transit will evaluate, facilitate, and implement transit-oriented development strategies as the agency plans, designs, builds and operates the regional transit system, through cooperation and partnerships with public and private entities, as allowed by applicable laws, regulations, plans, and policies.

Consistency with Lynnwood Link Extension

The Lynnwood Link Extension supports transit-oriented development in local station areas that allow for increased density. Any transit-oriented development occurring in station areas as a result of the Lynnwood Link Extension would follow the implementation strategy for Sound Transit's transit-oriented development program. This strategy is described in the Sound Transit Transit-oriented

Development Program Strategic Plan and Sound Transit Transit-oriented Development Policy.

4.2.4 Local Land Use Plans

The local land use plans and development regulations that are relevant to the Lynnwood Link Extension are summarized below. Each section also provides specific goals and policies as applicable, and briefly discusses the Lynnwood Link Extension's compatibility and conformance with these plans.

City of Seattle Comprehensive Plan

Plan Summary

Seattle's Comprehensive Plan: Toward a Sustainable Seattle, which was first adopted in 1994 and last amended in 2006, was developed to guide how Seattle will accommodate residential and employment growth over the next 20 years. The plan consists of 11 elements that each contain goals and policies for guiding growth in Seattle: Urban Village, Land Use, Transportation, Housing, Capital Facilities, Utilities, Economic Development, Neighborhood Planning, Human Development, Cultural Resources, and Environment. Sound Transit reviewed the elements to identify the applicable goals and policies. The only elements with goals and policies applicable to the proposed project were in the Land Use and Transportation elements.

Consistency with Lynnwood Link Extension

Table 4.2-3 summarizes the relevant Land Use Element and Transportation Element goals and policies of Seattle's Comprehensive Plan and discusses how the Lynnwood Link Extension is compatible and in conformance with these goals and policies.

Table 4.2-3. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Seattle Comprehensive Plan

Specific Goals and Policies	Discussion
LAND USE ELEMENT	
LUG31: Provide flexibility in, or supplement, standard zone provisions to achieve special public purposes where circumstances warrant. Such areas include shoreline areas, airport height districts, historic landmark and special review districts, major institutions, art and cultural districts, areas around high capacity transit stations, and other appropriate locations.	A portion of the proposed NE 130th Street Station area is located within the Northgate Overlay District. This district was identified to support commercial development, protect the residential character of residential neighborhoods, be amenable to pedestrians, and support Northgate as a regional mass transit center. Specific development standards and design guidelines apply to commercial zones within the overlay district. The standards, including street facades, sidewalk design, and parking, are intended to encourage pedestrian use and activity in the area.

Table 4.2-3. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Seattle Comprehensive Plan

Specific Goals and Policies	Discussion
LU178: Promote the integration of high capacity transit stations into the neighborhoods surrounding them and foster development appropriate to significant increases in pedestrian activity and transit ridership. Use overlay districts or other adjustments to zoning to cultivate transit-oriented communities.	Same as Goal LUG31.
TRANSPORTATION ELEMENT	
TG8: Meet the current and future mobility needs of residents, businesses, and visitors with a balanced transportation system. **TG9:** Provide programs and services to promote transit, bicycling, walking, and carpooling to help reduce car use and single-occupancy vehicle trips.	The Lynnwood Link Extension would provide an alternative to single-occupancy vehicle travel; maintain mobility; and provide fast, efficient, and reliable connections to urban centers. It would also encourage increased density and a mixture of land uses, which promote transit use and more walkable communities.
TG14: Increase transit ridership, and thereby reduce use of single-occupancy vehicles to reduce environmental degradation and the societal costs associated with their use.	The Lynnwood Link Extension would provide an alternative means of transportation over single-occupancy vehicles and would improve air quality and conserve energy.
T20: Work with transit providers to provide transit service that is fast, frequent, and reliable between urban centers and urban villages and that is accessible to most of the city's residences and businesses. Pursue strategies that make transit safe, secure, comfortable, and affordable.	The Lynnwood Link Extension would be designed for and maximize safety, as well as provide fast and reliable transit access between urban centers and regional destinations.
T21: Support development of an integrated, regional high capacity transit system that links urban centers within the city and the region.	The Lynnwood Link Extension would connect with the Northgate Link, Central Link, and East Link, thus providing transit links to urban centers and regional destinations.
TG22: Reduce or mitigate air, water, and noise pollution from motor vehicles.	The Lynnwood Link Extension would reduce air, water, and noise pollution from motor vehicles by providing people with another mode of travel over single-occupancy vehicles.
TG24: Actively engage other agencies to assure that regional projects and programs affecting the city are consistent with City plans, policies, and priorities. **T58:** Coordinate with regional, state, and federal agencies, local governments, and transit providers when planning and operating transportation facilities and services in order to promote regional mobility for people and goods and the urban center approach to growth management.	Sound Transit would coordinate and work with the City to make the Lynnwood Link Extension consistent with City plans, policies, and priorities.

City of Seattle Transportation Strategic Plan

Plan Summary

The City of Seattle's Transportation Strategic Plan, first adopted in 1998 and last amended in 2005, is the 20-year functional work plan for the Seattle Department of Transportation (SDOT). The Transportation Strategic Plan describes the actions SDOT will take to accomplish the goals and policies in the Comprehensive Plan over the next 20 years.

Consistency with Lynnwood Link Extension

Because the goals and policies of Seattle's Comprehensive Plan are used in the City's Transportation Strategic Plan, the Lynnwood Link Extension would also be compatible and in conformance with this plan.

Seattle Department of Transportation Northgate Coordinated Transportation Investment Plan

Plan Summary

The Northgate Coordinated Transportation Investment Plan is a blueprint to guide public and private transportation investments through 2030. These investments will make better land use and transportation choices possible, thus helping to transform the Northgate Urban Center and link it to healthy surrounding neighborhoods and the region. The Coordinated Transportation Investment Plan recommends projects to address existing transportation deficiencies and anticipated future needs.

Consistency with Lynnwood Link Extension

Table 4.2-4 summarizes the relevant transportation improvement concepts of the Coordinated Transportation Investment Plan and discusses how the Lynnwood Link Extension is compatible and in conformance with these concepts.

Table 4.2-4. Lynnwood Link Extension's Consistency with the Goals and Policies of the Seattle Department of Transportation Northgate Coordinated Transportation Investment Plan

Specific Goals and Policies	Discussion
TRANSPORTATION IMPROVEMENT CONCEPTS	
J-3: Improve transit service with average of 15 minutes frequencies during peak periods and 30 minutes frequencies during off-peak period to other urban villages, such as Bitter Lake and Aurora-Licton Springs.	The Lynnwood Link Extension would have exclusive rights-of-way for trains, thus allowing the system to operate outside of traffic and avoid operating and safety conflicts. This would allow the trains to run the fast and frequent service needed to serve the corridor, with trains as often as 4 minutes during peak times.

Table 4.2-4. Lynnwood Link Extension's Consistency with the Goals and Policies of the Seattle Department of Transportation Northgate Coordinated Transportation Investment Plan

Specific Goals and Policies	Discussion
J-13: Work with Sound Transit and stakeholders to study and implement proactive parking management techniques around the station to prevent use of neighborhood streets for park-and-ride purposes, prior to the opening of the light rail station.	There are a total of 720 on-street and off-street parking spaces within 0.25 mile of the proposed NE 130th Street Station. Sixty percent of the available parking is on-street and 94 percent of all parking is not time-restricted. In neighborhoods where parking is currently not restricted, Sound Transit would work with the applicable jurisdictions to implement preventative strategies (i.e., time limits or neighborhood permit programs), where appropriate.

Seattle Pedestrian Master Plan

Plan Summary

The mission of the Seattle Pedestrian Master Plan, which was adopted in 2009, is to make Seattle the most walkable city in the nation. The plan aims to meet that mission while supporting the vision of the Pedestrian Master Plan Advisory Group through four main goals: safety, equity, vibrancy, and health.

Consistency with Lynnwood Link Extension

Table 4.2-5 summarizes the relevant objectives of the Seattle Pedestrian Master Plan and discusses how the Lynnwood Link Extension is compatible and in conformance with these objectives.

Table 4.2-5. Lynnwood Link Extension's Consistency with the Goals and Policies of the Seattle Pedestrian Master Plan

Specific Goals and Policies	Discussion
OBJECTIVE 3: INCREASE PEDESTRIAN SAFETY	
Strategy 3.2: Improve crossing conditions, especially in areas with high pedestrian demand **a.** Develop and maintain short block lengths to maximize pedestrian crossing opportunities. **b.** Provide short and direct pedestrian crossings. **c.** Implement and evaluate enhancement and enforcement programs. **d.** Revise design standards for curb ramps and curb radii. **e.** Encourage transit providers to locate transit stops close to signalized intersections. **f.** Evaluate current signal timing practices and revise, as needed, to balance pedestrian crossing delay and	At the proposed NE 130th Street Station, the sidewalks adjacent to the roadway on the I-5 overpass are narrow and not buffered from traffic. Depending on the guideway configuration, the NE 130th Street overpass may be reconstructed, resulting in better pedestrian access across I-5. Sound Transit has considered pedestrian safety in developing the Lynnwood Link Extension alternatives and will continue to do so throughout project development. Mitigation measures will be considered, as appropriate, for any impacts on pedestrian safety that cannot be avoided. Nonmotorized facilities are discussed in Chapter 3 of the Final EIS.

Table 4.2-5. Lynnwood Link Extension's Consistency with the Goals and Policies of the Seattle Pedestrian Master Plan

Specific Goals and Policies	Discussion
demand with full intersection functionality. **g.** Adopt and install technologies and systems that reduce barriers to walking as well as conflicts between pedestrians and motorists.	
OBJECTIVE 5: CREATE VIBRANT PUBLIC SPACES THAT ENCOURAGE WALKING	
Strategy 5.1: Create an appropriate mix of uses and destinations within neighborhoods. **a.** Use land use and zoning tools to encourage and support pedestrian-friendly growth and development.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas. The project also would help to focus the majority of growth in the NE 130th Street Station area in Seattle where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities as well as promoting walkable and cohesive neighborhoods.

Seattle Bicycle Master Plan

Plan Summary

The Seattle Bicycle Master Plan, which was adopted in 2014, provides a framework for improving the bicycling environment throughout the city. A central focus of the plan is to design and implement bicycle facilities that are as safe and appropriate for riders of all ages and abilities. The plan also provides guidance on how bicycle investments will be prioritized in the future; performance measures to track progress in accomplishing the plan's goals; and other actions the City and its partners can take to support bicycling in the future.

Consistency with Lynnwood Link Extension

Table 4.2-6 summarizes the relevant goals, objectives, and strategies of the Seattle Bicycle Master Plan and discusses how the Lynnwood Link Extension is compatible and in conformance with this plan.

Table 4.2-6. Lynnwood Link Extension's Consistency with the Goals and Policies of the Seattle Bicycle Master Plan

Specific Goals and Policies	Discussion
Goals: Ridership: Increase the amount and mode share of bicycling in Seattle for all trip purposes. Safety: Improve safety for bicycle riders. Connectivity: Create a bicycle network that connects to places that people want to go, and provides for a time-efficient travel option.	The NE 130th Street Station access for bicyclists occurs primarily along arterials, and access to the west of I-5 is limited by the few freeway crossings. NE 130th Street crosses I-5, but the roadway on the overpass is narrow. Depending on the guideway configuration, the NE 130th Street overpass may be reconstructed, resulting in better nonmotorized access across I-5.

Table 4.2-6. Lynnwood Link Extension's Consistency with the Goals and Policies of the Seattle Bicycle Master Plan

Specific Goals and Policies	Discussion
Objective 2: Integrate planning for bicycle facilities with all travel modes and principles for complete streets. **Strategy 4.2:** Implement cycle tracks (protected bicycle lanes) as part of the bicycle network. 4.2.4: Partner with transit agencies during project development and design to implement cycle tracks along transit corridors to allow for a continuous lane for people riding bicycles. **Strategy 4.9:** Coordinate bicycle network implementation with partners. 4.9.3: Coordinate with transit agencies for last-mile bicycle connections. 4.9.5: Coordinate with partners to install staircase runnels on staircases not owned by SDOT that allow bicycle accessibility to various destinations. **Strategy 4.11:** Improve bicycle safety and access at railroad and rail transit crossings and parallel facilities. 4.11.1: Assess all railroad and rail transit crossings that intersect bicycle facilities and install appropriate bicycle-supportive infrastructure. Use signage and pavement markings to facilitate crossings at 90 degrees to the maximum extent feasible. 4.11.2: Assess all railroad and rail transit lines that run parallel with existing bicycle facilities and install signage to facilitate safer travel behavior and enhance parallel bicycle facilities when possible. **Strategy 4.14:** Consider transit mobility improvements that minimize conflicts with people riding bicycles. 4.14.2: Design transit passenger waiting and boarding facilities to minimize conflicts and pinch points with people riding bicycles. 4.14.5: Recognize that Multimodal Corridor development is also a transit access—last mile—strategy. Enhance connections to and end-of-trip facilities at light rail stations, major transit hubs, major bus stops, and park-and-ride lots. **Strategy 5.5:** Provide short- and long-term secure bicycle parking at high-capacity transit stations, transit hubs, and heavily-used bus stops. 5.5.1: Coordinate with transit agencies and large institutions to develop clear, comprehensive, and consistent bicycle parking demand estimation and documentation methodologies. 5.5.2: Support transit agency partners in their efforts to	The Lynnwood Link Extension would support Sound Transit's updated Bicycle Policy (2009) integrating bicycles with regional transit services and facilities where land regulations allow. Basic elements of the policy include providing convenient means to secure bicycles, short- and long-term bicycle parking, and a facility design and layout that accommodate both bicycle and pedestrian movements.

Table 4.2-6. Lynnwood Link Extension's Consistency with the Goals and Policies of the Seattle Bicycle Master Plan

Specific Goals and Policies	Discussion
track quality and quantity of bicycle parking at transit stations. 5.5.3: Partner with local and regional transit agencies and large institutions to coordinate funding, construction, operations and maintenance of long-term secure bicycle parking facilities. Develop a universal on-demand bicycle parking access and fee system, as well as wayfinding, for future secure bicycle parking facilities.	

City of Seattle Transit Master Plan

Plan Summary

The City of Seattle Transit Master Plan, which was updated in April 2012, is a 20-year plan that identifies the types of transit facilities, services, programs, and system features that will be required to meet Seattle's transit needs through 2030. Building from an extensive market analysis, review of future growth patterns, and evaluation of transit needs, the Transit Master Plan identifies capital investment priorities needed to establish a network of high-quality, frequent transit services that meet the travel needs of most Seattle residents and workers. The Transit Master Plan evaluates and recommends preferred transit modes for high-priority corridors and sets a framework for implementing corridor-based transit improvements in close coordination with other modal needs.

Consistency with Lynnwood Link Extension

Table 4.2-7 summarizes the relevant strategies and policies of the City of Seattle Transit Master Plan and discusses how the Lynnwood Link Extension is compatible and in conformance with these strategies and policies.

Table 4.2-7. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Seattle Transit Master Plan

Specific Goals and Policies	Discussion
Strategy 1: Destination Accessibility: Coordinate land uses and the transit network **Policy ToN1.1:** Locate transit intensive land uses in urban villages and along priority transit corridors so they can be efficiently served by frequent transit.	The Preferred Alternative has an option considering a potential station at NE 130th Street. The Lynnwood Link Extension would support limited transit-oriented development around the NE 130th Street Station area if that station area is selected for development. The station would increase the walkability of the surrounding area.

Table 4.2-7. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Seattle Transit Master Plan

Specific Goals and Policies	Discussion
Policy ToN1.2: Direct most development within urban villages, urban centers.	The Lynnwood Link Extension would support mixed-use development (commercial, office, and residential) in designated urban growth areas and would help focus the majority of growth in the NE 130th Street Station area (if selected for development) in Seattle where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for efficient provision of services and facilities as well as promoting walkable and cohesive neighborhoods.
Policy ToN1.3: Design transit nodes, stations, and corridors to maximize their value to neighborhoods.	For the entire Lynnwood Link Extension, Sound Transit would develop design criteria that provide a consistent architectural theme for all elevated elements, and for features such as stations, while also reflecting the character of individual station areas. These criteria would be developed with input from the Cities through which the project corridor passes (Seattle, Shoreline, Mountlake Terrace, and Lynnwood). Visual and aesthetic resources are discussed in Section 4.5 of the Final EIS.
Strategy 2: Distance: Create a transit-supportive urban structure & street network. **Policy ToN2.1:** Provide a fine-grained pedestrian and bicycle network that connects to transit.	The NE 130th Street Station (if selected for development) would be designed to integrate within a pedestrian-friendly environment and would incorporate context-sensitive design considerations. Designated drop-off areas are planned at proposed station locations, and bicycle racks are planned where appropriate. Signage and wayfinding designs for each travel mode would be developed with input from affected jurisdictions.
Strategy 3: Density: Concentrate and intensify activities near transit. **Policy ToN3.1:** Use zoning to focus the highest densities closest to transit corridors and nodes. **Policy ToN3.2:** Use land near transit nodes and corridors as efficiently as possible. **Policy ToN3.3:** Plan for density that responds to the character of existing development.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas and help focus the majority of growth in the NE 130th Street Station area (if selected for development) in Seattle where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities as well as promoting walkable and cohesive neighborhoods.
Policy ToN3.4: Identify opportunity sites for increased densities on the FTN [Frequent Transit Network]. • Work with owners of vacant and likely redevelopment parcels in station areas and priority transit corridors to encourage infill development.	Sound Transit will promote and encourage transit-friendly, transit-oriented development, joint development, and quality public and private projects at and around the NE 130th Street Station (if selected for development) to enhance the community, build transit ridership, and aid economic

Table 4.2-7. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Seattle Transit Master Plan

Specific Goals and Policies	Discussion
• Encourage partnerships with transit agencies to catalyze TOD [transit-oriented development] projects through property acquisition and/or redevelopment. • Ensure public agencies do not hold property where redevelopment is feasible. • Explore the potential of converting existing surface parking lots into future redevelopment sites. • Focus development at the best-connected transit nodes. • Encourage development opportunity at model interchanges and station areas. • Encourage the location of major destinations at the intersection of transit lines. **Strategy 4:** Diversity: Encourage a mix of uses. **Policy ToN4.1:** Mix residential, employment, recreation, and commercial uses in station areas and along the FTN.	development. Sound Transit will also support and work collaboratively with the City of Seattle and the private sector to ensure transit-oriented development around Sound Transit facilities.
Strategy 6: Demand Management: Provide incentives and disincentives. **Policy ToN6.2:** Reduce auto-dependency by providing transit supportive services and programs.	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system as an alternative to the single-occupancy vehicle and would also provide links to other travel modes, including rail, buses, and walking.

City of Shoreline Comprehensive Plan

Plan Summary

Shoreline's Comprehensive Plan, which was first adopted in 1998 and updated in December 2012, builds off the 2005 Comprehensive Plan update. The plan was developed to address anticipated population and employment growth and how facilities and services will be maintained or improved to accommodate expected growth. The plan consists of nine comprehensive plan elements that each contains goals and policies for guiding growth in Shoreline: Land Use; Community Design; Housing; Transportation; Economic Development; Natural Environment; Parks, Recreation and Open Space; Capital Facilities; and Utilities. Additionally, the Shoreline Master Program and Subarea Plans are included as appendices to the Comprehensive Plan. Sound Transit reviewed the elements of the plan and relevant appendices to identify the applicable goals and policies. Goals and policies applicable to the proposed project are included in the Land Use, Housing, Transportation, and Economic Development elements.

Consistency with Lynnwood Link Extension

Table 4.2-8 summarizes the relevant goals and policies of Shoreline's Comprehensive Plan and discusses how the Lynnwood Link Extension is compatible and in conformance with these goals and policies.

Table 4.2-8. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Comprehensive Plan

Specific Goals and Policies	Discussion
FRAMEWORK GOALS	
FG 2: Provide high quality public services, utilities, and infrastructure that accommodate anticipated levels of growth, protect public health and safety, and enhance the quality of life.	The Lynnwood Link Extension would provide mass transit service to the City of Shoreline, generally following I-5, as well as to other urban centers along the project corridor, and adjacent centers associated with the Central Link and Northgate Link Extension projects.
FG 13: Encourage a variety of transportation options that provide better connectivity within Shoreline and throughout the region.	The Lynnwood Link Extension would bring a light rail transit option to Shoreline with potential stations located at NE 145th Street (Preferred Alternative and Alternatives A1, A3, A10), NE 155th Street (Alternatives A5, A7, A11), and NE 185th Street (Preferred Alternative and Alternatives A1, A3, A5, A7, A10, A11). The Lynnwood Link Extension would also connect with the Northgate Link Extension, University Link Extension, and East Link Extension, thus providing transit connections from Shoreline to urban centers and other regional destinations.
FG 14: Designate specific areas for high-density development, especially along major transportation corridors.	The Lynnwood Link Extension would support mixed-use development in designated urban areas and help focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities as well as promoting walkable and cohesive neighborhoods.
LAND USE ELEMENT	
Goal LU I: Encourage development that creates a variety of housing, shopping, entertainment, recreation, gathering spaces, employment, and services that are accessible to neighborhoods.	The Lynnwood Link Extension would support mixed-use development in designated regional growth centers and help focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities, as well as promoting walkable and cohesive neighborhoods and protecting those areas where growth is not encouraged.
Goal LU III: Create plans and strategies that implement the City's Vision 2029 and Light Rail Station Area Planning Framework Goals for transit supportive development to occur within a ½ mile radius of future light rail stations.	Same as Goal LU I.

Table 4.2-8. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Comprehensive Plan

Specific Goals and Policies	Discussion
Goal LU IV: Work with regional providers to develop a system that includes two light rail stations in Shoreline, and connects all areas of the city to high capacity transit using a multi-modal approach.	The Lynnwood Link Extension would include two light rail stations in the City of Shoreline. Segment A alternatives, the Preferred Alternative, and Alternatives A1, A3, A10, and A11 include light rail station options at NE 145th Street and NE 185th Street. Alternatives A5 and A7 include light rail station options at NE 155th Street and NE 185th Street. The Lynnwood Link Extension would provide light rail transit—a fast, reliable, and efficient mode of travel that would provide linkages to other nonmotorized and transit options.
LU 19: The Special Study Area designates future subarea planning or Light Rail Station Areas. The underlying zoning for this designation remains unless it is changed through an amendment to the Comprehensive Plan Land Use Map and Development Code.	The Lynnwood Link Extension would support mixed-use development in designated regional growth centers. The project would also help to focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities, as well as promoting walkable and cohesive neighborhoods and protecting those areas where growth is not encouraged.
LU 20: Collaborate with regional transit providers to design transit stations and facilities that further the City's vision by employing superior design techniques, such as use of sustainable materials; inclusion of public amenities, open space, and art; and substantial landscaping and retention of significant trees.	Sound Transit would develop design criteria that provide a consistent architectural theme for all elevated elements and for features such as stations. These criteria would be developed with input from the Cities through which the project corridor passes (Seattle, Shoreline, Mountlake Terrace, and Lynnwood). Visual and aesthetic resources are discussed in Section 4.5 of the Final EIS.
LU 21: Work with Metro Transit, Sound Transit, and Community Transit to develop a transit service plan for the light rail stations. The plan should focus on connecting residents from all neighborhoods in Shoreline to the stations in a reliable, convenient, and efficient manner.	Sound Transit will continue to coordinate with the City of Shoreline and transit agencies to develop a transit service plan for Shoreline's stations.
LU 22: Encourage regional transit providers to work closely with affected neighborhoods in the design of any light rail transit facilities.	Sound Transit will continue to coordinate with the City of Shoreline regarding the Lynnwood Link Extension.
LU 23: Work with neighborhood groups, business owners, regional transit providers, public entities, and other stakeholders to identify and fund additional improvements that can be efficiently constructed in conjunction with light rail and other transit facilities.	Sound Transit has provided extensive opportunities for public involvement throughout the Lynnwood Link Extension planning phase and will continue to do so throughout the entire project.

Table 4.2-8. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Comprehensive Plan

Specific Goals and Policies	Discussion
LU 24: Maintain and enhance the safety of Shoreline's streets when incorporating light rail, through the use of street design features, materials, street signage, and lane markings that provide clear, unambiguous direction to drivers, pedestrians, and bicyclists.	Sound Transit will design the project to ensure that safe connections would be maintained or integrated into the potential NE 145th Street, NE 155th Street, and NE 185th Street Stations, and in other locations where the project would alter roadways or other features of the transportation network.
LU 25: Evaluate property within a ½ mile radius of a light rail station for multi-family residential choices (R-18 or greater) that support light rail transit service, non-residential uses, non-motorized transportation improvements, and traffic and parking mitigation.	The potential NE 145th Street, NE 155th Street, and NE 185th Street Station locations were chosen for their proximity to existing and planned commercial, employment, and residential concentrations consistent with community plans, and optimum ridership potential.
LU 26: Evaluate property within a ¼ mile radius of a light rail station for multi-family residential housing choices (R-48 or greater) that support light rail transit service, non-residential uses, non-motorized transportation improvements, and traffic and parking mitigation.	Same as LU 25 above.
LU 27: Evaluate property along transportation corridors that connects light rail stations and other commercial nodes in the city, including Town Center, North City, Fircrest, and Ridgecrest for multi-family, mixed-use, and non-residential uses.	Same as LU 25 above.
LU 28: Implement a robust community involvement process that develops tools and plans to create vibrant, livable, and sustainable light rail station areas.	Sound Transit has provided extensive opportunities for public involvement throughout the Lynnwood Link Extension planning phase and will continue public outreach throughout the entire project.
LU 29: Create and apply innovative methods and tools to address land use transitions in order to manage impacts on residents and businesses in a way that respects individual property rights. Develop mechanisms to provide timely information so residents can plan for and respond to changes.	Sound Transit has provided extensive opportunities for public involvement throughout the Lynnwood Link Extension planning phase and will continue public outreach throughout the entire project. In addition, Sound Transit will support and work collaboratively with the City of Shoreline and the private sector to ensure transit-oriented development around Sound Transit facilities.
LU 30: Encourage and solicit the input of stakeholders, including residents; property and business owners; non-motorized transportation advocates; environmental preservation organizations; and transit, affordable housing, and public health agencies.	Sound Transit has provided extensive opportunities for public involvement throughout the Lynnwood Link Extension planning phase and will continue to do so throughout the entire project.
LU 31: Create a strategy in partnership with the adjoining neighborhoods for phasing redevelopment of current land uses to those suited for Transit-Oriented Communities (TOCs), taking into account when the city's development needs and market demands are ready for change.	Sound Transit will support and work collaboratively with the City of Shoreline and the private sector to ensure transit-oriented development around Sound Transit facilities.

Table 4.2-8. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Comprehensive Plan

Specific Goals and Policies	Discussion
LU 32: Allow and encourage uses in station areas that will foster the creation of communities that are socially, environmentally, and economically sustainable.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas. The project would also help to focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities, as well as promoting walkable and cohesive neighborhoods and protecting those areas where growth is not encouraged.
LU 33: Regulate design of station areas to serve the greatest number of people traveling to and from Shoreline. Combine appropriate residential densities with a mix of commercial and office uses, and multi-modal transportation facilities.	The potential NE 145th Street, NE 155th Street, and NE 185th Street Station locations were chosen for their proximity to existing and planned commercial, employment, and residential concentrations consistent with community plans, and optimum ridership potential. Sound Transit would develop design criteria that provide a consistent architectural theme for all elevated elements and for features such as stations. These criteria would be developed with input from the Cities through which the project corridor passes (Seattle, Shoreline, Mountlake Terrace, and Lynnwood). Visual and aesthetic resources are discussed in Section 4.5 of the Final EIS.
LU 34: Pursue market studies to determine the feasibility of developing any of Shoreline's station areas as destinations (example: regional job, shopping, or entertainment centers).	The potential for development related to the Lynnwood Link Extension is analyzed (in the Final EIS) for the potential NE 145th Street, NE 155th Street, and NE 185th Street Station locations.
LU 35: Identify the market and potential for redevelopment of public properties located in station and study areas.	Same as LU 34.
LU 36: Encourage development of station areas as inclusive neighborhoods in Shoreline with connections to other transit systems, commercial nodes, and neighborhoods.	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system that would provide linkages to other travel modes, including rail, buses, bicycling, and walking.
LU 37: Regulate station area design to provide transition from high-density multi-family residential and commercial development to single-family residential development.	Sound Transit will support and work collaboratively with the City of Shoreline and the private sector to ensure transit-oriented development around Sound Transit facilities.
LU 38: Through redevelopment opportunities in station areas, promote restoration of adjacent streams, creeks, and other environmentally sensitive areas; improve public access to these areas; and provide public education about the functions and values of adjacent natural areas.	The Lynnwood Link Extension would provide the opportunity for development around station areas. As development occurs, the City of Shoreline could promote various environmental restoration projects.

Table 4.2-8. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Comprehensive Plan

Specific Goals and Policies	Discussion
LU 39: Use the investment in light rail as a foundation for other community enhancements.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas. The project also would help to focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities, as well as promoting walkable and cohesive neighborhoods and protecting those areas where growth is not encouraged.
LU 40: Explore and promote a reduced dependence upon automobiles by developing transportation alternatives and determining the appropriate number of parking stalls required for TOCs. These alternatives may include ride-sharing or vanpooling, car-sharing (i.e., Zipcar), bicycle sharing, and walking and bicycle safety programs.	The Lynnwood Link Extension would reduce dependency on the automobile by providing a fast, efficient, and reliable mode of travel with linkages to other travel modes, and it would also support development in those areas targeted for growth.
LU 41: Consider a flexible approach in design of parking facilities that serve light rail stations, which could be converted to other uses if demands for parking are reduced over time.	Sound Transit will continue to coordinate with the City of Shoreline regarding parking for the Lynnwood Link Extension that could be converted to other uses as parking demand shrinks.
LU 42: Transit Oriented Communities should include non-motorized corridors, including undeveloped rights-of-way, which are accessible to the public, and provide shortcuts for bicyclists and pedestrians to destinations and transit. These corridors should be connected with the surrounding bicycle and sidewalk networks.	Sound Transit will support and work collaboratively with the City of Shoreline and the private sector to ensure transit-oriented development around Sound Transit facilities.
LU 43: Employ design techniques and effective technologies that deter crime and protect the safety of transit users and neighbors.	Sound Transit implements crime prevention through environmental design principles directed at reducing crime incidents at park-and-ride lots. Other measures to minimize crime would include the use of equipment (i.e., closed circuit TV), the use of anti-crime programs such as anti-graffiti programs, and the use of security personnel.
LU 49: Consider the addition of compatible mixed uses and shared (joint use) parking at park-and-ride facilities.	Sound Transit will continue to coordinate with the City of Shoreline regarding parking for the Lynnwood Link Extension that could be converted to other uses as parking demand shrinks.
LU 50: Work with transit providers to site and develop park and rides with adequate capacity and in close proximity to transit service.	Sound Transit will continue to coordinate with the City of Shoreline regarding parking for the Lynnwood Link Extension.

Table 4.2-8. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Comprehensive Plan

Specific Goals and Policies	Discussion
LU 52: Parking requirements should be designed for average need, not full capacity. Include regulatory provisions to reduce parking standards, especially for those uses located within ¼ mile of high-capacity transit, or serving a population characterized by low rates of car ownership. Other parking reductions may be based on results of the King County Right-Sized Parking Initiative.	Sound Transit will continue to coordinate with the City of Shoreline regarding parking within ¼ mile of high-capacity transit.
HOUSING ELEMENT	
H 18: Consider mandating an affordability component in Light Rail Station Areas or other Transit-Oriented Communities.	Sound Transit will support and work collaboratively with the City of Shoreline and the private sector to ensure transit-oriented development around Sound Transit facilities.
TRANSPORTATION ELEMENT	
Goal T III. Provide a pedestrian system that is safe, connects destinations, accesses transit, and is accessible by all.	Lynnwood Link Extension stations would be designed to encourage pedestrian and nonmotorized accessibility.
Goal T IV: Work with transportation providers and regional partners to develop and implement an efficient and effective multimodal transportation system to address overall mobility and accessibility, and which maximizes the people-carrying capacity of the surface transportation system.	The Lynnwood Link Extension would provide light rail transit—a fast, reliable, and efficient mode of travel that would provide linkages to other nonmotorized and transit options.
Goal T VI: Encourage alternative modes of transportation to reduce the number of automobiles on the road.	The Lynnwood link Extension would reduce dependency on the automobile by providing a fast, efficient, and reliable mode of travel with linkages to other travel modes.
Goal T VIII: Coordinate the implementation and development of Shoreline's transportation system with our neighboring transit systems and regional partners.	Sound Transit would coordinate and work with the City of Shoreline regarding the Lynnwood Link Extension.
Goal T IX: Support increased transit coverage and service that connects local and regional destinations to improve mobility options for all Shoreline residents.	The Lynnwood Link Extension would provide a fast, reliable, and efficient mode of mass transit linking Shoreline to other urban centers in the project corridor and other urban communities and destinations in the region.
T1: Work with the community and regional partners to create standards for development of the Light Rail Station Special Study Areas identified in the Land Use Map (Figure LU-1) and to implement Light Rail Framework Goals, which became LU20 – LU43.	Sound Transit would coordinate and work with the City of Shoreline regarding the Lynnwood Link Extension.
T3: Reduce the impact of the city's transportation system on the environment through the use of technology, expanded transit use, and non-motorized transportation options.	The Lynnwood Link Extension would provide light rail transit—a fast, reliable, and efficient mode of travel that would provide linkages to other nonmotorized and transit options.

Table 4.2-8. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Comprehensive Plan

Specific Goals and Policies	Discussion
T28: Encourage development that is supportive of transit, and advocate for expansion and addition of new routes in areas with transit supportive densities and uses.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas. The project also would help to focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities as well as promoting walkable and cohesive neighborhoods.
T30: Work with transportation providers to develop a safe, efficient, and effective multi-modal transportation system to address overall mobility and accessibility. Maximize the people-carrying capacity of the surface transportation system.	The Lynnwood Link Extension would provide light rail transit—a fast, reliable, and efficient mode of travel that would provide linkages to other nonmotorized and transit options.
T34: Work with Sound Transit, the Shoreline School District, the Washington State Department of Transportation, King County Metro Transit, the City of Seattle, and Shoreline neighborhoods to develop the final light rail alignment and station area plans for the areas surrounding the future Link Light Rail stations. (See LU20 – LU43 for additional light rail station study area policies.)	Sound Transit and the City of Shoreline have been coordinating through the Lynnwood Link Extension planning phase and will continue to coordinate throughout the entire project.
T38: Work with Metro Transit, Sound Transit, and Community Transit to develop a bus service plan that connects residents to light rail stations, high-capacity transit corridors, and park and ride lots throughout the city.	Same as T34 above.
T39: Implement traffic mitigation measures at Light Rail Station Areas.	Transportation impacts of the Lynnwood Link Extension would be mitigated. Please see Chapter 3 of the Final EIS for more information.
T40: Promote livable neighborhoods around the light rail stations through land use patterns, transit service, and transportation access.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas. The project also would help to focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities, as well as promoting walkable and cohesive neighborhoods.

Table 4.2-8. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Comprehensive Plan

Specific Goals and Policies	Discussion
Economic Development	
Goal ED I: Maintain and improve the quality of life in the community by: • Increasing employment opportunities and the job base; • Supporting businesses that provide goods and services to local and regional populations; • Reducing reliance on residential property tax to fund City operations and capital improvements; • Providing quality public services; • Complementing community character; and • Maximizing opportunities along Bus Rapid Transit corridors and areas to be served by light rail.	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system that would be an alternative to the single-occupancy vehicle. It would also provide linkages to other travel modes, including rail, buses, and walking. Efficiencies in transportation and more walkable communities are shown to improve people's quality of life.
ED1: Improve economic vitality by: • Promoting existing businesses; • Recruiting new businesses; • Assisting businesses to create strategies and action plans through the Small Business Accelerator Program; • Encouraging increased housing density around commercial districts, especially those served by high capacity rapid transit, to expand customer base; and • Developing design guidelines to enhance commercial areas with pedestrian amenities, and "protect and connect" adjacent residential areas.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas. The project also would help to focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities, as well as promoting walkable and cohesive neighborhoods.
ED2: Promote non-motorized connections between commercial businesses, services, and residential neighborhoods.	The Lynnwood Link Extension would bring to the City of Shoreline light rail transit—a fast, reliable, and efficient mode of transportation connecting to other nonmotorized and transit options.
ED31: Plan the Light Rail Station Areas to create connectivity for appropriate growth.	The Lynnwood Link Extension would support mixed-use development (commercial, office, and residential) in designated urban growth areas. The project also would help to focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for efficient provision of services and facilities.

City of Shoreline Southeast Neighborhoods Subarea Plan

Plan Summary

Shoreline's Southeast Neighborhoods Subarea Plan, which was adopted in 2010, proposes a long-range vision, identifies infrastructure priorities, implements appropriate zoning, and informs development of code modifications for the Briarcrest and Paramount special study areas (located predominantly in the Ridgecrest neighborhood). The plan consists of seven elements that each contain goals and policies for guiding growth in Shoreline's Southeast Neighborhoods: Land Use; Housing; Transportation; Parks, Recreation, and Open Space; Economic Development; Community Design; and Natural Environment. The only elements with goals and policies applicable to the proposed project were in the Land Use and Transportation elements.

Consistency with Lynnwood Link Extension

Table 4.2-9 summarizes the relevant Land Use and Transportation goals and policies of Shoreline's Southeast Neighborhoods Subarea Plan and discusses how the Lynnwood Link Extension is compatible and in conformance with these goals and policies.

Table 4.2-9. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Southeast Neighborhoods Subarea Plan

Specific Goals and Policies	Discussion
LAND USE	
LU4: Establish policies and zoning to provide appropriate transitions between existing and proposed development and dissimilar land uses to minimize conflicts related to solar access, noise, scale, etc.	Sound Transit will support and work collaboratively with the City of Shoreline and the private sector to ensure transit-oriented development around Sound Transit facilities.
LU5: Place highest density housing (mixed-use) on transit lines in already established commercial zones.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas. The project also would help to focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities, as well as promoting walkable and cohesive neighborhoods and protecting those areas where growth is not encouraged.
LU9: As the housing market and transportation technologies evolve to support more options, establish zoning designations for areas that may be appropriate for car-free zones or reduced parking standards.	The Lynnwood Link Extension would reduce dependency on the automobile by providing a fast, efficient, and reliable mode of travel with linkages to other transportation modes. Doing this lends support for future car-free zones or reduced parking standards.

Table 4.2-9. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Southeast Neighborhoods Subarea Plan

Specific Goals and Policies	Discussion
LU10: Quality of life for current residents in the subarea should be considered in decision-making processes that involve new development in the community, even though decisions must also take into account overall land use goals and the economic needs of the City as a whole.	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system that would provide an alternative to the single-occupancy vehicle and also provide linkages to other travel modes, including rail, buses, and walking. Efficiencies in transportation and more walkable communities are shown to improve people's quality of life.
TRANSPORTATION	
T2: Retain, improve, and expand public transit	The Lynnwood Link Extension would expand light rail transit as part of a balanced regional transportation system.
T3: Increase local transit service to economic hubs and schools (in addition to service to downtown Seattle) that focuses on east/west connections.	The Lynnwood Link Extension in its connection to Northgate Link Extension and University Link Extension would provide direct transit service to the University of Washington and downtown Seattle as well as regional job centers north to Lynnwood.
T11: Encourage the City to work with Seattle, King County, Sound Transit, and WSDOT to undertake a corridor study on 145th Street that would result in a plan for the corridor to improve safety, efficiency, and modality for all users.	As part of the Lynnwood Link Extension, a potential station could be located at Interstate 5 and NE 145th Street. Sound Transit would coordinate and work with the City of Shoreline on a corridor study on NE 145th Street, as needed, to improve safety, efficiency, and modality for all users.

City of Shoreline Transportation Master Plan

Plan Summary

Shoreline's Transportation Master Plan, which was adopted in 2011, provides policies and goals for development of the City's transportation system based upon growth assumptions through 2030. The Transportation Master Plan focuses on satisfying future travel demand by making efficient use of the existing infrastructure, planning for improvements to the City's transportation network, and providing the facilities and services to encourage walking, bicycling, and transit as priority modes. Included as part of the Transportation Master Plan are the Bicycle Plan, Pedestrian Plan, Transit Plan, and Master Street Plan.

Consistency with Lynnwood Link Extension

Table 4.2-10 summarizes the relevant goals and policies of Shoreline's Transportation Master Plan and discusses how the Lynnwood Link Extension is compatible and in conformance with these goals and policies.

Table 4.2-10. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Transportation Master Plan

Specific Goals and Policies	Discussion
SUSTAINABILITY AND QUALITY OF LIFE	
Goal T II: Work with transportation providers to develop a safe, efficient, and effective multimodal transportation system to address overall mobility and accessibility. Maximize the people-carrying capacity of the surface transportation system.	The Lynnwood Link Extension would provide light rail transit—a fast, reliable, and efficient mode of travel that would provide linkages to other nonmotorized and transit options.
T2: Reduce the impact of the City's transportation system on the environment through the use of technology, expanded transit use and nonmotorized transportation options.	Lynnwood Link Extension would be powered by electricity. In the Puget Sound region and areas serving power to the Lynnwood Link Extension project corridor, much of the power sources come from hydropower, which is a non-polluting power source. The Lynnwood Link Extension would also reduce greenhouse gases during operation by reducing vehicle miles and hours traveled. The Lynnwood Link Extension would further promote regional policies related to reducing dependence on single-occupancy vehicles and increasing nonmotorized travel modes, especially within urban centers.
T10: Transportation projects and facilities should be sited, designed, and constructed to avoid or minimize negative environmental impacts to the extent feasible.	The Lynnwood Link Extension would provide for an improved quality of life by providing a fast, efficient, and reliable mode of travel; encouraging increased densities where allowed; and promoting more walkable and cohesive neighborhoods. The Lynnwood Link Extension includes mitigation and design measures that would minimize impacts on the environment.
10: Encourage the use of programs and services that minimize the need to own a car, such as car sharing and increased transit use.	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system that would provide an alternative to the use of single-occupancy vehicles.
10.10: Encourage the use of technologies that minimize reliance on fossil fuels and reduce greenhouse gas emissions, such as electric and high fuel efficiency automobiles.	The Lynnwood Link Extension would be powered by electricity. In the Puget Sound Region and areas the Lynnwood Link Extension would serve, non-polluting hydropower is a major source of power. The Lynnwood Link Extension would result in a decrease of greenhouse gases during operation by reducing vehicle miles and hours traveled. The Lynnwood Link Extension would further promote regional policies related to reducing dependence on single-occupancy vehicles and increasing nonmotorized travel modes, especially within urban centers.
Goal T IV: Encourage alternative modes of transportation to reduce the number of automobiles on the road.	The Lynnwood link Extension would promote reduced automobile use by introducing a new transit alternative.

Table 4.2-10. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Transportation Master Plan

Specific Goals and Policies	Discussion
T5: Support and promote opportunities and programs so that residents have options to travel throughout Shoreline and the region using modes other than single-occupancy vehicles.	Same as Goal T IV.
Goal T VII: Coordinate the implementation and development of shoreline's transportation system with its neighbors and regional partners.	Sound Transit will continue to coordinate with the City of Shoreline and transit agencies to develop a transit service plan for Shoreline's stations.
BICYCLE PLAN	
Goal T VIII: Develop a bicycle system that is connective, safe and encourages bicycling as a viable alternative method of transportation.	The Lynnwood Link Extension would support Sound Transit's updated Bicycle Policy (2009) to integrate bicycles with regional transit services and facilities where land use regulations allow. Basic elements of the policy include providing convenient means to secure bicycles, short- and long-term bicycle parking, and facility design and layout that accommodate both bicycle and pedestrian movement.
T14: Implement the Bicycle System Plan. Develop a program to construct and maintain bicycle facilities that are safe, connect to destinations, access transit and are easily accessible. Use short-term improvements, such as signage and markings, to identify routes when large capital improvements will not be constructed for several years.	Same as Goal T VIII.
PEDESTRIAN PLAN	
Goal T IX: Provide a pedestrian system that is safe, connects to destinations, accesses transit and is accessible by all.	The Lynnwood Link Extension would support mixed-use development (commercial, office, and residential) in designated urban growth areas. This project also would help to focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for efficient provision of services and facilities as well as promoting walkable and cohesive neighborhoods.
17.1: Develop wayfinding signage and mapping system for pedestrian facilities that directs and guides users to public facilities, parks, schools, significant transit stops, and transportation facilities and commercial areas.	Sound Transit has considered pedestrian safety in development of the Lynnwood Link Extension alternatives and will continue to do so throughout project development. Signage and wayfinding designs would be developed with input from the City of Shoreline. Nonmotorized facilities are discussed in Chapter 3 of the Final EIS.

Table 4.2-10. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Transportation Master Plan

Specific Goals and Policies	Discussion
T18: When identifying transportation improvements, prioritize construction of sidewalks, walkways, and trails. Pedestrian facilities should connect to destinations, access transit and be accessible by all.	Same as Goal 17.1.
TRANSIT PLAN	
Goal T X: Support and encourage increased transit coverage and service that connects local and regional destinations to improve mobility options for all Shoreline residents.	The Lynnwood Link Extension would provide fast, reliable, and efficient connections to the city of Shoreline and the other urban centers in the corridor as well as regional destinations.
22.4: Support the ongoing programs of transit providers to provide bicycle racks on all buses and trains.	The Lynnwood Link Extension would support Sound Transit's updated Bicycle Policy (2009) to integrate bicycles with regional transit services and facilities where land use regulations allow. Basic elements of the policy include providing convenient means to secure bicycles, short- and long-term bicycle parking provisions, and facility design and layout that accommodate both bicycle and pedestrian movements.
T27: Work with transit agencies to improve east-west service across the City of Shoreline and service from Shoreline to the University of Washington.	The Lynnwood Link Extension is part of the Link light rail system and would directly connect to the northern terminus of the system at the Northgate Station, which is now under construction. From there, riders could continue south on the Link system to the University of Washington, Capitol Hill, downtown Seattle, and SeaTac. Separate projects to extend light rail to the south or east will also allow direct connections to Bellevue, Redmond, and Federal Way.
T29: Work with Sound Transit, the Shoreline School District, Washington State Department of Transportation, Metro Transit, the City of Seattle and Shoreline neighborhoods to develop the final light rail alignment and station area plans for the areas surrounding the future Link light rail stations.	Sound Transit and the City of Shoreline have been coordinating through the Lynnwood Link Extension planning phase and will continue to coordinate throughout the entire project.
29.1: Participate in the Sound Transit planning process and environmental review to identify the final alignment for light rail from Northgate to Lynnwood. Advocate for two stations in Shoreline that will result in the highest ridership, most cost-effective solution and compatibility with planned surrounding land uses. Should the final light rail alignment be located on I-5, it should be on the side(s) that takes advantage of potential TOD (transit-oriented development), increased employment and residential densities, and land in public ownership, such as the Shoreline Conference Center and NE 185th Street.	Same as Goal T29. In addition, as part of the Lynnwood Link Extension, two stations are planned within the city of Shoreline, with three potential locations along Interstate 5 at NE 145th, NE 155th, and NE 185th streets. Station ridership, cost-effectiveness, compatibility with planned surrounding land uses, and transit-oriented development potential are analyzed for each of the proposed station locations in the Final EIS.

Table 4.2-10. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Transportation Master Plan

Specific Goals and Policies	Discussion
29.2: Work with the neighborhoods and communities surrounding the future light rail stations to determine the types of land uses desired near the stations. Modify the City's land use policies and development regulations, as needed, to create the underlying zoning that will result in development of the stations as desired.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas. The project also would help to focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities as well as promoting walkable and cohesive neighborhoods. Light rail stations are being designed to integrate access from other travel modes. Stations will be designed to fit in neighborhoods and facilitate transit use consistent with light rail best practices. Sound Transit will continue to work with the City of Shoreline to potentially modify the City's land use policies and development regulations to achieve growth in station areas.
29.3: Determine the desired and needed traffic mitigation for the station areas based upon the planned future land use and anticipated future traffic demand in the area, including provisions for bicycles and pedestrian facilities at and connecting to the stations.	The Final EIS outlines the avoidance, minimization, and mitigation measures for potential traffic impacts in the city of Shoreline associated with operation of the Lynnwood Link Extension.
29.4: Coordinate with Sound Transit during their planning process to ensure the City's future land use plans are considered and integrated into station area designs.	Sound Transit and the City of Shoreline have been coordinating through the Lynnwood Link Extension planning phase and will continue to coordinate throughout the entire project.
29.5: Closely monitor and participate in Sound Transit's required mode study, alternatives analysis and environmental process, and coordinate with cities to the north and south of Shoreline regarding Sound Transit planning and design.	Same as Goal T29.4.
T32: Continue to install and support the installation of transit-supportive infrastructure.	The potential NE 145th Street, NE 155th Street, and NE 185th Street Stations would include amenities and considerations of patrons' needs, including weather protection, pedestrian comfort, and safety designs. Signage and wayfinding designs would be developed in cooperation with input from affected jurisdictions.
32.2: Ensure private developers continue to construct improvements that are transit-supportive.	The Lynnwood Link Extension would support transit-oriented development in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas that allow for increased density and also increase the walkability of the surrounding area.

Table 4.2-10. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Transportation Master Plan

Specific Goals and Policies	Discussion
T33: Work with Metro Transit, Sound Transit and Community Transit to develop a bus service plan that connects residents to light rail stations, high-capacity transit corridors, and park & ride lots throughout the City.	Sound Transit will continue to coordinate with the City of Shoreline and transit agencies to develop a transit service plan for Shoreline's stations.
T34: Implement traffic mitigation measures at light rail stations areas.	The Final EIS outlines the avoidance, minimization, and mitigation measures for potential traffic impacts in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas associated with operation of the Lynnwood Link Extension.
34.2: Work with Sound Transit to implement traffic mitigation in the light rail station areas, as developed in the station area planning process.	Same as Goal T34.
34.3: Improve bicycle and pedestrian facilities in the vicinity of the light rail stations to encourage nonmotorized transportation at stations.	The potential NE 145th Street, NE 155th Street, and NE 185th Street Stations are being designed to integrate into the pedestrian-friendly environment and with context-sensitive design considerations. Bicycle racks are planned where appropriate.
34.4: Work with the City of Seattle, WSDOT, Sound Transit and Metro Transit to improve N/NE 145th Street from Lake City Way NE to Greenwood Avenue N in order to provide better east-west bus connections to the Aurora Avenue N BRT line, the light rail station at NE 145th Street and the future BRT line on Lake City Way NE.	Sound Transit will continue to coordinate with the City of Shoreline and other transit agencies.
T35: Promote livable neighborhoods around light rail stations through land use patterns, transit service and transportation access.	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system that would be an alternative to the single-occupancy vehicle. It would also provide linkages to other travel modes, including rail, buses, and walking. Efficiencies in transportation and more walkable communities are shown to improve people's quality of life.
35.1: Ensure feeder routes to the light rail stations are serving all neighborhoods in Shoreline and operating at frequencies that encourage light rail use.	Sound Transit would work with local bus service providers to integrate bus service and planning for adequate bus transfers at the potential NE 145th Street, NE 155th Street, and NE 185th Street station locations.
35.2: Monitor traffic traveling to and from the light rail stations to ensure surrounding neighborhoods are not experiencing cut-through traffic or other negative impacts. Implement appropriate solutions to minimize impacts and improve safety.	The Final EIS outlines the avoidance, minimization, and mitigation measures for potential traffic impacts in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas associated with the operation of the Lynnwood Link Extension.

Table 4.2-10. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Transportation Master Plan

Specific Goals and Policies	Discussion
MASTER STREET PLAN	
T36: Design City transportation facilities with the primary purpose of moving people and goods via multiple modes, including automobiles, freight trucks, transit, bicycles, and walking, with parking identified as a secondary use.	The Lynnwood Link Extension would bring light rail transit to Shoreline. This fast, reliable, and efficient mode of transportation would provide linkages to other nonmotorized and transit options.
CONCURRENCY AND LEVEL OF SERVICE	
T40: Adopt the following levels of service as the desired frequency of transit service in the city of Shoreline: - Headways on all-day service routes should be no less than 30 minutes, including weekends and evenings (strive for 20-minute or less headways during the day on these routes). - Headways on peak-only routes should be no more than 20 minutes (strive for 15-minute or less headways on these routes).	The Lynnwood Link Extension would have 4-minute headways during peak hours, 10-minute headways during midday and early evening hours, and 15-minute headways during early morning and late evening hours.

City of Shoreline Environmental Sustainability Strategy

Plan Summary

Shoreline's Environmental Sustainability Strategy, adopted in 2008, is intended to establish an inclusive set of principles and priorities and provide strategic direction for the City to undertake in order to become an environmentally sustainable city. Actions included in the strategy address Shoreline's operations, future development, leadership, and planning processes, including prioritization of nonmotorized transportation investment planning. The Environmental Sustainability Strategy includes five focus areas: city operations, practice, and outreach; energy conservation and carbon reduction; ecosystem management and stewardship; sustainable development and green infrastructure; and waste reduction and resource conservation.

Consistency with Lynnwood Link Extension

Table 4.2-11 summarizes the relevant guiding principles, focus areas, and recommendations of the strategy and discusses how the Lynnwood Link Extension is compatible and in conformance with these principles.

Table 4.2-11. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Environmental Sustainability Strategy

Specific Goals and Policies	Discussion
TEN GUIDING PRINCIPLES	
6. Manage Expected Growth in a Sustainable Way: The regional benefits of growth management must not come at the expense of livability. Growth and density will be focused in environmentally sustainable areas and serviced by improved infrastructure, including non-motorized facilities, transit, and enhanced access to parks and natural features.	The Lynnwood Link Extension would support mixed-use development in designated urban areas and help focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities as well as promoting walkable and cohesive neighborhoods and protecting those areas where growth is not encouraged.
10. Energy Solutions are Key to Reducing Our Carbon Footprint: The City will reduce the amount of energy used in vehicles and facilities and promote sustainable energy sources. The City will evaluate energy use and carbon emissions and develop conservation targets. The City recognizes the relationship between energy and sustainable development principles. Transportation solutions and efficient buildings are key priorities for both.	Lynnwood Link Extension would be powered by electricity. In the Puget Sound region and areas that the Lynnwood Link Extension will serve, much of the power sources come from hydropower, which is a non-polluting power source. The Lynnwood Link Extension would reduce greenhouse gases during operation by reducing vehicle miles and hours traveled. The Lynnwood Link Extension would further regional policies related to reducing dependence on single-occupancy vehicles and increasing nonmotorized travel modes, especially within urban centers.
TOP 10 LIST OF KEY PROGRAM STRATEGIES	
4. Measure Emissions in Permitting and Planning and Take Steps to Mitigate: Evaluate energy consumption and greenhouse gas emissions in both long-range planning and development review decisions using quantitative tools. This includes implementation of this recommendation in State Environmental Policy Act (SEPA) review and the use of quantitative tools during the next major Comprehensive Plan update.	The Lynnwood Link Extension would provide an alternative means of transportation over the single-occupancy vehicle and would improve air quality and conserve energy. The Final EIS provides specific analysis on project energy consumption and greenhouse gas emissions.
5. Prioritize Non-Motorized Transportation Investment and Planning: Devote more planning and capital resources to developing a pedestrian and bicycle system as an attractive alternative to single-occupancy vehicles. Prioritize non-motorized transportation planning and improvements with a focus on linking destinations, including an emphasis on the development of the Green Streets program. Non-motorized transportation investment is a key item in the U.S. Mayor's Climate Protection Agreement.	The potential NE 145th Street, NE 155th Street, and NE 185th Street Stations are designed to encourage pedestrian and nonmotorized accessibility.

Table 4.2-11. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Environmental Sustainability Strategy

Specific Goals and Policies	Discussion
FOCUS AREA 3: SUSTAINABLE DEVELOPMENT AND GREEN INFRASTRUCTURE	
Develop plans for a coordinated bicycle and pedestrian system which provides and connects to major destinations and offers an attractive alternative to other modes.	Same as number 5 on list of key program strategies.
Establish clear transit priorities, strengthen the land use and transportation link in adopted plans, and promote improvements that benefit Shoreline residents.	The Lynnwood Link Extension would bring a light rail transit option to Shoreline with potential stations located at NE 145th Street (Preferred Alternative and Alternatives A1, A3, A10), NE 155th Street (Alternatives A5, A7, A11), and NE 185th Street (Preferred Alternative, Alternatives A1, A3, A5, A7, A10, A11). The Lynnwood Link Extension would also connect with the Northgate Link Extension, University Link Extension, and East Link Extension, thus providing links in Shoreline to urban centers and regional destinations.
Promote a transit-supportive land use pattern that focuses new development nodes near existing and proposed transit corridors and improvements, especially along the I-5 corridor.	The Lynnwood Link Extension would support mixed-use development in designated urban areas and help focus the majority of growth in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities as well as promoting walkable and cohesive neighborhoods.
Promote natural solutions to stormwater management in private and public development with both incentives and requirements by revising engineering and development code standards, implementing CIP projects, and through public outreach.	The Lynnwood Link Extension would include stormwater detention and treatment to address impacts related to stormwater runoff and the designed systems. Sound Transit's Environmental Sustainability and Management System requires that low-impact operational stormwater management techniques be investigated and considered during the project design process.

City of Shoreline Light Rail Guiding Principles

Plan Summary

The City of Shoreline's Light Rail Guiding Principles, adopted in 2011, is a guiding document for Shoreline regarding future discussions and input to Sound Transit with respect to planning, construction, and operation of light rail to directly serve Shoreline residents. The document is organized into three major elements: Performance, Maximizing Funds, and Local Opportunities and Impacts.

Consistency with Lynnwood Link Extension

Table 4.2-12 summarizes the relevant Light Rail Guiding Principles and discusses how the Lynnwood Link Extension is compatible and in conformance with these principles.

Table 4.2-12. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Light Rail Guiding Principles

Specific Goals and Policies	Discussion
PERFORMANCE	
Support a light rail system that provides the shortest travel times for riders traveling to and from Shoreline.	The Lynnwood Link Extension would operate on a grade-separated guideway, thereby increasing travel time and reliability benefits. For example, transit travel times from Shoreline to downtown Seattle would be between 16 and 18 minutes under the 2035 light rail alternatives compared to 28 minutes under the 2035 No Build Alternative. Chapter 3 of the Final EIS presents more information regarding Lynnwood Link Extension transit travel times.
Support development of a complete light rail system that serves the Puget Sound region efficiently and minimizes travel times to destinations.	The Lynnwood Link Extension is part of the Link light rail system and would directly connect to the northern terminus of the system at the Northgate Station, which is now under construction. From there, riders could continue south on the Link system to the University of Washington, Capitol Hill, downtown Seattle, and SeaTac. Separate projects to extend light rail to the south or east will also allow direct connections to Bellevue, Redmond, and Federal Way.
Support the development of a light rail system that will serve the greatest number of riders traveling to and from Shoreline.	The potential NE 145th Street, NE 155th Street, and NE 185th Street Station locations in Shoreline were chosen for proximity to existing and planned commercial, employment, and residential concentrations consistent with community plans and optimum ridership potential.
Support the development of light rail stations that are easily accessed by foot, bicycle, bus, or car. The stations should expand opportunities for convenient access to other forms of transit, such as bus rapid transit and local bus service. Traffic impacts should also be minimized and mitigated in station areas.	The potential NE 145th Street, NE 155th Street, and NE 185th Street Station designs consider all joining travel modes—pedestrian, passenger pick-up/drop-off, transit transfers, bicycles, and park-and-ride facilities. The Final EIS outlines the avoidance, minimization, and mitigation measures for potential traffic impacts in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas associated with both the construction and the operation of the Lynnwood Link Extension.

Table 4.2-12. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Light Rail Guiding Principles

Specific Goals and Policies	Discussion
MAXIMIZING FUNDS	
Ensure that as decisions are made, funding remains in the project budget to fund two light rail stations in Shoreline.	As part of the Lynnwood Link Extension, two stations are planned within the City of Shoreline, with three potential locations along Interstate 5 at NE 145th Street, NE 155th Street, and NE 185th Street.
Support minimizing costs associated with right-of-way acquisition and capital investments as well as ongoing operation and maintenance costs while maximizing performance of the light rail system.	The Lynnwood Link Extension would minimize right-of-way acquisitions to the extent possible in the city of Shoreline while still maximizing performance of the light rail system.
Support extension of a light rail system through Shoreline and Seattle that maximizes the available funding in the north King County subarea. In accordance with Sound Transit's subarea equity policy, funds generated in this subarea should be spent only in this subarea and be used to provide high quality transit services and amenities for north King County residents.	The Lynnwood Link Extension would extend light rail from the Northgate neighborhood of Seattle north to Shoreline, Mountlake Terrace, and Lynnwood.
LOCAL OPPORTUNITIES AND IMPACTS	
Support the location, alignment and operation of light rail that provides access to a socially, economically, and geographically diverse ridership.	The potential NE 145th Street, NE 155th Street, and NE 185th Street Station locations were chosen for their proximity to existing and planned commercial, employment, and residential concentrations consistent with community plans.
Believe land uses around light rail stations should support transition to transit-oriented communities over time and in partnership with the local neighborhood.	The Lynnwood Link Extension supports transit-oriented development in the potential NE 145th Street, NE 155th Street, and NE 185th Street Station areas in Shoreline that allow for increased density, which would allow for more efficient use of land and allow for an efficient provision of services and facilities as well as promote walkable and cohesive neighborhoods. Sound Transit is coordinating with the City of Shoreline and will continue to do so regarding transit-oriented development at the selected City of Shoreline station sites.
Committed to a robust community involvement process that develops tools and plans to create and enhance vibrant, livable, and sustainable transit-oriented station areas.	Sound Transit has provided extensive opportunities for public involvement throughout the Lynnwood Link Extension planning phase and will continue public outreach throughout the entire project.

Table 4.2-12. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Shoreline Light Rail Guiding Principles

Specific Goals and Policies	Discussion
Ensure impacts on residents and businesses are managed and individual property rights are protected; provide timely information so residents can plan for and respond to changes.	Any private property acquisitions required for the Lynnwood Link Extension would be done in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act.
Support a light rail system that will foster economic prosperity in Shoreline by encouraging existing businesses, enhancing property values, creating family-wage jobs, building sustainable housing stock, and attracting investment.	The Lynnwood Link Extension would support mixed-use (commercial, office, and residential) development to allow growth at greater density where existing land use policies and regulations allow, and provide connections to urban centers with a fast, efficient, and reliable transit system.
Support the development of a light rail system that minimizes noise and visual impacts to Shoreline residents and businesses.	The Final EIS outlines the avoidance, minimization, and mitigation measures for potential noise and visual impacts associated with the operation and construction of Lynnwood Link Extension.

City of Shoreline 185th Street Station Subarea Planned Action Final EIS

Plan Summary

The 185th Street Station Subarea Plan involves land uses and zoning provisions for transit-oriented development in the subarea (located at a boundary between the Echo Lake, Meridian Park, and North City neighborhoods), as well as supporting public space enhancements, multimodal transportation and utility system improvements, and other associated public infrastructure and amenities. The Final EIS for this plan was published in November 2014, and comprehensive plan amendments are expected to be adopted in 2015.

The analyzed alternatives associated with the 185th Street Station Subarea includes the NE 185th Street Station proposed by Sound Transit in the Lynnwood Link Extension EIS. The 185th Street Subarea Planned Action Final EIS states that the final Subarea Plan is expected to result in a plan for transit-oriented land use and zoning provisions in the subarea as well as support for public space enhancements, multimodal transportation and utility system improvements, and other public infrastructure amenities associated with the plan. The proposed station at NE 185th Street would support Shoreline's goals and policies. No policy issues of concern to Sound Transit were identified.

The City of Shoreline's updated 2012 *Comprehensive Plan* already designates this location as a Light Rail Station Study Area. The City would support transit-oriented development at this location through the approval of a Subarea Plan.

Consistency with Lynnwood Link Extension

Although service is not scheduled to begin until 2023, Sound Transit's planning, design, and environmental review for construction of the light rail line, stations, and associated facilities is being coordinated with the City of Shoreline, which has been planning land use changes around the light rail stations to be located in Shoreline.

City of Mountlake Terrace Comprehensive Plan

Plan Summary

The City of Mountlake Terrace's Comprehensive Plan, which was first adopted in 2003 and last amended in 2011, provides coordinated goals, policies, maps, and strategies regarding the community's development, investment, and quality of life. It takes a broad perspective for a 20-year period and incorporates future needs for population and employment growth. The plan consists of 10 elements that each contain goals and policies for guiding growth in Mountlake Terrace: Community Livability; Environment; Economic Vitality; Housing; Land Use; Recreation, Parks, and Open Space; Transportation; Capital Facilities; Utilities; and Plan Administration. Sound Transit reviewed the elements to identify the applicable goals and policies. The only elements with applicable goals and policies were in the Land Use and Transportation elements.

Consistency with Lynnwood Link Extension

Table 4.2-13 summarizes the relevant elements of the City's comprehensive plan and discusses how the Lynnwood Link Extension is compatible and in conformance with these.

Table 4.2-13. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Mountlake Terrace Comprehensive Plan

Specific Goals and Policies	Discussion
LIVABILITY ELEMENT	
Goal CL-1: Livability for current and future generations.	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system that would provide an alternative to single-occupancy vehicles and also provide linkages to other travel modes, including rail, buses, and walking. Efficiencies in transportation and more walkable communities are shown to improve people's quality of life.
CL-1.1: Promote a positive image of the city as a vibrant, thriving, and desirable place in which to live, work, shop, and play.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas and help focus the majority of growth in the proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway, and optional 220th Street SW Station areas in Mountlake Terrace where existing zoning and land use

Table 4.2-13. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Mountlake Terrace Comprehensive Plan

Specific Goals and Policies	Discussion
	codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities as well as promoting walkable and cohesive neighborhoods.
CL-1.4: Promote a pedestrian-friendly environment.	Same as CL-1.1 above.
CL-1.13: Promote a strengthened downtown commercial core and a healthy local economy.	The Lynnwood Link Extension would support mixed-use (commercial, office, and residential) development to allow growth at greater density, where existing land use policies and regulations allow, and provide the City of Mountlake Terrace with connections to and from urban centers with a fast, efficient, and reliable transit system.
ENVIRONMENTAL ELEMENT	
Goal EN-1: Clean air, clean water, and healthy natural environment.	The Lynnwood Link Extension would further regional polices related to reducing dependence on single-occupancy vehicles and increasing nonmotorized travel modes, especially within urban centers. It would also help reduce air pollution and conserve energy. The proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station would be located in areas designated for increased density, and the Lynnwood Link Extension would provide direct and frequent access to those areas as well as connections to regional destinations. Promoting transit and walkable communities would reduce vehicle miles and hours traveled and, therefore, would help reduce air pollution.
EN-1.6: Encourage convenient alternatives to automobile travel within the city and region.	Same as Goal EN-1.
EN-1.14: Promote the planting of trees and other vegetation for beautification, air quality, noise control, and stormwater management.	Sound Transit would develop design criteria that provide a consistent architectural theme for all elevated elements and for features such as stations while also reflecting the character of individual station areas. These criteria would be developed with input from the Cities through which the project corridor passes (Seattle, Shoreline, Mountlake Terrace, and Lynnwood). Visual and aesthetic resources are discussed in Section 4.5 of the Final EIS.
ECONOMIC VITALITY ELEMENT	
EV-1.1: Encourage efficient use of existing buildable lands, including vacant and redevelopable sites.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas and help focus the majority of growth in the proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station areas in Mountlake Terrace where existing zoning and

Table 4.2-13. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Mountlake Terrace Comprehensive Plan

Specific Goals and Policies	Discussion
	land use codes allow for greater development densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities, promoting walkable and cohesive neighborhoods, and protecting those areas where growth is not encouraged.
EV-1.3: Encourage mixed uses in designated areas.	Same as EV-1.1 above.
EV-1.4: Provide opportunities for adding new land uses to or near existing or planned parking structures, such as the Community Transit park-and-ride lot on 236th Street SW and I-5.	The Preferred Alternative and Alternatives B1 and B2 of the Lynnwood Link Extension would place the proposed Mountlake Terrace light rail station at the Mountlake Terrace Transit Center near the existing Community Transit park-and-ride lot. The Lynnwood Link Extension would support transit-oriented development by allowing a greater density and a mixture of land uses to occur in the station areas.
EV-1.5: Designate lands for commercial and industrial development, while protecting nearby residents from incompatible uses.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas and help focus the majority of growth in the proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station areas in Mountlake Terrace where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities, promoting walkable and cohesive neighborhoods, and protecting those areas where growth is not encouraged. The Lynnwood Link Extension would provide fast, reliable, and efficient connections to the other urban centers in the project corridor and other urban communities, as well as regional destinations.
EV-1.10: Provide adequate infrastructure to support economic development to meet projected growth, within constraints of local resources.	Same as EV-1.5 above.
EV-2.3: Provide for a balanced transportation system that supports business needs, including pedestrians, transit, cars, and trucks.	The Lynnwood Link Extension would bring mass transit to the City of Mountlake Terrace as part of a balanced regional transportation system. Light rail station designs will consider all joining travel modes—pedestrian, passenger pick-up/drop-off, transit transfers, bicycles, and when possible and needed, park-and-ride facilities.
EV-2.5: Provide for good schools, parks, transportation, civic buildings, and other service amenities.	Same as above.
EV-2.7: Limit stress from noise, pollution, or traffic congestion.	The Lynnwood Link Extension would reduce noise and air pollution from motor vehicles by providing people with another mode of travel beyond single-occupancy vehicles.

Table 4.2-13. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Mountlake Terrace Comprehensive Plan

Specific Goals and Policies	Discussion
LAND USE ELEMENT	
LU-1.1: Provide for a pattern of land use that will complement the community's physical characteristics, encourage pedestrian activity, revitalize the Town Center and give people opportunities to interact with each other in positive ways.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas and help focus the majority of growth in the proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station areas in Mountlake Terrace where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities as well as promoting walkable and cohesive neighborhoods.
LU-1.2: Respect the character of established residential neighborhoods and non-residential neighborhoods.	The proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station locations were chosen for their proximity to existing and planned commercial, employment, and residential concentrations consistent with community plans and optimum ridership potential. The Final EIS evaluates how the Lynnwood Link Extension would perform with land use and transportation systems to minimize disruption and, where necessary, include mitigation measures to further reduce impacts on adjacent properties during construction. Sound Transit would develop design criteria that provide a consistent architectural theme for all elevated elements and for features such as stations while also reflecting the character of individual station areas. These criteria would be developed with input from the Cities through which the project corridor passes (Seattle, Shoreline, Mountlake Terrace, and Lynnwood). Visual and aesthetic resources are discussed in Section 4.5 of the Final EIS.
LU-1.5: Retain or enhance scenic views whenever possible.	The Lynnwood Link Extension route and the proposed station alternatives in Mountlake Terrace generally follow Interstate 5, a major highway corridor, and would either be at-grade or elevated and would not affect scenic views in Mountlake Terrace. Visual and aesthetic resources are discussed in Section 4.5 of the Final EIS.
LU-2.2: Take reasonable measures to provide land uses that will meet the city's population target for 2012 and for subsequent planning periods.	The Lynnwood Link Extension would support mixed-use development (commercial, office, and residential) in designated urban growth areas and would help focus the majority of growth in the proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station areas in

Table 4.2-13. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Mountlake Terrace Comprehensive Plan

Specific Goals and Policies	Discussion
	Mountlake Terrace where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for efficient provision of services and facilities and promoting walkable and cohesive neighborhoods.
LU-2.3: Encourage innovative land use patterns and site development, such as Planned Unit Development and Mixed Uses, where appropriate.	Same as LU-2.2 above.
LU-2.6: Recognize that the City cannot take private property for public use without just compensation.	Any private property required for the Lynnwood Link Extension would be acquired in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act.
LU-3.3: Encourage development to express variety and reflect the area's unique characteristics.	The Lynnwood Link Extension would support a variety of mixed-use development (commercial, office, and residential) in designated urban growth areas and would help focus the majority of growth in the proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station areas in Mountlake Terrace where existing zoning and land use codes allow for greater densities. Additionally stations are designed to fit in the neighborhoods and facilitate transit use consistent with light rail best practices.
LU-5.1: Encourage high-quality infill and redevelopment projects to revitalize the community.	Same as LU-3.3 above.
LU-5.4: Encourage co-location of development and mixed uses to enhance the community's image and convenience within or near public park-and-ride sites.	The Preferred Alternative and Alternatives B1 and B2 of the Lynnwood Link Extension would place the proposed Mountlake Terrace light rail station at the Mountlake Terrace Transit Center near the existing Community Transit park-and-ride lot. The Lynnwood Link Extension would support transit-oriented development by allowing a greater density and a mixture of land uses to occur in the station areas.
LU-5.6: Encourage development to be pedestrian- and bicycle-friendly and convenient for transit.	The Lynnwood Link Extension would provide the opportunity for transit-oriented development within designated urban centers around the proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station areas. Such development would be designed to encourage pedestrian and nonmotorized accessibility.
LU-5.8: Support the regional land use and transportation plans by realizing the vision for the Mountlake Terrace Subregional Growth Center and the North Melody Hill Activity Hub as vibrant centers with jobs, transit access, walkability, and prominence as cultural and economic	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system as an alternative to single-occupancy vehicles and provide linkages to other travel modes, including rail, buses, and walking. Mountlake Terrace would benefit from the

Table 4.2-13. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Mountlake Terrace Comprehensive Plan

Specific Goals and Policies	Discussion
destinations.	connections provided by the Lynnwood Link Extension among urban centers to the north as well as from adjacent communities served by the Central Link and Northgate Link Extensions. The Preferred Alternative and Alternative B2 of the Lynnwood Link Extension include an optional station at 220th Street SW; this could potentially bring transit access to the Melody Hill subarea.
LU-5.9: Concentrate major transportation funding in the Mountlake Terrace Subregional Growth Center and the North Melody Hill Activity Hub.	Same as LU-5.8 above.
TRANSPORTATION ELEMENT	
TR-1.1: Provide for safe transportation facilities that integrate the needs of transit riders, pedestrians, commuters, and motorists and take into account large vehicle movements.	The Lynnwood Link Extension would be designed to maximize safety, as well as provide fast and reliable transit access between urban centers and regional destinations.
TR-1.2: Make pedestrian and transit facilities safe and accessible for people with disabilities.	Sound Transit complies with Americans with Disabilities Act design requirements.
TR-2.1: Work with state, regional, and local agencies to meet or do better than meet air and water quality standards.	The Lynnwood Link Extension could improve air quality by promoting a reduction in automobile use with the introduction of a new transit alternative in the project corridor. The Lynnwood Link Extension would include stormwater detention and treatment to address impacts related to stormwater runoff. Sound Transit's Environmental Sustainability and Management System requires that low-impact operational stormwater management techniques be investigated and considered during the project design.
TR-2.4: Through the environmental review process, mitigate transportation projects to minimize pollution, noise, glare, and other adverse impacts.	The Final EIS outlines the avoidance, minimization, and mitigation measures for potential air quality, noise, visual, and other environmental impacts in the proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station areas associated with both the construction and the operation of the Lynnwood Link Extension.
TR-2.6: Encourage the provision of landscaping adjacent to transportation facilities for the purposes of stormwater management, noise reduction, air quality improvements, visual appearance, and pedestrian safety.	Same as TR-2.4 above.
TR-2.8: Support mode shifts from single-occupancy vehicles to alternative modes such as walking, bicycling, carpooling, vanpooling, and transit to reduce negative impacts to the environment caused by fossil-fueled	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system as an alternative to single-occupancy vehicles and provide linkages to other travel modes, including rail, buses,

Table 4.2-13. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Mountlake Terrace Comprehensive Plan

Specific Goals and Policies	Discussion
transportation.	bicycling, and walking.
TR-3.1: Provide an efficient system for multiple modes of transportation.	Same as TR-2.8 above.
TR-4.8: Provide mobility for people driving, walking, bicycling, and using transit.	Same as TR-2.8 above.
TR-4.11: Ensure that multimodal concurrency standards are met by implementing critical pedestrian, bicycle, and transit improvements.	Same as TR-2.8 above.
TR-5.4: Encourage parking facilities, including park-and-ride facilities, to provide for mixed uses and multiple purposes.	The Preferred Alternative and Alternatives B1 and B2A of the Lynnwood Link Extension would place the proposed Mountlake Terrace light rail station at the Mountlake Terrace Transit Center near the existing Community Transit park-and-ride lot. An option for the Preferred Alternative and Alternative B2A would also develop a station at 220th Street SW. Lynnwood Link Extension would support transit-oriented development by encouraging greater density and a mixture of land uses to occur in the station areas, consistent with the City's land use plans.
TR-5.6: Provide for transportation projects needed to accommodate the City's share of future growth.	The Lynnwood Link Extension would support mixed-use (commercial, office, and residential) development to allow growth at a greater density where existing land use policies and regulations allow, and provide connections to urban centers with a fast, efficient, and reliable transit system.
TR-6.1: Encourage public transportation to be extended throughout the City at a level of service appropriate to the type of development in each area.	The Lynnwood Link Extension would have 4-minute headways during peak hours, 10-minute headways during midday and early evening hours, and 15-minute headways during early morning and late evening hours.
TR-6.3: Encourage improved transit service to other local and regional jurisdictions and to employment, shopping, and educational centers, including those in King County.	The Lynnwood Link Extension would provide fast, reliable, and efficient connections to the other urban centers in the project corridor and to other urban communities as well as regional destinations.
TR-6.4: Incorporate transit agency participation into the development review process, where applicable, to ensure site plans for new projects are compatible with and provide infrastructure necessary to support public transportation.	Sound Transit and the City of Mountlake Terrace have been coordinating throughout the Lynnwood Link Extension planning phase and will continue to do so throughout the entire project.
TR-6.5: Continue to facilitate the expansion of Link light rail from Seattle to Mountlake Terrace, primarily within the eastern portion of the Interstate 5 (I-5) right-of-way, and to include a light rail station in Mountlake Terrace at approximately I-5 and 236th Street SW, which shall be built in a manner that allows access from the recently built	The Lynnwood Link Extension would expand Link light rail north from Northgate through the cities of Shoreline, Mountlake Terrace, and Lynnwood. The Preferred Alternative and Alternatives B1 and B4 would travel primarily within the eastern portion of the I-5 right-of-way. While the Preferred Alternative and

Table 4.2-13. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Mountlake Terrace Comprehensive Plan

Specific Goals and Policies	Discussion
transit center.	Alternatives B1 and B2A would have the Mountlake Terrace Transit Center Station located at the recently built Mountlake Terrace Transit Center, Alternative B4 would have the Mountlake Terrace Freeway Station located within the I-5 right-of-way. The Preferred Alternative and Alternatives B1 and B2A route would travel within the eastern portion of the I-5 right-of-way up to the Mountlake Terrace Transit Center Station at the existing Mountlake Terrace Transit Center, and then cross to the west side of I-5 as it continues north.
TR-6.8: Support transit ridership by providing strong pedestrian linkages to the Mountlake Terrace Transit Center and future light rail station.	The proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station would be designed to encourage pedestrian and nonmotorized accessibility.
TR-6.9: Preserve right-of-way and private land necessary for the construction of light rail.	After completion of the EIS process, selection of the Preferred Alternative, and final design, Sound Transit would begin the right-of-way acquisition process.
TR-6.10: Encourage development of high-capacity transit (especially light rail) on I-5 and express buses on I-5 and SR 99 to serve Mountlake Terrace.	The Lynnwood Link Extension would provide mass transit service to the City of Mountlake Terrace, generally following I-5, as well as to other urban centers along the project corridor and adjacent centers associated with the Central Link and Northgate Link Extension projects.
TR-6.11: Support innovative programs and encourage transit-oriented development to attract transit riders and make ridership convenient, fast, and comfortable.	The Lynnwood Link Extension would provide the opportunity for development of transit-oriented development within designated urban centers.
TR-7.1: Provide for a pedestrian system that: a. Connect residences, businesses, schools, parks, transit facilities, and civic buildings.	The Lynnwood Link Extension would support transit-oriented development in the proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station areas in Mountlake Terrace that allow for increased density and would increase the walkability of the surrounding area.
TR-7.2: Maintain and enhance the pedestrian system by: f. Providing for convenient connections to frontage pedestrian systems and transit facilities.	The proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station would be designed to encourage pedestrian accessibility.
TR-7.3: Prioritize improvements for sidewalks and pedestrian paths using the following criteria: e. Is this route also a route for transit or provide access to transit?	Same as TR-7.2 above.
TR-7.7: Incorporate pedestrian-oriented design into street improvements, street standards, and development projects.	Same as TR-7.2 above.

Table 4.2-13. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Mountlake Terrace Comprehensive Plan

Specific Goals and Policies	Discussion
TR-9.6: Reduce the need for parking facilities by increasing mode split from walking, bicycling, and transit.	The Lynnwood Link Extension would provide a fast, efficient, and reliable mode of travel as an alternative to single-occupancy vehicles and provide service to other urban centers in the project corridor and the region.

Mountlake Terrace Town Center, Freeway/Tourist District, and Multifamily Development Design Standards

Plan Summary

The City of Mountlake Terrace's Town Center, Freeway/Tourist District Design Standards and Multifamily Development Design Standards were adopted in 2008 and 2010, respectively. They present standards that apply to all development and redevelopment in the noted areas. The design elements for the Town Center, Freeway/Tourist District are intended to foster a cohesive pattern of development that supports pedestrian activity and transit-oriented development. The Design Standards for Multifamily Development similarly presents standards that apply to all development and redevelopment with respect to multifamily developments.

Consistency with Lynnwood Link Extension

Sound Transit would develop design criteria that provide a consistent architectural theme for all elevated elements and for features such as stations while also reflecting the character of individual station areas. These criteria would be developed with input from the Cities through which the project corridor passes (Seattle, Shoreline, Mountlake Terrace, and Lynnwood). Visual and aesthetic resources are discussed in Section 4.5 of the Final EIS.

Mountlake Terrace Economic Vitality Strategy

Plan Summary

Mountlake Terrace's Economic Vitality Strategy, which was adopted in 2008, identifies goals, action strategies, and implementation steps to build a quality community where residents and businesses thrive through the facilitation of mixed-use development; investments in parks, recreation, and cultural arts; and improvements to streets and public infrastructure.

Consistency with Lynnwood Link Extension

Table 4.2-14 summarizes relevant goals of the Economic Vitality Strategy and discusses how the Lynnwood Link Extension is compatible and in conformance with these goals and policies.

Table 4.2-14. Lynnwood Link Extension's Consistency with the Goals and Policies of the Mountlake Terrace Economic Vitality Strategy

Specific Goals and Policies	Discussion
Goal I: Create a Business and Development Climate that Facilitates Desirable Investment **A.** Continue to cultivate a culture supportive of economic development among City staff and residents. **1.** Define a Mountlake Terrace definition of "economic vitality" that is specific to the goals and values of Mountlake Terrace. Components include: • Increase population and population density in support of environmental sustainability and to create economic vitality and enhance the community's amenities and public services.	The Lynnwood Link Extension would support mixed-use development (commercial, office, and residential) in designated urban growth areas and would help focus the majority of growth in the proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station areas in Mountlake Terrace where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, allowing for efficient provision of services and facilities and promoting walkable and cohesive neighborhoods.
Goal II: Strengthen the City's Identity and Communications to Enhance the City's Image. **A.** Continue to define and build upon Mountlake Terrace's identity as a community. **2.** Incorporate discussion of the community's values in the City's communications with residents. Themes to address include: • A connected city that is an integrated part of the greater Seattle metropolitan area linked by transportation and employment patterns. • An active regional partner in sustainability efforts and care for the larger Puget Sound environment.	Sound Transit would develop design criteria that provide a consistent architectural theme for all elevated elements and for features such as stations while also reflecting the character of individual station areas. These criteria would be developed with input from the Cities through which the project corridor passes (Seattle, Shoreline, Mountlake Terrace, and Lynnwood). Visual and aesthetic resources are discussed in Section 4.5 of the Final EIS. The Lynnwood Link Extension is part of the Link light rail system and would directly connect to the northern terminus of the system at the Northgate Station, which is now under construction. Stations along the Lynnwood Link Extension would be located in Shoreline, Mountlake Terrace, and Lynnwood. From any of these stations, riders could continue south on the Link system to the University of Washington, Capitol Hill, downtown Seattle, and SeaTac. Separate projects to extend light rail to the south or east will also allow direct connections to Bellevue, Redmond, and Federal Way.
B. Facilitate the development of the Town Center as a community gathering place. **7.** Encourage transit, walking, and bicycling connections within and around the Town Center **i.** Prioritize the connections between the Town Center and the Recreation Pavilion, and the Town Center and the transit center/freeway station using sidewalks, streetlights, greenery, and street art to encourage walking between these nodes.	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system as an alternative to the use of single-occupancy vehicles and would also provide linkages to other travel modes, including rail, buses, bicycling, and walking. Mountlake Terrace's Town Center would benefit from the connections Lynnwood Link Extension would provide among urban centers to the north as well as connections to adjacent communities served by the Central and Northgate Link Extensions.

Mountlake Terrace Sustainability Strategy

Plan Summary

Mountlake Terrace's Sustainability Strategy, which was adopted in 2008, identifies goals, action strategies, and implementation steps to create a livable community through the natural and built environment as well as to improve resource efficiency.

Consistency with Lynnwood Link Extension

Table 4.2-15 summarizes relevant goals of the Sustainability Strategy and discusses how the Lynnwood Link Extension is compatible and in conformance with these goals.

Table 4.2-15. Lynnwood Link Extension's Consistency with the Goals and Policies of the Mountlake Terrace Sustainability Strategy

Specific Goals and Policies	Discussion
Goal I: Establish a Strong Foundation and Supportive Culture for Sustainability **E.** Engage partners in a collaborative approach to sustainability **2.** Meet with Snohomish Public Utilities District, Community Transit, and Sound Transit in launch process of this Strategy and on an ongoing basis to assess opportunities for collaboration.	Sound Transit will continue to coordinate and work with the City of Mountlake Terrace on issues of sustainability regarding the Lynnwood Link Extension.
Goal III: Maximize Energy-Efficient Mobility Options that Connect City Residents to the Places where they Live, Work, and Play. **G.** Continue to work with Community Transit, Sound Transit, and King County Metro to improve commuting options and service **1.** Coordinate with transit agencies to enhance services within Mountlake Terrace through: • Linkages among the Community Transit, Sound Transit, and King County Metro Systems serving the city • Promotion of the Community Transit Center	The Lynnwood Link Extension would bring to Mountlake Terrace a fast, efficient, and reliable transportation system that would also provide linkages to other travel modes, including rail, buses, bicycling, and walking. Residents of Mountlake Terrace would benefit from the connections Lynnwood Link Extension would provide among regional growth centers to the north as well as connections to adjacent communities served by the Central and Northgate Link Extensions.
2. Partner with Sound Transit to achieve light rail connectivity for Mountlake Terrace.	Sound Transit will continue to coordinate and work with the City on integrating the selected Mountlake Terrace station site with City plans.
3. Coordinate with the Washington State Department of Transportation, as well as transit agencies and others, to encourage transit-oriented development, recognizing opportunities associated with the new transit center and freeway station at I-5 and 236th Street SW.	The Lynwood Link Extension would support transit-oriented development in the proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station areas in Mountlake Terrace that allow for increased density and would also increase the walkability of the surrounding area. Sound Transit will continue to coordinate and work with the City on transit-oriented development at the selected Mountlake Terrace station site.

Mountlake Terrace Transit-Oriented Development Report

Plan Summary

The City of Mountlake Terrace Transit-Oriented Development Report provides analysis on future mixed-use development options for the upper portion of the I-5 park-and-ride at 236th Street SW. It also provides guidance to the City's efforts to identify opportunities for comprehensive plan elements, development regulations, and other tools that would encourage mixed-use housing and compatible transit-oriented development within the Mountlake Terrace urban core.

Consistency with Lynnwood Link Extension

The Lynnwood Link Extension would increase the opportunity for transit-oriented development to occur within Mountlake Terrace.

Mountlake Terrace Transit Service Strategy

Plan Summary

Mountlake Terrace's Transit Service Strategy, which was adopted in 2010, identifies the City's goals, priorities, and transit needs over the next 15 years. The Transit Service Strategy emphasizes the City's support for transit and also acts as a roadmap to increase transit services in Mountlake Service. The Transit Service Strategy is also aimed at helping the City ensure that its land use goals for the Town Center and other neighborhoods are met.

Consistency with Lynnwood Link Extension

Table 4.2-16 summarizes relevant goals of the strategy and discusses how the Lynnwood Link Extension is compatible and in conformance with these goals and policies.

Table 4.2-16. Lynnwood Link Extension's Consistency with the Goals and Policies of the Mountlake Terrace Transit Service Strategy

Specific Goals and Policies	Discussion
CITY ACTIONS	
Goal 1: Provide municipal infrastructure to improve rider experience and increase ridership. **1.** Strive to ensure that sidewalks are available on both sides of the street on transit routes. **2.** Consider transit signal priority in transportation projects. **5.** Consider layover needs of any transit agency during roadway design.	The potential Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Stations would include amenities and considerations of patrons' needs, including weather protection, pedestrian comfort, and safety designs.

Table 4.2-16. Lynnwood Link Extension's Consistency with the Goals and Policies of the Mountlake Terrace Transit Service Strategy

Specific Goals and Policies	Discussion
Goal 2: Accommodate light rail at or near Mountlake Terrace's central station location—the Mountlake Terrace Transit Center. **2.** Once Sound Transit adopts a preliminary preferred alignment, consider adopting new regulations requiring all development along the preliminary preferred alignment to follow site design, which does not preclude light rail and will not require any demolition of recently built structures to construct light rail.	The Preferred Alternative and Alternatives B1 and B2A of the Lynnwood Link Extension would place the proposed Mountlake Terrace Transit Center Station at the Mountlake Terrace Transit Center, while Alternative B4 would have the Mountlake Terrace Freeway Station located on I-5.
Goal 3: Partner with transit agencies and local municipalities to garner the best possible service. **1.** Work with staff from Community Transit, Sound Transit, and King County Metro Transit to achieve our goals and their goals.	Sound Transit will continue to coordinate with the City of Mountlake Terrace on the Lynnwood Link Extension planning and design.
Goal 4: Support Transit Oriented Development **1.** Provide for efficient land uses. **2.** Encourage mixed use projects in key locations, such as the Town Center. **3.** Continue to implement the plan—A Vision for Mountlake Terrace Town Center—to provide transit-oriented development in the city. **4.** Consider ways to enhance transit-oriented development such as adjusting development regulations on parcels near the Mountlake Terrace Transit Center. **5.** Encourage changes to Washington State laws to allow tax increment financing to ease the economic bottom line of constructing transit-oriented development.	The Lynnwood Link Extension would support transit-oriented development in the proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station areas in Mountlake Terrace that allow for increased density. The increased density encourages more efficient use of land, thus allowing for an efficient provision of services and facilities as well as promoting walkable and cohesive neighborhoods. Sound Transit will continue to coordinate and work with the City on transit-oriented development at the selected Mountlake Terrace station site.
TRANSIT AGENCY ACTIONS	
Goal 1: Provide a higher level of service connecting the Town Center, North Melody Hill, and the Mountlake Terrace Transit Center than other areas of the city. **1.** Utilize taxpayer dollars on transit most efficiently by serving the densest land use areas in the city with proportionally more service than other areas of the city. **2.** Increase ridership per revenue hour in Mountlake Terrace by providing the greatest amount of service to the densest areas. **3.** Support transit-oriented development in the Town Center and North Melody Hill by providing necessary transit service.	Same as prior goal. The Lynnwood Link Extension would provide light rail transit service to the City of Mountlake Terrace, generally following I-5, as well as to other urban centers along the Lynnwood Link Extension corridor and adjacent centers associated with the Central Link and Northgate Link Extension projects. The Preferred Alternative and Alternatives B1 and B2A would place a light rail stop at the Mountlake Terrace Transit Center Station. The Preferred Alternative has an option for, and Alternative B2A includes, a station at 220th Street SW, which would also provide a connection from the transit center to the Melody Hill subarea. Alternative B4 would place a light rail station on the freeway adjacent to the existing transit center. Potential Lynnwood Link Extension station locations in

Table 4.2-16. Lynnwood Link Extension's Consistency with the Goals and Policies of the Mountlake Terrace Transit Service Strategy

Specific Goals and Policies	Discussion
4. Support Commute Trip Reduction programs in North Melody Hill and the Town Center. **5.** Retain and enhance transit service to North Melody Hill and Town Center to guarantee developers that their developments will be well served by transit.	Mountlake Terrace were chosen for their proximity to existing and planned commercial, employment, and residential concentrations consistent with community plans and optimum ridership potential.
Goal 2: Balance access to transit with route efficiency in Mountlake Terrace. **1.** Provide transit service to neighborhoods in Mountlake Terrace. **2.** Provide connections to Town Center, North Melody Hill, the Mountlake Terrace Transit Center, and the Recreation Pavilion.	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system and an alternative to the use of single-occupancy vehicles. It would also provide linkages to other travel modes, including rail, buses, bicycling, and walking. Neighborhoods in Mountlake Terrace would benefit from these connections.
Goal 3: Support regional connections to and from Town Center, North Melody Hill, and Mountlake Terrace Transit Center. **1.** Retain all day, bi-directional regional transit service to the Mountlake Terrace Transit Center from downtown Seattle and consider more all-day, bi-directional services. **3.** Support strong transfer synchronization from Mountlake Terrace Transit Center to North Melody Hill and Town Center to support regional trips.	The Lynnwood Link Extension is part of the Link light rail system and would directly connect to the northern terminus of the system at the Northgate Station, which is now under construction. Stations along the Lynnwood Link Extension would be located in Shoreline, Mountlake Terrace, and Lynnwood. From any of these stations, riders could continue south on the Link system to the University of Washington, Capitol Hill, downtown Seattle, and SeaTac. Separate projects to extend light rail east farther to the south will also allow direct connections to Bellevue, Redmond, and Federal Way.
Goal 4: Retain and enhance regional connections **1.** Downtown Seattle, University District, and Everett are major employment areas to which Mountlake Terrace residents need access. **2.** Reduce congestion on I-5 by enhancing transit service to the dense North Melody Hill and Town Center areas during peak commute times. **3.** Encourage easy access to regional transit as the system becomes more of a central spine with connections by synchronizing local transfers to regional transit.	The Lynnwood Link Extension would provide a fast, efficient, and reliable transportation system that would provide an alternative to the use of single-occupancy vehicles. Linking the urban centers with fast, reliable, and efficient transit would increase the effectiveness of bus transit service to outer areas of the Puget Sound region. This would help the overall transportation system operate more efficiently with fewer cars, and provide more walkable and livable communities with affordable transportation options.
Goal 5: Support direct connections to local centers **1.** Nearby centers in South Snohomish County and North King County, such as Downtown Lynnwood and Downtown Edmonds, are key connections for residents and employees. a) Work to synchronize transfers at critical transfer areas, such as the Edmonds Ferry Terminal and the Lynnwood Transit Center. **2.** Encourage these routes to be bi-directional.	Same as Goal 4 above.

Table 4.2-16. Lynnwood Link Extension's Consistency with the Goals and Policies of the Mountlake Terrace Transit Service Strategy

Specific Goals and Policies	Discussion
Goal 6: Encourage better connections over county line. **1.** The boundary between Snohomish and King Counties is arbitrary and cuts off transit service arbitrarily. Encourage better local cross-country service across the county line to increase transit usage. **2.** Work with Cities such as Shoreline to improve service across the county line. **3.** Consider transit partnerships to provide routes which go further into each county.	Same as Goal 4 above.
Goal 7: Accommodate light rail at or near Mountlake Terrace's preferred light rail station location—the Mountlake Terrace Transit Center. **1.** Encourage Sound Transit to adopt a preliminary preferred alignment and station in the vicinity of the Mountlake Terrace Transit Center. **2.** If resources allow, consider a second station in the vicinity of 220th Street SW and I-5.	The Preferred Alternative and Alternatives B1 and B2A of the Lynnwood Link Extension would place a light rail stop at the Mountlake Terrace Transit Center. The Preferred Alternative has an option for, and Alternative B2A includes, a station at 220th Street SW near I-5. Alternative B4 would place a light rail station on I-5 adjacent to the existing transit center.
Goal 8: Maintain usefulness of the freeway flyer station once the light rail station is operational. **1.** The investment in the freeway flyer station should remain useful once the light rail extension is constructed. **2.** Consideration should be given for a transfer point to light rail from other regional service, which will continue northward, such as the Sound Transit Route 510 or Community Transit routes.	Alternative B4 of the Lynnwood Link Extension would place a light rail station on I-5 at the Mountlake Terrace Freeway Station adjacent to the existing transit center. The freeway station would be extended to the north, retrofitted to accommodate light rail trains, and closed to bus use. Under all Segment B alternatives, the Lynnwood Link Extension could be inconsistent with Goal 8 if the alternatives lead to the closure of the freeway flyer station. However, when Sound Transit identified a Preferred Alternative for evaluation in the Final EIS, it directed further study of potential reuse of the flyer station.

Melody Hill Subarea Plan

Plan Summary

Mountlake Terrace's Melody Hill Subarea Plan, which was adopted in 2006, provides a long-term vision and plan for a 20-year period at a more detailed level than in the City's Comprehensive Plan. The subarea plan identifies major planning issues and provides recommendations, goals, and policies specific to the Melody Hill subarea to promote community livability, economic vitality, pedestrian and nonmotorized improvements, transportation mobility, improved access to the Interurban Trail, and a healthy environment.

Consistency with Lynnwood Link Extension

Table 4.2-17 summarizes relevant goals of the Melody Hill Subarea Plan and discusses how the Lynnwood Link Extension is compatible and in conformance with these goals and policies.

Table 4.2-17. Lynnwood Link Extension's Consistency with the Goals and Policies of the Melody Hill Subarea Plan

Specific Goals and Policies	Discussion
Goal MH-1: Efficient use of land **Policy MH-1.1:** Encourage efficient use of existing buildable lands, including vacant and redevelopable sites.	The Lynnwood Link Extension would support mixed-use development (commercial, office, and residential) in designated urban growth areas and would help focus the majority of growth in the proposed Mountlake Terrace Transit Center, Mountlake Terrace Freeway Station, and optional 220th Street SW Station areas in Mountlake Terrace where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for efficient provision of services and facilities, as well as promoting walkable and cohesive neighborhoods and protecting those areas where growth is not encouraged.
Policy MH 1.4: Establish a land use pattern that complements the community's physical characteristics, enhances neighborhood livability, and promotes economic development in the Melody Hill subarea.	Same as above. The Preferred Alternative has an option for, and Alternative B2A includes, a station at 220th Street SW near I-5.
Goal MH-2: High-quality development **Policy MH-2.5:** Require commercial, industrial, and office development within the subarea to integrate pedestrian connections/improvements and transit access in their plans.	Same as Policy MH-1 above.
Goal MH-6: Neighborhood walkability **Policy MH-6.1:** Encourage a pedestrian and transit friendly neighborhood commercial center node at 220th Street/66th Avenue West.	The Preferred Alternative has an option for, and Alternative B2A includes, a potential station at 220th Street SW near I-5. The Lynnwood Link Extension would provide an alternative travel mode to single-occupancy vehicles and support the increased density currently existing and planned for after construction. Some pedestrian facilities such as sidewalks and street crossings would be improved as part of the project. There would also be improved pedestrian access to transit and the project would promote a more walkable neighborhood.
Goal MH-8: Neighborhood access and mobility **Policy MH-8.3:** Prioritize funding for transportation projects that emphasize safety, maintenance of existing facilities, mobility, demand management, linkages with regional transportation systems, and congestion reduction.	The Lynnwood Link Extension would provide a fast, efficient, and reliable mode of travel as an alternative to single-occupancy vehicles and provide connections to other urban centers in the project corridor and the region.

Table 4.2-17. Lynnwood Link Extension's Consistency with the Goals and Policies of the Melody Hill Subarea Plan

Specific Goals and Policies	Discussion
Goal MH-10: Convenient transit access **Policy MH-10.1:** Minimize negative impacts of traffic by continuing to develop non-motorized alternatives and encouraging transit, carpools, and other measures that reduce traffic congestion and pollution.	Same as Goal MH-8 above.

City of Lynnwood Comprehensive Plan

Plan Summary

The City of Lynnwood's Comprehensive Plan, which was first adopted in 1995 and most recently amended in 2011, provides coordinated goals, policies, maps, and strategies regarding the community's development, investment, and quality of life. It takes a broad perspective for a 25-year period and incorporates future needs for population and employment growth. The plan consists of eight elements that each contains goals and policies for guiding growth in Lynnwood: Land Use; Transportation; Housing; Parks, Recreation, and Open Space; Cultural and Historic Resources; Environmental Resources; Economic Development, Capital Facilities, and Utilities; and Implementation. Sound Transit reviewed the elements to identify the applicable goals and policies. The only elements with applicable goals and policies were in the Land Use, Transportation, and Environmental Resources elements.

Consistency with Lynnwood Link Extension

Table 4.2-18 summarizes relevant elements of the plan and discusses how the Lynnwood Link Extension is compatible and in conformance with these goals and policies.

Table 4.2-18. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Lynnwood Comprehensive Plan

Specific Goals and Policies	Discussion
LAND USE ELEMENT	
Goal: A balanced land use pattern that prevents urban sprawl, preserves and enhances residential neighborhoods, protects environmentally sensitive areas, protects people and property from environmental hazards, promotes economic development, and encourages community redevelopment at appropriate locations, resulting in a high quality physical environment for residents, workers, and visitors.	The Lynnwood Link Extension would support mixed-use development in designated urban growth areas and help focus the majority of growth in the proposed 200th Street SW, Lynnwood Transit Center, and Lynnwood Park-and-Ride Station areas in Lynnwood where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities

Table 4.2-18. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Lynnwood Comprehensive Plan

Specific Goals and Policies	Discussion
	as well as promoting walkable and cohesive neighborhoods and protecting those areas where growth is not encouraged.
Subgoal: Density: Assure that the density of development is consistent with the local and regional development patterns, with available and planned infrastructure, with Growth Management Act requirements, and with surrounding land uses.	Same as the goal above.
Subgoal: Development Balance: Assure that the ratio of land areas for various developed uses accommodates regional market needs while maintaining a good balance between urban developed and natural, or open, land allocations.	The Lynnwood Link Extension would encourage increased density and a mixture of land uses, which promotes transit and more walkable communities. The proposed station location with Alternative C1 would best promote walkability within the City Center, while Alternatives C2 and C3 would promote walkability by locating the station toward 44th Avenue West. Compared to Alternative C3, the Preferred Alternative (C3 Modified) also would avoid bisecting a large block to the east of 44th Avenue West that the City of Lynnwood has identified for high-density development in its City Center Plan.
Subgoal: Single-Family Housing Retention: Assure preservation of existing single-family neighborhoods and community identity through protection from conflict with or encroachment of incompatible land uses or activities.	Land use changes are regulated by jurisdictions. The Lynnwood Link Extension alternatives and the proposed 200th Street SW, Lynnwood Transit Center, and Lynnwood Park-and-Ride Station locations were chosen for their proximity to existing and planned commercial, employment, and residential concentrations consistent with community plans.
Subgoal: Urban Design: Establish and administer plans, policies, and regulations to improve the function and appearance of existing and new development and thereby enhance the livability and image of Lynnwood.	Lynnwood Link Extension facilities would be designed in coordination with the City to improve multimodal functions and seek opportunities to visually complement existing and future developments. Refer to Chapter 2 of the Final EIS for information on the project planning and development process.
Subgoal: Environment: Assure that developed uses of land avoid and protect environmentally sensitive areas and that such uses avoid and are protected from environmental hazard areas.	Sound Transit has considered environmentally sensitive areas in its development of the Lynnwood Link Extension alternatives and will continue to do so throughout project planning and development. Mitigation measures will be considered, as appropriate, for any impacts on environmentally sensitive areas that cannot be avoided.
Policy LU-6.1: The siting of public facilities shall follow these guideline: a) Public facilities should be centrally located in their service area. d) Facilities that serve the entire city shall be easily accessible from all parts of the city and should be minimized and then mitigate use-generated traffic or	The locations for Lynnwood Link Extension stations in Lynnwood were chosen to take advantage of public transit infrastructure already in place to serve the project corridor's travel needs. The proposed 200th Street SW, Lynnwood Transit Center, and Lynnwood Park-and-Ride Station sites met the needs for effective pedestrian, bicycle, transit, and automobile access. Also, adjacent

Table 4.2-18. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Lynnwood Comprehensive Plan

Specific Goals and Policies	Discussion
other impacts to residential neighborhoods. e) Facilities that serve regional needs shall be located in close proximity to regional transportation systems (freeways, arterials, or major public transit lines); such facilities shall minimize and then mitigate use-generated traffic or other impacts to residential neighborhoods. f) Regional facilities shall also be located in close proximity to supporting services. g) Public facilities serving regional needs should also be located near supporting or complementary uses and away from residential areas.	land uses and their population and employment are to be considered, as well as opportunities for transit-oriented development. The Preferred Alternative (C3 Modified) would reconfigure parts of the existing park-and-ride in order to develop the light rail station and a larger parking garage. It would feature a plaza connecting to the intersection of 200th Street SW/Alderwood Mall Boulevard/44th Avenue West, nearer to the core of the City Center subarea.
Policy LU-8.3: Establish a program to preserve historically and culturally significant sites, buildings, structures, landscapes, trees and artifacts.	Sound Transit has considered historic and culturally significant resources in development of the Lynnwood Link Extension alternatives and will continue to do so throughout project development. Mitigation measures will be considered, as appropriate, for any impacts on historic and culturally significant resources that cannot be avoided.
Policy LU-8.4: Provide adequate setbacks, buffers, landscaping, visual screens, and appropriate building scale and architecture to make development compatible with nearby residential and other land uses.	Sound Transit would develop design criteria that provide a consistent architectural theme for all elevated elements and for features such as stations while also reflecting the character of individual station areas. These criteria would be developed with input from the Cities through which the project corridor passes (Seattle, Shoreline, Mountlake Terrace, and Lynnwood). Visual and aesthetic resources are discussed in Section 4.5 of the Final EIS.
Policy LU-8.19: Screening of elements such as recycling and waste collection areas, compactors and dumpsters, loading and service areas, and mechanical equipment shall be required so that these elements do not create a negative impact to the streetscape and nearby residential areas.	Same as Policy LU-8.4 above.
TRANSPORTATION ELEMENT	
Goal: To provide mobility for residents, visitors and commuters through a balanced system of transportation alternatives that supports the City's land use vision, protects neighborhoods from transportation impacts and minimizes adverse impacts on the environment.	The Lynnwood Link Extension would bring to the City of Lynnwood light rail transit—a fast, reliable, and efficient mode of transportation that would provide linkages to other nonmotorized and transit options. Sound Transit has considered transportation mobility in development of the Lynnwood Link Extension alternatives and will continue to do so throughout project development. Mitigation measures will be considered, as appropriate, for any impacts on transportation mobility that cannot be avoided.

Table 4.2-18. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Lynnwood Comprehensive Plan

Specific Goals and Policies	Discussion
Subgoal: Public Transit System: Work with the transit providers to make transit an attractive travel option for local residents, employees, and users of regional facilities.	The Lynnwood Link Extension would provide for an improved quality of life by providing a fast, efficient, reliable mode of travel, thus encouraging increased densities, where allowed, and promoting more walkable and cohesive neighborhoods.
T-11: Work with the transit providers to establish a hierarchy of transit services focused on three major elements: 1) neighborhood services, 2) local urban service, and 3) inter-community and regional services.	The Lynnwood Link Extension would focus on the element of inter-community and regional services. The Lynnwood Link Extension would be part of the Link light rail system and directly connect to the northern terminus of the system at the Northgate Station, which is now under construction. Stations along the Lynnwood Link Extension would be located in Shoreline, Mountlake Terrace, and Lynnwood. From any of these stations, riders could continue on the Link system to the University of Washington, Capitol Hill, downtown Seattle, and SeaTac. Separate projects to extend light rail to the south or east will also allow direct connections to Bellevue, Redmond, and Federal Way.
T-12: Continue working with Sound Transit on the development of the improvements to the park-and-ride lot.	Sound Transit and the City of Lynnwood have been coordinating through the Lynnwood Link Extension planning phase and will continue to coordinate throughout the entire project.
T-15: Work with private development and transit agencies to integrate transit facilities and pedestrian and bicycle connections to residential, retail, manufacturing, commercial office, and other types of developments.	Same as T-12 above.
T-15.A.: Ensure that Sound Transit's approved ST 2 project that will extend light rail service under ST 2 to Lynnwood includes one light rail station in the Core District of the City Center, serving the City Center, and a separate station at the Lynnwood Transit Center serving commuters. Lynnwood will partner with Sound Transit to implement and secure funding for this extension. Construction of the City Center station should be completed with the original 2023 timeframe.	The Lynnwood Link Extension would extend light rail services to the city of Lynnwood. There is one station planned in Lynnwood with four alternatives. The Preferred Alternative (C3 Modified) would reconfigure parts of the existing park-and-ride in order to develop the light rail station and a larger parking garage. It would feature a plaza connecting to the intersection of 200th Street SW/Alderwood Mall Boulevard/44th Avenue West, nearer to the core of the City Center subarea. Alternative C1 would place the Lynnwood light rail station at 200th Street SW (the 200th Street Station), slightly north of the existing Lynnwood Transit Center. A plaza and walkways would connect the station to the existing transit center. Under the Preferred Alternative (C3 Modified) and Alternatives C2 and C3, the Lynnwood light rail station would be located at the existing Lynnwood Transit Center. A second station is currently not funded.

Table 4.2-18. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Lynnwood Comprehensive Plan

Specific Goals and Policies	Discussion
Subgoal: Transportation Functionality and Safety: Maximize the functionality and safety of the local circulation system to guide the design of all transportation facilities, incorporating new materials and technology and responding to the needs of neighborhoods, visitors, and businesses.	The Lynnwood Link Extension would be designed to maximize safety and provide fast and reliable transit access between urban centers and regional destinations.
T-24.6: Encourage land uses that would generate relatively low volumes of traffic, or complementary peak periods, or would have the potential to increase the use of public transportation systems.	The Lynnwood Link Extension would provide an alternative to single-occupancy vehicles; maintain mobility; and provide fast, efficient, and reliable connections to urban centers. It would also encourage increased density and a mixture of land uses, which promote transit and more walkable communities.
Subgoal: Environmental Factors: Minimize the impacts of the transportations system on the city's environment and neighborhood quality of life.	The Lynnwood Link Extension would provide for an improved quality of life by providing a fast, efficient, reliable mode of travel; encouraging increased densities where allowed; and promoting more walkable and cohesive neighborhoods.
T-27: Evaluate projects and programs for consistency with environmental issues such as climate change, conservation, and sustainability as required by law and deemed appropriate.	The Final EIS evaluates the Lynnwood Link Extension for environmental issues as required under both the National Environmental Policy Act and the State Environmental Policy Act. The Lynnwood Link Extension would also be designed to comply with Sound Transit's Sustainability Program.
T-28: Minimize consumption of natural resources through the efficient coordination of traffic flow, the promotion of non-motorized alternatives, and the use of public transit.	The Lynnwood Link Extension would promote a reduction in automobile use by introducing a new, fast, reliable transit alternative that could result in improved air quality and conserve energy.
T-29: Minimize spillover parking from commercial areas, parks and other facilities encroaching on residential neighborhoods.	In neighborhoods where parking is currently not restricted, Sound Transit would work with the applicable jurisdictions to implement prevention strategies (i.e., time limits or neighborhood permit programs) where appropriate.
T-30: Preserve the safety of residential streets and the livability of residential neighborhoods by discouraging non-local traffic on streets classified as residential streets.	The Lynnwood Station would generate new vehicle trips to and from the park-and-ride lot because more capacity would be provided with the light rail alternatives. Trips to and from the station would be expected to use arterial streets; traffic volumes on local residential streets are not likely to increase due to increased park-and-ride use.
T-31: Develop a strong neighborhood traffic control program to discourage cut-through traffic on non-arterial streets.	Sound Transit and the City of Lynnwood have been coordinating through the Lynnwood Link Extension planning phase and will continue to coordinate throughout the entire project.

Table 4.2-18. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Lynnwood Comprehensive Plan

Specific Goals and Policies	Discussion
ENVIRONMENTAL RESOURCES ELEMENT	
Subgoal ER-2: Conservation of Resources and Recycling: A city government that strives to reduce consumption of resources; minimizes waste; reduces pollution; uses new technologies; promotes conservation, reuse, and recycling; encourages non-automotive transportation; and promotes the use of alternative fuels.	The Lynnwood Link Extension would promote a reduction in automobile use by introducing a new, fast, reliable transit alternative that could improve air quality and conserve energy.
Objective ER-2.1: Recycle and conserve resources through the implementation of the following policies: **Policy ER-2.6:** Work to reduce emissions of greenhouse gases from transportation by encouraging the use of non-automotive transportation by city employees and the public and measures that reduce vehicle miles traveled.	The Lynnwood Link Extension would be powered by electricity. In the Puget Sound region and areas the Lynnwood Link Extension would serve, non-polluting hydropower is a major source of power. The Lynnwood Link Extension would result in a decrease of greenhouse gases during operation by reducing vehicle miles and hours traveled. The Lynnwood Link Extension would further promote regional polices related to reducing dependence on single-occupancy vehicles and increasing nonmotorized travel modes, especially within urban centers.
Subgoal ER-8: Air Quality: Raise Lynnwood's level of livability by supporting efforts to reduce urban environmental air pollution and increase indoor environmental quality in city-owned buildings.	Same as Objective ER-2.1 and Policy ER-2.6 above. In addition, the Lynnwood Link Extension would help reduce air pollution and conserve energy. The Lynnwood Station alternatives would be located in areas designated for increased density, and the Lynnwood Link Extension would provide direct and frequent access to other centers in the project corridor, as well as provide connections to regional destinations. Promoting transit and walkable communities would reduce vehicle miles and hours traveled and therefore would help reduce air pollution.
Objective ER-8.1: Support the reduction of urban environmental air pollution to establish standards. **Policy ER-8.1:** Strive to reduce air pollution from all sources, including transportation, wood burning and industrial activities through appropriate land use and transportation policies.	Same as Objective ER 2.1 and Subgoal ER-8 above.
Policy ER-8.2: Support regional growth management activities that help reduce the need for automobile transportation and related air pollution.	Same as Subgoal ER-8 above.
Policy ER-8.3: Promote clean-burning, alternative-fueled vehicles for use by large fleet operators, transit operators, and the public as a way of reducing impacts on air quality.	Same as Subgoal ER-8 above.

Table 4.2-18. Lynnwood Link Extension's Consistency with the Goals and Policies of the City of Lynnwood Comprehensive Plan

Specific Goals and Policies	Discussion
Subgoal ER-10: Reduction of Noise Pollution: Minimize, to the extent practical, noise pollution through the implementation of the following policies: **Policy ER-10.6:** Promote actions, such as equipment modifications and operational limits that reduce noise from transportation modes, construction sites, industrial uses, and commercial business establishments.	Sound Transit's noise policy is committed to minimizing noise impacts that exceed applicable Federal Transit Administration and Federal Highway Administration noise standards at the source. In addition, Sound Transit has committed to a maintenance program that includes periodic rail grinding or replacement, wheel truing or replacement, vehicle maintenance, and operator training, which help to maintain low noise levels along transit corridors. Refer to Section 4.7, Noise and Vibration, of the Final EIS for mitigation of noise impacts.

Lynnwood Access Study

Plan Summary

The Lynnwood Access Study provides an analysis of I-5 operations in the near term and the future, including local transportation improvements to support access, egress, and through traffic for the city of Lynnwood and the City Center Subarea to and from I-5. This study considered the City Center Master Plan land use and traffic improvements proposed through 2025 and PSRC regional growth forecasts through 2032.

Consistency with Lynnwood Link Extension

The Lynnwood Access Study was reviewed by Sound Transit and incorporated, as relevant, into the planning and design of the Lynnwood Link Extension.

Lynnwood City Center Subarea Plan

Plan Summary

The Lynnwood City Center Subarea Plan, which was first adopted in 2005 and last revised in 2007, outlines a vision for the City Center in which the area will evolve from existing automobile-oriented land uses into a compact, vibrant downtown area with mixed-use, pedestrian-friendly, and transit-supportive land uses. The plan provides the legal and policy underpinnings for revisions to the City's codes, Capital Facilities Program, and administrative structure to allow for and encourage development within the City Center.

Consistency with Lynnwood Link Extension

Table 4.2-19 summarizes relevant elements of the City Center Subarea Plan and discusses how the Lynnwood Link Extension is compatible and in conformance with this plan.

Table 4.2-19. Lynnwood Link Extension's Consistency with the Goals and Policies of the Lynnwood City Center Subarea Plan

Specific Goals and Policies	Discussion
LAND USE	
CCLU 2: Concentration and Intensity The City Center will be the focus of high concentrations of development, containing multi-story buildings, multiple residential development, parking structures, and a variety of civic buildings and spaces.	The Lynnwood Link Extension would support mixed-use development (commercial, office, and residential) in designated urban growth areas and would help focus the majority of growth in the potential 200th Street SW Station, Lynnwood Transit Center, and Lynnwood Park-and-Ride Station areas where existing zoning and land use codes allow for greater densities. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities, as well as promoting walkable and cohesive neighborhoods.
TRANSPORTATION	
CCT 11: Reduce Vehicle Trips Work with City Center property and business owners to develop and implement effective vehicle demand management strategies to reduce vehicle trips generated by commuting City Center workers.	The Lynnwood Link Extension would reduce dependency on automobiles by providing a fast, efficient, and reliable mode of travel with linkages to other modes, and also support development in those areas targeted for growth.
CCT 12: Increase Transit Service Work with Community Transit and Sound Transit to increase transit services for the City Center.	The Lynnwood Link Extension would provide mass transit, which is a fast, reliable, and efficient mode of travel that would provide linkages to other nonmotorized and transit options.
CCT 15: Bicycle Storage Provide bicycle storage facilities or bicycle racks at the transit center and other destinations within the City Center.	The Lynnwood Link Extension would support Sound Transit's updated Bicycle Policy (2009) to integrate bicycles with regional transit services and facilities where land regulations allow. Basic elements of the policy include providing a convenient means to secure bicycles, short- and long-term bicycle parking, and a facility design and layout that accommodate both bicycle and pedestrian movements.
CC 19: Mixed Use Development Allow mixed-use developments to provide reduced parking supply.	The Lynnwood Link Extension would support transit-oriented development by allowing greater density and a mixture of land uses in the potential 200th Street SW Station, Lynnwood Transit Center, and Lynnwood Park-and-Ride Station areas. The increased density would allow for more efficient use of land, thus allowing for an efficient provision of services and facilities, as well as promoting walkable and cohesive neighborhoods.

Lynnwood City Center Design Guidelines

Plan Summary

The Lynnwood City Center Design Guidelines set forth guidelines for all development and redevelopment within the Lynnwood City Center. These guidelines are based on the Planning and Urban Design Principles of the City Center Subarea Plan.

Consistency with Lynnwood Link Extension

Sound Transit would develop design criteria that provide a consistent architectural theme for all elevated elements and for features such as stations while also reflecting the character of individual station areas. These criteria would be developed with input from the Cities through which the project corridor passes (Seattle, Shoreline, Mountlake Terrace, and Lynnwood).

City of Lynnwood Mode Split for City Center Street Master Plan

Plan Summary

The City of Lynnwood Mode Split for City Center Street Master Plan was prepared to include an analysis of the effects of the proposed ST2 projects, including light rail transit extensions into the City Center, station placements within the City Center, and opportunities for station placement to serve as a catalyst for transit-oriented development. This report also evaluates alternative station locations from the perspective of general transit guidelines and the City of Lynnwood.

Consistency with Lynnwood Link Extension

The Lynnwood Link Extension would extend light rail services to the City of Lynnwood. There is one station planned in Lynnwood with four alternatives. Alternative C1 would place the Lynnwood light rail station at 200th Street SW (the 200th Street Station), slightly north of the existing Lynnwood Transit Center. A plaza and walkways would connect the station to the existing transit center. Under Alternatives C2 and C3, the Lynnwood light rail station would be located at the existing Lynnwood Transit Center. The Preferred Alternative (C3 Modified) would reconfigure parts of the existing park-and-ride in order to develop the light rail station and a larger parking garage. It would feature a plaza connecting to the intersection of 200th Street SW/Alderwood Mall Boulevard/44th Avenue West, nearer to the core of the City Center subarea.

The analysis presented in the City of Lynnwood Mode Split for City Center Street Master Plan was reviewed by Sound Transit and considered in developing the project alternatives.

Lynnwood Local Improvement District Feasibility Study

Plan Summary

The Lynnwood Local Improvement District (LID) Feasibility Study collected property data and developed a range of potential special benefits that could be used to estimate the potential for LID funding for transportation infrastructure in the City Center subarea.

Consistency with Lynnwood Link Extension

The results of the Lynnwood LID Feasibility Study were reviewed by Sound Transit as part of the collaborative approach to considering station area planning with the City. Sound Transit supports these and other local funding mechanisms as a way to help provide supporting infrastructure to maximize the benefits of the regional transit investment.

APPENDIX I-4.5

Visual and Aesthetic Resources

APPENDIX I-4.5 VISUAL AND AESTHETIC RESOURCES — BACKGROUND INFORMATION

Introduction

This description of the existing visual conditions within the Lynnwood Link Extension Project study area is based on the visual assessment system developed by the Federal Highway Administration (FHWA). The approaches and terminology used in this assessment are found in FHWA's Visual Impact Assessment for Highway Projects (FHWA 1981). This appendix also assesses the project's consistency with visual resource goals and policies of relevant agencies, including the Washington State Department of Transportation (WSDOT), which is responsible for the Interstate 5 (I-5) corridor, and local government comprehensive plans.

The assessment of existing visual quality is concerned with the character of the visual experience for a typical viewer. The assessment of visual quality is subjective. A person perceiving the visual environment brings personal and cultural frames of reference to the discernment and evaluation of visual information. There is, however, broad agreement in federal, state, and local regulations as well as from research that establishes general public consensus on what constitutes a desirable visual environment.

The WSDOT Roadside Policy Manual (M 3110.01) provides the most explicit guidance for the treatment of portions of the right-of-way outside the vehicular travel lands. This applies to all lands managed by WSDOT and may extend to sites outside the right-of-way boundaries. Within the project area, there are two relevant classifications:

- Forested Roadside: The Forested landscape is predominantly natural or naturalized trees. A Forested roadside is characterized by natural-appearing landforms and native trees and/or understory vegetation. Zone 2 may be meadow or shrubs. Forest may appear different from location to location due to climatic and elevation differences.
- Built Character: Built character indicates a landscape in which human elements and structures are notable or predominant in the overall context. Built character includes suburban and urban areas. Once structures dominate the natural environment and human manipulation of the land is dominant, the roadside is considered to have a Built classification. Vegetation may be native or non-native within a setting that has a predominance of built elements such as buildings, walls, and bridges. In some locations, a more consistent, refined appearance is evident throughout the management zones. Special attention is given to architectural detail within suburban and urban areas and on Scenic Byways. Roadside management is used to develop a consistent, informal, and moderately refined appearance.

WSDOT uses a system of zones to categorize roadside activities. Figure 1 shows those zones as they relate to Project Design and Maintenance activities.

These zones are all outside of the travelled roadway and shoulders.

Zone 1 includes areas adjacent to the pavement that are vegetation-free or routinely mowed.

Zone 2 includes the "Clear Zone" as defined in the Design Manual as the roadside border area available for use by errant vehicles. This area may consist of a shoulder, a recoverable slope, a no recoverable slope, and/or a clear run-out area. The median is part of a clear zone. In a Forested Roadside, Zone 2 may be meadow or shrubs.

Zone 3 includes the area beyond the clear zone up to the right of way line and typically contains native or naturally occurring vegetation.

The WSDOT Design Manual (M 22-01.11)Chapter 900 also provides guidance.

The Washington State Department of Transportation (WSDOT) recognizes roadsides as an asset. WSDOT manages roadsides, balancing operational and environmental functions and lowest life cycle costs consistent with a reliable, safe, and sustainable transportation system. The roadside is the primary place used to blend transportation facilities into the context of the natural and built environments. The roadside is the green infrastructure that contributes to the transportation system. It integrates natural processes into the built environment and includes the concepts of low-impact development (LID).

Good roadside design coordinates many elements, including, but not limited to: structures; vegetation; signs; pedestrian and bicycle movement; stormwater treatment facilities; and other right of way functions. All the elements work together to provide visual continuity in the highway corridor. Highway Beautification Act Lands on I-5 include land outside of the right-of-way acquired in accordance with the Highway Beautification Act of 1965 (23 United States Code [USC] 319, Landscaping and Scenic Enhancement) which provided separate funding for roadside development. These lands were acquired in accordance with the following provisions:

- 23 Code of Federal Regulations (CFR) 752 .2 Policy

  (a) Highway esthetics is a most important consideration in the Federal-aid highway program. Highways must not only blend with our natural, social, and cultural environment, but also provide pleasure and satisfaction in their use.

  (c) The development of the roadside to include landscape development, safety rest areas, and the preservation of valuable adjacent scenic lands is a necessary component of highway development.

- 23 CFR 752.9 Scenic lands.

  (a) Acquisition of interests in and improvement of strips of land or water areas adjacent to Federal-aid highways may be made as necessary for restoration, preservation, and enhancement of scenic beauty.

  (b) Scenic strip interests may be acquired in urban or rural areas, combined in one or more projects, authorized separately whether or not there is or has been a Federal-aid project on the adjoining Federal-aid highway.

  (c) Approval of acquisition and development of scenic strips on completed Interstate should be conditioned on a showing that the acquisition of scenic strips was considered under the Highway Beautification Program for that particular section of Interstate.

If any of these areas are altered or used for other purposes, FHWA requires mitigation for the square footage and function.

1.1 Local Jurisdictions

Local jurisdictions have a variety of policies and regulations that relate to visual quality, aesthetics, and neighborhood character. Washington State's Growth Management Act (GMA) requires state and local governments to manage statewide growth by identifying urban growth areas (UGAs) and preparing comprehensive plans, capital improvement programs, and development regulations. The GMA does not have specific mandates to consider visual and aesthetic concerns. The GMA, however, does refer to "ensuring the vitality and character of established residential neighborhoods" (Revised Code of Washington [RCW] 36.70A.070(2)). The comprehensive plans and land use regulations of the jurisdictions through which the proposed Lynnwood Link Extension routes pass are summarized to provide criteria to evaluate impacts of the proposed project alternatives.

City of Seattle

Seattle's most relevant polices are in the State Environmental Policy Act (SEPA) and Agency Decisions Specific environmental policies in the Seattle Municipal Code (SMC) 25.05.675(2)(a).

It is the City's policy to protect public views of significant natural and human-made features: Mount Rainer, the Olympic and Cascade Mountains, the downtown skyline, and major bodies of water, including Puget Sound, Lake Washington, Lake Union, and the Ship Canal, from public places consisting of the specified viewpoints, parks, scenic routes, and view corridors.

None of the public places from which views are protected are present within the project corridor except for I-5, which is designated a scenic route.

City of Shoreline

Shoreline's Comprehensive Plan Community Design Element Goals & Policies document contains a number of relevant policies generally similar to Goal CD I, as described in Appendix I-4.2, Land Use Plans, Goals, and Policies.

City of Mountlake Terrace

Mountlake Terrace's Comprehensive Plan Land Use Element contains a number of relevant policies generally similar to Policy LU-1.5, which includes the City's transportation facilities:

- Retain or enhance scenic views, whenever possible.

City of Lynnwood

Lynnwood's Comprehensive Plan Land Use Element contains a number of relevant policies, including the following:

- Views may be protected through height restrictions, sign controls, view corridor requirements, and landscaping regulations. View corridors are openings in the urban landscape that allow views of important features such as historical buildings, mountains, shorelines, and parks. Lynnwood's topography provides limited views of the Olympic and Cascade Mountains and Mount Rainier.

Specific regulations relating to transportation facilities include:

- 17.05.100 Aesthetics. A. Development which maintains and improves the existing aesthetic character of the community should be encouraged. It is the policy of the city that:
  - Existing vegetation should be preserved for the maximum possible time before being cleared for development.

STUDY AREA

The area of visual quality analysis is defined by the viewshed from which salient aspects of the proposed project alternatives can be seen. These viewsheds constitute the study area for the aesthetics and visual quality analysis. The analysis area extends at least 500 feet on either side of the project alignments, but in some cases the viewshed is larger, depending on topography, the scale of the project features, and viewpoints available.

The assessment of existing visual quality and viewsheds was based on site visits, examining aerial photographs, reviewing conceptual engineering drawings of the proposed alternatives, reviewing existing plans and policies, and preparing an inventory of relevant existing conditions.

Three concepts were used in defining existing visual quality within the viewsheds.

Visual Character refers to identifiable visual information. Visual character may be distinguished both at the level of specific elements and at the level of relationships among elements. The first step in assessing visual effects is to describe visual attributes and environmental features using objective descriptors (such as form, line, color, and texture).

Four key features are used to identify relationships between elements of the visual environment: dominance, scale, diversity, and continuity. The integration of these elements results in a complete description of the character of a view.

> **Dominance** refers to the position of an individual element, or its extent or contrast among all the other elements of a view.
>
> **Scale** refers to apparent size relationships between an element and the other components of its surroundings.
>
> **Diversity** is a function of the number, variety, and intermixing of elements in a view.
>
> **Continuity** refers to the maintenance of visual relationships between connected or related landscape features.

Viewers are categorized as having high, average, or low sensitivity to changes in the landscape they observe.

> **High Viewer Sensitivity** generally describes the experience of people who are in an area to enjoy its visual features. Tourists and recreational users attracted to an area of natural beauty, or an urban landscape with unique features, or historic associations are among the most sensitive to visual features. Residents of an area also typically are very sensitive to change in the landscape because they are familiar with a landscape and view it frequently.
>
> **Average Viewer Sensitivity** generally describes the experience of people who view the visual context as a secondary feature of other activities. People who are engaged in activities that require them to focus on features other than the landscape, such a driver passing through an area, are likely to be less sensitive to the visual context. An exception may be drivers with the option of selecting several routes who chose a particular route for its visual quality or drivers and passengers taking a scenic route. Persons at work or shopping or engaged in other purposeful activities may value a pleasant environment but generally are not at a specific location for the purpose of enjoying the scenery.
>
> **Low Viewer Sensitivity** generally describes the experience of persons engaged in activities that render the quality of their surroundings as irrelevant or incidental.

Visual quality refers to the perception of the visual experience by viewers and is described in terms of several parameters.

> **Vividness** refers to the way landscape components combine in distinctive and memorable visual patterns. For different landscapes, various elements may contribute to vividness.
>
> **Intactness** refers to the integrity of natural and human-built visual patterns, the extent to which the scene "hangs together." The evaluation of intactness also includes the extent to which the landscape is free from encroaching elements. Encroaching elements may include a single eyesore or multiple elements.
>
> **Unity** refers to the visual coherence and compositional harmony of the landscape considered as a whole. It refers to the fit between elements of the landscape but does not connote uniformity in design or character. In some cases, landscapes also have unity due to a common design milieu or association with historical events.

The visual quality of an area has a complex relationship to viewer sensitivity. In an area with high visual quality, such as a spectacular view, a person who does not regularly see the view or is distracted by the driving experience may still place a high value on the view. In an area with low visual quality, persons still may object to views that fall short of their visual goals for the area.

1.2 Segment A Viewsheds

1.2.1 Viewshed 1: NE 92nd Street to NE 115th Street

Viewshed 1 is in the Northgate area, a large retail, office, multifamily, and institutional area with the Northgate Mall and surrounding shopping area as its main feature. A variety of moderate intensity office uses as well as large multifamily complexes are located on both sides of I-5. The 60-acre North Seattle Community College campus is west of I-5.

The southern boundary of Viewshed 1 is NE 95th Street. The south side of NE 95th Street is south of the planned Northgate Link Light Rail station. This street provides a readily identifiable topographical and visual break in the residential neighborhood to the south and a readily identifiable overpass on I-5 leading to a downgrade in which the Northgate Mall and North Seattle Community College are the most notable features.

The northern boundary of Viewshed 1 is NE 115th Street. The north side of NE 115th Street, which is within the residential area north of the Northgate commercial area, is the approximate boundary between multifamily development to the south

and single-family residential development to the north. This street is at the beginning of a highway curve where the character of I-5 changes.

The eastern boundary of Viewshed 1 is generally the topographic ridge east of Roosevelt Way (10th Avenue NE). The visual boundary is generally much narrower and defined by local topography and view blockage by mature trees or buildings. South of NE Northgate Way (NE 110th Street), views of the light rail corridor east of 3rd Avenue NE are generally blocked by large buildings, including Northgate Mall, the Thornton Place mixed-use development, and multistory buildings along 1st Avenue NE south of NE 100th Street. North of NE Northgate Way, views of the light rail corridor are limited to adjacent buildings and streets that end at I-5. Large multifamily buildings block views to NE 115th Street except from upper floors. North of NE 115th Street, single-family residences, large trees, and the noise wall along I-5 block most views from a distance greater than a city block. The exception would be with the proposed Alternative A3 elevated crossing over NE 117th Street.

The Viewshed 1 western boundary is generally the topographic ridge along Dayton Avenue North about a mile from I-5. The visual boundary is generally much narrower and defined by local topography and view blockage by mature trees or buildings. South of North 113th Street, views of the light rail corridor west of Meridian Avenue North are generally blocked by large buildings, including the North Seattle Community College and office and multifamily buildings. In most cases, views are limited to the upper floors of buildings facing I-5 because the highway is higher than the topography to the west. North of North 113th Street, views of the light rail corridor are limited by topography and noise walls along I-5. The exception would be the proposed Alternative A3 elevated crossing over NE 117th Street.

Northgate Mall occupies the area immediately east of the light rail corridor on the east side of I-5, with buildings up to 60 feet high that extend from Northgate Way (NE 110th Street) south to NE 103rd Street. The shopping center is surrounded by surface parking lots with landscaping that provides a continuous tree canopy when viewed from the middle distance. South of the shopping center is the Thornton Place mixed-use development, which consists of a multistory parking garage, a multistory theater complex, and a multistory residential use that extends to about NE 102nd Street. South of NE 102nd Street, existing uses consist of three- to five-story office buildings and residential uses. North of Northgate Way is a mix of multifamily uses ranging from two to five stories high and commercial uses ranging from one to several stories high. East of 5th Avenue NE, existing uses are primarily one-story retail with surface parking.

West of I-5, the largest use is North Seattle Community College between North 92nd Street and North 103rd Street. The college campus includes one- to three-story buildings and an extensive parking lot with extensive landscaping. North of

the college are four- to six-story office and residential buildings, with some smaller-scale retail along Northgate Way.

Visual Character

I-5 is about 350 feet wide (shoulder to shoulder) in the Viewshed 1 area, with interchange and collector-distributor lanes up to 600 feet wide. It is generally equivalent to 10 to 12 lanes south of Northgate Way. The highway character is consistent with the Roadside Classification Plan of semi-urban, which envisions a prevalence of built environment features intermixed with natural or naturalized elements.

The roadway orientation is almost due north-south. I-5 curves to the east at about North 113th Street. Views to the north end with a skyline of evergreen trees in the distance. To the south, the view terminates in a topographic break at about NE 87th Street. At the termination of the view, the highway corridor is framed on both sides by the tops of evergreen trees. The downtown Seattle skyline is not visible to the south from this viewshed.

I-5 is framed to the east by stands of native trees that vary in the extent to which they screen views. Northgate Mall and parking garages dominate the view in the middle distance. The eastern horizon elements consist of distant continuous stands of treetops.

The roadside to the west of I-5 in Viewshed 1 is framed by sparse vegetation to NE 112th Street, where a noise wall begins. Western horizon elements include continuous stands of treetops, with the upper floors of buildings at North Seattle Community College and apartment buildings dominating the middle distance between Northgate Mall, North 105th Street, and North 110th Street.

There are no major natural features on this section of I-5. The central visual element for vehicle occupants is the linear character of the horizontal travel lanes with consistent texture and color. The highway is framed by managed vegetation outside of travel lanes that varies in texture and color according to its density and maturity. In places, mature evergreen trees at the margins of the highway provide the dominant features of the corridor because of their greater visual interest as compared to linear features. In Viewshed 1, large-scale urban buildings such as the multistory Northgate Mall, offices, and apartment buildings dominate the landscape because they are the largest and most prominent features. Other elements have a variety of size, character, styles, and continuity in this viewshed.

East of I-5, the highway is a substantial component of the landscape for viewers in and west of large buildings such as Northgate Mall, offices, and apartment buildings. The highway is elevated above surrounding topography, and its linear features and vehicles on the roadway are screened to various extents by landscaping within the

right-of-way and landscaping, street trees, and parking lot trees that generally interrupt ground-level views to the west. East of the large buildings and in the residential areas farther to the east, the major component of views is large-scale urban buildings, which generally block views of I-5. West of I-5, the major component of views include multistory apartment and office buildings. I-5 is visible only from the closest buildings and parking lots because views are blocked by buildings and landscaping. The dominant elements in the landscape are large buildings with a diversity of scale and design features.

Viewer Sensitivity

Viewers of the landscape in the Viewshed 1 area consist of drivers and occupants of about 200,000 vehicles per day who travel through the area, drivers and occupants of vehicles on local arterials, and shoppers at Northgate Mall and other establishments. Office and residential occupants of multistory buildings are a much smaller component of the potential viewing population. All viewers are likely to be of low to average sensitivity.

Visual Quality

Visual quality of views from I-5 in Viewshed 1 is low. Vividness is low. There are no near, middle, or distant features that are distinctive or memorable. Intactness is moderate; the highway has consistent character consistent with the Roadside Classification Plan of semi-urban, with built environment features intermixed with natural or naturalized elements. Unity is low to moderate. The consistent character of I-5 travel lanes, with high-intensity urban uses on both sides moderated somewhat by vegetation, results in a moderate level of visual coherence and compositional harmony between the various elements of the highway and surrounding landscape.

Visual quality is low to medium for all viewer groups in land uses on both sides of I-5 in Viewshed 1. There are no distinctive or memorable features. Urban uses on both sides of I-5 provide some compositional harmony through similar building scale and moderately dense landscaping, which results in a similar street-level character over most of the area. The visual quality looking towards I-5 from the neighborhood is composed of prominent roadway elements and vehicles visible from nearby properties that vary from the scale and character of urban commercial and multi-family residential buildings and streetscapes. The visual character of Viewshed 1 is illustrated in photographs of Viewpoint 1 from I-5 northbound, Viewpoint 2 at 1st Avenue NE and NE 97th Street, and Viewpoint 3 at 1st Avenue NE and NE 113th Street.

1.2.2 Viewshed 2: NE 115th Street to NE 133rd Street

The northern boundary of Viewshed 2 is defined by a transition in topography as well as between a single-family residential area on the east side of I-5 and Jackson Park Golf Course. The topography slopes up gradually toward NE 130th Street.

The eastern Viewshed 2 boundary is generally the topographic ridge along 10th Avenue NE. The visual boundary is generally somewhat narrower and defined by mature trees that block views.

The western boundary is generally the topographic ridge along Corliss Avenue North about a half mile from I-5. The visual boundary is generally much narrower and is defined by mature trees that block views.

Viewshed 2 includes a single-family residential area on both side of I-5. There are a few churches and institutional uses in the area and a park on the west side of the freeway extending from NE 125th Street to NE 130th Street.

Visual Character

I-5 is 350 feet to 450 feet wide in Viewshed 2, with interchange and a collector-distributor lane on the east side equivalent to 10 lanes with no median. The highway exhibits a prevalence of built environment features, with noise walls on both sides and little landscaping and vegetation south of NE 130th Street. The visual character is dominated by the linear character of the horizontal travel lanes and the linear character of continuous noise walls, both of which have similar and consistent texture and color. The highway is framed by managed vegetation behind the noise walls, but the greater complexity of texture and color is a minor element because of the visual dominance of the framing noise walls.

The visual character of the residential areas on both sides of I-5 is provided by the similar character and design of small single-family residences on lots with lawn and landscaped areas. Large evergreen trees provide the dominate color and texture of distant views and are the dominant element above the roofline of residences. Streets have a consistent character from framing residences and landscaping. I-5 is not visible from most neighborhoods in Viewshed 2 because views are blocked by intervening buildings and landscaping. Views from within a residential block of I-5 are generally screened by a combination of topography, vegetation, and noise walls. Noise walls vary in their visual prominence when viewed from adjacent neighborhoods, largely due to the extent of vegetation on the residential side of the walls, which is generally substantial. I-5 is not visible as an encroaching element from surrounding neighborhoods.

Viewer Sensitivity

Residents of the single-family residential neighborhood on the east side of I-5 in Viewshed 2 and users of parks and churches are likely to be highly sensitive to changes in the visual context. Drivers and occupants of about 200,000 vehicles per day who travel through this viewshed on I-5 are likely to be of average sensitivity.

Visual Quality

The visual quality of I-5 south of 130th Street is low due to encroachment of noise walls and lack of intactness due to the low presence of vegetation between the noise walls and highway. There are no features that are distinctive or memorable in views available to vehicle occupants.

The visual quality of the surrounding neighborhoods is medium to high because of the compositional harmony of the similar-scale buildings and moderately dense landscaping that results in a similar street-level character over most of the viewshed. The visual quality looking towards I-5 from the neighborhood is composed of consistent scale and character of structures and vegetation. Vegetation and noise walls limit views towards the highway while providing a consistent background character.

The visual character of Viewshed 2 is shown in photographs of Viewpoint 4 at NE 113th Street and 3rd Avenue NE, Viewpoint 5 at the church at 3rd Avenue NE north of NE 117th Street, Viewpoint 6 at NE 124th Street east of 5th Avenue NE, Viewpoint 7 on 5th Avenue at NE 125th Street and Viewpoint 8 at Roosevelt Way NE (NE 130th Street) east of 5th Avenue NE.

1.2.3 Viewshed 3: NE 133rd Street to NE 152nd Street

The Viewshed 3 northern boundary is defined by a transition in topography as I-5 transitions from a downslope to a level section. The eastern viewshed boundary is the topographic ridge that extends to the northeast from 10th Avenue NE to near 4th Avenue NE near NE 145th Street. The western boundary is generally the topographic ridge along Burke Avenue North about a half mile from I-5. The visual boundary on both sides is generally much narrower and is defined by mature trees that block views.

Viewshed 3 includes the City of Seattle's Jackson Park Golf Course on the east side of I-5 and a single-family residential area and a private school campus on the west side. Views of I-5 are available from the fairways in the westerly portion of the golf course but are obscured in many areas by heavy vegetation between the I-5 travel lanes and 5th Avenue NE and between this arterial and the golf fairways. Views from the residential area on the west side of I-5 are currently excluded from most residences and residential streets by continuous noise walls and dense vegetation,

except for some higher elevation residences. Views from residences north of NE 145th Street and east of I-5 are blocked by noise walls. Views down streets perpendicular to I-5 include views over the noise walls near 5th Avenue NE, where topography is higher.

Visual Character

In Viewshed 3, I-5 has eight travel lanes, except at the NE 145th Street interchange. The highway is generally above the adjacent grade on the east side and below the adjacent grade on the west side. The central visual element for vehicle occupants is the linear character of the horizontal travel lanes with consistent texture and color. The view terminates to the north with a skyline characterized by the distant color and texture of evergreen trees in the distance. For southbound traffic on I-5, the view approaching the NE 145th Street overpass includes the distant vivid element of snow-capped Mount Rainier, which rises in contrast to the distant color and texture of evergreen trees on the remainder of the skyline. South of NE 143rd Street, the view terminates at the topographic rise near NE 130th Street, with treetops the dominant feature of the distant skyline. The downtown Seattle skyline is not visible in any views to the south from I-5 in Viewshed 3.

The dominant landscape feature is the Jackson Park Golf Course to the east, with elements of vivid green in fairway areas framed by dark green stands of mature evergreens. The land cover immediately east of I-5 is a mix of deciduous trees, which provides a diversity of color and texture in all seasons. Land cover to the west is a homogeneous dark green of mature evergreen tree cover rising on a hill, with little or no views of roofs or other features of the residential neighborhood.

Golfers at Jackson Park Golf Course view a landscape dominated by the color and texture of heavy evergreen vegetation in the middle distance on the facing hill to the west. The near views of the golf course are of the connected features of horizontal elements of grass turf on fairways separated by bands of mature evergreen trees. I-5 at the base of the hill to the west is largely not an element of views because of screening by mature vegetation.

The visual character of the residential areas on the west side of I-5 is dominated by b large evergreen trees on individual lots and by mature vegetation adjacent to I-5. Residential streetscapes have a consistent character because they are framed by residences and landscaping. I-5 is not visible from most neighborhoods in Viewshed 3 because views are blocked by intervening buildings and mature trees. Noise walls vary in their visual prominence when viewed from the back yards of adjacent single-family houses.

Viewer Sensitivity

Golfers at Jackson Park Golf Course are likely to be highly sensitive to changes in the landscape because these viewers are engaged in a recreational use in an area with high visual amenities. Residents of the single-family residential neighborhood on the west side of I-5 are also likely to be highly sensitive to changes in the visual context. Drivers and occupants of about 200,000 vehicles per day who travel through Viewshed 3 on I-5 are likely to be of average sensitivity.

Visual Quality

The visual quality of Jackson Park Golf Course is medium to high. The golf course has a unity and compositional harmony of a landscaped setting and is buffered from views of encroaching features such as I-5 by mature vegetation. There are no vivid features visible. Residential areas are of medium visual quality because of the similar character of the residential neighborhood with similar building scale and moderately dense landscaping that provides a similar street-level character with I-5 visible from higher topography. The visual character of I-5 is medium because dense vegetation frames both sides I-5. The view from southbound vehicles on I-5 from NE 155th Street to NE 145th Street includes Mount Rainier as a distinctive and memorable element in the distance. This short stretch of highway has medium visual quality because of that view and framing vegetation; however, this view lasts for only for a few minutes of travel and the context of the view is the travel lanes of the highway. Intermittent views of Mount Rainier and other Cascade Mountain peaks are available to travelers on I-5 through much of Washington and Oregon.

The visual character of Viewshed 3 is shown in photographs of Viewpoint 10 from Jackson Park Golf Course, Viewpoint 11 from I-5 northbound at NE 143rd Street, Viewpoint 12 from 5th Avenue NE at NE 145th Street, Viewpoint 13 from North 145th Street at 4th Avenue North, Viewpoint 14 from NE 148th Street west, Viewpoint 16 from 5th Avenue NE at NE 149th Street, and Viewpoint 17 from I-5 southbound at NE 148th Street.

1.2.4 Viewshed 4: NE 152nd to NE 178rd Street

Viewshed 4 encompasses a portion of the I-5 corridor within the city of Shoreline generally characterized by a slope to the east and more level topography on the west. The northern boundary of this viewshed represents a change in highway character from one dominated by vegetation to a greater dominance of noise walls.

The eastern boundary of this viewshed east of I-5 is a single-family residential area largely on a slope above the highway, with the 3.6-acre Ridgecrest Park at NE 162nd Street adjacent to the highway. The western boundary of Viewshed 4 west of I-5 and largely below the grade of I-5 travel lanes consists of a single-family residential area with Twin Ponds Park south of NE 155th Street, the King County Metro Transit

North Base and King County Transfer Facility between North 163rd Street and North 167th Street, James Keough Park between North 163rd Street and North 167th Street, and Ronald Bog Park south of NE 175th Street. None of these parks has views of I-5 travel lanes because of topography, noise walls, and vegetation. An approximately 0.5-acre WSDOT "beautification area" is at the southeast corner of the NE 175th Street interchange. A 1-acre "beautification area" is located across the highway at the northwest corner of the interchange.

Visual Character

I-5 is 150 feet to 200 feet wide in Viewshed 4, with eight travel lanes except at the NE 175th Street Interchange and the access to the transit base. The visual character is dominated by the linear character of horizontal travel lanes, with consistent texture and color. The highway is framed by heavy mature evergreen vegetation on both sides, except at the King County Transfer Facility, which provides a contrasting natural element.

The visual character of the residential areas on both sides of I-5 is consistent from the residences and landscaping. I-5 is not visible from neighborhoods to the east because views are blocked by intervening buildings and mature trees. Ridgecrest Park at NE 162nd Street on the east side of the highway is screened by a berm and a row of large deciduous trees. On the west side of I-5, most of the project corridor is below the elevation of the travel lanes.

Viewer Sensitivity

Viewers of the landscape in Viewshed 4 consist of residents of the single-family residential neighborhoods on both sides of I-5, who are highly sensitive to changes in the visual context. Park users are also considered highly sensitive to changes they can observe. Drivers and occupants of about 200,000 vehicles per day who travel through the viewshed on I-5 are likely to be of average sensitivity.

Visual Quality

The visual quality of I-5 is medium because of the dense vegetation that frames the highway on both sides, but I-5 has no vivid features in Viewshed 4. Visual quality of the residential area is medium because of the unity provided by the homogeneous character of similar building scale and moderately dense landscaping, which provide a similar street-level character. The residential area in this viewshed has no features that are vivid, distinctive, or memorable. Direct views of I-5 are not available except for overhead signage. Noise from I-5 is, however, a constant reminder of its presence. The extent to which the I-5 corridor is a visual intrusion is reduced by topography, vegetation buffers, and noise walls and does not displace the unity of

the surrounding neighborhoods. These features provide a moderate level of fit between I-5 and the elements of the surrounding residential neighborhood.

The visual character of Viewshed 4 is shown in photographs of Viewpoint 18 and 19 at NE 155th Street west of 3rd Avenue NE, Viewpoint 20 at 1st Avenue NE south of NE 159th Street, and Viewpoints 21 and 22 at Ridgecrest Park.

1.2.5 Viewshed 5: NE 178rd Street to NE 190th Street

The northern boundary of Viewshed 5 is a transition between a relatively level highway grade and a downslope beginning at about NE 190th Street. The viewshed is bounded by topography, but the main distinguishing feature is the prominence of noise walls on both sides of the highway, which are more prominent at the top of a cut slope on the west side.

Single-family residential use is present on both sides of I-5 in this viewshed. There are a few churches, cemeteries, and institutional uses in the area. On the west side of I-5 between North 185th Street and North 190th Street are the Shoreline School District administrative offices, conference center, and stadium. An approximately 0.5-acre beautification area is on the east side of I-5 south of NE 180th Street. Also east of I-5 in Viewshed 5 is a parcel owned by Seattle City Light for a transmission line corridor that accommodates a water pump station. Residential areas in this viewshed do not currently have views of I-5 due to noise walls.

Visual Character

I-5 is about 160 feet wide in Viewshed 5, with eight lanes. The visual character is dominated by the linear features of the horizontal travel lanes. The highway is bounded by noise walls set back from travel lanes on the west side by an intervening cut slope with little mature vegetation. On the east side of I-5, there are noise walls close to travel lanes through most of the corridor, with little or no intervening vegetation. Visual character is dominated by manmade features. There are no vivid features in views.

The visual character of the residential areas on both sides of I-5 is defined by the similar character and design of small single-family residences on lots with lawn and landscaped areas. Large evergreen trees provide the dominant color and texture of distant views and are the dominant element above the roofline of residences. Streets have a consistent character from the residences and landscaping that frame the arterials. I-5 is not visible from most neighborhoods because views are blocked by intervening buildings and landscaping. The Shoreline School District administrative offices, conference center, and stadium on the west side of I-5 provide a contrasting character, with the scale of the stadium dominating near views. The Seattle City Light transmission line corridor on the east side of I-5 is prominent because of its tall metal lattice towers north of NE 185th Street on a corridor that cuts diagonally

through the neighborhood; the transmission line corridor is less prominent to the south, where it transitions to two sets of wooden poles along streets. Views of I-5 from residential neighborhoods are generally screened by a combination of topography, vegetation, and noise walls, which reduces the highways visual intrusion and provides a moderate level of fit with the surrounding residential neighborhoods.

Viewer Sensitivity

Drivers and occupants of about 200,000 vehicles per day who travel through Viewshed 5 on I-5 are likely to be of average sensitivity. Residents of the single-family residential neighborhoods on both sides of the highway are likely to be highly sensitive to changes in the visual context. Persons viewing games at the Shoreline Stadium are likely to have a low level of sensitivity because of their focus on game activities.

Visual Quality

The visual quality of I-5 in Viewshed 5 is low to medium because of the noise walls on both sides that frame the highway, although the setback on the west side reduces the noise walls' visual prominence. The visual quality of the residential area is medium due to the homogeneous character of the residential neighborhood, which has similar building scale and moderately dense landscaping that provide a similar street-level character. The Shoreline Stadium is a visual encroachment in the immediate vicinity on the west side of I-5. The Seattle City Light transmission line corridor is a visual intrusion for nearby viewers. The extent to which the I-5 corridor is a visual intrusion is reduced by topography, vegetation buffers, and noise walls, which maintains the consistent scale and character of structures and vegetation in the adjacent residential neighborhoods. There are no vivid features in any views.

The current visual character of Viewshed 5 is shown in photographs of Viewpoint 23 from I-5 northbound at NE 183th Street, Viewpoint 24 of the Seattle City Light transmission line corridor from NE 185th Street east of 8th Avenue NE, Viewpoint 25 at NE 185th Street west of 8th Avenue NE, Viewpoint 26 at NE 185th Street west of 5th Avenue NE, Viewpoint 27 at NE 185th Street looking west from near 5th Avenue NE, Viewpoint 28 from 5th Avenue NE (west of I-5) north of NE 185th Street, and Viewpoint 29 of I-5 southbound at NE 187th Street.

1.3 Segment B Viewsheds

1.3.1 Viewshed 6: NE 190th Street to NE 205th Street (244th Street SW, SR 104)

Viewshed 6 is on the south side of a topographic valley occupied by McAleer Creek. I-5 is in a downgrade characterized by steep topography on both sides.

A predominantly single-family residential area occupies both side of I-5 in this viewshed. There are a few churches, cemeteries, and institutional uses in the area. On the east side of I-5 between NE 190th Street and NE 193th Street, the North City Park and the closed North City Elementary School bound about 1,000 feet of the right-of-way. A 100-foot-wide Beautification Area is located between the highway right-of-way and the park and school property.

Visual Character

I-5 is about 160 feet wide in this viewshed, with eight lanes. The linear features of the highway are bounded by heavy vegetation. There are noise walls on both sides of I-5, but they are not visible from the highway because they are set back from the shoulder with dense vegetation. The view to the north terminates with the distant color and texture of evergreen trees on a slope, with the distinctive silhouette of treetops at the skyline. There is a high level of coherence and compositional harmony between linear elements of I-5 and the surrounding heavily vegetated landscape.

The visual character of the residential areas on both sides of I-5 is provided by the similarity of single-family residences and stands of large evergreen trees throughout the area that provide the dominant visual element. Views of the highway from the residences are screened by a combination of topography, vegetation, and noise walls, which reduces I-5's visual intrusion and provides a moderate level of fit with the surrounding residential neighborhoods.

Viewer Sensitivity

Drivers and occupants of about 180,000 vehicles per day who travel through Viewshed 6 on I-5 are likely to be of average sensitivity. Residents of the single-family neighborhoods on both sides of the highway can be considered to be highly sensitive to changes in the visual context.

Visual Quality

The high visual quality of I-5 in Viewshed 6 can be attributed to the highway being framed by very dense mature vegetation on both sides. The visual quality of the residential area is medium because of the homogeneous character of the residential neighborhood, with similar building scale and moderately dense landscaping that provide a similar street-level character. Topography and heavy vegetation limit the extent to which I-5 is a visual encroachment into the unity of the neighborhood.

The current visual character of Viewshed 6 is shown in a photograph of Viewpoint 30 from I-5 northbound at NE 195th Street.

1.3.2 Viewshed 7: NE 205th Street (244th Street SW) to Mountlake Transit Center (233rd Street SW)

Viewshed 7 includes the broad bottom of the topographic valley occupied by McAleer Creek. I-5 is in a gentle upgrade to the north, and the viewshed is bounded at the north by the transition to a heavily vegetated narrow valley.

On the east side of I-5 adjacent to NE 205th Street, 244th Street SW is a commercial and office area separated from I-5 by a dense tree cover along McAleer Creek. North of the commercial area, a former school site is bounded by less dense, primarily deciduous trees. A single-family residential neighborhood east of the commercial area is screened by trees on a steep slope. The Mountlake Terrace Transit Center is at the north end of the viewshed. On the east side of I-5 is a residential area screened by trees on a steep slope. The Nile Golf Course on the west side of I-5 is below the grade of I-5 except at its northeast corner.

Visual Character

I-5 is about 300 feet wide in the southern part of Viewshed 7 with collector/distributor lanes on both sides and widens to about 1,100 feet at the 244th Street SW interchange and narrows a bit to about 700 feet at the 236th Street SW interchange to the north. The visual character is dominated by the linear character of the broad expanse of horizontal travel lanes, with complexity provided by multiple ramps. At the northern boundary of Viewshed 7, the Mountlake Terrace Transit Center has a large parking garage that contrasts in shape and scale with the linear features of the highway. South of the transit center, a multistory office building on the east side of I-5 also provides a contrast to the features of the highway.

The commercial area to the east of I-5 has similar scale and design of buildings and some continuity in parking and landscape features. Views of I-5 are screened by the large trees in the McAleer Creek riparian corridor

The visual character of the Mountlake Terrace Transit Center is dominated by the parking structure and parking lots, although it is surrounded by heavy vegetation.

West of I-5, the Nile Golf Course has continuity and integration of natural features in fairways separated by stands of mature evergreen trees. I-5 is not visible except at the far northeast corner of the golf course, where the highway is a minor element in an expansive view.

Residences and landscaping provide a consistent visual character in the residential areas on the east side of I-5, which is not visible because of distance and heavy vegetation on the steep slope separating the residential neighborhood from the commercial area below.

Drivers and occupants of about 180,000 vehicles per day who travel through Viewshed 7 on I-5 are likely to be of average sensitivity, as are users of the commercial area and offices to the east. Players on the Nile Golf Course and residents are likely to have high sensitivity to the visual environment but have few views of the highway.

Visual Quality

The visual quality of I-5 in Viewshed 7 is medium. The highway has very wide travel lanes because of collector-distributor lanes on each side, but it has a consistent character due to vegetation framing the highway on both sides and heavily vegetated hillsides at the horizon along the direction of movement both north and south. The visual quality of the commercial area to the east is likely to be low to medium due to the similar character of built elements. The Nile Golf Course and residential areas have high visual quality because of the homogeneous character and lack of intrusion of I-5 due to topography and vegetation.

The current visual character of Viewshed 7 is shown in photographs of Viewpoint 31 from I-5 northbound at 240th Street SE and of Viewpoint 32 at 236th Street SW.

1.3.3 Viewshed 8: 233rd Street SW to 220th Street SW

Viewshed 8 is a distinctive stretch of I-5 characterized by the narrow valley it traverses, with high steep slopes and very heavy mature evergreen tree cover.

Viewshed 8 includes predominantly single-family residential use on both sides of I-5 at the top of steep slopes up to 80 feet high, with densely vegetated areas between 50 feet and 200 feet wide. Residential areas in this viewshed have no views of I-5 because of noise walls and vegetation, except for residences on 227th Street SW, which is at an elevation close to I-5. Noise walls separate the residences from views of I-5. A beautification area extends along the west side of the right-of-way from about 233rd Street SW to just south of 228th Street SW at the top of the densely vegetated slope.

Visual Character

I-5 is about 200 feet wide in Viewshed 8, with eight lanes and a median 40 feet to 50 feet wide. The highway is bounded by very dense vegetation on high steep slopes on either side. There is dense evergreen trees cover from north of 236th Street SW to the off-ramps at 220th Street SW. A road overcrossing at 228th/230th Streets SW crosses I-5 and traverses the slope. South of 225th Street SW, the tree cover on the east side of I-5 is up to 100 feet high and 100 to 250 feet wide. The tree cover on the west side of I-5 is up to 80 feet high and about 2,000 feet wide south of 227th Street SW. The tree cover between 227th Street SW and 222nd Street SW ranges from 80 to 20 feet high and 50 to 200 feet wide, with a short noise wall near the bottom of

the slope that is visible from I- 5. 227th Street SW is at a similar elevation as I-5 because it is located in a former stream ravine. There are noise walls on both sides of I-5, but they are not visible from the highway because they are near the top of a slope and screened by heavy vegetation. On the west side of I 5 from about 233rd Street SW to just south of 228th Street SW, a highway beautification area extends along the top of a densely vegetated slope.

The view to the north ends with distinctive silhouette of evergreen trees adjacent to I-5 due to the curve of the highway. The heavy vegetation on both sides is the dominant visual element because of the height of the vegetated slope and the density and maturity of the trees. There is a high level of coherence and compositional harmony between linear elements of the highway and the surrounding, heavily vegetated landscape.

The visual character of the residential areas on both sides of I-5 in this viewshed is provided by the similar character of single-family residences. There are no views of the highway because of noise walls, tree cover, and slopes. I-5 is not a visual intrusion, although the residences on 227th Street SW are in a valley with noise walls that partly screen views of I-5.

Viewer Sensitivity

Drivers and occupants of about 180,000 vehicles per day who travel through Viewshed 8 on I-5 are likely to be of average sensitivity. Residents of the single-family neighborhoods on both sides of the highway would be highly sensitive to changes in the visual context.

Visual Quality

The visual quality of views from I-5 in Viewshed 8 has high visual integrity and unity because the highway is framed by very dense mature vegetation on both sides. The almost complete enclosure of this segment of I-5 by heavy vegetation on both sides of a ravine provides near and near-middle view elements that are distinctive and memorable, although of short duration, particularly for southbound vehicles. For northbound vehicles south of 232nd Street SW, visual quality is medium rather than high because of the encroachment of roadway crossings and the pedestrian overpass to the existing median transit stop. Visual quality of the residential area is medium due to the homogeneous character of the residential neighborhood, which has similar building scale and moderately dense landscaping that provides a similar street-level character.

The current visual character of Viewshed 8 is shown in photographs of Viewpoint 33 from I-5 northbound at 232nd Street SW, Viewpoint 34 from I-5 southbound at 232nd Street SW, Viewpoint 35 from I-5 southbound at 230th Street SW, Viewpoint

36 from the 230th Street SW Overpass, Viewpoint 37 from 222nd Street east of 64th Avenue West, and Viewpoint 38 at 222nd Street SW.

1.3.4 Viewshed 9: 220th Street SW to 212th Street SW

Viewshed 9 includes the almost level section of I-5 oriented southwest-to-northeast south of where the light rail alignment would transition off the I-5 corridor to the west.

Viewshed 9 includes predominantly single-family residential uses on both sides of I-5, generally below the elevation of the highway, except near 212th Street SW. There is moderate to dense vegetation within the right-of-way, with noise walls adjacent to residential uses. On the west side of I-5, there are office buildings between 220th Street SW and 219th Street SW and a multifamily complex between 219th Street SW and 216th Street SW.

Visual Character

I-5 is about 220 feet wide in Viewshed 9, with eight lanes and a median 40 feet to 60 feet wide. The highway is bounded by moderate-to-dense mature vegetation on both sides. Noise walls, where present, are set back from the roadway, buffered by vegetation, and not visible from vehicles. Northbound vehicle occupants on I-5 north of 216th Street SW have views of Mount Pilchuck, Three Fingers, and Whitehorse Mountain peaks in the distance. They are vivid distant features, particularly when snowcapped during the winter and spring.

The visual character of the residential areas on both sides of I-5 is provided by the similar character of single-family residences. There are no views of the highway because of noise walls, tree cover, and slopes. I-5 is not a visual intrusion.

Viewer Sensitivity

Viewers of the landscape in Viewshed 9 consist of residents of the single-family residential neighborhoods on both sides of I-5, who can be considered highly sensitive to changes in the visual context. There are, however, no current views of the highway because of noise walls and vegetation. Office and commercial areas on the west side of I-5 have low to average viewer sensitivity. Drivers and occupants of about 200,000 vehicles per day who travel through this viewshed on I-5 are likely to be of average sensitivity.

Visual Quality

The majority of I-5 in Viewshed 9 is bordered by dense, mature, native vegetation, which provides a sense of enclosure and a moderate level of fit between elements of the highway and the vegetation border. This results in a moderate level of coherent and compositional harmony for viewers on I-5. Visual quality is medium and reflects the integrity and unity provided by framing vegetation. Viewshed 9 is not considered

to have high visual quality because, although the mountain peaks are distinctive and memorable elements, the view lasts for only for a few minutes. Intermittent views of Cascade Mountain peaks, including Mount Baker, are available to travelers on I-5 northbound for many miles.

Visual quality of the residential area in Viewshed 9 is likely to be medium because the homogeneous character of the residential neighborhood, which has similar building scale and moderately dense landscaping that provides a similar street-level character. The visual quality of the office and commercial area to the west is low to medium due to the similar character of built elements, landscaping, and street character.

The current visual character of Viewshed 9 is shown in photographs of Viewpoint 39 from I-5 northbound at 212th Street SW.

1.4 Segment C Viewshed

1.4.1 Viewshed 10: 212th Street SW to 40th Avenue West

Viewshed 10 includes several landscape units, which are described below and then characterized by visual quality and character in the subsequent subsection.

- Landscape Unit 1 – I-5 northbound between 212th Street SW and 52nd Avenue West in Lynnwood is bounded by a single-family residential neighborhood, including the privately owned Hall Lake and a 10-acre open space area that has been used as a summer camp. Five residences and a church are adjacent to I-5. The land north of I-5 varies from 30 feet to 40 feet below the elevation of the travel lanes. A densely vegetated area with mature evergreen and deciduous trees about 50 feet to 70 feet wide is within the right-of-way on steep fill slopes. The current visual character is shown in photographs of Viewpoint 40 from Hall Lake. The current character of I-5 is shown by Viewpoint 41 from I-5 southbound at 50th Avenue West.
- Landscape Unit 2 – Along 52nd Avenue West on the west side is a single-family residential neighborhood from I-5 to 203rd Street SW. West of 52nd Avenue West is a single-family residential area. To the west along Cedar Valley Road is an office complex on a small lake. East of 52nd Avenue West and Cedar Valley Road is a commercial and light industrial area extending to Scriber Creek Park. The current visual character is shown in photographs of Viewpoint 42 from 52nd Avenue at 208th Street SW.
- Landscape Unit 3 – Scriber Creek Park is on the west side of Cedar Valley Road from 201st Street SW and 200th Street SW. This park encompasses lawn area, wetlands along Scriber Creek, and trails. The current visual character is shown in photographs of Viewpoint 43.
- Landscape Unit 4 – Along 200th Street SW from Cedar Valley Road to 44th Avenue West are a multifamily development on the north side to 46th Avenue West and a small shopping center between 46th and 44th Avenues West. The south side of 200th Street SW has multifamily development from

50th to 48th Avenues West, office development from 48th to 46th Avenues West, and commercial development from 46th to 44th Avenues West. The multifamily areas have a consistent streetscape, with street trees and either parking lot landscaping or front yard lawns. The current visual character is shown in photographs of Viewpoint 44 of 50th Avenue West from 200th Street SW and Viewpoint 45 of 200th Street SW from 49th Avenue West.

- Landscape Unit 5 – South of 200th Street SW, the Lynnwood Transit Center is on a 29-acre site, with bus loading facilities located between 48th and 46th Avenues West south of 202nd Street SW, and 1,368 parking spaces. There is a transit-only overpass connecting to the center high-occupancy vehicle (HOV) lanes on I-5. The parking lots have moderately dense landscaping.
- Landscape Unit 6 – A large tract east of the Lynnwood Transit Center consists of wetlands along Scriber Creek with heavy vegetation, including mature deciduous trees. The current visual character is shown in photographs of Viewpoint 46, the existing trail from Scriber Creek Park and Viewpoint 47 from the transit center.
- Landscape Unit 7 – The Interurban Trail between 52nd Avenue West and the Lynnwood Transit Center is bounded by moderate to dense vegetation on both sides except adjacent to the transit center, where one side of the trail is adjacent to parking lots. The current visual character is shown in photographs of Viewpoint 48 from the trail at 48th Avenue West and Viewpoint 51 from 44th Avenue West.
- Landscape Unit 8 – The 44th Avenue West corridor south of 200th Street SW includes commercial development and the Lynnwood Transit Center on the west side and commercial development on the east side. The area is characterized by wide streets, parking lots, and strip malls. The current visual character is shown in photographs of Viewpoint 49 and 50 of 44th Avenue West from south and north of 200th Street SW.

Visual Character and Visual Quality

Visual character and quality differs within the Viewshed 10 landscape units.

- Landscape Unit 1 – I-5 northbound from the curve at about 215th Street SW is aligned with distant views of Mount Pilchuck, Three Fingers, and Whitehorse Mountain in the distance. These peaks are vivid distant features, particularly when snowcapped. The highway is bounded by moderate-to-dense, mature vegetation on both sides. Visual quality is medium, which reflects the integrity and unity provided by framing vegetation. I-5 in this landscape unit is not considered to have a high visual quality because, although the mountain peaks are distinctive and memorable elements, the view lasts for only for a few minutes. Intermittent views of Cascade peaks, including Mount Baker, are available to travelers on I-5 northbound for many miles. Visual quality of the residential area is likely to be medium due to the homogeneous character of the residential neighborhood, which has similar building scale and moderately dense landscaping that provides a

similar street-level character. The current visual character of this Viewshed 10 landscape unit is shown in photographs of Viewpoint 31 from I-5 northbound at 212th Street SW and Viewpoint 33 from I-5 southbound at 50th Avenue West.

- Landscape Unit 2 – The single-family residential neighborhood along I-5 between 212th Street SW and 52nd Avenue West, including residences and a large open-space tract adjacent to the highway, is separated from I-5 by dense, mature vegetation. Visual quality of this Viewshed 10 landscape unit is medium due to the open space area and mature vegetation. The current visual character of this area is shown in a photograph of Viewpoint 32 from the residential area adjacent to Hall Lake.
- Landscape Unit 2 – The residential neighborhood on the west side of 52nd Avenue West west of I-5 has medium visual quality due to a unity of features. The industrial uses north of 52nd Avenue West are not a visual intrusion because of the low profile of buildings and landscaping and parking areas adjacent to the street. The current visual character of this landscape unit is illustrated by a photograph of Viewpoint 34 from 52nd Avenue West at 208th Street SW.
- Landscape Unit 3 – Scriber Creek Park on the east side of Cedar Valley Road approaching 200th Street SW has high visual quality due to the mix of lawn, wetlands, and trails and the unifying, homogeneous, dense vegetation throughout that also buffers the park from the street and adjacent urban development. The current visual character of this landscape unit is illustrated by photographs of Viewpoints 35 and 38 from within Scriber Creek Park and Viewpoint 36 outside of the park at 50th Avenue West and 200th Street SW and Viewpoint 39 from the Lynnwood Transit Center.
- Landscape Unit 4 – The areas on both sides of 200th Street SW west of Cedar Valley Road include multifamily buildings and offices, transitioning to commercial uses east of 46th Avenue West. The multifamily residential neighborhood has medium visual quality due to a unity of bulk, design, and landscaping that provides compatible features. The commercial areas north of industrial uses north of 46th Avenue West have low visual quality due to the variety of building forms, the lack of visual harmony among a variety of building styles, and other features. The current visual character of this landscape unit is illustrated by a photograph of Viewpoint 37 from 200th Street SW at 49th Avenue West.
- Landscape Unit 5 – The Lynnwood Transit Center occupies a 29-acre site with several large park-and-ride areas. The transit center is bounded on the west by a large tract with wetlands and Scriber Creek. Visual quality of the transit center is low due to the predominance of parking lots, despite landscaping and the adjacent open space area.
- Landscape Unit 6 – Scriber Creek wetland and the Interurban Trail occupies this area between the Lynnwood Transit Center, Scriber Creek Park, 52nd Avenue West, and generally I-5. The area includes both natural views of the

wetlands to the northwest of the Interurban Trail, and the trail itself is developed on Snohomish County PUD's major transmission corridor; large towers and overhead lines are part of the landscape. Industrial properties are to the south and east of the landscape unit, and commercial/light industrial buildings, the transit center, direct access ramps and a pump station are on its various edges. The visual quality for viewers is moderate because the natural views are interrupted by these other built features. The current visual character of this landscape unit is illustrated by photographs of Viewpoints 41, 42, and 43.

- Landscape Unit 7 – The Interurban Trail crosses 52nd Avenue West and runs northeast toward the Lynnwood Transit Center, with the Scriber Creek wetlands and the transit center to the north, before it continues northward to cross 44th Avenue West on an overpass near I-5. The trail is bounded by moderate-to-dense vegetation and has a medium visual quality due to the unity of the vegetation cover along the corridor. The current visual character of the area east of the transit center is illustrated by a photograph of Viewpoint 40 from the Interurban Trail at 48th Avenue West. The current visual character of the bridge crossing over 44th Avenue West is illustrated by a photograph of Viewpoint 42.
- Landscape Unit 8 – The 44th Avenue West corridor south of 200th Street SW includes commercial development and the Lynnwood Transit Center on the south side and a variety of commercial development on the north side. The dominant visual image is wide streets, large parking lots, signs, and strip malls. The visual quality for viewers within the commercial area is medium to low due to lack of unity. The visual quality for occupants of vehicles traveling north on the arterial is generally low because of the multiple overcrossings by I-5 and the Interurban Trail, freeway on-ramps, adjacent parking lots, signs, and strip malls with little visual interest. The current visual character of this landscape unit is illustrated by a photograph of Viewpoint 41 from 44th Avenue West south of 200th Street SW.

Viewer Sensitivity

Viewers of the landscape in Viewshed 10 consist of residents of the single-family and multifamily residential neighborhoods, which are considered to be highly sensitive to changes in the visual context. Workers in industrial areas and shoppers in commercial areas are likely to be of average sensitivity. Drivers and occupants of about 200,000 vehicles per day who travel through the area on I-5 as well as occupants of vehicles on arterials are likely to be of average sensitivity.

APPENDIX I-4.6

Air Quality and Greenhouse Gases

APPENDIX I-4.6 AIR QUALITY AND GREENHOUSE GASES — BACKGROUND INFORMATION

Table I-4.6-1. Air Quality Standards

Pollutant	National primary standard	Washington State and PSCAA regional standard
CO (carbon monoxide)		
1-hour average (not to be exceeded more than once per year)	35 ppm	35 ppm
8-hour average (not to be exceeded more than once per year)	9 ppm	9 ppm
PM_{10}		
24-hour average (not to be exceeded more than once per year on average over 3 years)	150 µg/m^3	150 µg/m^3
$PM_{2.5}$		
Annual (annual mean, averaged over 3 years)	12 µg/m^3	12 µg/m^3
24-hour average concentration (98th percentile averaged over 3 years)	35 µg/m^3	35 µg/m^3
Total suspended particulates		
Annual arithmetic mean	NS	60 µg/m^3
24-hour average concentration (not to be exceeded more than once per year)	NS	150 µg/m^3
O_3 (ozone)		
8-hour average (annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years)	0.075 ppm	0.075 ppm
SO_2 (sulfur dioxide)		
1-hour average (99th percentile of 1-hour daily maximum concentrations, averaged over 3 years)	75 ppb	75 ppb
3-hour average (not to be exceeded more than once per year)	0.5 ppm	0.5 ppm
24-hour average (not to be exceeded more than once per year)	NS	0.14 ppm
Annual average (not to be exceeded)	NS	0.02 ppm
NO_2 (nitrogen dioxide)		
1-hour average (98th percentile averaged over 3 years)	100 ppb	100 ppb
Annual (annual mean)	53 ppb	53 ppb
Pb (lead)		
Rolling 3-month average (not to be exceeded)	0.15 µg/m^3	0.15 µg/m^3

Sources: EPA 2011; Chapter 173-474 WAC (1987)

The 8-hour ozone standard of 0.075 ppm (effective in 2008) replaces (for the most part) the previous 1-hour standard of 0.08 ppm.

µg/m^3 = micrograms per cubic meter; NS = no standard established; ppb = parts per billion; ppm = parts per million

Carbon Monoxide Hot-spot Modeling

For the Final EIS, existing conditions and long-term localized operational impacts for forecast year 2035 under the No Build and Lynnwood Link Extension Preferred Alternative (which is considered representative of the effects of other potential combinations of alternatives in Segments A, B and C) were evaluated using EPA's MOVES2010b to calculate vehicular emission rates, and EPA's CAL3QHC dispersion model to determine worst-case CO concentrations at signalized intersections.

Worst-case CO concentrations were initially calculated for the Draft EIS on a total of nine intersections (three per project segment) with the highest potential CO emissions, and no air quality impacts were found. The analysis was updated for the Final EIS for three of the nine intersections, which reconfirmed the finding of no air quality impacts.

To screen for the intersections with the highest potential emissions, traffic data were used to identify intersections with the highest volume and a LOS of D or worse under the light rail alternatives for forecast year 2035. If the worst-case intersections do not impact air quality, then all other intersections would experience a lesser impact. The screened intersections meeting these criteria underwent a CO hot-spot modeling analysis.

Since the Draft EIS, there have also been some changes in the tools used for calculating air quality conditions. The Draft EIS results were derived from the Washington State Intersection Screening Tool (WASIST) and was based on a series of worst-case scenarios in EPA's MOBILE 6.2 emission factor algorithm and EPA's CAL3QHC mobile source dispersions model. EPA has issued new requirements for air quality modeling using newer EPA's MOVES2010b emission factor algorithm. The Final EIS analysis has been updated using EPA's MOVES2010b emission factor algorithm and EPA's CAL3QHC mobile source dispersion model.

With either method, there are three informational data input categories necessary to perform a complete CO analysis:

1. General inputs. These include the project's general characteristics, such as the project name, intersections name, year of the analysis, and background concentration.
2. Intersection inputs. These include detailed information on the modeled intersection, the intersection layout, peak-hour traffic volumes, approach speed, and signal timing.
3. Receptor inputs. These include more specific information concerning receptors and the distance from the edge of the roadways.

After these informational data inputs are entered, the models calculate the worst-case CO concentrations at the specified intersections (Table I-4.6-2).

The Final EIS worst CO concentrations using EPA's MOVES2010b and EPA's CAL3QHC models were lower than the Draft EIS CO concentrations calculated with conservative WASIST screening (Table I-4.6-3). Because the worst-case intersections do not impact air quality under both the Final EIS and Draft EIS analysis, then all other intersections would experience a lesser impact.

Table I-4.6-2. Final EIS Modeled CO Concentrations

Segment	Intersection	2035 Highest Volume Alternative in AM or PM with an LOS of "D", "E" or "F"	2011 Existing		2023 Lynnwood Link Extension		2035 No Build		2035 Lynnwood Link Extension		2040 Lynnwood Link Extension	
			1-hr (ppm)	8-hr (ppm)	1-hr (ppm)	8-hr (ppm)	1-hr (ppm)	8-hr (ppm)	1-hr (ppm)	8-hr (ppm)	1-hr (ppm)	8-hr (ppm)
A	N 145th Street & Bothell Way NE/Lake City Way	Preferred Alternative - PM	4.8	3.9	2.9	2.6	2.6	2.4	2.6	2.4	2.6	2.4
B	220th Street SW & I-5 Northbound Ramps	B2a - PM	4.0	3.3	2.9	2.6	2.6	2.4	2.6	2.4	2.6	2.4
C	196th Street SW & 36th Avenue W	Preferred Alternative - PM	6.2	4.9	3.6	3.1	3.0	2.6	3.0	2.6	3.1	2.7

Table I-4.6-3. Draft EIS Modeled CO Concentrations

Segment	Intersection	2035 Highest Volume Alternative in AM or PM with an LOS of "D", "E" or "F"	2012 Existing		2023 Lynnwood Link Extension		2035 No Build		2035 Lynnwood Link Extension		2040 Lynnwood Link Extension	
			1-hr (ppm)	8-hr (ppm)	1-hr (ppm)	8-hr (ppm)	1-hr (ppm)	8-hr (ppm)	1-hr (ppm)	8-hr (ppm)	1-hr (ppm)	8-hr (ppm)
A	N 145th Street & Bothell Way NE/Lake City Way	A10 - PM	8.8	7.1	9.7	7.7	9.3	7.4	9.3	7.4	9.4	7.5
A	N 145th Street & SR 99	A10 - PM	8.8	7.1	9.4	7.5	9.0	7.2	9.0	7.2	9.2	7.3
A	N 185th Street & SR 99 (includes Firlands Way N)	A1 - PM	8.3	6.7	9.9	7.8	9.5	7.5	9.5	7.5	9.6	7.6
B	220th Street SW & I-5 Northbound Ramps	B2a - AM	7.0	5.8	7.9	6.4	7.3	6.0	7.7	6.3	7.7	6.3
B	220th Street SW & 66th Avenue W	B2a - PM	7.4	6.1	7.8	6.4	7.5	6.2	7.6	6.2	7.6	6.2
B	220th Street SW & SR 99	B2a - PM	9.2	7.3	9.9	7.8	9.6	7.6	9.6	7.6	9.6	7.6
C	200th Street SW/Alderwood Mall Boulevard & 44th Avenue W	C1 - PM	9.1	7.3	10.0	7.9	9.5	7.5	9.6	7.6	9.7	7.7
C	196th Street SW & 36th Avenue W	C1 - PM	9.4	7.5	10.4	8.2	9.8	7.8	9.8	7.8	10.1	8.0
C	196th Street SW & 44th Avenue W	C1 - PM	8.2	6.6	10.3	8.1	9.8	7.8	9.8	7.8	9.9	7.8

APPENDIX I-4.9

Water Resources

APPENDIX I-4.9 WATER RESOURCES — BACKGROUND INFORMATION

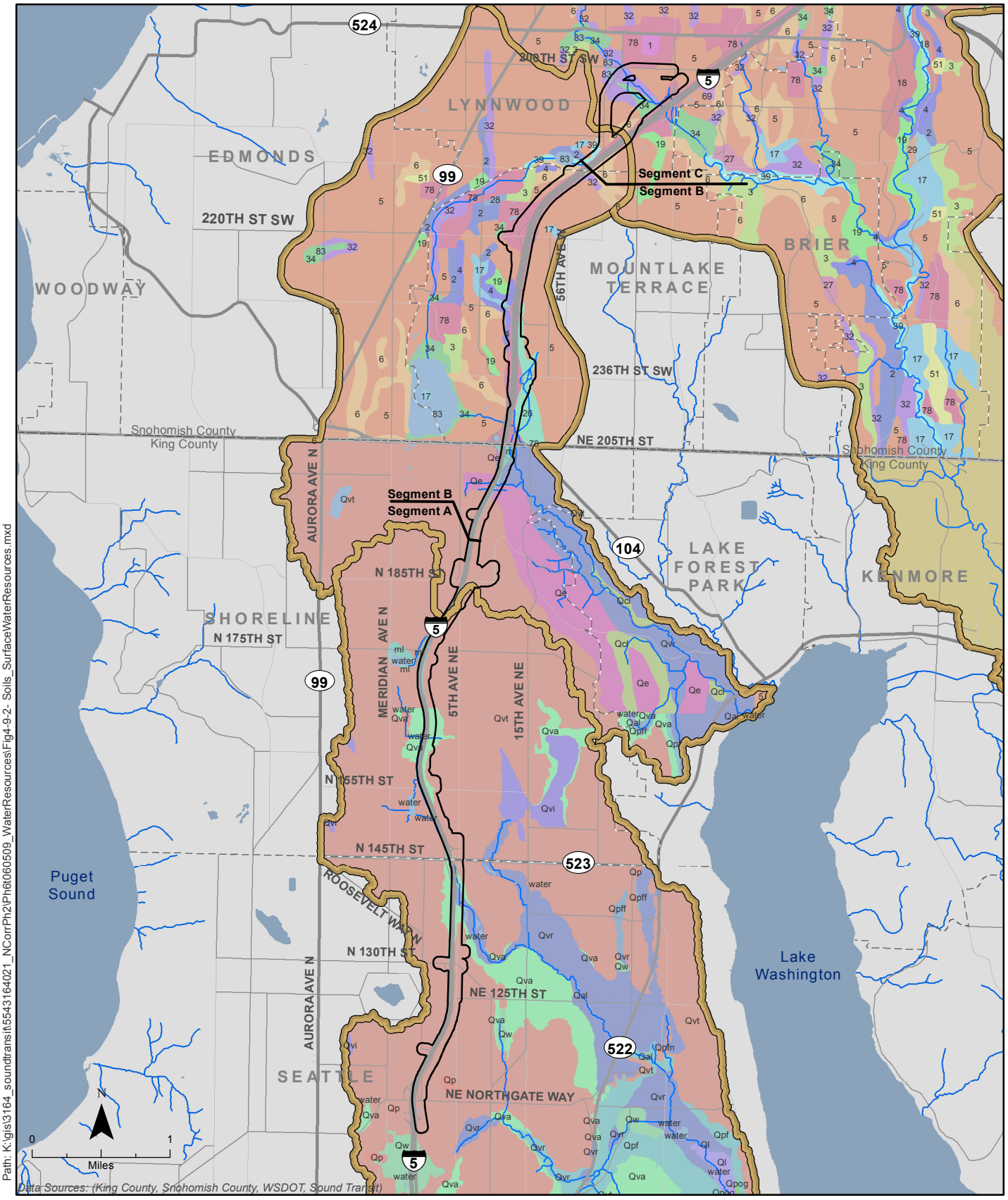
EXISTING STORMWATER FACILITIES

Existing water quality and flow control facilities in the proposed project vicinity include the following:

- NE Northgate Way: A WSDOT stormwater pond is present to the east of I-5 just south of NE Northgate Way.
- North 117th Street: A City of Seattle municipal vault is present west of I-5 and north of North 117th Street.
- North 165th Street: A City of Shoreline municipal vault is present in the parking lot west of I-5.
- NE 170th to NE 175th Street: WSDOT media filter drains and stormwater ponds are present east and west of I-5, and within the I-5 ramp areas.
- NE 185th Street: A WSDOT stormwater pond and a media filter drain are present to the west of I-5 just south of NE 185th Street.
- NE 200th Street: A WSDOT vault is present to the west of I-5 just south of NE 200th Street.
- 205th Street NE/SR 104: A WSDOT stormwater pond is located in the northwest ramp of the I-5 and 205th Street NE/SR 104 interchange. Two City of Mountlake Terrace municipal stormwater vaults are present in the residential development northeast of the interchange.
- 236th Street SW: A WSDOT stormwater pond is adjacent to the southeast ramp of I-5 at 236th Street SW.
- Mountlake Terrace Transit Center: WSDOT media filter drains, stormwater tanks, and stormwater vaults are present on either side of I-5 starting just north of the Mountlake Terrace Transit Center, near 232nd Place SW, north to 220th Street SW.
- 220th Street SW to 212th Street SW: WSDOT media filter drains are present along the I-5 median from about 0.1 mile north of 220th Street SW to 212th Street SW.
- 212th Street SW: WSDOT stormwater ponds are present on either side of I-5 just north of 212th Street SW.
- Lynnwood Transit Center: WSDOT media filter drains are present east of 52nd Avenue West to about 209th Street SW. A WSDOT stormwater pond is present on the west side of I-5 in the vicinity of 206th Street SW. There are also three City of Lynnwood municipal stormwater vaults and a municipal stormwater pond in the southern portion of the Lynnwood Transit Center.

HYDROLOGIC SOIL GROUPS

Table I-4.9-1 summarizes the hydrologic soil group for each soil type in the study area. Soil locations are shown on Figure I-4.9-1.



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Project Area
City Boundary
County Boundary
Study Area
Stream Basin
Stream
Waterbody

Figure I-4.9-1
Study Area Soils

Table I-4.9-1. Study Area Soils

Map Code	Soil Description
Hydrologic Soil Group A: High Infiltration	
17	Everett gravelly sandy loam, 0 to 8 percent slopes
18	Everett gravelly sandy loam, 8 to 15 percent slopes
19	Everett gravelly sandy loam, 15 to 25 percent slopes
26	Indianola loamy sand, 15 to 25 percent slopes
Qal	Alluvium, mostly sand/gravel stream deposits. Some silt, clay, organics
Qe	Esperance sand, medium to coarse
Qvr	Recessional outwash deposits-Stratified sand and gravel
Qyal	Younger alluvium, mod sorted cobble gravel, pebbly sand, and sandy silt
Hydrologic Soil Group B: Moderate Infiltration	
Qvi	Ice-contact deposits. Similar to Qvr, less well sorted, silt-rich, contains pods of till.
Hydrologic Soil Group C: Low Infiltration	
1	Alderwood gravelly sandy loam, 2 to 8 percent slopes
2	Alderwood gravelly sandy loam, 8 to 15 percent slopes
3	Alderwood gravelly sandy loam, 15 to 25 percent slopes
4	Alderwood-Everett gravelly sandy loams, 25 to 70 percent slopes
5	Alderwood-Urban land complex, 2 to 8 percent slopes
6	Alderwood-Urban land complex, 8 to 15 percent slopes
27	Kitsap silt loam, 0 to 8 percent slopes
28	Kitsap silt loam, 8 to 25 percent slopes
29	Kitsap silt loam, 25 to 50 percent slopes
Qpf	Pre-Fraser - silt, sand, gravel; heterogenious grain size, mainly gray silt
Qpog	Pre-Olympia - silt, sand, graveL, sparce till.
Qva	Advance outwash deposits, well-sorted sand and gravel with silt, dense
Qvt	Till, compact/dense silt, sand, and gravel, 1 m to 10 m thick
Hydrologic Soil Group D: Wet Soils	
32	McKenna gravelly silt loam, 0 to 8 percent slopes
34	Mukilteo muck
39	Norma loam
51	Probable quarry pit
69	Terric Medisaprists, nearly level
78	Urban land
ml	modified land
Qcl	Clay of unknown age, compact, some silt.
Ql	Lake deposits, silt/clay with local peat and other organics
Qp	Peat, organics. Some sand, silt, clay, ash from swamps and bogs.
Qpff	Pre-Fraser Fine - silt and clay
Qpfn	Non-glacial Pre-Fraser - peat and other organics
Qw	Whidbey formation, wetland deposits. Medium sand, silt, clay, well sorted. Non-glacial floodplain deposits.

Sources: Booth et.al. 2009, King County 2004, NRCS 2012, Smith 1975

FLOODPLAINS

Jurisdictional flood zones in the study area are defined as follows:

- Federal Emergency Management Agency (FEMA): Defines areas with flood risks as geographic areas having an annual risk of flooding of 1 percent (100-year floodplain) or 0.2 percent (500-year floodplain) (FEMA 2011).
- King County: Designates Flood Hazard Areas as any land that would be inundated by the 100-year flood and/or channel migration (King County Code [KCC] § 21A.06).
- Snohomish County: Designates Special Flood Hazard Areas as 100-year floodplain identified on FEMA's 2005 Flood Insurance Rate Maps (Snohomish County Code [SCC] § 30.65).
- City of Seattle: Designates Special Flood Hazard Areas as 100-year floodplain identified on FEMA's 1995 Flood Insurance Rate Maps (Seattle Municipal Code § 25.06).
- City of Shoreline: Regulates the 100-year floodplain identified on FEMA's most recent Flood Insurance Rate Maps in addition to floodplains identified in recent flood insurance studies for Thornton Creek and the Puget Sound shoreline (currently under FEMA review and subject to regulation upon FEMA adoption); also regulates Zero-Rise Floodway defined as the channel of a stream and that portion of the adjoining floodplain that is necessary to contain and discharge the base flood flow without any measurable increase (equal to or greater than 0.01 foot) in flood height (Shoreline Municipal Code § 13.12).
- City of Mountlake Terrace: Regulates activities in the 100-year floodplain identified on FEMA's most recent Flood Insurance Rate Maps; 100-year floodplains established by comprehensive drainage plans, observed areas of localized flooding, or where the Community and Economic Development Department has determined that drainage or erosion conditions present an imminent potential of harm to the welfare and safety of the surrounding community (Mountlake Terrace Municipal Code § 16.20).
- City of Lynnwood: Designates Special Flood Hazard Areas as 100-year floodplain identified on FEMA's most recent Flood Insurance Rate Maps (Lynnwood Municipal Code § 16.46).

APPLICABLE REQUIREMENTS

Water Resource Regulations

The federal, state, and local regulations that govern the protection or use of water resources in the study area are listed below. Local plans and/or policies that guide the use of water resources in the study area are also included.

- National Environmental Policy Act, 42 United States Code (USC) Section 4321
- Clean Water Act, 33 USC 1251 et seq., Sections 401, 402, and 404

- Coastal Zone Management Act, 16 USC 1451 et seq.
- Floodplain Management Presidential Executive Order 11988
- Safe Drinking Water Act, 42 USC 300 et seq., Chapter 6A
- Washington State Environmental Policy Act, Washington Administrative Code (WAC) 197-11 and WAC 468-12
- Washington State Water Quality Standards for Surface Waters, WAC 173-201A
- Washington State Water Quality Standards for Ground, WAC 173-200
- Washington State Flood Control Management Act, Revised Code of Washington (RCW) 89
- Washington State Water Pollution Control Act, RCW 90.48
- Washington State Shoreline Management Act, RCW 90.58, WAC 173-26
- King County Surface Water Management, Title 9 KCC
- King County Groundwater Protection, KCC 9.14
- King County Critical Areas, KCC 21A.24
- King County Shoreline Management, Title 25 KCC
- Snohomish County Water Pollution Control, SCC 7.53
- Snohomish County Water Quality Restoration and Water Quantity Management, SCC 25A
- Snohomish County Shoreline Management, SCC 30.44
- Snohomish County Critical Areas Regulations, SCCs 30.62, 30.62A, 30.62B, and 30.62C
- Snohomish County Drainage, SCC 30.63A
- Snohomish County Land Disturbing Activity, SCC 30.63B
- Snohomish County Low Impact Development, SCC 30.63C
- Snohomish County Groundwater Protection, SCC 30.64
- Snohomish County Special Flood Hazard Areas, SCC 30.65
- Swamp Creek Urban Growth Area Drainage Needs Report, including Scriber Creek Subbasin (Snohomish County 2002)
- City of Lynnwood Stormwater Management, Lynnwood Municipal Code 13.40
- City of Lynnwood Surface Water Quality, Lynnwood Municipal Code 13.45
- City of Lynnwood Flood Hazard Area Regulations, Lynnwood Municipal Code 16.46

- City of Lynnwood Environmentally Critical Areas, Lynnwood Municipal Code 17.10
- City of Mountlake Terrace Shorelines Management Act, Mountlake Terrace Municipal Code 16.10
- City of Mountlake Terrace Critical Areas, Mountlake Terrace Municipal Code 16.15
- City of Mountlake Terrace Requirements for Controlling Stormwater Runoff from New Development, Redevelopment, and Construction Sites, Mountlake Terrace Municipal Code 16.20
- City of Seattle Stormwater Code, Seattle Municipal Code 22.8
- City of Seattle Floodplain Development, Seattle Municipal Code 25.06
- City of Seattle Environmentally Critical Areas Regulations, Seattle Municipal Code 25.09
- City of Shoreline Surface Water Utility, Shoreline Municipal Code 13.10
- City of Shoreline Shoreline Management Plan, Shoreline Municipal Code 16.10
- City of Shoreline Critical Areas, Shoreline Municipal Code 20.80
- Thornton Creek Watershed Plan (R.W. Beck 2009)
- Thornton Creek Draft Watershed Action Plan (Thornton Creek Watershed Management Committee 2001)
- Greater Lake Ballinger/McAleer Creek Watershed Study Draft Strategic Action Plan (Otak et al. 2009)

Water Resource Permits

Permits related to water resources that may be anticipated or incorporated as part of the project include the following:

Federal

- Clean Water Act, Section 401 – Washington State Department of Ecology
- Clean Water Act, Section 404 and Section 10 – U.S. Army Corps of Engineers

State and County

- Hydraulic Project Approval – Washington Department of Fish and Wildlife
- Aquatic Use Authorization: Aquatic Lease – Washington Department of Natural Resources
- National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge Permit – Washington State Department of Ecology

- NPDES Construction Stormwater General Permit – Washington State Department of Ecology
- Temporary Modification of Water Quality Criteria – Washington State Department of Ecology
- Water Quality Certification: Section 401 – Washington State Department of Ecology
- Waste Discharge Permit for discharge of construction water to the sanitary sewer – King County

Cities

- Construction Permits – Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood
- Development Permits – City of Lynnwood

Other

- Pipeline and Utility Crossing: Permits – Utility Providers
- Utility Approvals: Easements and Use Agreements – Utility Providers

BEST MANAGEMENT PRACTICES

Long-Term Operations

The proposed stormwater management for the Lynnwood Link Extension follows the Sound Transit *Design Criteria Manual* (Sound Transit 2012), which requires stormwater design for Sound Transit projects to conform to the requirements of the local jurisdictions. The Lynnwood Link Extension would comply with the following local design manuals:

- WSDOT: WSDOT *Highway Runoff Manual* (WSDOT 2014)
- City of Seattle: City of Seattle *Flow Control and Water Quality Treatment Technical Requirements Manual*, *Volume 3* (City of Seattle 2009)
- City of Shoreline: 2012 Ecology *Stormwater Management Manual for Western Washington* (Ecology 2012); *Engineering Development Manual* (City of Shoreline 2012); *Low Impact Development, Technical Guidance for Puget Sound* (latest version)
- City of Mountlake Terrace: 2012 Ecology *Stormwater Management Manual for Western Washington* (Ecology 2012)
- City of Lynnwood: 2005 Ecology *Stormwater Management Manual for Western Washington* (Ecology 2005) (expected to adopt the 2012 manual by the time project design is underway)

Based on the guidance provided in the *Design Criteria Manual,* low impact development (LID) is a preferred stormwater management method and would be employed wherever possible. Also, the 2012 Ecology *Stormwater Management Manual for Western Washington* requires LID approaches to stormwater management to the

extent feasible. Stormwater management facilities will be designed using sustainable, LID approaches where possible, referencing the above manuals and the Puget Sound LID Manual (WSU and Puget Sound Partnership 2012) as guidance. However, in areas where use of LID measures is not feasible due to physical site constraints, other techniques may be used. Stormwater flow control techniques may include detention ponds, infiltration ponds, vaults, and dispersion. Water quality treatment techniques may include bioretention, ecology embankments, and media filter vaults. Treatment to remove metals, oil, and grease would be provided at parking lots and roadway areas where required. A detailed discussion of the requirements applied and the proposed facilities is presented in the *Lynnwood Link Extension Conceptual Design Report - Appendix G: Drainage Plan Report Technical Memorandum* (Sound Transit 2012).

Construction

The risk of construction-related impacts to water resources would be controlled by complying with the NPDES Construction Stormwater General Permit process; the standards presented in the WSDOT *Highway Runoff Manual*, Seattle's *Stormwater Manual*, and Ecology's *Stormwater Management Manual for Western Washington*; and best management practices (BMPs), as appropriate. If discharge of treated construction or process water to a sanitary sewer is proposed, approval must be obtained from the the appropriate jurisdiction. King County's Industrial Waste Division has jurisdiction over the western portion of King County and a small area of southwestern Snohomish County. In the Snohomish County portions of the study area, discharge from Mountlake Terrace and a portion of the city of Edmonds is collected by the King County Industrial Waste Division. Discharge from within the city of Lynnwood is treated by the Lynnwood Wastewater Treatment Division. For construction within and over streams or other water bodies, a Hydraulic Project Approval (HPA) would be obtained from the Washington Department of Fish and Wildlife (WDFW) before work begins.

Through compliance with these requirements, an approved Construction Stormwater Pollution Prevention Plan (CSWPPP) would be developed and implemented for the proposed project. The CSWPPP would serve as the overall construction stormwater mitigation plan by describing overall procedural and structural pollution prevention and flow control BMPs, including location, size, maintenance requirements, and monitoring. An Ecology-certified erosion and sediment control lead (CESCL) would be employed to conduct compliance inspections. In addition, the CSWPPP would include each of the following elements:

- Temporary Erosion and Sediment Control – This element would outline the design and construction specifications for BMPs to be used to identify, reduce, eliminate, or prevent sediment and erosion problems.
- Spill Prevention, Control, and Countermeasures – This element would outline requirements for and implementation of spill prevention, inspection

protocols, equipment, material containment measures, and spill response procedures.

- Concrete Containment and Disposal – This element would outline the management, containment, and disposal of concrete debris, slurry, and dust, and discuss BMPs that would be used to reduce high pH levels.
- Dewatering Management – This element would outline procedures for pumping groundwater away from the construction area, and storing (as necessary), testing, treating (as necessary), and discharging or disposing of the dewatering water.
- Fugitive Dust Control – This element would outline measures to prevent the generation of fugitive dust from exposed soil, construction traffic, and material stockpiles.

Potential BMPs include the following:

- Phasing the work in an effort to minimize the area of impact
- Minimizing the amount of cleared area at a construction site
- Stabilizing construction entrances and haul roads using quarry spalls
- Washing truck tires at construction entrances, as necessary
- Constructing silt fences downslope from exposed soil
- Protecting catch basins from sediment
- Containing and controlling concrete and hazardous materials on site
- Installing temporary ditches to route runoff around or through construction sites, with periodic straw bales or rock check dams to slow and settle runoff
- Providing temporary plastic or mulch to cover soil stockpiles and exposed soil
- Using straw wattles to reduce the length of unbroken slopes and minimize runoff concentration
- Using temporary erosion control blankets or mulch on exposed steep slopes to minimize erosion before vegetation is established
- Constructing temporary sedimentation ponds to remove solids from concentrated runoff and dewatering before being discharged
- Conducting vehicle fueling and maintenance activities no closer than 100 feet from a water body or ditch
- Implementing stream protection measures, as necessary, including diverting stream flow around the construction area and limiting the construction period to the required "work window," a period of the year identified in the HPA when fish would be minimally affected

IMPERVIOUS SURFACE CHANGES

A quantitative estimate of proposed impervious surface was calculated in an area extending out 100 feet from the right-of-way boundaries along each alternative alignment and the proposed light rail stations (see Figure I-4.9-2). The calculations included the areas of the alternatives only and did not include options. Table I-4.9-2 compares total proposed impervious surface for the Preferred Alternative and other alternatives in Segments A, B, and C that would potentially result in the highest and lowest amount of new impervious surfaces, compared to total existing impervious surface in the same area.

Table I-4.9-2. Proposed Changes in Impervious Surfaces

Project Alternative	Total Existing Impervious (acres)			Total Impervious After Project (acres)			Percent Change		
	PGIS[a]	NPGIS[b]	Total	PGIS[a]	NPGIS[b]	Total	PGIS[a]	NPGIS[b]	Total
Segment A: Seattle to Shoreline									
Preferred Alternative: At-grade/Elevated with NE 145th and NE 18th Street Stations	79	11.28	90.28	82.55	38.26	120.81	4%	239%	34%
A1: At-grade/Elevated with NE 145th and NE 185th Street Stations (maximum of other alternatives)	79	11.28	90.28	81.84	38.00	119.85	4%	237%	33%
A3: Mostly Elevated with NE 145th and NE 185th Street Stations (minimum)	79	11.28	90.28	78.80	37.97	116.78	0%	237%	29%
Segment B: Shoreline to Mountlake Terrace									
Preferred Alternative (B2 Modified): East Side to Mountlake Terrace Transit Center to West Side	63.8	4.89	68.69	63.46	22.53	85.99	-1%	361%	25%
B2A: East Side to Mountlake Terrace Transit Center to West Side with 220th Street SW Station (maximum)	63.8	4.89	68.69	62.91	23.57	86.47	-1%	382%	26%
B4: East Side to Mountlake Terrace Freeway Station to Median (minimum)	63.8	4.89	68.69	60.24	19.95	80.20	-6%	308%	17%

Table I-4.9-2. Proposed Changes in Impervious Surfaces

Project Alternative	Total Existing Impervious (acres)			Total Impervious After Project (acres)			Percent Change		
	PGIS[a]	NPGIS[b]	Total	PGIS[a]	NPGIS[b]	Total	PGIS[a]	NPGIS[b]	Total
Segment C: Mountlake Terrace to Lynnwood									
Preferred Alternative (C3 Modified): Along 1-5 to Lynnwood Park-and-Ride Station	55.47	11.32	66.79	53.42	17.1	70.52	-4%	51%	6%
C2 Option 2: 52nd Avenue West to Lynnwood Transit Center with Option 2 West Connection (maximum of other alternatives)	55.47	11.32	66.79	52.81	17.47	70.27	-5%	54%	5%
C1 Option 1: 52nd Avenue West to 200th Street SW (minimum)	55.47	11.32	66.79	52.68	16.76	69.44	-5%	48%	4%

[a] PGIS: pollution-generating impervious surfaces, which include parking areas, bus holding areas, project-associated roads or road realignments, and maintenance facilities

[b] NPGIS: non-pollution-generating impervious surfaces, which include light rail tracks and stations

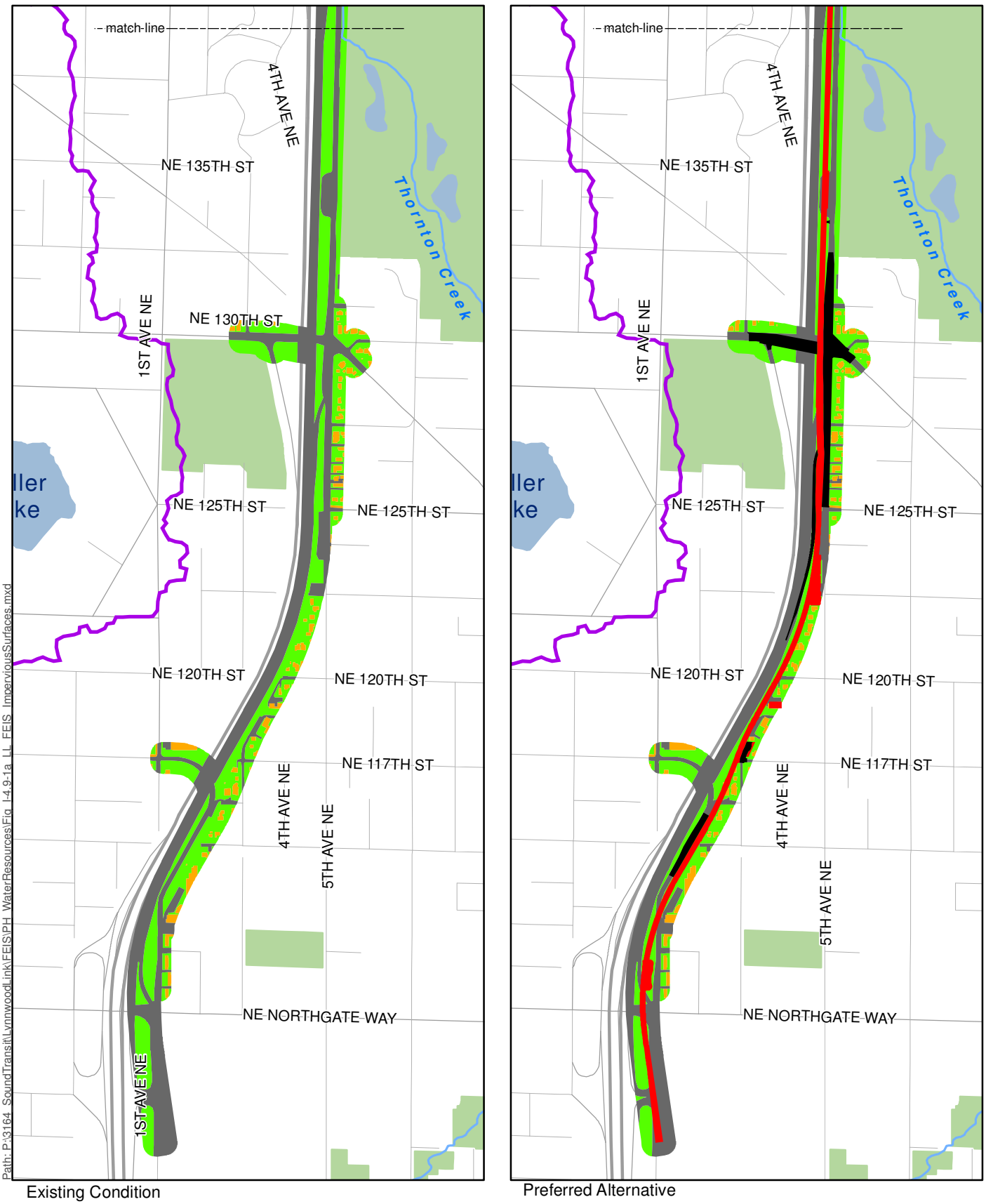


Figure I-4.9-2a
Existing and Proposed Impervious Surfaces

Lynnwood Link Extension

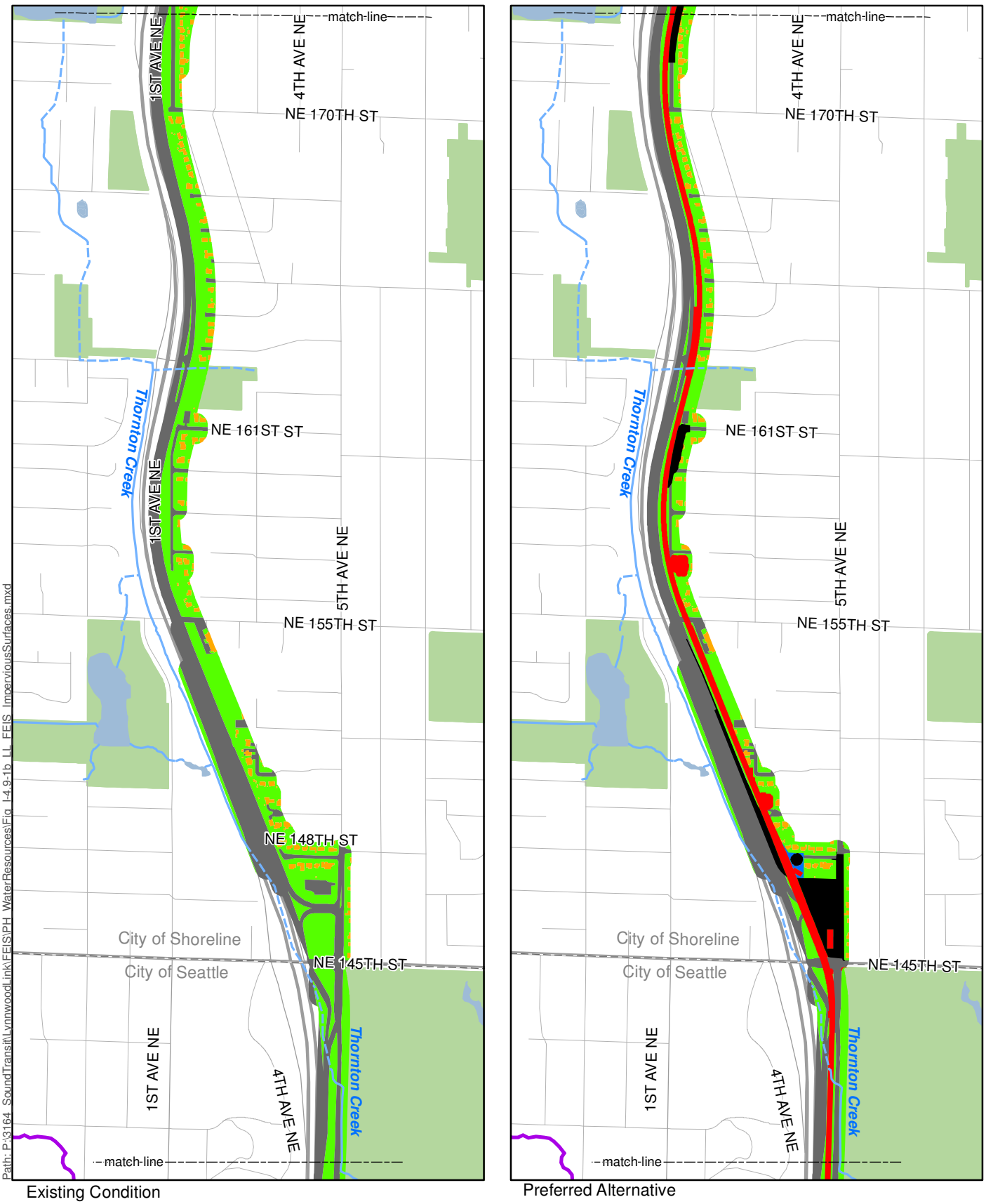


Figure I-4.9-2b
Existing and Proposed Impervious Surfaces

Lynnwood Link Extension

Figure I-4.9-2c
Existing and Proposed Impervious Surfaces

Lynnwood Link Extension

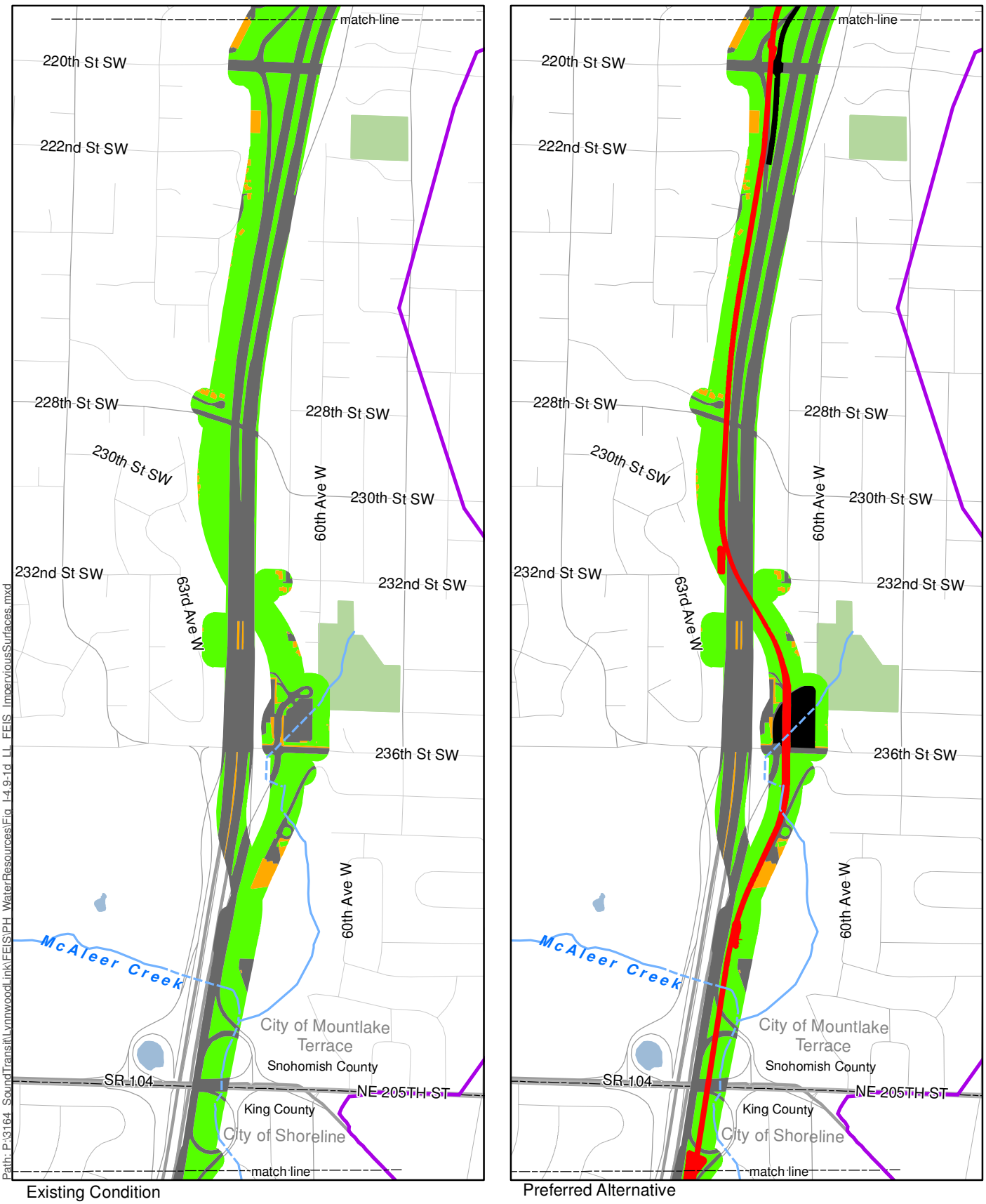


Figure I-4.9-2d
Existing and Proposed Impervious Surfaces

Lynnwood Link Extension

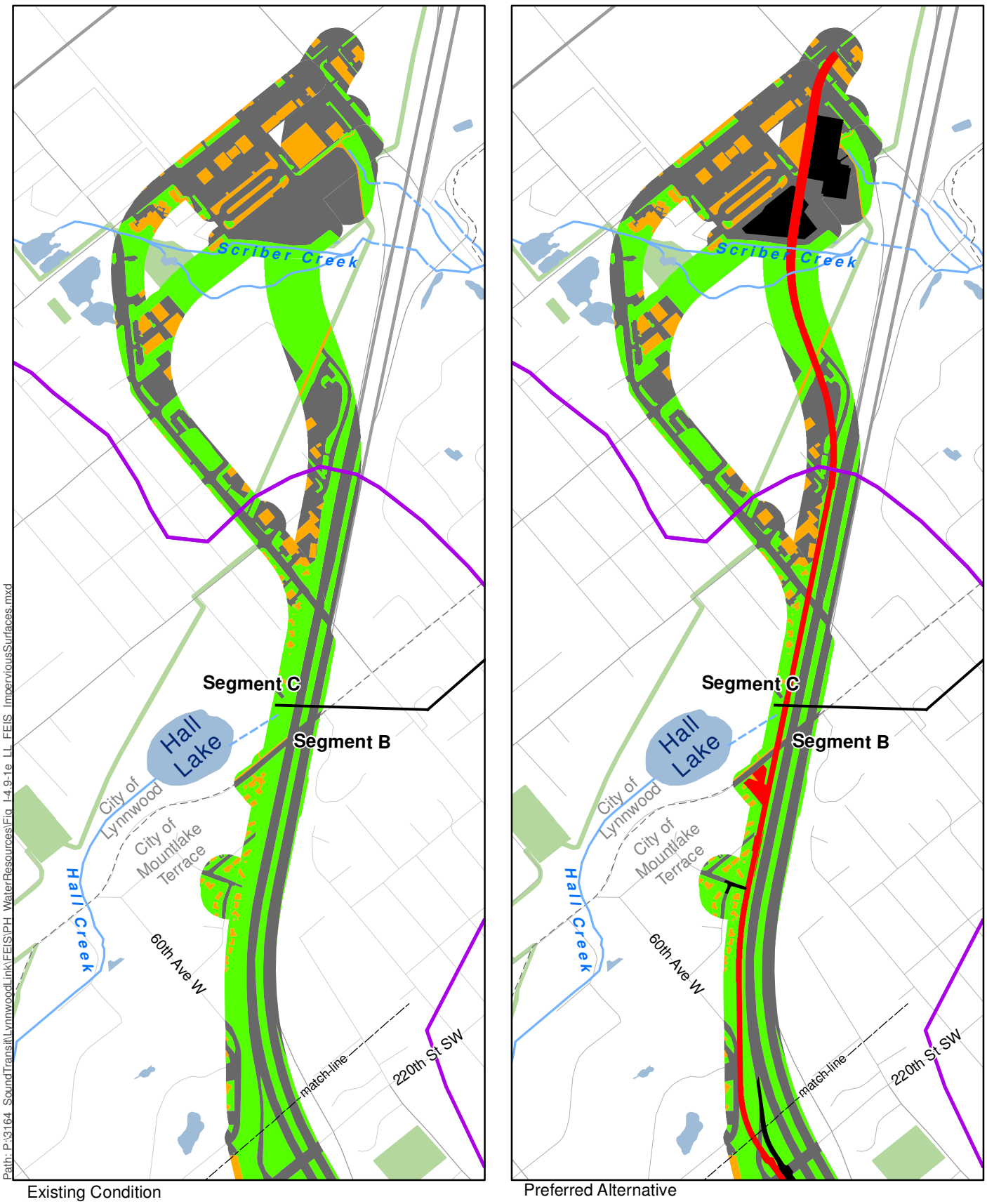


Figure I-4.9-2e
Existing and Proposed Impervious Surfaces

Lynnwood Link Extension

Existing Condition

Maximum Proposed Impervious Increase
Alternatives A1, B2A, C2W

Minimum Proposed Impervious Increase
Alternatives A3, B4, C1M

N

0 0.2
Miles

City Boundary
County Boundary
Park
Waterbody

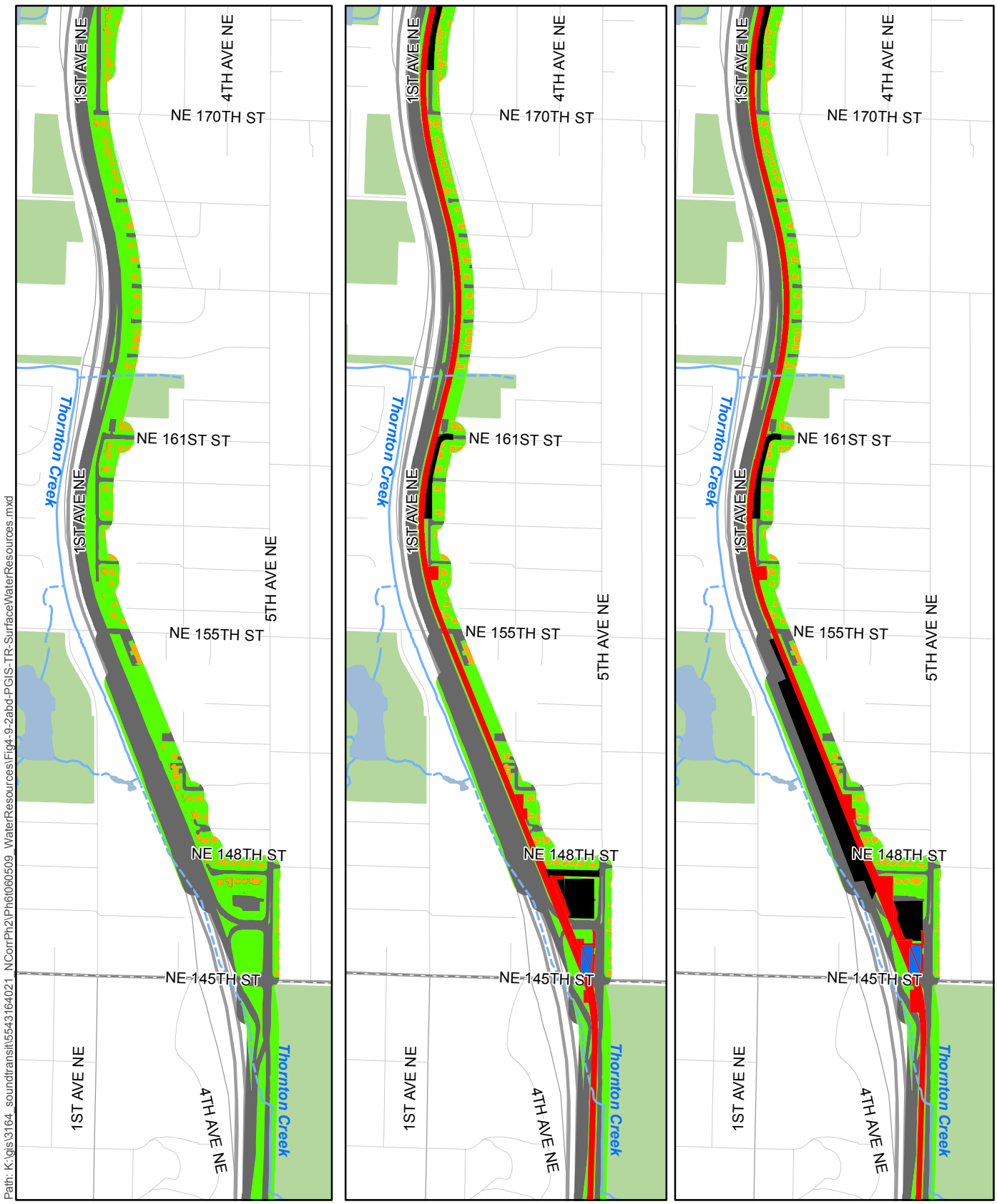
Existing Cover	Proposed Cover
PGIS*	PGIS*
NPGIS*	NPGIS*
Pervious	Pervious

* PGIS = Pollution - Generating Impervious Surface
NPGIS = Non - Pollution Generating Impervious Surface

Data Sources:
(King County, Snohomish County, WSDOT, Sound Transit)

Figure I-4.9-3a
Existing and Proposed Impervious Surfaces

Lynnwood Link Extension



Existing Condition

Maximum Proposed Impervious Increase
Alternatives A1, B2A, C2W

Minimum Proposed Impervious Increase
Alternatives A3, B4, C1M

N

0 0.2
Miles

City Boundary
County Boundary
Park
Waterbody

Existing Cover
PGIS*
NPGIS*
Pervious

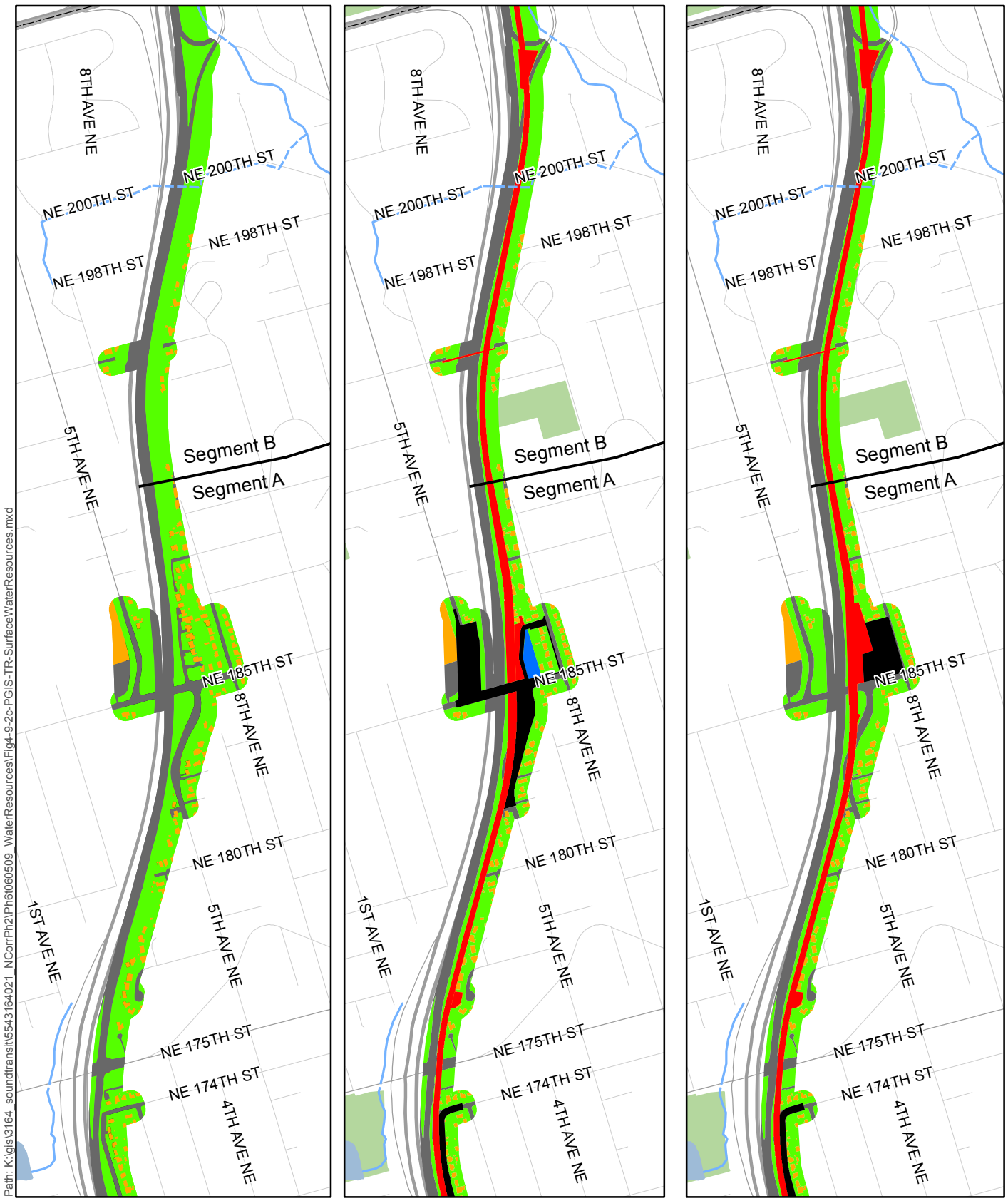
Proposed Cover
PGIS*
NPGIS*
Pervious

* PGIS = Pollution - Generating Impervious Surface
NPGIS = Non - Pollution Generating Impervious Surface

Data Sources:
(King County, Snohomish County, WSDOT, Sound Transit)

Figure I-4.9-3b
Existing and Proposed Impervious Surfaces

Lynnwood Link Extension



Existing Condition

Maximum Proposed Impervious Increase
Alternatives A1, B2A, C2W

Minimum Proposed Impervious Increase
Alternatives A3, B4, C1M

N

0 0.2
Miles

City Boundary
County Boundary
Park
Waterbody

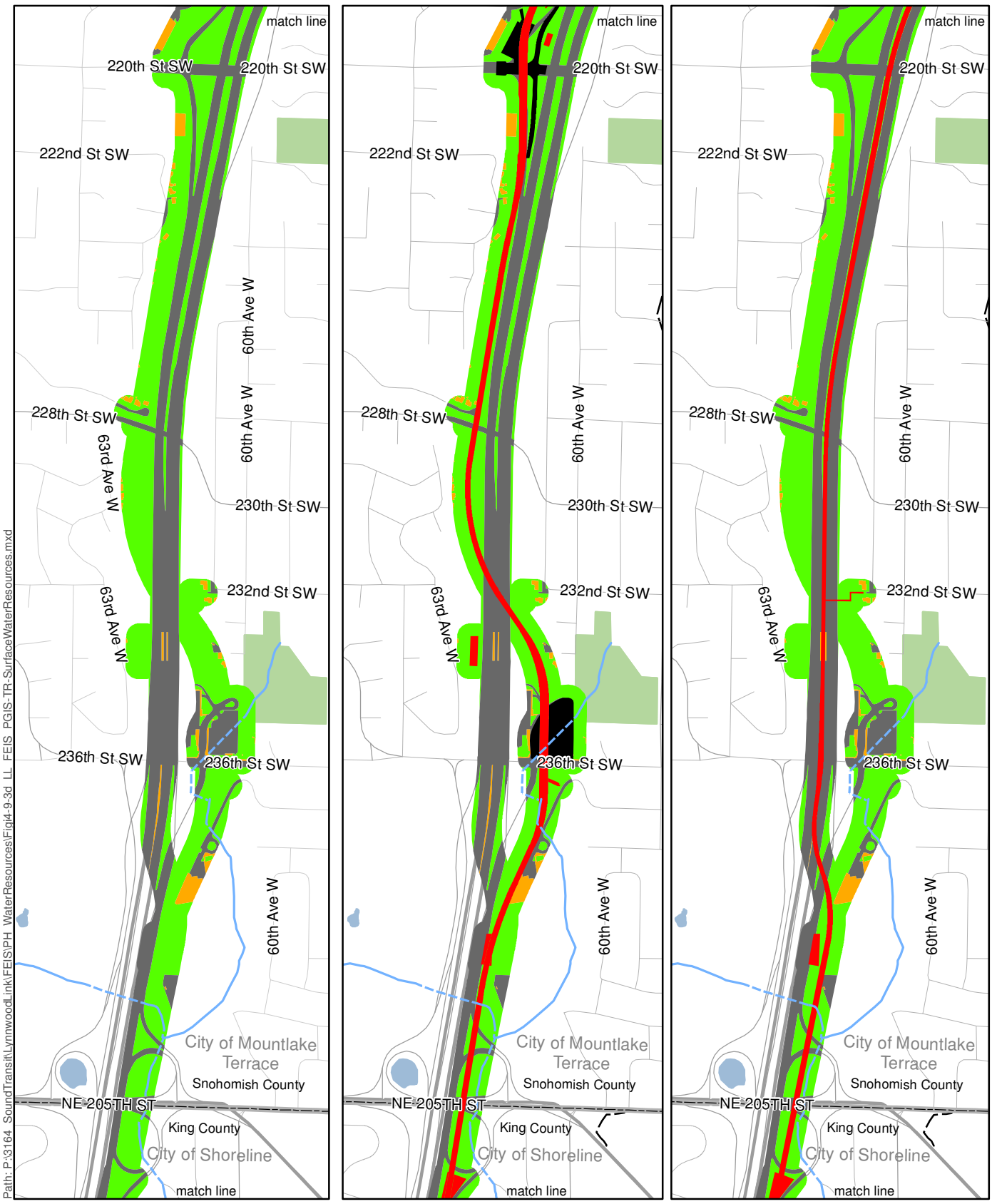
Existing Cover	Proposed Cover
PGIS*	PGIS*
NPGIS*	NPGIS*
Pervious	Pervious

* PGIS = Pollution - Generating Impervious Surface
NPGIS = Non - Pollution Generating Impervious Surface

Data Sources:
(King County, Snohomish County, WSDOT, Sound Transit)

Figure I-4.9-3c
Existing and Proposed Impervious Surfaces

Lynnwood Link Extension



Existing Condition

Maximum Proposed Impervious Increase
Alternatives A1, B2A, C2W

Minimum Proposed Impervious Increase
Alternatives A3, B4, C1M

N

0 0.2
Miles

City Boundary
County Boundary
Park

Existing Cover	Proposed Cover
PGIS*	PGIS*
NPGIS*	NPGIS*
Pervious	Pervious

* PGIS = Pollution - Generating Impervious Surface
NPGIS = Non - Pollution Generating Impervious Surface

Data Sources:
(King County, Snohomish County, WSDOT, Sound Transit)

Figure I-4.9-3d
Existing and Proposed Impervious Surfaces

Lynnwood Link Extension

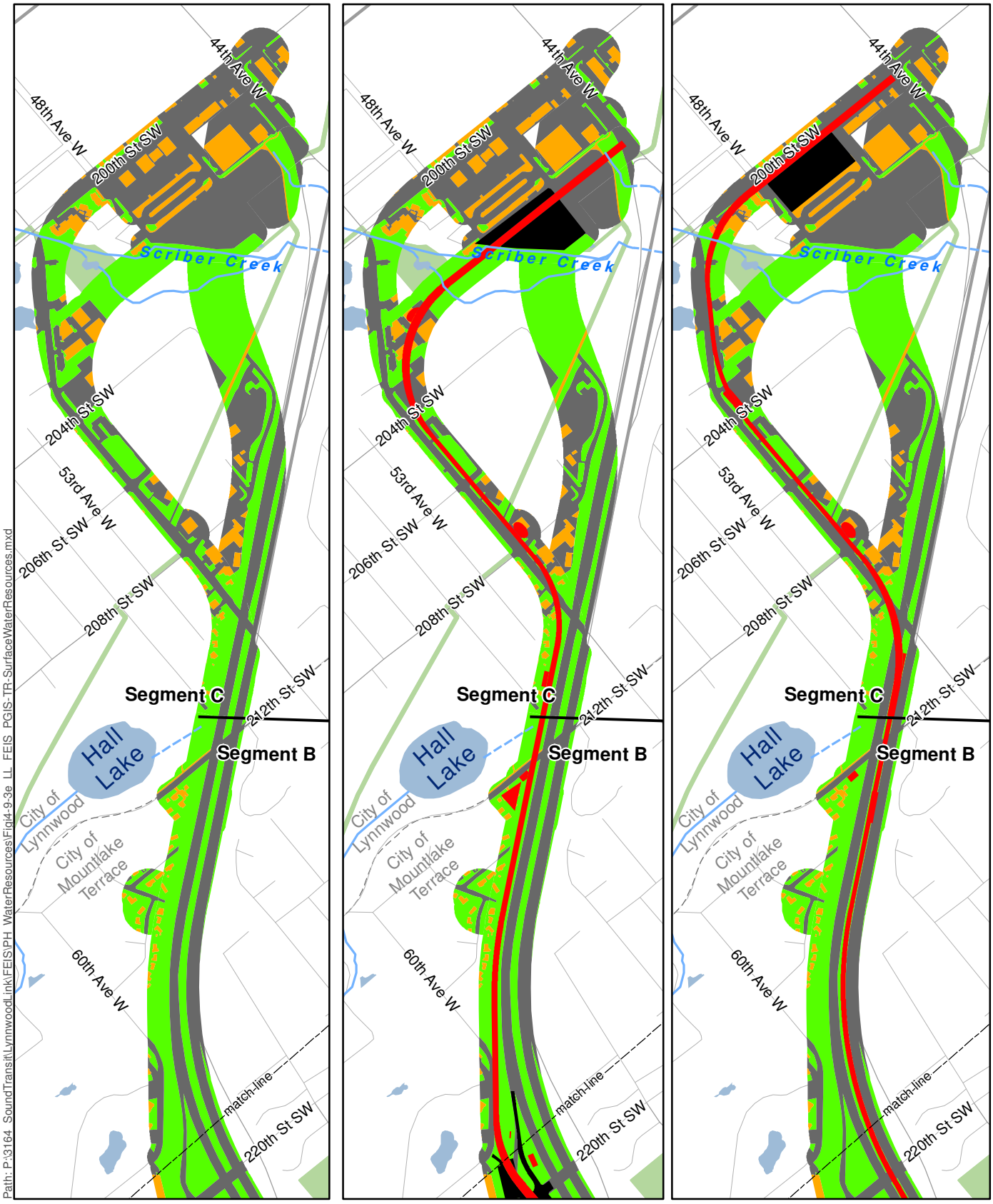


Figure I-4.9-3e
Existing and Proposed Impervious Surfaces

Lynnwood Link Extension

APPENDIX I-4.11

Geology and Soils

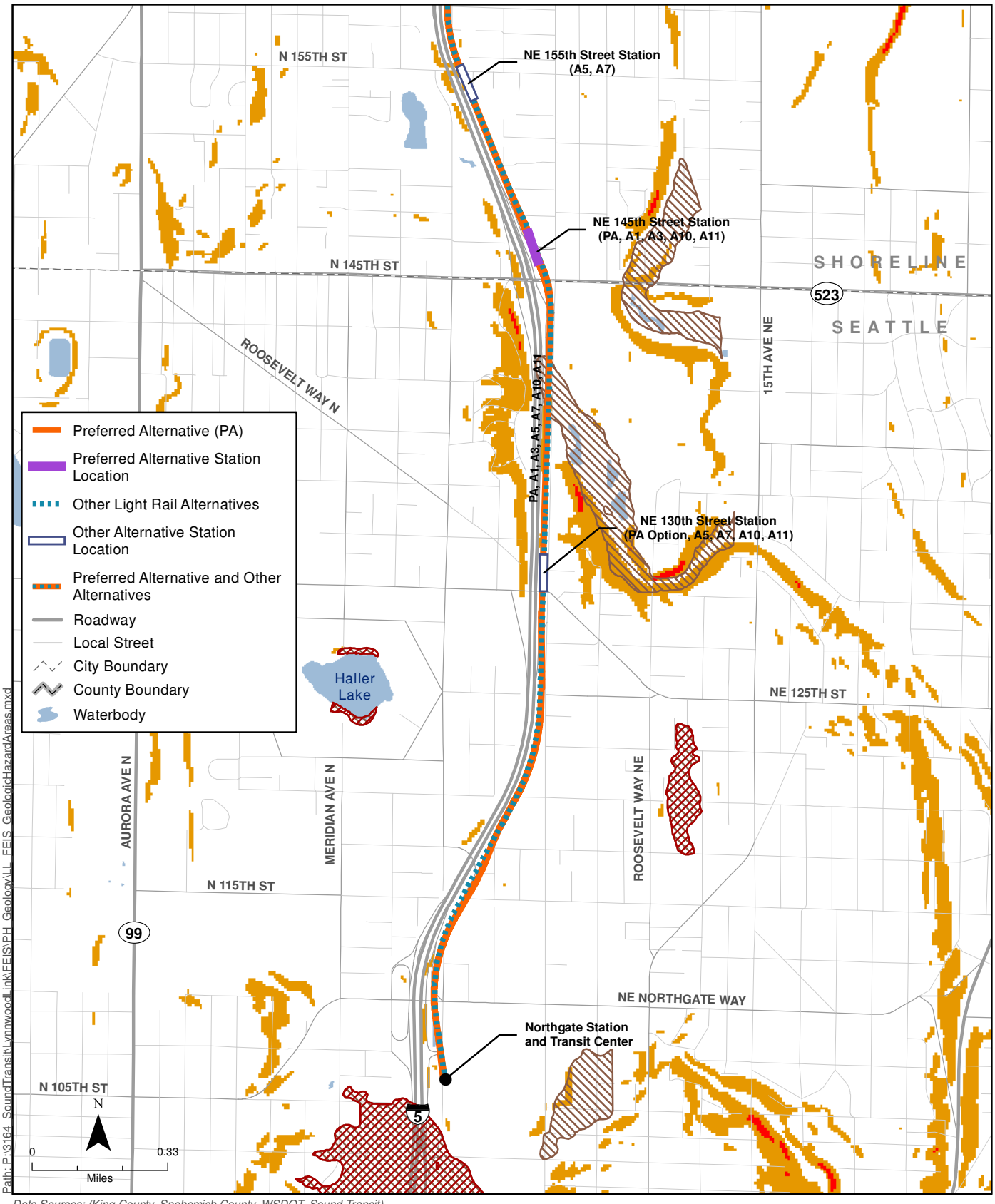
APPENDIX I-4.11 GEOLOGY AND SOILS — BACKGROUND INFORMATION

Table I-4.11-1. Summary of Geologic Units and Engineering Properties

Geologic Unit (Map Symbol)	Description	General Constructability	Density and/or Hardness	Strength	Permeability	Liquefaction Potential
Modified land	Fill and/or graded natural soils that obscure or alter the original soils; not mapped or shown on map legend, because entire I-5 corridor could potentially be shown as modified land	Varying. Poor foundation support and poor cut stability if non-engineered, good foundation support and cut stability if engineered	Variable	Variable	Variable	High
Wetland deposits (Qw)	Organic-rich sediment, peat and fine-grained alluvium deposited in and around wetlands; not all deposits mapped	Poor foundation support, poor cut stability, high occurrence of groundwater, poor soils for reuse as engineered fill	Very soft to medium stiff	Low	Variable	High
Peat (Qp)	Organic matter and woody debris, often accumulated in the floors of recessional outwash channels, commonly interbedded with silt and clay; not all deposits mapped	Poor foundation support and poor cut stability; highly compressible	Very soft to medium stiff	Very low	Medium	Low
Younger alluvium (Qyal)	Sand with variable silt content and silt with occasional layers of organic matter, deposited by streams and running water; not all deposits mapped	Poor to fair foundation support, depending on composition, density and construction type; some soils might be wet-weather sensitive; some soils might be suitable for reuse as engineered fill, depending on fines content	Loose to medium dense or soft to stiff	Low to medium	Low to high	High

Geologic Unit (Map Symbol)	Description	General Constructability	Density and/or Hardness	Strength	Permeability	Liquefaction Potential
Vashon recessional outwash deposits (Qvr)	Layered sand and gravel with minor silt and clay layers deposited in outwash channels emanating from retreating glaciers as well as in and adjacent to recessional lakes.	Fair to good foundation support and stable cuts when undisturbed, unless below the water table or exposed to water; potential groundwater occurrence; soils suitable for reuse as engineered fill	Loose to dense	Low to medium	Medium	Medium
Vashon glacial till (Qvt)	Non-sorted mixture of clay, silt, sand, gravel, cobbles, and boulders deposited along the base of the Vashon glacial ice. The upper 2 to 5 feet is often weathered. These materials are generally heterogeneous, yet often exhibit considerable variation in composition over short distances	Excellent foundation support and stable cuts when undisturbed; perched groundwater sometimes encountered; wet-weather sensitive, soils suitable for reuse as engineered fill depending on moisture content	Medium dense to very dense	High	Low	Low
Advance outwash (Qva)	Stratified sand with gravel and some cobbles deposited by streams emanating from advancing glaciers and subsequently glacially consolidated. Advance outwash deposits typically contain relatively low fines content. However, locally, the advance outwash can be silty and contain layers of fine-grained sands and silts.	Excellent foundation support and stable cuts when undisturbed, unless below the water table or exposed to water; potentially high groundwater occurrence; soils suitable for reuse as engineered fill	Dense to very dense	High	Medium to high	Low

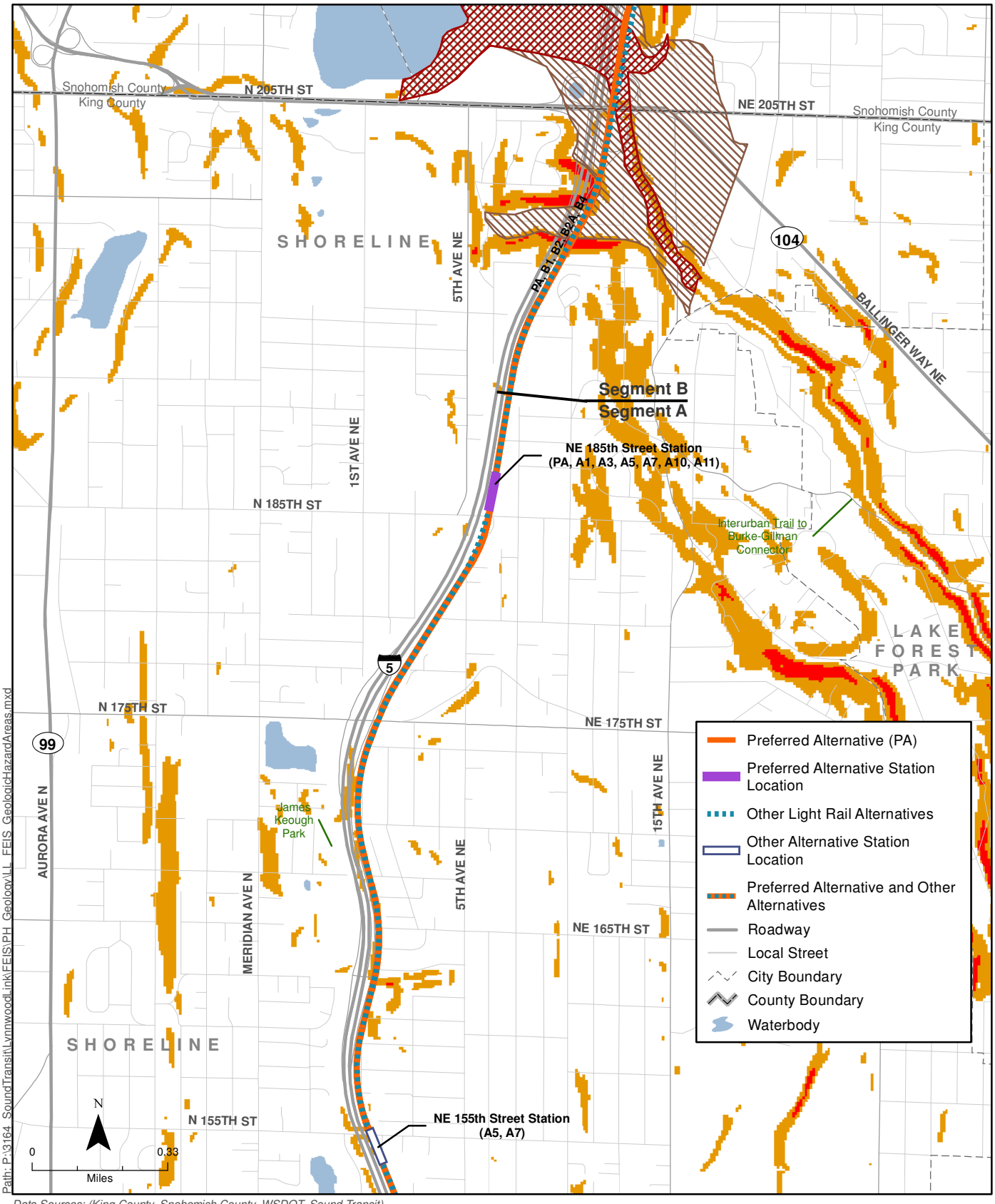
Geologic Unit (Map Symbol)	Description	General Constructability	Density and/or Hardness	Strength	Permeability	Liquefaction Potential
Lawton clay (Qvlc)	Thick sections of clay and silt and fine sand and some layers of peaty sand deposited in proglacial lakes and subsequently glacially consolidated; not mapped but likely present below advance outwash	Good foundation support when undisturbed, cuts potentially unstable if previous slope movement has occurred; low groundwater occurrence; poor soils for reuse as engineered fill	Medium stiff to hard	Medium to high	Low	Low



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Figure I-4.11-1a
Geologic Hazard Areas

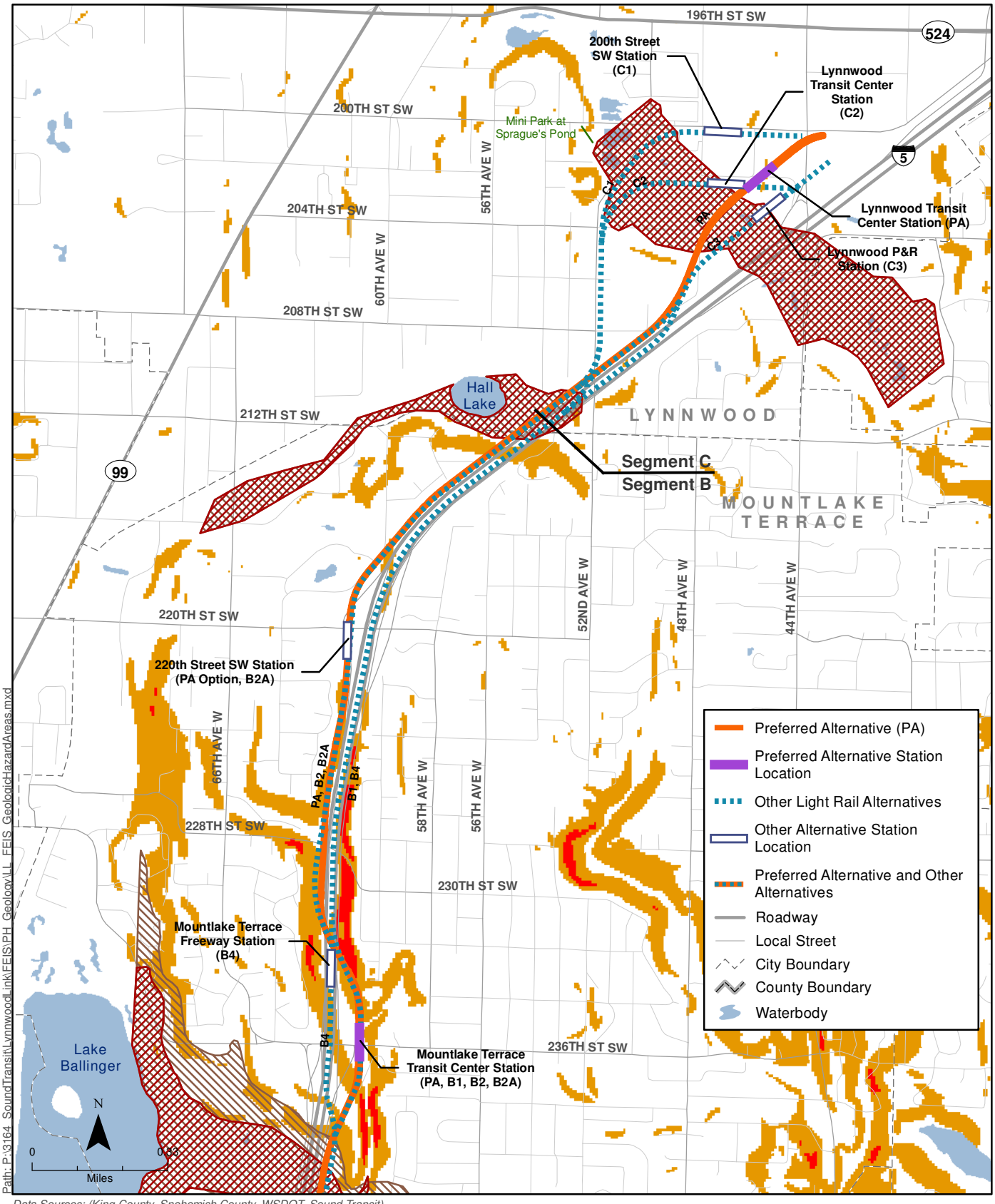
Settlement Hazard Areas
Seismic Hazard Areas
Steep Slope Hazard Areas (15% - 40% Slopes)
Landslide Hazard Areas (>40% Slopes)



Path: P:\3164 SoundTransit\LynnwoodLink\FEIS\PH Geology\LL FEIS GeologicHazardAreas.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Figure I-4.11-1b
Geologic Hazard Areas



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Figure I-4.11-1c
Geologic Hazard Areas

Settlement Hazard Areas
Seismic Hazard Areas
Steep Slope Hazard Areas (15% - 40% Slopes)
Landslide Hazard Areas (>40% Slopes)

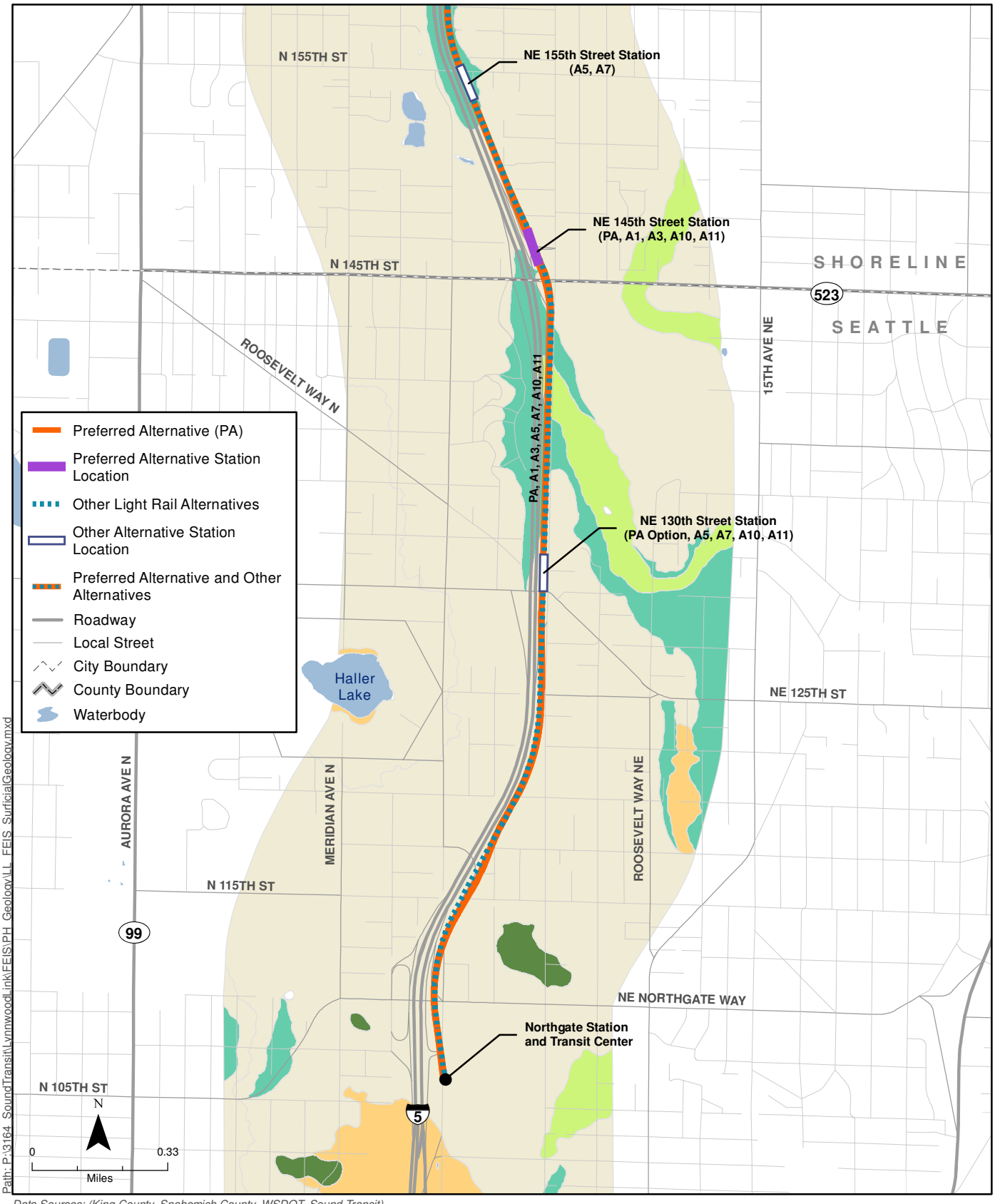
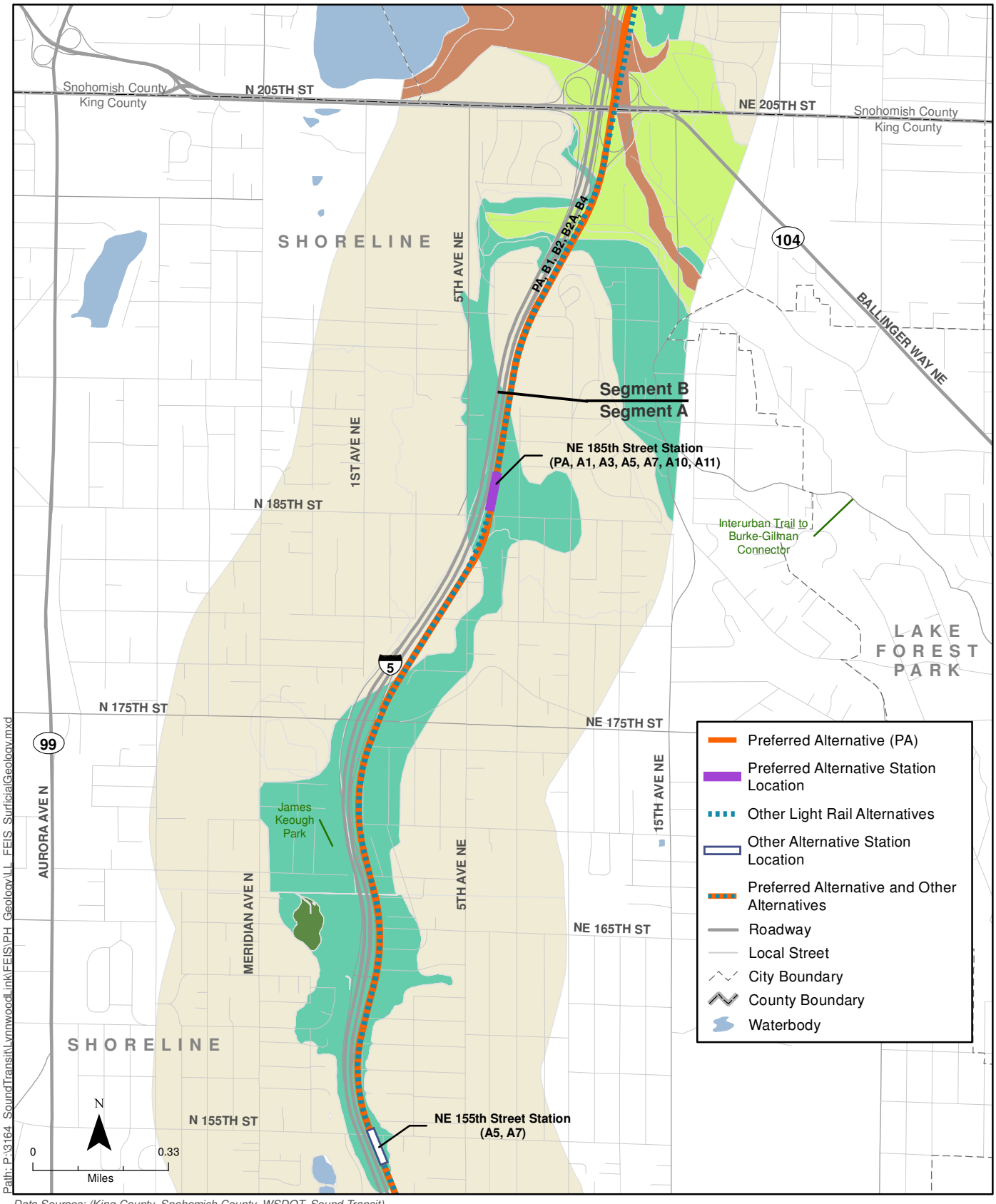


Figure I-4.11-2a
Surficial Geology

Lynnwood Link Extension

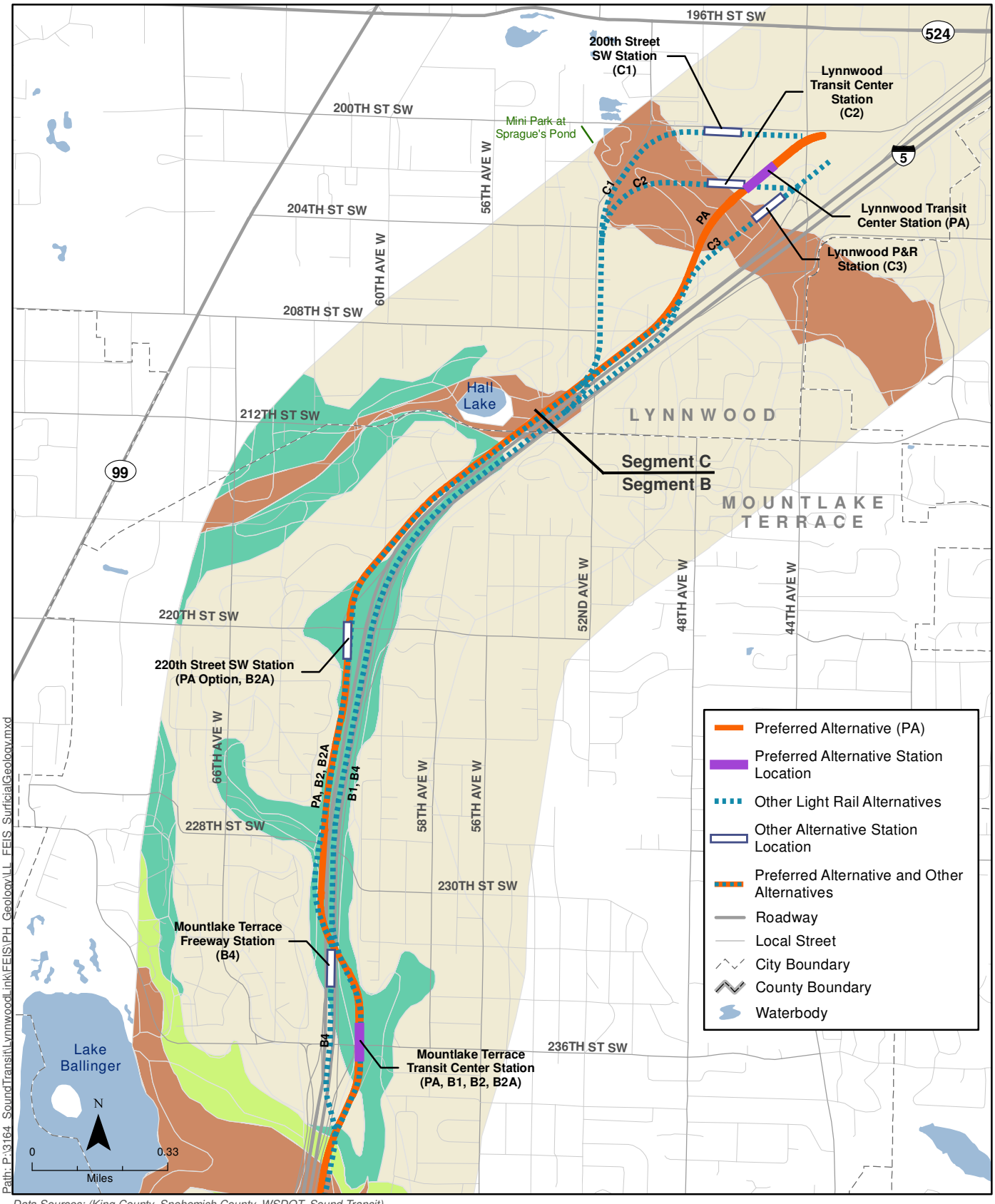


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Qp - Peat
Qva - Advance Outwash
Qvr - Vashon Recessional Outwash Deposits
Qvt - Vashon Glacial Till
Qw - Wetland Deposits
Qyal - Younger Alluvium
Water

Figure I-4.11-2b
Surficial Geology

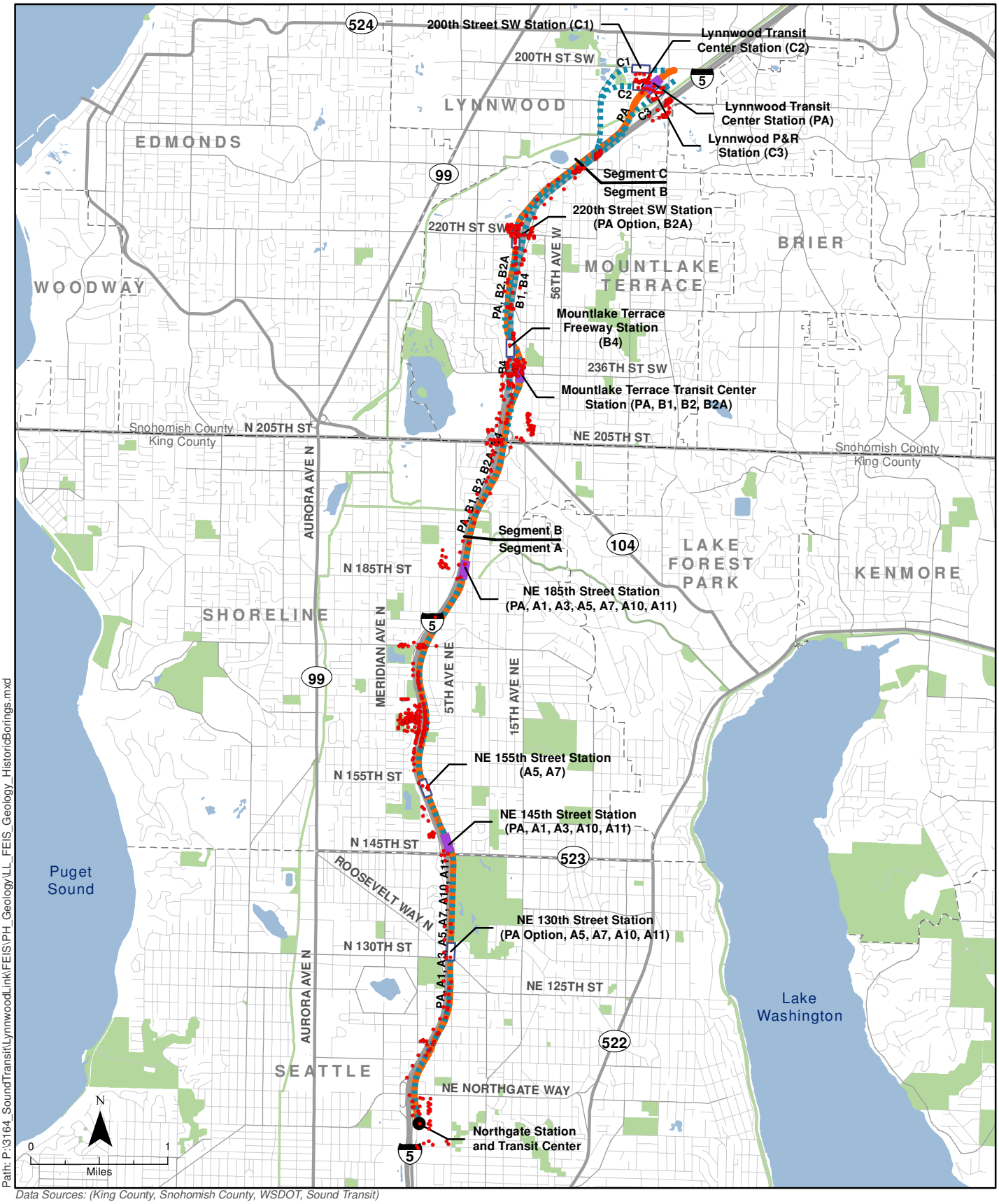
Lynnwood Link Extension



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Qp - Peat
Qva - Advance Outwash
Qvr - Vashon Recessional Outwash Deposits
Qvt - Vashon Glacial Till
Qw - Wetland Deposits
Qyal - Younger Alluvium
Water

Figure I-4.11-2c
Surficial Geology



Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_Geology\LL_FEIS_Geology_HistoricBorings.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Preferred Alternative (PA)
Preferred Alternative Station Location
Other Light Rail Alternatives
Other Alternative Station Location
Preferred Alternative and Other Alternatives
Historical Borings
Roadway
Local Street
City Boundary
County Boundary
Park
Waterbody

Figure I-4.11-3
Historical Borings

Lynnwood Link Extension

APPENDIX I-4.12

Hazardous Materials

APPENDIX I-4.12 HAZARDOUS MATERIALS — BACKGROUND INFORMATION

Potential Acquisition Issues

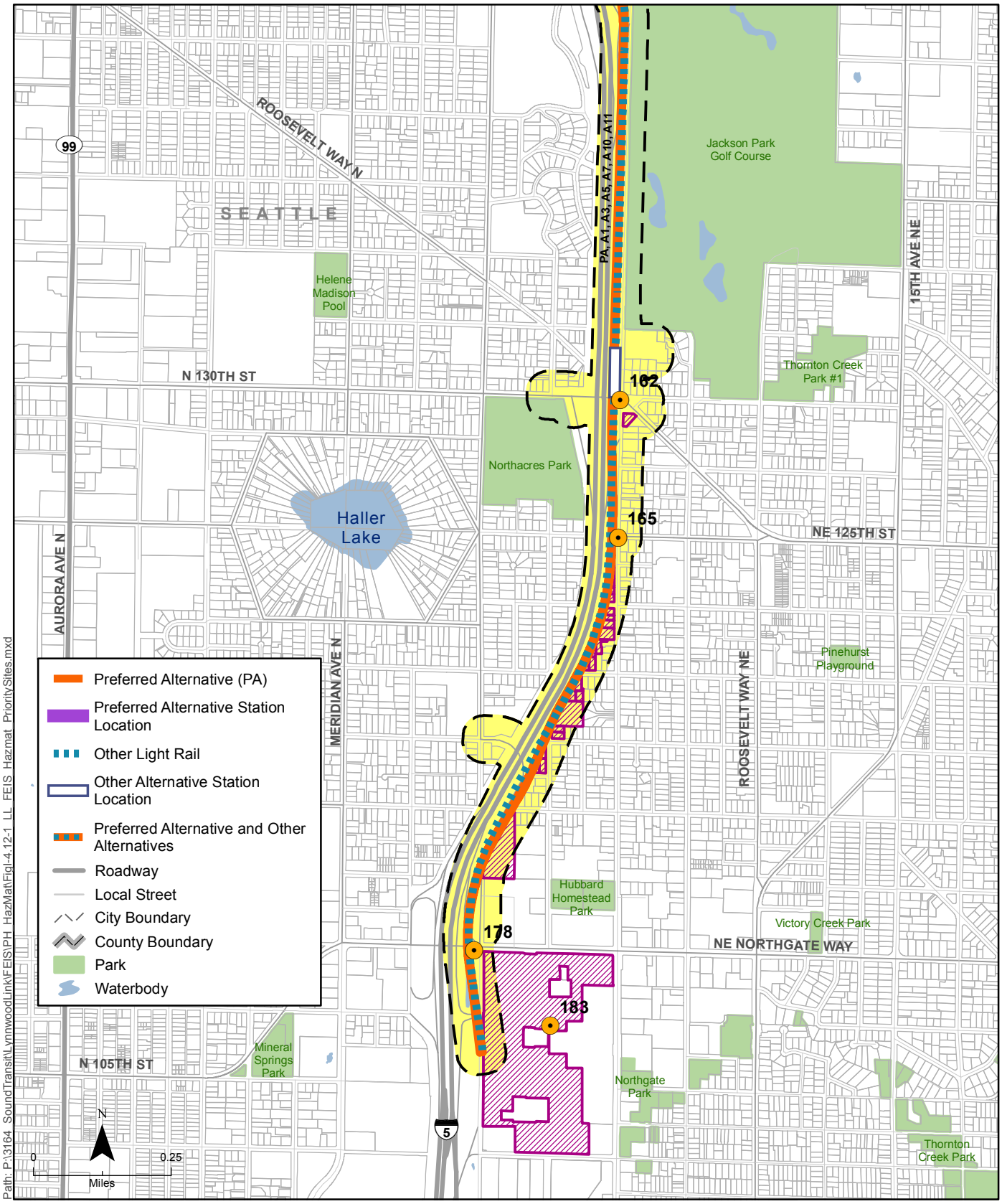
Acquisition of property where recognized environmental conditions (RECs) have been identified can result in or a need for further action by the purchaser (i.e., Sound Transit). Issues can include:

1) restriction in current or future property use;
2) incurring costs for cleanup;
3) schedule delays;
4) worker and public safety; and/or
5) increased resource agency oversight.

Sound Transit routinely investigates the previous ownership and uses of a property as well as its conditions prior to an acquisition, which helps safeguard and manage potential liability issues. In this way, RECs are disclosed prior to the sale of the property and potential issues can be mitigated prior to construction activities. Inquiry may result in responsibility for cleanup by the owner/operator and/or reduction in the property's value.

Additional investigations and other due diligence may be conducted prior to property acquisition. A Phase I ESA conducted consistent with ASTM 1527-05, or equivalent, could be performed for an industrial or commercial property that is planned for acquisition. A Phase I ESA would include activities such as on-site inspections and interviews with property owners and operators, activities that are not standard practice in developing Draft EIS documents. Acquiring temporary or permanent easements may also require some level of due diligence.

Additional investigation may be necessary to establish the presence or absence of contamination to satisfy due diligence requirements under federal law and to qualify for landowner liability protections. Assessment would also help in the determination of potential cleanup actions and cost. The conduct of these additional assessments is considered sufficient to mitigate agency liability as described in Section 4.12.8.



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Hazardous Materials Site and Ranking

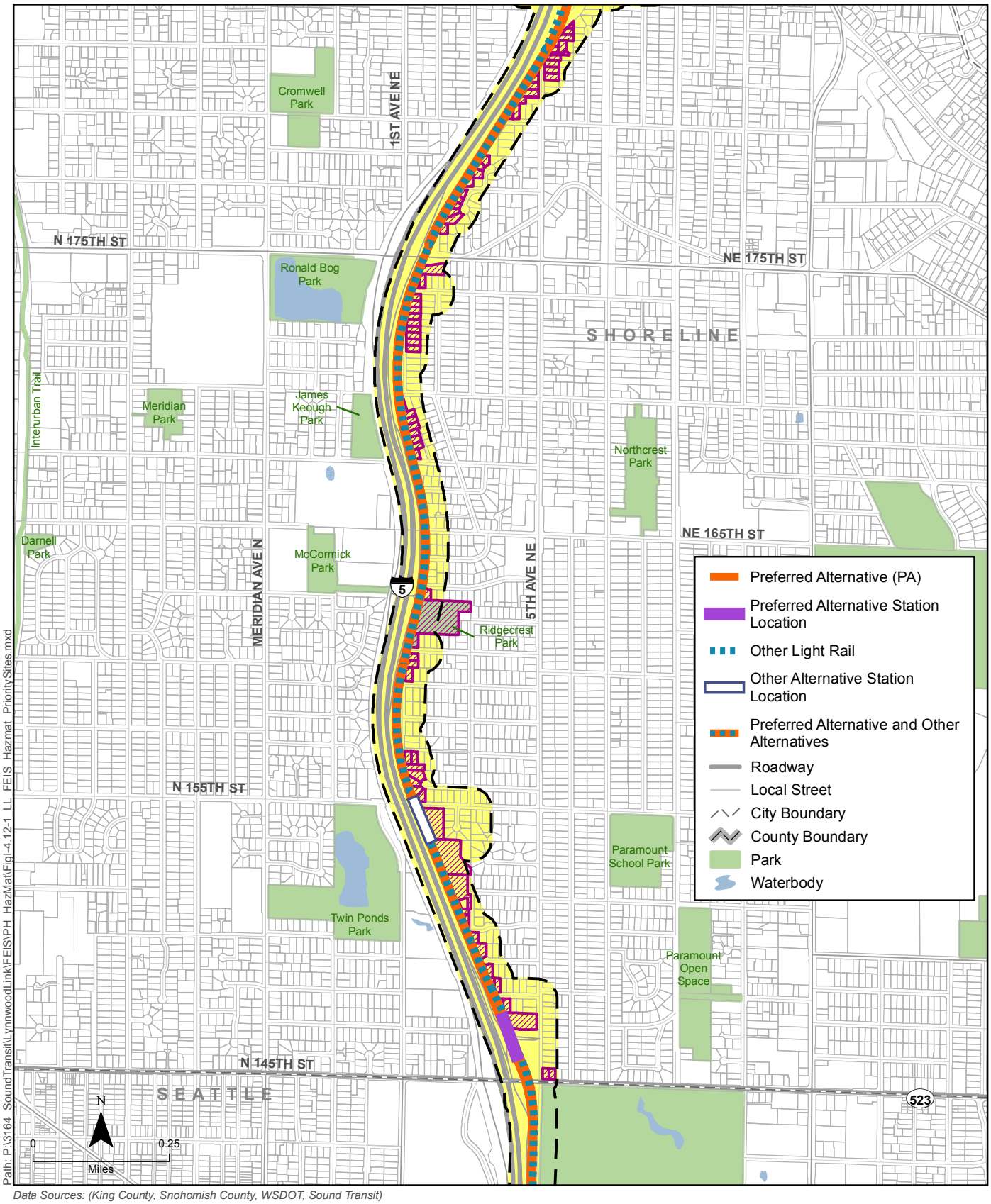
4
5
118 (EDR ID)*

Project Study Area
Potential Acquisition Parcel

**Note:*
EDR ID is assigned from the Environmental Data Resources (EDR) regulatory database review.

Figure I-4.12-1a
Potential Acquisition Parcels and Highest Priority Hazardous Materials Sites

Lynnwood Link Extension



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Hazardous Materials Site and Ranking

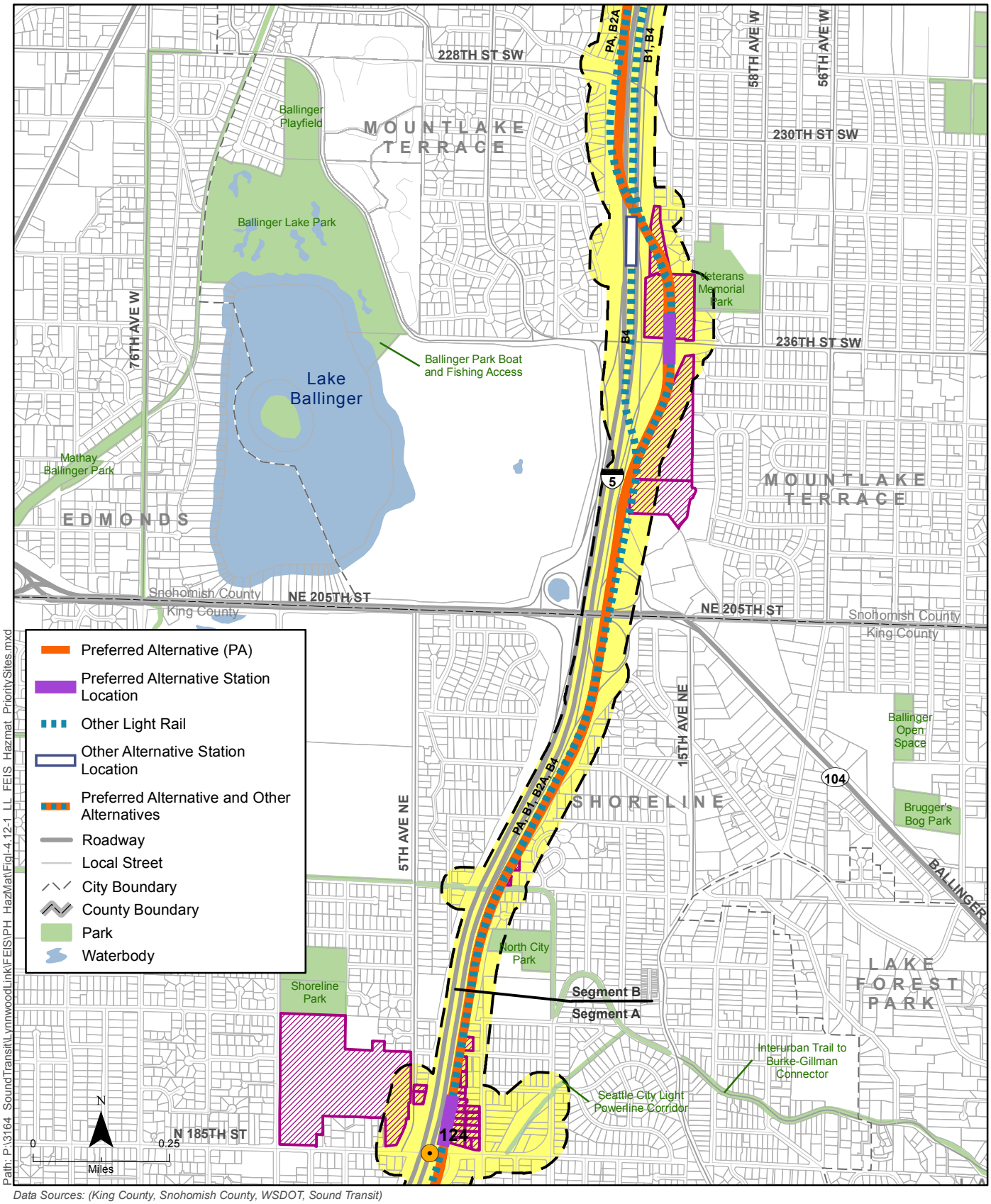
4
5
118 (EDR ID)*

Project Study Area
Potential Acquisition Parcel

**Note:*
EDR ID is assigned from the Environmental Data Resources (EDR) regulatory database review.

Figure I-4.12-1b
Potential Acquisition Parcels and Highest Priority Hazardous Materials Sites

Lynnwood Link Extension



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Hazardous Materials Site and Ranking

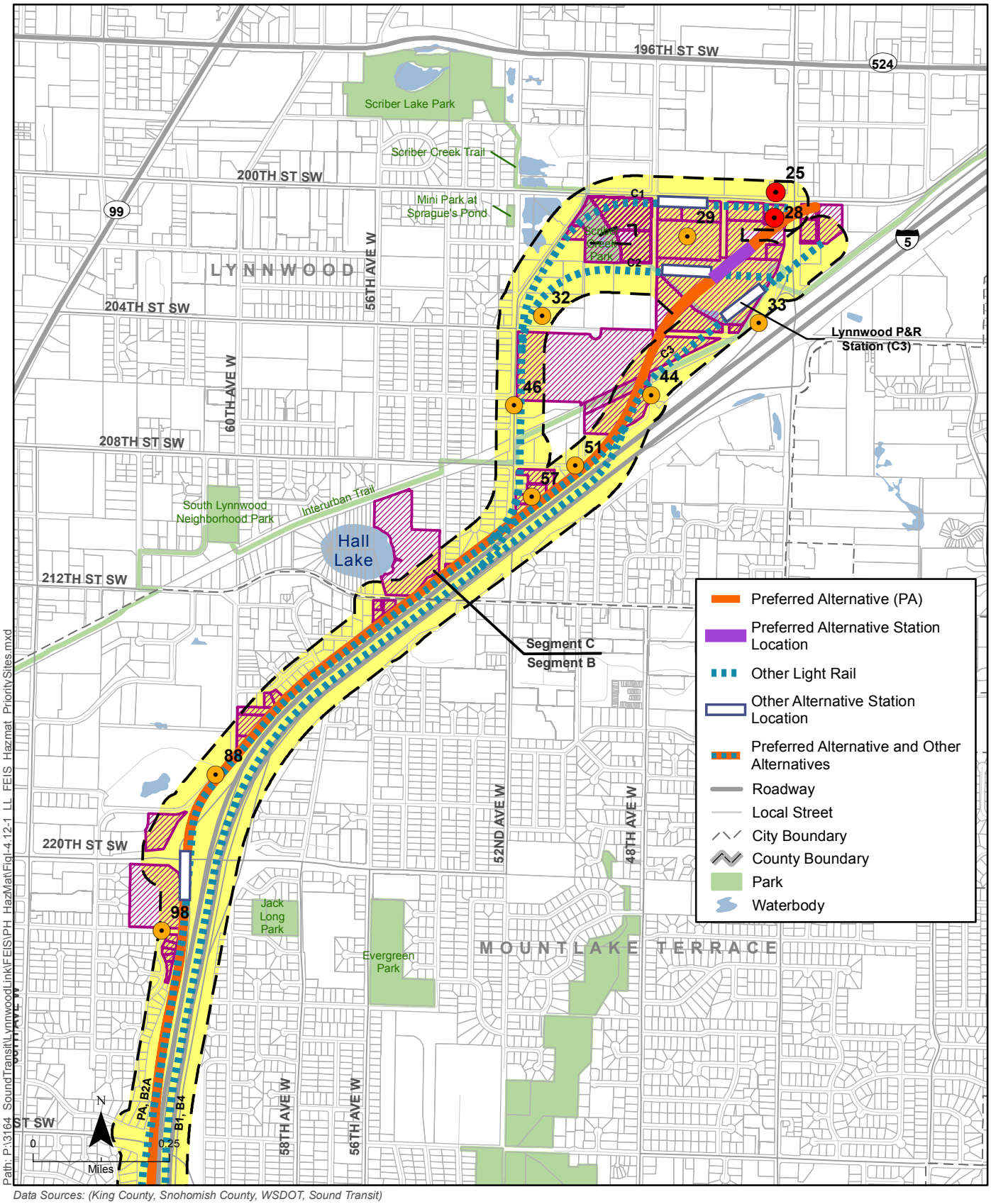
4
5
118 (EDR ID)*

Project Study Area
Potential Acquisition Parcel

**Note:*
EDR ID is assigned from the Environmental Data Resources (EDR) regulatory database review.

Figure I-4.12-1c
Potential Acquisition Parcels and Highest Priority Hazardous Materials Sites

Lynnwood Link Extension



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Hazardous Materials Site and Ranking

4
5
118 (EDR ID)*

Project Study Area
Potential Acquisition Parcel

**Note:*
EDR ID is assigned from the Environmental Data Resources (EDR) regulatory database review.

Figure I-4.12-1d
Potential Acquisition Parcels and Highest Priority Hazardous Materials Sites

Lynnwood Link Extension

Table I-4.12-1 - All Sites Within the Study Area Identified in One or More Environmental Databases

EDR ID	Owner Name	Address	City	Washington State Department of Ecology Databases											
				UST	LUST	AST	CSCSL	CSCSL-NFA	SPILLS	VCP	RAATS	ICR	SWF/LF	INST CONTROL	BROWN FIELDS
1	FIRE STATION 1 LYNNWOOD	18800 44TH AVE W	LYNNWOOD	X	X		X								
2	JB ASPHALT CO	19222 HWY 99	LYNNWOOD				X								
2	KELLYS FURNITURE REFINISHING	19230 HWY 99	LYNNWOOD	X	X		X			X					
3	TOP AUTO INC LYNNWOOD	19414 44TH AVE W	LYNNWOOD												
3	USA PETROLEUM 190	19420 44TH AVE W	LYNNWOOD	X				X		X		X			
4	TIRE MARK	19406 HWY 99	LYNNWOOD	X	X		X								
5	L & L ENTERPRISES	19502 48TH AVE W	LYNNWOOD												
6	LIGHTHOUSE DIVING CENTER	5421 C 196TH ST SW	LYNNWOOD					X							
7	HIGHLINE CLEANERS	19515 44TH AVE	LYNNWOOD												
8	KELLY MOORE PAINT CO INC LYNNWOOD	5009 196TH ST SW	LYNNWOOD												
9	GLACIER ENVIRONMENTAL SVCS	4807 196TH SW	LYNNWOOD												
9	ARCO 6214	4812 196TH ST SW	LYNNWOOD	X	X							X			
9	LYNNWOOD AUTO PARTS INC	4815 196TH SW	LYNNWOOD												
9	KC MARTIN AUTOMOTIVE SVC CO MAIN SHOP	4829 196TH ST SW	LYNNWOOD												
10	196TH ST SW LYNNWOOD	4909 196TH ST SW	LYNNWOOD						X						
10	FIVE STAR CAR WASH	4921 196TH ST SW	LYNNWOOD	X	X		X					X			
10	LES SCHWAB TIRES	4933 196TH ST SW	LYNNWOOD	X	X										
11	CLEANERY SNOHOMISH LYNNWOOD	4701 196TH SW	LYNNWOOD												
11	UNOCAL STATION 5623	4733 196TH ST SW	LYNNWOOD					X				X			
12	LYNNWOOD SHURGARD	4600 196TH SW	LYNNWOOD												
12	FRED MEYER FUEL STOP 180	4615 196TH ST SW	LYNNWOOD												
12	FRED MEYER FUELING FACILITY	4618 196TH ST SW	LYNNWOOD												
13	MINUTEMAN PRESS LYNNWOOD	4291 196TH ST SW	LYNNWOOD												
13	EXXON CO USA 79078	4317 196TH ST SW & 144TH	LYNNWOOD	X	X		X			X		X			
14	ALDERWOOD OLDSMOBILE/CADILLAC (TWO REPORTS)	3909 196TH SW	LYNNWOOD	X				X		X		X			
15	SUPER SHOPS LYNNWOOD	4028 SW 196TH ST	LYNNWOOD	X											
16	ELAN BUILDING	3810 196TH ST SW	LYNNWOOD	X											
17	60 MINUTE TUNE/ DAVES COMPLETE BRAKE	19610 A 44TH AVE W	LYNNWOOD	X	X		X					X			
18	LYNNWOOD ALTERATIONS	19720 44TH AVE W	LYNNWOOD												
18	R C & COMPANY LTD	19730 44TH AVE W	LYNNWOOD												
19	NN CONTACT LENS INTL	4201 198TH ST SW	LYNNWOOD												
20	BEST PRODUCTS CO INC LYNNWOOD	19801 40TH AVE W	LYNNWOOD												
20	LEATHER TO LACE	4001 198TH ST SW	LYNNWOOD												
20	SEATTLE GOODWILL	4027 198TH STREET SW	LYNNWOOD												
21	SCHUCKS AUTO SUPPLY LYNNWOOD	19825 HWY 99	LYNNWOOD				X					X			
22	LYNNWOOD CITY	5322 198TH ST SW	LYNNWOOD												
23	FIRESTONE STORE NO 3197	19800 44TH AVE W STE H	LYNNWOOD	X				X				X			
23	GOODYEAR SVC STORE LYNNWOOD	19805 44TH AVE W	LYNNWOOD						X						
24	SCHUCKS HWY 99	19915 HWY 99	LYNNWOOD	X	X		X								
25	MR CLEAN CAR WASH	19907 44TH AVE W	LYNNWOOD	X	X							X			
25	SHELL STATION 120839	19930 44TH AVE W	LYNNWOOD	X	X		X			X		X			
26	AT&T WIRELESS CEDAR VALLEY	4030 200TH ST SW	LYNNWOOD												
26	CENTERS 3 COLLISION	4030 ALDERWOOD MALL BLVD	LYNNWOOD												
27	7 ELEVEN STORE 22893	4520 200TH ST SW	LYNNWOOD												
27	PC RECYCLE	4520 200TH ST SW STE 201	LYNNWOOD												
28	CHEVRON 94953	20010 44TH AVE W	LYNNWOOD	X	X		X		X	X		X			
29	COMMUNITY TRANSIT	20100 48TH AVE W	LYNNWOOD						X						
29	CARVER CORP	20121 48TH AVE W	LYNNWOOD												
30	PIERRE MONEYMART	20221 HWY 99	LYNNWOOD	X	X		X			X					
31	NELSON MOTORS INC	20307 HWY 99	LYNNWOOD	X	X		X								
32	RIMPAC STEEL INC	20311 52ND AVE W	LYNNWOOD					X		X		X			
32	CEDAR VALLEY ROAD DRUM	20515 CEDAR VALLEY RD	LYNNWOOD												

Table I-4.12-1 - All Sites Within the Study Area Identified in One or More Environmental Databases

EDR ID	Owner Name	Address	City	Washington State Department of Ecology Databases											
				UST	LUST	AST	CSCSL	CSCSL-NFA	SPILLS	VCP	RAATS	ICR	SWF/LF	INST CONTROL	BROWN FIELDS
33	LYNNWOOD SEWER LIFT STA 10	4599 204TH ST	LYNNWOOD	X	X										
34	OLDS OLYMPIC MAIN OFFICE	6016 204TH SW	LYNNWOOD	X	X		X								
35	MAGNA DESIGN INC	5804 204TH SW	LYNNWOOD												
36	REYNOLDS CORP	5720 204TH ST SW	LYNNWOOD	X											
37	ZIC 2 LLC CORPORATE OFFICE PARK	4001 204TH ST SW	LYNNWOOD												
38	GTE LYNNWOOD GARAGE	3831 204TH SW	LYNNWOOD	X	X		X					X			
39	LARCHWAY ARCO	3830 204TH SW	LYNNWOOD	X											
40	WILLIAMS & ABBOTT CONSTRUCTION	20508 56TH AVE W STE A	LYNNWOOD												
40	ROTO ROOTER INC	20508 56TH AVE W STE C	LYNNWOOD												
41	LYNNWOOD PUBLIC WORKS	20519 60TH AVE W	LYNNWOOD				X								
41	LYNNWOOD CITY PARKS & RECREATION SHOP	20522 60TH AVE W	LYNNWOOD	X	X		X								
42	EDMONDS SCHOOL DISTRICT SUPPORT CTR	S OF 204TH ST SW ROW & E OF 5	LYNNWOOD												
43	OPTIONS PROGRAM	20525 52ND AVE WEST	LYNNWOOD												
44	C MARTIN TRUCKING	20610 48TH AVE W	LYNNWOOD					X							
44	C MARTIN TRUCKING INC	20631 48TH W	LYNNWOOD	X				X				X			
45	LYNNWOOD DODGE INC	20612 HWY 99	LYNNWOOD				X					X			
46	CONNELLY SKIS INC	20621 52ND AVE W	LYNNWOOD						X						
47	HERTZ EQUIPMENT RENTAL ERC 9789	20630 56TH AVE W	LYNNWOOD												
48	UNOCAL STATION SHIN	20713 HWY 99	LYNNWOOD	X	X		X								
49	AA RENTALS	20728 56TH AVE W	LYNNWOOD						X						
50	PRO TEX PAINTING	20727 52ND AVE W	LYNNWOOD												
51	SHELDONS CUSTOM CAB LTD	20626 50TH AVE W	LYNNWOOD												
51		5015 208TH ST SW	LYNNWOOD						X						
52	BRIGGS TECHNOLOGIES INC LYNNWO	6027 208TH SW	LYNNWOOD												
53	USWCOM LYNNWOOD PRR 27563	6024 208TH ST SW	LYNNWOOD												
54	ECLECTIC PRODUCTS INC TITAN DIVISION	5629 208TH ST SW	LYNNWOOD												
54	WINK CORP	5631 208TH SW	LYNNWOOD												
55	R & J AUTO DETAIL	5121 208TH SW	LYNNWOOD												
56	NIX 99 IMPORT RECYCLING	5522 208TH ST SW	LYNNWOOD												
57	BUDGET TANK REMOVAL	20825 52ND AVE	LYNNWOOD						X						
58	HALLS LAKE CSWGP	20907 59TH PLACE W	LYNNWOOD												
59	US DOJ DEA 54TH W LYNNWOOD	20908 54TH AVE W 8	LYNNWOOD												
60	COYOTE CLEANING SYSTEMS INC	7208 210TH ST SW	EDMONDS				X					X			
61	JAMES AUTO SERVICE	21000 70TH AVE W	EDMONDS				X								
62	BERRY NEON CO INC	21027 61ST W	LYNNWOOD	X											
63	J & J AUTO REPAIR	6204 211TH ST SW	LYNNWOOD												
64	MGM GRAPHICS INC	6116 211TH ST SW	LYNNWOOD												
65	BOB MILLER	21126 44TH AVE W	LYNNWOOD	X											
66	SEATTLE ENGINE REBUILDERS & REMFG INC	6501 212TH ST SW	LYNNWOOD												
67	ANDYS ARCO	6408 212 SW	LYNNWOOD	X											
67	DAVIS INDUSTRIES INC	6425 212TH ST SW	LYNNWOOD	X											
68	WESTERN TYPOGRAPHERS INC	6333 212TH ST	LYNNWOOD												
69	SNOHOMISH CNTY PUD HALLS LK SUBSTATION	6120 212TH ST SW	MOUNTLAKE TERRACE	X				X				X			
69	BEETLES UNLIMITED INC	6127 212TH ST SW UNIT B	LYNNWOOD												
69	SNOHOMISH CNTY PUD 1 ESPERANCE SUBSTA	6129 212TH ST SW	LYNNWOOD												
69	LYNNWOOOD AUTO TRUCK SERVICE	6131 212TH ST SW	LYNNWOOD												
69	ALLEN L CURTIS	6137 212TH SW	LYNNWOOD	X											
69	SNOHOMISH CNTY PUD LYNNWOOD STA	6200 212TH ST SW	LYNNWOOD				X					X			
69	FRANKS SUBURBAN AUTOMOTIVE 1	6203 212TH SW	LYNNWOOD												
69	KENS RADIATOR SERVICE	6226 212TH SW	LYNNWOOD					X				X			
69	SAFETY KLEEN SYSTEMS INC LYNNWOOD 709201	6303 212TH ST SW STE C	LYNNWOOD	X	X		X				X				
70	GILLEN PROPERTY HALL LAKE	20908 54TH AVE W	LYNNWOOD					X		X					

Table I-4.12-1 - All Sites Within the Study Area Identified in One or More Environmental Databases

EDR ID	Owner Name	Address	City	Washington State Department of Ecology Databases											
				UST	LUST	AST	CSCSL	CSCSL-NFA	SPILLS	VCP	RAATS	ICR	SWF/LF	INST CONTROL	BROWN FIELDS
71	SOUTHLAND CORP 2331 18726	21202 52ND AVE W	MOUNTLAKE TERRACE	X	X							X			
71	JOHNS TEXACO	5215 212TH SW	LYNNWOOD	X	X		X		X						
71	BARUCH AMIRA PARTNERSHIP	5215 212TH SW	LYNNWOOD												
71	JOHNS TEXACO	5215 212TH SW	LYNNWOOD	X	X										
72	EXPO CLEANERS	21005 44TH AVE W	MOUNTLAKE TERRACE												
72	RESIDENCE FORMER	21029 44TH AVE W	MOUNTLAKE TERRACE									X			
72	ARCO 5525	21201 44TH AVE W	MOUNTLAKE TERRACE												
72	US EPA MOUNTLAKE TERRACE DRUMS	212TH ST SW & 44TH AVE W NE C	MOUNTLAKE TERRACE									X			
73	CHEMTECK SERVICES INC	212TH SW & 44TH W NE COR	LYNNWOOD												
74	HANSON BROTHERS MOVING & STORAGE	21307 61ST PL W	MOUNTLAKE TERRACE	X				X		X		X			
74	SNOHOMISH CNTY SW TRANSFER STATION	21311 61ST PL W	MOUNTLAKE TERRACE										X		
75	NELSON PETROLEUM	6303 213TH PL SW	MOUNTLAKE TERRACE						X						
76	ALLIED WASTE OF LYNNWOOD	21325 66TH AVE W	LYNNWOOD												
77	MONTERRA	21426 48TH AVE W	MOUNTLAKE TERRACE												
78	VIKING FREIGHT INC MOUNTLAKE TERRACE	6203 215TH ST	MOUNTLAKE TERRACE												
78	MOUNTLAKE TERRACE CITY	6204 215TH ST SW	MOUNTLAKE TERRACE	X	X		X					X			
78	MOUNTLAKE TERRACE/LYNNWOOD MAINT. FACILITY	6205 215TH ST. SW	MOUNTLAKE TERRACE									X			
79	COLOR TECH MOUNTLAKE TERRACE	6304 215TH ST SW	MOUNTLAKE TERRACE												
79	SIGN TECH	6306 215TH ST SW	MOUNTLAKE TERRACE												
80	LLOYD CONTROLS INC	21414 66TH W	MOUNTLAKE TERRACE	X			X	X		X					
81	ENVIRONMENTAL QUALITY MANAGEMENT INC	6825 216TH ST SW STE A	LYNNWOOD												
81	INTELLIGENT CONTROLS INC	6825 216TH ST SW STE J	LYNNWOOD												
82	WHIRLWIND SERVICES	6801 216TH ST SW	MOUNTLAKE TERRACE												
83	NORTHWEST TRANSFORMER SERV MT	6510 216 ST SW UNITC	MOUNTLAKE TERRACE					X							
84	WESCO AUTOBODY SUPPLY	21601 66TH AVE W	MOUNTLAKE TERRACE												
85	CROSS PROPERTY FORMER	21700 HWY 99	EDMONDS				X								
86	MOUNTLAKE TERRACE DRUM	6103 ST ALBION WAY	MOUNTLAKE TERRACE												
87	LIGHT DOCTOR LLC	21706 66TH AVE W	MOUNTLAKE TERRACE												
87	AVIATION INSTRUMENT SVC INC	21709 66TH AVE W	MOUNTLAKE TERRACE												
87	TECHNIGRAPHIC SYSTEMS INC MOUNTLAKE TERR	21718 66TH AVE W STE 200	MOUNTLAKE TERRACE												
88	SNOHOMISH COUNTY PUD	21604 60TH AVE W	MOUNTLAKE TERRACE						X						
89	FILE DOCTORS	6505 218TH SW STE B	MOUNTLAKE TERRACE												
90	FORMS WEST INC	21816 66TH W	MOUNTLAKE TERRACE												
91	CLOUDY & BRITTON INC	6202 214TH SW	MOUNTLAKE TERRACE	X											
92	PLAID PANTRY NO 316	21919 66TH AVE W	MOUNTLAKE TERRACE	X				X							
92	MELODY CUSTOM CLEANERS	21919 66TH AVE W STE C	MOUNTLAKE TERRACE												
92	PLAID PANTRY #316	21919 66TH AVE. W.	MOUNTLAKE TERRACE									X			
93	BLUE CROSS OF WASHINGTON	7003 220TH SW	MOUNTLAKE TERRACE	X											
94	PREMERA PARKING GARAGE	6909 220TH ST SW	MOUNTLAKE TERRACE												
95	PREMERA BLUE CROSS	6707 220TH ST SW	MOUNTLAKE TERRACE												
96	ALPINE SPECIALTY CLEANING	6601 220TH ST SW	MOUNTLAKE TERRACE												
96	SHELL STATION 121478	6602 220TH SW	MOUNTLAKE TERRACE	X	X		X		X	X		X			
97	MOUNTLAKE TERRACE CITY 58TH AVE	22106 58TH AVE W	MOUNTLAKE TERRACE												
98	SNOH PUD	6200 222ND ST SW	MOUNTLAKE TERRACE						X						
99	ST PIUS X SCHOOL	22105 58TH AVE W	MOUNTLAKE TERRACE	X											
100	AT&T WIRELESS MOUNTLAKE TERRACE	6601 224TH ST SW	MOUNTLAKE TERRACE												
101	EDMONDS USAVE MINI MART	22625 HWY 99	EDMONDS				X								
102	CIRCLE K 1458	23003 56TH AVE W	MOUNTLAKE TERRACE					X							
102	CHI S AUTO REPAIR	23009 56TH AVE W	MOUNTLAKE TERRACE	X											
103	SHELL 120951	23206 56TH ST SW	MOUNTLAKE TERRACE					X		X					
103	CHEVRON 97856	23208 56TH AVE W	MOUNTLAKE TERRACE	X				X				X			
103	QUEENS CLEANER	5602 232ND ST SW	MOUNTLAKE TERRACE					X							

Table I-4.12-1 - All Sites Within the Study Area Identified in One or More Environmental Databases

EDR ID	Owner Name	Address	City	Washington State Department of Ecology Databases											
				UST	LUST	AST	CSCSL	CSCSL-NFA	SPILLS	VCP	RAATS	ICR	SWF/LF	INST CONTROL	BROWN FIELDS
104	MOUNTLAKE TERRACE CITY OF	23204 58TH AVE W	MOUNTLAKE TERRACE	X											
105	R & R AUTOMOTIVE	23504 56TH AVE W	MOUNTLAKE TERRACE	X											
106	MOUNTLAKE TERRACE PARK & RIDE	6001 236TH ST SW	MOUNTLAKE TERRACE												
106	EVERGREEN ELEMENTARY	6004 237TH ST SW	MOUNTLAKE TERRACE												
107	SCHOOL	23606 54TH W	MOUNTLAKE TERRACE	X	X		X								
107	SNOHOMISH COUNTY CHRISTIAN SCHOOL	23607 54TH AVE. W.	MOUNTLAKE TERRACE									X			
108	THE KINGS PRESS INC	24007 56TH AVE W	MOUNTLAKE TERRACE												
109	WOOD SPECIALTY PRODUCTS INC	24300 60TH AVE W	MOUNTLAKE TERRACE												
109	GATEWAY PLACE	6001 244TH ST SW	MOUNTLAKE TERRACE												
110	PLANTING DESIGN CO	24200 76TH W	EDMONDS	X	X		X								
111	TIME OIL CO MOUNTLAKE TERRACE	24205 56TH AVE W	MOUNTLAKE TERRACE	X	X		X					X			
112	PATRICK HERMAN	24311 56TH AVE W	MOUNTLAKE TERRACE	X	X							X			
112	7 ELEVEN FOOD STORE 230618022K	24325 56TH AVE N	MOUNTLAKE TERRACE												
113	NILE TEMPLE OF THE SHRINE	6601 244TH SW	MOUNTLAKE TERRACE	X	X				X			X			
113	TERRACE CLEANERS	6603 244TH ST SW	MOUNTLAKE TERRACE												
114	SHELL STATION 120865/ TEXACO #632320083	1505 NE 205TH ST	SEATTLE	X	X		X			X		X			
115	ASKAR MINI MART	1901 NE 205TH ST	SHORELINE						X						
115	GATEWAY AUTO	5601 244TH SW	MOUNTLAKE TERRACE	X	X										
116	WALLACE OMICORP BALLINGER	20309 BALLINGER WAY NE	SEATTLE	X											
116	ONCORP PROPERTIES	20319 BALLINGER WAY NE	SEATTLE												
116	RITE AID 6234	20320 BALLINGER WAY NE	SEATTLE				X								
117	ROES BALLINGER CHEVRON SERVICE 99124	20330 15TH AVE NE	SEATTLE	X	X										
118	U SAVE OIL CO INC SEATTLE	20217 BALLINGER WAY N E	SEATTLE	X											
119	PACIFIC COAST VENTURES LLC	20128 B BALLINGER WAY NE	SHORELINE												
120	KING COUNTY HOUSING AUTHORITY BALLINGER	20115 20TH PL NE	SEATTLE	X											
121	OUTRIGGER HOIST CO	20028 15TH NE	SEATTLE												
121	COASTAL COATINGS INC	20038 15TH NE	SEATTLE												
122	BALLINGER GAS & FOOD MART/ EXXON	20010 BALLINGER WAY NE	SHORELINE	X	X		X					X			
122	BALLINGER VILLAGE SHOPPING CENTER	20024 BALLINGER WAY NE	SHORELINE				X			X					
122	BALLINGER VILLAGE CLEANERS	20028 BALLINGER WAY NE	SHORELINE				X								
122	BALLINGER VILLAGE LP	20036 BALLINGER WAY NE	SHORELINE												
122	SOUND OIL COMPANY	20041 BALLINGER RD NE	SEATTLE	X	X		X								
122	WASHINGTON TREE SERVICE INC SEATTLE	20057 BALLINGER WAY NE	SEATTLE	X											
123	KING CNTY PARKS SHORELINE POOL	19030 1ST AVE NE	SEATTLE												
124	WA DOT	I-5 & 185TH	SHORELINE						X						
125	TIME OIL CO 15TH AVE	18005 15TH AVE NE	SEATTLE	X	X							X			
126	SITE SE10 NORTH CITY	18010 15TH AVE NE	SEATTLE	X											
126	AT&T WIRELESS NORTH CITY	18012 15TH AVE NE	SEATTLE												
127	ST MARKS CATHOLIC SCHOOL	18003 15TH PL NE	SEATTLE	X											
128	CROMWELL PARK IMPROVEMENTS	18009 CORLISS AVE N	SHORELINE									X			
129	ASP GERMAN CAR REPAIR	17704 15TH AVE NE	SEATTLE	X	X							X			
129	NORTH CITY CLEANERS	17721 15TH AVE NE	SEATTLE												
129	GORDONS NORTH SEATTLE TIRES	17754 15TH AVE NE	SEATTLE												
130	EXXON #7 7255	17956 1ST AVE. S.	SEATTLE									X			
131	NORTHCITY TEXACO	17563 15TH AVE NE	SHORELINE	X	X		X			X					
132	UNOCAL 4973	1150 N 175TH ST	SEATTLE	X	X		X								
133	UNOCAL 5728	1211 NE 175TH	SEATTLE	X	X		X								
134	BURKE PROPERTY	17248 RONALD PL N	SEATTLE				X								
135	MERIDIAN PARK ELEMENTARY SCHOOL	17077 MERIDIAN AVE N	SHORELINE	X											
135	MERIDIAN LANDFILL	170TH N & MERIDIAN AV	SEATTLE				X								
136	AT&T RONALD	2360 N 167TH ST	SEATTLE												
137	EVANS TIRE SVC CTRS 066	16622 AURORA AVE N	SEATTLE	X	X		X								

Table I-4.12-1 - All Sites Within the Study Area Identified in One or More Environmental Databases

EDR ID	Owner Name	Address	City	Washington State Department of Ecology Databases											
				UST	LUST	AST	CSCSL	CSCSL-NFA	SPILLS	VCP	RAATS	ICR	SWF/LF	INST CONTROL	BROWN FIELDS
138	U HAUL CO OF N SEATTLE	16503 AURORA AVE N	SEATTLE	X	X		X					X			
139	KING CNTY SOLID WASTE DIV 1ST NE TRANS	165TH & MERIDIAN AVE N	SEATTLE												
140	FUELCARE SHORELINE	509 NE 165TH ST	SHORELINE												
141	JIM ADAMS AUTO CLINIC INC	16268 5TH AVE NE	SEATTLE	X											
142	SEATTLE CITY LIGHT SHORELINE SUBSTATION	2136 N 163RD ST	SHORELINE												
142	KING CNTY DOT METRO TRANSIT NORTH BASE	2160 N 163RD ST	SEATTLE	X											
143	HENDRICKSON PROPERTY	928 N 160TH ST	SEATTLE				X								
144	SHORELINE SCHOOL DISTRICT CENTRAL KITCHEN IMPR	2003 NE 160TH ST	SHORELINE												
145	CHEVRON 200410	15510 AURORA AVE N	SEATTLE	X	X		X								
146	CRAWFORD PROPERTY	2326 N 155TH ST	SHORELINE				X		X						
147	WA DSHS FIRCREST SCHOOL	15230 15TH AVE NE	SHORELINE	X	X		X								
148	EVERGREEN SCHOOL	15201 MERIDIAN AVE N	SEATTLE												
149	TINSLEY RESIDENCE	14855 6TH AV NE	SEATTLE					X							
150	HODGES PROPERTY	15001 8TH AVE NE	SEATTLE					X							
151	UNITED CEREBRAL PALSY RES CTR	14910 1ST AVE N	SEATTLE												
152	PARK RIDGE CARE FACILITY, FORMER UST SITE	1250 NE 145TH ST	SEATTLE				X	X		X					
153	SPARK'S TUNEUP (FRMR TEXACO)	14501 15TH AVE NE	SEATTLE	X	X		X								
153	QFC NORTH SEATTLE 858	1531 NE 145TH ST	SEATTLE				X	X							
153	SEATTLE CITY ROW NE 145TH & 15TH NE	NE 145TH ST & 15TH AVE NE	SEATTLE				X								
154	NORTHPARK SHOPPING CENTER	1549 NE 145TH ST	SEATTLE				X								
155	LAKESIDE SCHOOL	14050 1ST AVE NE	SEATTLE												
156	LAKESIDE UPPER SCHOOL	14056 4TH NE	SEATTLE	X											
157	KJORSVIK PROPERTY	14038 SUNNYSIDE AVE N	SEATTLE				X								
158	JACKSON GOLF COURSE	1000 NE 135TH	SEATTLE						X						
159	HALLER LAKE TEXACO	13401 ROOSEVELT WAY N	SEATTLE	X	X		X			X		X			
160	PSE NORTH OPERATING BASE	13330 STONE AVE N	SEATTLE	X	X		X								
161	VERIZON WIRELESS NORTH ACRES PARK	351 NE 133RD ST	SEATTLE												
162	UNK	5TH AVE NE & NE 130TH ST	SEATTLE						X						
163	CORP OF ARCHDIOCESE OF SEATTLE UST 12696	1230 NE 127TH	SEATTLE	X											
164	SEATTLE CITY SDOT HALLER LAKE	12600 STONE AVE N	SEATTLE				X								
165		5TH NE & 125TH NE	SEATTLE						X						
166	BARRETT HARDWARE	12230 AURORA AVE N	SEATTLE	X	X		X			X					
167	PSE	12312 5TH AVE NE	SEATTLE						X						
168	2115 N 122ND ST	2115 N 122ND ST	SEATTLE												
169	NORTHWEST HOSPITAL	1550 N 115TH ST	SEATTLE	X					X						
170	ALPINE CUSTOM BUILDINGS LLC	11310 8TH AVE NE	SEATTLE												
171	NORTHGATE URBAN CENTER PARK	11035 5TH AVE NE	SEATTLE												
171	NORTHGATE DENTAL CONDO ASSOC	11066 5TH AVE NE STE 111	SEATTLE												
171	UNOCAL 5532	500 NE NORTHGATE WAY	SEATTLE	X				X				X			
171	STANDARD OIL SERVICE STA 9-7533 FORMER	501 NE NORTHGATE WAY	SEATTLE	X				X		X					
172	NORTHGATE CLEANERS	11020 8TH AVE NE	SEATTLE					X		X					
172	ROOSEVELT AUTO BODY NORTHGATE 8TH AVE	11035 8TH AVE NE	SEATTLE												
172	AT&T WIRELESS NORTHGATE	11050 8TH AVE NE	SEATTLE												
172	GOODYEAR AUTO SVC CTR 8822 NOR	810 NORTHGATE WAY	SEATTLE					X		X		X			
172	PAHLKA WATERPROOFING INC	825 NE NORTHGATE WAY	SEATTLE												
172	SHELL OIL CO 129593	859 NE NORTHGATE WAY	SEATTLE	X				X		X		X			
173	TARGET STORE 1284	302 NE NORTHGATE WAY	SEATTLE												
173	NORTHGATE EXPANSION PROJECT	310 NE NORTHGATE WAY	SEATTLE												
174	CONOCOPHILLIPS 30101	2143 N NORTHGATE WAY	SEATTLE	X	X							X			
174	CHEVRON 92815	2150 N NORTHGATE WAY & CORL	SEATTLE	X	X		X			X		X			
175	CHEVRON #9 2815 (THREE REPORTS)	NORTHGATE & CORLISS AVE.	SEATTLE									X			
176	NORTHGATE ARCO	2101 N NORTHGATE WAY	SEATTLE	X											

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				UST	LUST	AST	CSCSL	CSCSL-NFA	SPILLS	VCP	RAATS	ICR	SWF/LF	INST CONTROL	BROWN FIELDS
177	NORTHGATE MALL PARTNERSHIP	401 NE NORTHGATE WAY	SEATTLE												
178	WDOT I-5/NORTHGATE	1ST NE & NE 110TH	SEATTLE									X			
179	BON MARCHE SEATTLE NORTHGATE MALL	602 NORTHGATE MALL	SEATTLE												
180	SHELL STATION 120819	1935 N NORTHGATE WAY	SEATTLE	X	X		X			X					
181	ACCU PAP DIAGNOSTIC SVCS NORTH	120 NORTHGATE PLAZA 351	SEATTLE												
181	CAMERAS WEST 1034	150 NORTHGATE PLZ	SEATTLE												
181	JCPENNEY COMPANY INC	475 NORTHGATE MALL	SEATTLE												
182	WA UW SCRIBNER CENTER	2150 N 107TH ST STE 160 & B075	SEATTLE												
183	NORTHGATE MALL	555 NORTHGATE MALL	SEATTLE	X				X				X			
184	EXPRESSLY PORTRAITS 39 NORTHGATE MALL	750 NORTHGATE MALL	SEATTLE												
184	KITS CAMERA 1003	923 NORTHGATE MALL	SEATTLE												
185	BON MARCHE TIRE CENTER	10500 5TH AVE NE	SEATTLE					X		X		X			
185	KINDRED HOSPITAL SEATTLE	10560 5TH AVE NE	SEATTLE												
186	NWH OUTPATIENT MEDICAL CENTER	10330 MERIDIAN AVE N	SEATTLE												
187	SEATTLE CITY ESD N POLICE PRECINCT	10049 COLLEGE WAY N	SEATTLE												
188	NORTHGATE HOLDING CO	10202 5TH AV NE	SEATTLE					X							
189	GATEWAY MUIRLAND INC 100TH ST	115 NE 100TH ST	SEATTLE												
190	NORTHGATE COMMONS	300 NE 100TH ST	SEATTLE												
191	SEATTLE CITY LIGHT STONE AVE	9809 STONE AVE N	SEATTLE	X	X		X	X							
192	NORTHGATE STATION	9538-9598 1ST AV NE	SEATTLE				X								

Table I-4.12-1 - All Sites Within the Study Area Identified in One or More Environmental Databases (continued)

EDR ID	Owner Name	Address	City	U.S. Environmental Protection Agency Databases							OTHER
				NPL	CERCLIS	CERCLIS-NFRAP	CORRACTS	RCRAInfo	ERNS	BROWNFIELDS	
1	FIRE STATION 1 LYNNWOOD	18800 44TH AVE W	LYNNWOOD								X
2	JB ASPHALT CO	19222 HWY 99	LYNNWOOD								X
2	KELLYS FURNITURE REFINISHING	19230 HWY 99	LYNNWOOD								X
3	TOP AUTO INC LYNNWOOD	19414 44TH AVE W	LYNNWOOD								X
3	USA PETROLEUM 190	19420 44TH AVE W	LYNNWOOD								X
4	TIRE MARK	19406 HWY 99	LYNNWOOD								X
5	L & L ENTERPRISES	19502 48TH AVE W	LYNNWOOD								X
6	LIGHTHOUSE DIVING CENTER	5421 C 196TH ST SW	LYNNWOOD								X
7	HIGHLINE CLEANERS	19515 44TH AVE	LYNNWOOD								X
8	KELLY MOORE PAINT CO INC LYNNWOOD	5009 196TH ST SW	LYNNWOOD								X
9	GLACIER ENVIRONMENTAL SVCS	4807 196TH SW	LYNNWOOD								X
9	ARCO 6214	4812 196TH ST SW	LYNNWOOD								X
9	LYNNWOOD AUTO PARTS INC	4815 196TH SW	LYNNWOOD								X
9	KC MARTIN AUTOMOTIVE SVC CO MAIN SHOP	4829 196TH ST SW	LYNNWOOD								X
10	196TH ST SW LYNNWOOD	4909 196TH ST SW	LYNNWOOD								X
10	FIVE STAR CAR WASH	4921 196TH ST SW	LYNNWOOD								X
10	LES SCHWAB TIRES	4933 196TH ST SW	LYNNWOOD								X
11	CLEANERY SNOHOMISH LYNNWOOD	4701 196TH SW	LYNNWOOD								X
11	UNOCAL STATION 5623	4733 196TH ST SW	LYNNWOOD								X
12	LYNNWOOD SHURGARD	4600 196TH SW	LYNNWOOD								X
12	FRED MEYER FUEL STOP 180	4615 196TH ST SW	LYNNWOOD								X
12	FRED MEYER FUELING FACILITY	4618 196TH ST SW	LYNNWOOD								X
13	MINUTEMAN PRESS LYNNWOOD	4291 196TH ST SW	LYNNWOOD								X
13	EXXON CO USA 79078	4317 196TH ST SW & 144TH	LYNNWOOD								X
14	ALDERWOOD OLDSMOBILE/CADILLAC (TWO REPORTS)	3909 196TH SW	LYNNWOOD								X
15	SUPER SHOPS LYNNWOOD	4028 SW 196TH ST	LYNNWOOD								X
16	ELAN BUILDING	3810 196TH ST SW	LYNNWOOD								X
17	60 MINUTE TUNE/ DAVES COMPLETE BRAKE	19610 A 44TH AVE W	LYNNWOOD								X
18	LYNNWOOD ALTERATIONS	19720 44TH AVE W	LYNNWOOD								X
18	R C & COMPANY LTD	19730 44TH AVE W	LYNNWOOD								X
19	NN CONTACT LENS INTL	4201 198TH ST SW	LYNNWOOD								X
20	BEST PRODUCTS CO INC LYNNWOOD	19801 40TH AVE W	LYNNWOOD								X
20	LEATHER TO LACE	4001 198TH ST SW	LYNNWOOD								X
20	SEATTLE GOODWILL	4027 198TH STREET SW	LYNNWOOD								X
21	SCHUCKS AUTO SUPPLY LYNNWOOD	19825 HWY 99	LYNNWOOD								X
22	LYNNWOOD CITY	5322 198TH ST SW	LYNNWOOD								X
23	FIRESTONE STORE NO 3197	19800 44TH AVE W STE H	LYNNWOOD								X
23	GOODYEAR SVC STORE LYNNWOOD	19805 44TH AVE W	LYNNWOOD								X
24	SCHUCKS HWY 99	19915 HWY 99	LYNNWOOD								X
25	MR CLEAN CAR WASH	19907 44TH AVE W	LYNNWOOD								X
25	SHELL STATION 120839	19930 44TH AVE W	LYNNWOOD								X
26	AT&T WIRELESS CEDAR VALLEY	4030 200TH ST SW	LYNNWOOD								X
26	CENTERS 3 COLLISION	4030 ALDERWOOD MALL BLVD	LYNNWOOD								X
27	7 ELEVEN STORE 22893	4520 200TH ST SW	LYNNWOOD								X
27	PC RECYCLE	4520 200TH ST SW STE 201	LYNNWOOD								X
28	CHEVRON 94953	20010 44TH AVE W	LYNNWOOD					X			X
29	COMMUNITY TRANSIT	20100 48TH AVE W	LYNNWOOD								
29	CARVER CORP	20121 48TH AVE W	LYNNWOOD								X
30	PIERRE MONEYMART	20221 HWY 99	LYNNWOOD								X
31	NELSON MOTORS INC	20307 HWY 99	LYNNWOOD								X
32	RIMPAC STEEL INC	20311 52ND AVE W	LYNNWOOD								X
32	CEDAR VALLEY ROAD DRUM	20515 CEDAR VALLEY RD	LYNNWOOD								X

Table I-4.12-1 - All Sites Within the Study Area Identified in One or More Environmental Databases (continued)

EDR ID	Owner Name	Address	City	U.S. Environmental Protection Agency Databases							OTHER
				NPL	CERCLIS	CERCLIS-NFRAP	CORRACTS	RCRAInfo	ERNS	BROWNFIELDS	
33	LYNNWOOD SEWER LIFT STA 10	4599 204TH ST	LYNNWOOD								X
34	OLDS OLYMPIC MAIN OFFICE	6016 204TH SW	LYNNWOOD								X
35	MAGNA DESIGN INC	5804 204TH SW	LYNNWOOD								X
36	REYNOLDS CORP	5720 204TH ST SW	LYNNWOOD								X
37	ZIC 2 LLC CORPORATE OFFICE PARK	4001 204TH ST SW	LYNNWOOD								X
38	GTE LYNNWOOD GARAGE	3831 204TH SW	LYNNWOOD								X
39	LARCHWAY ARCO	3830 204TH SW	LYNNWOOD								X
40	WILLIAMS & ABBOTT CONSTRUCTION	20508 56TH AVE W STE A	LYNNWOOD								X
40	ROTO ROOTER INC	20508 56TH AVE W STE C	LYNNWOOD								X
41	LYNNWOOD PUBLIC WORKS	20519 60TH AVE W	LYNNWOOD								X
41	LYNNWOOD CITY PARKS & RECREATION SHOP	20522 60TH AVE W	LYNNWOOD								X
42	EDMONDS SCHOOL DISTRICT SUPPORT CTR	S OF 204TH ST SW ROW & E OF 5	LYNNWOOD								X
43	OPTIONS PROGRAM	20525 52ND AVE WEST	LYNNWOOD								X
44	C MARTIN TRUCKING	20610 48TH AVE W	LYNNWOOD								X
44	C MARTIN TRUCKING INC	20631 48TH W	LYNNWOOD								X
45	LYNNWOOD DODGE INC	20612 HWY 99	LYNNWOOD								X
46	CONNELLY SKIS INC	20621 52ND AVE W	LYNNWOOD					X			X
47	HERTZ EQUIPMENT RENTAL ERC 9789	20630 56TH AVE W	LYNNWOOD								X
48	UNOCAL STATION SHIN	20713 HWY 99	LYNNWOOD								X
49	AA RENTALS	20728 56TH AVE W	LYNNWOOD								X
50	PRO TEX PAINTING	20727 52ND AVE W	LYNNWOOD								X
51	SHELDONS CUSTOM CAB LTD	20626 50TH AVE W	LYNNWOOD								X
51		5015 208TH ST SW	LYNNWOOD								
52	BRIGGS TECHNOLOGIES INC LYNNWO	6027 208TH SW	LYNNWOOD								X
53	USWCOM LYNNWOOD PRR 27563	6024 208TH ST SW	LYNNWOOD								X
54	ECLECTIC PRODUCTS INC TITAN DIVISION	5629 208TH ST SW	LYNNWOOD								X
54	WINK CORP	5631 208TH SW	LYNNWOOD								X
55	R & J AUTO DETAIL	5121 208TH SW	LYNNWOOD								X
56	NIX 99 IMPORT RECYCLING	5522 208TH ST SW	LYNNWOOD								X
57	BUDGET TANK REMOVAL	20825 52ND AVE	LYNNWOOD								
58	HALLS LAKE CSWGP	20907 59TH PLACE W	LYNNWOOD								X
59	US DOJ DEA 54TH W LYNNWOOD	20908 54TH AVE W 8	LYNNWOOD								X
60	COYOTE CLEANING SYSTEMS INC	7208 210TH ST SW	EDMONDS								X
61	JAMES AUTO SERVICE	21000 70TH AVE W	EDMONDS								X
62	BERRY NEON CO INC	21027 61ST W	LYNNWOOD								X
63	J & J AUTO REPAIR	6204 211TH ST SW	LYNNWOOD								X
64	MGM GRAPHICS INC	6116 211TH ST SW	LYNNWOOD					X			X
65	BOB MILLER	21126 44TH AVE W	LYNNWOOD								X
66	SEATTLE ENGINE REBUILDERS & REMFG INC	6501 212TH ST SW	LYNNWOOD								X
67	ANDYS ARCO	6408 212 SW	LYNNWOOD								X
67	DAVIS INDUSTRIES INC	6425 212TH ST SW	LYNNWOOD								X
68	WESTERN TYPOGRAPHERS INC	6333 212TH ST	LYNNWOOD								X
69	SNOHOMISH CNTY PUD HALLS LK SUBSTATION	6120 212TH ST SW	MOUNTLAKE TERRACE								X
69	BEETLES UNLIMITED INC	6127 212TH ST SW UNIT B	LYNNWOOD								X
69	SNOHOMISH CNTY PUD 1 ESPERANCE SUBSTA	6129 212TH ST SW	LYNNWOOD								X
69	LYNNWOOOD AUTO TRUCK SERVICE	6131 212TH ST SW	LYNNWOOD								X
69	ALLEN L CURTIS	6137 212TH SW	LYNNWOOD								X
69	SNOHOMISH CNTY PUD LYNNWOOD STA	6200 212TH ST SW	LYNNWOOD								X
69	FRANKS SUBURBAN AUTOMOTIVE 1	6203 212TH SW	LYNNWOOD								X
69	KENS RADIATOR SERVICE	6226 212TH SW	LYNNWOOD								X
69	SAFETY KLEEN SYSTEMS INC LYNNWOOD 709201	6303 212TH ST SW STE C	LYNNWOOD				X				X
70	GILLEN PROPERTY HALL LAKE	20908 54TH AVE W	LYNNWOOD								X

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				NPL	CERCLIS	CERCLIS-NFRAP	CORRACTS	RCRAInfo	ERNS	BROWNFIELDS	
71	SOUTHLAND CORP 2331 18726	21202 52ND AVE W	MOUNTLAKE TERRACE								X
71	JOHNS TEXACO	5215 212TH SW	LYNNWOOD								X
71	BARUCH AMIRA PARTNERSHIP	5215 212TH SW	LYNNWOOD								X
71	JOHNS TEXACO	5215 212TH SW	LYNNWOOD								X
72	EXPO CLEANERS	21005 44TH AVE W	MOUNTLAKE TERRACE								X
72	RESIDENCE FORMER	21029 44TH AVE W	MOUNTLAKE TERRACE								X
72	ARCO 5525	21201 44TH AVE W	MOUNTLAKE TERRACE								X
72	US EPA MOUNTLAKE TERRACE DRUMS	212TH ST SW & 44TH AVE W NE C	MOUNTLAKE TERRACE								X
73	CHEMTECK SERVICES INC	212TH SW & 44TH W NE COR	LYNNWOOD								X
74	HANSON BROTHERS MOVING & STORAGE	21307 61ST PL W	MOUNTLAKE TERRACE								X
74	SNOHOMISH CNTY SW TRANSFER STATION	21311 61ST PL W	MOUNTLAKE TERRACE								X
75	NELSON PETROLEUM	6303 213TH PL SW	MOUNTLAKE TERRACE								X
76	ALLIED WASTE OF LYNNWOOD	21325 66TH AVE W	LYNNWOOD								X
77	MONTERRA	21426 48TH AVE W	MOUNTLAKE TERRACE								X
78	VIKING FREIGHT INC MOUNTLAKE TERRACE	6203 215TH ST	MOUNTLAKE TERRACE								X
78	MOUNTLAKE TERRACE CITY	6204 215TH ST SW	MOUNTLAKE TERRACE								X
78	MOUNTLAKE TERRACE/LYNNWOOD MAINT. FACILITY	6205 215TH ST. SW	MOUNTLAKE TERRACE								
79	COLOR TECH MOUNTLAKE TERRACE	6304 215TH ST SW	MOUNTLAKE TERRACE								X
79	SIGN TECH	6306 215TH ST SW	MOUNTLAKE TERRACE								X
80	LLOYD CONTROLS INC	21414 66TH W	MOUNTLAKE TERRACE								X
81	ENVIRONMENTAL QUALITY MANAGEMENT INC	6825 216TH ST SW STE A	LYNNWOOD								X
81	INTELLIGENT CONTROLS INC	6825 216TH ST SW STE J	LYNNWOOD								X
82	WHIRLWIND SERVICES	6801 216TH ST SW	MOUNTLAKE TERRACE								X
83	NORTHWEST TRANSFORMER SERV MT	6510 216 ST SW UNITC	MOUNTLAKE TERRACE			X					X
84	WESCO AUTOBODY SUPPLY	21601 66TH AVE W	MOUNTLAKE TERRACE								X
85	CROSS PROPERTY FORMER	21700 HWY 99	EDMONDS								X
86	MOUNTLAKE TERRACE DRUM	6103 ST ALBION WAY	MOUNTLAKE TERRACE								X
87	LIGHT DOCTOR LLC	21706 66TH AVE W	MOUNTLAKE TERRACE								X
87	AVIATION INSTRUMENT SVC INC	21709 66TH AVE W	MOUNTLAKE TERRACE								X
87	TECHNIGRAPHIC SYSTEMS INC MOUNTLAKE TERR	21718 66TH AVE W STE 200	MOUNTLAKE TERRACE								X
88	SNOHOMISH COUNTY PUD	21604 60TH AVE W	MOUNTLAKE TERRACE						X		
89	FILE DOCTORS	6505 218TH SW STE B	MOUNTLAKE TERRACE								X
90	FORMS WEST INC	21816 66TH W	MOUNTLAKE TERRACE								X
91	CLOUDY & BRITTON INC	6202 214TH SW	MOUNTLAKE TERRACE								X
92	PLAID PANTRY NO 316	21919 66TH AVE W	MOUNTLAKE TERRACE								X
92	MELODY CUSTOM CLEANERS	21919 66TH AVE W STE C	MOUNTLAKE TERRACE								X
92	PLAID PANTRY #316	21919 66TH AVE. W.	MOUNTLAKE TERRACE								
93	BLUE CROSS OF WASHINGTON	7003 220TH SW	MOUNTLAKE TERRACE								X
94	PREMERA PARKING GARAGE	6909 220TH ST SW	MOUNTLAKE TERRACE								X
95	PREMERA BLUE CROSS	6707 220TH ST SW	MOUNTLAKE TERRACE								X
96	ALPINE SPECIALTY CLEANING	6601 220TH ST SW	MOUNTLAKE TERRACE								X
96	SHELL STATION 121478	6602 220TH SW	MOUNTLAKE TERRACE								X
97	MOUNTLAKE TERRACE CITY 58TH AVE	22106 58TH AVE W	MOUNTLAKE TERRACE								X
98	SNOH PUD	6200 222ND ST SW	MOUNTLAKE TERRACE								
99	ST PIUS X SCHOOL	22105 58TH AVE W	MOUNTLAKE TERRACE								X
100	AT&T WIRELESS MOUNTLAKE TERRACE	6601 224TH ST SW	MOUNTLAKE TERRACE								X
101	EDMONDS USAVE MINI MART	22625 HWY 99	EDMONDS								X
102	CIRCLE K 1458	23003 56TH AVE W	MOUNTLAKE TERRACE								X
102	CHI S AUTO REPAIR	23009 56TH AVE W	MOUNTLAKE TERRACE								X
103	SHELL 120951	23206 56TH ST SW	MOUNTLAKE TERRACE								X
103	CHEVRON 97856	23208 56TH AVE W	MOUNTLAKE TERRACE								X
103	QUEENS CLEANER	5602 232ND ST SW	MOUNTLAKE TERRACE								X

Table I-4.12-1 - All Sites Within the Study Area Identified in One or More Environmental Databases (continued)

EDR ID	Owner Name	Address	City	U.S. Environmental Protection Agency Databases							OTHER
				NPL	CERCLIS	CERCLIS-NFRAP	CORRACTS	RCRAInfo	ERNS	BROWNFIELDS	
104	MOUNTLAKE TERRACE CITY OF	23204 58TH AVE W	MOUNTLAKE TERRACE								X
105	R & R AUTOMOTIVE	23504 56TH AVE W	MOUNTLAKE TERRACE								X
106	MOUNTLAKE TERRACE PARK & RIDE	6001 236TH ST SW	MOUNTLAKE TERRACE								X
106	EVERGREEN ELEMENTARY	6004 237TH ST SW	MOUNTLAKE TERRACE								X
107	SCHOOL	23606 54TH W	MOUNTLAKE TERRACE								X
107	SNOHOMISH COUNTY CHRISTIAN SCHOOL	23607 54TH AVE. W.	MOUNTLAKE TERRACE								
108	THE KINGS PRESS INC	24007 56TH AVE W	MOUNTLAKE TERRACE								X
109	WOOD SPECIALTY PRODUCTS INC	24300 60TH AVE W	MOUNTLAKE TERRACE								X
109	GATEWAY PLACE	6001 244TH ST SW	MOUNTLAKE TERRACE								X
110	PLANTING DESIGN CO	24200 76TH W	EDMONDS								X
111	TIME OIL CO MOUNTLAKE TERRACE	24205 56TH AVE W	MOUNTLAKE TERRACE								X
112	PATRICK HERMAN	24311 56TH AVE W	MOUNTLAKE TERRACE								X
112	7 ELEVEN FOOD STORE 230618022K	24325 56TH AVE N	MOUNTLAKE TERRACE								X
113	NILE TEMPLE OF THE SHRINE	6601 244TH SW	MOUNTLAKE TERRACE								X
113	TERRACE CLEANERS	6603 244TH ST SW	MOUNTLAKE TERRACE					X			X
114	SHELL STATION 120865/ TEXACO #632320083	1505 NE 205TH ST	SEATTLE								X
115	ASKAR MINI MART	1901 NE 205TH ST	SHORELINE								X
115	GATEWAY AUTO	5601 244TH SW	MOUNTLAKE TERRACE								X
116	WALLACE OMICORP BALLINGER	20309 BALLINGER WAY NE	SEATTLE								X
116	ONCORP PROPERTIES	20319 BALLINGER WAY NE	SEATTLE								X
116	RITE AID 6234	20320 BALLINGER WAY NE	SEATTLE								X
117	ROES BALLINGER CHEVRON SERVICE 99124	20330 15TH AVE NE	SEATTLE								X
118	U SAVE OIL CO INC SEATTLE	20217 BALLINGER WAY N E	SEATTLE								X
119	PACIFIC COAST VENTURES LLC	20128 B BALLINGER WAY NE	SHORELINE								X
120	KING COUNTY HOUSING AUTHORITY BALLINGER	20115 20TH PL NE	SEATTLE								X
121	OUTRIGGER HOIST CO	20028 15TH NE	SEATTLE								X
121	COASTAL COATINGS INC	20038 15TH NE	SEATTLE								X
122	BALLINGER GAS & FOOD MART/ EXXON	20010 BALLINGER WAY NE	SHORELINE								X
122	BALLINGER VILLAGE SHOPPING CENTER	20024 BALLINGER WAY NE	SHORELINE								X
122	BALLINGER VILLAGE CLEANERS	20028 BALLINGER WAY NE	SHORELINE								X
122	BALLINGER VILLAGE LP	20036 BALLINGER WAY NE	SHORELINE								X
122	SOUND OIL COMPANY	20041 BALLINGER RD NE	SEATTLE								X
122	WASHINGTON TREE SERVICE INC SEATTLE	20057 BALLINGER WAY NE	SEATTLE								X
123	KING CNTY PARKS SHORELINE POOL	19030 1ST AVE NE	SEATTLE								X
124	WA DOT	I-5 & 185TH	SHORELINE								
125	TIME OIL CO 15TH AVE	18005 15TH AVE NE	SEATTLE								X
126	SITE SE10 NORTH CITY	18010 15TH AVE NE	SEATTLE								X
126	AT&T WIRELESS NORTH CITY	18012 15TH AVE NE	SEATTLE								X
127	ST MARKS CATHOLIC SCHOOL	18003 15TH PL NE	SEATTLE								X
128	CROMWELL PARK IMPROVEMENTS	18009 CORLISS AVE N	SHORELINE								X
129	ASP GERMAN CAR REPAIR	17704 15TH AVE NE	SEATTLE								X
129	NORTH CITY CLEANERS	17721 15TH AVE NE	SEATTLE								X
129	GORDONS NORTH SEATTLE TIRES	17754 15TH AVE NE	SEATTLE								X
130	EXXON #7 7255	17956 1ST AVE. S.	SEATTLE								
131	NORTHCITY TEXACO	17563 15TH AVE NE	SHORELINE								X
132	UNOCAL 4973	1150 N 175TH ST	SEATTLE								X
133	UNOCAL 5728	1211 NE 175TH	SEATTLE								X
134	BURKE PROPERTY	17248 RONALD PL N	SEATTLE								X
135	MERIDIAN PARK ELEMENTARY SCHOOL	17077 MERIDIAN AVE N	SHORELINE								X
135	MERIDIAN LANDFILL	170TH N & MERIDIAN AV	SEATTLE								X
136	AT&T RONALD	2360 N 167TH ST	SEATTLE								X
137	EVANS TIRE SVC CTRS 066	16622 AURORA AVE N	SEATTLE								X

Table I-4.12-1 - All Sites Within the Study Area Identified in One or More Environmental Databases (continued)

EDR ID	Owner Name	Address	City	U.S. Environmental Protection Agency Databases							OTHER
				NPL	CERCLIS	CERCLIS-NFRAP	CORRACTS	RCRAInfo	ERNS	BROWNFIELDS	
138	U HAUL CO OF N SEATTLE	16503 AURORA AVE N	SEATTLE								X
139	KING CNTY SOLID WASTE DIV 1ST NE TRANS	165TH & MERIDIAN AVE N	SEATTLE								X
140	FUELCARE SHORELINE	509 NE 165TH ST	SHORELINE								X
141	JIM ADAMS AUTO CLINIC INC	16268 5TH AVE NE	SEATTLE								X
142	SEATTLE CITY LIGHT SHORELINE SUBSTATION	2136 N 163RD ST	SHORELINE					X			X
142	KING CNTY DOT METRO TRANSIT NORTH BASE	2160 N 163RD ST	SEATTLE					X			X
143	HENDRICKSON PROPERTY	928 N 160TH ST	SEATTLE								X
144	SHORELINE SCHOOL DISTRICT CENTRAL KITCHEN IMPR	2003 NE 160TH ST	SHORELINE								X
145	CHEVRON 200410	15510 AURORA AVE N	SEATTLE								
146	CRAWFORD PROPERTY	2326 N 155TH ST	SHORELINE								X
147	WA DSHS FIRCREST SCHOOL	15230 15TH AVE NE	SHORELINE								X
148	EVERGREEN SCHOOL	15201 MERIDIAN AVE N	SEATTLE								X
149	TINSLEY RESIDENCE	14855 6TH AV NE	SEATTLE								X
150	HODGES PROPERTY	15001 8TH AVE NE	SEATTLE								X
151	UNITED CEREBRAL PALSY RES CTR	14910 1ST AVE N	SEATTLE								X
152	PARK RIDGE CARE FACILITY, FORMER UST SITE	1250 NE 145TH ST	SEATTLE								X
153	SPARK'S TUNEUP (FRMR TEXACO)	14501 15TH AVE NE	SEATTLE								X
153	QFC NORTH SEATTLE 858	1531 NE 145TH ST	SEATTLE								X
153	SEATTLE CITY ROW NE 145TH & 15TH NE	NE 145TH ST & 15TH AVE NE	SEATTLE								X
154	NORTHPARK SHOPPING CENTER	1549 NE 145TH ST	SEATTLE								X
155	LAKESIDE SCHOOL	14050 1ST AVE NE	SEATTLE					X			X
156	LAKESIDE UPPER SCHOOL	14056 4TH NE	SEATTLE								X
157	KJORSVIK PROPERTY	14038 SUNNYSIDE AVE N	SEATTLE								X
158	JACKSON GOLF COURSE	1000 NE 135TH	SEATTLE								X
159	HALLER LAKE TEXACO	13401 ROOSEVELT WAY N	SEATTLE								X
160	PSE NORTH OPERATING BASE	13330 STONE AVE N	SEATTLE								X
161	VERIZON WIRELESS NORTH ACRES PARK	351 NE 133RD ST	SEATTLE								X
162	UNK	5TH AVE NE & NE 130TH ST	SEATTLE								
163	CORP OF ARCHDIOCESE OF SEATTLE UST 12696	1230 NE 127TH	SEATTLE								X
164	SEATTLE CITY SDOT HALLER LAKE	12600 STONE AVE N	SEATTLE					X			X
165		5TH NE & 125TH NE	SEATTLE								
166	BARRETT HARDWARE	12230 AURORA AVE N	SEATTLE								X
167	PSE	12312 5TH AVE NE	SEATTLE						X		
168	2115 N 122ND ST	2115 N 122ND ST	SEATTLE							X	
169	NORTHWEST HOSPITAL	1550 N 115TH ST	SEATTLE					X			X
170	ALPINE CUSTOM BUILDINGS LLC	11310 8TH AVE NE	SEATTLE								X
171	NORTHGATE URBAN CENTER PARK	11035 5TH AVE NE	SEATTLE								X
171	NORTHGATE DENTAL CONDO ASSOC	11066 5TH AVE NE STE 111	SEATTLE								X
171	UNOCAL 5532	500 NE NORTHGATE WAY	SEATTLE								X
171	STANDARD OIL SERVICE STA 9-7533 FORMER	501 NE NORTHGATE WAY	SEATTLE								X
172	NORTHGATE CLEANERS	11020 8TH AVE NE	SEATTLE								X
172	ROOSEVELT AUTO BODY NORTHGATE 8TH AVE	11035 8TH AVE NE	SEATTLE								X
172	AT&T WIRELESS NORTHGATE	11050 8TH AVE NE	SEATTLE								X
172	GOODYEAR AUTO SVC CTR 8822 NOR	810 NORTHGATE WAY	SEATTLE								X
172	PAHLKA WATERPROOFING INC	825 NE NORTHGATE WAY	SEATTLE								X
172	SHELL OIL CO 129593	859 NE NORTHGATE WAY	SEATTLE								X
173	TARGET STORE 1284	302 NE NORTHGATE WAY	SEATTLE					X			X
173	NORTHGATE EXPANSION PROJECT	310 NE NORTHGATE WAY	SEATTLE								X
174	CONOCOPHILLIPS 30101	2143 N NORTHGATE WAY	SEATTLE								X
174	CHEVRON 92815	2150 N NORTHGATE WAY & CORL	SEATTLE								X
175	CHEVRON #9 2815 (THREE REPORTS)	NORTHGATE & CORLISS AVE.	SEATTLE								
176	NORTHGATE ARCO	2101 N NORTHGATE WAY	SEATTLE								X

Table I-4.12-1 - All Sites Within the Study Area Identified in One or More Environmental Databases (continued)

EDR ID	Owner Name	Address	City	U.S. Environmental Protection Agency Databases							OTHER
				NPL	CERCLIS	CERCLIS-NFRAP	CORRACTS	RCRAInfo	ERNS	BROWNFIELDS	
177	NORTHGATE MALL PARTNERSHIP	401 NE NORTHGATE WAY	SEATTLE					X			X
178	WDOT I-5/NORTHGATE	1ST NE & NE 110TH	SEATTLE								
179	BON MARCHE SEATTLE NORTHGATE MALL	602 NORTHGATE MALL	SEATTLE								X
180	SHELL STATION 120819	1935 N NORTHGATE WAY	SEATTLE								X
181	ACCU PAP DIAGNOSTIC SVCS NORTH	120 NORTHGATE PLAZA 351	SEATTLE								X
181	CAMERAS WEST 1034	150 NORTHGATE PLZ	SEATTLE								X
181	JCPENNEY COMPANY INC	475 NORTHGATE MALL	SEATTLE								X
182	WA UW SCRIBNER CENTER	2150 N 107TH ST STE 160 & B075	SEATTLE								X
183	NORTHGATE MALL	555 NORTHGATE MALL	SEATTLE								X
184	EXPRESSLY PORTRAITS 39 NORTHGATE MALL	750 NORTHGATE MALL	SEATTLE								X
184	KITS CAMERA 1003	923 NORTHGATE MALL	SEATTLE					X			X
185	BON MARCHE TIRE CENTER	10500 5TH AVE NE	SEATTLE								X
185	KINDRED HOSPITAL SEATTLE	10560 5TH AVE NE	SEATTLE								X
186	NWH OUTPATIENT MEDICAL CENTER	10330 MERIDIAN AVE N	SEATTLE								X
187	SEATTLE CITY ESD N POLICE PRECINCT	10049 COLLEGE WAY N	SEATTLE								X
188	NORTHGATE HOLDING CO	10202 5TH AV NE	SEATTLE								X
189	GATEWAY MUIRLAND INC 100TH ST	115 NE 100TH ST	SEATTLE								X
190	NORTHGATE COMMONS	300 NE 100TH ST	SEATTLE								X
191	SEATTLE CITY LIGHT STONE AVE	9809 STONE AVE N	SEATTLE								X
192	NORTHGATE STATION	9538-9598 1ST AV NE	SEATTLE								X

Table I-4.12-2 - Ranking of All Sites Within the Study Area

EDR ID	Owner Name	Address	City	Location				
				Project Study Area	Project Study Area-1/8mi	1/8mi-1/4mi	1/4mi-1/2mi	> 1/2mi
1	FIRE STATION 1 LYNNWOOD	18800 44TH AVE W	LYNNWOOD					X
2	JB ASPHALT CO	19222 HWY 99	LYNNWOOD					X
2	KELLYS FURNITURE REFINISHING	19230 HWY 99	LYNNWOOD					X
3	TOP AUTO INC LYNNWOOD	19414 44TH AVE W	LYNNWOOD				X	
3	USA PETROLEUM 190	19420 44TH AVE W	LYNNWOOD				X	
4	TIRE MARK	19406 HWY 99	LYNNWOOD					X
5	L & L ENTERPRISES	19502 48TH AVE W	LYNNWOOD				X	
6	LIGHTHOUSE DIVING CENTER	5421 C 196TH ST SW	LYNNWOOD				X	
7	HIGHLINE CLEANERS	19515 44TH AVE	LYNNWOOD				X	
8	KELLY MOORE PAINT CO INC LYNNWOOD	5009 196TH ST SW	LYNNWOOD			X		
9	GLACIER ENVIRONMENTAL SVCS	4807 196TH SW	LYNNWOOD			X		
9	ARCO 6214	4812 196TH ST SW	LYNNWOOD			X		
9	LYNNWOOD AUTO PARTS INC	4815 196TH SW	LYNNWOOD			X		
9	KC MARTIN AUTOMOTIVE SVC CO MAIN SHOP	4829 196TH ST SW	LYNNWOOD			X		
10	196TH ST SW LYNNWOOD	4909 196TH ST SW	LYNNWOOD			X		
10	FIVE STAR CAR WASH	4921 196TH ST SW	LYNNWOOD			X		
10	LES SCHWAB TIRES	4933 196TH ST SW	LYNNWOOD			X		
11	CLEANERY SNOHOMISH LYNNWOOD	4701 196TH SW	LYNNWOOD			X		
11	UNOCAL STATION 5623	4733 196TH ST SW	LYNNWOOD			X		
12	LYNNWOOD SHURGARD	4600 196TH SW	LYNNWOOD			X		
12	FRED MEYER FUEL STOP 180	4615 196TH ST SW	LYNNWOOD			X		
12	FRED MEYER FUELING FACILITY	4618 196TH ST SW	LYNNWOOD			X		
13	MINUTEMAN PRESS LYNNWOOD	4291 196TH ST SW	LYNNWOOD			X		
13	EXXON CO USA 79078	4317 196TH ST SW & 144TH	LYNNWOOD			X		
14	ALDERWOOD OLDSMOBILE/CADILLAC (TWO REPORTS)	3909 196TH SW	LYNNWOOD				X	
15	SUPER SHOPS LYNNWOOD	4028 SW 196TH ST	LYNNWOOD				X	
16	ELAN BUILDING	3810 196TH ST SW	LYNNWOOD				X	
17	60 MINUTE TUNE/ DAVES COMPLETE BRAKE	19610 A 44TH AVE W	LYNNWOOD			X		
18	LYNNWOOD ALTERATIONS	19720 44TH AVE W	LYNNWOOD			X		
18	R C & COMPANY LTD	19730 44TH AVE W	LYNNWOOD			X		
19	NN CONTACT LENS INTL	4201 198TH ST SW	LYNNWOOD			X		
20	BEST PRODUCTS CO INC LYNNWOOD	19801 40TH AVE W	LYNNWOOD			X		
20	LEATHER TO LACE	4001 198TH ST SW	LYNNWOOD			X		
20	SEATTLE GOODWILL	4027 198TH STREET SW	LYNNWOOD			X		
21	SCHUCKS AUTO SUPPLY LYNNWOOD	19825 HWY 99	LYNNWOOD					X
22	LYNNWOOD CITY	5322 198TH ST SW	LYNNWOOD			X		
23	FIRESTONE STORE NO 3197	19800 44TH AVE W STE H	LYNNWOOD		X			
23	GOODYEAR SVC STORE LYNNWOOD	19805 44TH AVE W	LYNNWOOD		X			
24	SCHUCKS HWY 99	19915 HWY 99	LYNNWOOD					X
25	MR CLEAN CAR WASH	19907 44TH AVE W	LYNNWOOD		X			
25	**SHELL STATION 120839**	**19930 44TH AVE W**	**LYNNWOOD**	**X**				
26	AT&T WIRELESS CEDAR VALLEY	4030 200TH ST SW	LYNNWOOD			X		
26	CENTERS 3 COLLISION	4030 ALDERWOOD MALL BLVD	LYNNWOOD			X		
27	7 ELEVEN STORE 22893	4520 200TH ST SW	LYNNWOOD	X				
27	PC RECYCLE	4520 200TH ST SW STE 201	LYNNWOOD	X				
28	**CHEVRON 94953**	**20010 44TH AVE W**	**LYNNWOOD**	**X**				
29	**COMMUNITY TRANSIT**	**20100 48TH AVE W**	**LYNNWOOD**	**X**				
29	CARVER CORP	20121 48TH AVE W	LYNNWOOD	X				
30	PIERRE MONEYMART	20221 HWY 99	LYNNWOOD					X
31	NELSON MOTORS INC	20307 HWY 99	LYNNWOOD					X
32	**RIMPAC STEEL INC**	**20311 52ND AVE W**	**LYNNWOOD**	**X**				

Table I-4.12-2 - Ranking of All Sites Within the Study Area

EDR ID	Owner Name	Address	City	Location				
				Project Study Area	Project Study Area-1/8mi	1/8mi-1/4mi	1/4mi-1/2mi	> 1/2mi
32	CEDAR VALLEY ROAD DRUM	20515 CEDAR VALLEY RD	LYNNWOOD	X				
33	LYNNWOOD SEWER LIFT STA 10	4599 204TH ST	LYNNWOOD		X			
34	OLDS OLYMPIC MAIN OFFICE	6016 204TH SW	LYNNWOOD					X
35	MAGNA DESIGN INC	5804 204TH SW	LYNNWOOD				X	
36	REYNOLDS CORP	5720 204TH ST SW	LYNNWOOD				X	
37	ZIC 2 LLC CORPORATE OFFICE PARK	4001 204TH ST SW	LYNNWOOD		X			
38	GTE LYNNWOOD GARAGE	3831 204TH SW	LYNNWOOD				X	
39	LARCHWAY ARCO	3830 204TH SW	LYNNWOOD				X	
40	WILLIAMS & ABBOTT CONSTRUCTION	20508 56TH AVE W STE A	LYNNWOOD			X		
40	ROTO ROOTER INC	20508 56TH AVE W STE C	LYNNWOOD			X		
41	LYNNWOOD PUBLIC WORKS	20519 60TH AVE W	LYNNWOOD				X	
41	LYNNWOOD CITY PARKS & RECREATION SHOP	20522 60TH AVE W	LYNNWOOD				X	
42	EDMONDS SCHOOL DISTRICT SUPPORT CTR	S OF 204TH ST SW ROW & E OF 50TH	LYNNWOOD	X				
43	OPTIONS PROGRAM	20525 52ND AVE WEST	LYNNWOOD	X				
44	**C MARTIN TRUCKING**	**20610 48TH AVE W**	**LYNNWOOD**	**X**				
44	**C MARTIN TRUCKING INC**	**20631 48TH W**	**LYNNWOOD**	**X**				
45	LYNNWOOD DODGE INC	20612 HWY 99	LYNNWOOD					X
46	**CONNELLY SKIS INC**	**20621 52ND AVE W**	**LYNNWOOD**	**X**				
47	HERTZ EQUIPMENT RENTAL ERC 9789	20630 56TH AVE W	LYNNWOOD			X		
48	UNOCAL STATION SHIN	20713 HWY 99	LYNNWOOD					X
49	AA RENTALS	20728 56TH AVE W	LYNNWOOD			X		
50	PRO TEX PAINTING	20727 52ND AVE W	LYNNWOOD	X				
51	SHELDONS CUSTOM CAB LTD	20626 50TH AVE W	LYNNWOOD	X				
51		**5015 208TH ST SW**	**LYNNWOOD**	**X**				
52	BRIGGS TECHNOLOGIES INC LYNNWO	6027 208TH SW	LYNNWOOD				X	
53	USWCOM LYNNWOOD PRR 27563	6024 208TH ST SW	LYNNWOOD				X	
54	ECLECTIC PRODUCTS INC TITAN DIVISION	5629 208TH ST SW	LYNNWOOD			X		
54	WINK CORP	5631 208TH SW	LYNNWOOD			X		
55	R & J AUTO DETAIL	5121 208TH SW	LYNNWOOD	X				
56	NIX 99 IMPORT RECYCLING	5522 208TH ST SW	LYNNWOOD			X		
57	**BUDGET TANK REMOVAL**	**20825 52ND AVE**	**LYNNWOOD**	**X**				
58	HALLS LAKE CSWGP	20907 59TH PLACE W	LYNNWOOD				X	
59	US DOJ DEA 54TH W LYNNWOOD	20908 54TH AVE W 8	LYNNWOOD		X			
60	COYOTE CLEANING SYSTEMS INC	7208 210TH ST SW	EDMONDS					X
61	JAMES AUTO SERVICE	21000 70TH AVE W	EDMONDS					X
62	BERRY NEON CO INC	21027 61ST W	LYNNWOOD				X	
63	J & J AUTO REPAIR	6204 211TH ST SW	LYNNWOOD				X	
64	MGM GRAPHICS INC	6116 211TH ST SW	LYNNWOOD				X	
65	BOB MILLER	21126 44TH AVE W	LYNNWOOD				X	
66	SEATTLE ENGINE REBUILDERS & REMFG INC	6501 212TH ST SW	LYNNWOOD				X	
67	ANDYS ARCO	6408 212 SW	LYNNWOOD				X	
67	DAVIS INDUSTRIES INC	6425 212TH ST SW	LYNNWOOD				X	
68	WESTERN TYPOGRAPHERS INC	6333 212TH ST	LYNNWOOD				X	
69	SNOHOMISH CNTY PUD HALLS LK SUBSTATION	6120 212TH ST SW	MOUNTLAKE TERRACE				X	
69	BEETLES UNLIMITED INC	6127 212TH ST SW UNIT B	LYNNWOOD				X	
69	SNOHOMISH CNTY PUD 1 ESPERANCE SUBSTA	6129 212TH ST SW	LYNNWOOD				X	
69	LYNNWOOOD AUTO TRUCK SERVICE	6131 212TH ST SW	LYNNWOOD				X	
69	ALLEN L CURTIS	6137 212TH SW	LYNNWOOD				X	
69	SNOHOMISH CNTY PUD LYNNWOOD STA	6200 212TH ST SW	LYNNWOOD				X	
69	FRANKS SUBURBAN AUTOMOTIVE 1	6203 212TH SW	LYNNWOOD				X	
69	KENS RADIATOR SERVICE	6226 212TH SW	LYNNWOOD				X	

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EDR ID	Owner Name	Address	City	Location				
				Project Study Area	Project Study Area-1/8mi	1/8mi-1/4mi	1/4mi-1/2mi	> 1/2mi
69	SAFETY KLEEN SYSTEMS INC LYNNWOOD 709201	6303 212TH ST SW STE C	LYNNWOOD				X	
70	GILLEN PROPERTY HALL LAKE	20908 54TH AVE W	LYNNWOOD		X			
71	SOUTHLAND CORP 2331 18726	21202 52ND AVE W	MOUNTLAKE TERRACE		X			
71	JOHNS TEXACO	5215 212TH SW	LYNNWOOD		X			
71	BARUCH AMIRA PARTNERSHIP	5215 212TH SW	LYNNWOOD		X			
72	EXPO CLEANERS	21005 44TH AVE W	MOUNTLAKE TERRACE				X	
72	RESIDENCE FORMER	21029 44TH AVE W	MOUNTLAKE TERRACE				X	
72	ARCO 5525	21201 44TH AVE W	MOUNTLAKE TERRACE				X	
72	US EPA MOUNTLAKE TERRACE DRUMS	212TH ST SW & 44TH AVE W NE CORNER	MOUNTLAKE TERRACE				X	
73	CHEMTECK SERVICES INC	212TH SW & 44TH W NE COR	LYNNWOOD				X	
74	HANSON BROTHERS MOVING & STORAGE	21307 61ST PL W	MOUNTLAKE TERRACE			X		
74	SNOHOMISH CNTY SW TRANSFER STATION	21311 61ST PL W	MOUNTLAKE TERRACE			X		
75	NELSON PETROLEUM	6303 213TH PL SW	MOUNTLAKE TERRACE			X		
76	ALLIED WASTE OF LYNNWOOD	21325 66TH AVE W	LYNNWOOD				X	
77	MONTERRA	21426 48TH AVE W	MOUNTLAKE TERRACE				X	
78	VIKING FREIGHT INC MOUNTLAKE TERRACE	6203 215TH ST	MOUNTLAKE TERRACE			X		
78	MOUNTLAKE TERRACE CITY	6204 215TH ST SW	MOUNTLAKE TERRACE			X		
78	MOUNTLAKE TERRACE/LYNNWOOD MAINT. FACILITY	6205 215TH ST. SW	MOUNTLAKE TERRACE			X		
79	COLOR TECH MOUNTLAKE TERRACE	6304 215TH ST SW	MOUNTLAKE TERRACE			X		
79	SIGN TECH	6306 215TH ST SW	MOUNTLAKE TERRACE			X		
80	LLOYD CONTROLS INC	21414 66TH W	MOUNTLAKE TERRACE				X	
81	ENVIRONMENTAL QUALITY MANAGEMENT INC	6825 216TH ST SW STE A	LYNNWOOD				X	
81	INTELLIGENT CONTROLS INC	6825 216TH ST SW STE J	LYNNWOOD				X	
82	WHIRLWIND SERVICES	6801 216TH ST SW	MOUNTLAKE TERRACE				X	
83	NORTHWEST TRANSFORMER SERV MT	6510 216 ST SW UNITC	MOUNTLAKE TERRACE				X	
84	WESCO AUTOBODY SUPPLY	21601 66TH AVE W	MOUNTLAKE TERRACE				X	
85	CROSS PROPERTY FORMER	21700 HWY 99	EDMONDS					X
86	MOUNTLAKE TERRACE DRUM	6103 ST ALBION WAY	MOUNTLAKE TERRACE		X			
87	LIGHT DOCTOR LLC	21706 66TH AVE W	MOUNTLAKE TERRACE			X		
87	AVIATION INSTRUMENT SVC INC	21709 66TH AVE W	MOUNTLAKE TERRACE			X		
87	TECHNIGRAPHIC SYSTEMS INC MOUNTLAKE TERR	21718 66TH AVE W STE 200	MOUNTLAKE TERRACE			X		
88	**SNOHOMISH COUNTY PUD**	**21604 60TH AVE W**	**MOUNTLAKE TERRACE**	**X**				
89	FILE DOCTORS	6505 218TH SW STE B	MOUNTLAKE TERRACE			X		
90	FORMS WEST INC	21816 66TH W	MOUNTLAKE TERRACE			X		
91	CLOUDY & BRITTON INC	6202 214TH SW	MOUNTLAKE TERRACE		X			
92	PLAID PANTRY NO 316	21919 66TH AVE W	MOUNTLAKE TERRACE			X		
92	MELODY CUSTOM CLEANERS	21919 66TH AVE W STE C	MOUNTLAKE TERRACE			X		
92	PLAID PANTRY #316	21919 66TH AVE. W.	MOUNTLAKE TERRACE			X		
93	BLUE CROSS OF WASHINGTON	7003 220TH SW	MOUNTLAKE TERRACE				X	
94	PREMERA PARKING GARAGE	6909 220TH ST SW	MOUNTLAKE TERRACE				X	
95	PREMERA BLUE CROSS	6707 220TH ST SW	MOUNTLAKE TERRACE			X		
96	ALPINE SPECIALTY CLEANING	6601 220TH ST SW	MOUNTLAKE TERRACE			X		
96	SHELL STATION 121478	6602 220TH SW	MOUNTLAKE TERRACE			X		
97	MOUNTLAKE TERRACE CITY 58TH AVE	22106 58TH AVE W	MOUNTLAKE TERRACE			X		
98	**SNOH PUD**	**6200 222ND ST SW**	**MOUNTLAKE TERRACE**	**X**				
99	ST PIUS X SCHOOL	22105 58TH AVE W	MOUNTLAKE TERRACE			X		
100	AT&T WIRELESS MOUNTLAKE TERRACE	6601 224TH ST SW	MOUNTLAKE TERRACE				X	
101	EDMONDS USAVE MINI MART	22625 HWY 99	EDMONDS					X
102	CIRCLE K 1458	23003 56TH AVE W	MOUNTLAKE TERRACE				X	
102	CHI S AUTO REPAIR	23009 56TH AVE W	MOUNTLAKE TERRACE				X	
103	SHELL 120951	23206 56TH ST SW	MOUNTLAKE TERRACE				X	

Table I-4.12-2 - Ranking of All Sites Within the Study Area

EDR ID	Owner Name	Address	City	Location				
				Project Study Area	Project Study Area-1/8mi	1/8mi-1/4mi	1/4mi-1/2mi	> 1/2mi
103	CHEVRON 97856	23208 56TH AVE W	MOUNTLAKE TERRACE				X	
103	QUEENS CLEANER	5602 232ND ST SW	MOUNTLAKE TERRACE				X	
104	MOUNTLAKE TERRACE CITY OF	23204 58TH AVE W	MOUNTLAKE TERRACE			X		
105	R & R AUTOMOTIVE	23504 56TH AVE W	MOUNTLAKE TERRACE			X		
106	MOUNTLAKE TERRACE PARK & RIDE	6001 236TH ST SW	MOUNTLAKE TERRACE	X				
106	EVERGREEN ELEMENTARY	6004 237TH ST SW	MOUNTLAKE TERRACE	X				
107	SCHOOL	23606 54TH W	MOUNTLAKE TERRACE				X	
107	SNOHOMISH COUNTY CHRISTIAN SCHOOL	23607 54TH AVE. W.	MOUNTLAKE TERRACE				X	
108	THE KINGS PRESS INC	24007 56TH AVE W	MOUNTLAKE TERRACE				X	
109	WOOD SPECIALTY PRODUCTS INC	24300 60TH AVE W	MOUNTLAKE TERRACE		X			
109	GATEWAY PLACE	6001 244TH ST SW	MOUNTLAKE TERRACE		X			
110	PLANTING DESIGN CO	24200 76TH W	EDMONDS					X
111	TIME OIL CO MOUNTLAKE TERRACE	24205 56TH AVE W	MOUNTLAKE TERRACE				X	
112	PATRICK HERMAN	24311 56TH AVE W	MOUNTLAKE TERRACE				X	
112	7 ELEVEN FOOD STORE 230618022K	24325 56TH AVE N	MOUNTLAKE TERRACE				X	
113	NILE TEMPLE OF THE SHRINE	6601 244TH SW	MOUNTLAKE TERRACE			X		
113	TERRACE CLEANERS	6603 244TH ST SW	MOUNTLAKE TERRACE			X		
114	SHELL STATION 120865/ TEXACO #632320083	1505 NE 205TH ST	SEATTLE			X		
115	ASKAR MINI MART	1901 NE 205TH ST	SHORELINE				X	
115	GATEWAY AUTO	5601 244TH SW	MOUNTLAKE TERRACE				X	
116	WALLACE OMICORP BALLINGER	20309 BALLINGER WAY NE	SEATTLE			X		
116	ONCORP PROPERTIES	20319 BALLINGER WAY NE	SEATTLE			X		
116	RITE AID 6234	20320 BALLINGER WAY NE	SEATTLE			X		
117	ROES BALLINGER CHEVRON SERVICE 99124	20330 15TH AVE NE	SEATTLE			X		
118	U SAVE OIL CO INC SEATTLE	20217 BALLINGER WAY N E	SEATTLE				X	
119	PACIFIC COAST VENTURES LLC	20128 B BALLINGER WAY NE	SHORELINE				X	
120	KING COUNTY HOUSING AUTHORITY BALLINGER	20115 20TH PL NE	SEATTLE				X	
121	OUTRIGGER HOIST CO	20028 15TH NE	SEATTLE			X		
121	COASTAL COATINGS INC	20038 15TH NE	SEATTLE			X		
122	BALLINGER GAS & FOOD MART/ EXXON	20010 BALLINGER WAY NE	SHORELINE				X	
122	BALLINGER VILLAGE SHOPPING CENTER	20024 BALLINGER WAY NE	SHORELINE				X	
122	BALLINGER VILLAGE CLEANERS	20028 BALLINGER WAY NE	SHORELINE				X	
122	BALLINGER VILLAGE LP	20036 BALLINGER WAY NE	SHORELINE				X	
122	SOUND OIL COMPANY	20041 BALLINGER RD NE	SEATTLE				X	
122	WASHINGTON TREE SERVICE INC SEATTLE	20057 BALLINGER WAY NE	SEATTLE				X	
123	KING CNTY PARKS SHORELINE POOL	19030 1ST AVE NE	SEATTLE					X
124	**WA DOT**	**I-5 & 185TH**	**SHORELINE**	**X**				
125	TIME OIL CO 15TH AVE	18005 15TH AVE NE	SEATTLE				X	
126	SITE SE10 NORTH CITY	18010 15TH AVE NE	SEATTLE				X	
126	AT&T WIRELESS NORTH CITY	18012 15TH AVE NE	SEATTLE				X	
127	ST MARKS CATHOLIC SCHOOL	18003 15TH PL NE	SEATTLE				X	
128	CROMWELL PARK IMPROVEMENTS	18009 CORLISS AVE N	SHORELINE			X		
129	ASP GERMAN CAR REPAIR	17704 15TH AVE NE	SEATTLE				X	
129	NORTH CITY CLEANERS	17721 15TH AVE NE	SEATTLE				X	
129	GORDONS NORTH SEATTLE TIRES	17754 15TH AVE NE	SEATTLE				X	
130	EXXON #7 7255	17956 1ST AVE. S.	SEATTLE		X			
131	NORTHCITY TEXACO	17563 15TH AVE NE	SHORELINE				X	
132	UNOCAL 4973	1150 N 175TH ST	SEATTLE					X
133	UNOCAL 5728	1211 NE 175TH	SEATTLE				X	
134	BURKE PROPERTY	17248 RONALD PL N	SEATTLE					X
135	MERIDIAN PARK ELEMENTARY SCHOOL	17077 MERIDIAN AVE N	SHORELINE			X		

Table I-4.12-2 - Ranking of All Sites Within the Study Area

EDR ID	Owner Name	Address	City	Location				
				Project Study Area	Project Study Area-1/8mi	1/8mi-1/4mi	1/4mi-1/2mi	> 1/2mi
135	MERIDIAN LANDFILL	170TH N & MERIDIAN AV	SEATTLE			X		
136	AT&T RONALD	2360 N 167TH ST	SEATTLE		X			
137	EVANS TIRE SVC CTRS 066	16622 AURORA AVE N	SEATTLE					X
138	U HAUL CO OF N SEATTLE	16503 AURORA AVE N	SEATTLE					X
139	KING CNTY SOLID WASTE DIV 1ST NE TRANS	165TH & MERIDIAN AVE N	SEATTLE				X	
140	FUELCARE SHORELINE	509 NE 165TH ST	SHORELINE			X		
141	JIM ADAMS AUTO CLINIC INC	16268 5TH AVE NE	SEATTLE			X		
142	SEATTLE CITY LIGHT SHORELINE SUBSTATION	2136 N 163RD ST	SHORELINE			X		
142	KING CNTY DOT METRO TRANSIT NORTH BASE	2160 N 163RD ST	SEATTLE			X		
143	HENDRICKSON PROPERTY	928 N 160TH ST	SEATTLE					X
144	SHORELINE SCHOOL DISTRICT CENTRAL KITCHEN IMPROV	2003 NE 160TH ST	SHORELINE			X		
145	CHEVRON 200410	15510 AURORA AVE N	SEATTLE					X
146	CRAWFORD PROPERTY	2326 N 155TH ST	SHORELINE		X			
147	WA DSHS FIRCREST SCHOOL	15230 15TH AVE NE	SHORELINE					X
148	EVERGREEN SCHOOL	15201 MERIDIAN AVE N	SEATTLE				X	
149	TINSLEY RESIDENCE	14855 6TH AV NE	SEATTLE			X		
150	HODGES PROPERTY	15001 8TH AVE NE	SEATTLE			X		
151	UNITED CEREBRAL PALSY RES CTR	14910 1ST AVE N	SEATTLE		X			
152	PARK RIDGE CARE FACILITY, FORMER UST SITE	1250 NE 145TH ST	SEATTLE				X	
153	SPARK'S TUNEUP (FRMR TEXACO)	14501 15TH AVE NE	SEATTLE				X	
153	QFC NORTH SEATTLE 858	1531 NE 145TH ST	SEATTLE				X	
153	SEATTLE CITY ROW NE 145TH & 15TH NE	NE 145TH ST & 15TH AVE NE	SEATTLE				X	
154	NORTHPARK SHOPPING CENTER	1549 NE 145TH ST	SEATTLE					X
155	LAKESIDE SCHOOL	14050 1ST AVE NE	SEATTLE			X		
156	LAKESIDE UPPER SCHOOL	14056 4TH NE	SEATTLE		X			
157	KJORSVIK PROPERTY	14038 SUNNYSIDE AVE N	SEATTLE				X	
158	JACKSON GOLF COURSE	1000 NE 135TH	SEATTLE			X		
159	HALLER LAKE TEXACO	13401 ROOSEVELT WAY N	SEATTLE			X		
160	PSE NORTH OPERATING BASE	13330 STONE AVE N	SEATTLE					X
161	VERIZON WIRELESS NORTH ACRES PARK	351 NE 133RD ST	SEATTLE		X			
162	**UNK**	**5TH AVE NE & NE 130TH ST**	**SEATTLE**	**X**				
163	CORP OF ARCHDIOCESE OF SEATTLE UST 12696	1230 NE 127TH	SEATTLE				X	
164	SEATTLE CITY SDOT HALLER LAKE	12600 STONE AVE N	SEATTLE					X
165		**5TH NE & 125TH NE**	**SEATTLE**	**X**				
166	BARRETT HARDWARE	12230 AURORA AVE N	SEATTLE					X
167	**PSE**	**12312 5TH AVE NE**	**SEATTLE**	**X**				
168	2115 N 122ND ST	2115 N 122ND ST	SEATTLE			X		
169	NORTHWEST HOSPITAL	1550 N 115TH ST	SEATTLE				X	
170	ALPINE CUSTOM BUILDINGS LLC	11310 8TH AVE NE	SEATTLE				X	
171	NORTHGATE URBAN CENTER PARK	11035 5TH AVE NE	SEATTLE			X		
171	NORTHGATE DENTAL CONDO ASSOC	11066 5TH AVE NE STE 111	SEATTLE			X		
171	UNOCAL 5532	500 NE NORTHGATE WAY	SEATTLE			X		
171	STANDARD OIL SERVICE STA 9-7533 FORMER	501 NE NORTHGATE WAY	SEATTLE			X		
172	NORTHGATE CLEANERS	11020 8TH AVE NE	SEATTLE				X	
172	ROOSEVELT AUTO BODY NORTHGATE 8TH AVE	11035 8TH AVE NE	SEATTLE				X	
172	AT&T WIRELESS NORTHGATE	11050 8TH AVE NE	SEATTLE				X	
172	GOODYEAR AUTO SVC CTR 8822 NOR	810 NORTHGATE WAY	SEATTLE				X	
172	PAHLKA WATERPROOFING INC	825 NE NORTHGATE WAY	SEATTLE				X	
172	SHELL OIL CO 129593	859 NE NORTHGATE WAY	SEATTLE				X	
173	TARGET STORE 1284	302 NE NORTHGATE WAY	SEATTLE		X			
173	NORTHGATE EXPANSION PROJECT	310 NE NORTHGATE WAY	SEATTLE		X			

Table I-4.12-2 - Ranking of All Sites Within the Study Area

EDR ID	Owner Name	Address	City	Location				
				Project Study Area	Project Study Area-1/8mi	1/8mi-1/4mi	1/4mi-1/2mi	> 1/2mi
174	CONOCOPHILLIPS 30101	2143 N NORTHGATE WAY	SEATTLE			X		
174	CHEVRON 92815	2150 N NORTHGATE WAY & CORLISS	SEATTLE			X		
175	CHEVRON #9 2815 (THREE REPORTS)	NORTHGATE & CORLISS AVE.	SEATTLE		X			
176	NORTHGATE ARCO	2101 N NORTHGATE WAY	SEATTLE			X		
177	NORTHGATE MALL PARTNERSHIP	401 NE NORTHGATE WAY	SEATTLE			X		
178	**WDOT I-5/NORTHGATE**	**1ST NE & NE 110TH**	**SEATTLE**	**X**				
179	BON MARCHE SEATTLE NORTHGATE MALL	602 NORTHGATE MALL	SEATTLE			X		
180	SHELL STATION 120819	1935 N NORTHGATE WAY	SEATTLE				X	
181	ACCU PAP DIAGNOSTIC SVCS NORTH	120 NORTHGATE PLAZA 351	SEATTLE			X		
181	CAMERAS WEST 1034	150 NORTHGATE PLZ	SEATTLE			X		
181	JCPENNEY COMPANY INC	475 NORTHGATE MALL	SEATTLE			X		
182	WA UW SCRIBNER CENTER	2150 N 107TH ST STE 160 & B075	SEATTLE			X		
183	NORTHGATE MALL	555 NORTHGATE MALL	SEATTLE		X			
184	EXPRESSLY PORTRAITS 39 NORTHGATE MALL	750 NORTHGATE MALL	SEATTLE		X			
184	KITS CAMERA 1003	923 NORTHGATE MALL	SEATTLE		X			
185	BON MARCHE TIRE CENTER	10500 5TH AVE NE	SEATTLE			X		
185	KINDRED HOSPITAL SEATTLE	10560 5TH AVE NE	SEATTLE			X		
186	NWH OUTPATIENT MEDICAL CENTER	10330 MERIDIAN AVE N	SEATTLE			X		
187	SEATTLE CITY ESD N POLICE PRECINCT	10049 COLLEGE WAY N	SEATTLE				X	
188	NORTHGATE HOLDING CO	10202 5TH AV NE	SEATTLE				X	
189	GATEWAY MUIRLAND INC 100TH ST	115 NE 100TH ST	SEATTLE				X	
190	NORTHGATE COMMONS	300 NE 100TH ST	SEATTLE				X	
191	SEATTLE CITY LIGHT STONE AVE	9809 STONE AVE N	SEATTLE					X
192	NORTHGATE STATION	9538-9598 1ST AV NE	SEATTLE				X	

Table I-4.12-2 - Ranking of All Sites Within the Project Study Area (continued)

EDR ID	Owner Name	Address	City	Site With a Known or Suspected Release to the Environment?	Active or Inactive?	RANK
1	FIRE STATION 1 LYNNWOOD	18800 44TH AVE W	LYNNWOOD	YES	--	0
2	JB ASPHALT CO	19222 HWY 99	LYNNWOOD	YES	--	0
2	KELLYS FURNITURE REFINISHING	19230 HWY 99	LYNNWOOD	YES	--	0
3	TOP AUTO INC LYNNWOOD	19414 44TH AVE W	LYNNWOOD	NO	--	0
3	USA PETROLEUM 190	19420 44TH AVE W	LYNNWOOD	YES	INACTIVE	0
4	TIRE MARK	19406 HWY 99	LYNNWOOD	YES	--	0
5	L & L ENTERPRISES	19502 48TH AVE W	LYNNWOOD	NO	--	0
6	LIGHTHOUSE DIVING CENTER	5421 C 196TH ST SW	LYNNWOOD	YES	INACTIVE	0
7	HIGHLINE CLEANERS	19515 44TH AVE	LYNNWOOD	NO	--	0
8	KELLY MOORE PAINT CO INC LYNNWOOD	5009 196TH ST SW	LYNNWOOD	NO	--	0
9	GLACIER ENVIRONMENTAL SVCS	4807 196TH SW	LYNNWOOD	NO	--	0
9	ARCO 6214	4812 196TH ST SW	LYNNWOOD	YES	--	0
9	LYNNWOOD AUTO PARTS INC	4815 196TH SW	LYNNWOOD	NO	--	0
9	KC MARTIN AUTOMOTIVE SVC CO MAIN SHOP	4829 196TH ST SW	LYNNWOOD	NO	--	0
10	196TH ST SW LYNNWOOD	4909 196TH ST SW	LYNNWOOD	YES	--	0
10	FIVE STAR CAR WASH	4921 196TH ST SW	LYNNWOOD	YES	--	0
10	LES SCHWAB TIRES	4933 196TH ST SW	LYNNWOOD	YES	--	0
11	CLEANERY SNOHOMISH LYNNWOOD	4701 196TH SW	LYNNWOOD	NO	--	0
11	UNOCAL STATION 5623	4733 196TH ST SW	LYNNWOOD	YES	INACTIVE	0
12	LYNNWOOD SHURGARD	4600 196TH SW	LYNNWOOD	NO	--	0
12	FRED MEYER FUEL STOP 180	4615 196TH ST SW	LYNNWOOD	NO	--	0
12	FRED MEYER FUELING FACILITY	4618 196TH ST SW	LYNNWOOD	NO	--	0
13	MINUTEMAN PRESS LYNNWOOD	4291 196TH ST SW	LYNNWOOD	NO	--	0
13	EXXON CO USA 79078	4317 196TH ST SW & 144TH	LYNNWOOD	YES	--	0
14	ALDERWOOD OLDSMOBILE/CADILLAC (TWO REPORTS)	3909 196TH SW	LYNNWOOD	YES	INACTIVE	0
15	SUPER SHOPS LYNNWOOD	4028 SW 196TH ST	LYNNWOOD	NO	--	0
16	ELAN BUILDING	3810 196TH ST SW	LYNNWOOD	NO	--	0
17	60 MINUTE TUNE/ DAVES COMPLETE BRAKE	19610 A 44TH AVE W	LYNNWOOD	YES	--	0
18	LYNNWOOD ALTERATIONS	19720 44TH AVE W	LYNNWOOD	NO	--	0
18	R C & COMPANY LTD	19730 44TH AVE W	LYNNWOOD	NO	--	0
19	NN CONTACT LENS INTL	4201 198TH ST SW	LYNNWOOD	NO	--	0
20	BEST PRODUCTS CO INC LYNNWOOD	19801 40TH AVE W	LYNNWOOD	NO	--	0
20	LEATHER TO LACE	4001 198TH ST SW	LYNNWOOD	NO	--	0
20	SEATTLE GOODWILL	4027 198TH STREET SW	LYNNWOOD	NO	--	0
21	SCHUCKS AUTO SUPPLY LYNNWOOD	19825 HWY 99	LYNNWOOD	YES	--	0
22	LYNNWOOD CITY	5322 198TH ST SW	LYNNWOOD	NO	--	0
23	FIRESTONE STORE NO 3197	19800 44TH AVE W STE H	LYNNWOOD	YES	INACTIVE	3
23	GOODYEAR SVC STORE LYNNWOOD	19805 44TH AVE W	LYNNWOOD	YES	INACTIVE	3
24	SCHUCKS HWY 99	19915 HWY 99	LYNNWOOD	YES	--	0
25	MR CLEAN CAR WASH	19907 44TH AVE W	LYNNWOOD	YES	INACTIVE	3
25	**SHELL STATION 120839**	**19930 44TH AVE W**	**LYNNWOOD**	**YES**	**ACTIVE**	**5**
26	AT&T WIRELESS CEDAR VALLEY	4030 200TH ST SW	LYNNWOOD	NO	--	0
26	CENTERS 3 COLLISION	4030 ALDERWOOD MALL BLVD	LYNNWOOD	NO	--	0
27	7 ELEVEN STORE 22893	4520 200TH ST SW	LYNNWOOD	NO	N/A	2
27	PC RECYCLE	4520 200TH ST SW STE 201	LYNNWOOD	NO	N/A	2
28	**CHEVRON 94953**	**20010 44TH AVE W**	**LYNNWOOD**	**YES**	**ACTIVE**	**5**
29	**COMMUNITY TRANSIT**	**20100 48TH AVE W**	**LYNNWOOD**	**YES**	**ACTIVE**	**4**
29	CARVER CORP	20121 48TH AVE W	LYNNWOOD	NO	N/A	2
30	PIERRE MONEYMART	20221 HWY 99	LYNNWOOD	YES	--	0
31	NELSON MOTORS INC	20307 HWY 99	LYNNWOOD	YES	--	0
32	**RIMPAC STEEL INC**	**20311 52ND AVE W**	**LYNNWOOD**	**YES**	**INACTIVE**	**4**

Table I-4.12-2 - Ranking of All Sites Within the Project Study Area (continued)

EDR ID	Owner Name	Address	City	Site With a Known or Suspected Release to the Environment?	Active or Inactive?	RANK
32	CEDAR VALLEY ROAD DRUM	20515 CEDAR VALLEY RD	LYNNWOOD	NO	N/A	2
33	LYNNWOOD SEWER LIFT STA 10	4599 204TH ST	LYNNWOOD	YES	INACTIVE	3
34	OLDS OLYMPIC MAIN OFFICE	6016 204TH SW	LYNNWOOD	YES	--	0
35	MAGNA DESIGN INC	5804 204TH SW	LYNNWOOD	NO	--	0
36	REYNOLDS CORP	5720 204TH ST SW	LYNNWOOD	NO	--	0
37	ZIC 2 LLC CORPORATE OFFICE PARK	4001 204TH ST SW	LYNNWOOD	NO	N/A	1
38	GTE LYNNWOOD GARAGE	3831 204TH SW	LYNNWOOD	YES	--	0
39	LARCHWAY ARCO	3830 204TH SW	LYNNWOOD	NO	--	0
40	WILLIAMS & ABBOTT CONSTRUCTION	20508 56TH AVE W STE A	LYNNWOOD	NO	--	0
40	ROTO ROOTER INC	20508 56TH AVE W STE C	LYNNWOOD	NO	--	0
41	LYNNWOOD PUBLIC WORKS	20519 60TH AVE W	LYNNWOOD	YES	--	0
41	LYNNWOOD CITY PARKS & RECREATION SHOP	20522 60TH AVE W	LYNNWOOD	YES	--	0
42	EDMONDS SCHOOL DISTRICT SUPPORT CTR	S OF 204TH ST SW ROW & E OF 50TH	LYNNWOOD	NO	N/A	2
43	OPTIONS PROGRAM	20525 52ND AVE WEST	LYNNWOOD	NO	N/A	2
44	**C MARTIN TRUCKING**	**20610 48TH AVE W**	**LYNNWOOD**	**YES**	**INACTIVE**	**4**
44	**C MARTIN TRUCKING INC**	**20631 48TH W**	**LYNNWOOD**	**YES**	**INACTIVE**	**4**
45	LYNNWOOD DODGE INC	20612 HWY 99	LYNNWOOD	YES	--	0
46	**CONNELLY SKIS INC**	**20621 52ND AVE W**	**LYNNWOOD**	**YES**	**ACTIVE**	**4**
47	HERTZ EQUIPMENT RENTAL ERC 9789	20630 56TH AVE W	LYNNWOOD	NO	--	0
48	UNOCAL STATION SHIN	20713 HWY 99	LYNNWOOD	YES	--	0
49	AA RENTALS	20728 56TH AVE W	LYNNWOOD	YES	--	0
50	PRO TEX PAINTING	20727 52ND AVE W	LYNNWOOD	NO	N/A	2
51	SHELDONS CUSTOM CAB LTD	20626 50TH AVE W	LYNNWOOD	NO	N/A	2
51		**5015 208TH ST SW**	**LYNNWOOD**	**YES**	**ACTIVE**	**4**
52	BRIGGS TECHNOLOGIES INC LYNNWO	6027 208TH SW	LYNNWOOD	NO	--	0
53	USWCOM LYNNWOOD PRR 27563	6024 208TH ST SW	LYNNWOOD	NO	--	0
54	ECLECTIC PRODUCTS INC TITAN DIVISION	5629 208TH ST SW	LYNNWOOD	NO	--	0
54	WINK CORP	5631 208TH SW	LYNNWOOD	NO	--	0
55	R & J AUTO DETAIL	5121 208TH SW	LYNNWOOD	NO	N/A	2
56	NIX 99 IMPORT RECYCLING	5522 208TH ST SW	LYNNWOOD	NO	--	0
57	**BUDGET TANK REMOVAL**	**20825 52ND AVE**	**LYNNWOOD**	**YES**	**ACTIVE**	**4**
58	HALLS LAKE CSWGP	20907 59TH PLACE W	LYNNWOOD	NO	--	0
59	US DOJ DEA 54TH W LYNNWOOD	20908 54TH AVE W 8	LYNNWOOD	NO	N/A	1
60	COYOTE CLEANING SYSTEMS INC	7208 210TH ST SW	EDMONDS	YES	--	0
61	JAMES AUTO SERVICE	21000 70TH AVE W	EDMONDS	YES	--	0
62	BERRY NEON CO INC	21027 61ST W	LYNNWOOD	NO	--	0
63	J & J AUTO REPAIR	6204 211TH ST SW	LYNNWOOD	NO	--	0
64	MGM GRAPHICS INC	6116 211TH ST SW	LYNNWOOD	NO	--	0
65	BOB MILLER	21126 44TH AVE W	LYNNWOOD	NO	--	0
66	SEATTLE ENGINE REBUILDERS & REMFG INC	6501 212TH ST SW	LYNNWOOD	NO	--	0
67	ANDYS ARCO	6408 212 SW	LYNNWOOD	NO	--	0
67	DAVIS INDUSTRIES INC	6425 212TH ST SW	LYNNWOOD	NO	--	0
68	WESTERN TYPOGRAPHERS INC	6333 212TH ST	LYNNWOOD	NO	--	0
69	SNOHOMISH CNTY PUD HALLS LK SUBSTATION	6120 212TH ST SW	MOUNTLAKE TERRACE	YES	INACTIVE	0
69	BEETLES UNLIMITED INC	6127 212TH ST SW UNIT B	LYNNWOOD	NO	--	0
69	SNOHOMISH CNTY PUD 1 ESPERANCE SUBSTA	6129 212TH ST SW	LYNNWOOD	NO	--	0
69	LYNNWOOOD AUTO TRUCK SERVICE	6131 212TH ST SW	LYNNWOOD	NO	--	0
69	ALLEN L CURTIS	6137 212TH SW	LYNNWOOD	NO	--	0
69	SNOHOMISH CNTY PUD LYNNWOOD STA	6200 212TH ST SW	LYNNWOOD	YES	--	0
69	FRANKS SUBURBAN AUTOMOTIVE 1	6203 212TH SW	LYNNWOOD	NO	--	0
69	KENS RADIATOR SERVICE	6226 212TH SW	LYNNWOOD	YES	INACTIVE	0

Table I-4.12-2 - Ranking of All Sites Within the Project Study Area (continued)

EDR ID	Owner Name	Address	City	Site With a Known or Suspected Release to the Environment?	Active or Inactive?	RANK
69	SAFETY KLEEN SYSTEMS INC LYNNWOOD 709201	6303 212TH ST SW STE C	LYNNWOOD	YES	--	0
70	GILLEN PROPERTY HALL LAKE	20908 54TH AVE W	LYNNWOOD	YES	INACTIVE	3
71	SOUTHLAND CORP 2331 18726	21202 52ND AVE W	MOUNTLAKE TERRACE	YES	ACTIVE	3
71	JOHNS TEXACO	5215 212TH SW	LYNNWOOD	YES	ACTIVE	3
71	BARUCH AMIRA PARTNERSHIP	5215 212TH SW	LYNNWOOD	NO	N/A	1
72	EXPO CLEANERS	21005 44TH AVE W	MOUNTLAKE TERRACE	NO	--	0
72	RESIDENCE FORMER	21029 44TH AVE W	MOUNTLAKE TERRACE	YES	--	0
72	ARCO 5525	21201 44TH AVE W	MOUNTLAKE TERRACE	NO	--	0
72	US EPA MOUNTLAKE TERRACE DRUMS	212TH ST SW & 44TH AVE W NE CORNER	MOUNTLAKE TERRACE	YES	--	0
73	CHEMTECK SERVICES INC	212TH SW & 44TH W NE COR	LYNNWOOD	NO	--	0
74	HANSON BROTHERS MOVING & STORAGE	21307 61ST PL W	MOUNTLAKE TERRACE	YES	INACTIVE	0
74	SNOHOMISH CNTY SW TRANSFER STATION	21311 61ST PL W	MOUNTLAKE TERRACE	NO	--	0
75	NELSON PETROLEUM	6303 213TH PL SW	MOUNTLAKE TERRACE	YES	--	0
76	ALLIED WASTE OF LYNNWOOD	21325 66TH AVE W	LYNNWOOD	NO	--	0
77	MONTERRA	21426 48TH AVE W	MOUNTLAKE TERRACE	NO	--	0
78	VIKING FREIGHT INC MOUNTLAKE TERRACE	6203 215TH ST	MOUNTLAKE TERRACE	NO	--	0
78	MOUNTLAKE TERRACE CITY	6204 215TH ST SW	MOUNTLAKE TERRACE	YES	--	0
78	MOUNTLAKE TERRACE/LYNNWOOD MAINT. FACILITY	6205 215TH ST. SW	MOUNTLAKE TERRACE	YES	--	0
79	COLOR TECH MOUNTLAKE TERRACE	6304 215TH ST SW	MOUNTLAKE TERRACE	NO	--	0
79	SIGN TECH	6306 215TH ST SW	MOUNTLAKE TERRACE	NO	--	0
80	LLOYD CONTROLS INC	21414 66TH W	MOUNTLAKE TERRACE	YES	INACTIVE	0
81	ENVIRONMENTAL QUALITY MANAGEMENT INC	6825 216TH ST SW STE A	LYNNWOOD	NO	--	0
81	INTELLIGENT CONTROLS INC	6825 216TH ST SW STE J	LYNNWOOD	NO	--	0
82	WHIRLWIND SERVICES	6801 216TH ST SW	MOUNTLAKE TERRACE	NO	--	0
83	NORTHWEST TRANSFORMER SERV MT	6510 216 ST SW UNITC	MOUNTLAKE TERRACE	YES	INACTIVE	0
84	WESCO AUTOBODY SUPPLY	21601 66TH AVE W	MOUNTLAKE TERRACE	NO	--	0
85	CROSS PROPERTY FORMER	21700 HWY 99	EDMONDS	YES	--	0
86	MOUNTLAKE TERRACE DRUM	6103 ST ALBION WAY	MOUNTLAKE TERRACE	NO	N/A	1
87	LIGHT DOCTOR LLC	21706 66TH AVE W	MOUNTLAKE TERRACE	NO	--	0
87	AVIATION INSTRUMENT SVC INC	21709 66TH AVE W	MOUNTLAKE TERRACE	NO	--	0
87	TECHNIGRAPHIC SYSTEMS INC MOUNTLAKE TERR	21718 66TH AVE W STE 200	MOUNTLAKE TERRACE	NO	--	0
88	**SNOHOMISH COUNTY PUD**	**21604 60TH AVE W**	**MOUNTLAKE TERRACE**	**YES**	**ACTIVE**	**4**
89	FILE DOCTORS	6505 218TH SW STE B	MOUNTLAKE TERRACE	NO	--	0
90	FORMS WEST INC	21816 66TH W	MOUNTLAKE TERRACE	NO	--	0
91	CLOUDY & BRITTON INC	6202 214TH SW	MOUNTLAKE TERRACE	NO	N/A	1
92	PLAID PANTRY NO 316	21919 66TH AVE W	MOUNTLAKE TERRACE	YES	INACTIVE	0
92	MELODY CUSTOM CLEANERS	21919 66TH AVE W STE C	MOUNTLAKE TERRACE	NO	--	0
92	PLAID PANTRY #316	21919 66TH AVE. W.	MOUNTLAKE TERRACE	YES	--	0
93	BLUE CROSS OF WASHINGTON	7003 220TH SW	MOUNTLAKE TERRACE	NO	--	0
94	PREMERA PARKING GARAGE	6909 220TH ST SW	MOUNTLAKE TERRACE	NO	--	0
95	PREMERA BLUE CROSS	6707 220TH ST SW	MOUNTLAKE TERRACE	NO	--	0
96	ALPINE SPECIALTY CLEANING	6601 220TH ST SW	MOUNTLAKE TERRACE	NO	--	0
96	SHELL STATION 121478	6602 220TH SW	MOUNTLAKE TERRACE	YES	--	0
97	MOUNTLAKE TERRACE CITY 58TH AVE	22106 58TH AVE W	MOUNTLAKE TERRACE	NO	--	0
98	**SNOH PUD**	**6200 222ND ST SW**	**MOUNTLAKE TERRACE**	**YES**	**ACTIVE**	**4**
99	ST PIUS X SCHOOL	22105 58TH AVE W	MOUNTLAKE TERRACE	NO	--	0
100	AT&T WIRELESS MOUNTLAKE TERRACE	6601 224TH ST SW	MOUNTLAKE TERRACE	NO	--	0
101	EDMONDS USAVE MINI MART	22625 HWY 99	EDMONDS	YES	--	0
102	CIRCLE K 1458	23003 56TH AVE W	MOUNTLAKE TERRACE	YES	INACTIVE	0
102	CHI S AUTO REPAIR	23009 56TH AVE W	MOUNTLAKE TERRACE	NO	--	0
103	SHELL 120951	23206 56TH ST SW	MOUNTLAKE TERRACE	YES	INACTIVE	0

Table I-4.12-2 - Ranking of All Sites Within the Project Study Area (continued)

EDR ID	Owner Name	Address	City	Site With a Known or Suspected Release to the Environment?	Active or Inactive?	RANK
103	CHEVRON 97856	23208 56TH AVE W	MOUNTLAKE TERRACE	YES	INACTIVE	0
103	QUEENS CLEANER	5602 232ND ST SW	MOUNTLAKE TERRACE	YES	INACTIVE	0
104	MOUNTLAKE TERRACE CITY OF	23204 58TH AVE W	MOUNTLAKE TERRACE	NO	--	0
105	R & R AUTOMOTIVE	23504 56TH AVE W	MOUNTLAKE TERRACE	NO	--	0
106	MOUNTLAKE TERRACE PARK & RIDE	6001 236TH ST SW	MOUNTLAKE TERRACE	NO	N/A	2
106	EVERGREEN ELEMENTARY	6004 237TH ST SW	MOUNTLAKE TERRACE	NO	N/A	2
107	SCHOOL	23606 54TH W	MOUNTLAKE TERRACE	YES	--	0
107	SNOHOMISH COUNTY CHRISTIAN SCHOOL	23607 54TH AVE. W.	MOUNTLAKE TERRACE	YES	--	0
108	THE KINGS PRESS INC	24007 56TH AVE W	MOUNTLAKE TERRACE	NO	--	0
109	WOOD SPECIALTY PRODUCTS INC	24300 60TH AVE W	MOUNTLAKE TERRACE	NO	N/A	1
109	GATEWAY PLACE	6001 244TH ST SW	MOUNTLAKE TERRACE	NO	N/A	1
110	PLANTING DESIGN CO	24200 76TH W	EDMONDS	YES	--	0
111	TIME OIL CO MOUNTLAKE TERRACE	24205 56TH AVE W	MOUNTLAKE TERRACE	YES	--	0
112	PATRICK HERMAN	24311 56TH AVE W	MOUNTLAKE TERRACE	YES	--	0
112	7 ELEVEN FOOD STORE 230618022K	24325 56TH AVE N	MOUNTLAKE TERRACE	NO	--	0
113	NILE TEMPLE OF THE SHRINE	6601 244TH SW	MOUNTLAKE TERRACE	YES	--	0
113	TERRACE CLEANERS	6603 244TH ST SW	MOUNTLAKE TERRACE	NO	--	0
114	SHELL STATION 120865/ TEXACO #632320083	1505 NE 205TH ST	SEATTLE	YES	--	0
115	ASKAR MINI MART	1901 NE 205TH ST	SHORELINE	YES	--	0
115	GATEWAY AUTO	5601 244TH SW	MOUNTLAKE TERRACE	YES	--	0
116	WALLACE OMICORP BALLINGER	20309 BALLINGER WAY NE	SEATTLE	NO	--	0
116	ONCORP PROPERTIES	20319 BALLINGER WAY NE	SEATTLE	NO	--	0
116	RITE AID 6234	20320 BALLINGER WAY NE	SEATTLE	YES	--	0
117	ROES BALLINGER CHEVRON SERVICE 99124	20330 15TH AVE NE	SEATTLE	YES	--	0
118	U SAVE OIL CO INC SEATTLE	20217 BALLINGER WAY N E	SEATTLE	NO	--	0
119	PACIFIC COAST VENTURES LLC	20128 B BALLINGER WAY NE	SHORELINE	NO	--	0
120	KING COUNTY HOUSING AUTHORITY BALLINGER	20115 20TH PL NE	SEATTLE	NO	--	0
121	OUTRIGGER HOIST CO	20028 15TH NE	SEATTLE	NO	--	0
121	COASTAL COATINGS INC	20038 15TH NE	SEATTLE	NO	--	0
122	BALLINGER GAS & FOOD MART/ EXXON	20010 BALLINGER WAY NE	SHORELINE	YES	--	0
122	BALLINGER VILLAGE SHOPPING CENTER	20024 BALLINGER WAY NE	SHORELINE	YES	--	0
122	BALLINGER VILLAGE CLEANERS	20028 BALLINGER WAY NE	SHORELINE	YES	--	0
122	BALLINGER VILLAGE LP	20036 BALLINGER WAY NE	SHORELINE	NO	--	0
122	SOUND OIL COMPANY	20041 BALLINGER RD NE	SEATTLE	YES	--	0
122	WASHINGTON TREE SERVICE INC SEATTLE	20057 BALLINGER WAY NE	SEATTLE	NO	--	0
123	KING CNTY PARKS SHORELINE POOL	19030 1ST AVE NE	SEATTLE	NO	--	0
124	**WA DOT**	**I-5 & 185TH**	**SHORELINE**	**YES**	**ACTIVE**	**4**
125	TIME OIL CO 15TH AVE	18005 15TH AVE NE	SEATTLE	YES	--	0
126	SITE SE10 NORTH CITY	18010 15TH AVE NE	SEATTLE	NO	--	0
126	AT&T WIRELESS NORTH CITY	18012 15TH AVE NE	SEATTLE	NO	--	0
127	ST MARKS CATHOLIC SCHOOL	18003 15TH PL NE	SEATTLE	NO	--	0
128	CROMWELL PARK IMPROVEMENTS	18009 CORLISS AVE N	SHORELINE	YES	--	0
129	ASP GERMAN CAR REPAIR	17704 15TH AVE NE	SEATTLE	YES	--	0
129	NORTH CITY CLEANERS	17721 15TH AVE NE	SEATTLE	NO	--	0
129	GORDONS NORTH SEATTLE TIRES	17754 15TH AVE NE	SEATTLE	NO	--	0
130	EXXON #7 7255	17956 1ST AVE. S.	SEATTLE	YES	INACTIVE	3
131	NORTHCITY TEXACO	17563 15TH AVE NE	SHORELINE	YES	--	0
132	UNOCAL 4973	1150 N 175TH ST	SEATTLE	YES	--	0
133	UNOCAL 5728	1211 NE 175TH	SEATTLE	YES	--	0
134	BURKE PROPERTY	17248 RONALD PL N	SEATTLE	YES	--	0
135	MERIDIAN PARK ELEMENTARY SCHOOL	17077 MERIDIAN AVE N	SHORELINE	NO	--	0

Table I-4.12-2 - Ranking of All Sites Within the Project Study Area (continued)

EDR ID	Owner Name	Address	City	Site With a Known or Suspected Release to the Environment?	Active or Inactive?	RANK
135	MERIDIAN LANDFILL	170TH N & MERIDIAN AV	SEATTLE	YES	--	0
136	AT&T RONALD	2360 N 167TH ST	SEATTLE	NO	N/A	1
137	EVANS TIRE SVC CTRS 066	16622 AURORA AVE N	SEATTLE	YES	--	0
138	U HAUL CO OF N SEATTLE	16503 AURORA AVE N	SEATTLE	YES	--	0
139	KING CNTY SOLID WASTE DIV 1ST NE TRANS	165TH & MERIDIAN AVE N	SEATTLE	NO	--	0
140	FUELCARE SHORELINE	509 NE 165TH ST	SHORELINE	NO	--	0
141	JIM ADAMS AUTO CLINIC INC	16268 5TH AVE NE	SEATTLE	NO	--	0
142	SEATTLE CITY LIGHT SHORELINE SUBSTATION	2136 N 163RD ST	SHORELINE	NO	--	0
142	KING CNTY DOT METRO TRANSIT NORTH BASE	2160 N 163RD ST	SEATTLE	NO	--	0
143	HENDRICKSON PROPERTY	928 N 160TH ST	SEATTLE	YES	--	0
144	SHORELINE SCHOOL DISTRICT CENTRAL KITCHEN IMPROV	2003 NE 160TH ST	SHORELINE	NO	--	0
145	CHEVRON 200410	15510 AURORA AVE N	SEATTLE	YES	--	0
146	CRAWFORD PROPERTY	2326 N 155TH ST	SHORELINE	YES	ACTIVE	3
147	WA DSHS FIRCREST SCHOOL	15230 15TH AVE NE	SHORELINE	YES	--	0
148	EVERGREEN SCHOOL	15201 MERIDIAN AVE N	SEATTLE	NO	--	0
149	TINSLEY RESIDENCE	14855 6TH AV NE	SEATTLE	YES	INACTIVE	0
150	HODGES PROPERTY	15001 8TH AVE NE	SEATTLE	YES	INACTIVE	0
151	UNITED CEREBRAL PALSY RES CTR	14910 1ST AVE N	SEATTLE	NO	N/A	1
152	PARK RIDGE CARE FACILITY, FORMER UST SITE	1250 NE 145TH ST	SEATTLE	YES	INACTIVE	0
153	SPARK'S TUNEUP (FRMR TEXACO)	14501 15TH AVE NE	SEATTLE	YES	--	0
153	QFC NORTH SEATTLE 858	1531 NE 145TH ST	SEATTLE	YES	INACTIVE	0
153	SEATTLE CITY ROW NE 145TH & 15TH NE	NE 145TH ST & 15TH AVE NE	SEATTLE	YES	--	0
154	NORTHPARK SHOPPING CENTER	1549 NE 145TH ST	SEATTLE	YES	--	0
155	LAKESIDE SCHOOL	14050 1ST AVE NE	SEATTLE	NO	--	0
156	LAKESIDE UPPER SCHOOL	14056 4TH NE	SEATTLE	NO	N/A	1
157	KJORSVIK PROPERTY	14038 SUNNYSIDE AVE N	SEATTLE	YES	--	0
158	JACKSON GOLF COURSE	1000 NE 135TH	SEATTLE	YES	--	0
159	HALLER LAKE TEXACO	13401 ROOSEVELT WAY N	SEATTLE	YES	--	0
160	PSE NORTH OPERATING BASE	13330 STONE AVE N	SEATTLE	YES	--	0
161	VERIZON WIRELESS NORTH ACRES PARK	351 NE 133RD ST	SEATTLE	NO	N/A	1
162	**UNK**	**5TH AVE NE & NE 130TH ST**	**SEATTLE**	**YES**	**ACTIVE**	**4**
163	CORP OF ARCHDIOCESE OF SEATTLE UST 12696	1230 NE 127TH	SEATTLE	NO	--	0
164	SEATTLE CITY SDOT HALLER LAKE	12600 STONE AVE N	SEATTLE	YES	--	0
165		**5TH NE & 125TH NE**	**SEATTLE**	**YES**	**ACTIVE**	**4**
166	BARRETT HARDWARE	12230 AURORA AVE N	SEATTLE	YES	--	0
167	**PSE**	**12312 5TH AVE NE**	**SEATTLE**	**YES**	**ACTIVE**	**4**
168	2115 N 122ND ST	2115 N 122ND ST	SEATTLE	YES	--	0
169	NORTHWEST HOSPITAL	1550 N 115TH ST	SEATTLE	YES	--	0
170	ALPINE CUSTOM BUILDINGS LLC	11310 8TH AVE NE	SEATTLE	NO	--	0
171	NORTHGATE URBAN CENTER PARK	11035 5TH AVE NE	SEATTLE	NO	--	0
171	NORTHGATE DENTAL CONDO ASSOC	11066 5TH AVE NE STE 111	SEATTLE	NO	--	0
171	UNOCAL 5532	500 NE NORTHGATE WAY	SEATTLE	YES	INACTIVE	0
171	STANDARD OIL SERVICE STA 9-7533 FORMER	501 NE NORTHGATE WAY	SEATTLE	YES	INACTIVE	0
172	NORTHGATE CLEANERS	11020 8TH AVE NE	SEATTLE	YES	INACTIVE	0
172	ROOSEVELT AUTO BODY NORTHGATE 8TH AVE	11035 8TH AVE NE	SEATTLE	NO	--	0
172	AT&T WIRELESS NORTHGATE	11050 8TH AVE NE	SEATTLE	NO	--	0
172	GOODYEAR AUTO SVC CTR 8822 NOR	810 NORTHGATE WAY	SEATTLE	YES	INACTIVE	0
172	PAHLKA WATERPROOFING INC	825 NE NORTHGATE WAY	SEATTLE	NO	--	0
172	SHELL OIL CO 129593	859 NE NORTHGATE WAY	SEATTLE	YES	INACTIVE	0
173	TARGET STORE 1284	302 NE NORTHGATE WAY	SEATTLE	NO	N/A	1
173	NORTHGATE EXPANSION PROJECT	310 NE NORTHGATE WAY	SEATTLE	NO	N/A	1

Table I-4.12-2 - Ranking of All Sites Within the Project Study Area (continued)

EDR ID	Owner Name	Address	City	Site With a Known or Suspected Release to the Environment?	Active or Inactive?	RANK
174	CONOCOPHILLIPS 30101	2143 N NORTHGATE WAY	SEATTLE	YES	--	0
174	CHEVRON 92815	2150 N NORTHGATE WAY & CORLISS	SEATTLE	YES	--	0
175	CHEVRON #9 2815 (THREE REPORTS)	NORTHGATE & CORLISS AVE.	SEATTLE	YES	INACTIVE	3
176	NORTHGATE ARCO	2101 N NORTHGATE WAY	SEATTLE	NO	--	0
177	NORTHGATE MALL PARTNERSHIP	401 NE NORTHGATE WAY	SEATTLE	NO	--	0
178	**WDOT I-5/NORTHGATE**	**1ST NE & NE 110TH**	**SEATTLE**	**YES**	**ACTIVE**	**4**
179	BON MARCHE SEATTLE NORTHGATE MALL	602 NORTHGATE MALL	SEATTLE	NO	--	0
180	SHELL STATION 120819	1935 N NORTHGATE WAY	SEATTLE	YES	--	0
181	ACCU PAP DIAGNOSTIC SVCS NORTH	120 NORTHGATE PLAZA 351	SEATTLE	NO	--	0
181	CAMERAS WEST 1034	150 NORTHGATE PLZ	SEATTLE	NO	--	0
181	JCPENNEY COMPANY INC	475 NORTHGATE MALL	SEATTLE	NO	--	0
182	WA UW SCRIBNER CENTER	2150 N 107TH ST STE 160 & B075	SEATTLE	NO	--	0
183	NORTHGATE MALL	555 NORTHGATE MALL	SEATTLE	YES	INACTIVE	3
184	EXPRESSLY PORTRAITS 39 NORTHGATE MALL	750 NORTHGATE MALL	SEATTLE	NO	N/A	1
184	KITS CAMERA 1003	923 NORTHGATE MALL	SEATTLE	NO	N/A	1
185	BON MARCHE TIRE CENTER	10500 5TH AVE NE	SEATTLE	YES	INACTIVE	0
185	KINDRED HOSPITAL SEATTLE	10560 5TH AVE NE	SEATTLE	NO	--	0
186	NWH OUTPATIENT MEDICAL CENTER	10330 MERIDIAN AVE N	SEATTLE	NO	--	0
187	SEATTLE CITY ESD N POLICE PRECINCT	10049 COLLEGE WAY N	SEATTLE	NO	--	0
188	NORTHGATE HOLDING CO	10202 5TH AV NE	SEATTLE	YES	INACTIVE	0
189	GATEWAY MUIRLAND INC 100TH ST	115 NE 100TH ST	SEATTLE	NO	--	0
190	NORTHGATE COMMONS	300 NE 100TH ST	SEATTLE	NO	--	0
191	SEATTLE CITY LIGHT STONE AVE	9809 STONE AVE N	SEATTLE	YES	INACTIVE	0
192	NORTHGATE STATION	9538-9598 1ST AV NE	SEATTLE	YES	--	0

Table I-4.12-3 - Sites in Study Area Ranked 4 and 5

EDR ID	Owner Name	Address	City	Ecology Databases								EPA Databases		Active or Inactive?	Rank
				UST	LUST	AST	CSCSL	CSCSL-NFA	SPILLS	VCP	ICR	RCRAInfo	ERNS		
				U	K	BB	H	AM	M	AX	CT	FL, G, Q, T	E		
Segment A															
124	WA DOT	I-5 & 185TH	SHORELINE						X					ACTIVE	4
162	UNK	5TH AVE NE & NE 130TH ST	SEATTLE						X					ACTIVE	4
165	--	5TH NE & 125TH NE	SEATTLE						X					ACTIVE	4
178	WDOT I-5/NORTHGATE	1ST NE & NE 110TH	SEATTLE								X			ACTIVE	4
Segment B															
88	SNOHOMISH COUNTY PUD	21604 60TH AVE W	MOUNTLAKE TERRACE						X				X	ACTIVE	4
98	SNOH PUD	6200 222ND ST SW	MOUNTLAKE TERRACE						X					ACTIVE	4
Segment C															
25	SHELL STATION 120839	19930 44TH AVE W	LYNNWOOD	X	X		X			X	X			ACTIVE	5
28	CHEVRON 94953	20000/20010 44TH AVE W	LYNNWOOD	X	X		X		X	X	X	X		ACTIVE	5
29	COMMUNITY TRANSIT	20100 48TH AVE W	LYNNWOOD						X					ACTIVE	4
32	RIMPAC STEEL INC	20311 52ND AVE W	LYNNWOOD					X		X	X			INACTIVE	4
33	LYNNWOOD SERER LIFT STA 10	4599 204TH ST	LYNNWOOD		X									INACTIVE	4
44	C MARTIN TRUCKING	20610/20631 48TH AVE W	LYNNWOOD	X				X			X			INACTIVE	4
46	CONNELLY SKIS INC	20621 52ND AVE W	LYNNWOOD						X			X		ACTIVE	4
51	--	5015 208TH ST SW	LYNNWOOD						X					ACTIVE	4
57	BUDGET TANK REMOVAL	20825 52ND AVE	LYNNWOOD						X					ACTIVE	4

APPENDIX I-4.15

Utilities

Path: K:\gis\3164_soundtransit\5543164021_NCorrPh2\Ph_Utilities\SegmentA_GeneralizedImpacts.mxd

N

0 0.25 0.5 Miles

- At-Grade Route
- Cut Route
- Elevated Route
- Project Footprint
- Milepost

Utility Conflict Crossings

- Communication
- Electric
- Gas
- Sewer
- Stormwater
- Water

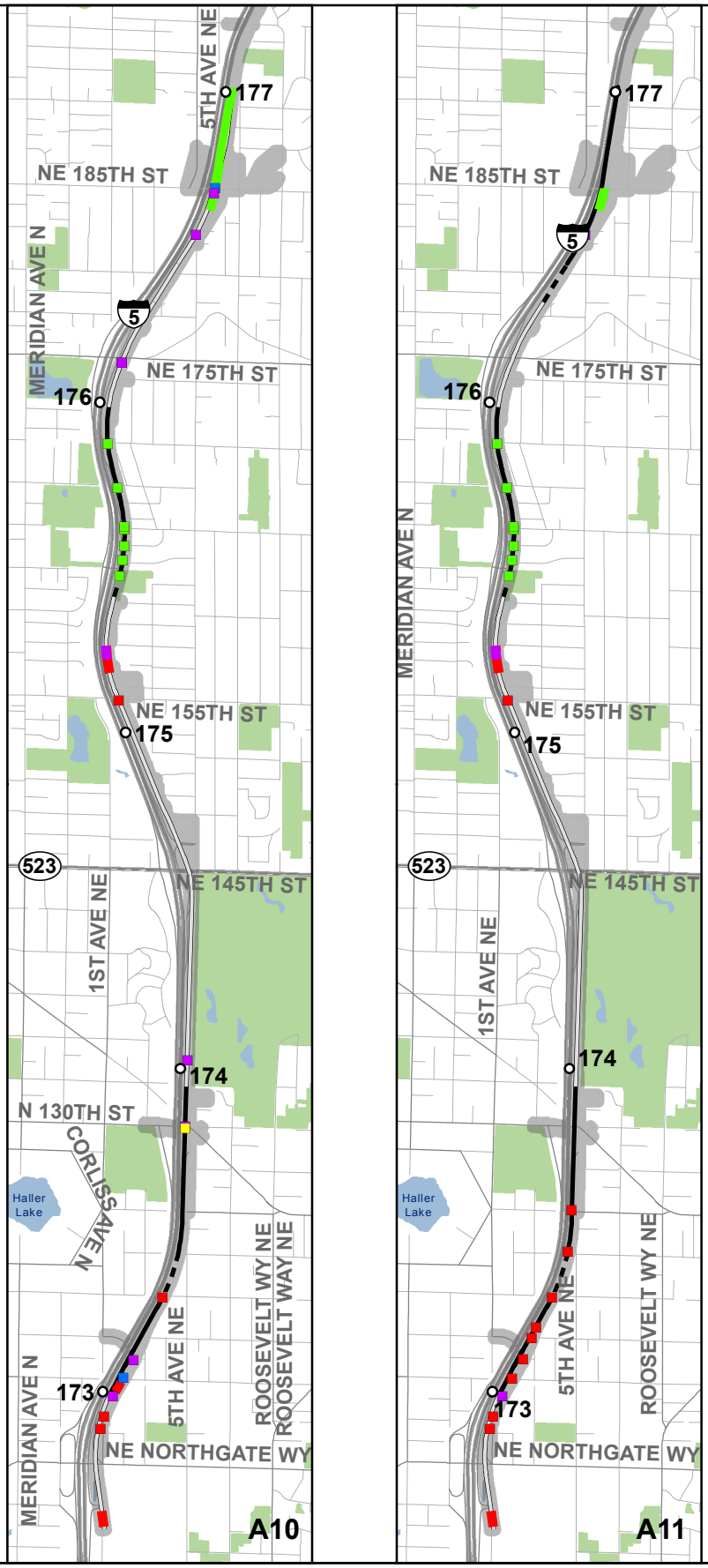
Parallel Utility Conflicts

- Communication
- Electric
- Gas
- Sewer
- Stormwater
- Water

Source: King County, Snohomish County, Seattle, Shoreline, Mountlake Terrace, Alderwood Water District, Ronald Waste Water District, Lynnwood, Shoreline Water District, WSDOT, Comcast, CenturyLink, Puget Sound Energy, TCI Cablevision

Figure I-4.15-1
Utility Conflicts
Segment A

Lynnwood Link Extension



Path: K:\gis\3164_soundtransit\5543164021_NCorrPh2\Ph_Utilities\SegmentA_GeneralizedImpactsA10.mxd

N

0 0.25 0.5 Miles

- At-Grade Route
- Cut Route
- Elevated Route
- Project Footprint
- Milepost

Utility Conflict Crossings

- Communication
- Electric
- Gas
- Sewer
- Stormwater
- Water

Parellel Utility Conflicts

- Communication
- Electric
- Gas
- Sewer
- Stormwater
- Water

Source: King County, Snohomish County, Seattle, Shoreline, Mountlake Terrace, Alderwood Water District, Ronald Waste Water District, Lynnwood, Shoreline Water District, WSDOT, Comcast, CenturyLink, Puget Sound Energy, TCI Cablevision

Figure I-4.15-2
Utility Conflicts
Segment A
Alternatives A10, A11
Lynnwood Link Extension

N

0 0.2 0.4 Miles

- At-Grade Route
- Cut Route
- Elevated Route
- Project Footprint
- Milepost

Utility Conflict Crossings

- Communication
- Electric
- Gas
- Sewer
- Stormwater
- Water

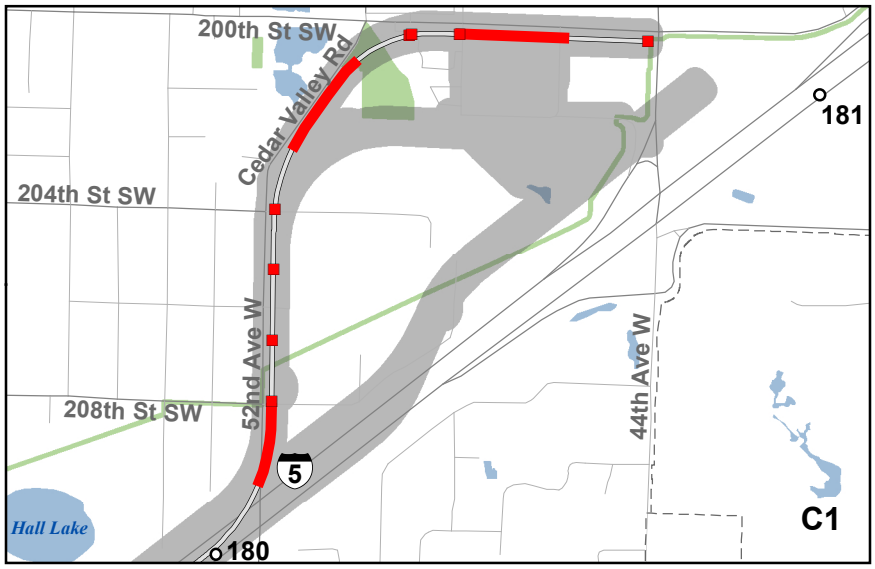
Parallel Utility Conflicts

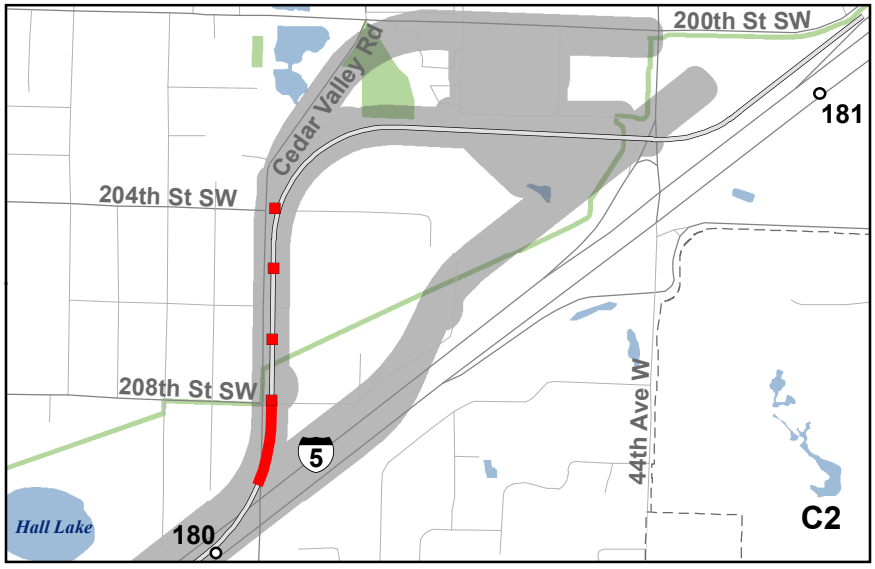
- Communication
- Electric
- Gas
- Sewer
- Stormwater
- Water

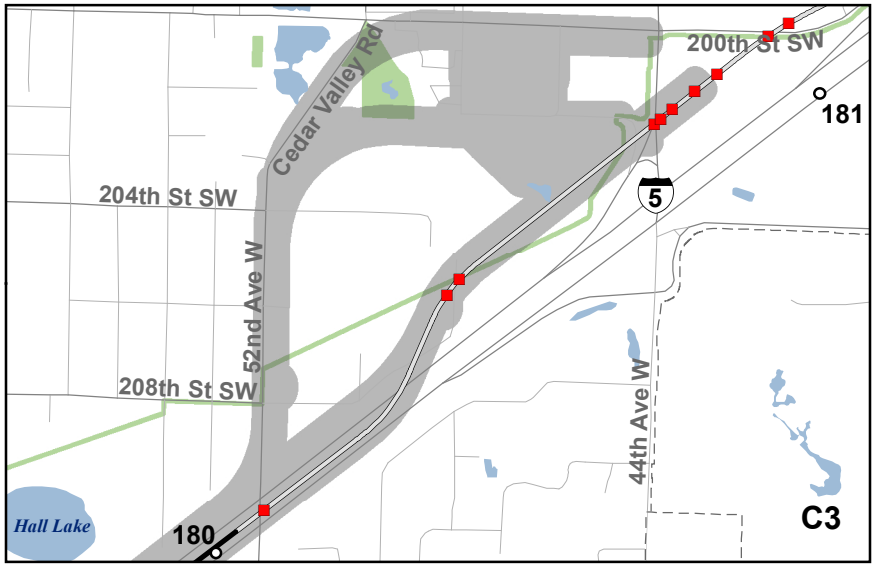
Source: King County, Snohomish County, Seattle, Shoreline, Mountlake Terrace, Alderwood Water District, Ronald Waste Water District, Lynnwood, Shoreline Water District, WSDOT, Comcast, CenturyLink, Puget Sound Energy, TCI Cablevision

Figure I-4.15-3
Utility Conflicts
Segment B

Lynnwood Link Extension







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At-Grade Route
Cut Route
Elevated Route
Project Footprint
Milepost

Utility Conflict Crossings
Communication
Electric
Gas
Sewer
Stormwater
Water

Parallel Utility Conflicts
Communication
Electric
Gas
Sewer
Stormwater
Water

Source: King County, Snohomish County, Seattle, Shoreline, Mountlake Terrace, Alderwood Water District, Ronald Waste Water District, Lynnwood, Shoreline Water District, WSDOT, Comcast, CenturyLink, Puget Sound Energy, TCI Cablevision

Figure I-4.15-4
Utility Conflicts
Segment C

Lynnwood Link Extension

Appendix J

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APPENDIX J – REFERENCES

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Lynnwood Link Extension

Sound Transit Board Briefing Book

Light Rail Alternatives Evaluation

Northgate to Lynnwood

April 2012

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Appendix A: Environmental Scoping Summary Report
Appendix B: March 2012 Drop-In Session Summary

INTRODUCTION

This briefing book evaluates the light rail route and station alternatives along I-5 between the Northgate and the Lynnwood Transit centers that are being considered for further design and analysis in the Draft Environmental Impact Statement (DEIS). Staff will brief the Sound Transit Board Capital Committee at their April 12th meeting and seek identification of the light rail alternatives to be included in the DEIS at the Board meeting on April 26, 2012.

Project Background

Sound Transit intends to extend the Link light rail system from the planned interim terminus at Northgate Transit Center to the Lynnwood Transit Center, as shown in Figure 1. The Lynnwood Link Extension project is an element of Sound Transit's adopted Long-Range Plan and is part of the Sound Transit 2 (ST2) Plan for regional transit investments approved by voters in 2008. The project is also included in the region's Metropolitan Transportation Plan (Puget Sound Regional Council's *Transportation 2040*). These plans anticipate the eventual extension of mass transit service north to Everett, connecting to a regional system serving other markets to the south and east, such as University of Washington, Capitol Hill, downtown Seattle, Bellevue, Redmond and SeaTac.

Sound Transit completed an Alternative Analysis (AA) in accordance with FTA New Starts guidelines in 2011. The AA developed and evaluated a range of transit mode and route alternatives to provide high capacity transit service between Northgate and the Lynnwood Transit Center. The performance of these alternatives was analyzed for transportation effectiveness, supportive land use and economic development effects, preservation of a healthy environment, cost & constructability, New Starts grant program competitiveness, and Sound Transit program affordability. The analysis and evaluation was documented in the *Alternatives Analysis Report and SEPA Addendum, September 2011.*

Sound Transit also gathered public input during the formulation of the alternatives to be considered in the AA and environmental review. Early environmental scoping was conducted in 2010 in conjunction with the AA process, and additional scoping was conducted in the fall of 2011. From September 30 to October 31, 2011, Sound Transit and the Federal Transit Administration (FTA) conducted public scoping for the North Corridor Transit Project EIS. Three scoping public meetings and one agency scoping meeting were held to solicit comments on the AA results and on the alternatives to be evaluated in the EIS. More than 240 people attended the public meetings, and staff from thirteen agencies and tribes attended the agency scoping meeting.

In December 2011 in Motion 2011-87, the Sound Transit Board narrowed the range of alternatives to be developed and studied in the EIS to light rail along I-5. Other modes and corridors were excluded from further study.

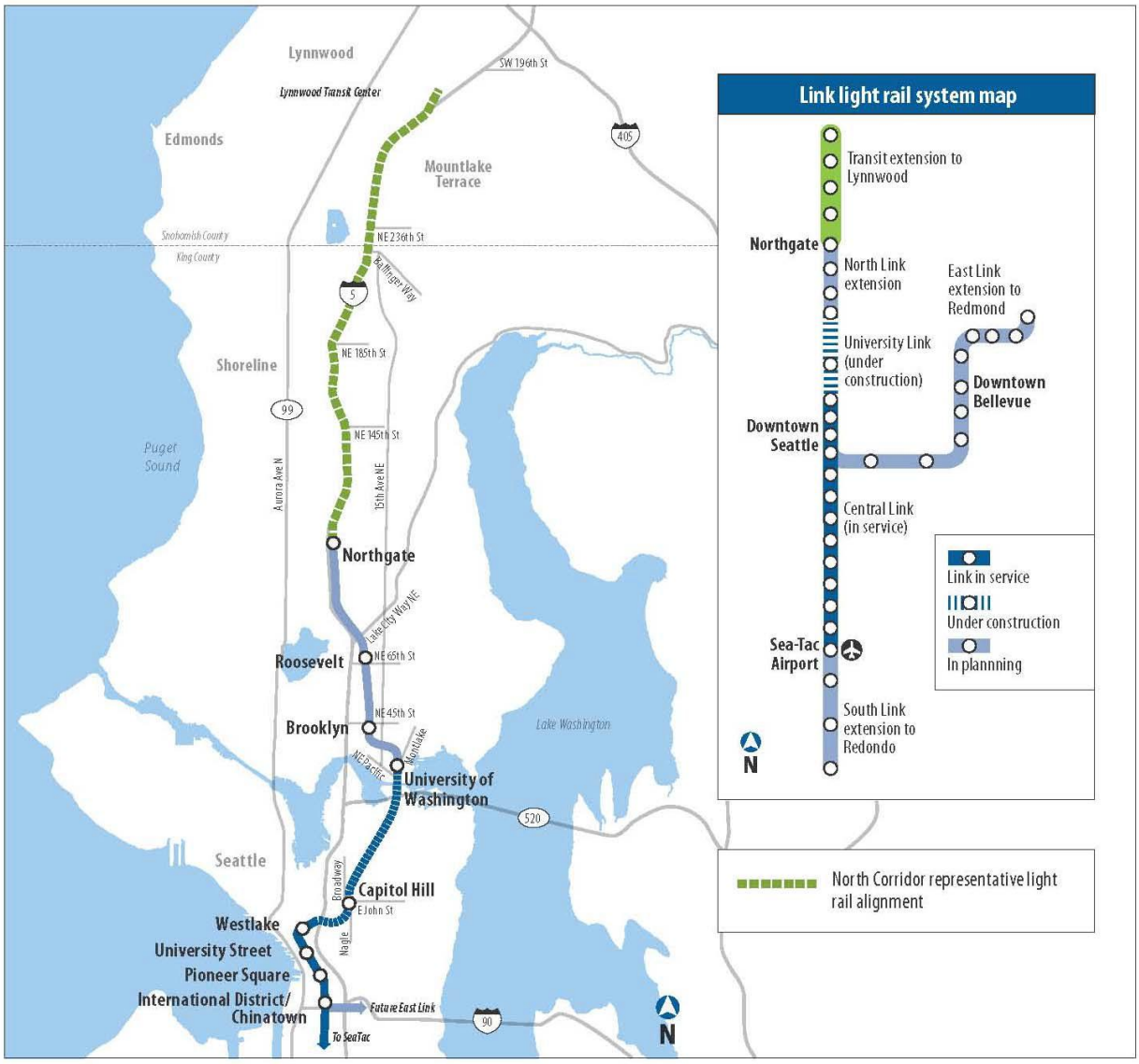


Figure 1: Lynnwood Link Extension Project Vicinity Map

Since that action, Sound Transit has further analyzed a variety of potential I-5 light rail alignment and station alternatives for the purpose of defining the alternatives to be studied in the EIS. The alternatives evaluated were identified through public and agency scoping comments or by the technical team

ALTERNATIVES DEVELOPMENT

The AA I-5 Alternative

One light rail alignment, profile and station access alternative along I-5 was defined and evaluated during the AA for comparison to other corridor and mode alternatives. The AA I-5 alternative has been carried forward for the purpose of assessing the relative advantages and disadvantages of additional I-5 light rail alignment and station alternatives identified through the EIS scoping process.

The AA I-5 alternative assumes that double track light rail guideway would be extended along the east side of I-5 from the end of the Northgate Station tail tracks to Mountlake Terrace in a mix of retained cut, retained fill and elevated profile, with an elevated station at NE 145th Street, a retained cut station at NE 185th Street and an elevated station at the Mountlake Terrace Transit Center. From there it would cross the northbound lanes of I-5 on elevated structure to the median where it would run in retained cut/retained fill profile to just south of the Lynnwood Transit Center. It would then cross the southbound lanes of I-5 on elevated structure and run on elevated guideway to an elevated station at the Lynnwood Transit Center. Expanded park and ride would be provided at NE 145th Street, NE 185th Street and Lynnwood Transit Center. The AA I-5 alternative is shown in Figure 2.

Figure 2: AA I-5 Alternative

Alternatives Suggested During Scoping

Several light rail station and alignment alternatives were suggested through scoping and are shown in Figures 3 and 4. Scoping comments are discussed in more detail in the *North Corridor Transit Project Environmental Scoping Summary Report* in Appendix A.

Other Alternatives

Along the I-5 corridor, light rail guideway could conceivably be placed along either side of the freeway or in the median. There are also numerous locations that could be considered for stations. A number of light rail station, alignment and profile alternatives have been considered aside from the AA I-5 alternative and the alternatives suggested through scoping.

ALTERNATIVES EVALUATION

All alternatives were first evaluated to identify any issues that could disqualify them from further analysis. Considerations included consistency with the approved ST2 program, station accessibility, major infrastructure development constraints, and Sound Transit policies and design guidance.

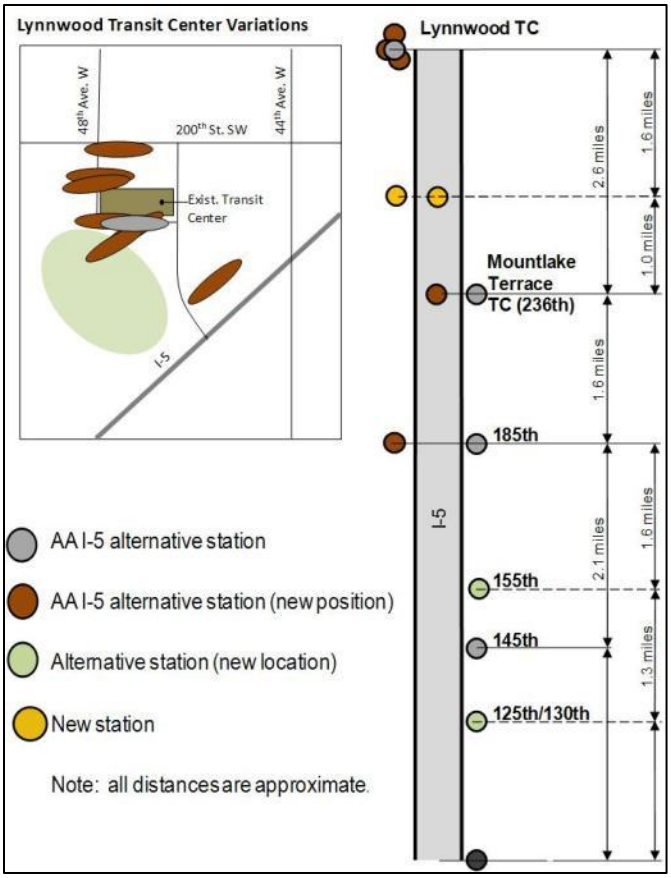


Figure 3: Station Alternatives

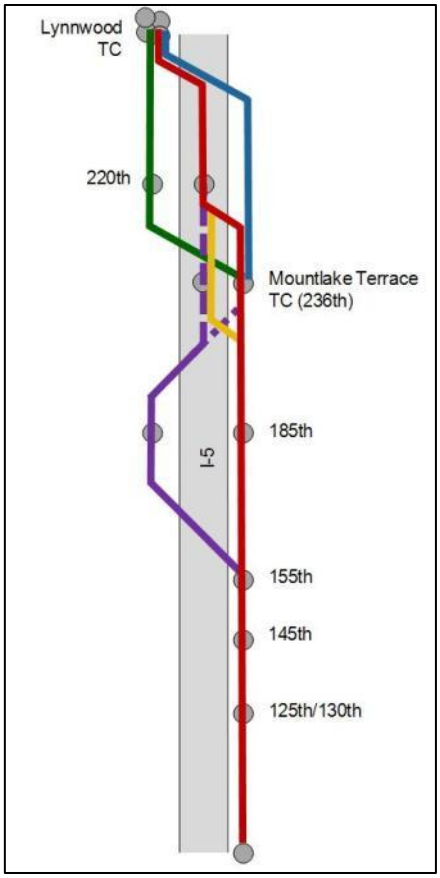


Figure 4: Alignment Alternatives

Those alternatives that passed the initial evaluation were analyzed further using the following evaluation criteria:

- Transportation performance (light rail travel time, pedestrian/bicycle access, bus access, automobile access)
- Ridership potential
- Environmental effects (noise, traffic, parks/recreation area and section 4(f)/6(f) resources, historic/Section 106 resources, wetland/ ecosystems/ water resources, visual, environmental justice)
- Station area development potential (existing land use and transit oriented development potential)
- Cost implications (capital and operations)
- Constructability (design deviations and I-5 impacts)
- Right-of-way/property implications (magnitude and types)

Evaluation was done as a comparison of the performance of each alternative relative to performance of the AA I-5 alternative. Each alternative was generally rated as performing better than, worse than or similar to that alternative, or having higher, lower or similar potential impacts or benefits.

PUBLIC INPUT

Sound Transit conducted an extensive outreach program including both early scoping and environmental scoping, ongoing agency engagement via an Interagency Technical Working Group (ITWG) of cities, counties and regional, state and transit agencies, and briefings to the Sound Transit Board and other stakeholders at key points in the AA and EIS processes to date. The alternatives defined, screened and evaluated in this briefing book were identified in part from public comments received during the EIS scoping process conducted in October 2011, which included three public meetings and one agency meeting with over 250 attendees and almost 70 written comments. Scoping comments are discussed in more detail in the *North Corridor Transit Project Environmental Scoping Summary Report* in Appendix A.

The alternatives and screening results have been shared with the ITWG and individual jurisdictions/agencies, and were shared with the public in March 2012 via 10 informal drop-in sessions throughout corridor. About 450 people participated in those sessions and about 150 written comments were received. Comments from the drop-in sessions are summarized in the *March 2012 Drop-In Session Summary* in Appendix B.

EVALUATION RESULTS

This section depicts and describes the station and alignment alternatives that were evaluated in detail in three project segments and assesses their performance relative to the AA I-5 alternative. The project segments are:

Segment A: Northgate through NE 185th Street Station

Segment B: NE 185th Street to 212th Street SW

Segment C: 212th Street SW to Lynnwood Transit Center

The depictions and descriptions of the alternatives are neither definitive nor final. They are based on the current early level of design (approximately 2%) and station access programming. They are intended to show the differences between alternatives when compared to the AA I-5 alternative and other alternatives in the same segment sufficient for the Board to identify the most promising alternatives for further evaluation in the EIS. A full evaluation of the alternatives identified by the Board for further study will be provided in the EIS.

Performance of the AA I-5 Alternative

The tables below summarize the performance of the AA I-5 alternative in each segment. This alternative is the basis of comparison for the other alternatives.

Segment A: Northgate through NE 185th Street Station

Criteria	Performance
Transportation Performance	Good travel time performance. 145th and 185th Street stations provide good bus and vehicle access, fair pedestrian and bike access.
Ridership Potential	Moderate ridership potential based on residential and population nearby, with parking provided at both stations.
Potential Environmental Effects	Generally moderate with higher effects in sensitive areas (streams and wetlands) and in areas of limited right of way, and potential property, park, historic, noise, visual and traffic impacts.
Development Potential	Low. High proportion of single-family development pattern. Limited development opportunities nearby.
Cost Implications (2010$ M)	Segment cost not calculated independently; total AA I-5 alternative cost is $1.4 - $1.6 billion (2010$).
Constructability	Constrained areas for construction and staging.
ROW Implications	Narrow WSDOT right-of-way provides some room to accommodate light rail but some private properties will need to be acquired in some areas along the alignment, and at stations.

Segment B: NE 185th Street to 212th Street SW

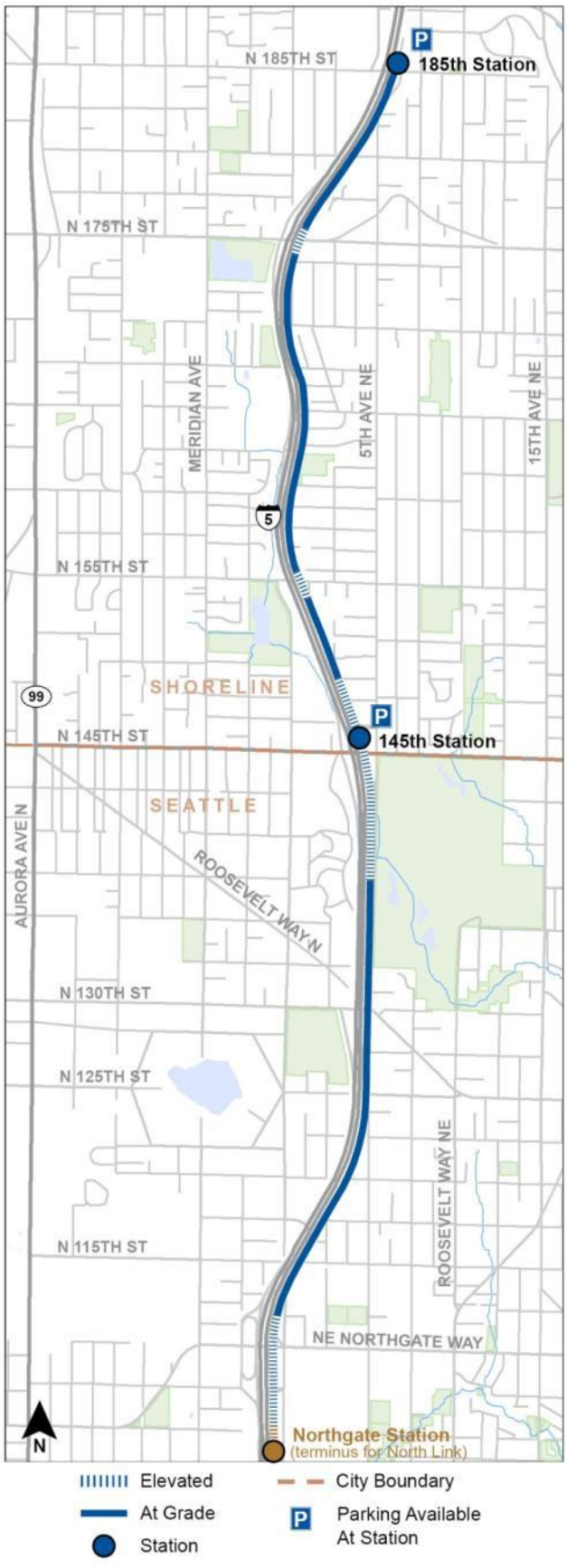
Criteria	Performance
Transportation Performance	Good travel time performance, but could have reduced operational speeds related to crossing I-5. Good bus and vehicle access to Mountlake Terrace Transit Center station. Fair pedestrian and bicycle access to station.
Ridership Potential	High ridership potential.
Potential Environmental Effects	Overall low to moderate level of impacts because much of the alignment is in the freeway median. Localized wetlands, noise and ecosystem impacts, mostly north of the Mountlake Terrace Transit Center.
Development Potential	Moderate development potential at Mountlake Terrace Transit Center Station, close proximity to designated Town Center.
Cost Implications (2010$ M)	Segment cost not calculated independently; total AA I-5 alternative cost is $1.4 - $1.6 billion (2010$).
Constructability	Low potential for design deviations and I-5 impacts, but could have staging implications related to crossing I-5.
ROW Implications	Low potential for property impacts because most of the alignment remains within I-5 right of way.

Segment C: 212th Street SW to Lynnwood Transit Center

Criteria	Performance
Transportation Performance	Good travel time performance. Good bus, vehicular, pedestrian and bicycle access at Lynnwood Transit Center.
Ridership Potential	High ridership potential.
Potential Environmental Effects	Higher levels of impacts, including to ecosystems from an elevated crossing of a stream and wetlands area, and visual, noise and

	potential displacement impacts to commercial and residential properties, and impacts related to the elevated guideway through Scriber Creek Park
Development Potential	High development potential at Lynnwood Transit Center and adjacent Lynnwood City Center. Mix of land uses compatible with existing zoning and City Center plan.
Cost Implications (2010$ M)	Segment cost not calculated independently; total AA I-5 alternative cost is $1.4 - $1.6 billion (2010$).
Constructability	Difficult to construct where it crosses the wetlands and park.
ROW Implications	Crosses a large parcel owned by Edmonds School District, which has development plans for the affected site, and alignment requires portions of several commercial and multifamily residential parcels, with potential displacements.

A1: AT-GRADE/ELEVATED TO 145TH AND 185TH EAST SIDE STATIONS



Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on elevated structure from Northgate Station to north of 117th Street, then in retained cut/fill to north of 130th Street, then elevated to north of 145th Street, then retained cut/fill to 185th Street except for elevated crossings of 155th and 175th Street.

Stations: An elevated station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 145th Street. A retained cut/fill station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 185th Street.

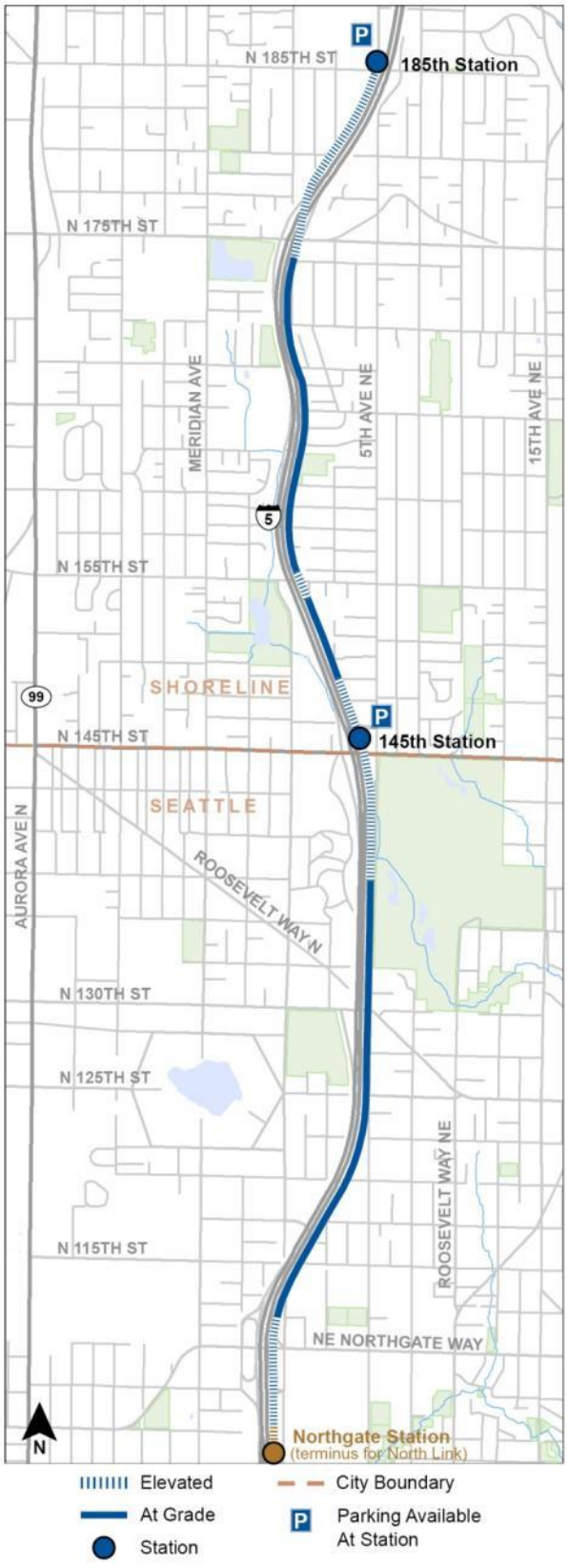
Relative pros and cons of this alternative:

- Provides regional service coverage in North Seattle and Shoreline
- 145th Street station serves both local and freeway access and provides opportunities to feed existing commuter buses to rail
- 185th Street station serves local access needs and supports potential redevelopment near the station
- Guideway profile optimized to reduce cost and provide additional flexibility to avoid some environmental impacts such as ecosystems

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Similar
Ridership Potential	Similar
Potential Environmental Effects	Similar
Development Potential	Similar
Cost Implications	Similar
Constructability	Similar
ROW Implications	Similar

A2: AT-GRADE/ELEVATED TO 145TH EAST SIDE AND 185TH WEST SIDE STATIONS



Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on elevated structure from Northgate Station to north of 117th Street, then in retained cut/fill from to north of 130th Street, then elevated to north of 145th Street, then retained cut/fill to 175th Street except for elevated crossings of 155th and 175th Street. North of 175th Street the guideway crosses I-5 on elevated structure to the west side and runs on elevated structure to 185th Street.

Stations: An elevated station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 145th Street. An elevated or retained cut station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 185th Street.

Relative pros and cons of this alternative:

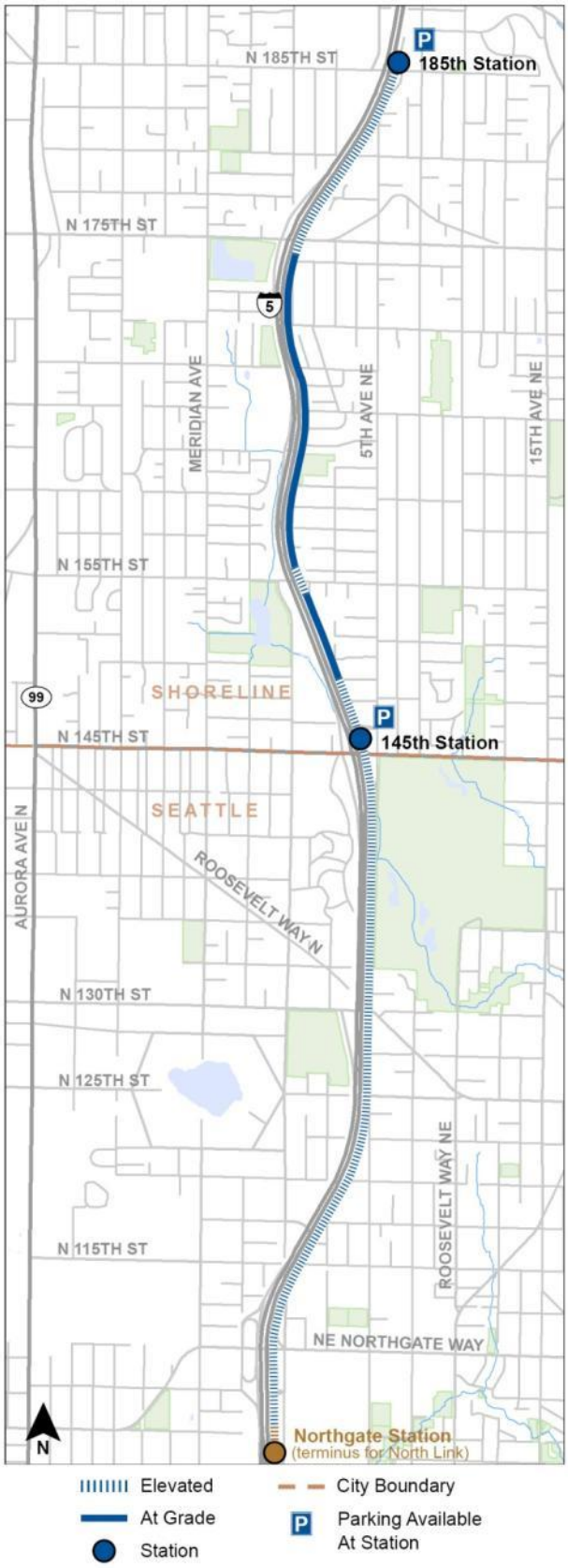
- Service coverage and station access similar to A1
- Guideway profile optimized to reduce cost (except for I-5 crossing), but I-5 crossing increases potential visual and historic impacts
- Places the 185th Street station slightly closer to potential transit-oriented development opportunities

Evaluation results: (see next page)

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Slight improvement in access at 185th Street due to station being closer to presumed park and ride sites and bus service.
Ridership Potential	Similar
Potential Environmental Effects	Similar except for higher potential visual and historic impacts. However, a west side alignment increases impacts into Segment B.
Development Potential	Similar
Cost Implications (2010$ M)	$40M to $50M more, plus potential additional costs in Segment B, depending on alternative.
Constructability	Substantially more difficult due to staging constraints and traffic impacts related to crossing I-5; also adds additional I-5 crossing in Segment B.
ROW Implications	Slightly less

A3: MOSTLY ELEVATED TO 145TH AND 185TH EAST SIDE STATIONS



Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on elevated structure from Northgate Station to north of 145th Street, then retained cut/fill to south of 175th Street except for an elevated crossing of 155th Street, then elevated to 185th Street.

Stations: An elevated station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 145th Street. An elevated station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 185th Street.

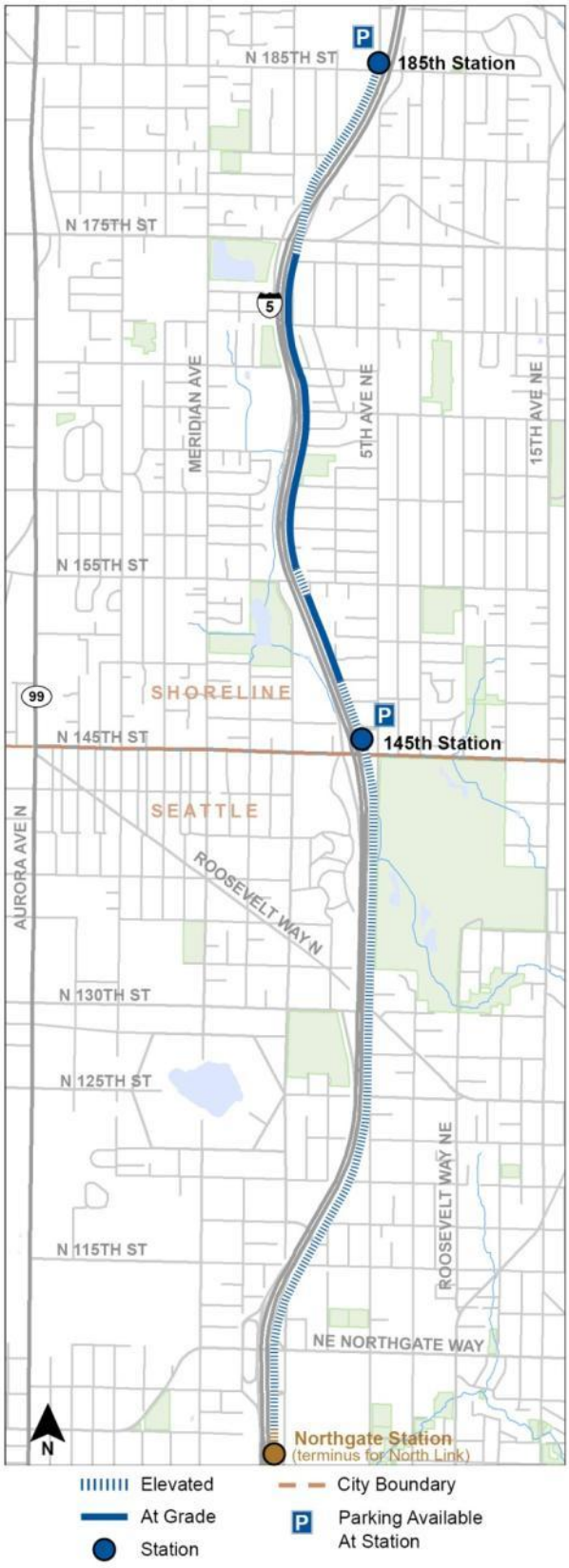
Relative pros and cons of this alternative:

- Service coverage and station access similar to A1
- More elevated guideway could reduce potential impacts to I-5 bridges and ramps, some properties and some environmental resources, but increases costs

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Similar
Ridership Potential	Similar
Potential Environmental Effects	Similar
Development Potential	Similar
Cost Implications (2010 $)	$90M to $105M more
Constructability	Potentially less difficult by avoiding 117th and 130th St. bridges
ROW Implications	Lower potential for property impacts

A4: MOSTLY ELEVATED TO 145TH EAST SIDE AND 185TH WEST SIDE STATIONS



Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on elevated structure from Northgate Station to north of 145th Street, then retained cut/fill to south of 175th Street except for elevated crossings of 155th and 175th Streets. North of 175th Street the guideway crosses I-5 on elevated structure to the west side and runs on elevated structure to 185th Street.

Stations: An elevated station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 145th Street. An elevated or retained cut station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 185th Street.

Relative pros and cons of this alternative:

- Service coverage and station access similar to A1
- More elevated guideway could reduce potential impacts to I-5 bridges and ramps, some properties and some environmental resources, but increases costs
- Places the 185th Street station slightly closer to potential transit-oriented development opportunities
- I-5 crossing and west side elevated structure increases potential visual and historic impacts

Evaluation results: (see next page)

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Slight improvement in access at 185th Street due to station being closer to presumed park and ride sites and bus service.
Ridership Potential	Similar
Potential Environmental Effects	Similar, with higher visual and historic impacts and lower ecosystem impacts due to elevated structures. However, a west side alignment increases impacts into Segment B.
Development Potential	Similar
Cost Implications (2010$ M)	$105M $120M more
Constructability	Substantially more difficult due to staging constraints and traffic impacts related to crossing I-5; also adds additional I-5 crossing in Segment B.
ROW Implications	Slightly less

A5: AT-GRADE/ELEVATED TO 130TH, 155TH AND 185TH EAST SIDE STATIONS

Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on elevated structure from Northgate Station to north of 117th Street, then in retained cut/fill to north of 130th Street, then elevated to north of 145th Street, then retained cut/fill to 185th Street except for elevated crossings of 155th and 175th Street.

Stations: A retained cut/fill station with on-street bus facilities would be located at 130th Street. An elevated station would straddle 155th Street with up to 500 park and ride stalls and on-street bus facilities nearby. A retained cut/fill station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 185th Street.

Relative pros and cons of this alternative:

- Three stations provide more service coverage and ridership potential in this segment than the two stations included in Alternatives A1 through A4.
- Station at 130th Street has more apparent opportunity for transit oriented development, but less opportunity for access from the freeway
- 185th Street station serves local access needs and supports potential redevelopment near the station
- Guideway profile optimized to reduce cost and provide additional flexibility to avoid some environmental impacts such as ecosystems

Evaluation results: (see next page)

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Travel times would be slightly slower due to added station
Ridership Potential	Moderate Increase as result of doubling population within walking distance due to added station
Potential Environmental Effects	Similar. Potential for higher historic impacts; lower ecosystem impacts
Development Potential	Slightly better. 130th Street Station is within 0.5 miles of existing commercial node. Otherwise, predominantly single-family surrounds stations.
Cost Implications (2010$ M)	$40M to $45M more
Constructability	Slightly more difficult, due to wider section at 130th Street Station and fewer staging areas available at 130th and 155th compared to 145th Street.
ROW Implications	Similar with localized differences in station areas

A6: AT-GRADE/ELEVATED TO 130TH AND 155TH EAST SIDE AND 185TH WEST SIDE STATIONS

Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on elevated structure from Northgate Station to north of 117th Street, then in retained cut/fill from to north of 130th Street, then elevated to north of 145th Street, then retained cut/fill to 175th Street except for elevated crossings of 155th and 175th Street. North of 175th Street the guideway crosses I-5 on elevated structure to the west side and runs on elevated structure to 185th Street.

Stations: A retained cut/fill station with on-street bus facilities would be located at 130th Street. An elevated station would straddle 155th Street with up to 500 park and ride stalls and on-street bus facilities nearby. An elevated or retained cut station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 185th Street.

Relative pros and cons of this alternative:

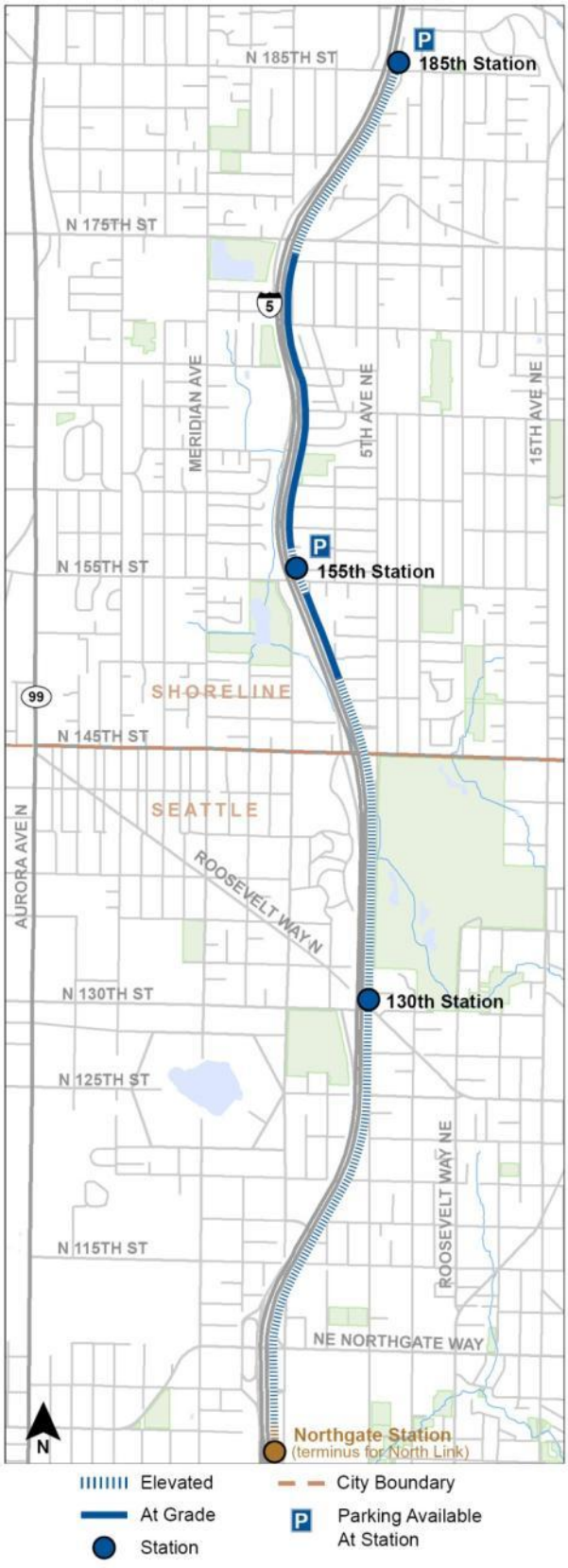
- Service coverage, station access, ridership and transit-oriented development opportunities similar to A5
- Places the 185th Street station slightly closer to potential transit-oriented development opportunities
- Guideway profile optimized to reduce cost (except for I-5 crossing), but I-5 crossing increases potential visual and historic impacts

Evaluation results: (see next page)

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Travel times would be slightly slower due to added station. Slight improvement in access at 185th Street due to station platform being closer to parking garage and bus service.
Ridership Potential	Moderate Increase as result of doubling population within walking distance due to added station
Potential Environmental Effects	Similar. Potential for higher historic and visual impacts, lower ecosystem impacts. Westside alignment increases impacts moving into Segment B.
Development Potential	Slightly better. 130th Street Station is within 0.5 miles of existing commercial node. Otherwise, predominantly single-family surrounds stations.
Cost Implications (2010$ M)	$80M to $95M more, plus additional costs in Segment B depending on alternative.
Constructability	Substantially more difficult due to staging constraints and traffic impacts related to crossing I-5; also adds additional I-5 crossing in Segment B.
ROW Implications	Slightly less

A7: MOSTLY ELEVATED TO 130TH, 155TH AND 185TH EAST SIDE STATIONS



Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on elevated structure from Northgate Station to north of 145th Street, then retained cut/fill to south of 175th Street except for an elevated crossing of 155th Street, then elevated to 185th Street.

Stations: An elevated station with on-street bus facilities would be located at 130th Street. An elevated station would straddle 155th Street with up to 500 park and ride stalls and on-street bus facilities nearby. An elevated station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 185th Street.

Relative pros and cons of this alternative:

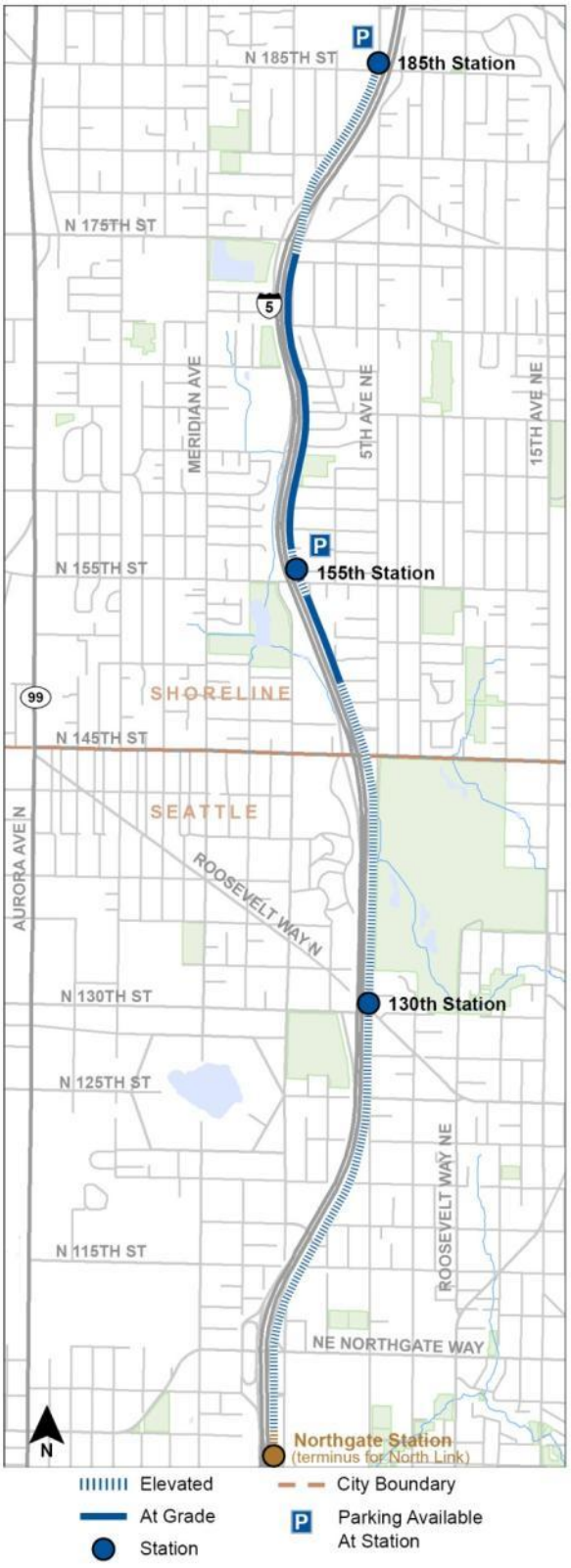
- Service coverage, station access, ridership and transit-oriented development opportunities similar to A5
- More elevated guideway could reduce potential impacts to I-5 bridges and ramps, some properties and some environmental resources, but increases costs

Evaluation results: (see next page)

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Travel times would be slightly slower due to added station
Ridership Potential	Moderate Increase as result of doubling population within walking distance due to added station
Potential Environmental Effects	Similar. Higher potential for visual impacts but more ability to reduce ecosystem impacts.
Development Potential	Slightly better. 130th Street Station is within 0.5 miles of existing commercial node. Otherwise, predominantly single-family surrounds stations.
Cost Implications (2010$ M)	$120M to $135M more
Constructability	Potentially less difficult if 117th and 130th St. bridges are avoided, but there are fewer staging areas available at 130th and 155th compared to 145th Street.
ROW Implications	Similar, with localized differences in station areas

A8: MOSTLY ELEVATED TO 130TH AND 155TH EAST SIDE AND 185TH WEST SIDE STATIONS



Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on elevated structure from Northgate Station to north of 145th Street, then retained cut/fill to south of 175th Street except for elevated crossings of 155th and 175th Streets. North of 175th Street the guideway crosses I-5 on elevated structure to the west side and runs on elevated structure to 185th Street.

Stations: An elevated station with on-street bus facilities would be located at 130th Street. An elevated station would straddle 155th Street with up to 500 park and ride stalls and on-street bus facilities nearby. An elevated or retained cut station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 185th Street.

Relative pros and cons of this alternative:

- Service coverage, station access, ridership and transit-oriented development opportunities similar to A5
- More elevated guideway could reduce potential impacts to I-5 bridges and ramps, some properties and some environmental resources, but increases costs
- Places the 185th Street station slightly closer to potential transit-oriented development opportunities

Evaluation results: (see next page)

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Travel times would be slightly slower due to added station. Slight improvement in access at 185th Street due to station platform being closer to parking garage and bus service.
Ridership Potential	Moderate Increase as result of doubling population within walking distance due to added station
Potential Environmental Effects	Higher potential for noise, historic and visual impacts, with potential reduction in ecosystem impacts. A west side alignment increases impacts moving into Segment B.
Development Potential	Slightly better. 130th Street Station is within 0.5 miles of existing commercial node. Otherwise, predominantly single-family surrounds stations.
Cost Implications (2010$ M)	$130M to $150M more, plus possible additional costs in Segment B, depending on alternative
Constructability	Substantially more difficult due to staging constraints and traffic impacts related to crossing I-5; also adds additional I-5 crossing in Segment B.
ROW Implications	Similar, but with localized differences in station areas

B1: EAST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO MEDIAN

Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on retained cut/fill to about NE 200th Street, then elevated to the Mountlake Terrace Transit Center. Some elevated guideway would be necessary near NE 185th Street to connect if the 185th Street station were elevated. North of Mountlake Terrace, the guideway would cross the northbound lanes of I-5 on elevated structure then transition to retained cut/fill in the median of I-5 near 230th Street SW, then run in retained cut/fill in the median to 212th Street SW.

Stations: An elevated station would be located at the Mountlake Terrace Transit Center along with expanded on- and off-street bus facilities. The existing 880 park and ride stalls would be maintained but not expanded.

Relative pros and cons of this alternative:

- The station is located at the existing focus of transit service and access for the city at the transit center, leveraging existing transit investment
- The station placement is closest to the Mountlake Terrace city center and nearby transit-oriented development opportunities
- No clear continuing transit purpose for the adjacent freeway station when bus service is restructured in response to light rail service
- Median alignment between Mountlake Terrace and Lynnwood is the least expensive guideway option

Evaluation results: (see next page)

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Similar
Ridership Potential	Similar
Potential Environmental Effects	Similar
Development Potential	Similar
Cost Implications (2010$ M)	Similar
Constructability	Similar
ROW Implications	Similar

B2: EAST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO WEST SIDE

Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on retained cut/fill to about NE 200th Street, then elevated to the Mountlake Terrace Transit Center. Some elevated guideway would be necessary near NE 185th Street to connect if the 185th Street station were elevated. North of Mountlake Terrace, the guideway would cross the northbound and southbound lanes of I-5 on elevated structure then to the west side of the freeway, then runs in retained cut/fill to south of 220th Street SW, then largely on elevated structure to 212th Street SW.

Stations: An elevated station would be located at the Mountlake Terrace Transit Center along with expanded on- and off-street bus facilities. The existing 880 park and ride stalls would be maintained but not expanded.

Relative pros and cons of this alternative:

- Station access and transit-oriented development opportunities similar to B1
- Crossing over the entire I-5 freeway to the west side near Mountlake Terrace Transit Center can be accomplished more directly and on shorter, less expensive structures than with the split crossing required in some other alternatives
- West side alignment between Mountlake Terrace and Lynnwood provides the opportunity for a future station at 220th Street
- No clear continuing transit purpose for the adjacent freeway station when bus service is restructured in response to light rail service
- Fewer potential environmental impacts than an east side alignment between Mountlake Terrace and Lynnwood

Evaluation Results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Similar
Ridership Potential	Similar
Potential Environmental Effects	Higher level of impacts, including higher ecosystems, noise and visual due to alignment on the west side of the freeway.
Development Potential	Similar
Cost Implications (2010$ M)	$65M to $85M more
Constructability	Improvement due to single crossing of I-5. Also, construction staging outside of the highway is better than in median.
ROW Implications	Moderate increase in need for additional properties outside I-5 ROW.

B2A: EAST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO WEST SIDE WITH 220TH STATION

Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on retained cut/fill to about NE 200th Street, then elevated to the Mountlake Terrace Transit Center. Some elevated guideway would be necessary near NE 185th Street to connect if the 185th Street station were elevated. North of Mountlake Terrace, the guideway would cross the northbound and southbound lanes of I-5 on elevated structure then to the west side of the freeway, then runs in retained cut/fill to south of 220th Street SW, then largely on elevated structure to 212th Street SW.

Stations: An elevated station would be located at the Mountlake Terrace Transit Center along with expanded on- and off-street bus facilities. The existing 880 park and ride stalls would be maintained but not expanded. An at-grade/elevated station would be located just south of 220th Street SW.

Relative pros and cons of this alternative:

- A 220th station was not included in the voter-approved ST2 Plan and might require plan amendment to add it to this extension
- Station access and transit-oriented development opportunities enhanced by addition of second station in this segment near higher density residential and employment area
- Crossing over the entire I-5 freeway to the west side near Mountlake Terrace Transit Center can be accomplished more directly and on shorter, less expensive structures than with the split crossing required in some other alternatives
- No clear continuing transit purpose for the adjacent freeway station when bus service is restructured in response to light rail service

- Fewer potential environmental impacts than an east side alignment between Mountlake Terrace and Lynnwood

Evaluation Results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Travel times would be slightly slower due to added station but system access would be improved
Ridership Potential	Higher due to added station
Potential Environmental Effects	Higher level of impacts, including higher ecosystems, noise and visual due to alignment on the west side of the freeway. Station at 220th could increase potential for historic impacts.
Development Potential	Greater due to added station in higher density residential and employment area
Cost Implications (2010$ M)	$110M to $130M more
Constructability	Improvement due to single crossing of I-5. Also, construction staging outside of the highway is better than in median.
ROW Implications	Moderate increase in need for additional properties outside I-5 ROW.

B3: EAST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO EAST SIDE

Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on retained cut/fill to about NE 200th Street, then elevated to the Mountlake Terrace Transit Center. Some elevated guideway would be necessary near NE 185th Street to connect if the 185th Street station were elevated. North of Mountlake Terrace, the guideway would continue largely on elevated structure along the east side of I-5 to 212th Street SW.

Stations: An elevated station would be located at the Mountlake Terrace Transit Center along with expanded on- and off-street bus facilities. The existing 880 park and ride stalls would be maintained but not expanded.

Relative pros and cons of this alternative:

- Station access and transit-oriented development opportunities similar to B1
- Crossing over the entire I-5 freeway to the west side near 212th Street SW can be accomplished more directly and on shorter, less expensive structures than with the split crossing required in some other alternatives
- No clear continuing transit purpose for the adjacent freeway station when bus service is restructured in response to light rail service

Evaluation results: (see next page)

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Similar
Ridership Potential	Similar
Potential Environmental Effects	Higher potential for noise, visual, and ecosystems impacts due to extended section along I-5 through a greenbelt separating I-5 from residential neighborhoods.
Development Potential	Similar
Cost Implications (2010$ M)	$65M to $85M more
Constructability	Improvement, due to single crossing of I-5. Also, construction staging outside of the highway is better than in median
ROW Implications	Moderate increase in need for additional properties outside of I-5 ROW.

B4: EAST SIDE TO MOUNTLAKE TERRACE FREEWAY STATION TO MEDIAN

Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on retained cut/fill to about NE 200th Street, then elevated to about 240th Street SW. Some elevated guideway would be necessary near NE 185th Street to connect if the 185th Street station were elevated. From 240th Street, the guideway would cross the northbound lanes of I-5 on elevated structure then transition to retained cut/fill in the median of I-5 south of the 236th Street SW overpass, then run at grade in the median to the Mountlake Terrace Freeway Station. From the station it would run in retained cut/fill in the median to 212th Street SW.

Stations: The existing at-grade Mountlake Terrace Freeway Station would be extended and converted to light rail use, including a new pedestrian bridge over the northbound lanes of I-5 at the north end of the platform to tie into the Mountlake Terrace street grid at 232nd Street SW. The existing 880 stall park and ride and adjacent transit center would be utilized without further improvement, but on-street bus facilities near the transit center would be expanded.

Relative pros and cons of this alternative:

- Reusing the freeway station saves capital cost and provides a continuing transit purpose for the facility when bus services are restructured in response to new light rail service
- Guideway geometry required to access the median of I-5 south of 236th Street SW would introduce speed restrictions and some delay to the system
- Transit-oriented development opportunities similar to B1, but station access would require longer walks to the station in middle of the freeway.

- Avoids construction disruption of the Mountlake Terrace Transit Center

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Slightly lower due to increased walk distance (approximately 800 feet) between station platform and parking and bus transfer at Mountlake Terrace, and poorer platform waiting environment.
Ridership Potential	Small reduction due to longer walk access to station platform.
Potential Environmental Effects	Generally reduced because alignment avoids localized noise and ecosystem impacts north of Mountlake Terrace Transit Center, but would have higher visual and ecosystem impacts associated with the second pedestrian bridge.
Development Potential	Similar
Cost Implications (2010$ M)	$30M Less
Constructability	Substantially more difficult, due to deviations, reduced speeds, and median construction related to crossing into median to the Mountlake Terrace Freeway Station.
ROW Implications	Similar

B5: WEST SIDE TO MOUNTLAKE TERRACE FREEWAY STATION TO MEDIAN

Guideway: The guideway runs along the west side of I-5, in WSDOT rights-of-way wherever possible, elevated from the west side 185th Street station, transitioning to retained cut/fill to about NE 200th Street, then elevated to about 240th Street SW. From 240th Street, the guideway would cross the southbound lanes of I-5 on elevated structure then transition to retained cut/fill in the median of I-5 south of the 236th Street SW overpass, then run at grade in the median to the Mountlake Terrace Freeway Station. From the station it would run in retained cut/fill in the median to 212th Street SW. *This alternative would only be connected with Segment A alternatives that include a west side station at NE 185th Street*.

Stations: The existing at-grade Mountlake Terrace Freeway Station would be extended and converted to light rail use, including a new pedestrian bridge over the northbound lanes of I-5 at the north end of the platform to tie into the Mountlake Terrace street grid at 232nd Street SW. The existing 880 stall park and ride and adjacent transit center would be utilized without further improvement, but on-street bus facilities near the transit center would be expanded.

Relative pros and cons of this alternative:

- This alternative requires that the guideway cross all lanes of I-5 two times between Northgate and Lynnwood, with added cost and construction impacts
- Reusing the freeway station saves capital cost and provides a continuing transit purpose for the facility when bus services are restructured in response to new light rail service
- Guideway geometry required to access the median of I-5 south of 236th Street SW would introduce speed restrictions and delay to the system

- Transit-oriented development opportunities similar to B1, but station access would require longer walks to the station in middle of the freeway.
- Avoids construction disruption of the Mountlake Terrace Transit Center

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Slightly lower due to increased walk distance (approximately 800 feet) between station platform and parking and bus transfer at Mountlake Terrace, and poorer platform waiting environment.
Ridership Potential	Small reduction due to longer walk access to station platform.
Potential Environmental Effects	Increased due to higher visual and ecosystem impacts along the west side from 185th, and higher visual and ecosystem impacts associated with second pedestrian bridge.
Development Potential	Similar
Cost Implications (2010$ M)	$15M to $20M More
Constructability	Substantially more difficult, due to deviations, reduced speeds, and median construction related to crossing into median to the Mountlake Terrace Freeway Station.
ROW Implications	Similar.

B6: WEST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO MEDIAN

Guideway: The guideway runs along the west side of I-5, in WSDOT rights-of-way wherever possible, elevated from the west side 185th Street station and across I-5 to the east side near NE 190th Street, then generally elevated to Mountlake Terrace Transit Center. North of Mountlake Terrace, the guideway would cross the northbound lanes of I-5 on elevated structure then transition to retained cut/fill in the median of I-5 near 230th Street SW, then run in retained cut/fill in the median to 212th Street SW. *This alternative would only be conncected with Segment A alternatives that include a west side station at NE 185th Street*.

Stations: An elevated station would be located at the Mountlake Terrace Transit Center along with expanded on- and off-street bus facilities. The existing 880 park and ride stalls would be maintained but not expanded.

Relative pros and cons of this alternative:

- This alternative requires that the guideway cross all lanes of I-5 three times between Northgate and Lynnwood, with added cost and construction impacts
- Station access and transit-oriented development opportunities similar to B1
- No clear continuing transit purpose for the adjacent freeway station when bus service is restructured in response to light rail service
- Median alignment between Mountlake Terrace and Lynnwood is the least expensive guideway option

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Similar
Ridership Potential	Similar
Potential Environmental Effects	Overall similar but with higher visual impacts from sections along the west side of I-5 and then transitioning to the east prior the Mountlake Terrace Transit Center.
Development Potential	Similar
Cost Implications (2010$ M)	$50M to $60M more
Constructability	Substantially more difficult due to staging constraints and traffic impacts related to crossing I-5.
ROW Implications	Overall similar, but higher potential for increased property impacts from the west/east crossing south of the Mountlake Terrace Transit Center.

B7: WEST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO WEST SIDE

Guideway: The guideway runs along the west side of I-5, in WSDOT rights-of-way wherever possible, elevated from the west side 185th Street station and across I-5 to the east side near NE 190th Street, then generally elevated to Mountlake Terrace Transit Center. North of Mountlake Terrace, the guideway would cross the northbound and southbound lanes of I-5 on elevated structure then to the west side of the freeway, then run in retained cut/fill to south of 220th Street SW, then largely on elevated structure to 212th Street SW. *This alternative would only be connected with Segment A alternatives that include a west side station at NE 185th Street*.

Stations: An elevated station would be located at the Mountlake Terrace Transit Center along with expanded on- and off-street bus facilities. The existing 880 park and ride stalls would be maintained but not expanded.

Relative pros and cons of this alternative:

- This alternative requires that the guideway cross all lanes of I-5 three times between Northgate and Lynnwood, with added cost and construction impacts
- Station access and transit-oriented development opportunities similar to B1
- No clear continuing transit purpose for the adjacent freeway station when bus service is restructured in response to light rail service
- Crossing back over the entire I-5 freeway to the west side near Mountlake Terrace Transit Center can be accomplished more directly and on shorter, less expensive structures than with the split crossing required in some other alternatives

- West side alignment between Mountlake Terrace and Lynnwood provides the opportunity for a future station at 220th Street
- Fewer potential environmental impacts than an east side alignment between Mountlake Terrace and Lynnwood.

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Similar
Ridership Potential	Similar
Potential Environmental Effects	Markedly increased, including higher visual impacts along the west side from 185th to the Mountlake Terrace Transit Center. To the north, higher visual, ecosystem and noise impacts, including for the transition back to the west side and along the west side greenbelt up to S. 220th Street. Higher ecosystem impacts also near S. 212th Street.
Development Potential	Similar
Cost Implications (2010$ M)	$110M to $140M more
Constructability	Substantially more difficult due to additional crossing of I-5
ROW Implications	Moderate increase in need for additional properties outside of I-5 ROW.

B7A: WEST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO WEST SIDE WITH 220TH STATION

Guideway: The guideway runs along the west side of I-5, in WSDOT rights-of-way wherever possible, elevated from the west side 185th Street station and across I-5 to the east side near NE 190th Street, then generally elevated to Mountlake Terrace Transit Center. North of Mountlake Terrace, the guideway would cross the northbound and southbound lanes of I-5 on elevated structure then to the west side of the freeway, then run in retained cut/fill to south of 220th Street SW, then largely on elevated structure to 212th Street SW. *This alternative would only be connected with Segment A alternatives that include a west side station at NE 185th Street*.

Stations: An elevated station would be located at the Mountlake Terrace Transit Center along with expanded on- and off-street bus facilities. The existing 880 park and ride stalls would be maintained but not expanded.

Relative pros and cons of this alternative:

- A 220th station was not included in the voter-approved ST2 Plan and might require plan amendment to add it to this extension
- This alternative requires that the guideway cross all lanes of I-5 three times between Northgate and Lynnwood, with added cost and construction impacts
- Station access and transit-oriented development opportunities enhanced by addition of second station in this segment near higher density residential and employment area
- No clear continuing transit purpose for the adjacent freeway station when bus service is restructured in response to light rail service
- Crossing back over the entire I-5 freeway to the west side near Mountlake Terrace Transit

Center can be accomplished more directly and on shorter, less expensive structures than with the split crossing required in some other alternatives

- West side alignment between Mountlake Terrace and Lynnwood provides the opportunity for a future station at 220th Street
- Fewer potential environmental impacts than an east side alignment between Mountlake Terrace and Lynnwood.

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Travel times would be slightly slower due to added station but system access would be improved
Ridership Potential	Higher due to added station
Potential Environmental Effects	Markedly increased, including higher visual impacts along the west side from 185th to the Mountlake Terrace Transit Center. To the north, higher visual, ecosystem and noise impacts, including for the transition back to the west side and along the west side greenbelt up to S. 220th Street. Higher ecosystem impacts also near S. 212th Street. Station at 220th could increase potential for historic impacts.
Development Potential	Greater due to added station in higher density residential and employment area
Cost Implications (2010$ M)	$150M to $180M more
Constructability	Substantially more difficult due to additional crossing of I-5
ROW Implications	Moderate increase in need for additional properties outside of I-5 ROW.

B8: WEST SIDE TO MOUNTLAKE TERRACE TRANSIT CENTER TO EAST SIDE

Guideway: The guideway runs along the west side of I-5, in WSDOT rights-of-way wherever possible, elevated from the west side 185th Street station and across I-5 to the east side near NE 190th Street, then generally elevated to Mountlake Terrace Transit Center. North of Mountlake Terrace, the guideway would continue largely on elevated structure along the east side of I-5 to 212th Street SW. *This alternative would only be connected with Segment A alternatives that include a west side station at NE 185th Street*.

Stations: An elevated station would be located at the Mountlake Terrace Transit Center along with expanded on- and off-street bus facilities. The existing 880 park and ride stalls would be maintained but not expanded.

Relative pros and cons of this alternative:

- This alternative requires that the guideway cross all lanes of I-5 three times between Northgate and Lynnwood, with added cost and construction impacts
- Station access and transit-oriented development opportunities similar to B1
- No clear continuing transit purpose for the adjacent freeway station when bus service is restructured in response to light rail service
- Crossing over the entire I-5 freeway to the west side near 212th Street SW can be accomplished more directly and on shorter, less expensive structures than with the split crossing required in some other alternatives

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Similar
Ridership Potential	Similar
Potential Environmental Effects	Markedly increased due to higher visual and ecosystem impacts along the west side from 185th, and higher visual, ecosystem, and potential noise impacts, including for the transition to the east side and along the eastside greenbelt to the north.
Development Potential	Similar
Cost Implications (2010$ M)	$110M to $140M more
Constructability	Substantially more difficult, due to additional crossing of I-5
ROW Implications	Moderate increase in need for additional properties outside of I-5 ROW.

C1: 52ND AVE W TO 200TH STREET STATION

Guideway: From 212th Street SW, the guideway would turn north along the east side of 52nd Avenue W on elevated guideway and then turn east along the south side of 200th Street SW to a terminal station east of 48th Avenue W. The guideway would extend 700-1,000 feet beyond the station to provide trail track space to turn around and park trains that are out of service.

Stations: an elevated terminal station would be located on 200th Street SW east of 48th Avenue W, approximately two blocks north of the Lynnwood Transit Center. Up to 500 park and ride stalls would be added at the adjacent ~1,400 stall Lynnwood Park and Ride lot, and the Lynnwood Transit Center and on-street bus facilities would be expanded if necessary.

Relative pros and cons of this alternative:

- This station site is closest to the Lynnwood City Center and the alignment is well situated for future extension to the north along the Alderwood Mall Parkway corridor.
- Passengers transferring between the rail station and bus transit center would have a two block walk
- This alignment alternative would directly impact Scriber Creek park and multifamily residences along 200th Street SW
- Elevated guideway along 200th Street SW could be a barrier to development of adjacent properties

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Similar
Ridership Potential	Slight increase due to station proximity to a higher level of population and employment.
Potential Environmental Effects	Higher noise and visual impacts due to longer sections adjacent to residential areas. Higher potential for property impacts, including to multifamily residential areas. Reduced park and ecosystem impacts but direct impacts remain.
Development Potential	Similar
Cost Implications (2010$ M)	$22 to $29 More
Constructability	Improved due to shorter wetland crossing and accessibility from the local roads
ROW Implications	Higher impacts, including to multi-family residential complex, but avoids Edmonds School District property.

C2: 52ND AVE W TO LYNNWOOD TRANSIT CENTER STATION

Guideway: From 212th Street SW, the guideway would turn north along the east side of 52nd Avenue W on elevated guideway and then turn east along the 202nd Street SW right-of-way along the south side of Scriber Creek Park to a terminal station at Lynnwood Transit Center. The guideway would extend 700-1,000 feet beyond the station to provide space to turn around and park trains that are out of service.

Stations: An elevated terminal station would be located adjacent to the south edge of the Lynnwood Transit Center. Up to 500 park and ride stalls would be added at the adjacent ~1,400 stall Lynnwood Park and Ride lot, and the Lynnwood Transit Center and on-street bus facilities would be expanded if necessary.

Relative pros and cons of this alternative:

- This station site is adjacent to the Lynnwood Transit Center and would provide the most convenient bus-rail transfers.
- Future extension of the line to the north would likely impact hotel(s) east of 44th Avenue W
- This alignment alternative would pass near Scriber Creek park and multifamily residences along 202th Street SW, and would cross a major wetland complex

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Similar
Ridership Potential	Similar
Potential Environmental Effects	Similar, with reduced effects in several areas. Avoids impacts to Edmonds School District property, but could displace other commercial uses. Increased visual and noise impacts and similar to slightly reduced park and ecosystem impacts.
Development Potential	Similar
Cost Implications (2010$ M)	$7 to $10 More
Constructability	Slightly improved due to shorter wetland crossing
ROW Implications	Higher Impacts

C3: I-5 TO LYNNWOOD PARK & RIDE STATION

Guideway: From 212th Street SW, this alternative would cross over I-5 and parallel the north side of I-5 on elevated structure and cross over the Lynnwood HOV direct access ramp, then turn northeast to a terminal station in the Lynnwood Park and Ride. The guideway would extend 700-1,000 feet beyond the station and over 44th Avenue W to provide space to turn around and park trains that are out of service.

Stations: An elevated terminal station would be located in the southeast corner of the Lynnwood Park and Ride lot. Up to 500 park and ride stalls would be added to the ~1,400 stall Lynnwood Park and Ride lot, and the Lynnwood Transit Center would be re-located closer to the rail station and expanded if necessary.

Relative pros and cons of this alternative:

- This alternative has the shortest and lowest cost guideway, but has higher costs associated with relocating the Lynnwood Transit Center.
- This alternative has the fewest potential environmental impacts because it is located away for residential properties, has the shortest wetland crossing and avoids impacts to Scriber Creek Park.
- Future extension of the line to the north would likely impact hotel(s) east of 44th Avenue W

Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Similar, although lower pedestrian access due to longer walk distances from residential and mixed use areas to the north and east.
Ridership Potential	Similar
Potential Environmental Effects	Lower. Generally avoids the wetland, stream, visual, and noise impacts of the AA alternative. Avoids some potential displacements, but could affect one to two more commercial uses.
Development Potential	Similar
Cost Implications (2010$ M)	$27 to $33 More
Constructability	Slightly improved due to shorter wetland crossings but more difficult over direct access ramp and 44th Ave. W.
ROW Implications	Reduces overall number of affected properties although some larger commercial properties could still be affected.

APPENDIX A

ENVIRONMENTAL SCOPING SUMMARY REPORT

North Corridor Transit Project

Environmental Scoping Summary Report

SOUND TRANSIT
401 South Jackson Street
Seattle, WA 98104-2826

December 2011

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

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Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FTA	Federal Transit Authority
NEPA	National Environmental Policy Act
NOI	Notice of Intent
PSRC	Puget Sound Regional Council
SEPA	State Environmental Policy Act
Sound Transit	Central Puget Sound Regional Transit Authority
SR	State Route
TOD	transit-oriented development
WSDOT	Washington State Department of Transportation

INTRODUCTION

From September 30 to October 31, 2011, Sound Transit (the Central Puget Sound Regional Transit Authority) and the Federal Transit Administration (FTA) conducted public scoping for the North Corridor Transit Project Environmental Impact Statement (EIS). Sound Transit is proposing the North Corridor Transit Project to connect to the regional light rail system in the Northgate neighborhood of Seattle, with alternatives to extend light rail northward to the cities of Shoreline, Mountlake Terrace, and Lynnwood.

Scoping supports the environmental review process requirements of the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA). FTA and Sound Transit have determined that the project has the potential to result in significant environmental effects, and an EIS is needed. Scoping allows the public, agencies, and tribes to learn about and provide comments to help guide the EIS review for the proposed project.

This Scoping Summary Report summarizes the scoping process and the comments Sound Transit and FTA received. Sound Transit and FTA are considering the comments as they identify the range of alternatives and potential environmental issues to be evaluated in the EIS.

NORTH CORRIDOR TRANSIT PROJECT OVERVIEW

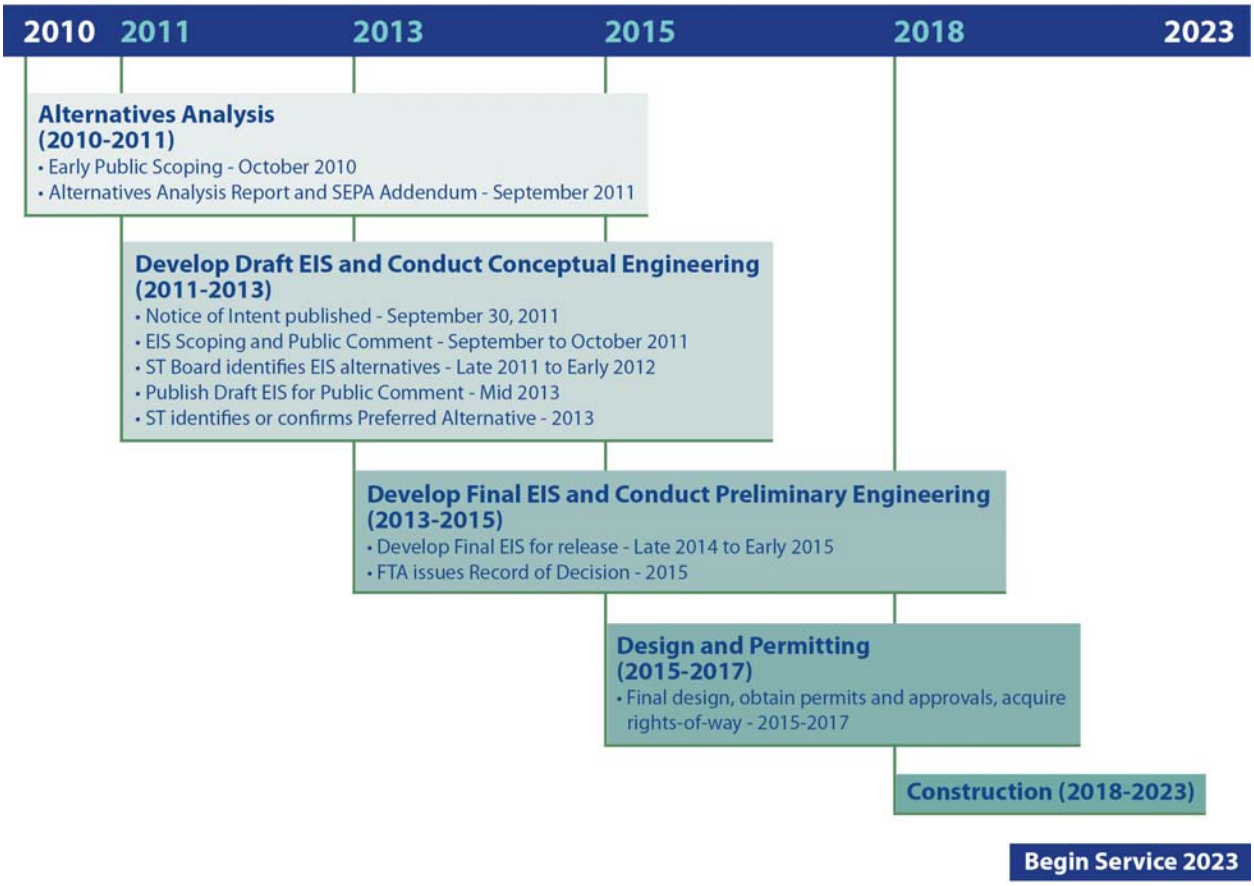
The North Corridor generally follows I-5 between Northgate and Lynnwood. While it is the major north-south route through the state of Washington, I-5 also serves a large commuter market between Snohomish and King counties and the City of Seattle. The corridor falls within an urban area that is constrained by Puget Sound to the west and Lake Washington to the east. There is a large north/south commuter market in this area that travels between the communities in Snohomish and King Counties, toward Seattle or north to Everett, where many of the region's jobs are located.

The North Corridor Transit Project is an element of Sound Transit's adopted Long-Range Plan and is part of the ST2 Plan for regional transit investments approved by voters in 2008. The project is also in the region's Metropolitan Transportation Plan (Puget Sound Regional Council's *Transportation 2040*). All of these plans anticipate the eventual extension of mass transit service north to Everett, connecting to a regional system serving other markets to the south, such as University of Washington, Capitol Hill, downtown Seattle, and SeaTac.

The start of the EIS phase for the North Corridor Transit Project is building on the results of an Alternatives Analysis Sound Transit performed in 2010-2011 that included early public and agency scoping in October 2010. The Alternatives Analysis developed and evaluated a range of alternatives to improve transit in the corridor, and resulted in an Alternatives Analysis Report and SEPA Addendum that identified the most promising alternatives for further study. The Alternatives Analysis also served as an addendum to Sound Transit's Supplemental EIS on the Regional Transit Long-Range Plan (June 2005).

Figure 1 shows the overall schedule Sound Transit expects for the North Corridor project, from the initial planning and environmental review steps through to final design and construction, leading to the planned start of transit service in 2023.

Figure 1. North Corridor Transit Project Schedule



The Scoping Process

The NEPA and SEPA scoping process began with formal notices to prepare an EIS, accompanied by advertisements and other public notices and outreach materials. For NEPA, a Notice of Intent (NOI) to prepare an EIS was published in the Federal Register on

September 29, 2011. For SEPA, a scoping notice was published in the State's SEPA register on September 30, 2011. Sound Transit also provided links to the notices at www.soundtransit.org/NCTP.

The scoping comment period was held from September 30 to October 31, 2011. During this time, Sound Transit and FTA asked the public to provide comments on the proposed purpose and need statement, environmental issues for evaluation in the EIS, and the alternatives being considered for study in the draft EIS.

Scoping was conducted by Sound Transit and FTA in consultation with other agencies, including the Washington State Department of Transportation; Federal Highway Administration; the cities of Seattle, Shoreline, Mountlake Terrace, Edmonds, and Lynnwood; King and Snohomish counties; Community Transit; affected tribes; and other regional, state and federal agencies. The scoping approach was also developed to be consistent with FTA's regulations for implementing NEPA, as defined in 23 CFR 450.318(b)(2)(iv).

Notices and Advertisements

In addition to the formal EIS scoping notices, Sound Transit and FTA used several other public notice and involvement tools to notify and engage the public and agencies during scoping:

- Direct mail postcards to approximately 103,000 addresses in the corridor (with translated information also provided)
- Email notices on September 30 and October 6, 2011 to more than 1,000 addresses
- Advertisements in the Seattle Times and other print and online media
- Printed posters and postcards dropped off at many public locations in the corridor (such as at libraries, city halls, and community centers)
- Notices on Sound Transit's project website at www.soundtransit.org/NCTP, accompanied by a Scoping Information Report (September 2011)

The print advertisements were placed in the Seattle Times and local North Corridor area newspapers announcing the upcoming public meetings. Advertisements in print and online publications, along with a number of media stories, were published by:

- tu Decides
- Snohomish County Business Journal
- Publicola
- Seattle Transit Blog
- MLT News
- Shoreline News
- The Herald
- Progressive Railroading
- The Weekly Herald
- My Edmonds News

To help reach a full range of community members, meeting notification materials were translated into Spanish, Russian, traditional Chinese and Korean. Sound Transit also placed notices in online blogs, Sound Transit's Twitter feed, and Sound Transit's Facebook page. Staff prepared press releases to generate news articles to further create awareness about the project and its public involvement opportunities.

In addition, Sound Transit staff met with seven organizations and elected bodies (city councils) in the project area before or during the scoping period. During the scoping period, Sound Transit also conducted a live-streamed online panel discussion called "Tech Talk" on October 7th, which was focused on the results of the Alternatives Analysis. Tech Talk was a moderated discussion of comments and questions raised by on-line participants. The discussion covered the project background and schedule, the findings of the project's Alternatives Analysis, and the merits and attributes of potential light rail alternatives. It also covered issues such as land use, transportation performance, design, and environmental effects. This informational session was advertised by email (September 30 and October 6, 2011) and on local area transportation-related blogs. During the session, Sound Transit staff also encouraged the participants to attend the public scoping meetings and submit formal comments.

Background Materials

To provide additional information about why Sound Transit is proposing the North Corridor Transit Project and how the EIS will be conducted, the agency produced the following publications and made them available on the project website and at public meetings prior to the start of scoping:

- *Scoping Information Report:* a summary of the current environmental scoping effort, which provides a planning history of the project, the results of the recent Alternatives Analysis, the draft purpose and need statement, the range of alternatives being considered for study in the EIS, the potential environmental topics to be reviewed in the EIS, and the project schedule.
- *Draft Coordination Plan*: a summary of the plan to engage the public, agencies and tribes throughout the environmental review process.
- *Alternatives Analysis Report and SEPA Addendum*: a summary document and complete technical report describing the initial study Sound Transit conducted to define the most promising alternatives now being considered for further review in the EIS, along with alternatives to be dropped from further consideration.

Public and Agency Scoping Meetings

Three public meetings and one agency meeting were held during the scoping period. More than 240 people attended the public meetings. Staff from thirteen of the 40 invited agencies and tribes attended the agency meeting.

Public Meetings		
October 11, 2011 6 p.m. - 8 p.m.	Shoreline Conference Center 18560 1st Avenue NE Shoreline, WA 98155	100 (86 signed in)
October 13, 2011 6 p.m. - 8 p.m.	Embassy Suites 20610 44th Avenue W Lynnwood, WA 98036	55 (43 signed in)
October 18, 2011 6 p.m. - 8 p.m.	Ingraham High School 1819 N. 135th Street Seattle, WA 98133	30 (26 signed in)
Agency and Tribal Meeting		
October 11, 2011 2 p.m. - 4 p.m.	Shoreline Conference Center 18560 1st Avenue NE Shoreline, WA 98155	13 agencies

Public Meetings

The public meetings used an "open house" format combined with a presentation and Question and Answer session. Each meeting had a sign in area, a comment area, and information stations with display posters and background written materials (such as the project's *Scoping Information Report*, *Alternatives Analysis Report and SEPA Addendum*, and fact sheets). There were also several interactive stations to help the public note specific areas of the corridor. Each station had project staff to answer questions and listen to participants.

In the presentations, Sound Transit and FTA staff described the project and its history to date, and took questions from the audience. Some of the more common topics were:

- Station locations
- Park and rides
- Service levels
- Elevated versus surface sections
- Federal funding
- Project schedule
- Alternatives Analysis findings
- Bus service, including east-west connections
- Ridership
- Land use plans and transit-oriented development
- Economic and environmental impacts

Agency Meeting

The agency meeting had a similar format to the public meetings, but was designed to help agencies and tribes identify their level of interest and future involvement in the EIS process as the project moves forward. (There are additional federal requirements guiding how agencies and tribes are to be engaged in the EIS process, as described in the project's *Draft Coordination Plan*.) Thirteen agencies attended the agency scoping meeting. See Attachment B for a list of attendees.

SUMMARY OF COMMENTS RECEIVED

From September 30 through October 31, 2011, Sound Transit and FTA received 69 comment submittals from individuals, 14 comment submittals from jurisdictions and agencies, and 3 from organizations.

The majority of the comments Sound Transit and FTA received were positive.

All the jurisdictions, agencies and organizations with written comments either supported the proposed project or offered advice on the project's next steps into the environmental process. None of these parties were opposed to the proposed project.

Seven of the agencies and jurisdictions specifically indicated support for an I-5 alternative, as did all of the organizations that commented.

One agency (King County Department of Transportation) supported carrying a SR 99 alternative and an I-5 alternative into the EIS, primarily because of the potential differences in transit-oriented development potential for the alignments. (After the close of the comment

period, the King County Department of Transportation wrote an additional letter noting its preference for an I-5 alternative.)

Several other agencies, including the cities of Seattle, Edmonds, Lynnwood, Mountlake Terrace, Everett, and Community Transit, noted concerns about a SR 99 elevated alternative's impacts, costs, ridership or ability to meet other purpose and need objectives.

More than 75 percent of the public's (individuals) comments supported the proposed project or one or more of the light rail alternatives Sound Transit and FTA are considering for the EIS.

About 45 percent of the commenters expressed support for a specific alignment, including one or both of the alternatives.

From all general public comments, about 35 percent supported an I-5 light rail alternative, while 3 percent were opposed.

About 13 percent supported a SR 99 light rail alternative, and 7 percent were opposed.

About 5 percent (or 3 of the commenters) were opposed to the proposed project, including one party who preferred Bus Rapid Transit instead of light rail. The remaining 21 percent did not indicate a clear preference or focused on environmental or other issues.

The other comments varied, but included suggestions about route or station locations, environmental or land use factors, and the purpose and need for the project. A number of commenters asked for Sound Transit to move ahead more quickly to build the project.

Comments from the General Public

During the scoping period, Sound Transit and FTA received 69 comments from members of the public through written forms at the public meeting, the online form, email, or direct mail.

Fifty-two of the comments indicated general support for the project. Twenty-four expressed support for the I-5 alignment, while eight supported the SR 99 alignment.

Three individuals opposed the project as a whole. One person opposed Sound Transit in general and the potential for new taxes, stating that light rail has not been cost effective. Two people who opposed light rail, expressed support for a bus system or bus-only lanes.

The 17 comments supporting an I-5 alignment focused on travel time benefits, the problems of congestion, and the need for enough parking to meet demand.

The two comments opposed to an I-5 alignment suggested the project's focus should be on creating more opportunities for transit-oriented development and related environmental benefits, including energy savings and reduced greenhouse gas emissions. They believed SR 99 offered more potential for this, while I-5 offered less or no potential.

The eight comments opposed to an SR 99 alignment noted the environmental impacts of construction, particularly economic impacts to businesses, but they also cited cost as a factor.

Many of the remaining comments from the public provided general opinions about the proposed project and its purpose, suggestions about the alternatives, and primary areas of environmental concern, including wetlands, noise and vibration, visual impacts and construction.

There were only a few comments about the project's "purpose and need", which is the formal statement of why the project is proposed and why Sound Transit believes it is needed. However, a number of commenters described why they supported the project and how they expected to use it. A summary of these comments is provided below.

General Project

- Project schedule is too long
- Adequate commuter parking must be included; some park-and-rides already at capacity (for instance, Lynnwood Transit Center)
- East/west transit service is important to get commuters to light rail stations
- At-grade trains are slow trains, so ours must not be at-grade
- Need good light rail service all day, not just commuter times
- Will coach amenities include tables and outlets, comfortable seats, and safe standing room?
- Initial train service was minimal, parking was minimal, and travel time was excessive
- Travel efficiency and cost are most important considerations
- Prefer route with more car parking and stations
- Consider Shoreline's "town center" density plans and how that would affect ridership forecasts
- Make sure stations are walkable and accessible, including some with no parking
- The project should emphasize benefits to transit-oriented development, walkability, community equity, environmental and other factors, in addition to transportation

Suggestions about Alternatives

- Add station at 130th to I-5 alignment
- Reconsider stations that offer better walkability than those just along I-5 interchanges
- Reconsider stations at 15th/145th and 15th/175th stations that offer better walkability and transit-oriented development (TOD) than those along I-5
- Lynnwood Transit Center access needs modification, and needs more walkable areas – hard to access in SOV
- Light rail should extend to Alderwood Mall, Lynnwood Convention Center, and Lynnwood City Center

- Place a walkable, accessible station closer to Lynnwood City Center or Alderwood Mall
- Extend as far north as possible, such as to Ash Way to serve more commuters and reduce traffic at Lynnwood
- Use Interurban Trail land for alignment; already paid for and dedicated for transit
- 220th & SR 99 should be served; highest residential and employment density in south Snohomish County
- Northgate park-and-ride should be rebuilt in manner of Hammersmith Station in London, with better connections, mixed uses, and amenities
- Extend SR 99 alignment into Edmonds/Lynnwood with some combination of 208th, Interurban corridor, and 200th St to Lynnwood transit center
- Look at placing SR 99 alignment diagonally through NW Hospital campus to reduce travel distance.
- Consider different Shoreline station location; such as at the Shoreline Park-and-Ride, near 185th, and near the urban villages identified by the Shoreline community. Stations should emphasize walk up, bike up, and transfers, not huge parking lots
- Place pedestrian-only stop near I-5 & 196th to be consistent with Lynnwood's City Center Plan
- Park-and-rides should have: bus stops, bicycle spaces, electric vehicle outlets, camera monitoring for security, snack bar, restrooms, alternative energy for power needs, pay phone
- Consider staggered stops; run more trains but skip some stations
- SR 99 alignment should be placed on west side of road
- Consider a mix of Express Bus on I-5 between Lynnwood and Northgate, linked to a limited stop light rail route using SR 99 to connect Lynnwood to Northgate

<u>Concerns about Impacts</u>

- Noise, traffic, parks and visual impacts from light rail along I-5, where noise and traffic impacts are already high
- Parking impacts if stations do not provide enough parking, especially in areas where demand already exceeds supply
- Impacts to businesses along a SR 99 alignment, including displacements and loss of business (also noted as reasons a SR 99 alternative should not be studied further)
- Impacts in Lynnwood due to increased traffic and pedestrians
- General project impacts on residences, but especially noise, visual, changes to sound walls or access
- Noise and vibration impacts on residences
- Property acquisition process questions
- Streams and wetlands adjacent to I-5, including at NE 145th Street, near Mountlake Terrace, and near Lynnwood

- Wildlife – preserve greenbelts and/or avenues used to navigate the area
- Impacts of increased pressure for growth around station areas, with further impacts to the remaining natural areas

Purpose and Need

- Include TOD and environmental benefits as a key purpose of the system
- Endorse community equity and benefits elements to low income and minority populations as part of the project purpose
- Endorse the need for improvements to travel time, speed, reliability for transit riders

Comments from Agencies and Jurisdictions

Fourteen agencies provided comments during the scoping period. This included nine local jurisdictions (city or county governments or districts), a transit agency, one regional agency, one state agency, and two federal agencies.

Local Jurisdictions

City of Edmonds

The City's letter discussed the Alternatives Analysis and voiced general support for the project. The letter noted the City may later indicate a preference for an alignment alternative. However, if a SR 99 alternative is included in the EIS, the City would want to have the option for a route to continue along SR 99 north of 205th/244th Street into the City of Edmonds. (After the close of the comment period, the City provided an updated letter identifying I-5 as their preferred alternative.)

City of Everett

Everett's letter encouraged including an I-5 light rail alignment in the EIS. The letter noted concerns with SR 99 impacts, including business disruption, higher costs, lower ridership, and lack of connection to existing transit facilities investments such as at NE 145th Street. The City encouraged Sound Transit to select an alignment that would support light rail to Snohomish County and Everett, with the least cost, highest ridership, and best chance for receiving federal funding.

City of Lynnwood

The City noted its longstanding support for the North Corridor project and a regional transit investment to connect to the city center as a regionally designated growth center. The City included its adopted resolution endorsing an I-5 light rail alternative, noting overall transportation and environmental performance and cost effectiveness. The City also identified concerns with a SR 99 alignment, including lower overall benefits, higher costs, conflicts with Bus Rapid Transit investments, impacts, and delays or conflicts with future plans

to extend service to Everett. The City noted its interest in a future station closer to the core of the city center area. Lynnwood also provided comments for the EIS's treatment of impacts, including construction, parks, and property acquisitions.

City of Mountlake Terrace

Mountlake Terrace's letter voiced continued support for placing light rail along the I-5 corridor, and encouraged Sound Transit to identify an I-5 light rail alternative as a preliminary preferred alternative. It also identified concerns for the higher costs and impacts of a SR 99 alternative. The letter noted the I-5 alternative's ability to achieve the greatest number of riders at the smallest capital cost, and endorsed the general findings of the Alternatives Analysis. The City also noted the importance of a light rail investment to its vision for creating a vibrant, mixed use area within walking distance to a future light rail station near I-5 and 236th Street SW, and identified its own planning and environmental efforts toward creating transit-oriented development nearby.

City of Seattle

The City's letter voiced support for the project's proposed purpose and need statement and acknowledged Sound Transit's coordination with corridor jurisdictions during the Alternatives Analysis. The City concurred with the Alternatives Analysis findings, and supported limiting the range of alternatives to an I-5 light rail alternative and a no-build alternative if Sound Transit identifies an I-5 light rail alternative as the locally preferred alternative.

City of Shoreline

The City of Shoreline provided a detailed letter attaching its scoping comments on impacts and issues for Sound Transit to consider in the EIS, along with adopted Guiding Principles the City plans to use for its own decisions about light rail. The letter indicated that the Shoreline City Council will be identifying its preference for a specific alignment later in November, but they were very supportive of the proposed extension of light rail to Shoreline. The City's Guiding Principles include transportation, land use, economic, social, cost and impact considerations. The City's scoping comments addressed issues such as potential alignments and station locations (including studying a potential station at I-5/NE 185th Street on the west side of I-5), costs, travel times, ridership, access (including avoiding or upgrading bike/pedestrian crossing the freeway at NE 195th Street), social equity, land use, and transit feeder service. It also discussed noise, visual and traffic impacts and mitigation measures. (The City also provided a similar letter to the Chairman of the Sound Transit Board. After the close of the scoping period, the City wrote an additional letter to inform Sound Transit and FTA that the City Council had identified the I-5 alignment as the City's preferred alignment.)

Lynnwood Public Facilities District

This City development district encouraged Sound Transit to site a station within walking distance of the Lynnwood Convention Center and noted the importance of the center to the economic vitality of Lynnwood.

County and Regional Agencies

Puget Sound Regional Council

The regional council provided a detailed letter noting the importance of high capacity transit to the region's integrated strategy for growth management, transportation and economic development. The letter suggested additional factors to consider for the purpose and need and related objectives, including the ability to focus growth to create walkable, compact and transit-oriented communities and to support regional growth and activity areas. In addition, PSRC provided comments on the scope of EIS alternatives and analysis, including ways to measure access by mode, a variety of station sites and attributes, and the identification of potential mitigation measures.

King County

The King County Department of Transportation provided scoping comments on the purpose and need, range of alternatives, environmental factors and potential project evaluation criteria. The County suggested expanding the project's purpose to include providing a catalyst for desired growth, such as walkable, transit-oriented communities. The County's comments on alternatives supported including both the I-5 and the SR 99 alternatives. The letter suggested a range of alternatives was needed to help weigh the balance between leveraging existing transportation investments against the different types of land use along an I-5 versus a SR 99 alignment. The County's comments on alternatives recommended evaluating both I-5 and SR 99 in the EIS, and a range of alternative station locations along SR 99.

For the I-5 Alternative, the County suggested station locations should be evaluated at NE 155th Street and NE 130th Street. (After the close of the comment period, the County wrote an additional letter noting its preference for an I-5 alternative because of the I-5 alignment's higher ridership, lower cost, and because it would complement the County's and Community Transit's investment in bus rapid transit service on SR 99. King County stated they plan to implement the RapidRide E line on SR 99 between downtown Seattle and the King/Snohomish counties in 2013.)

For the SR 99 Alternative, the County suggested possible station locations should be evaluated at:

- NW Hospital at N 115th Street
- N 130th Street

- N 145th Street
- N 160th Street
- N 175th Street
- N 185th Street
- Shoreline Park-and-Ride
- SW 216th Street, and
- SW 202nd Street

Snohomish County

Snohomish County's letter indicated overall support for the project but did not specifically endorse an alternative. The County suggested considering an array of factors in analyzing EIS alternatives, such as the ability to support long range plans to extend to Everett, travel time and ridership, number of stations, and regional service versus a local service focus. The letter also discussed station-area issues, including multimodal access (east-west transit access, and pedestrian and bicycle facilities), evaluating impacts to local land uses, park and ride capacity, and local land use effects.

Community Transit

Community Transit's letter thanked Sound Transit for engaging them in the Alternatives Analysis and emphasized their interest in fulfilling a shared vision for effective regional and local transit. The letter voiced support for the purpose and need and noted the importance of the regional investment to allow more of their resources to focus on connecting centers and feeding the regional system. The agency also supported the I-5 alternative because it best supports the purpose and need, and they identified concerns with the ability of SR 99 elevated light rail alternative to efficiently and cost-effectively meet future travel demand. The letter concluded with comments on the Alternatives Analysis report and Community Transit's services, facilities and plans.

State

Department of Archaeology and Historic Preservation

The Department wrote regarding its role under the National Historic Preservation Act and related federal regulation and asked for continued opportunities to be involved as the project develops.

Federal

Environmental Protection Agency

The EPA's letter was received from Region 10 in Seattle, and focused on environmental scoping and analysis issues and procedures. EPA provided a list of additional resources to

consider in developing methods and conducting the analysis. The agency offered suggestions on areas such as indirect and cumulative effects, water quality, aquatic resources, climate change, ecosystems, air quality, Environmental Justice, endangered species, tribal consultations, historic properties, and human health.

Advisory Council on Historic Preservation

The Advisory Council acknowledged the invitation to participate in the EIS, offered general guidance for the project's review of historic resources effects, and noted its ability to participate in the project later if impacts to historic resources are identified.

Organizations

Snohomish County Committee for Improved Transportation

The Committee expressed support for light rail and the I-5 alignment. Cost and travel time are of particular interest to the organization.

Shoreline Chamber of Commerce

The Chamber of Commerce Board of Directors agreed to only support the I-5 alignment for light rail, noting they found it to be the best option for the businesses and citizens of Shoreline.

Snohomish County Infrastructure Coordination Committee

The Committee indicated that the I-5 alternative has clear advantages for the County, including cost, feasibility, and connections to regional centers. They also suggested that going into the EIS process with a preliminary preferred alternative will save time and money.

Project Correspondence Received After the Close of the Scoping Comment Period

After the close of the comment period (October 31, 2011), Sound Transit received additional letters from six parties addressing scoping-related issues. Several of these parties had submitted letters earlier during the comment period (City of Shoreline, City of Edmonds, and King County Department of Transportation) and wanted to provide updates or new information. While the scoping summary does not count these letters received after the end of the comment period as formal scoping comments, their key points are summarized below.

City of Shoreline

Following up on an earlier letter provided during scoping, the City of Shoreline wrote to inform Sound Transit and FTA that the Shoreline City Council had unanimously identified the I-5 alignment as the City's preferred alignment on November 14, 2011.

Washington State Department of Transportation

WSDOT provided a letter thanking Sound Transit for its coordination during the Alternatives Analysis and stating the concept placing light rail within the I-5 right-of-way would be a feasible alternative for further study in the EIS. WSDOT also emphasized the importance of ensuring safe access to and from light rail stations and avoiding adverse impacts to highway operations.

King County Department of Transportation

The King County Department of Transportation provided an additional letter to convey its support for the I-5 alternative identified in the Alternatives Analysis. The Department noted that its scoping period letter discussing both SR 99 and I-5 alternatives was focusing on strategies for improving the EIS if either alternative was chosen, and did not indicate a preferred alternative. The letter also described the benefits of the I-5 alternative, including its potential to complement bus rapid transit investments already being made along the SR 99 corridor.

City of Edmonds

The City supplemented its earlier scoping period letter with a letter to the Sound Transit Board conveying its support and preference for an I-5 alternative, based on the I-5 alternative described in the Alternatives Analysis. The City noted the 2008 public vote approving Sound Transit investments that included the light rail extension to Lynnwood and also identified the benefits of the I-5 alternative.

Edmonds School District

The school district wrote regarding its plans for three properties near the corridor and encouraged the project to develop alternatives that could avoid impacting the properties. While the District did not take a position on any of the alternatives under consideration, it stated that the properties were important components of its long-range property plan approved by voters in 2006. The District's properties include land to be developed as a District Support Site, located south of the Lynnwood Transit Center; the "Melody Hill" site located on the southwest corner of I-5/SW 220th Street SW in Mountlake Terrace; and the Evergreen Elementary School site at 236th Street SW in Mountlake Terrace. The District noted the latter two properties were important for revenue generation for the District's capital program.

Aurora Avenue Merchants Association

The association, which represents 515 business members located along SR 99 between 65th Street NW and 145th Street NW, wrote to express support for an I-5 light rail alignment and opposition to a SR 99 alignment. The association noted costs, travel time, environmental

impacts, and construction and community disruption impacts as key factors behind its position.

NEXT STEPS

Identifying the Draft EIS Alternatives and the Scope of the EIS – The public and agency comments received during scoping will help Sound Transit (at the direction of the Sound Transit Board) and FTA finalize the purpose and need for the project and identify the issues and alternatives to be considered in the Draft EIS.

In late 2011 or early 2012, the Sound Transit Board is expected to consider a motion to provide direction on the range of alternatives to be studied in the Draft EIS. The consideration of any motions will be conducted in regularly scheduled meetings of the Board and will be open to the public.

Draft EIS – Upon direction of the Sound Transit Board and in consultation with FTA, work on the Draft EIS is expected to begin in early 2012. The Draft EIS will take about 12 to 18 months to complete and issue for public and agency review, leading to publication in about mid-2013. The Draft EIS will be available for a minimum 45-day public comment period that will include public hearings.

After the close of the Draft EIS public comment period, the Sound Transit Board will consider public comments as well as the information in the Draft EIS when it identifies the preferred alternative for the Final EIS.

Final EIS – The Final EIS will complete the analysis of the preferred alternative along with the other proposed build alternatives and No-Build Alternative, and it will respond to the comments received on the Draft EIS. Work on the Final EIS is expected to begin in late 2013 with publication scheduled for 2014.

Record of Decision – After the publication of the Final EIS, FTA is expected to release a Record of Decision (ROD). The ROD documents findings by FTA that the project has met the requirements of NEPA and related environmental regulations. It describes the project, alternatives considered, the public opportunity to comment, the public comments and responses, the basis for the decision to approve the project, and mitigation measures required.

Attachment A – Parties Providing Scoping Comments

Scoping comments were received between September 30, 2011 and October 31, 2011 from the following agencies, organizations, and public individuals.

Federal Agency

Advisory Council on Historic Preservation (ACHP)

United States Environmental Protection Agency, Region 10 (EPA)

State Agency

Washington State Department of Archaeology and Historic Preservation

Regional Agency

Puget Sound Regional Council (PSRC)

Local Agency

City of Edmonds

City of Lynnwood, Community Development

City of Mountlake Terrace

City of Shoreline

City of Seattle

King County

Lynnwood Public Facilities District

Snohomish County

Organization

Shoreline Chamber of Commerce

Snohomish County Tomorrow, Infrastructure Coordination Committee

Economic Alliance & Snohomish County Committee for Improved Transportation

Public

Allen, Jim
Anonymous 1
Anonymous 2
Anonymous 3
Anonymous 4
Ballard, Marilyn
Battey, Chris & Sora
Bauer, Andrew
Beisse, Mark
Betz-Zall, Jonathan
Bond, Donna
Buss, Alison
Callahan, Kevin S.
Cannon, Ed & Doris
Cecil, Michael
Chamness, David
Clute, Brian
DeRepentigny, Mike
Dewhirst, John S.
DiPeso, Wendy
Donohue, Kellen
Fraker, Tracy
Frare, Therese
Fulford-Foster, Jeremiah
Genin, Laura
Gilcreest, Ralph
Goodman, Eric
Gosse, J.
Gould, Tim
Gstead
Hale, Patricia
Halvorson, Erik
Ham, Ken
Henthorn, Carl
Ingreham, Larry
Kelly, Shay
Knoke, Mark
Kulseth, Greg
Laura
Lawson, Rich
Levin, Joe
Link, S.T
Lumansoc, Gerry
Matway, Melanie
McCaig, Gary
Miner, Randy
mlumansoc
Morgan, Paul
Moss, Donna
Murti, Deven Bjorn
O'Donald, Julie
Palmer, Paula
r2d2griff
Peterson, Dan
Peterson, Jan
Rocco, Frank
Rogers, Mark
Shaw, Jim
SIG516AR
Sinnott, Larry
Spinney, Tom
S.R
Stumpf, Fred L.
talbotjs
Usen, Mike
Wasikowski, Joseph
Wijayratne, Ramona
Wilkie, Mary Anne
Zeitlen, Patty

Attachment B – Agency Meeting Attendees

Agency Scoping Meeting
2:00 p.m. – 4:00 p.m.
October 11, 2011
Shoreline Conference Center

Attendees:

Name	Title	Organization
Allan Giffen	Director, Planning and Community Development	City of Everett
Tom Hingson	Director, Transportation Services	Everett Transit
Carrie Deichl	Environmental Protection Specialist	FTA
Dan Drais	Environmental Protection Specialist	FTA
Gil Cerise	Senior Transit Planner	PSRC
Janiene Lambert	City Center Program Manager	City of Lynnwood
Steve Butler	Director, Community Development	City of Mill Creek
Bert Hauss	Transportation Engineer	City of Edmonds
Stephen Clifton	Director, Economic Development	City of Edmonds
Liz Gotterer	Transit Planner	King County Metro
Mike Usen	Senior Transit Environmental Planner	King County Metro
Jay Larson	Transportation Specialist	Snohomish County
David True	Manager, Capital Development	Community Transit
June Devoll	Manager, Strategic Planning and Grants	Community Transit
Alicia McIntire	Senior Transportation Planner	City of Shoreline
Dylan Counts	Sound Transit Liaison	WSDOT

APPENDIX B

MARCH 2012 DROP-IN SESSION SUMMARY

Background & Summary

In March 2012, the North Corridor Transit Project outreach team and technical staff conducted outreach in the project area to engage residents about project progress. This outreach builds on a fall 2011 comment period, compliant with NEPA (National Environmental Policy Act) and SEPA (State Environmental Policy Act) scoping requirements and procedures. Since then, the Sound Transit Board identified the I-5 corridor route and light rail mode as the most promising for further study.

The North Corridor Transit Project will extend light rail from Northgate to Lynnwood, and is a component of the 2008 ST2 package approved by Puget Sound voters. To plan this route and seek competitive federal grant funding from the Federal Transit Administration, an Alternatives Analysis process (requirement of New Starts guidelines), was completed in 2011 to determine the corridor and mode for mass transit expansion beyond Northgate.

The next step is to determine alternatives for analysis in a draft Environmental Impact Statement. Between December 2011 and March 2012, the technical team completed preliminary work to explore alternative routes and stations. To "show our work" and explore these options with the public, the project team engaged in a round of outreach in March 2012, at ten casual, drop-in venues. Through this effort, the project team engaged in over 450 discussions in the project area.

Outreach Overview & Purpose

Ten drop-in sessions held between March 13 and March 24 provided an informal opportunity for the public to speak to members of the project team and ask questions related to I-5 alignment(s) and potential station locations. The sessions were held at locations across north Seattle, Edmonds, Mountlake Terrace, Shoreline and Lynnwood. The objectives of the drop-in sessions included:

- **Engage:** Provide an informal opportunity for the public to speak to members of the project team and ask questions.
- **Educate:** Provide Sound Transit and North Corridor Transit Project background information.
- **Update:** Provide information on project status and how input has informed corridor selection to date.
    - Explain I-5 selection as most promising alternative corridor.
    - Provide detailed information on potential station locations.
- **Get local:** Offer opportunity for input on exact station location, and offer opportunity for input on station access.
- **Go "where people are":** Host events in locations where Sound Transit could achieve the above objectives while residents were already out and about.
- **Identify:** How input will be used, next steps, the overall project schedule, and opportunity for public involvement.

Themes and Take-aways from Engagement

- Overall, there is general support and excitement, and growing knowledge of, the North Corridor project.
- Specific recommendations and preferences about potential station locations are taking shape. For instance, the N. 185th St. station area received the most comments as a single station. However, given the "either/or" options of N. 145th St. with N. 155th St. and either N. 125th St. or N. 130th St., that combination of stations elicited three times as many comments.

- There is general support of the I-5 corridor for alternatives, with minimal SR 99 commentary about why it's no longer an option or how the decision was made to look at I-5.
- Questions and concerns were common related to potential future transit-oriented development, pedestrian and bike access to stations, to make the route as successful as possible, or in contrast, due to neighborhood effects.
- Decision-making and timing is a personal topic. Participants asked questions about timing of decision making, construction and completion for personal decision-making and daily commutes. This was especially relevant to those participants who have concerns about real estate required for light rail construction.

Participation

Project team members engaged approximately **456** individuals over the course of the ten sessions.

Visitors to the sessions responded well to the casual meeting format and the opportunity to talk one-on-one with project staff. Anecdotally, approximately two-thirds of participants attended because they received a postcard or were notified in another way. However, these drop-in sessions also reached a wide spectrum of the community, that included those who might not attend a large public meeting. Occasionally, project staff received questions about the format, as some members of the public expected a formal presentation.

In addition to citizens, several elected officials and staff from local jurisdictions and agencies attended multiple sessions. These included representatives from Mountlake Terrace, Shoreline, Edmonds, Community Transit, Edmonds School District, and WSDOT.

A variety of input was received: **154 written** comments and an additional **100 verbal** themes noted by project representatives. Contact information was collected through comment forms and sign-in sheets, with **134** individuals added to the project GovDelivery email list to receive future project updates.

Notification

Postcard notice

A saturation postcard was mailed to approximately 41,300 single family homes, apartments and businesses, hitting mailboxes beginning on February 29. The general distribution area included a half-mile area around the I-5 corridor, from Northgate to the Lynnwood Transit Center, including some areas further to the east and west.

Bundles of postcards were dropped off at dozens of area locations with high foot traffic, based on organization and stakeholder research in the project area. Approximately 30 locations were hosted for postcard delivery two weeks prior to the drop-in sessions, including:

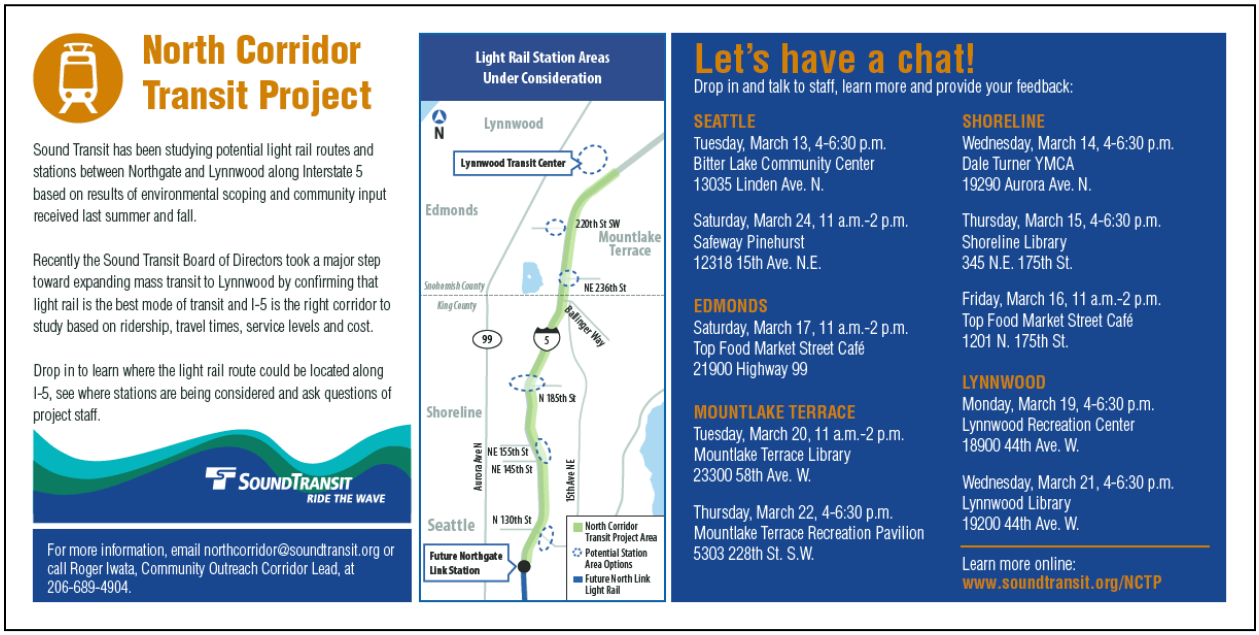
- Shoreline Senior Center
- Shoreline Recreation Center
- City of MLT Recreation Pavillion
- Alderwood Vocational Rehabilitation
- Northgate Community Center Alderwood Mall
- Alderwood Boys & Girls Club
- Plaza Latina
- North Seattle Community College
- MLT Library
- Northgate Public Library
- Lynnwood Community Services
- Dale Turner YMCA
- Safeway Pinehurst

- Roger's Marketplace
- Rancho Grande
- Korean Beef Soup
- European Food Store
- Jewel Box Café
- Ballinger Commons
- Shoreline Community Church
- Lynnwood Public Library
- H MART (Asian grocery)
- Community Health Center
- Top Food - Edmonds
- Top Food - Shoreline
- Bitter Lake Community Center
- Shoreline Library
- Lynnwood Recreation Center

Additionally, postcards were hung on community bulletin boards at the following locations:

- Starbucks Northgate
- Donut House Northgate
- Patty's Eggnest
- QFC Northgate
- Starbucks at 125th/15th
- Brown's Coffee House
- Starbucks SR 99/220th
- Garden Café
- Local Yolk
- Starbucks SR 99/205th
- Sky Nursery
- Safeway SR 99/155th
- Starbucks SR99/130th
- Starbucks SR99/185th

Drop-in session postcard



Community calendars

A community calendar announcement was e-mailed or posted when possible on the following calendars:

- Shoreline Patch
- Shoreline Currents
- Shoreline Area News
- City of Shoreline
- City of Everett
- City of Lynnwood
- City of Edmonds
- City of Mountlake Terrace
- Publicalendar (Publicola)
- Aurora Avenue Merchant's Association
- Snohomish County Tourism Bureau
- So. Snoco Chamber
- Everett Chamber of Commerce Snohomish County EDC
- Feet First
- City of Seattle calendar
- Tu Decides Calendar

Community blog display ads

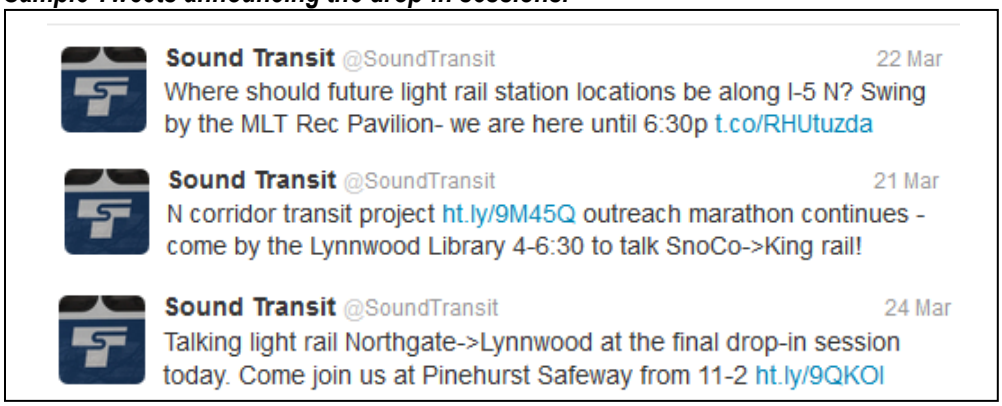
Ad space was purchased on local community blogs, including:

- My Edmonds News
- Lynnwood Today
- Seattle Transit Blog

Website, email and social media notification
Other notification tools were used, including:

- E-update to GovDelivery list (approximately 1,765 individuals)
- Sound Transit Twitter and Facebook pages (5,537 followers; 2,622 fans, respectively)
- Website updates (agency activities calendar and project website)

Sample Tweets announcing the drop-in sessions.



At least one participant visited as a result of the Twitter announcements.

Earned Media

The drop-in sessions garnered media attention outside of deliberate advertisements and calendar postings, with area media sources reporting on the project itself as well as the drop-in sessions. These included:

Articles (print/online)

- "Help Sound Transit Pick Light Rail Locations," Everett Herald, March 16, 2012
- "Light Rail Along I-5: Informational Meeting Coming Up Next Week," EdmondsPatch, March 7, 2012
- "North Corridor Meetings Start Tomorrow," Seattle Transit Blog, March 12, 2012
- "Extending light rail from Northgate to Lynnwood," Shoreline Area News, February 29, 2012
- "Reminder: More community drop-in sessions this week for northend light rail planning," My Edmonds News, March 18, 2012

News
Light Rail Along I-5: Informational Meeting Coming Up Next Week
The event will be held at Top Food & Drug in Edmonds.
By Patch Staff | Email the author | 5:20 am
Recommend Tweet 0 Email Print Comment
Sound Transit is encouraging community members to stop by Top Food & Drug in Edmonds next week to get a look at potential light rail station and alignment locations between Northgate and Lynnwood.
The event will be held March 17 from 11 a.m. to 2 p.m. at the Top Food Market Street Café, 21900 Highway 99.
The new light rail line that Sound Transit is preparing to build along the I-5 corridor is part of the Sound Transit 2 extensions to the north, east and south approved by voters in 2008.
Upload Photos and Videos

TV News segments

- King 5 News, March 15, 2012

- Q13 Fox News, March 16, 2012

Drop in Set-up and Venues

Drop in venues were set up similarly to fairs and festivals: targeted materials, with easy-to-maneuver layout and nimble infrastructure. Booths were placed in high foot traffic areas, with a layout intended to be simple, inviting and graphics-based with maps to generate discussion. Materials included:

- Table-top roll-plots showing overall route map and relevant station locations with post-its and markers to comment.
- Quick screen banners to catch people's attention in crowded areas, to pose a "What do you think" question, and identify the corridor and potential station locations.
- Project fact sheets and general Sound Transit service information.
- Four comment mechanisms:

    - ***Verbal comments*** were tracked by staff and summarized after each session.
    - ***Written comment forms*** were available and were the most popular method of commenting.
    - ***Written comments*** could be left on the roll-plot map to comment on specific locations.
    - ***Electronic comments*** could be made via an iPad, used several times as an alternative to the written comment form.
    - ***Email comments*** were also accepted.

The location of each drop in session was selected based on potential natural foot traffic, and proximity to potential station locations. Varying times (11 a.m.-2 p.m. and 4-6:30 p.m.) were used to coincide with busy times at each location and to accommodate varying potential attendee schedules. Drop-in sessions were hosted in locations where foot traffic was high in order to catch public attention without a formal invite.

Drop-in session locations, date and time

SEATTLE
Tuesday, March 13, 4-6:30 p.m.
Bitter Lake Community Center
13035 Linden Ave. N.

Saturday, March 24, 11 a.m.-2 p.m.
Safeway Pinehurst
12318 15th Ave. N.E.

EDMONDS
Saturday, March 17, 11 a.m.-2 p.m.
Top Food Market Street Café
21900 Highway 99

MOUNTLAKE TERRACE
Tuesday, March 20, 11 a.m.-2 p.m.
Mountlake Terrace Library
23300 58th Ave. W.

Thursday, March 22, 4-6:30 p.m.
Mountlake Terrace Recreation Pavilion
5303 228th St. S.W.

SHORELINE
Wednesday, March 14, 4-6:30 p.m.
Dale Turner YMCA
19290 Aurora Ave. N.

Thursday, March 15, 4-6:30 p.m.
Shoreline Library
345 N.E. 175th St.

Friday, March 16, 11 a.m.-2 p.m.
Top Food Market Street Café
1201 N. 175th St.

LYNNWOOD
Monday, March 19, 4-6:30 p.m.
Lynnwood Recreation Center
18900 44th Ave. W.

Wednesday, March 21, 4-6:30 p.m.
Lynnwood Library
19200 44th Ave. W.

Key Themes from Feedback

The following key themes were developed based on a qualitative analysis of discussions and comments from the drop-in sessions.

- Individuals frequently expressed general support and excitement about the project. Many comments and questions were **general in nature to the North Corridor project**. Participants asked a broad range of questions regarding timing of station choices, final design and completion.
- Participants also consistently asked questions related to station **parking**. Specifically at stations areas that currently lack adequate parking facilities, such as N. 145th St.
- Several participants had concerns regarding **bus and vehicle connections** to the stations and encouraged alternative transportation to stations by increasing **east – west** bus service.
- **Pedestrian and bike access** was another issue that generated comments. Commenters requested infrastructure, including sidewalks and bike lanes, be added near stations.
- Several comments related to increasing **development** around stations and ensuring station locations and transit provide access to local business districts and dense residential areas.
- In total, all comments related to access – parking, pedestrian, bus, east-west connections, and development – constituted over 80 specific comments, one of the more frequent themes.
- General questions related to Sound Transit's decision process also arose. Specifically, these came from residents located along the alignment and/or near potential stations expressing concern over **potential right-of-way acquisition**. Some of these residents, who are anxious about the process ahead, noted the location of their house on the roll-plot maps and provided input on their preference for station location and siting. They have questions and concerns related to timing and the property acquisition process. These property owners will continue to follow project progress.
- There was general **support of the I-5 alignment** with minimal commentary about SR 99 and why it is no longer an option.
- The roll-plot maps successfully facilitated a dialogue with participants about the project alignment and specific station locations. Many used the map to provide **input on station locations** and identify particular resources like parks, facilities, streams and topography. The most station-specific comments came in related to N. 145th St. vs. N. 125th/130th and N. 155th St. There is roughly an even split in preference between the two options. When mentioning N. 155th St., these commenters reflected a preference for N. 130th St. over N. 125th St.

Themes by Topic Area

Specific comments and themes are addressed below, including comments on specific station areas. All verbatim comments can be found in Appendix A.

General project questions and comments

The most frequent general topic of conversation surrounded general project questions and comments (45 total). Participants were generally very excited and supportive of the project. Questions primarily related to when the project would be operational, when the final alternatives would be ready, accessibility for elderly and handicapped, noise reduction measures and environmental impacts. Representative comments include:

- "Please do this as soon as possible! "
- "When will we have more info on the alternatives?"
- "Will it be elevated or at grade?"
- "How often will the trains run?"
- "The closer to existing park and rides and commercial the better."
- "Are you considering transit time in your evaluation?"
- "We'll use light rail all the time."
- "This process is moving too slow!"
- "I'm very excited about this project. When will it be open?"
- "Hooray for light rail to Lynnwood!"
- "This is exciting. I have a small home of 35th and 208th Pl SW. Looking forward to walking to transit center and taking fast transit to Seattle."

Parking Availability

Approximately 25 comments received related to parking availability. Many participants asked that there be ample free parking at stations, as other transit centers fill up quickly. Simultaneously, participants were concerned about parking overflow on neighborhood streets surrounding potential station locations. Representative comments included:

- "Please make sure there is parking near the transit stations."
- "The biggest concern is parking."
- "No land available for parking. People who can't drive to station won't ride the train."

East-West Bus and Vehicle Connections

Approximately 15 comments received were related to east-west bus and vehicle connections. Many comments related to ensuring reliable, frequent east-west bus connections from stations, and providing bus connections to key transportation points. Representative comments include:

- "Bus access to stations from E & W are key. Right now no service."
- "Cross town buses are too infrequent."
- "There should be buses running every 5 minutes running east-west along 130th St, 145th St, Northgate Way, etc."

Bike and Pedestrian Access

Approximately 15 comments received were related to bike and pedestrian access. Comments said it important to promote pedestrian and bicycle access to stations by adding infrastructure (sidewalks, overpasses, bike lanes, etc.) so stations can be accessed by means other than a car. Participants provided specific suggestions for locations for improved pedestrian access (included in specific station input below).

- "Consider pedestrian west to east of I-5 access to the light rail station."
- "Neighborhood needs pedestrian improvements in conjunction with station development (very few sidewalks). Also work with City of Shoreline for prioritizing city-funded sidewalks in neighborhoods."

Development around stations

Approximately 10 comments received were related to development around stations. Comments related to increasing transit oriented development and providing access to local business districts and dense residential areas. Representative comments include:

- "Stations should be designed in a way to include shops, stores, living spaces."
- "The development around the identified stations (Shoreline) will add to the economic growth of the community."
- "Can't we integrate stations into some sort of complex? A station by itself is a waste of space and land."

Property acquisition

At least 20 property owners adjacent to the project area attended the drop-in sessions and commented or asked questions. Shoreline drop-in sessions generated the most comments related to potential property acquisition.

Residents near alignment and stations have concerns about property acquisition and the uncertainty of station locations. There was a preference for stations that avoid property acquisition. Those in close proximity to the alignment have concerns about the impacts to property values. If property acquisition were required, there were concerns that assessed property values would be too low. Representative comments include:

- "Please ensure against situation similar to Seattle Monorail Project in Ballard. If lots acquired by eminent domain and the project is abandoned, displaced property owners should be given right of first refusal to re-purchase their lots at or below the amount they were paid."
- "When will properties be purchased?"
- "I would like to know that all our concerns about the land be given a serious thought and the consequences of progress not cost our homes."
- "Please stay on the current WSDOT right of way… Please leave homes alone*."*

General service information and other ST topics

Comments related generally to Sound Transit were also heard. A handful of visitors mentioned the independent study by James MacIsaac featured in the Weekly Herald (3/21/2012). Other comments included:

- "Reinstate bus routes between Lynnwood Transit Center and Northgate until project is complete."
- "Provide free parking at Northgate Station for all the local neighborhoods."
- "What will light rail do to help with parking at the already crowded Northgate area?"
- "Important to have security at all light rail stations."

- "Current seats on light rail are narrow and too hard."
- "The walk from the Sea-Tac station to the terminal is too far. Moving sidewalks should be installed."
- "Provide electric vehicle charging at stations."
- "What has been given back to the Shoreline community as a result of I-5 being built, bus barn at N. 165th St., and 15th Ave. N. condensed to two lanes? All of which has impacted the quality of life."

Themes by Station Area

The following comments summarize key themes and specific suggestions for each potential station location.

I-5 Route

Approximately 35 comments received were related to the I-5 alignment. There was general support of the I-5 alternative with minimal SR 99 commentary about why it's no longer an option or how the decision was made to look at I-5. Commenters expect the I-5 alignment to reduce traffic and congestion. Representative comments include:

- "The closer to existing park and rides and commercial the better."
- "There should be a pedestrian/bike bridge (over I-5 near Northgate)."
- "Alignment from Lynnwood to Downtown, and eventually Bellevue, will be very beneficial."
- "I'd love light rail on I-5."
- "I support the I-5 option, to consolidate traffic and minimize property impacts."

N. 125th St. Station Area

Approximately 25 comments received were related to this station area. Seattle drop-in session visitors were the most likely to offer a preference for this station in combination with a N. 155th. St. station, however overall, it did not show as preferable as N. 130th to commenters in terms of number of comments. Representative comments included:

- "This station would serve Lake City."
- "If we have N 125th St station area in further, it will help a lot of people in Northgate area especially patients going to Northwest hospital."
- "I highly suggest putting a LINK station on the east side of I-5 at 125th St or 130th St. I live in Pinehurst and feel it would add so much to the community, and basically enable me not to have a car."

N. 130th St. Station Area

Approximately 40 comments received were related to N. 130th St. Seattle drop-in session visitors were the most likely to offer a preference for this station in combination with a N. 155th. St. station. Comments said the area is generally more walkable and accessible from surrounding neighborhoods, including two urban villages, and the area has more land available for growth. Representative comments included:

- "N. 130th St. would be better than 145th--more land for growth around it."
- "N. 130th St. crosses I-5 and N. 125th St. does not…important for pedestrians and cyclists."
- "This station would serve Lake City."

N. 145th St. Station Area

Nearly 50 comments received were related to this station area. Shoreline and Seattle drop-in session visitors generated the most comments due to proximity to the station. Many thought the area would be a good spot for a station because of the many bus transfer stops, but there is also heavy traffic in the area. When commenting on 145th, there was a slight uptick of commenters stating a general preference for N. 145th St. station over N. 130th St./125th St. and N. 155th St. combination. However, those who preferred abandoning N. 145th stated the street is not pedestrian friendly, or that the area is already over-crowded with parking, so the potential station would need additional parking. They reflected that in general the existing park and ride facility generates commuters parking on neighborhood streets. Representative comments include:

- "N. 145th St. is too close to N. 130th St."
- "Arterial has potential for a transit corridor."
- "Station area is isolated from neighborhoods."
- "I prefer station at N. 145th St. - more function position and on a very active street and the location is very accessible."

N. 155th St. Station Area

Approximately 40 comments received were related to N. 155th St. Seattle and Shoreline drop-in session visitors generated the most comments. They reflected that the area is walkable and accessible from several neighborhoods east and west of I-5, and stated that N. 155th St. is also an important corridor for cyclists. Many said the N. 155th St. area is residential with slower traffic, however expressed a concern about the increased traffic a station would bring. Representative comments include:

- "No easement/right-of-way for station. Wet lands. Park."
- "No land available for parking."
- "A station at N. 175th St. would provide better connectivity to North City and Aurora."

N. 185th St. Station Area (East or West)

Approximately 50 comments received were related to N. 185th St. Shoreline drop-in session visitors generated the most comments due to proximity. There was split preference between east/west side locations. Regardless of location, many asked for the incorporation of pedestrian improvements in conjunction with station development. There is some concern among residents related to increased traffic in the area and commuters parking in surrounding neighborhoods. Commenters also conveyed that area is also an important corridor for cyclists. Representative comments include:

- "Shoreline Stadium/Shoreline Conference Center could be used for shared parking."
- "There isn't enough area to support the increase in traffic and the impact on the residents there would be very detrimental."
- "I'm thrilled at the prospect of a station on east side of freeway at N 185th—that would be within walking distance of my house and therefore would get frequent use by me."

Mountlake Terrace Station Area

Approximately 20 comments received were related to this station area. Most offered a preference for a station east of I-5 at the existing transit center. Several noted this is a good station location because it is best to couple multiple transit modes at one station.

- "Current station should be enclosed."
- "Create walkway west of Mountlake Terrace Transit Center to avoid N. 205th St./I-5/interchange."
- "Create walkway to businesses near 15th Ave. N.E. and Ballinger Way N.E."

220th St. S.W. Station Area

Approximately 10 written comments received were related to this station area, with Shoreline drop-in session visitors generating the most comments.

- "Suggest not including a station at N.220th St. and keeping the alignment as straight as possible."
- "This would serve Premera, which is the biggest employer in Mountlake Terrace."

Lynnwood Transit Center Station Area

Approximately 15 comments received were related to the Lynnwood Transit Center. Lynnwood drop-in session visitors generated the most comments due to proximity, however many Lynnwood comments were general in nature. Overall, this station likely did not generate many comments due to the assumption that the station will be incorporated into Lynnwood Transit Center in some form, and further analysis and design detail are required. Some commented that there should be easy access to the Alderwood Mall. There were some concerns about the potential station's proximity to wetlands.

- "Place station as far as possible from I-5 to increase walkability."
- "Put Lynnwood Station as close as possible to the transit center."
- "Will the Lynnwood station be located in the swamp?"

Next Steps

The technical team will use the input compiled in a variety of ways:

- In combination with technical analysis, recommendations will be made to the Board of Directors for alternatives for further study in the draft Environmental Impact Statement.
- Continuing to develop alternatives – route development.
- Continuing to develop alternatives – station location detail and access improvements that can be made by Sound Transit or coordinating agencies (cities, King County Metro and Community Transit).

The team will continue to engage the public in the project area as the project progresses. While the next "formal" comment period is the draft Environmental Impact Statement (expected in Spring 2013), this outreach proved successful in the North Corridor project area and provided the team with ideas for future outreach. Specifically:

- Going "where people are" allowed the team to have detailed conversations, yet simultaneously catch people who may not have heard of the project. The project will continue to seek these outreach opportunities through fairs and festivals and other venues at appropriate junctures.
- Scheduling additional organizational briefings with neighborhoods and other groups in the corridor to continue to gather feedback and educate people about the project.
- Collaborating with the technical and environmental team and Sound Transit Real Estate, when the team has new information to share, to determine a best time to engage direct neighbors of the project about potential property impacts.

APPENDIX A

North Corridor Drop-in Sessions: By the Numbers

Date	Location	# of Visitors	Sign-Ins	Comment Forms	iPad Comments	Verbal Comments Noted	Roll Plot
March 13	Bitter Lake Community Center	33	N/A	15	1	14	16
March 14	Dale Turner YMCA	28	13	7	1	12	0
March 15	Shoreline Library	68	38	22	0	5	29
March 16	Top Food – Shoreline	68	9	17	0	20	6
March 17	Top Food – Edmonds	28	10	3	0	15	0
March 19	Lynnwood Recreation Center	42	19	4	0	10	0
March 20	Mountlake Terrace Library	21	11	1	0	12	0
March 21	Lynnwood Library	49	16	5	0	8	0
March 22	Mountlake Terrace Recreation Pavilion	76	10	7	0	11	0
March 24	Safeway Pinehurst	43	9	16	0	10	0
Email Comments		N/A	N/A	4	N/A	N/A	N/A
TOTAL		456	135	101	2	117	51

The table below shows the number of comments (written and verbal) received about specific station locations and topics organized by the drop-in session city where the comment was received.

Number of comments received by city and topic*								
	Lynnwood (3/19, 3/21)	Shoreline (3/14, 3/15, 3/16)	Mountlake Terrace (3/20, 3/22)	Edmonds (3/17)	Seattle (3/13, 3/34)	Email	**Totals**	
Total Comments Received at Drop-In Locations	28	120	32	17	71	4	**n/a**	
I-5 route at:	4	15	3	3	9	1	35	
N. 125th St. Station Area	1	5	2	1	14	1	24	**154**
N. 130th St. Station Area	1	14	1	0	23	1	40	
N. 145th St. Station Area	1	27	2	2	16	1	49	
N. 155th St. Station Area	1	22	3	0	14	1	41	
N. 185th St. Station Area (E or W)	2	34	3	2	4	2	**47**	
Mountlake Terrace Station Area	1	10	3	1	7	1	23	
220th St. S.W. Station Area	1	4	1	0	3	0	9	
Lynnwood Transit Center Station Area	4	4	0	1	5	1	15	
Property Acquisition	0	16	2	0	4	0	22	
Parking/Access	6	34	5	4	22	2	**73**	**83**
Development around stations	2	5	0	0	3	0	10	
North Corridor related questions (general)	5	13	13	3	11	0	**45**	
Study Area	2	9	1	1	8	1	22	
General Sound Transit	0	4	0	2	4	0	10	

**Please note, while 154 total written comments were received during this outreach series. Any one of these comments could address multiple topics, as reflected above.*

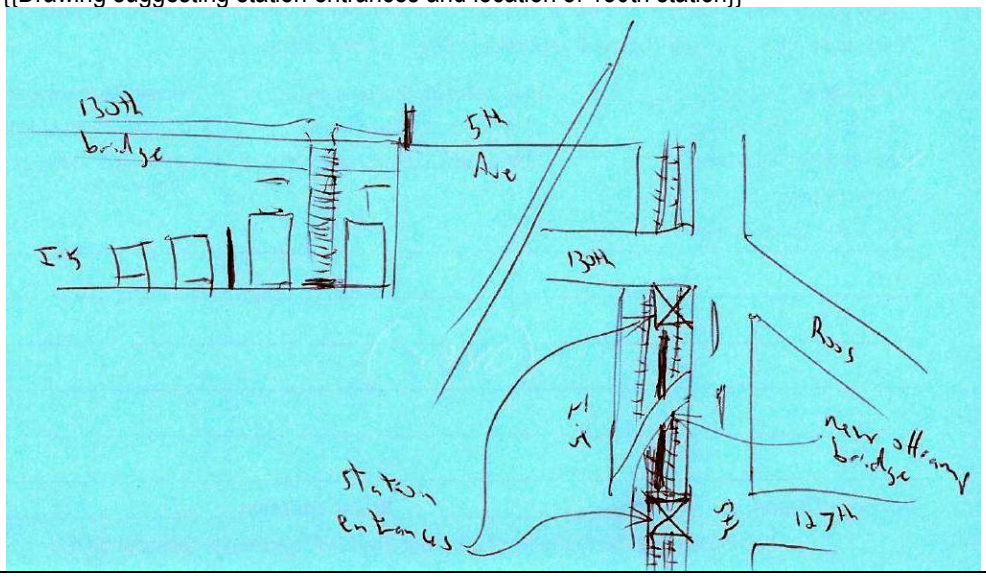
APPENDIX B

Verbatim Comments

The following are comments received via comment forms, iPad online comment form, rollplot, and conversations with project representatives organized by drop-in session location.

Please note: Verbal comments are notations of comments heard, summarized by project representatives. Verbal comments should not be construed as verbatim comments, and could be repeats of general sentiments expressed in written comments received.

Source	Comment
Bitter Lake Community Center, Seattle Tuesday, March 13, 4-6:30 p.m.	
Comment Form	I think if we have N 125th St station area in further, it will help a lot of people in Northgate area especially patients going to Northwest hospital.
Comment Form	Biggest concern is ridership – hitting projected numbers. Please be sure to work with Metro, King County, Seattle, Snohomish County to increase east-west bus connections and to increase TOD/density. Hitting ridership numbers is imperative if we are to pass ST III.
Comment Form	I prefer a station at NE 130th St over NE 125th St because 130th crosses I-5 and 125th does not. Not important for drivers but important for pedestrians and cyclists, and presumably a future Metro bus route could travel on 130th to link with light rail service. Regarding the proposed station at 155th, it seems a station at 175th would provide better connectivity to North City and Aurora.
Comment Form	1. New multi living homes on east side of I-5, 2. Deep unsuitable material in 145th/5 NE, 3. Old garbage dump east side of I-5 at NE 165th St
Comment Form	I highly suggest putting a LINK station on the east side of I-5 at 125th St or 130th St. I live in Pinehurst and feel it would add so much to the community, and basically enable me not to have a car. Also, I would suggest some express trains from SeaTac to the North Seattle area (only stopping at a few major stops).
Comment Form	Please stay on the current WASH DOT right of way. Prefer station N of 130th at Park and Ride. Please leave homes alone. Prefer station at 145th.
Comment Form	N. 145th St station area is isolated from neighborhoods. N. 130th and 155th stations would be more walkable and accessible from several neighborhoods east and west of I-5. Having 130th and 155th (pair) provides a more pedestrian focus whereas 145th, a more drive to park and ride facility.
Comment Form	The I-5 route will destroy the Bitter Lake Urban Village. 145th St is NOT a good location for a station as it is very condensed already and there will be immediate pressure to create an urban village around the station (Roosevelt) which will make things even worse. No area for commuter parking here either (if Snohomish Co. can have HUGE commuter parking, we should be able to as well.
Comment Form	130th would be better than 145th--more land for growth around it, plus a good cross-city bus route to Bitter Lake and Lake City. The south side of 130th would be better than the north side, for greater walkshed.

Source	Comment
	Lynnwood: as far as possible from I-5 for greater walkshed.
Comment Form	I am very concerned about environmental issues, in particular the Thornton Creek Watershed. Please be careful of the system and wreak no further harm during construction. The creek system is a hallmark of NE Seattle and Shoreline as well. It also serves vital infrastructure functions. When the projects are finished the tributaries should also function on enhanced open space and greenbelts, more vital than before. Thank you!
Comment Form	I favor option 1 over 2, and 1a over 1b, that is, 155th over 145th, and 130th over 125th. 130th better serves both sides of I-5, and better serves transit, future if not present. 130th is on a direct route between 2 urban villages, making it ripe for an east-west bus route. 145th is too close to 130th making 155th better. 155th has more walkable destinations. 145th is too busy to be pedestrian friendly. --- I urge you to use some of your pedestrian/bicycle access funds and work with the city to create a sidewalk west of I-5 on Roosevelt, then 135th. This is the shortest route to Ingraham HS, but Roosevelt currently is muddy and/or unsafe for peds. This diagonal street can extend the "walkshed" to more blocks. Working with WSDOT to connect Roosevelt to 130th at I-5 with a ped. Path would be ideal, but is not necessary. --- Consider building the alignment level and straight so that an infill station can be added in the future to serve Northwest Hospital/Northgate North. --- I used to work near Ballinger Way and 15th. The transit, bicycle, and ped. Options for getting there are all poor. Please, please work with Mountlake Terrace to create a ped/bike path heading due south from the Mountlake Terrace station, where the elementary school used to be. This path can serve the office building, cinema, extended stay hotel, and other businesses.
Comment Form	{{Drawing suggesting station entrances and location of 130th station}} 
iPad	I like the plans that I have seen so far but Think that a station at 130th would draw lots of ridership along with a station at 155th. A station at 145th might be good for bus connections but is blocked by the golf course and it would be hard to draw walk on riders. I don't want a huge reliance on park and rides to get to link Light Rail as it would cost Sound Transit more than improving bus connections. As far as the north part, I would suggest not including a station at 220th and keeping the alignment as straight as possible (using the median freeway station at MT) to achieve the least possible travel time between Lynnwood and Northgate Transit Centers. Thanks for the informational open house.
Roll Plot	You are on the right track

Source	Comment
Roll Plot	Is a walkway possible here to avoid walking through 205th/I-5/Interchange? (West side of Mountlake Terrace Transit Center)
Roll Plot	Walkway to businesses near 15th and Ballinger (east side of Mountlake Terrace Transit Center)
Roll Plot	Do NOT put a station here at 145th. Thank you.
Roll Plot	Hill (near east side of 155th/I-5)
Roll Plot	Hill (near west side of 145th/I-5)
Roll Plot	High auto traffic (145th/I-5)
Roll Plot	Noted location of Thornton Creek (east of I-5)
Roll Plot	Sidewalk to Ingraham High School and Helene Madison pool on Roosevelt and 135th
Roll Plot	Stations with entrances at 130th and 127th. Below 130th? Included drawing.
Roll Plot	Potential future station near bridge over I-5, to serve Northwest Hospital and the north end of Northgate neighborhood. Please build straight and level, if possible, to allow future station. (East side of I-5, South of 130th St Station area)
Roll Plot	Need east-west bus route between urban villages
Roll Plot	Do not use NSCC parking lot to replace NG parking!
Roll Plot	Ped/bike bridge (over I-5 near Northgate)
Roll Plot	Off ramp over station? Station over everything? (Drew potential alignment and station location)
Roll Plot	Noted urban village location at Aurora and N 130th St
Verbal	I live at 126th St
Verbal	I live at 8th and 127th
Verbal	What are the dimensions of the stations?
Verbal	What impact will you have on the new public housing?
Verbal	155th doesn't seem connected to anything and 145th is connected but a nightmare!
Verbal	How high is the voltage on the wires?
Verbal	It looks encouraging!
Verbal	East/West connections most critical for bus/making project work
Verbal	130th more logical than 125th
Verbal	Update website with comment form
Verbal	When will you know more?
Verbal	Is Northlink "real"?
Verbal	What is elevated vs. not?
Verbal	How will you deal with overpasses? Interchanges?
Dale Turner YMCA, Shoreline Wednesday, March 14, 4-6:30 p.m.	
Comment Form	I need will lot of my computer online for googlemail.com. I want to say thank you for your time. Have a nice day. I would like you're hope me good time today. {{sic}}
Comment Form	Buses fleet New MCI buses 2012 delivery?
Comment Form	Light rail route from Lynnwood to Seattle/Bellevue/SeaTac from home Lynnwood and work YMCA light rail open 2023 Lynnwood.
Comment Form	Neighborhood needs pedestrian improvements in conjunction with station development (very few sidewalks) also work with City of Shoreline for prioritizing city-funded sidewalks in

Source	Comment
	neighborhoods.
Comment Form	Good to see this finally starting. I support the I-5 option, to consolidate traffic and minimize property impacts.
Comment Form	Our neighborhood is very close to the I-5 corridor. We are concerned about noise, soil erosion, elevated rails in our yards, property values and views.
iPad	Consider adding non rush hour direction trains to Boeing Everett and Mukilteo. Many drivers could get off the road if more trains run
Verbal	I'd love light rail on I-5, I'm so excited. When will this start?
Verbal	Wheelchair access at the stations is very important.
Verbal	Make it easy to get the bikes on board the trains.
Verbal	My home could be affected by the station to the east of N 185th St.
Verbal	The City of Mountlake Terrace likes the alignment next to the transit center.
Verbal	This is very good.
Verbal	When will homes and properties be purchased?
Verbal	When will homes be valued for purchase? My mortgage is for more than my home's worth.
Verbal	What is the eminent domain process?
Verbal	I like the station at N 155th Street but would also be happy with it at N. 145th Street.
Verbal	How large will the footprint of the tracks be?
Verbal	I really think we should be on SR 99 to serve more metropolitan areas.
Verbal	What is Sound Transit? How is it different than Metro?
Verbal	Need to have east-west service improved, especially to Shoreline Community College.
Thursday, March 15, 4-6:30 p.m. Shoreline Library	
Comment Form	My preference is station at N 155th St.
Comment Form	Preferred stations are checked above to give better regional access to local business districts and dense residential areas for Shoreline, Lake City, Lake Forest Park, Edmonds and Mountlake Terrace. I am a local resident and business owner on Aurora.
Comment Form	The 145th St station seems to make more sense rather than the combined 130th and 155th option. However, I do not find the 145th overpass to be pedestrian friendly. This is the reason I have never used the Metro stops at 145th. The sidewalk on the overpass is too narrow and the railing over I-5 is too low - not a comfortable place to walk for anyone with a fear of heights and fear of speeding cars. I think the overpass should be made wider to better accommodate pedestrians and bikes. The railings could be made much higher. If these amenities were made, considering the number of bus routes on 145th, the station would be well used.
Comment Form	While I support light rail, I oppose the construction of a station at 185th St. There isn't enough area to support the increase in traffic and the impact on the residents there would be very detrimental.
Comment Form	Please ensure against situation similar to Seattle Monorail Project in Ballard. If lots acquired by eminent domain and the project is abandoned, displaced property owners should be given right of first refusal to re-purchase their lots at or below the amount they were paid.
Comment Form	Concerned about multi-modal access to stations from the east side of the I-5 alignment for Lake Forest Park residents. Topography in this area has prevented efficient bus service, so park and ride facilities adjacent to stations is very important.

Source	Comment
Comment Form	Put stations at P&R lots (existing ones) easy transfers to other modes. Put at 145 - P&R lot can transition in the long term to TOD. Bus access to stations from E & W are key. Right now no service. On South LRT line, no one can get there unless drive. Put at grade as much as possible. ID areas of potential high levels of noise and plan early to mitigate in neighborhoods.
Comment Form	Having stations at 155th and 130th/125th would seem to indicate a slower speed. Also, 145th seems to be a nexus for transfer stops. How much more will cost increase for 2 stations vs. one? I'm okay with 185th eastside with improvements for accessibility and walking.
Comment Form	It would be a lot of help.
Comment Form	This would be great to expand it and convenient.
Comment Form	Your route shows this project as going through my house that I have owned and improved on since 1974. And the way the county keeps depreciating land values, this scares me! I am totally against this project. Either down the middle of I-5 or through the park, dump, bus station.
Comment Form	North Corridor stations in general. One of the problems I see is that all the stations are located in areas that just don't promote commerce. By this, I mean when you get off at these stations you have to drive to stores and shops. These stations should be designed in a way to include shops, stores, living spaces. Can't we integrate stations into some sort of complex? A station by itself is a waste of space and land.
Comment Form	Is my home at 363 NE 178th St, corner of 5th Avenue NE, clear enough or impacted by the right-of-way??
Comment Form	Need more info, 11300 1st Ave NE #222, Seattle WA 98125
Comment Form	Need more information. 11300 1st NE #202, 98125 206-367-7016
Comment Form	I want to know how long before they take it down like they did with the Interurban. 206-364-5557.
Comment Form	Want to know what area from 5th Ave NE to freeway the station will be. How much property would you take?
Comment Form	I will like to know that all our concern about the land being give a serious thought and the consequences of progress not cost our homes. {{sic}}
Comment Form	The biggest concern is parking
Comment Form	Please work with Shoreline, WSDOT and Sound Transit on the proposed improvements to 145. This arterial has potential for a transit corridor. Don't be deterred by current conditions.
Comment Form	I think the two stations should be 145th and 185th on west side.
Roll Plot	Future special service until so anytime by 2030 new Everett Station
Roll Plot	We thinkful would maybe to the future united or it willing can't see to future about Everett link light rail station center. {{sic}}
Roll Plot	I would unlike reknew it to try I might be however so long away into trip on link light rail. I will be available are learning how to planner I'll maybe be new wife - a new life was what I think about. New Lynnwood link lightrail I'd looking this likely us those on the street P&R city of Lynnwood on 44th Ave W until 2021-23. {{sic}}
Roll Plot	I like the 220th Street Station - closer to my home.
Roll Plot	Live in Shoreline, work at Premera - 220th in MLT. Would like a station there. Biggest employer in MLT.
Roll Plot	Yes for MLT P&R stop - couple as many modes as possible at 1 stop
Roll Plot	ID any areas of rail ahead of time where there may be noise - plan early for noise-reduction

Source	Comment
	for neighborhoods.
Roll Plot	No on west side of N. 185th. No - stadium too close, traffic congestion.
Roll Plot	Stadium/center complex foundation for parking. West side 185th
Roll Plot	185th West Site could provide less busy area for expand a commute grow. Good choice 185th.
Roll Plot	185th Yes - traffic/circulation concerns - enough capacity for buses (every 40 blocks Ngate 145th and 185th).
Roll Plot	I think that the 185th would be great yet how would it effect parking or current traffic.
Roll Plot	I like 155th and 185th
Roll Plot	Like 155th with additional parking.
Roll Plot	Not through my HOUSE. 170th and 1st NE
Roll Plot	No! 155th Yes 145 on eastside!
Roll Plot	145th Yes - needs P+R lot can yes as a potential TOD in future
Roll Plot	Parking - 145th with ample parking is better than 155th with parking but none at 130th, with bus service currently, people will drive to stations.
Roll Plot	Dual stations! 155th and 125th or 130th
Roll Plot	I prefer station at 145th more function position and on very active street (145) and location very accessible.
Roll Plot	510 and 511 stop here, 145th a good option!
Roll Plot	Prefer more stops vs. less.
Roll Plot	Shoreline Center/current parking lot by football stadium is opportunity site for shared parking structure. Rail parking by day during the week. School district activity nights and weekends.
Roll Plot	A transit station at 185th (west) would provide better access to the center of Shoreline and access to the business district on Aurora and Shoreline Center
Roll Plot	Crossing over to west side is an unnecessary cost. Put station on east side. (N. 185th St.)
Roll Plot	No land available for parking. People who can't drive to station won't ride the train. (N. 155th St.)
Roll Plot	No easement/right-of-way for station. Wet lands. Park. (N. 155th St.)
Roll Plot	Park and ride at 145th is filled over capacity! Plenty of rider potential for rail. Parking overflows out on to 5th. Bus riders even park as far north as 165th and 5th in the business area and catch the bus to go south. Business area/bus rider parking got so bad that 2 years ago Shoreline posted 2 hour parking limits
Roll Plot	Please work with Shoreline, WSDOT and Metro on the improvements planned for 145th. This arterial should have potential as a transit corridor.
Verbal	I need to find the timeline online for the project.
Verbal	I want a community information meeting with Ridgecrest (400 emails/blog)
Verbal	Would like easy access for LFP residents
Verbal	What will keep this from taking homes?
Verbal	When will you know more?
Top Food Market Street Café, Shoreline Friday, March 16, 11 a.m.-2 p.m.	
Comment Form	Prefer these two stops in the Shoreline area. Parking is needed at the stations – very important!
Comment Form	One can not talk to Metro planners only by complaint filing—Northgate via NW Hospital via

Source	Comment
	Aurora and Washelli to I-5 at 145th then north to station at N. 175th. The major arterial from Shoreline City Center and North City.
Comment Form	I'm thrilled at the prospect of a station on east side of freeway at N 185th—that would be within walking distance of my house and therefore would get frequent use by me.
Comment Form	Parking in the neighborhoods by commuters. Will a parking garage be built or will we have to fight for parking in front of our own homes?
Comment Form	Concerns around street parking impact and street congestion. Also concerned about additional noise, as we live close to the proposed station location.
Comment Form	Lid from NE 155th to 185th sound suppression/decibel reduction over non-suppressible 20 block I-5 stretch--NE 155th to NE 185th a natural drainage to Twin Ponds and Pevealy {{sic}} Pond to Jackson via east side of I-5.
Comment Form	Please provide ample parking for older and disabled people who live too far for walking (and cross town busses are too infrequent!)
Comment Form	I commuted for work to the University District for over 25 years and to downtown for about a year. During those times I tried to use the bus and leave my car at home. I found that bus schedules tripled my commute time (to the U-District) and did not offer good options to make the downtown commute a consistent one. I ended up driving to work in the U-District and then later driving to Northgate to catch a bus when I worked downtown. My opinion is that if the light rail solution depends on bringing riders to the stations on buses, it will be extremely important to coordinate options and schedules so that people are able to get to the job and get back home in a manner that benefits their entire day. It can't make them be late for work if there is just one bus and it cannot significantly increase their travel time compared to driving. I love the idea of using light rail as an option. I've visited other large cities and used transportation systems to travel the cities. When they work well, it's so much easier than using a car.
Comment Form	As an owner of an electric vehicle I would like to see both L2 and L3 charging available at these stations. L3 or DC fast charging in particular is critical for fast on demand charging, taking only 30 minutes. It would seem logical that with the high energy power lines being put in for the train that fast charges could perhaps feed off of it.
Comment Form	If funds allow the 145th, 155th, E. 185th would be cost/benefit. More riders. About time folks!
Comment Form	My home has been in my family 50+ years. We have endured the freeway being built, the bus barn built at 165th, and 15th Ave NE street being condensed to 2 lanes—all of which has impacted the quality of our life. No sound barrier wall built along I-5 as once promised, increased traffic on 5th Ave NE. The noise level from the freeway itself is almost unbearable (add the airline traffic above in this area also). What has been given back to this Shoreline Community? I only see our quality of life (and now our homes) taken away from us. I am truly disgusted with WSDOT and Sound Transit. What can you say or to do change my mind?
Comment Form	I think this is a great idea and project. I support it! Please consider my vote for a 130th Station and a 155th Station. I think 145th would be ok if traffic can be mitigated somehow. Also, please consider pedestrian west to east of I-5 access to the light rail station.
Comment Form	Traffic on 5th Ave. between 175th and 185th ever since that 4 way stop was put in on 10th, traffic on 5th has increased, because cars do not need to stop at 180th. The speed of these cars has also increased. People use 5th as a thru-way to or from the freeway. This is a concern right now. If there is a station put in, traffic would most likely increase. Would a stop be put in at 5th and 180th to help control the speed of these drivers and traffic? It is especially a concern because there are school bus stops on 5th in this area. I have witnessed cars speed North down 5th then take a right so wide that they end up in the oncoming lane, or so

Source	Comment
	tight, they end up on the shoulder. A danger to both cards and pedestrians as there is no sidewalk. They also rarely stop for pedestrians in or at the crosswalk at 5th and 180th. I really hope this is looked at. Thank you.
Comment Form	Suggest to plant more trees along I-5 (within the coverage of the project) or add other structures that will minimize the noise that already is a problem for us who live closest to the freeway. Otherwise I believe the project, overall, is good for the community.
Comment Form	With traffic through Shoreline, that is far heavier, this is a necessary project; the development around the identified stations (Shoreline) will add to the economic growth of the community; hopefully all considerations could be given to Shoreline's elderly and disabled population.
Comment Form	I am very excited about light rail in my community however the possibility of a station at 155th would be unacceptable. I live off of 155th and 8th NE and use 155th daily. This street is a quiet, slow, residential thoroughfare that serves 2 major Shoreline parks and an elementary school. Increased traffic on 155th would potentially lead to car/pedestrian accidents for those reasons. 145th and 185th are the obvious options for stops within shoreline. The fact that Metro would "prefer" (and now uses) 155th is only due to 145th being in such poor shore and congested during peak hours. 145th, being a "state highway" and part of an alternative route over Lake Washington, should make it a major hub of transportation. It needs improvements to accommodate, Metro bus service and a large light rail station. Thanks.
Comment Form	If you can get people to the stations efficiently by mass transit or provide parking—great. Otherwise it is better to drive my car to the Northgate Transit Center and take the 41 or 303 to Seattle. The east-west traffic flow is best for N 130th St Station. It would be great to have good east-west mass transit to the freeway station. The time it takes to ride mass transit needs to be near what it takes to drive my car.
Roll Plot	NE 156th to NE 160th and Ridgecrest Park
Roll Plot	Natural water course near Twin Ponds - natural drainage
Roll Plot	145th and 155th is a excellent choice. 130th s/b included if funds are available
Roll Plot	Prefer 155th!
Roll Plot	Put station at 145th OR 155th/130th
Roll Plot	Future station at 220th
Verbal	155th not a good spot
Verbal	When is Ulink open?
Verbal	Is it I-5 for sure?
Verbal	My house is right there - 185th
Verbal	Traffic on 5th ave increasing or speeding
Verbal	Should go to the mall
Verbal	185th concern - has been narrowed and more congested on West Side
Verbal	More trees or noise mitigation
Verbal	Will the stations be elevated?
Verbal	Ridgecrest - want to know major issues
Verbal	Where will people park?
Verbal	I'm worried people will park on street near my house!
Verbal	Stated mechanism needed researching acquisition/in case of failure to complete project.
Verbal	Need better connections to Shoreline Community College

Source	Comment
Verbal	Very nice forum - very convenient
Verbal	The less stations, the better
Verbal	Fix map so 175th is center of community
Verbal	155th – lid from 155th to 185th
Verbal	1500 parking spots for whole corridor!
Verbal	185th would be good!
Top Food Market Street Café, Edmonds Saturday, March 17, 11 a.m.-2 p.m.	
Comment Form	I prefer stations at the locations checked (I-5 route, N. 145th St., N. 185th St., Mountlake Terrace Station Area, Lynnwood Transit Center Station Area)
Comment Form	145th is logical place for a station and park and ride
Comment Form	North Corridor – good to have security person at stations where needed. I was impressed that there was a security person at one of the stations along Martin Luther Kid Way. I was also impressed that a security officer checked passengers for tickets. Three people were escorted off of train. If possible, I would like to have enclosed waiting areas with visibility all-around. This would help in our cool, wet climate and encourage more passengers. Please use1% for arts fund and donations to make stations as beautiful as possible. Current seats on light rail are too narrow and too hard. Great windows (large) on the trains now. Very enjoyable ride! When my husband and I traveled on the light rail for the first time 2 weeks ago, we only saw one couple who was obviously going to the airport (they have wheeled suitcases). I thought more people would use the train to go to the airport. One problem at the airport, is that people have to walk a long way to the terminal. It would help to add clear walls (glass) to protect people against the cold and wind. It is a long way to get to walk to the airport for disabled people. It would be helpful to add seats along the walk for resting. (We traveled from the University Station to the airport and walked around to the airport and then returned to the West Lake Mall stop. Then returned by bus to the Kenmore park and ride. University District Stop: I would support having a security officer there fulltime because of the crime problems in the U. District and because the stop will be underground. I support the current 20-hour service with a 4-hour closure for clean up because that will discourage transients from camping at the stations. North Corridor: I supposed the proposed 4 stops so that travel is as quick as possible to downtown Seattle and the airport. Please work with Community Transit to provide direct bus service between the light rail stop and the Edmonds ferry.
Verbal	Completion date?
Verbal	Will there be any impacts to wildlife/wetlands
Verbal	Will there be security in the U-Link tunnel station?
Verbal	When will we have more info on the alts?
Verbal	Support 4 stations so it's faster
Verbal	East-west connections
Verbal	Indifferent to whether stations are on east/west--not potentially impacted
Verbal	Owner, just want quickest route to downtown
Verbal	Would like to see a good connection to Edmonds ferry
Verbal	I-5 a no-brainer
Verbal	Build fast!

Source	Comment
Verbal	Prefer 145th
Verbal	Put Lynnwood Station as close as possible to the transit center
Verbal	155th—no! 145th better for future development and connecting buses.
Lynnwood Recreation Center, Lynnwood Monday, March 19, 4-6:30 p.m.	
Comment Form	Hooray LR to Lynnwood!
Comment Form	I would prefer the route to the transit area closest to the I-5. This mitigates wetland issues and allows a continuation to Lynnwood City Center (future station) park III without condemnation or removal of existing businesses. Thank you. Planning Commissioner.
Comment Form	This is exciting. I have a small home of 35th and 208th Pl SW. Looking forward to walking to transit center and taking fast transit to Seattle.
Comment Form	#1 125th is redundant, us #3 the 145th station. Forget the #2 130th station also and #4 the 155th station seem excessive. Definitely need the 185th, #6 MLT and possibly the 220th station. My preference is for the 185th station to be on the east side of I-5.
Verbal	Much interest in seeing this go to Ash Way
Verbal	VOA property at 164th--much potential for senior riders
Verbal	Smoky Point – up to
Verbal	Shortest points between transfer and actual station—short walks!
Verbal	Closer to existing park and ride and commercial the better
Verbal	SNOTRAC: Sunrise Services—private corporation – Senior Housing
Verbal	SNOTRAC: Stillaguamish Tribe – Snohomish County Human Services
Verbal	What's the start of service date?
Verbal	Would existing 511 be discontinued?
Verbal	Heard from Twitter, thought I'd stop by!
Mountlake Terrace Library Tuesday, March 20, 11 a.m.-2 p.m.	
Comment Form	Keep the rail to the east to the MLT park and ride lot.
Verbal	How much additional parking?
Verbal	Timeline for the project?
Verbal	East or west of the freeway
Verbal	Property acquisition
Verbal	This is very exciting
Verbal	Great way to increase value
Verbal	Are these all set in stone?
Verbal	Need to increase east-west service
Verbal	How fast/how often?
Verbal	Will this impact the HOV lanes?
Verbal	This process is moving too slow!
Verbal	Are you considering transit time in your evaluation?

Source	Comment
Lynnwood Library Wednesday, March 21, 4-6:30 p.m.	
Comment Form	I like it. It is exactly what I wanted and advocated.
Comment Form	I like to ride train right now. That is very helpful. Good start. Thank you.
Comment Form	Please make sure there is parking near the transit stations! Thank you!
Comment Form	Just a general comment that I'm very excited that these are plans to extend the Link to the north. Thanks.
Comment Form	This is a much-needed project, though it won't be finished for at least 11 years. In the interim, it would be helpful to reinstate a bus routes between Lynnwood Transit Center (or Ash Way) and Northgate. I used to take the bus but now I drive…
Comment Form	Send graphics!
Verbal	This is great but it won't be adequate. Need to be more like NY City.
Verbal	Very excited about this project. When will it be open?
Verbal	Will the Lynnwood station be located in the swamp?
Verbal	This project isn't worth it. Cap it at Northgate and give Seattle what it wants.
Verbal	More east-west options during off peak times
Verbal	How much?
Verbal	How will TOD be affected by the alignment near I-5?
Verbal	I love this project! It can't come soon enough
Mountlake Terrace Recreation Pavilion Thursday, March 22, 4-6:30 p.m.	
Comment Form	Hurry! Want this now! ☺ Parking availability is biggest concern
Comment Form	N/NE 185th and N/NE 155th St are important east-west corridors for bicyclists and drivers who live/work on the "north end." Travel times east-west on those 2 streets are 1/3 to ½ the time it takes on N. 205th, N/NE 175th and N/NE 145th streets. (This has little to do with access to LINK light rail. If stations are built at NE 155th or NE 185th please preserve as much as possible the current east-west corridor travel times. I would like to be contacted about this issue as are likely to get little feedback on this issue. The fewer stations the better, for feaster train times. Therefore I prefer "Option 2" with a station at NE 145th St and NOT at 155th, 130th or 125th Streets.
Comment Form	I think it's great expanding light rail out to Mountlake Terrace. I feel it will ease traffic and provide additional alternatives to driving.
Comment Form	Hoping to see current freeway median bus stop converted to light rail and station more enclosed than current design. Extremely cold, loud and fumes from roadway.
Comment Form	Please do this as soon as possible! I will pay whatever I need to. We'll use light rail all the time.
Comment Form	The flyer stop seems like a more natural choice for the light rail station than the transit center.
Comment Form	Very excited about light rail in Mountlake Terrace at 220th
Verbal	We're really excited about this!
Verbal	When will it be ready?
Verbal	When will decisions about alignments be made? And Stations?
Verbal	Will it be elevated?

Source	Comment
Verbal	Are these all being considered?
Verbal	I like having two stations (155th and 130 or 125) instead of just one (145)
Verbal	We're so behind on the times
Verbal	Sounds like a great idea!
Verbal	Make sure you have parking!
Verbal	Edmonds School District would like a briefing
Verbal	Good idea!
Safeway Pinehurst Saturday, March 24, 11 a.m.-2 p.m.	
Comment Form	We are a walking community. There is no room for more traffic in our area between 145th and 175th and 5th ave. Ridgecrest Park is heavily used as well as Paramount Park. Crest Theater and the Shoreline Library are all used by our community. This is not an industrial area. We love our homes and our community. We don't want to move.
Comment Form	2 support the 125th/130th and 155th option. My experience is that stops do not add materially to the schedule and having the two stations would provide better access.
Comment Form	Not within the scope of this project. However: A "moving sidewalk" should be added to the Sea-Tac Station. This is too far for elderly, disabled to have a suitcase!
Comment Form	How far east will this project go and what will lightrail do to help with parking in an already very crowded parking area
Comment Form	I-5 at 175th Route should be on east side because of Ronald Bog. Strongly prefer 2 stations at 125/130 and 155.
Comment Form	Yeah! Hurry it up! ☺ We'll use it.
Comment Form	There should be buses running every 5 minutes running east-west along 130th St, 145th St, Northgate Way, etc. Then anyone living in North Seattle is close enough to a light rail station and won't have to drive to a park and ride.
Comment Form	I would really like there to be free parking next to the light rail station so that people that live farther away can and will take the light rail rather than driving. Please also keep the light rail as affordable as possible.
Comment Form	There should be a station at 130th St and 155th St. There are a lot of people that live by 130th who would benefit from being close to a station.
Comment Form	Please provide free parking at Northgate Station for all the local neighborhoods.
Comment Form	I live in the 125th St area. I can see that 145th is a bigger priority, but without a station at 125th/130th that area it is going to be awkwardly served. Especially since I assume bus #41 could be cut. A new bus route along 125th/130th could also serve Lake City efficiently, especially if the new bike lanes are removed.
Comment Form	I read there was a independent study done and it show this was not cost effective it would be better to use buses on I-5. How far from the freeway will you be buying homes?
Comment Form	Voting for 130th Station. Would be great for Pinehurst, Waller Lake, and surrounding neighborhood.
Comment Form	I don't want to have to walk to I-5 to catch my bus (Route 77 and 73, which stop closer to my house). It would be too inconvenient for me.
Verbal	When is it expected to start?
Verbal	Will my property be in the right of way?
Verbal	Will this replace buses?
Verbal	What side of freeway will this be on?

Source	Comment
Verbal	There should be a moving sidewalk to the light rail at the airport.
Verbal	Escalator at Pioneer Square station is too narrow.
Verbal	Will a station at 130th be on 5th? Will it be in the right of way?
Verbal	Will it be elevated or at grade?
Verbal	I'm excited about this project. Glad it's on I-5.
Verbal	Will parking be elevated in structures or in lots?
Project Email	
Email	We are unable to attend the meetings this week as we are in Oklahoma, but we own a house at I-5 and 185th. Can you share with us the plans for this area? Thanks for the card in the mail about the open houses coming up.
Email	About the light rail extension to Mountlake Terrace, my comment is that I would like to see a station at N. 185th St. I also see that shuttle buses running east/west across each of the stations, would make this train more useful to most people. Parking needs to be available, but that won't serve everyone. As far as how I'll use it, I'm an East Shoreline resident. By the time this line is finished I hope to retire from work, however it would be wonderful to be able to take the train to the University and to downtown. Thank you.
Email	The three most important stops (not the only stops) for me would be: * Mountlake Terrace * Lynnwood Transit Center * Alderwood Mall (end of line)
Email	Thank you for taking time this weekend to talk to me about the potential light rail station options in N Seattle for the North Corridor Transit Project. If it jogs your memory, I'm the tall English guy with long curly hair and a beard :) With projects like these, there's never a perfect place for any option, and yet, for our city to thrive and grow in the future, this is a neccesary project and so somewhere has to be chosen. My preferred option is definately the original proposal at 145th, and not just because I live very close to the option at 130th. I believe it could be made to be a viable option as long as my concerns about parking can be addressed, and would be incredibly convenient for me, I just think that 145th will be cheaper, and more convenient for more people than 2 stations N and S of it. Below, I've listed what I hope come across as balanced thoughts both positive and negative for each option we discussed. Please let me know if any of this is unclear or raises further questions from you. I look forward to the results from the EIA's and the subsequent direction this sends the project group. Best Regards Gavin Jewell

Source	Comment
	529 NE 130th Street. Feedback on proposed Light Rail extension; stations at 125th, 130th, or 145th: 125th Good E transit links with routes 41 and 252. No parking Poor E/W access - would not serve Haller Lake at all without additional freeway bridge. Would not serve Shoreline. 130th Poor transit links E/W (buses) Poor transit links N/S (buses) Good Parking options at Park n Ride to North (Jackson Park Golf Course) Large Church Parking Lot to North Highly residential area Close-by very quiet neighborhood (NE 130th and surrounding) currently has zero on-street parking - risk of significant (i.e. any) disruption high without controls even with parking at park n ride and church Close-by neighborhood very low crime, peaceful, of architectural significance If station built in freeway cutting, unobtrusive visually and audibly to neighborhood Large grassy area on E side of freeway between on-ramp and freeway may offer good alternative space and better serve Haller Lake residents Additional traffic through already busy, accident prone and pedestrian unfriendly 130th/5th intersection likely to increase Potential for Trail visitors to traverse local neighborhood for unofficial trail entry despite official access on 5th Ave & 145th 145th Good local transit links N/S and E/W - plenty of buses. Jackson Park Perimeter Trail official entrance located here in anticipation of future light rail station Close-by existing park and ride areas to north AND south Large available square footage area within existing transit/freeway boundaries Situated on existing large busy arterial for good access without adding much impact to quiet neighborhoods. Near School area (Lakeside Upper School) Would serve both Pinehurst and Shoreline, Haller Lake and Lake City 155th I don't know this area well - but is highly residential Shoreline, with potential for large impact from station traffic. Close to Parkwood and Evergreen schools Some parking at close-by Twin Ponds Park and possibly local church Appears to be plenty of space, at least on E side of freeway with no competition from on-ramps Would serve Shoreline well, but not Pinehurst

C

Lynnwood Link Extension

Sound Transit Board Briefing Book

Light Rail Alternatives Evaluation

Northgate to Lynnwood

April 2012

APPENDIX C

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ALTERNATIVES A9, A10 and A11 ADDED BY THE SOUND TRANSIT CAPITAL COMMITTEE

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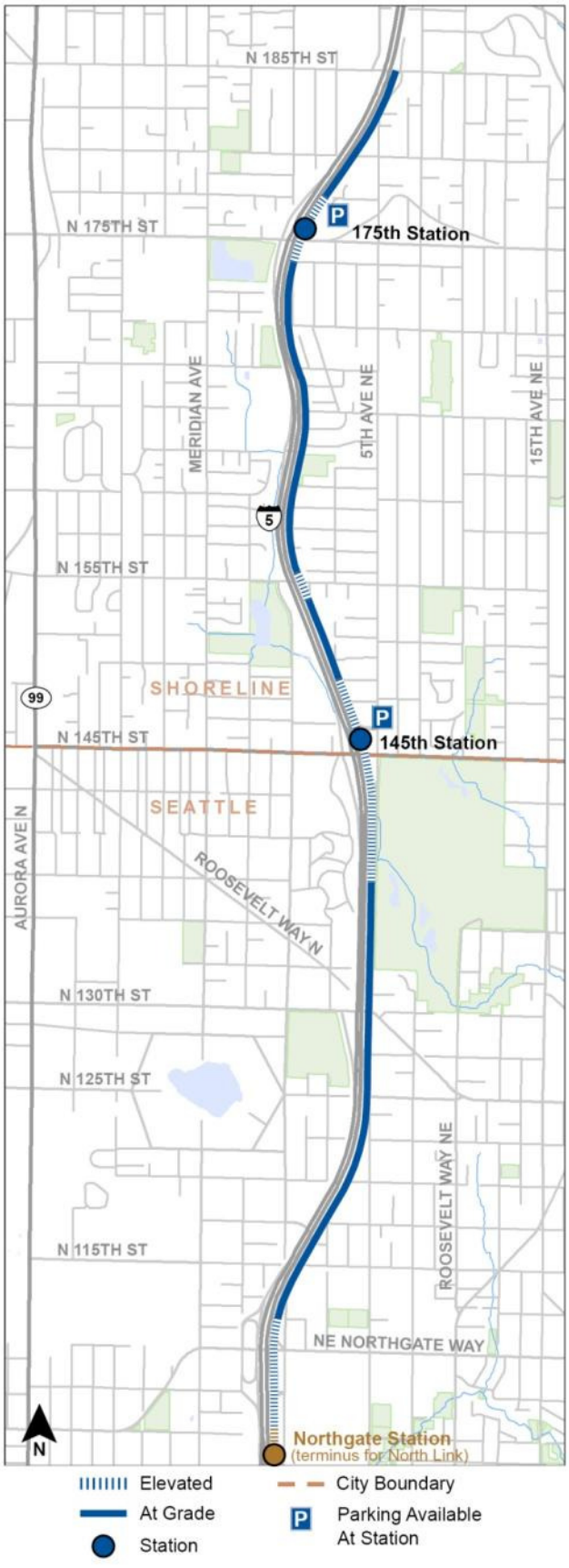
A9: AT-GRADE/ELEVATED TO 145TH AND 175TH EAST SIDE STATIONS



Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on elevated structure from Northgate Station to north of 117th Street, then in retained cut/fill to north of 130th Street, then elevated to north of 145th Street, then retained cut/fill to 175th Street except for elevated crossings of 155th and 175th Street. North of 175th Street the guideway runs in retained cut/fill to 185th Street.

Stations: An elevated station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 145th Street. An elevated station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 175th Street.

Relative pros and cons of this alternative:

- Provides regional service coverage in North Seattle and Shoreline
- 145th Street and 175th Street stations serve both local and freeway access and provides opportunities to feed existing commuter buses to rail, but all day bus service is limited
- NE 175th Street congestion hinders access to the station
- Walk access more difficult from west of I-5 due to freeway ramp crossings, hills and freeway undercrossing
- Higher potential for traffic impacts due to existing congestion
- Guideway profile optimized to reduce cost and provide additional flexibility to avoid some environmental impacts

Evaluation results: (see next page)

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Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Improved regional auto access with proximity to I-5 interchange, although park and ride market is predominantly local. Auto and bus access affected by traffic congestion and backups at interchange ramps. Less desirable pedestrian and bicycle environment to and from the west due to presence of high volume ramps and intersections, hilly terrain, and crossing under I-5. Reduced existing bus access at 175th with peak period-only service, compared with all-day service at 185th.
Ridership Potential	Similar
Potential Environmental Effects	Similar, except for higher potential for traffic congestion impacts due to a park and ride and station on NE 175th Street, which is currently congested. The 175th Station increases property and visual impacts to nearby residential areas, while neighborhood impacts in the NE 185th street area would be reduced.
Development Potential	Similar overall, but constrained on west side of I-5 by Ronald Bog.
Cost Implications (2010$ M)	$10M to $15M more, which includes savings of less complicated construction around NE 185th Street.
Constructability	Similar overall; increase in impacts at 175th is offset by reductions at 185th.
ROW Implications	Similar overall. A station at NE 175th would reduce property needs at NE 185th Street, but increase them at NE 175th Street.

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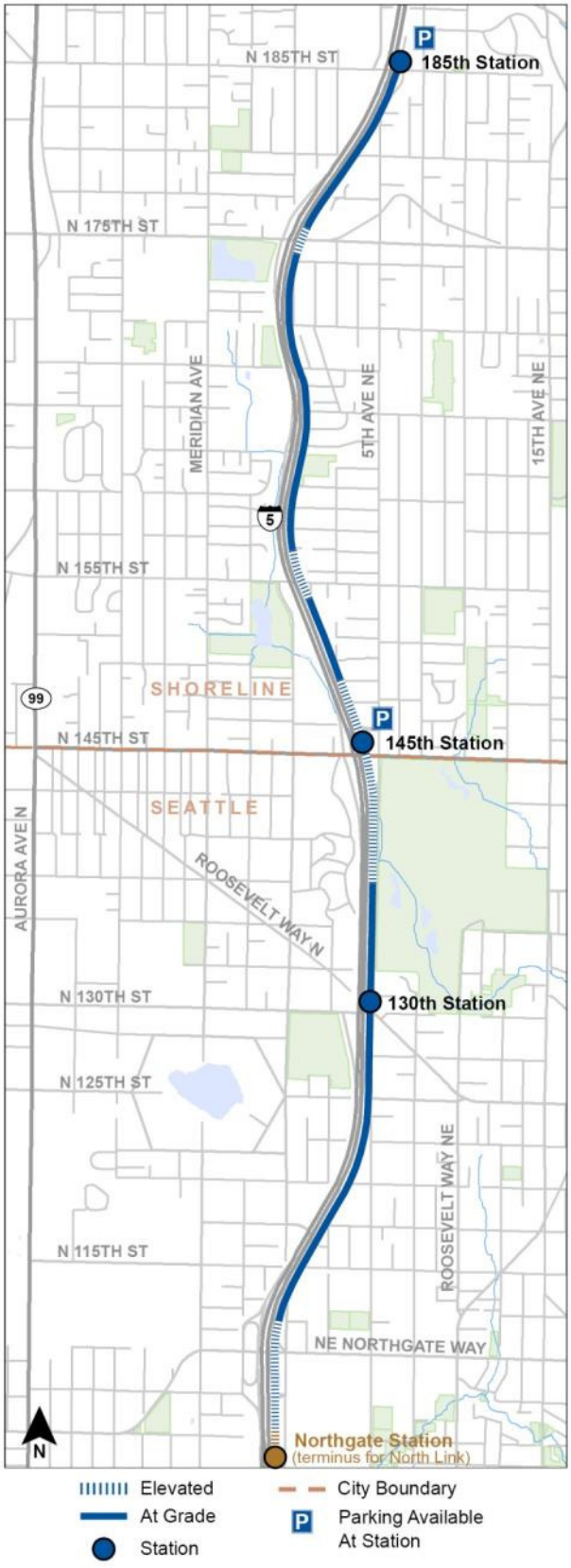
A10: AT-GRADE/ELEVATED TO 130TH, 145TH AND 185TH EAST SIDE STATIONS



Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, generally on elevated structure from Northgate Station to north of 117th Street, then in retained cut/fill to north of 130th Street, then elevated to north of 145th Street, then retained cut/fill to 175th Street except for elevated crossings of 155th and 175th Street. North of 175th Street the guideway runs in retained cut/fill to 185th Street.

Stations: A retained cut/fill station with on-street bus facilities would be located at NE 130th Street. An elevated station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 145th Street. An elevated station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 185th Street.

Relative pros and cons of this alternative:

- Three stations provide more service coverage and ridership potential in this segment than the two stations included in Alternatives A1 through A4.
- Added station adds cost
- 130th Street station has more apparent opportunity for transit oriented development
- 145th Street station serves both local and freeway access and provides opportunities to feed existing commuter buses to rail, but all day bus service is limited
- Potential for closely-spaced 130th and 145th Street stations to compete for riders
- 185th Street station serves local access needs and supports potential redevelopment near the station
- Guideway profile optimized to reduce cost and provide additional flexibility to avoid some environmental impacts such as ecosystems

Evaluation results: (see next page)

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Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Travel times would be slower due to added station
Ridership Potential	Moderate increase as result of increased population within walking distance of three stations instead of two
Potential Environmental Effects	Similar
Development Potential	Slightly better. 130th Street Station is within 0.5 miles of existing commercial node. Otherwise, predominantly single-family development surrounds stations.
Cost Implications (2010$ M)	$40M to $45M more
Constructability	Slightly more difficult, due to wider section at 130th Street Station and fewer staging areas available at 130th.
ROW Implications	Similar.

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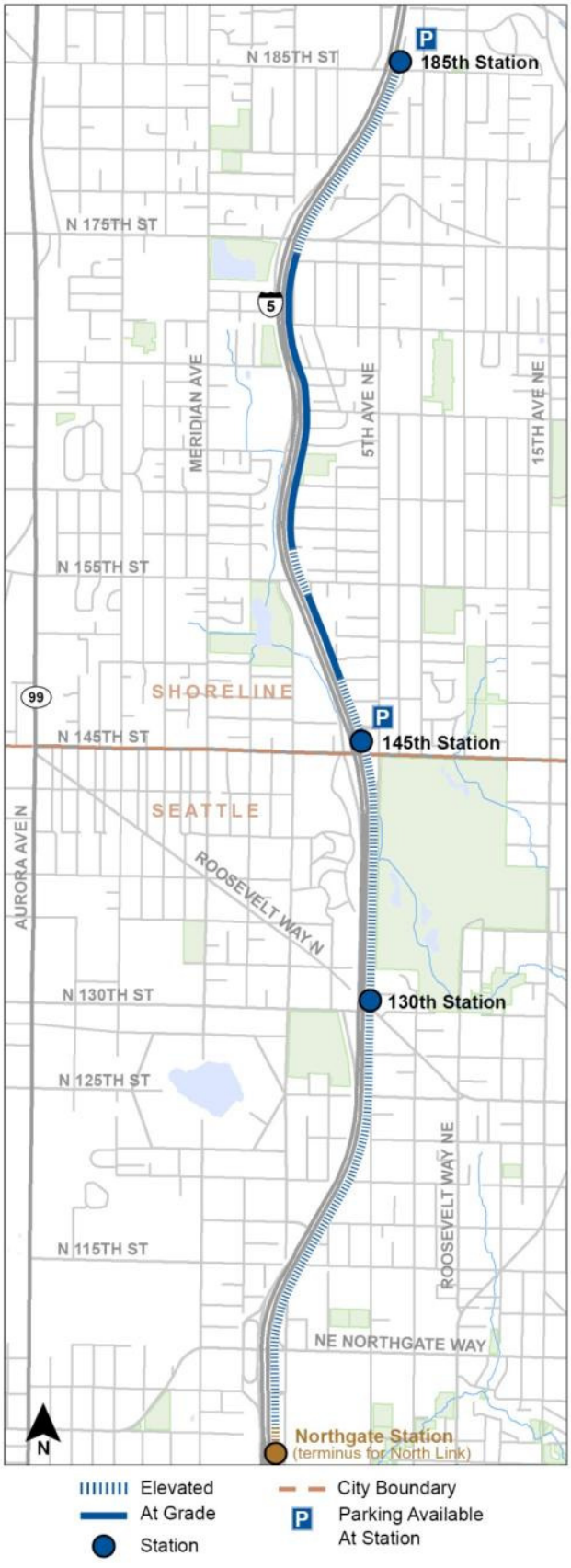
A11: MOSTLY ELEVATED TO 130TH, 145TH AND 185TH EAST SIDE STATIONS



Guideway: The guideway runs along the east side of I-5, in WSDOT rights-of-way wherever possible, on elevated structure from Northgate Station to north of 145th Street, then retained cut/fill to 175th Street except for elevated crossings of 155th and 175th Street. North of 175th Street the guideway runs primarily on elevated structure to 185th Street.

Stations: An elevated station with on-street bus facilities would be located at NE 130th Street. An elevated station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 145th Street. An elevated station with up to 500 park and ride stalls and on-street bus facilities would be located at NE 185th Street.

Relative pros and cons of this alternative:

- Service coverage, station access, ridership and transit-oriented development opportunities similar to A10
- Added station adds cost
- Potential for closely-spaced 130th and 145th Street stations to compete for riders
- More elevated guideway could reduce potential impacts to I-5 bridges and ramps, some properties and some environmental resources, but increases costs

Evaluation results: (see next page)

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Evaluation results:

Criteria	Performance Compared to the AA I-5 Alternative
Transportation Performance	Travel times would be slower due to added station
Ridership Potential	Moderate increase as result of increased population within walking distance of three stations instead of two
Potential Environmental Effects	Similar to slightly less.
Development Potential	Slightly better. 130th Street Station is within 0.5 miles of existing commercial node. Otherwise, predominantly single-family development surrounds stations.
Cost Implications (2010$ M)	$120M to $135M more
Constructability	Potentially less difficult because northbound off-ramp would not be rebuilt at 130th Ave. However, there are fewer staging areas available at 130th.
ROW Implications	Similar to slightly less.

Appendix L

Public Involvement and Agency Coordination

APPENDIX L – PUBLIC INVOLVEMENT AND AGENCY COORDINATION

In addition to the Draft EIS scoping meetings and related outreach described in Chapter 6, Sound Transit met with many other parties as part of the Draft EIS development. The meetings included agency and stakeholder briefings, including with groups involving or servicing low income and minority populations. Sound Transit also developed public displays and produced newsletters at several points leading up to the Draft EIS release. Since the publication of the Draft EIS, Sound Transit has continued to communicate project information to the public, including selection of the Preferred Alternative and revisions to design.

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
8/23/2014	Edmonds Farmers Market Bell St. & 5th Ave. N Edmonds			
8/16/2014	Celebrate Shoreline Festival Cromwell Park, 18030 Meridian Ave. N Shoreline			
8/7/2014	Lynnwood Farmers Market			
7/26/2014, 7/27/2014	Tour de Terrace			
7/19/2014	Shoreline Farmers Market			
7/12/2014	Pinehurst Fest			
6/26/2014	Spring 2014 Community Drop-In Mountlake Terrace Library, 23300 58th Ave. W			
6/25/2014	Spring 2014 Community Drop-In Shoreline Library, 345 NE 175th St.			
6/19/2014	Spring 2014 Community Drop-In Lynnwood Library, 19200 44th Ave. W			
6/18/2014	Spring 2014 Community Drop-In Northgate Community Center, 10510 5th Ave. NE			

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
6/11/2014	Spring 2014 Newsletter	✓	Mailer sent to 83,500 people, using the same distribution area as the Draft EIS notification. Topics included a general project overview, preferred alternative map and description, upcoming work and opportunities for the public to meet with staff at community drop-in sessions and/or fairs and festivals.	Translated information about how to contact the project for more information.
6/6/2014	GovDelivery of Spring 2014 Newsletter		Email update sent to subscription list to share information included in the Spring 2014 newsletter.	
6/3/2014	Link Operations & Maintenance Satellite Facility DEIS Public Meeting		Information table about the Lynnwood Link Extension Project at the open house.	
6/2/2014	Geotech flyering		Flyered residences nearby the following geotech fieldwork locations: A12, A15	
5/26/2014	Survey work right of entry calls		Called property owners to notify them of upcoming survey work: 1005, 1003, 1020, 1027, 1007, 1015, 1019, 1001, 1109, 1032	
5/19/2014	Survey work right of entry calls, Geotech flyering		Called property owners to notify them of upcoming survey work: 644, 646, 649, 653, 651, 642, 633, 628, 989, 993, 996, 998 Flyered residences nearby the following geotech fieldwork locations: A38, A29/30, A31, A35, A36, A54, A11	
5/12/2014	Survey work right of entry calls, Noise monitoring calls, Geotech flyering		Called property owners to notify them of upcoming survey work: 640, 636 Called property owners to notify them of noise monitoring installation: M54, 1095, 427, 420 Flyered residences nearby the following geotech fieldwork locations: A41, A40, A39	
5/10/2014	Cinco de Mayo with Familias Unidas	✓		
5/5/2014	Survey work right of entry calls, Geotech flyering		Called property owners to notify them of upcoming survey work: 618, 628, 630, 626, 616, 621, 614 Flyered residences nearby the following geotech fieldwork locations: A46, B05, A51, A50, A48, A47	

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
4/28/2014	Survey work right of entry calls, Vibration testing flyering, Geotech flyering		Called property owners to notify them of upcoming survey work: 596, 588, 591, 598, 608, 593 Flyered residences nearby the following vibration test sites: SV-9, 10, 11a, 11b, 12, 13, 14 Flyered residences nearby the following geotech fieldwork locations: B03, A43, A44, A45	
4/24/2014	Seattle Latvian Church Coordination	✓	Continue conversations about project design and potential impacts.	
4/21/2014	Geotech flyering		Flyered residences nearby the following geotech fieldwork location: B04	
4/18/2014	Winter 2014 Kiosks	✓	Moved a kiosk to the North Seattle College. Kept the kiosks at the two other locations.	One whole panel included translated information about the project and selection of the preferred alternative.
4/17/2014	GovDelivery of Preferred Alternative Video Simulation		Posting the simulation online and subsequent announcement	
4/14/2014	Geotech flyering, Survey work right of entry calls		Flyered residences nearby the following geotech fieldwork locations: A52/53, A54, B01, B30, B31, B34, A35, C05-08 Called property owners to notify them of upcoming survey work: 510, 508, 480, 502, 476, 486	
4/7/2014	Geotech flyering, Survey work right of entry calls		Flyered residences nearby the following geotech field work locations: B18, B26, B27, B29 Called property owners to notify them of upcoming survey work: 545, 527, 556, 523, 552, 538	
3/28/2014	New Property Owner Letter		Letter sent to new property owners not previously identified in the Draft EIS, but may not be impacted as designs have been refined. Along with the letter, the Winter 2014 newsletter and real estate brochure were provided.	
3/26/2014	Winter 2014 Kiosks	✓	Moved a kiosk to the Shoreline Library. Kept the kiosks at the other two locations since people continue to take our folios	One whole panel included translated information about the project and selection of the preferred alternative.

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
3/24/2014	Survey work right of entry calls		Called property contacts to notify them of upcoming survey work at the following survey locations: 841, 845, 847, 851, 837, 829, 822, 817, 816, 809, 806, 781, 776, 775, 770	
3/17/2014	Survey work right of entry calls		Called property contacts to notify them of upcoming survey work at the following survey locations: 868, 880, 854, 857, 860	
3/12/2014	North Link Open House Olympic View Elementary School		Topic of open house: 90% design. LLE will have an information table	
3/6/2014	DEIS Property Owner Meeting		Topics included project overview, potential property impacts for each alternative, acquisition process and timeline.	
2/28/2014	Winter 2014 Kiosks	✓	Placed at Northgate Community Center, Mountlake Terrace Library, Lynnwood Library. Content based on Winter 2014 newsletter.	One whole panel included translated information about the project and selection of the preferred alternative.
2/21/2014	New Property Owner Letter		Letter sent to new property owners not previously identified in the Draft EIS, but may not be impacted as designs have been refined. Along with the letter, the Winter 2014 newsletter and real estate brochure were provided.	
2/19-20/ 2014	Shoreline Area Planning			
2/3/2014	Winter 2014 Newsletter	✓	Mailer sent to 83,500 people, using the same distribution area as the Draft EIS notification. Topics included a general project overview, preferred alternative map and description, and upcoming work.	Translated information about how to contact the project for more information.
2/1/2014 - 3/1/2014	Responses to right of entry requests		Respond to calls and email from those who received the right of entry requests.	
1/22/2014	Northwest District Council		Meeting is from 6:30-8 p.m. (rescheduled from 12/4/13) Staff: Nytasha, Rhonda and Fred	
11/21/2013	Preferred Alternative announcement and website update		Media release sent announcing board selection of a preferred alternative. Website updated, as well, including a new map.	

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
11/19/2013	Everett Long-Range Planning Meeting			
11/15/2013	DEIS Property Owner Meeting		Topics included project overview, potential property impacts for each alternative, acquisition process and timeline.	
11/8/2013	Preferred Alternative board and committee meeting announcement		Project email update sent announcing upcoming committee and board meetings regarding preferred alternative and DEIS public comment summary availability.	
11/6/2013	Shoreline Station Area Planning Kickoff Meeting		Nytasha Sowers or Jeanne Krikawa will participate	
10/30/2013	DEIS Property Owner Meeting		Topics included project overview, potential property impacts for each alternative, acquisition process and timeline.	
10/24/2013	North Link Construction Meeting		Provided LLE materials	
9/19/2013	Shoreline Area Planning			
9/18/2013	King County Council Regional Transit Committee			
9/18/2013	Mountlake Terrace Business Association		Provided Readers Guide; Noted the following questions: What are other benefits for displaced homeowners? How might the project affect property values? What are the station choices? How will we mitigate noise? What happens to the center roadway of the I-90 bridge on the East Link project? Is current ridership meeting expectations?	
9/16/2013	EPA staff tour			
9/14/2013	12th Ave Block Party		Staff: Matt	
9/14/2013	Lynnwood community meeting		Staff: Michelle	
9/13/2013	Tech Talk		Live-streamed online panel discussion about the project and DEIS	
9/10/2013	Rep. Mark Liias tour			
9/4/2013	North District Council		Staff: Matt, ST, 7:00 PM	
8/27/2013	Broadview Community Council		7:00 PM	
8/26/2013	Shoreline School Board			

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
8/22/2013	Shoreline Lake Forest Park Senior Center		Hosted by the 185th Station Area Citizens Committee; 6:00 - 8:00 PM	
8/22/2013	Public Meeting Open House Shoreline Shoreline Conference Center		DEIS open house, 5:30 - 8:00 PM	
8/21/2013	Public Meeting Open House Lynnwood Embassy Suites			
8/20/2013	Open House Northgate Northgate Community Center		DEIS open house, 5:30 - 8:00 PM	
8/19/2013	DEIS Transit Squad Northgate Transit Center	✓		Distributed DEIS postcards with translation to more than 280 commuters from 6:30 - 9:00 AM
8/16/2013	DEIS Transit Squad Northgate Transit Center	✓		Distributed DEIS postcards with translation to more than 280 commuters from 6:30 - 9:00 AM
8/15/2013	Northgate West Condos		7:00:00 PM; Nytasha, Roger, ST; About 30 residents attended including the condo president and rep from the property management company. The presentation included the potential partial impact to a portion of the common area under one option. There were many good questions about noise, visual and vibration impacts. All were invited to the public meetings this week. Handouts included the Readers Guide and public meeting postcards.	
8/14/2013	Open House Mountlake Terrace Nile Shrine Golf Course	✓	DEIS open house, 5:30 - 8:00 PM	Materials with translation provided
8/13/2013	Senator Patty Murray staff tour			
8/12/2013	General Outreach DEIS Transit Squad Mountlake Terrace Transit Center	✓		Distributed DEIS postcards with translation to more than 250 commuters from 6:30 - 9:00 AM

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
8/7/2013	Environmental coalition (TCC, Futurewise, Cascade Bicycle Club)			
8/7/2013	Senior Services Light Rail Planning Meeting POPY's Café, Prince of Peace Lutheran Church 14514 20th Ave. NE, Shoreline	✓	DEIS briefing	All Shoreline residents welcome; especially those who use public transportation, guests of POPY's, Hopelink food banks, King County Housing residents, and folks of modest means; 6:30 - 9:00 PM
8/5/2013	Briefing 185th Citizen Committee Shoreline Shoreline			
8/5/2013 - 8/9/2013	DEIS Community Calendar postings		Community calendar notices advertising the DEIS open house dates were posted on the following pages online: Northwest Asian Weekly, Tu Decides, Shoreline-Lake Forest Park Patch, Shoreline Community College, City of Lynnwood, City of Mountlake Terrace, City of Edmonds, Feet First	
8/3/2013	Edmonds Farmers Market			
8/3/2013	SeaShore Transportation Forum		DEIS briefing	
8/2/2013, 8/5/2013	Packet distribution to social service agencies Locations throughout the project corridor	✓		Draft EIS Reader's Guides, English comment forms and translated comment forms
8/2/2013	Lake City Pioneer Days Festival	✓		DEIS materials (postcards and Reader's Guides) distributed by the Northgate Link outreach team; materials contain translated content
8/2/2013	SeaShore Transportation Forum		Staff: Nytasha, ST, 7:30 - 9:00 AM	
8/1/2013	Visioning for NE 145/ NE 155 Shoreline			

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
8/1/2013	Unitarian Universalist Church		Sponsored by Futurewise, focusing on NE 145th and NE 155th station areas, 6:00 - 8:00 PM	
8/1/2013	Community Transit Board CT Merrill Creek base, Everett		DEIS open house Staff: Michelle, ST, 3:00 - 5:00 PM; date TBD	
7/31/2013	Maple Leaf Summer Social, Olympic View Elementary School	✓		DEIS materials (postcards and Reader's Guides) distributed by the Northgate Link outreach team; materials contain translated content
7/31/2013	Snohomish County Council Robert J. Drewel Building, 3000 Rockefeller Ave.		DEIS briefing	
7/30/2013	Snohomish County Council Snohomish County Admin. Bldg.		Staff: Michelle, ST, 10:30 - 11:30 AM	
7/30/2013	King County Council Transportation & Environmental Committee		Staff: Nytasha, ST, 9:30 AM - 12:00 PM	
7/29/2013	Shoreline City Council			
7/27/2013, 7/28/2013	Tour de Terrace Mountlake Terrace			
7/25/2013, 7/26/2013, 7/29/2013	General Outreach Poster distribution Locations throughout the project corridor	✓		Translations in 6 languages: Spanish, Chinese - Traditional, Vietnamese, Tagalog, Korean, Amharic
7/24/2013	Shoreline Swingin' Summers Eve			
7/24/2013	Snohomish County Tomorrow		DEIS briefing	
7/23/2013	Seattle City Council Transportation Committee		DEIS briefing Staff: Nytasha, ST, 9:30 AM - 12:00 PM	
7/22/2013	Shoreline City Council		DEIS briefing Staff: Nytasha, ST, 7:00 - 9:00 PM	
7/22/2013	Mountlake Terrace Planning Commission		DEIS briefing Staff: Michelle, ST, 7:00 - 8:00 PM	
7/20/2013	Pinehurst Fest			
7/19/2013	SeaShore Transportation Forum			
7/18/2013	Snohomish County Committee for Improved Transportation		DEIS briefing	

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
7/18/2013	Briefing to Latvian Church Congregation	✓	DEIS briefing	Roger and Nytasha fielded questions and comments for 2.5 hours following their presentation. There were many excellent questions, some comments were a bit emotional but overall it was important to be there and take it on the chin from the greater church community. A church leader who served as moderator did a great job keeping things under control and was clear to point out that we have been working with them and have met with the Leadership group three times so far. Many came up to show their appreciation after the meeting. No media was present.
7/18/2013	Snohomish Cities & Towns		DEIS briefing Staff: Joni, Roger, ST, 5:30 - 6:30 PM	
7/18/2013	Community Transit Board CT Merrill Creek base		Staff: Michelle, ST, 3:00 - 5:00 PM; date TBD	
7/18/2013	Sound Transit Citizen Oversight Panel (COP)		DEIS briefing	
7/17/2013	King County Council Regional Transit Committee		DEIS briefing Staff: Nytasha, ST, 3:00 - 5:00 PM	
7/16/2013	Snohomish County Committee for Improved Transportation (SCCIT)		DEIS briefing Staff: Michelle, ST, 7:30 - 9:00 PM	
7/16/2013	Meeting with Latvian Church leadership	✓	DEIS briefing	
7/16/2013	King County Council Transportation & Environmental Committee		DEIS briefing Staff: Nytasha, ST, 9:30 AM - 12:00 PM	
7/16/2013	Edmonds School District		DEIS briefing	
7/15/2013	Mountlake Terrace City Council		DEIS briefing Staff: Michelle, ST, 6:30 - 8:00 PM	

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
7/15/2013	Lynnwood City Council study session		DEIS briefing Staff: Michelle, ST, 7:00 - 10:00 PM; date TBD	
7/11/2013	Shoreline Senior Services Korean Community Visioning workshop	✓		Shoreline Visioning Workshop
7/9/2013	Seattle City Council Transportation Committee		Staff: Nytasha, ST, 9:30 AM - 12:00 PM; date TBD	
7/6/2013	Shoreline Farmers Market			
7/3/2013	Congressman Rick Larson tour			
7/2/2013	City of Edmonds City Council		DEIS briefing	
6/26/2013 - 7/29/2013	Draft EIS Property Owner Meetings	✓	DEIS briefing	
6/25/2013	Lynnwood Open House (sponsored by City of Lynnwood)		DEIS briefing	
6/22/2013	Lynnwood Open House (sponsored by City of Lynnwood)		DEIS briefing	
6/19/2013	Letters mailed to property owners impacted by the project		Potentially impacted property owner letters sent to approximately 250 property owners	
6/19/2013	Snohomish County Tomorrow		DEIS Briefing	
6/18/2013	Snohomish County Committee for Improved Transportation		ST3 Briefing	
6/5/2013	Meeting with the North District Council		A panel will provide updates regarding ST Light Rail and Transit Oriented Development for Northgate and points north, and how these latest developments may impact North Seattle. Also the community would like to know the points along the way where they may be engaged in the process and anticipate involvement.	
6/5/2013	Meeting with the Shoreline Council of Neighborhoods		This meeting is to discuss station area planning, specifically presenting information on the schedule of station area planning and public outreach; report from May 22 meeting and what's next; and overview of Sound Transit EIS process and schedule.	

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
5/29/2013	Latvian Lutheran Church 11710 3rd Avenue NE Seattle, WA	✓		During this meeting, ST will show aerials of the route and station options between Northgate and N. 130th; Discuss potential impacts to the Church site under each option; Discuss potential impacts during construction; Review possible mitigation measures for any impacts to the Church; Identify key upcoming timelines (release of the Draft EIS, public meetings, comment period; Review the best ways for the Church to provide formal input, comments and timing; Discuss a briefing and agenda for the larger congregation and those who use the Church (early July?)
5/22/2013	Shoreline Station Area Planning Kickoff Mtg		6:00 - 8:30 PM Sound Transit will staff a table and be ready to talk about property acquisition approach with attendees if needed.	
5/21/2013	Broadview Community Council			
5/20/2013	Lynnwood City Council			
5/13/2013	Nile Shrine Golf Course			
5/13/2013	Northgate Community Center		5/13/2013 - 9/10/2013	
5/13/2013	Ballinger Neighborhood Association Shoreline	✓	5/13/2013 - 9/10/2013	

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
5/12/2013	Cinco de Mayo Fair and Festival	✓		1:00 - 5:00 PM Staff conducted about one-third of all conversations in Spanish; Conversations with Familias Unidas and South Everett Neighborhood Center staff reinforced the importance of clear, concise and to the point language in all translated outreach materials; • Participating in this event allowed staff to connect with a community that the project might not have engaged through traditional outreach methods (e.g. public meetings or drop-in sessions).
5/9/2013	Lake Forest Park City Council			
5/2/2013	Shoreline Planning Meeting			
4/16/2013	185th Station Citizen's Committee			
4/15/2013	North Corridor Leadership Group			
4/11/2013	Traveling displays	✓		
4/11/2013	Traveling displays	✓		
4/3/2013	Lynnwood Parks Board			
3/26/2013	General Outreach Traveling displays		Roger's Marketplace 3/26/2013 – 5/1/2013	
3/26/2013	Latvian Lutheran Church* Latvian Lutheran Church, 11710 3rd Avenue NE, Seattle, WA Seattle	✓		
3/19/2013	STEM Expo 2013 Mountlake Terrace High School Mountlake Terrace		ST provided project quickscreen (and agency route map), newsletters, some photos and giveaways	

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
3/19/2013	Victory Heights Community Council Victory Heights Playfield Preschool Seattle		Attendees asked several good questions including: What will the construction impacts near us? How will the final decision be made on the route and stations? How will you decide how much parking to add at each station? What is the average cost of the system per mile? How will the project be funded?	
3/17/2013	General Outreach Traveling displays		New Hope of Seattle 3/17/2013 – 3/19/2013	
3/14/2013	Richmond Highlands and Highland Terrace Neighborhoods Richmond Highlands and Highland Terrace neighborhoods Shoreline		Only four members attended the meeting but were all interested and focused on the project (thanks for your heads up about the potential for this). Group chairs have promised to forward information received from email updates to their membership. Several asked good questions including ones about the decision making process, parking/parking policies and upcoming info that will be in the DEIS. We were joined by Steve Saffron from the city of Shoreline (station area planning lead).	
3/8/2013	General Outreach Traveling displays		Community Health Center 3/8/2013 - 4/8/2013	
3/8/2013	General Outreach Traveling displays		Haggen (Closed) 3/8/2013 - 4/8/2013	
3/7/2013	Haller Lake Community Club HLCC, 7:00-8:00 Seattle			
3/1/2013	Shoreline City Council retreat Traveling displays			
2/27/2013	North/Northwest District Council Greenwood senior Center, 7:00 Seattle		Specific questions: possibility of a NE 130th and I5 will be authorized; neighborhoods in North Central Seattle should be interested in where their ST dollars are going; and how their communities might benefit or be impacted.	
2/25/2013	Traveling displays	✓	Lynnwood Parks and Recreation 2/25/2013 - 3/25/2013	
2/8/2013	Traveling displays	✓	Shoreline Community Center 2/8/2013 - 3/8/2013	

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
2/6/2013	Housing Consortium of Everett and Snohomish Counties* Everett Housing Authority, 12:00-1:30 Everett	✓		Touched on TOD/affordable housing
2/6/2013	ITWG Shoreline City Hall Shoreline			
1/25/2013	Environmental briefing ST Concourse Room, 11:45-1:30 Seattle		Attendees include: Rob Johnson, Transportation Choices Coalition; Brock Howell, Futurewise; Lisa Quinn, Feet First; Chuck Ayers, Cascade Bicycle Club; Craig Benjamin, Cascade Bicycle Club; Cody Young, Sierra Club; Blake Trask, Bicycle Alliance of Washington; Adam Parast, Seattle Transit Blog; Representative from Seattle Neighborhood Greenways	
1/9/2013	GenCare Lifestyle at Scribner Gardens (Lynnwood)* Lynnwood Lynnwood	✓		Briefing for senior housing facility residents
1/8/2013	Briefing to Ridgecrest Neighborhood Association Shoreline Eastside Police Neighborhood Center, 521 NE 165th Shoreline			
1/3/2013	Sound Transit Citizen Oversight Panel (COP)			
12/11/2012	Briefing to Briarcrest Neighborhood Association Shoreline			
12/7/2012	Meeting with the Superintendent of the Edmonds School District Edmonds School District Edmonds		Meeting regarding the OMSF site and LLE project impacts	
12/7/2012	City of Seattle staff meeting Seattle			

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
12/6/2012	Briefing to Pinehurst Community Council Amante Pizza and Pasta, 12319 Roosevelt Way NE Seattle			
12/6/2012	City of Shoreline Parks and Recreation meeting City of Shoreline Parks and Recreation Department Shoreline			
12/6/2012	Shoreline School District briefing Shoreline School District Shoreline			
12/6/2012	City of Shoreline staff meeting City of Shoreline Shoreline			
12/5/2012	City of Lynnwood staff meeting City of Lynnwood Lynnwood			
12/5/12 - 1/4/13	Traveling displays* Mountlake Terrace Recreation Pavilion, Bitter Lake Community Center, Lynnwood Library, Dale Turner YMCA, Spartan Community Recreation Center	✓	Mountlake Terrace Recreation Pavilion (12/5/12 - 12/17/12), Bitter Lake Community Center (12/5/12 - 1/4/13), Lynnwood Library (12/5/12 - 1/4/13), Dale Turner YMCA (12/17/12 - 1/4/13), Spartan Community Recreation Center (1/4/13 - 2/1/13)	Translations in 6 languages: Spanish, Chinese - Traditional, Vietnamese, Tagalog, Korean, Amharic
12/5/12, 12/6/12, 12/12/12, 12/17/12, 12/28/12	Poster distribution* Locations throughout the project	✓		Translations in 6 languages: Spanish, Chinese - Traditional, Vietnamese, Tagalog, Korean, Amharic; Posters distributed to EJ locations including: Center for Human Services, St. Andrew Kim Korean Church, Work Source, Scriber Pointe Senior Housing Association, Goodwill Job Training Center, H Mart, Korean Beef Soup restaurant, European Foods, Plaza Latina

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
12/3/2012	WSDOT staff meeting			
11/9/2012	Latvian Church* 11710 3rd Ave. NE Seattle	✓		Talked with church staff generally about the project
11/9/2012	Businesses around the Lynnwood Transit Center Lynnwood			
11/9/2012	Melody Hills/Edmonds School District property 220th Station area Edmonds			
10/26/2012	North Corridor Leadership Group Briefing			
10/11/2012	Operations and Maintenance Satellite Facility public meeting Lynnwood Convention Center Lynnwood			
10/8/2012	Briefing to Northgate and Shoreline ETC's North Seattle Community College Seattle		Fielded questions about travel time to downtown and a comment about the importance of east-west connections, especially with connecting bus service to Shoreline Community College.	
10/1/12 - 10/3/12	APTA Annual Meeting Washington State Convention and Trade Center Seattle			
9/29/2012	Ethnic Elder Resource Fair* Everett Community College Everett	✓		Interpreters available at the meeting; Spanish speaker staffed booth; significant interactions with non-English speakers
9/27/2012	Mountlake Terrace City Council briefing Mountlake Terrace City Hall			
9/27/2012	Lynnwood Link Extension DECM Design coordination meeting			

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
9/25/2012	Northgate CN Kick Off meeting			
9/25/2012	FTA coordination meeting			
9/20/2012	Lynnwood Link Design coordination meeting			
9/20/2012	WSDOT/ST coordination meeting			
9/19/2012	North Corridor TOD coordination meeting			
9/18/2012	Echo Lake, Meridian Park, North City and City of Shoreline Shoreline City Hall Shoreline			
9/7/2012	Mountlake Terrace Farmer's Market Mountlake Terrace Mountlake Terrace			
9/5/2012	North Corridor TOD coordination meeting			
8/30/2012	Lynnwood Link Design/DECM Coordination Meeting			
8/28/2012	FTA coordination meeting			
8/25/2012	Shoreline Farmers Market Shoreline Shoreline			
8/24/2012	City of Shoreline staff meeting Shoreline Shoreline			
8/18/2012	Celebrate Shoreline* Shoreline Shoreline	✓		9 EJ interactions
8/10/2012	Edmonds School District Edmonds			
7/29/2012	Tour de Terrace Mountlake Terrace Mountlake Terrace			
7/28/2012	Tour de Terrace Mountlake Terrace Mountlake Terrace			

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
7/27/2012	City of Shoreline staff meeting Shoreline Shoreline			
7/27/2012			Provided project information and answered questions.	
7/25/2012			Provided project information and answered questions.	
7/25/2012	Shoreline School District briefing Shoreline			
7/19/2012			Provided project information and answered questions.	
7/18/2012	Shoreline Swing Eve Shoreline Shoreline			
7/17/2012	Echo Lake Neighborhood Group -Summer Picnic Shoreline Shoreline		Provided outreach materials for the event.	
7/14/2012	Edmonds Summer Market Edmonds Edmonds			
7/7/2012	Newsletter mailing* Lynnwood Link Project Area	✓		Translated box provided in Korean, Russian, Spanish and Chinese
6/29/2012	Email - Gov Delivery Project Subscription list			
6/28/2012	Thornton Creek Alliance Meadowbrook Community Center Seattle			
6/21/2012	Shoreline Fire Department Presentation Shoreline			
6/19/2012	FHWA/FTA/WSDOT coordination meeting			
6/4/2012	North Link Open House Northgate Seattle			

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
5/29/2012	ST Spokes People			
5/24/2012	Lake Forest Park City Council briefing Lake Forest Park			
5/24/2012	WSDOT coordination meeting			
5/23/2012	City of Shoreline - parks meeting Shoreline			
5/23/2012	King County Metro briefing Seattle			
5/22/2012	FTA coordination meeting			
5/21/2012	Lynnwood staff briefing Lynnwood			
5/18/2012	City of Seattle staff briefing Seattle			
5/17/2012	Community Transit staff briefing			
5/17/2012	Mountlake Terrace & Edmonds staff briefing			
5/16/2012	PSRC			
5/15/2012	WA State Historic Preservation Office Tour			
5/11/2012	City of Shoreline Shoreline City Hall Shoreline			
5/10/2012	Snohomish County Planning Directors			
5/6/2012	Congressman Rick Larsen Briefing			
5/5/2012	Cinco de Mayo* South Everett Neighborhood Center Everett	✓		Provided spanish speaking staff; significant interactions with non-english speakers
5/4/2012	Sea Shore briefing			
3/24/2012	Drop in meeting Safeway Pinehurst Seattle			
3/22/2012	Drop in meeting Mountlake Terrace Recreation Pavilion Mountlake Terrace			

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Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
3/21/2012	Drop in meeting* Lynnwood Library Lynnwood	✓		Held in conjunction with Korean Computing Class
3/20/2012	Drop in meeting* Mountlake Terrace Library Mountlake Terrace	✓		Held in conjunction with ESL class
3/19/2012	Drop in meeting Lynnwood Recreation Center Lynnwood			
3/17/2012	Drop in meeting Top Food Market Cafe Edmonds			
3/16/2012	Drop in meeting Top Food Market Cafe Shoreline			
3/15/2012	Drop in meeting Shoreline Library Shoreline			
3/14/2012	Drop in meeting Dale Turner YMCA Shoreline			
3/13/2012	Drop in meeting Bitter Lake Community Center Seattle			
3/10/2012	Individual ST Boardmember Briefings (Seattle, East King, Pierce Co.) Sound Transit			
3/7/2012	Drop-in Session Postcard drop-offs*	✓		Provided translated materials
2/28/2012	Drop-in Session Postcard Notification* North Corridor Project Area	✓	Project area households (41,300)	Translated box provided in Korean, Russian, Spanish and Chinese
2/28/2012	FTA Region X Meeting Federal Bldg Seattle			

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
2/6/2012	Mountlake Terrace Staff briefing MLT City Hall Mountlake Terrace			
1/31/2012	Joint staff meeting: King County, City of Seattle, Shoreline Sound Transit			
1/30/2012	Lynnwood City Council Lynnwood City Hall Lynnwood			
1/30/2012	Shoreline Land Use Planning Sound Transit Shoreline			
1/24/2012	FTA Region X Meeting Federal Bldg Seattle			
1/9/2012	WSDOT WSDOT Dayton Office Shoreline			
12/27/2011	FTA Region X Meeting Federal Bldg Seattle			
12/15/2011	Sound Transit Board Sound Transit Seattle		Identification of DEIS Alts/LPA	
12/8/2011	Board Capital Committee Meeting Sound Transit Seattle		Identification of DEIS Alts/LPA	
12/6/2011	ITWG/PAC Mountlake Terrace Council chambers Mountlake Terrace			
12/5/2011	Lynnwood City Council Lynnwood Lynnwood			

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
11/15/2011	FTA Region X Meeting Federal Bldg Seattle			
11/10/2011	Board Capital Committee Meeting Sound Transit Seattle			
10/25/2011	FTA Region X Meeting Federal Bldg Seattle			
10/18/2011	Public Scoping Meeting* Ingraham High School Seattle	✓		Translated posters and comment forms available in Korean, Russian, Spanish and Chinese
10/13/2011	Public Scoping Meeting* Embassy Suites Lynnwood	✓		Translated posters and comment forms available in Korean, Russian, Spanish and Chinese
10/12/2011	Shoreline Breakfast Rotary Shoreline			
10/11/2011	Public Scoping Meeting* Shoreline Conference Center Shoreline	✓		Translated posters and comment forms available in Korean, Russian, Spanish and Chinese
10/11/2011	Agency Scoping Meeting Shoreline Conference Center Shoreline			
10/7/2011	SeaShore Transportation Forum			
10/6/2011	Haller Lake Community Club Seattle			
10/5/2011	Shoreline Council of Neighborhoods Shoreline Shoreline			
10/7/2011	Tech Talk Sound Transit Board Room Seattle			

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
10/3/2011	Scoping notice: EJ poster and comment form distribution* North Corridor Project Area	✓		Poster translation: Korean, Russian, Chinese, Spanish
10/1/2011	Ethnic Elder Resource Fair* Everett Everett	✓		Interpreters available at the meeting; Spanish speaker staffed booth; significant interactions with non-English speakers
9/30/2011	Scoping notice: Postcard hits* North Corridor Project Area	✓	Project area households (103,000)	
9/29/2011	Scoping notice: Community calendar, display ad, online ad notification begins* North Corridor Project Area	✓		Notification in La Raza, Korea Daily, Seattle Chinese Times, Russian World Newspaper, Seattle Chinese Post, Tu Decides e-newsletter
9/27/2011	FTA Region X Meeting Federal Bldg Seattle			
9/26/2011	SnoTrac* Everett Everett	✓		Human service agency and transportation partnership servicing Snohomish County
9/22/2011	Participating and Cooperating Agency letters			
9/12/2011	Shoreline City Council Shoreline Shoreline			
9/8/2011	Environmental documents posted on web			
9/8/2011	Board Capital Committee Meeting Seattle Seattle			
9/1/2011	FTA Region X Meeting Federal Bldg Seattle			

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
8/29/2011	Lynnwood Staff Briefing on Lynnwood City Center extension Lynnwood Lynnwood			
8/20/2011	Celebrate Shoreline Shoreline Shoreline			
8/15/2011	Lynnwood/Mountlake Terrace Council Lynnwood/Mountlake Terrace			
8/14/2011	Taste of Edmonds Edmonds			
8/13/2011	Taste of Edmonds Edmonds			
8/12/2011	Taste of Edmonds Edmonds			
8/4/2011	Lynnwood Kiwanis Lynnwood Fire Station Lynnwood			
8/2/2011	Shoreline Lunch Rotary Shoreline			
8/2/2011	Edmonds City Council Edmonds			
7/31/2011	Tour de Terrace Mountlake Terrace			
7/30/2011	Tour de Terrace Mountlake Terrace			
7/28/2011	PAC/ITWG meeting Mountlake Terrace City Hall Mountlake Terrace			
7/27/2011	Maple Leaf Summer Social Maple Leaf Playground Seattle			

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
7/26/2011	Edmonds City Council Edmonds			
7/23/2011	Edmonds Summer Market Edmonds			
7/18/2011	Shoreline City Council Shoreline Shoreline			
7/14/2011	Mountlake Terrace City Council			
6/13/2011	FTA North Corridor Driving Tour with North Corridor Project Area			
6/7/2011	Northgate/Shoreline network meeting - Commute Trip Reduction employer network WA State Public Health Lab			
6/6/2011	Seattle City Council Seattle			
6/1/2011	Agency-Wide Environmental Community Briefing			
5/24/2011	Thornton Creek Alliance Seattle			
5/23/2011	AIA			
5/19/2011	Seattle Transportation Committee Seattle			
5/17/2011	North Link Northgate Station Open House Olympic View Elementary School Seattle			
5/10/2011	PAC/ITWG meeting Sound Transit			
5/10/2011	Aurora Avenue Merchant's Association			
5/9/2011	PMOC			
5/7/2011	Cinco de Mayo* Everett High School Everett	✓		Provided Spanish speaking staff; significant interactions with non-English speakers
5/5/2011	Rain City Rotary Shoreline			

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
5/3/2011	Snohomish County Council Snohomish County			
4/20/2011	Shoreline Transportation Open House Shoreline			
4/19/2011	Transportation Choices Coalition Seattle			
4/4/2011	DJ Wilson, Edmonds City Council Edmonds			
4/1/2011	SeaShore Transportation Forum			
3/31/2011	Diane Buckshnis, Edmonds City Council Edmonds			
3/31/2011	FHWA Olympia			
3/30/2011	Stephanie Wright, Snohomish County Council Snohomish County			
3/17/2011	Mountlake Lake Terrace Transit Center Grand Opening Mountlake Terrace Transit Center Mountlake Terrace			
3/9/2011	City of Lynnwood Lynnwood City Hall Lynnwood			
3/7/2011	City of Shoreline Shoreline City Hall Shoreline			
3/7/2011	City of Mountlake Terrace Mountlake Terrace City Hall Mountlake Terrace			
3/2/2011	WSDOT workshop Seattle			
3/1/2011	City of Seattle Seattle			

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
3/1/2011	King County Seattle			
2/16/2011	WSDOT Northwest Region Design & Construction Conference Seattle			
2/15/2011	ITWG/PAC Seattle			
2/15/2011	WSDOT Northwest Region Design & Construction Conference Seattle			
2/14/2011	Cascade Bicycle Club Briefing Seattle			
2/9/2011	Shoreline Chamber of Commerce Shoreline			
1/28/2011	Haller Lake Community Club MacPherson Property Management Shoreline			
1/28/2011	Innis Arden Shoreline			
1/27/2011	Richmond Highlands Neighborhood Association Shoreline			
1/24/2011	Familias Unidas Latino Resource Center* South Everett Neighborhood Center Everett	✓	Agree to help with project outreach	Provided potential environmental justice outreach ideas/contacts
1/21/2011	North City Neighborhood Association Shoreline Shoreline			
1/21/2011	DSHS Alderwood Office* Lynnwood	✓	Agree to help with project outreach	Provided potential environmental justice outreach ideas/contacts
1/20/2011	WSDOT technical meeting Seattle			

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
1/20/2011	PSRC transportation planning staff PSRC Seattle			
1/19/2011	Meridian Park Neighborhood Association Shoreline Shoreline			
1/13/2011	United Way of Snohomish County			
1/13/2011	Sound Transit Board Capital Facilities Committee Meeting			
1/7/2011	Center for Human Services* Shoreline	✓	Agree to help with project outreach	Provided potential environmental justice outreach ideas/contacts
1/7/2011	Worksource Lynnwood* Lynnwood	✓	Agree to help with project outreach	Provided potential environmental justice outreach ideas/contacts
1/6/2011	ST Citizen Oversight Panel			
12/17/2010	Boeing		Agree to help with project outreach	
11/29/2010	Premera Blue Cross Mountlake Terrace		Agree to help with project outreach	
11/19/2010	Everett Clinic Everett		Agree to help with project outreach	
11/18/2010	North Seattle Community College Seattle		Agree to help with project outreach	Provided potential environmental justice outreach ideas/contacts
11/16/2010	Futurewise		Agree to help with project outreach	
11/16/2010	Thornton Creek Alliance Seattle		Agree to help with project outreach	
11/15/2010	Alderwood Mall Lynnwood		Agree to help with project outreach	
11/12/2010	Dale Turner YMCA Shoreline	✓	Agree to help with project outreach	Provided potential environmental justice outreach ideas/contacts

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
11/10/2010	Catholic Community Services Everett	✓	Agree to help with project outreach	Provided potential environmental justice outreach ideas/contacts
11/8/2010	SNOTRAC/Senior Services of Snohomish County Services of Snohomish County	✓	Agree to help with project outreach	Provided potential environmental justice outreach ideas/contacts
11/5/2010	Snohomish County Tourism Bureau		Agree to help with project outreach	
11/5/2010	Shoreline Community College Shoreline		Agree to help with project outreach	Provided potential environmental justice outreach ideas/contacts
11/2/2010	South Snohomish County Chamber of Commerce Lynnwood		Agree to help with project outreach	
11/2/2010	Alderwood Boys & Girls Club Lynnwood		Agree to help with project outreach	
11/2/2010	Mountlake Terrace Business Association Edward Jones Mountlake Terrace		Agree to help with project outreach	
11/2/2010	Edmonds Community College Edmonds		Agree to help with project outreach	Provided potential environmental justice outreach ideas/contacts
10/29/2010	Cascade Land Conservancy Snohomish Office		Agree to help with project outreach	
10/28/2010	ITWG/PAC Mountlake Terrace City Hall Mountlake Terrace			
10/28/2010	Aurora Avenue Merchant's Association Seattle		Agree to help with project outreach	
10/28/2010	Edmonds School District Edmonds		Agree to help with project outreach	Provided potential environmental justice outreach ideas/contacts
10/26/2010	Sno Isle Libraries Marysville		Agree to help with project outreach	
10/19/2010	SIP Open House Everett Station		Project staff present to answer questions, provide information	

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
10/14/2010	Public Meeting: Planning Workshop Shoreline Conference Center Shoreline		77 attendees; 20 comments received	
10/13/2010	Agency/Jurisdiction Meeting: Agency Workshop Sound Transit Board Room Seattle		15 attendees; 5 cities represented; 4 agencies	
10/12/2010	Public Meeting: Planning Workshop* Lynnwood Convention Center Lynnwood	✓	94 attendees; 10 comments received	Four attendees who needed interpreters, and two interpreters available
10/7/2010	Public Meeting: Planning Workshop Ingraham High School Seattle		38 attendees; 9 comments received	
10/6/2010	Email N/A		GovDelivery project subscription list; Announcing upcoming public meetings for early scoping	
9/27/2010	Survey Monkey - Online Questionnaire NA		134 comments received	
9/27/2010	Social Media: Twitter Updates NA		70 clicks from Twitter to Project Website	
9/27/2010	Social Media: Facebook Updates NA		Passive interaction	
9/27/2010	Email - Gov Delivery Project Subscription list N/A		Announcing upcoming public meetings for early scoping	
9/24/2010	Community Calendar, Display Ad, Online Ad North Corridor Project Area		Submissions	
9/24/2010	Public Meeting Notification: Postcard Drop-offs* North Corridor Project Area Seattle	✓	34 locations in North Seattle, Shoreline, Mountlake Terrace, Lynnwood, Edmonds, Everett	Provided translation block
9/23/2010	ITWG/PAC Shoreline City Hall Shoreline			
9/22/2010	Public Meeting Notification: Postcard Notification* North Corridor Project Area NA	✓	Project Area households (130,000)	Provided translation block

Appendix L Table L-1. Lynnwood Link Extension Outreach

Event Date	Event/ Event Location	Environmental Justice Event	Notes	Environmental Justice specific notes
9/21/2010	Echo Lake Neighborhood Group Shoreline City Hall Shoreline		Project update, announced public meetings, incl. Northgate Link staff and update	
9/8/2010	Shoreline Council of Neighborhoods Shoreline City Hall Shoreline		Includes representatives from all neighborhood groups, announced upcoming public meetings	
7/8/2010	Transportation Choices Coalition, GGLO Seattle		Interested in Hwy 99 alignment for development potential	
7/1/2010	Mountlake Terrace City Council MLT City Hall MLT			
6/29/2010	King Co. Metro - Rapid Ride Staff Sound Transit		Project update and coordination	
6/28/2010	Snohomish County Public Works Everett		Project update	
2/15/2010	ITWG/PAC Sound Transit Board Room Seattle			

* Event or information involving low income or minority populations or interests.

Appendix M

Distribution List

APPENDIX M – DISTRIBUTION LIST

Federal Agencies
Advisory Council on Historic Preservation
Federal Emergency Management Agency
Federal Highway Administration
Federal Railroad Administration
National Park Service
National Marine Fisheries Service
Transportation Security Administration
U.S. Army Corps of Engineers
U.S. Bureau of Indian Affairs
U.S. Department of Fish and Wildlife
U.S. Department of Interior
U.S. Environmental Protection Agency (Region 10)

Tribes
Confederated Tribes and Bands of the Yakama Indian Nation
Duwamish Tribe
Muckleshoot Indian Tribe
Snohomish Tribe
Snoqualmie Tribe
Stillaguamish Tribe of Indians
Suquamish Tribe
Tulalip Tribes

State Agencies
Washington Department of Archaeology and Historic Preservation
Washington Department of Commerce
Washington Department of Ecology
Washington Department of Fish and Wildlife
Washington Department of Natural Resources
Washington Department of Social and Health Services
Washington Department of Transportation
Washington State Parks
Washington State Recreation and Conservation Office
Washington State Patrol

Regional Agencies
Puget Sound Clean Air Agency
Puget Sound Regional Council

County Agencies
King County
Snohomish County

Transit Agencies
Community Transit
Everett Transit
King County Metro
Pierce Transit

Local Agencies
City of Edmonds
City of Everett
City of Lynnwood
City of Mill Creek
City of Mountlake Terrace
City of Seattle
City of Shoreline

Libraries
Seattle Library, Central Branch
Seattle Library, Northgate Branch
Shoreline Library
Edmonds Library
Lynnwood Library
Mountlake Terrace Library
University of Washington
Washington State Library

Schools and Community Centers
Edmonds School District
Shoreline Public School District
Mountlake Terrace Recreation Pavilion
Lynnwood Recreation Center
Northgate Community Center
Shoreline Spartan Recreation Center

Utility Providers
CenturyLink
Integra Telecom
Puget Sound Energy
Seattle City Light
Seattle Public Utilities
Snohomish County Public Utility District
TCI Cablevision

Sound Transit also distributed the Final EIS to all parties commenting on the Draft EIS. Their names are listed in Appendix P.

Appendix N

Mitigation Plan

APPENDIX N – MITIGATION PLAN

The mitigation plan for Lynnwood Link Extension describes Sound Transit's preliminary mitigation commitments, which include all the mitigation measures Sound Transit proposes to implement to avoid or minimize impacts from the Preferred Alternative identified in the Final EIS. Many of the potential project impacts identified through the EIS process have been mitigated through incorporation of avoidance, minimization or improvement elements that are now included in the definition and design of the project. If the Sound Transit Board ultimately selects another alternative to build differing from the Preferred Alternative, the mitigation plan will be modified accordingly.

The mitigation measures described below are based on the potential mitigation measures identified in the Final EIS. Measures associated with the operation of Lynnwood Link (long-term impacts) are described first; measures associated with construction are described second. These mitigation measures are anticipated to be included as part of FTA's Record of Decision for the project, and would be tracked in a monitoring program to ensure that the mitigation commitments are being met and addressed.

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
3	Transportation	General Impacts	Long-term & Construction	The following sections discuss measures Sound Transit would take to mitigate the impacts of the light rail alternatives. They also describe measures that Sound Transit proposes to take but which require the agreement of other parties. For instance, Sound Transit has identified certain intersection improvements, traffic management, safety, and parking strategies to mitigate project-related impacts, but the agency does not have the sole authority to make those improvements when the facilities are owned and managed by others. Others may also have alternative plans or projects to address project future conditions with or without the project. In these cases, Sound Transit would coordinate with these other agencies and jurisdictions to further define and implement improvements to mitigate the Lynnwood Link Extension's impacts.
3	Transportation	Arterials and Local Streets	Long-term	The following intersection improvements will improve the AM and PM peak hour intersection delay to meet LOS standards, or to achieve the same level of service or better for intersections that will be below standards with the No Build Alternative. Sound Transit will provide these improvements or other improvements as agreed to by the local jurisdictions. In lieu of constructing the proposed improvements, Sound Transit could instead contribute to a local jurisdiction's project to improve intersection performance where the No Build Alternative would already be below standards, as agreed to with local jurisdictions.
3	Transportation	Arterials and Local Streets	Long-term	Segment A: North 185th Street and Meridian Avenue North (City of Shoreline): Add protected-permissive phasing to the northbound and southbound left turns.
3	Transportation	Arterials and Local Streets	Long-term	Segment A: NE 185th Street and 2nd Avenue NE (City of Shoreline): Add a two-way left-turn lane or refuge area on NE 185th Street.
3	Transportation	Arterials and Local Streets	Long-term	Segment C: 200th Street SW and 50th Avenue West (City of Lynnwood): Add overlap phase to northbound right-turn movement.
3	Transportation	Arterials and Local Streets	Long-term	Segment C: 200th Street SW and 48th Avenue West (City of Lynnwood): Add an eastbound and southbound right-turn pocket.
3	Transportation	Arterials and Local Streets	Long-term	Segment C: 52nd Avenue West and 204th Street SW (City of Lynnwood): Change traffic control from two-way stop control to signal or roundabout.
3	Transportation	Arterials and Local Streets	Long-term	Segment C: 200th Street SW and 44th Avenue West (City of Lynnwood): Add a second northbound left-turn lane and extend the eastbound right-turn pocket back to the park-and-ride driveway.
3	Transportation	Arterials and Local Streets	Long-term	Segment C: 200th Street SW and 50th Avenue West (City of Lynnwood): Add overlap phase to northbound right-turn movement.

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
3	Transportation	Arterials and Local Streets	Long-term	Segment C: 200th Street SW and 48th Avenue West (City of Lynnwood): Add an eastbound right-turn pocket and a southbound right-turn pocket.
3	Transportation	Property Access and Local Circulation	Long-term	In areas where property access and local circulation will be modified by the project, Sound Transit will work with local jurisdictions to develop plans to maintain safe and effective access and circulation. In areas near modified interchanges, FHWA and WSDOT would also be consulted.
3	Transportation	Property Access and Local Circulation	Long-term	To discourage cut-through traffic that may occur on residential streets in station areas, Sound Transit will work with local jurisdictions where such activity may occur and support the local agency in implementing measures, such as neighborhood traffic controls.
3	Transportation	Parking	Long-term & Construction	Where the project will remove off-street private parking spaces, Sound Transit will work with property owners to provide compensation or equivalent replacement parking.
3	Transportation	Parking	Long-term	For all stations Sound Transit will work with local jurisdictions to evaluate and, if necessary, implement hide-and-ride mitigation. Sound Transit will inventory on-street parking around each station before and after the start of light rail revenue service, and would then work with the local jurisdictions to determine where appropriate mitigation measures would be needed. Potential parking control measures include parking meters, restricted parking signage, passenger and truck load zones, and residential parking zone programs. Sound Transit will be responsible for the cost of installing the signage or other parking controls for 1 year after the light rail extension begins operation. The local jurisdiction will be responsible for monitoring, enforcing, and maintaining the parking controls.
3	Transportation	Safety	Long-term	To address potential safety concerns related to the placement of project structures in the I-5 right-of-way, Sound Transit will coordinate with FHWA and WSDOT during final design and to secure highway-related design approval.
3	Transportation	Transit	Construction	Sound Transit will mitigate the temporary loss of parking at park-and-ride lots through one or more of the following, determined in consultation with local jurisdictions, facility owners, and involved transit agencies: Implement service increases or other measures to encourage transit trips that do not require automobile access. Redirect transit riders that use these locations to other nearby park-and-ride lots. Develop temporary parking for transit riders to use during construction. Use construction phasing strategies to build new park-and-ride spaces before the loss

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
				of existing spaces. Lease parking lots and/or new parking areas near the closed park-and-ride lots.
3	Transportation	Transit	Construction	Sound Transit will mitigate for partial closures of the Mountlake Terrace Transit Center and Lynnwood Transit Center by implementing one or more of the following, as appropriate, or other measures developed in coordination with transit agencies and local jurisdictions: Relocate transit stops to adjacent streets. Provide a temporary transit center at a nearby off-street location. Revise transit services (including temporary service between Mountlake Terrace and destinations in King County due to temporary closure of the Mountlake Terrace freeway station).
3	Transportation	Transit	Construction	Transit service mitigation measures for partial or full closures of streets will include rerouting of buses, where appropriate, to maintain transit service. Sound Transit will coordinate with local jurisdictions, King County Metro, Community Transit, and private transit service providers to minimize construction impacts and disruptions to bus facilities and services. Sound Transit will coordinate with those providers to inform passengers about changes with measures such as signage at existing transit stops, and using website information, rider information systems, emails, and agency mailing lists.
3	Transportation	Freeway Operations	Construction	As part of the WSDOT and FHWA approval process for construction within I-5 right-of-way and to minimize safety and operational impacts during construction, Sound Transit will collaborate with WSDOT and FHWA to develop and implement the project's Maintenance of Traffic plan.
3	Transportation	Freeway Operations	Construction	Sound Transit will coordinate construction with incident management, construction staging, and traffic control in places where the light rail construction will affect freeway traffic or involve changes to the roadside environment. Sound Transit will also coordinate with WSDOT to disseminate construction closure information to the public as needed.
3	Transportation	Arterials and Local Streets	Construction	Sound Transit will develop and implement detailed construction mitigation plans in coordination with local jurisdictions and WSDOT during the final design and permitting. To mitigate impacts to arterials and local streets, Sound Transit will: Develop the Maintenance of Traffic plan to conform to the *Manual on Uniform Traffic Control Devices* and jurisdictional agency requirements for traffic control. Use lighted or reflective signage to direct drivers to truck haul routes to ensure visibility

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
				during nighttime work hours. Use temporary reflective truck prohibition signs on streets with a high likelihood of cut-through truck traffic. Communicate public information about construction activities through tools such as print, radio, posted signs, Web sites, email and direct communication with other agencies and affected parties; ongoing communications will update interested parties regarding street or freeway lane closures, detours, hours of construction, business access, and parking impacts. Coordinate access closures with affected businesses and residents. If access closures are required, property access to residences and businesses will be maintained to the extent possible. If access to the property cannot be maintained, the specific construction activity will be reviewed to determine if it could occur during non-business hours, or if the parking spaces and users of this access (for example, deliveries) could be provided at an alternative location. Require the contractor to provide parking areas for construction workers, where necessary. This may include remote parking with shuttle service to and from the construction site if sufficient on-site parking cannot be provided. Post signs prior to construction in areas where surface construction activities will affect access to surrounding businesses. Schedule traffic lane closures and high volumes of construction truck traffic during off-peak hours. Evaluate and limit concurrent construction to minimize construction impacts. Cover potholes and open trenches, where possible, and use protective barriers to protect drivers from trenches remaining open. Provide temporary parking to mitigate loss due to construction staging or work activities, as appropriate.
3	Transportation	Nonmotorized Facilities	Construction	Sound Transit will provide detour routes through construction areas. Sound Transit will also notify the public of these changes.
3	Transportation	Nonmotorized Facilities	Construction	Multi-use trails that might be affected by construction will generally be kept open. Detours will be provided when trails are closed, unless they are closed for short durations or in areas where a detour option is not feasible.
3	Transportation	Nonmotorized Facilities	Construction	Closures or restrictions of I-5 overcrossings will be sequenced to maintain travel across I-5 at the next nearest crossing.
3	Transportation	Freight Mobility	Construction	Sound Transit will work with local jurisdictions to develop and implement construction

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
		and Access		traffic control plans. The agency also will coordinate with affected businesses before and during the construction period to maintain business access as much as possible.
3	Transportation	Freight Mobility and Access	Construction	For construction associated with I-5, Sound Transit will coordinate with freight stakeholder groups by providing construction information to WSDOT for use in the state's freight notification system. Sound Transit will provide information in a format acceptable to WSDOT.
3	Transportation	Cumulative	Construction	Sound Transit will coordinate the construction activities of the Northgate Link Extension and Lynnwood Link Extension projects, and would also coordinate with the King County Metro TOD project to minimize impacts of overlapping construction periods.
4.1	Acquisitions, Displacements, and Relocations	Acquisitions, Displacements, and Relocations	Long-term	For property that is acquired for this project, Sound Transit will compensate property owners affected by the project, according to the provisions specified in Sound Transit's Real Estate Property Acquisition and Relocation Policy, Procedures, and Guidelines; the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended; and the State of Washington's relocation and property acquisition law and regulations.
4.1	Acquisitions, Displacements, and Relocations	Acquisitions, Displacements, and Relocations	Construction	For temporary construction easements, in addition to just compensation, the property will be restored to its previous condition for the owner and/or another type of compensation will be employed as outlined during the easement's negotiation process.
4.1	Acquisitions, Displacements, and Relocations	Acquisitions, Displacements, and Relocations	Construction	If federally designated highway beautification areas are converted for project rights-of-way, Sound Transit will mitigate for these impacts by providing property along I-5 to replace the converted beautification areas, or with other measures as agreed by WSDOT and FHWA.
4.2	Land Use	Land Use	Long-term & construction	No specific mitigation is proposed.
4.3	Economics	Economics	Construction	Sound Transit will dedicate staff to work specifically with affected businesses during construction to minimize project-associated impacts. Construction mitigation plans will be developed to address the needs of businesses and will include, but are not limited to, the following measures: Provide a 24-hour construction telephone hotline. Provide business cleaning services on a case-by-case basis. Provide signage such as 'detour,' 'open for business,' and others as appropriate. Establish effective communications with the public through measures such as meetings and construction updates, alerts, and schedules. Implement promotion and marketing measures to help affected business districts

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
				maintain their customer base, consistent with Sound Transit policies, during construction. Maintain access as much as possible to each business and coordinate with businesses during times of limited access. Provide a community ombudsman.
4.3	Economics	Economics	Construction	To avoid cumulative construction impacts, Sound Transit will coordinate construction mitigation planning with other project owners and potentially affected parties in construction areas with multiple projects in the same vicinity at similar times.
4.4	Social Impacts, Community Facilities, and Neighborhoods	Social Impacts, Community Facilities, and Neighborhoods	Long term & construction	No specific mitigation is proposed.
4.5	Visual and Aesthetic Resources	Visual and Aesthetic Resources	Long-term	Sound Transit will incorporate specific measures to mitigate visual impacts as it develops the detailed design. Mitigation measures will be focused on areas identified as having high visual impacts, and must be compatible with the project's maintenance and operations requirements. Sound Transit will adhere to the tree replacement and landscaping policies of WSDOT and local jurisdictions. A Roadside Master Plan will be developed in accordance with WSDOT guidelines for the portion of the route on the I-5 right-of-way. Sound Transit will mitigate conversion of WSDOT beautification areas along I-5 to right-of-way with replacement property, or with other measures agreed to by WSDOT and FHWA. Replacement parcels will meet the intended function of the original beautification area. In areas identified as having high visual impacts, Sound Transit would mitigate with landscaping or visual treatments to retaining walls and other structures, practical, as based on available land, safety, and maintenance and operation needs.
4.5	Visual and Aesthetic Resources	Visual and Aesthetic Resources	Construction	Sound Transit will shield light sources used in nighttime construction to reduce the lighting impacts. Sound Transit will design and place construction screens or barriers to limit the visibility of work areas that will intrude on adjacent activities such as public open space, community facilities, and recreational areas and trails, where practical.
4.6	Air Quality and Greenhouse Gases	Air Quality and Greenhouse Gases	Long-Term	No specific mitigation is proposed.

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
4.6	Air Quality and Greenhouse Gases	Air Quality and Greenhouse Gases	Construction	Consistent with Puget Sound Clean Air Agency requirements, Sound Transit will use best management practices (BMPs) to prevent and reduce air quality impacts resulting from construction activities. Construction activities must comply with local regulations governing air quality, including those for controlling fugitive dust during construction. The following mitigation measures will be used, as necessary, and in accordance with standard practice to control PM10, PM2.5, and emissions of CO and NOx during construction. Several of these measures will also reduce GHG emissions: Spray exposed soil with a dust control agent, such as water. Cover all transported loads of soils and wet materials before transport, or provide adequate freeboard (i.e., space from the top of the material to the top of the truck). Install wheel washes or manually wash truck wheels, where needed. Remove the dust and mud that are deposited on paved, public roads. Route and schedule high volumes of construction traffic, where practicable. Require appropriate emission-control devices on all construction equipment powered by gasoline or diesel fuel. Use well-maintained heavy equipment. Cover, install mulch, or plant vegetation as soon as practicable after grading. Encourage contractors to employ emission-reduction technologies and practices for both on-road and off-road equipment and vehicles (e.g., retrofit equipment with diesel control technology and/or use ultra-low sulfur diesel). Implement idling restrictions for construction trucks. Locate construction equipment and truck staging zones away from sensitive receptors, as practicable, and in consideration of other factors such as noise and safety.
4.7	Noise and Vibration	Noise	Long-Term	Noise mitigation measures will be provided consistent with Sound Transit's Light Rail Noise Mitigation Policy (Motion No. M2004-08). The FTA manual also defines when mitigation is needed and bases this on the impact's severity, with severe impacts requiring the most consideration. During final design, all predicted impacts and mitigation measures will be reviewed for verification. During final design, if it is discovered that equivalent mitigation can be achieved by a less costly means, or if the detailed analysis shows no impact, then the mitigation measure may be modified or eliminated. While the mitigation provided herein is based on predicted impacts, further noise mitigation will be provided if, after operations commence, noise impacts occur for which mitigation is deemed necessary and appropriate under FTA noise standards. When source mitigation measures, noise walls, or sound barriers are infeasible or not

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
				entirely effective at reducing noise levels below the FTA impact criteria or applicable requirement, residential sound insulation will be evaluated and offered at properties where the existing building does not already achieve a sufficient exterior-to-interior reduction of noise levels.
4.7	Noise and Vibration	Noise	Long-Term	In Segment A replacement noise walls will range between approximately 6 and 24 feet in height to mitigate the combination of projected I-5 traffic noise levels resulting from the removal of the existing noise walls, changes to ramps and shielding, and light rail noise introduced by the project to below the impact criteria. Most noise impacts from light rail operating on an elevated structure will be mitigated by incorporating a 4- to 8-foot-tall barrier at the edge of the structure facing the noise-sensitive uses. Sound Transit will provide sound insulation where other standard measures that mitigate outdoor noise impacts are not completely effective. Mitigation for impacts from buses and cars operating in the NE 185th Street park-and-ride will include noise barriers along the edge of the facility, sound insulation, or revising the design of the facility to move access driveways and bus loading areas farther from residences. Based on the EIS analysis, mitigation for noise impacts in Segment A will include: Approximately 12,250 feet of relocated noise walls along I-5. Approximately 9,700 feet of additional noise walls. Approximately 530 feet of noise walls at NE 185th Street Station. Sound insulation will be offered at approximately 8 residences.
4.7	Noise and Vibration	Noise	Long-Term	In Segment B, at-grade noise walls will range between 4 and 10 feet above the track height, or from the top of retaining walls built as part of the project. Noise impacts from the elevated guideway will be mitigated with a 4- to 6-foot-tall barrier at the edge of the guideway structure to below the FTA criteria. Mitigation, such as a noise wall along the eastern edge of the facility, will mitigate impacts from buses serving the Mountlake Terrace Station park-and-ride. Based on the EIS analysis, mitigation for noise impacts in Segment B will include: Approximately 16,975 feet of additional noise walls. Approximately 400 feet of noise walls at Mountlake Terrace Station. Sound insulation will be offered at approximately 9 residences.
4.7	Noise and Vibration	Noise	Long-Term	In Segment C noise impacts will be mitigated by incorporating a 4- to 6-foot-tall barrier at the edge of the guideway structure. Based on the EIS analysis, mitigation for noise impacts in Segment C will include: Approximately 3,960 feet of noise walls for light rail noise.

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
				Sound insulation will be offered at approximately 58 residences for traffic noise, and 1,275 feet of noise walls or insulation for 23 additional units.
4.7	Noise and Vibration	Noise	Long-Term	All curves of less than 1,000-foot radius near noise-sensitive uses will be designed to accommodate a track lubrication system that Sound Transit will install should wheel squeal occur during operation.
4.7	Noise and Vibration	Vibration	Long-Term	Vibration impacts will be mitigated by design measures that reduce the amount of vibration energy transferred from passing trains into the ground. The use of a tire-derived aggregate (shredded tires) in a layer below the track ballast is an effective measure to reduce vibration transfer; other measures, such as ballast mats, a resiliently supported track, high-compliance rail fasteners or column isolation, are also available and may be appropriate in some locations, such as on structures. Specific vibration-isolation designs to mitigate impacts to below the FTA criteria will be determined during final design.
4.7	Noise and Vibration	Noise and Vibration	Long-Term	Special trackwork, such as a moveable-point or spring frog will be used in place of a conventional frog where cross-overs (the point at which two rails cross) will otherwise cause a noise or vibration impact.
4.7	Noise and Vibration	Noise and Vibration	Construction	Where existing noise walls will require relocation, the relocation will be completed as early in the construction process as practical so that the relocated walls will reduce noise from the ongoing construction activities. When required, Sound Transit or its contractor will seek the appropriate noise variance from the local jurisdiction.
4.7	Noise and Vibration	Noise and Vibration	Construction	Construction noise and vibration control mitigation will include the following measures, as necessary, to meet required noise limits and minimize vibration: Install construction site noise barrier or noise wall by noise-sensitive receivers where feasible and appropriate. Use smart backup alarms during nighttime work that automatically adjust, or lower the alarm level or tone based on the background noise level, or switch off back-up alarms and replace with spotters. Use low-noise emission equipment. Implement noise-deadening measures for truck loading and operations. Monitor and maintain equipment to meet noise limits. Use lined or covered storage bins, conveyors, and chutes with sound-deadening material. Use acoustic enclosures, shields, or shrouds for equipment and facilities. Install high-grade engine exhaust silencers and engine-casing sound insulation.

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
				Prohibit aboveground jack hammering and impact pile driving during nighttime hours. Minimize the use of generators or use whisper-quiet generators to power equipment. Limit use of public address systems. Use movable noise barriers at the source of the construction activity, where appropriate. Limit or avoid certain noisy or high vibration activities during nighttime hours. Demolish existing structures near vibration-sensitive receivers with methods that do not cause impact forces against the buildings or near them. Minimize use of vibratory soil compactors and vibratory hammers near vibration-sensitive receivers. Use oscillatory pile-casing techniques where appropriate. Avoid using variable-frequency vibratory hammers in dense residential areas, such as around the NE 130th Street, NE 145th Street, NE 155th Street, and NE 185th Street Stations. Avoid conventional vibratory hammers. An alternative to conventional vibratory pile drivers is a resonance-free vibrator or variable eccentric moment vibrator.
4.8	Ecosystem Resources	Environmentally sensitive resources	Construction	Sound Transit's construction contractor will implement construction BMPs that will apply to all work in or around sensitive areas. The construction contractor will work within construction limits marked with fencing and signage to prevent unintended impacts on riparian vegetation, wetlands, woodlands, and other sensitive sites outside of the construction limits.
4.8	Ecosystem Resources	Aquatic habitat	Construction	Temporary work trestles will be used in extremely sensitive areas, where practical, such as the Scriber Creek wetland complex.
4.8	Ecosystem Resources	Aquatic habitat	Construction	BMPs will be employed for fish and aquatic habitat protection. All work below the ordinary high water mark will comply with the terms and conditions set forth in the HPA issued by WDFW for the project.
4.8	Ecosystem Resources	Vegetation and wildlife	Long-term	Sound Transit will coordinate with WSDOT, local jurisdictions, and resource agencies conducting restoration projects in the area to minimize the potential for the presence of light rail facilities to interfere with future restoration projects.
4.8	Ecosystem Resources	Aquatic habitat	Construction	To reduce the risk of adverse effects on migrating salmonids, Sound Transit will require construction contractors to direct lighting away from fish-bearing waters and to place hoods or shields on lights, as needed, to minimize the amount of backlight or dispersed

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
				light cast toward the water's surface.
4.8	Ecosystem Resources	Surface water	Construction	For water quality protection, the project will obtain and adhere to a construction stormwater general permit under the National Pollutant Discharge Elimination System (NPDES) permit program to reduce or eliminate stormwater pollution and other impacts on surface waters. A construction stormwater pollution prevention plan (SWPPP), approved by Ecology, will also be implemented before the start of construction. The plan will include BMPs to (1) prevent erosion, (2) prevent sedimentation, and (3) identify, reduce, eliminate, or prevent stormwater contamination and water pollution from construction activity. The construction stormwater pollution prevention plan will include a temporary erosion and sediment control (TESC plan) that includes BMPS such as silt fences; protective ground covers such as straw, plastic sheeting, or jute mats; and straw bales in drainage features; spill prevention, control, and countermeasures plan; concrete containment and disposal plan; dewatering plan; and a fugitive dust plan.
4.8	Ecosystem Resources	Vegetation and wildlife	Construction	Measures will be implemented before and during project construction to avoid or minimize effects on vegetation and wildlife resources such as minimizing vegetation clearing, restoring temporarily affected areas, and preparing and implementing a revegetation plan.
4.8	Ecosystem Resources	Vegetation and wildlife	Construction	In accordance with the Migratory Bird Treaty Act, Sound Transit will consult with the U.S. Fish and Wildlife Service on measures to avoid impacts on migratory birds. Measures likely to be required may include pre-construction surveys for migratory birds and/or restrictions on vegetation clearing during the breeding season for migratory birds. Except where hazard trees pose an immediate threat to light rail safety or reliability, vegetation maintenance and hazard tree removal will be conducted outside of the breeding season for migratory birds.
4.8	Ecosystem Resources	Vegetation and wildlife	Construction	Sound Transit will implement appropriate measures to minimize the risk of introduction and spread of noxious and invasive species, including restoring temporarily disturbed areas as soon as practical following construction activities.
4.8	Ecosystem Resources	Vegetation and wildlife	Construction	To minimize use of herbicides and fertilizers, restoration of disturbed areas will include the use of mulching, ground cover, and other planting strategies that discourage growth of undesirable species.
4.8	Ecosystem Resources	Stormwater runoff and flow	Long-term	Sound Transit will also implement design and operation BMPs for permanent stormwater runoff treatment and flow control. These will include natural or engineered dispersion BMPs; biofiltration BMPs such as vegetated filter strips, biofiltration swales, or ecology embankments; wet-pool BMPs; and infiltration BMPs. The project will route

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
				drainage to maintain existing stream basin contributing areas.
4.8	Ecosystem Resources	Unavoidable impacts	Long-term	Long-term impacts on wetlands and wetland buffers will be mitigated through the use of available approved mitigation banks, the King County in-lieu fee program, or project-specific mitigation developed by Sound Transit. Compensatory mitigation will be implemented in accordance with applicable federal, state, and local requirements and guidelines. Mitigation for unavoidable impacts on streams, stream buffers, and wildlife habitat will comply with local critical areas ordinances. Sound Transit's actions to mitigate for impacts on wetlands and wetland buffers (e.g., planting native trees and shrubs near wetland areas) will help offset the loss of some habitat for wildlife and contribute to improved ecological function of nearby streams and stream buffers. Tree planting required for compliance with WSDOT's and local jurisdictions' tree protection rules will also mitigate for impacts on streams, stream buffers, and wildlife habitat. Potential sites currently under consideration for project-specific mitigation for impacts on wetlands and wetland buffers are: North Seattle Community College Campus Jackson Park Golf Course/5th Avenue NE NE 145th Street Vicinity NE 155th Street Station Vicinity Ballinger Lake Golf Course Scriber Creek Wetland Complex (Wetland WLY4)
4.9	Water Resources	Water Resources	Long-term & construction	The project would comply with all federal, state, and location regulations and apply all required BMPs to prevent or minimize long-term impacts, such as low-impact development (LID) approaches, where applicable, and stormwater flow control and water quality treatments as identified in Table 4.9-1 in the EIS. Sound Transit will mitigate construction impacts by complying with the NPDES Permit program, and implementing practices in its Construction Stormwater Pollution Prevention Plan.
4.10	Energy Impacts	Energy Impacts	Long-term & construction	No specific mitigation is proposed.
4.11	Geology and Soils	Geology and Soils	Long-term & construction	No specific mitigation is proposed. Sound Transit will use appropriate engineering design standards and BMPs to avoid adverse impacts.
4.12	Hazardous Materials	Hazardous Materials	Construction	To mitigate impacts from potential contaminated sites in the project area, Sound Transit will perform environmental due diligence for properties along the project corridor before property acquisition. Sound Transit will perform a Phase I Environmental Site Assessment (ESA) on properties to be acquired or that have substantial associated

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
				construction activities. A Phase II ESA might be necessary for property acquisition or for construction purposes if the Phase I ESA determines that the property has a likelihood of contamination. The results of these assessments could be used to establish the condition of acquisition properties and to determine plans for cleanup and construction management, as needed. Ecology will be notified if unknown contamination is encountered during an assessment. Some previously contaminated properties might require longer-term covenants, restrictions, or other remedial activities, which will be approved by Ecology.
4.12	Hazardous Materials	Hazardous Materials	Construction	To address potential impacts on environmental resources from construction activities, Sound Transit will implement applicable BMPs. These will include requiring contractors to prepare hazardous material management plans, construction stormwater pollution prevention plans, health and safety plans, spill control and prevention plans, contaminated media management plans, and lead and asbestos abatement programs, as necessary. These plans will establish the procedures for managing hazardous materials in accordance with state and federal regulations. To the extent practicable, Sound Transit will limit construction activities that might encounter contaminated groundwater or contaminated soil.
4.13	Electromagnetic Fields	Electromagnetic Fields	Long-term & construction	No specific mitigation is proposed.
4.14	Public Services	Public Services	Construction	Sound Transit will coordinate with the Shoreline Fire Department during final design to avoid construction impacts to Station No. 65, and to define measures to minimize impacts on response times and operations.
4.14	Public Services	Public Services	Long-term & construction	During final design and construction, Sound Transit will coordinate with the Edmonds School District to minimize property impacts on School District properties in Segments B and C.
4.14	Public Services	Public Services	Construction	Sound Transit will provide regular updates to schools, emergency service providers, local agencies, and postal services. It will also assist public school officials in providing advance and ongoing notices to students and parents about construction activity near schools.
4.15	Utilities	Utilities	Long-term & construction	Design standards and BMPs will minimize impacts. Coordination with utility providers and outreach to the public during construction and operation will minimize service disruptions and associated impacts. Sound Transit will conduct potholing and preconstruction surveys to identify utility locations. Sound Transit will follow safety protocols to protect the public and construction workers.

Table N-1. Mitigation Plan

EIS Chapter/ Section	Resource	Impact Topic	Period	Mitigation Description
4.16	Cultural, Archaeological, and Historic Resources	Cultural, Archaeological, and Historic Resources	Construction	To minimize the risk of damage to currently unknown archaeological resources, Sound Transit will develop an Inadvertent Discovery Plan prior to ground-disturbing construction activities. FTA and Sound Transit will coordinate with the State Historic Preservation Office (SHPO) and tribes to review the plan. In addition, archaeologists will conduct training for contractors to help them identify potential archaeological remains during construction; the training will also cover protocols to implement if something is discovered. If potentially significant archaeological materials or sites (or evidence thereof) are discovered during construction, activities will be halted around the find. All reasonable measures will be taken to avoid or minimize harm to the property until such time as FTA and Sound Transit, in consultation with the SHPO and the tribes, determine that appropriate measures have been taken to ensure that the project is in compliance with Section 106 of the National Historic Preservation Act. The Inadvertent Discovery Plan also will describe the procedures that Sound Transit and FTA will follow if any human remains are discovered during project construction.
4.17	Parks and Recreational Resources	Parks and Recreational Resources	Long-term	Ridgecrest Park: In coordination with the City of Shoreline, Sound Transit will provide landscaping and restoration of the affected area and place a barrier between the light rail facility and the park to function like the existing berm in buffering I-5 noise and views of I-5. The project will also design and rebuild 1st Avenue NE from NE 159th to NE 161st Street, in coordination with the City, and transfer replacement property at the south end of the park, or other property as agreed to with the City, consistent with the requirements of Forward Thrust. The replacement land will be developed to a level comparable to the displaced park area, and the design process will include outreach in the adjacent neighborhood to inform roadway and park design, in coordination with the City.
4.17	Parks and Recreational Resources	Parks and Recreational Resources	Construction	Shoreline Park and Stadium: Sound Transit will restore affected areas after construction, and will coordinate access improvements and construction activities with the Shoreline School District.
4.17	Parks and Recreational Resources	Parks and Recreational Resources	Construction	Trails: For all temporary trail closures or reroutes associated with construction, Sound Transit will coordinate with appropriate local jurisdictions to develop detours and to provide public information and signed detour routes during construction to allow for continued connections.

Appendix O

Biological Assessment

Lynnwood Link Extension

Biological Assessment

Hydrologic Unit Code (HUC) 17110012 (Lake Washington-Sammamish River)

401 South Jackson Street
Seattle, WA 98104-2826

December 2014

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

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Acronyms and Abbreviations

BA	biological assessment
BMPs	best management practices
cfs	cubic feet per second
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
DNR	Department of Natural Resources
DPS	distinct population segment
Ecology	Washington State Department of Ecology
EFH	essential fish habitat
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESU	evolutionarily significant unit
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HPA	Hydraulic Project Approval
HUC	hydrologic unit code
I-5	Interstate 5
Leq	equivalent sound level
LID	low-impact development
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
PCBs	polychlorinated biphenyls
PGIS	pollutant-generating impervious surface
Services	NMFS and USFWS
Sound Transit	Central Puget Sound Regional Transit Authority
SPCC	spill prevention, control, and countermeasures
SR	State Route
TESC	temporary erosion and sediment control
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WRIA	Water Resources Inventory Area
WSDOT	Washington State Department of Transportation

EXECUTIVE SUMMARY

The Central Puget Sound Regional Transit Authority (Sound Transit) is proposing to build and operate the Lynnwood Link Extension, which will expand the regional light rail system from Seattle to Lynnwood, Washington. The proposed project will be in the cities of Seattle and Shoreline in King County and in Mountlake Terrace and Lynnwood in Snohomish County. The light rail system will provide improved travel times and will increase transportation capacity in the heavily congested Interstate 5 (I-5) corridor. By 2035, approximately 68,000 transit trips are expected on the Lynnwood Link Extension each day, compared to about 34,000 trips using buses in the corridor north of Northgate if the project were not completed.

This biological assessment (BA) evaluates the potential effects of the Lynnwood Link Extension on listed species that might occur in the action area. The Lynnwood Link Extension will involve constructing approximately 8.5 miles of light rail from Seattle to Lynnwood. The proposed project includes guideways, stations, overhead electrification systems, traction power substations, parking structures, at-grade crossing improvements, modified roadways and interchanges, utilities, stormwater management facilities, and other associated new or modified structures to support the light rail system. The route is divided into the following three geographic segments:

- Segment A: Northgate to Shoreline
- Segment B: Shoreline to Mountlake Terrace
- Segment C: Mountlake Terrace to Lynnwood

Sound Transit has prepared this BA to facilitate consultation between the Federal Transit Administration (FTA) and the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act (ESA) of 1973 (16 United States Code §§ 1531-1544). The primary federal nexus for this project is federal-aid funding provided by FTA, although other federal approvals by the Federal Highway Administration (for modifications to the Interstate system) and the U.S. Army Corps of Engineers are also anticipated. Project activities with the potential to affect ESA-listed animal species include those at locations where the elevated and at-grade alignment crosses streams or wetlands or their buffers. Listed species are not present at all stream crossings because, in most cases, fish access is blocked by impassable culverts downstream.

Potential construction-related (short-term) effects on ESA-listed species include the introduction of sediment or pollutants into surface waters, temporary loss or degradation of riparian habitat, and disturbance of fish in waters where in-water work occurs.

Potential operational (long-term) effects include permanent loss of wetland, riparian, and buffer areas resulting from the placement of elevated guideways and support columns, and increased velocities and durations of peak flows in action area streams due to increases in the amount of impervious surface in the action area. Beneficial long-term effects may include improvements to wetland, riparian, and buffer vegetation because many areas to be cleared for construction have been overtaken by invasive species, and these areas will be replanted with native species. Beneficial long-

term effects will also result from improved stormwater treatment and reduced growth in automobile traffic.

The species covered in this BA are Chinook salmon (*Oncorhynchus tshawytscha*), steelhead (*O. mykiss*), and bull trout (*Salvelinus confluentus*). No designated or proposed critical habitat for any of these species occurs in the action area of the project. Table ES-1 summarizes the effects determination of the Lynnwood Link Extension for each of these species. No effects on critical habitat are expected because no designated or proposed critical habitat is present in the action area for the Lynnwood Link Extension. The nearest designated critical habitat for all three species is in Lake Washington, which is more than 3 miles downstream of the action area.

The project was also evaluated for potential effects on essential fish habitat (EFH). Based on the finding that project construction, including implementation of the conservation measures identified in this analysis, is not expected to result in any permanent reduction of quantity or quality of EFH, there will be no adverse effect on EFH for Pacific salmon, groundfish, or coastal pelagic species covered in the fisheries management plans applicable to this region.

Table ES-1. Effects Determinations for ESA-Listed Species and Critical Habitat

Species	Status	Federal Jurisdiction	Effects Determination
Chinook salmon, Puget Sound ESU	Threatened	NMFS	NLAA
Chinook salmon critical habitat	Designated	NMFS	NE
Steelhead, Puget Sound DPS	Threatened	NMFS	NLAA
Steelhead critical habitat	Proposed	NMFS	NE
Bull trout	Threatened	USFWS	NE
Bull trout critical habitat	Designated	USFWS	NE

ESU–Evolutionarily Significant Unit
DPS–Distinct Population Segment
NE–No Effect
NLAA–Not Likely to Adversely Affect
NMFS–National Marine Fisheries Service
USFWS–United States Fish and Wildlife Service

1 INTRODUCTION AND PROJECT DESCRIPTION

The Central Puget Sound Regional Transit Authority (Sound Transit) has prepared this biological assessment (BA) to facilitate consultation between the Federal Transit Administration (FTA) and the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act (ESA) of 1973 (16 United States Code §§ 1531-1544). The primary federal nexus for this project is federal aid funding provided by FTA, although the Federal Highway Administration (FHWA) also must approve any modifications to Interstate 5, which this project generally follows. This BA also supports ESA Section 7 compliance for the U.S. Army Corps of Engineers' (Corps) issuance of a permit under Section 404 of the federal Clean Water Act.

Sound Transit and FTA prepared a Draft Environmental Impact Statement (Draft EIS) that evaluated a No Build Alternative and several build alternatives (Sound Transit and Federal Transit Administration 2013). Through that analysis process, Sound Transit identified a Preferred Alternative, which is evaluated in this document and the Final EIS.

The ESA Section 7 requires federal agencies to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species or species proposed for listing as endangered or threatened under the ESA or result in the destruction or adverse modification of critical habitat for those species. This BA evaluates the potential direct and indirect effects of the Lynnwood Link Extension on species that are listed, or proposed to be listed, as endangered or threatened under the ESA, and that are regulated by NMFS or USFWS (collectively referred to as the Services). Analyses in this document also address potential effects on designated or proposed critical habitat for ESA-listed species. Effects on essential fish habitat (EFH), as defined by NMFS (2004), are also examined in this document (Appendix A).

This BA addresses direct and indirect project-related impacts on Chinook salmon, steelhead, and bull trout. Effects analyses address potential effects on individuals, habitat, and the foraging base for each species. The effects determinations are based on life history analysis, habitat requirements, literature review, agency consultation, and field reconnaissance studies conducted by biologists. Biological information for species covered in this BA can be found in Appendix B.

The proposed project involves constructing approximately 8.5 miles of light rail from Seattle to Lynnwood (Figure 1-1), generally along I-5. The Lynnwood Link Extension includes guideways, stations, traction power substations, parking structures, at-grade crossing improvements, and other associated structures to support the light rail system. The route is divided into three geographic segments, as follows:

- Segment A: Northgate to Shoreline (Figures 1-2 and 1-3)
- Segment B: Shoreline to Mountlake Terrace (Figures 1-3 and 1-4)
- Segment C: Mountlake Terrace to Lynnwood (Figure 1-4)

Construction methods and structures being proposed in each segment will be similar. The first part of this chapter describes common construction methods and proposed structure types. Subsequent sections in this chapter describe activities where each rail segment intersects with sensitive areas that could potentially support ESA-listed species in the action area.

The project area is in Water Resources Inventory Area (WRIA) 8 (Lake Washington/Cedar/ Sammamish). Most of the project area is in Hydrologic Unit Code (HUC) number 171100120400, Lake Washington-Sammamish River; the northern end of the project area is in HUC number 171100120303, Swamp Creek.

The Lynnwood Link Extension is part of the implementation of Puget Sound Regional Council's VISION 2040 and the Sound Transit 2005 Regional Transit Long-Range Plan. The purpose of the Lynnwood Link Extension is to expand the Sound Transit Link light rail system from Northgate in Seattle north into Shoreline, Mountlake Terrace, and Lynnwood in Snohomish County in order to:

- Provide reliable, rapid, and efficient peak and off-peak transit service of sufficient capacity to meet the existing and projected demand for travel to and from the corridor communities and other urban centers in the Central Puget Sound area.
- Create an alternative to travel on congested roadways, and improve connections to the regional multimodal transportation system.
- Support the adopted land use, transportation, and economic development plans of the region and the corridor communities.
- Advance the long-range vision, goals, and objectives for transit service established by the Sound Transit Long-Range Plan for high-quality regional transit service connecting major activity centers in King, Pierce, and Snohomish counties.
- Implement a financially feasible system that seeks to preserve and promote a healthy environment.

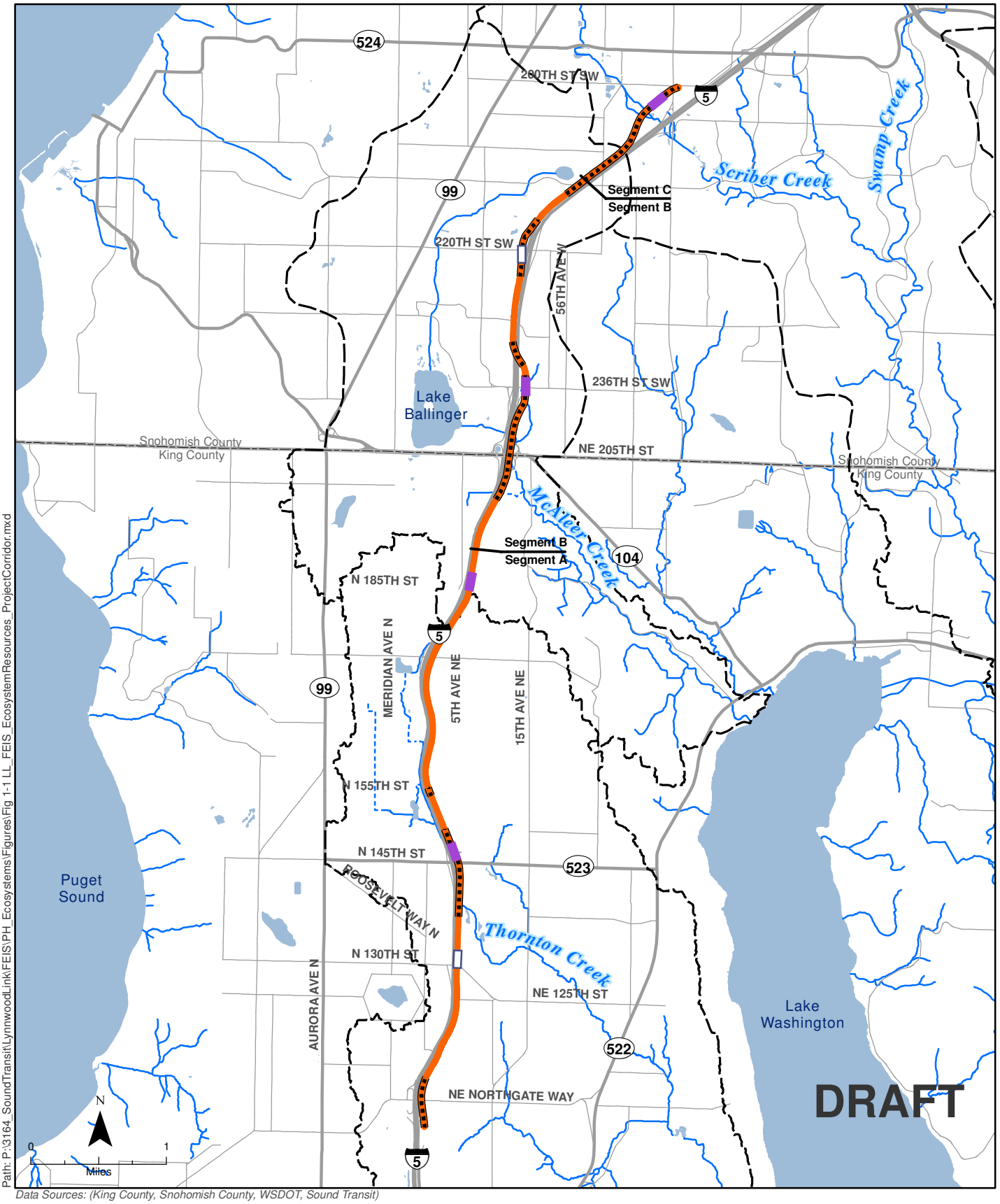
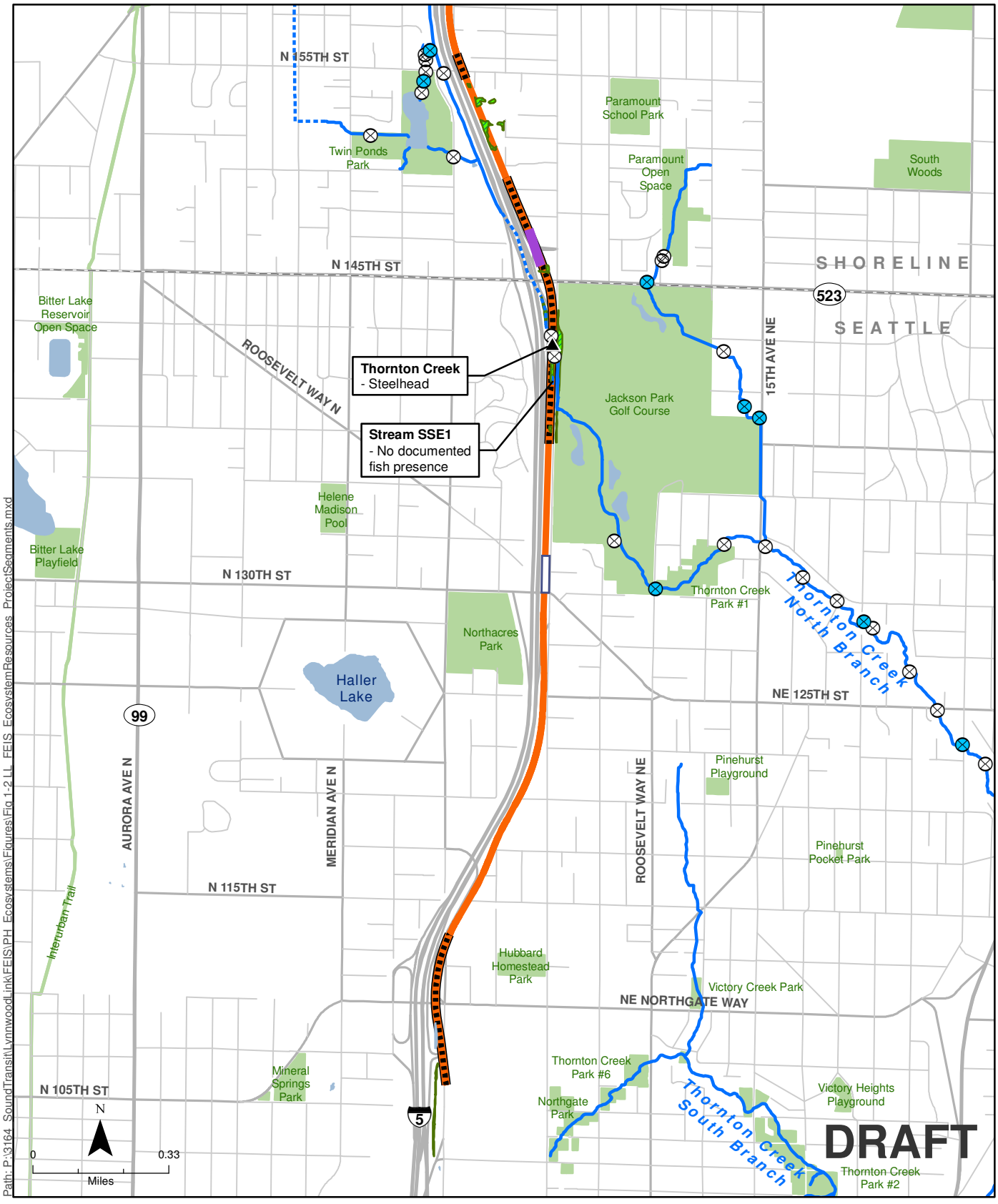


Figure 1-1
Project Corridor



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit, StreamNet)

- Proposed Alignment (At Grade)
- Proposed Alignment (Elevated)
- Proposed Station
- Optional Station
- Open Stream
- Piped Stream
- Total Fish Barrier
- Partial or Unclassified Fish Barrier
- Stream Crossing
- Wetland
- Waterbody
- Park
- City Boundary
- County Boundary

Note: Text boxes where the proposed alignment crosses or passes near streams identify the ESA-listed species known or expected to occur at those specific locations, and are not intended to depict upstream limits of fish distribution.

Figure 1-2
Southern End of the Project Corridor

Lynnwood Link Extension

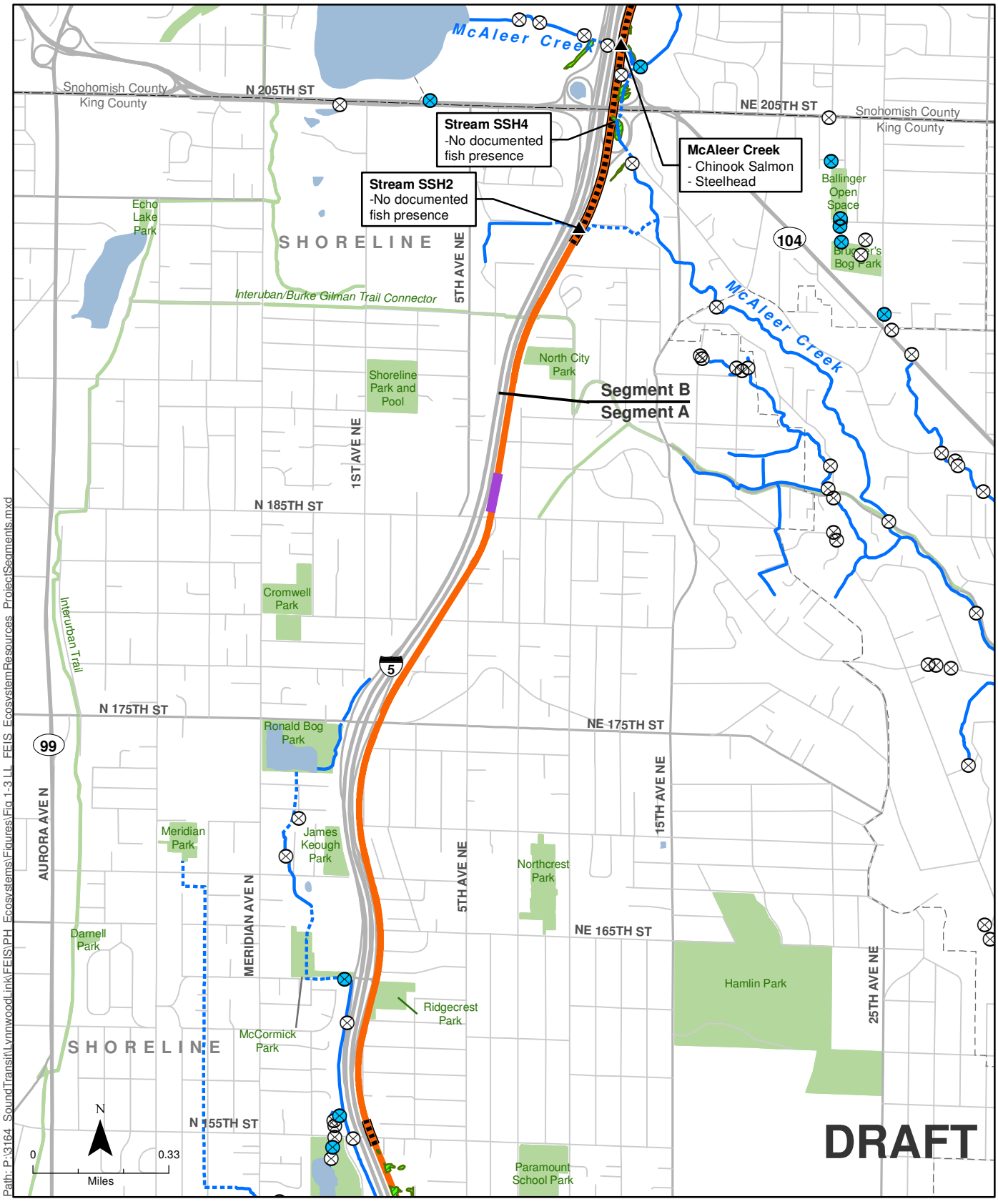


Figure 1-3
Middle Portion of the Project Corridor

Lynnwood Link Extension

Note: Text boxes where the proposed alignment crosses or passes near streams identify the ESA-listed species known or expected to occur at those specific locations, and are not intended to depict upstream limits of fish distribution.

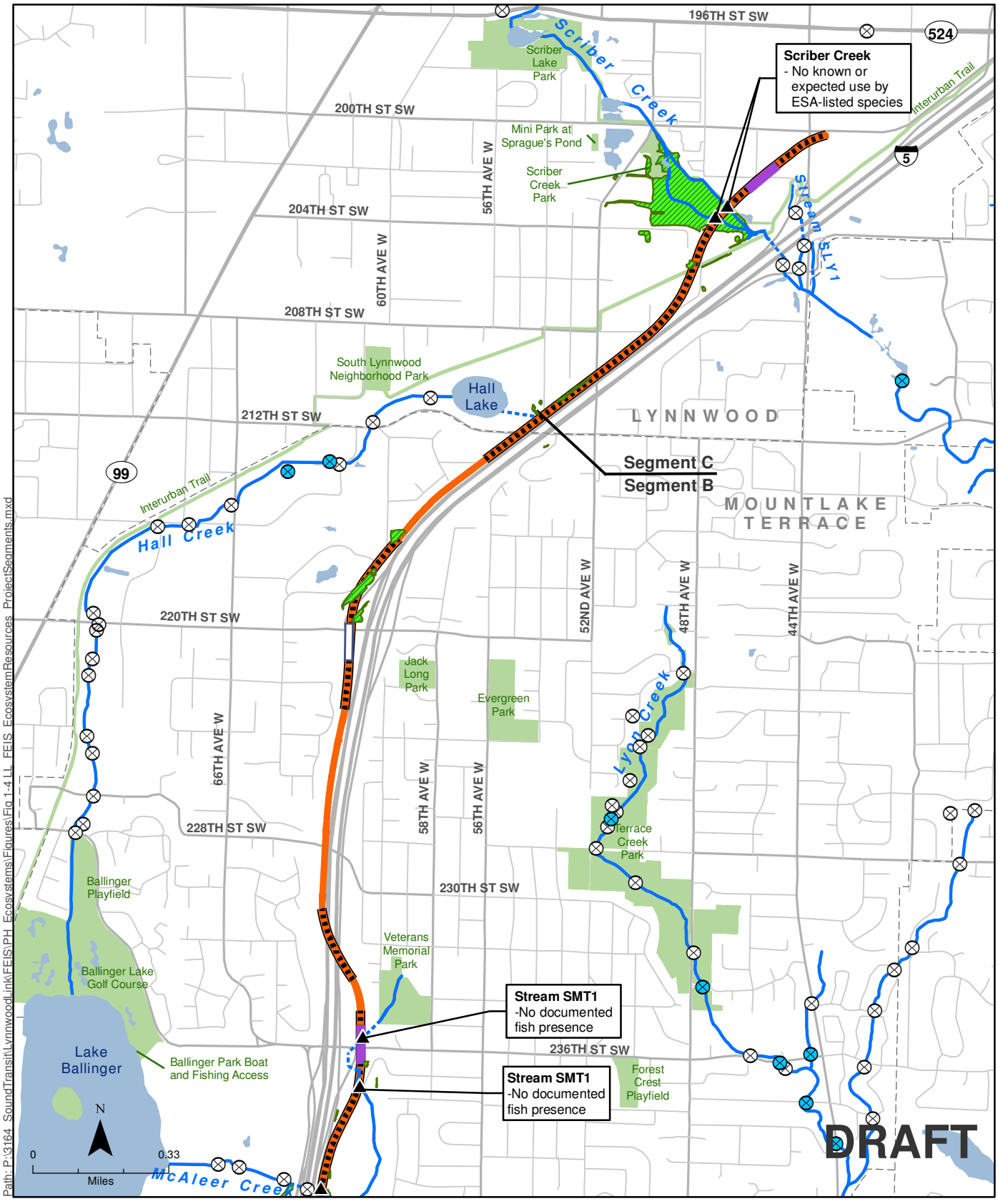


Figure 1-4
Northern End of the Project Corridor

Lynnwood Link Extension

Note: Text boxes where the proposed alignment crosses or passes near streams identify the ESA-listed species known or expected to occur at those specific locations, and are not intended to depict upstream limits of fish distribution.

1.1 General Construction Activities

The construction methods discussed below represent construction techniques and operations identified during preliminary engineering design. Specific construction methods will vary depending on site conditions and final design of the structures proposed. Construction of linear projects is typically divided into various segments or line sections based on similarities in configurations such as at-grade, elevated structures, or retained-cut/fill sections. Typical construction activities include:

- Demolition (buildings, pavement)
- Clearing and vegetation removal
- Fill and excavation
- Installing drainage systems, electrical systems, and communication systems
- Elevated structure construction
- At-grade track construction
- Retained cut construction
- Station and park-and-ride construction
- Roadway construction, sidewalk construction, and landscaping
- Utility relocation
- Retaining wall construction
- Driving or augering piles
- Deep shaft drilling
- Truck hauling and delivery of materials and equipment
- Dewatering
- Use of concrete batch plant
- Remediating any unexpected hazardous material areas
- Planting and revegetation

Typical construction equipment used to complete the Lynnwood Link Extension will include:

- Trucks (e.g., haul, service, delivery, and tractor trailers)
- Cranes
- Backhoes, loaders, compactors, and excavators
- Grading and paving equipment
- Vibratory equipment
- Drilling rigs and pile driving equipment

- Forklifts and manlifts
- Jackhammers
- Pumps (e.g., concrete, dewatering)
- Compressors, generators and welding equipment
- Demolition equipment
- Gantries

1.2 Construction Schedule

The construction duration will be approximately 6 years, including civil construction, systems installation (e.g., power and communications), testing, and startup activities. The schedule calls for a period of civil construction during which site preparation, primary construction, and final construction will take place. Construction durations will range from approximately 2 to 5 years in any given portion of the corridor. However, most ground-disturbing activities and heavy construction (development of structures, etc.) will occur in the initial phases of construction, with station completion and systems installation occurring in subsequent construction phases. Construction is scheduled to begin in 2018, with service commencing in 2023.

Typical construction for at-grade and elevated guideways and stations will occur on a 5- to 6-day work week schedule, primarily between 7 a.m. and 10 p.m. In some locations (primarily when existing traffic lanes may be affected) additional shifts, all-week, nighttime, or 24-hours/day construction activities may be implemented.

1.3 Structure Types

The proposed route and station configurations vary in profile, sometimes constructed at-grade, in a retained cut or fill, or elevated on columns. Because each of the three Lynnwood Link Extension segments includes similar structure types and construction methods, these structure types are described below.

Safety considerations require that vegetation be cleared near all guideways, necessitating a tree-clear zone within 20 feet of the structure at the time of construction. After construction, low-growing vegetation such as native shrubs can be planted within the tree-clear zone. The tops of mature plants are required to be at least 5 feet clear from the bottom of the structure. Where trees are planted outside the guideway, permanent vegetation will be pruned back to a clear zone between the edge of the guideway and the edge of the tree canopy for trees with mature heights less than the top of the safety railing. Where tree heights will reach above the height of the safety railing, a larger clear zone from the edge of the guideway to the edge of the tree canopy must be provided.

1.3.1 At-Grade

The term "at-grade" means that the rail line is located at street or surface level; for this project, an at-grade alignment is usually at the same level as the I-5 traffic lanes. At-grade guideways are typically

30 to 40 feet wide, with room for two sets of tracks. This width also includes room for the poles and overhead catenary wires needed to power trains. Light rail operating at grade is best suited in areas where the grade is 5 to 6 percent or less and there is adequate room within street rights-of-way or off-street corridors.

At-grade light rail construction methods and impacts are similar to typical road construction. Shallow, near-surface excavations will be required to construct the subgrade and track and station platform slabs for at-grade segments. In areas where access is not available from existing roads, a temporary construction road will be built. During the grading phase, the contractors will install drainage structures and below-grade light rail infrastructure.

1.3.2 Retained Cut and Retained Fill

Variants of the at-grade profile are retained cut, where the guideway is cut into the ground with a retaining wall on one or both sides, and retained fill, where the guideway is constructed on fill material supported by retaining walls. Retained cut and retained fill will be used where necessary to meet train operation grade requirements or to separate the grade below heavily traveled roadways. Construction of retained cut structures will consist of excavation of soil and sidewall stabilization, and construction of the bottom grade and guideway and sidewalls. Excavation depth is expected to vary based on topography of the area. Some dewatering may be required during excavation and construction. Construction of retained fill structures will include construction of retaining walls and placement of fill material between the walls to provide a surface for the guideway. As with other at-grade segments, retained cut and retained fill structures are typically 30 to 40 feet wide.

1.3.3 Elevated Profile

Elevated guideways and stations for light rail, similar to structures such as highway bridges, are generally constructed with reinforced concrete, steel, or combinations of both. Elevated guideways are typically about 30 feet wide and can vary in height. Light rail on elevated structures works well where the system must be grade-separated to cross over geographic or physical barriers, or accommodate higher train frequencies.

Construction will begin with preparation work to build foundations that may consist of shallow spread footings, drilled shafts, or deep-driven (augered) piles. Construction varies with type of foundation needed, which is based on soil conditions and the height of the structure. Spread footings require excavation, backfilling, and compaction, followed by installation of reinforcing steel and pouring of concrete. Drilled shafts are constructed using a vibratory or rotating drill rig to advance a permanent casing (steel or concrete) into the ground while soil from inside the casing is excavated. During excavation, a bentonite or synthetic polymer slurry is sometimes added to stabilize the walls of the shaft. When the shaft is of the desired depth, rebar reinforcement is placed in the shaft and concrete is poured with a tremie hose. Depending on location, dewatering of the shafts may be required before concrete is poured. With deep-driven piles, an auger is used that has a hollow center for pumping concrete. The auger is driven to a specified depth, then as it is pulled

back up, concrete is pumped into the void. Rebar reinforcement is placed into the concrete before it sets. This method is used in areas with drier soils.

Transitions between at-grade and elevated profiles are typically supported by compacted fill ramps. An elevated profile must have a minimum clearance of at least 16.5 feet over roadways, but topography and other consideration may result in a profile as high as 50 feet or more. Pier supports are typically 6 feet by 9 feet square at the ground, although the support structure below the ground may be larger. Just as for at-grade routes, the elevated guideway can travel either in the median of existing roadways, along the side of the roadway, or in off-street corridors.

Construction of an elevated guideway involves demolition of infrastructure in the project area, relocating utilities, and preparing necessary construction access. In undeveloped or other open areas, clearing, grubbing and grading will be needed. A temporary construction road will typically be built (in this corridor, generally along I-5) when constructing an elevated guideway in undeveloped areas or where access is not available from existing roads.

Falsework may need to be constructed in some areas where concrete is cast in place or to stabilize balanced cantilevered sections. Falsework may consist of pile-supported work platforms, which in turn support scaffolding and concrete forms.

Temporary work trestles will be needed for equipment access during construction of the elevated guideway where the proposed alignment crosses the Scriber Creek wetland complex. Trestles will consist of pile-supported platforms, one extending from upland areas southwest of the wetland complex and the other extending from the Lynnwood Transit Center northeast of the complex. The temporary work trestles will be about 30 feet wide, with heavy timber decking supported by steel beams. Pile bents (lateral rows of three to four piles) will be spaced at 30- to 50-foot intervals, with each pile driven below the mudline to a depth sufficient to support the large cranes and other equipment needed for construction of the elevated guideway. The spacing of the pile bents will be optimized to reduce the number of piles needed while providing sufficient structural support.

A vibratory hammer will be used for initial installation of most piles. If substrates preclude the use of a vibratory hammer, an impact hammer will be used. For all piles, an impact hammer will be used to complete the installation and to confirm the load-bearing capacity of each pile. Any work below the ordinary high water mark of Scriber Creek will be conducted in accordance with the terms of the Hydraulic Project Approval (HPA) and other applicable permits obtained for this project.

1.3.4 Stations

The project design includes four stations, with options to develop two others. Stations are designed according to the profile of the route. Depending on the location, stations are designed with center or side platforms. A station platform is typically 400 feet long to accommodate a four-car train but varies in width depending on the location of the platform, passenger volumes, vertical and horizontal circulation needs, and the track profile. The size of each station is determined by the site-specific access and parking requirements.

Escalators, elevators, and stairs will provide access to station platforms. Stations will include pedestrian and bicycle access to and from feeder bus lines, park-and-ride facilities, and surrounding streets. The station plans also include proposed bus stops, paratransit stops, and handicapped-accessible areas. Most of the stations will have parking areas for transit patrons in either a structure or a surface lot. At several station locations, the existing transit facilities already include park-and-ride lots that will be expanded or reconfigured. Two of the stations are at existing transit centers with major park and ride facilities. One is at an existing freeway flyer transit stop with an adjacent parking lot, and the fourth would create a new station and park-and-ride.

1.3.5 Traction Power Substations

Electric power for the trains will be provided from an overhead catenary system connected to the existing electrical grid through traction power substations. The traction power substations are completely enclosed small buildings, about 20 feet by 60 feet in size, with an additional 10 to 20 feet required around each unit. These electric substations will be installed at about 2-mile intervals. Automobile access is also required for each traction power substation for maintenance. When possible, they will be placed in the footprint of a light rail station or trackway or adjacent to the track where remaining right-of-way is available.

Traction power substations in Segment A will likely be installed at 120th Street NE and near the stations at NE 145th Street and NE 185th Street. The option for a station at NE 130th Street would also involve a traction power substation. In Segment B, substation are proposed at the Mountlake Terrace Transit Center and near 212th Street SW. Segment C includes one substation at the Lynnwood terminus.

1.3.6 Staging Areas and Construction Easements

Construction staging areas are needed before, during, and for a short time after construction work occurs. Staging areas will be used for construction equipment storage, construction materials delivery and storage, demolition materials or spoils handling (in accordance with applicable regulations), contractor trailers, access roads, and construction crew parking. At-grade, elevated, and retained cut-and-fill line sections will have construction staging areas along the routes. Where roadway right-of-way does not already exist, a corridor (encompassing the permanent light rail right-of-way) approximately 70 feet wide may be needed to construct the route, although narrower corridors can be used for construction to help minimize impacts or avoid other constraints. Contractors will generally use the property in which the facility is being constructed and property that has been acquired for right-of-way or other properties as negotiated by the contractor.

Construction easements are obtained for temporary use of property during construction and will be required in numerous locations along the route. In undeveloped land areas, easements up to 70 feet wide may be necessary to maneuver equipment and materials along the corridor during construction.

1.4 Description of Route and Project Activities by Segment

The following sections describe specific alignments and construction techniques for each segment. Photos of work areas within each segment, including proposed stream crossing areas, can be found in Chapter 4, Environmental Baseline.

1.4.1 Segment A: Northgate to Shoreline

Segment A (Figures 1-2 and 1-3) will extend approximately 4.2 miles, from the tail tracks for the Northgate Link Extension in Seattle north to NE 185th Street in Shoreline. The segment will include approximately 1.4 miles of elevated guideway and 2.8 miles of at-grade guideway. Alignment construction will entail reconstruction of both the off-ramp from northbound I-5 to NE 130th Street and the NE 130th Street overpass over I-5, along with a short section of 5th Avenue NE. The existing northbound on-ramp to I-5 at NE 145th Street will be relocated to the north, and the existing transit ramps at that interchange will be closed. Project construction will entail the reconstruction of several roadways, including 3rd Avenue NE, 1st Avenue NE, and 5th Avenue/7th Avenue NE.

Two stations are currently planned within this segment: an elevated station with a new 500-car parking garage at NE 145th Street and an at-grade station with a new 500-car parking garage at NE 185th Street. Sound Transit is also reviewing options for a third station at NE 130th Street, but a new parking facility is not included.

The route will cross the North Branch of Thornton Creek as an elevated guideway near the Jackson Park Golf Course, where the stream emerges from a pair of 1,500-foot-long culverts under I-5 before entering a pair of 48-foot-long culverts under 5th Avenue NE, approximately 4.2 miles upstream of the mouth of Thornton Creek. According to the Washington Department of Fish and Wildlife (WDFW), no ESA-listed species are known or expected to be present in this reach of Thornton Creek (WDFW 2014b). However, based on the observation of an adult steelhead near Twin Ponds upstream of the proposed crossing site (Tetra Tech/KCM 2004b), it is possible that steelhead may use stream habitats in that area.

No in-water work will be needed in Thornton Creek because all guideway support columns will be located above the ordinary high water mark of the stream. One support column will be placed approximately 40 feet from the stream (south of where the stream enters the culverts under 5th Avenue NE) and one straddle bent, with two support columns, will be placed approximately 20 feet north of where the stream emerges from the culverts under I-5. The elevated guideway will run parallel to the stream, partially spanning a surface-flowing segment of Thornton Creek approximately 100 feet long. Approximately 0.4 acre of the riparian buffer for Thornton Creek (as defined by the City of Seattle Critical Areas Ordinance, Seattle Municipal Code 25.09) falls within the guideway footprint.

Approximately 300 feet south of Thornton Creek's crossing under 5th Avenue NE, the elevated guideway will run parallel to a tributary to Thornton Creek (called Stream SSE1 for this analysis) but will not cross the watercourse. Two support columns will be placed approximately 30 feet from the

watercourse, one at either end of the surface-flowing segment. Approximately 0.2 acre of the riparian buffer for Stream SSE1 (provided the watercourse is classified as a potentially fish-bearing stream by the City of Seattle) falls within the guideway footprint.

1.4.2 Segment B: Shoreline to Mountlake Terrace

Segment B (Figures 1-3 and 1-4) will extend approximately 3.2 miles, from NE 185th Street in Shoreline north to 212th Street SW in Mountlake Terrace. The segment will include approximately 1.7 miles of elevated guideway and 1.5 miles of at-grade guideway. An elevated station with reconfigured surface parking is planned at the Mountlake Terrace Transit Center (236th Street SW), with another optional elevated station and 200-space surface parking area at 220th street SW. North of the transit center, the route will cross over I-5 and continue along the west side of the freeway.

The route will cross McAleer Creek as an elevated guideway where the stream emerges from a 400-foot culvert under I-5, approximately 3.5 miles upstream of the stream's mouth at Lake Washington. The elevated guideway will cross through the riparian buffers of two segments of McAleer Creek where it flows at the surface through cloverleaf interchanges between I-5 and State Route (SR) 104. Both Chinook salmon and steelhead may use stream habitats in these stream reaches (WDFW 2014b).

The elevated guideway will also cross through the riparian buffer of a small watercourse (provisionally called Stream SSH4) that emerges from a culvert in the cloverleaf interchange between eastbound SR 104 and northbound I-5, flows approximately 30 feet, and then joins McAleer Creek. The SSH4 riparian buffer is entirely contained within the McAleer Creek buffer. No in-water work will be needed in McAleer Creek because all guideway support columns will be located above the ordinary high water mark of the stream. Three support columns will be placed within 100 feet of surface-flowing segments of the stream: one approximately 70 feet from the ordinary high water mark and two approximately 100 feet from the ordinary high water mark. Approximately 0.6 acre of the riparian buffer for McAleer Creek (as defined by the critical areas ordinances of Shoreline [Shoreline Municipal Code 20.80.470] and Mountlake Terrace [Mountlake Terrace Municipal Code 16.15.080]) falls within the guideway footprint.

South of the McAleer Creek crossing, the route crosses a non-fish-bearing tributary to McAleer Creek (Stream SSH2). The entire length of this watercourse through the project area is contained in a culvert. Construction of the elevated guideway at this location will not entail any in-water work, nor will it affect any vegetation within the riparian buffer of any surface-flowing segments of the stream.

North of the McAleer Creek crossing, a short distance south of the Mountlake Terrace Transit Center, the route crosses an intermittently flowing, non-fish-bearing tributary to McAleer Creek (Stream SMT1). The alignment will be elevated at the crossing location. A portion of one guideway support column will be below the ordinary high water mark of the watercourse. All work within the stream channel will be conducted in accordance with the HPA and other permits that will include provisions designed to avoid or minimize the potential for adverse effects on habitat in receiving waters. Such provisions could include restrictions on construction periods below the ordinary high-

water mark and/or other measures designed to avoid or minimize the potential for construction activities to deliver sediment or pollutants to streams. Another support column will be placed approximately 40 feet from the ordinary high water mark. Approximately 0.5 acre of the riparian buffer for Stream SMT1 (as defined by Mountlake Terrace Municipal Code 16.15.080) falls within the guideway footprint.

1.4.3 Segment C: Mountlake Terrace to Lynnwood

Segment C (Figure 1-4) will extend approximately 1.0 mile, from 212th Street SW in Mountlake Terrace north to the Lynnwood Transit Center. The segment will include approximately 0.7 mile of elevated guideway and 0.3 mile of at-grade guideway. The alignment will be on the west side of I-5, leaving the right-of-way near 208th Street SW and then heading generally northward to an elevated station at the south side of the existing Lynnwood Transit Center. Existing surface parking areas displaced by station construction will be replaced by a new parking garage that will accommodate an additional 500 vehicles. Sound Transit is considering an option that would maintain 400 spaces on the existing surface parking lot to the south of the transit center, rather than converting the area for bus layover and circulation.

The route will cross Scriber Creek as an elevated guideway in the wetland complex immediately west of the Lynnwood Transit Center, approximately 2.6 miles upstream of the stream's confluence with Swamp Creek. No ESA-listed species are known or expected to use habitats in this stream reach (WDFW 2014b), which is approximately 2,900 feet upstream of a total barrier to fish passage.

The guideway will require 3 pairs of columns to cross the wetland complex. Some work below the ordinary high water mark of Scriber Creek may be required to construct the elevated guideway. Work areas where surface water is present will be isolated from other surface waters using a coffer dam or similar system to prevent suspended sediment or pollutants from leaving the work area. Approximately 0.6 acre of the riparian buffer Scriber Creek (as defined by the City of Lynnwood Critical Areas Ordinance, Lynnwood Municipal Code 17.10.060, based on the preliminary determination that the ordinary high water mark of the stream coincides with the outer boundary of the Scriber Creek wetland complex) falls within the guideway footprint.

As described in Section 1.3.3 (Elevated Profile), temporary work trestles will be needed for equipment access during construction of the elevated guideway where the proposed alignment crosses the Scriber Creek wetland complex. It is estimated that the total length of the temporary work trestles will be no more than 420 feet (one 100-foot-long trestle from the west, one 200-foot-long trestle from the east, and three 40-foot-long transverse trestles). Based on those length estimates, a maximum of 88 30-inch diameter steel piles may be installed in the Scriber Creek wetland complex while project construction is underway. Any in-water work for temporary work trestle construction (including impact pile driving, if necessary, as well as pile removal) will be conducted in accordance with the terms of the HPA and other applicable permits obtained for this project.

A non-fish-bearing tributary to Scriber Creek (Stream SLY1) flows through a narrow wooded area immediately east of the proposed location of the station at the Lynnwood Transit Center. The

project footprint does not intersect this stream. All project construction activities within 200 feet of Stream SLY1 will occur in currently paved portions of the transit center and therefore will not have any potential to affect the stream or its riparian buffer. It is possible, however, that the volume and pollutant loading levels of stormwater discharges to the stream could decrease when elevated light rail facilities are built above existing surface parking areas at the transit center (see Section 1.5.2, Pollutant-Generating Impervious Surface).

1.5 Stormwater Management for all Segments

For water quality protection, the project will obtain a construction stormwater general permit under the National Pollutant Discharge Elimination System (NPDES) permit program to reduce or eliminate stormwater pollution and other impacts on surface waters. The project will also develop a construction stormwater pollution prevention plan that implements best management practices (BMPs) for identifying, reducing, eliminating, or preventing sediment and erosion problems on site. The construction stormwater pollution prevention plan will include a temporary erosion and sediment control (TESC) plan; spill prevention, control, and countermeasures (SPCC) plan; concrete containment and disposal plan; dewatering plan; and a fugitive dust plan.

Conceptual engineering has been completed for the major stormwater detention and treatment facilities necessary for the Preferred Alternative. Sound Transit used a conservative approach in developing drainage concepts. Sound Transit applied the Western Washington Hydrology Model, Version 3.0, to analyze project hydrology and to determine sizing of the facilities. Detention facilities were designed to achieve post-project stormwater flows equivalent to forested conditions, as required by the Washington State Department of Ecology (Ecology). Most stormwater is expected to be discharged to existing city drainage facilities that discharge to water bodies from existing permitted municipal discharge locations.

1.5.1 Impervious Area

New impervious areas resulting from the Lynnwood Link Extension will include tracks and guideways, stations, park-and-ride lots, and roads (Table 1-1). Ballasted (i.e., gravel) track sections were counted as impervious areas by definition in accordance with the *Stormwater Management Manual for Western Washington* (Volume 1, Section 2.3). Relocated roads to accommodate the Lynnwood Link Extension were also counted as project-associated impervious area because the new and replaced pavement will require stormwater treatment and detention. For those cases where elevated track will overlay a relocated road, the underlying impervious area of the road was not counted in the impervious area numbers (to avoid double-counting). Existing impervious area of 226 acres was obtained from new surveyed base maps. The project will increase the amount of impervious surface in the action area by 52 acres (approximately 26 percent), mostly as a result of the new guideway covering existing grassy right-of-way areas.

Table 1-1. Existing and Proposed Amounts of Total and Pollutant-Generating Impervious Surface (acres)

Segment	Existing Impervious Area	Proposed Impervious Area	Net Change	Existing PGIS	Proposed PGIS	Net Change
A	90	121	+ 31	79	83	+ 4
B	69	86	+ 17	64	63	- 1
C	67	71	+ 4	55	53	- 2
Total	**226**	**278**	**+ 52**	**198**	**199**	**+ 1**

PGIS = pollutant-generating impervious surface

1.5.2 Pollutant-Generating Impervious Surface

Project pollutant-generating impervious surface (PGIS) is composed primarily of frontage roads and intersections near the project route that will need to be reconstructed to accommodate the light rail tracks. PGIS also includes bus holding areas, access roads, and parking areas at the park-and-ride lots constructed for the project.

Light rail guideways and stations have no motor vehicle traffic or other sources of pollutant-generating activities and are therefore classified as non-PGIS. Small amounts of non-toxic lubricant may be used on sections of light rail track in order to prevent operational noise from wheel squeal. Given the non-toxic nature of this product and small quantities anticipated to be used, track lubricant activities are not considered pollutant-generating. No stormwater treatment facilities are required in the non-PGIS areas.

In some areas, especially in Segment C, existing pollutant-generating segments of I-5 and commercial parking areas will be spanned by elevated portions of light rail. In these areas, precipitation that might otherwise have fallen on PGIS will fall instead on the non-pollutant-generating surface of the elevated guideway. The result will, in effect, be a conversion from pollutant-generating to non-pollutant-generating impervious surface, thus reducing the overall amount of PGIS in some portions of the project area (Table 1-1). Overall, project construction will result in a minimal change in the amount of PGIS in the action area because most of the proposed road segments and parking lots will be located in areas with similar existing uses.

1.5.3 Stormwater Flow Control and Treatment

The Lynnwood Link Extension will comply with the following local design manuals:

- Washington State Department of Transportation (WSDOT) 2014 Highway Runoff Manual
- City of Seattle: City of Seattle Flow Control and Water Quality Treatment Technical Requirements Manual, Volume 3
- City of Shoreline: Stormwater Management Manual for Western Washington (Ecology 2012a); City of Shoreline 2012 Engineering Development Manual; Low Impact Development, Technical Guidance for Puget Sound (Hinman 2012)
- City of Mountlake Terrace: Stormwater Management Manual for Western Washington (Ecology 2012a)

- City of Lynnwood: Stormwater Management Manual for Western Washington (the City currently uses the 2005 manual but is expected to adopt the 2012 manual by the time project design is underway)

Sound Transit's preliminary engineering for the Lynnwood Link Extension includes development of a conceptual layout for major stormwater facilities that are sized to comply with Sound Transit's 2012 *Design Criteria Manual*, which requires stormwater facilities for Sound Transit projects to conform to the requirements of local jurisdictions. Based on the guidance provided in Sound Transit's *Design Criteria Manual*, low-impact development (LID) is a preferred method of stormwater management and will be employed wherever possible. In addition, Ecology's 2012 *Stormwater Management Manual for Western Washington* requires LID approaches to stormwater management to the extent feasible. Stormwater management facilities will be designed using sustainable, LID approaches where possible, referencing the above manuals and the *Puget Sound LID Manual* (Hinman 2012) as guidance. However, in areas where use of LID measures is not feasible due to physical site constraints, other techniques will be used. A detailed discussion of the requirements applied and the proposed facilities is presented in the Lynnwood Link Extension Conceptual Design Report - Appendix G: Drainage Plan Report Technical Memorandum (Sound Transit 2012).

To minimize the potential impacts of increased impervious surface, stormwater detention facilities will be constructed as part of the Lynnwood Link Extension. The volume detained will be sufficient to offset any increase in impervious surface area in each segment. Based on the implementation of these BMPs, combined with compliance with the guidance documents identified above, peak flows are not expected to increase in any of the streams in the study area as a result of the project; moreover, base flows will be expected to remain similar to current conditions. Stormwater from all project-related impervious surface will receive appropriate flow control where required. Stormwater flow control techniques may include detention ponds, infiltration ponds, vaults, and dispersion.

Runoff from PGIS areas will typically require basic water quality treatment, with a goal to remove at least 80 percent of total suspended solids. Water quality treatment techniques may include bioretention, ecology embankments, and media filter vaults. Treatment to remove metals, oil, and grease will be provided at parking lots and roadway areas where required. Roadways where average daily traffic volume exceeds 7,500 vehicles will receive enhanced treatment, as will drainage outfalls that do not discharge to basic treatment water bodies. The specific stormwater management facilities used will depend on the conditions at the site. Typical facilities will likely consist of media filters or bioinfiltration facilities (i.e., rain gardens), but some stormwater wetlands may be installed where feasible.

All runoff is considered PGIS except for runoff from light-rail-only impervious surface (such as at-grade or elevated guideways and stations), sidewalks, and roofs. All PGIS will receive on-site water quality and flow control treatment before being discharged into municipal storm sewer systems. LID treatment methods will be encouraged and used wherever feasible. Some LID methods may include permeable pavement, rain gardens, bioretention planters, and dispersion/infiltration.

Where practical, non-PGIS runoff will be conveyed separately from PGIS runoff because it does not require water quality treatment. Non-PGIS runoff from elevated guideways will be dispersed

over permeable areas where infiltration could occur. This will help to reduce the volume of runoff to be detained, thereby reducing the size of the detention facilities. Dispersion is practical in areas where permeable surfaces exist below the guideway and there is little human activity (because water dripping from the guideway above would be bothersome to people below). Where non-PGIS and PGIS runoff is conveyed jointly, the stormwater management facility will be designed to detain the joint flow and to provide required treatment for the PGIS flow in accordance with Ecology standards.

The following sections describe proposed stormwater treatment for each segment of the corridor.

Segment A: Northgate to Shoreline

Segment A lies within the Thornton Creek and McAleer Creek drainage basins. Most of the segment, from Northgate to NE 180th Street, is within the Thornton Creek basin. The northern end of the segment, from NE 180th Street to the NE 185th Street Station, is within the McAleer Creek basin.

Within the Seattle city limits, management of stormwater from the track in Segment A will be subject to the guidelines of the City of Seattle Flow Control and Water Quality Treatment Technical Requirements Manual, Volume 3. North of Seattle, stormwater from the track will be managed according to the WSDOT 2014 Highway Runoff Manual. The park-and-ride facilities are typically located outside of the WSDOT right-of-way and will require a permit from the City of Shoreline.

The portion of the track south of Northgate Way will drain into the existing stormwater system. Flow control required for new impervious surface will be provided by the Sound Transit Northgate Link Extension.

Proposed flow control facilities for runoff from guideways in Segment A include detention ponds, detention vaults, and infiltration facilities. Overflow from the facilities will drain to existing drainage systems and ultimately to Thornton Creek (except to the northernmost facility, which is within the McAleer Creek basin and which will overflow to the WSDOT trunk line east of I-5). Downstream analyses will be conducted at each flow control facility outfall to evaluate whether the conveyance system has adequate capacity for additional stormwater flows. Some systems may require upgrading.

All surfaces subject to vehicular traffic within park-and-ride facilities are considered PGIS and will require water quality treatment. A water quality facility and detention pond for stormwater runoff from the reconstructed NE 130th Street bridge will be located west of I-5. Stormwater from the NE 145th Street Station will be treated in a bioretention facility and detained in an underground vault that discharges to an enclosed conveyance system leading to Thornton Creek. Stormwater from the NE 185th Street Station, adjacent parking and bus lanes, and the parking garage will be treated in three separate infiltration ponds. Ponds receiving runoff from pollution-generating surfaces will have treatment liners installed in the bottom of the pond to remove pollutants prior to infiltration into the ground.

The optional station at NE 130th Street will have no parking facilities; therefore, there will be no PGIS and water quality treatment will not be required. The runoff from the station will be combined with the track runoff and conveyed to an infiltration facility.

Opportunities for LID are limited in much of Segment A. Till soils underlie the track alignment, limiting infiltration. Much of the track will be in a retained cut, making dispersion infeasible. Additionally, much of the area is highly developed and space is limited adjacent to the track, which also deters the use of dispersion. Nevertheless, guideway dispersion (allowing water to flow off the guideway in a dispersed fashion) may be feasible for some portions of the elevated guideway, provided the vegetation beneath the guideway can be maintained to minimize erosion. Using dispersion would likely eliminate the need for some detention facilities.

Segment B: Shoreline to Mountlake Terrace

Segment B lies entirely within the McAleer drainage basin. The proposed guideway alignment falls within the WSDOT right-of-way; stormwater from the track will therefore be managed according to the WSDOT 2014 Highway Runoff Manual.

The Mountlake Terrace Transit Center and the optional 220th Street SW station are both within the city of Mountlake Terrace. Runoff from these facilities will be subject to the guidelines of the 2012 Ecology Manual. Surfaces to be treated as PGIS include the reconfigured surface parking at Mountlake Terrace Transit Center, the new surface parking at the optional SW 220th Street station, and the reconstructed off-ramps from southbound I-5 at SW 220th Street.

Flow control for runoff from guideways in Segment B will be provided by detention ponds, detention vaults, and infiltration facilities. Overflow from the facilities will drain to existing drainage systems and to McAleer Creek. The portion of the track and station over existing impervious surface at the Mountlake Terrace Transit Center will not require flow control or water quality treatment. Runoff will be directed to the existing detention pond that manages stormwater from the transit center.

Segment C: Mountlake Terrace to Lynnwood

The southern portion of Segment C lies within the McAleer Creek basin and the northern portion is in the Scriber Creek basin. The guideway for Segment C is partially within the WSDOT right-of-way and partially within the city of Lynnwood; stormwater management will follow the WSDOT 2014 Highway Runoff Manual and Ecology's *Stormwater Management Manual for Western Washington*. The City of Lynnwood currently uses the 2005 manual but is expected to adopt the 2012 manual by the time project design is underway.

The soils in Segment C consist of till with young alluvium in the vicinity of Scriber Creek and its associated wetland complex. Infiltration is assumed not to be feasible in this segment. Runoff from the guideway in the southernmost portion of the segment will be directed to the detention vault in the northern portion of Segment B. Flow control for the middle portion of the segment will be provided by a detention vault that will drain to the Scriber Creek wetlands.

The northern end of the alignment passes over the Scriber Creek wetland complex. Runoff from the portion of the guideway directly above the wetlands will be dispersed from the guideway into the wetland. North of the wetland complex, the alignment passes over existing impervious surfaces at the Lynnwood Transit Center. Two existing stormwater vaults in the transit center will be replaced with new vaults that are large enough to accommodate runoff from the new garage and access roads at the redesigned transit center.

2 BEST MANAGEMENT PRACTICES AND MINIMIZATION MEASURES

To avoid and/or minimize potential impacts from construction and operation of the Lynnwood Link Extension, the following conservation measures will be implemented.

2.1 Water Quality Protection During Construction

- A TESC plan will be developed and implemented for all project activities requiring clearing, vegetation removal, grading, ditching, filling, embankment compaction, demolition, and/or excavation. BMPs defined in the TESC plan will be used to control sediments from all vegetation removal or ground-disturbing activities.
- The contractor will implement the TESC plan before discharging or allowing runoff from the site. Monitoring requirements specified in the TESC will provide feedback to ensure that the erosion control practices are operating properly and effectively.
- An SPCC plan will be developed prior to beginning construction. The SPCC plan will identify the appropriate spill containment measures to be employed during construction.
- The contractor will adhere to water quality standards as stated in the 401 Water Quality Certificate and NPDES permit issued for the project.
- Erosion control devices (e.g., silt fences) will be installed, as needed, to protect surface waters and other critical areas.
- Erosion control blankets or an equally effective BMP will be installed on steep slopes that are susceptible to erosion and where ground-disturbing activities have occurred. This will prevent erosion and assist with establishment of native vegetation.
- Material that may be temporarily stored for use in project activities will be covered with plastic or other impervious material during rain events to prevent sediments from being washed from the storage area to surface waters.
- All temporary and permanent erosion and sedimentation control measures will be inspected on a regular basis, maintained, and repaired to ensure continued performance of their intended function.
- Silt fences will be inspected after each rainfall, and at least daily during prolonged rainfall.
- Turbid water (including untreated water from dewatering activities) will be prevented from discharging to streams and wetlands. Turbid wastewater may be routed to temporary or permanent detention facilities, or to upland areas that provide adequate infiltration.
- Any water having direct contact with uncured concrete will be contained and treated or removed from the site (as appropriate) to prevent discharge to streams or wetlands.
- All equipment to be used for construction activities will be cleaned and inspected prior to arriving at the project site to ensure no potentially hazardous materials are exposed, no leaks are present, and the equipment is functioning properly. Should a leak be detected on heavy

equipment used for the project, the equipment will be repaired before use. Wash water will not be discharged directly into any water body without pretreatment.

- Construction equipment and vehicles will be maintained to prevent them from leaking fuel or lubricants.
- Equipment (excluding track-mounted equipment, large cranes, and other relatively immobile equipment) will be refueled and maintenance activities conducted at a distance from the nearest wetlands, ditches, and flowing or standing water approved by regulatory permits.
- Heavy equipment used during the course of in-water work will operate from above the ordinary high water mark of streams wherever possible. Use of equipment below the ordinary high water mark will be limited to that necessary to gain position for work. Drive mechanisms will not enter or operate below the ordinary high water mark, except under the terms of the HPA issued by WDFW.
- If any permanent footings or drilled or pile-driven shafts are installed below the ordinary high water mark, installation will be conducted in a manner consistent with Section 404 and other permits issued for the project by the Corps and other parties (as applicable). When constructing drilled shafts, the contractor will ensure that all drilling equipment, drill recovery and recycling pits, and any waste or spoil produced are properly contained to prevent discharge of drill wastes or fluids to any surface water or wetlands.
- Any materials placed below the ordinary high water mark (e.g., cobble or boulders for energy dissipation at culvert ends, streambed gravel or other substrates) will be relatively clean and will be handled in a way to minimize turbidity. When flow is restored to any such work sites, methods will be employed to minimize turbidity; based on the implementation of these measures, the project is not expected to result in the exceedance of state water quality standards at the point of compliance (as defined in WAC 173-201A) in any affected watercourses.
- Uncured concrete and/or concrete byproducts will be prevented from coming in contact with streams or water conveyed directly to streams during construction in accordance with Washington Administrative Code (WAC) Section 220-110-270(3).
- A concrete truck chute cleanout area or equally effective BMP shall be established to properly contain wet concrete.

2.2 General Best Management Practices for Construction Near All Sensitive Areas

- Sound Transit will ensure compliance with all local, state, and federal permits received for the project.
- Revegetation of construction easements and other areas will occur either during or immediately after the project is completed. All disturbed riparian vegetation will be replanted. Trees will be planted when consistent with light rail safety standards. Riparian areas will be replanted with native species.
- The project will delineate the construction limits for vegetated and habitat areas to prevent unintended effects to riparian vegetation, wetlands, woodlands, and other sensitive sites

outside of the construction limits. The construction limits will be clearly marked with high-visibility construction fencing prior to any ground-disturbing or construction-related activities, and no work in these sensitive areas will occur. There will be no direct site disturbance outside of the construction limits.

- All work will comply with the terms and conditions set forth in the HPA and other permits (such as the Clean Water Act Section 404 permit) issued for the project, including provisions designed to avoid or minimize the potential for adverse effects on habitat in receiving waters. Such provisions could include restrictions on construction periods below the ordinary high-water mark and/or other measures designed to avoid or minimize the potential for construction activities to deliver sediment or pollutants to streams.
- In accordance with typical requirements of an HPA, when large woody debris must be moved to allow the reasonable use of an over-water or in-water facility, the large woody debris will be returned to the water downstream, where it can continue to provide aquatic habitat function.
- Work areas below the ordinary high water mark will be isolated from other surface waters with a coffer dam or similar system to prevent suspended sediment or pollutants from leaving the work area.
- Heavy equipment will operate from above the ordinary high water mark wherever possible.
- Soil or rock stockpiles, excavated materials, and excess soil materials will be prevented from eroding into sensitive habitats, including water channels, wetlands, and riparian areas outside of the construction limits by high water or storm runoff.
- To reduce the risk of adverse effects on migrating salmonids during project construction, Sound Transit will require construction contractors to direct lighting away from fish-bearing waters and to place hoods or shields on lights, as needed, to minimize the amount of backlight or dispersed light cast toward the water's surface.
- If any culverts need to be installed or extended on fish-bearing or potentially fish-bearing streams, design and construction will comply with WAC 220-110-070 regarding fish passage requirements. Any affected streambeds, stream banks adjacent to culverts, and stream relocation reaches will be permanently restored after in-water work with plantings of native or approved woody and herbaceous species within 1 year of completion of each phase of construction.
- Bank protection will follow the guidelines set forth in WDFW's *Integrated Streambank Protection Guidelines*.

2.3 Mitigation for Wetland, Wetland Buffer, and Stream Impacts

- Sound Transit is coordinating with resource agencies on identifying compensatory mitigation sites for wetland and wetland buffer impacts.
- A monitoring plan and adaptive management plan will be implemented for revegetated sensitive areas or buffers. The plans will verify 100 percent survival of all installed native trees and shrubs 1 year after installation. The performance criteria will be met if all dead plants are replaced at the end of the first year. Native woody species (planted and volunteer) will maintain, on average, a density of four plants per 100 square feet in each plant

community by the end of the 3-year period. Plant communities will be identified in the mitigation plan.

2.4 Design and Operation Best Management Practices

- Permanent stormwater runoff treatment and flow control facilities will be installed to meet the requirements of the Sound Transit's 2012 Design Criteria Manual.
- Stormwater conveyance and management facilities that promote infiltration will be incorporated where applicable and permittable.
- Runoff treatment BMPs that are best suited to the site conditions and best capable of achieving the required levels of treatment will be selected, designed, and installed. These may include natural or engineered dispersion BMPs; biofiltration BMPs such as vegetated filter strips, rain gardens, biofiltration swales, or media filters; wet-pool BMPs; and infiltration BMPs.
- Existing drainage configurations will not be rerouted to the extent that stormwater from one basin or subbasins is conveyed and discharged to another unless no other practical option is available.
- Operations will not cause impacts from overwater lighting, because the tracks will have no overhead lighting and the train headlights will point parallel to the tracks.

Examples of design measures on light rail vehicles to prevent pollution resulting from mechanical lubricants include the following:

- Sealed housing roller bearings for all axle bearings
- Enclosed and sealed motor bearings
- Enclosed truck bearings designed to exclude dirt
- Sealed door mechanisms
- Enclosed, sealed electrical conduits
- On-board batteries contained within sealed enclosures
- Air conditioners with refrigerant enclosed in sealed system and motors with sealed bearings

2.5 Weed Control

- Per federal, state, and local requirements and guidance, Sound Transit will implement appropriate measures to minimize risk of introduction and spread of noxious and invasive species.
- The project will implement pesticide application techniques, in accordance with current Ecology water quality agreements, to minimize the impact on aquatic and terrestrial environments.
- To minimize use of herbicides and fertilizers, restoration of disturbed areas will include the use of mulching, ground cover, and other planting strategies that discourage growth of undesirable species.

3 ACTION AREA

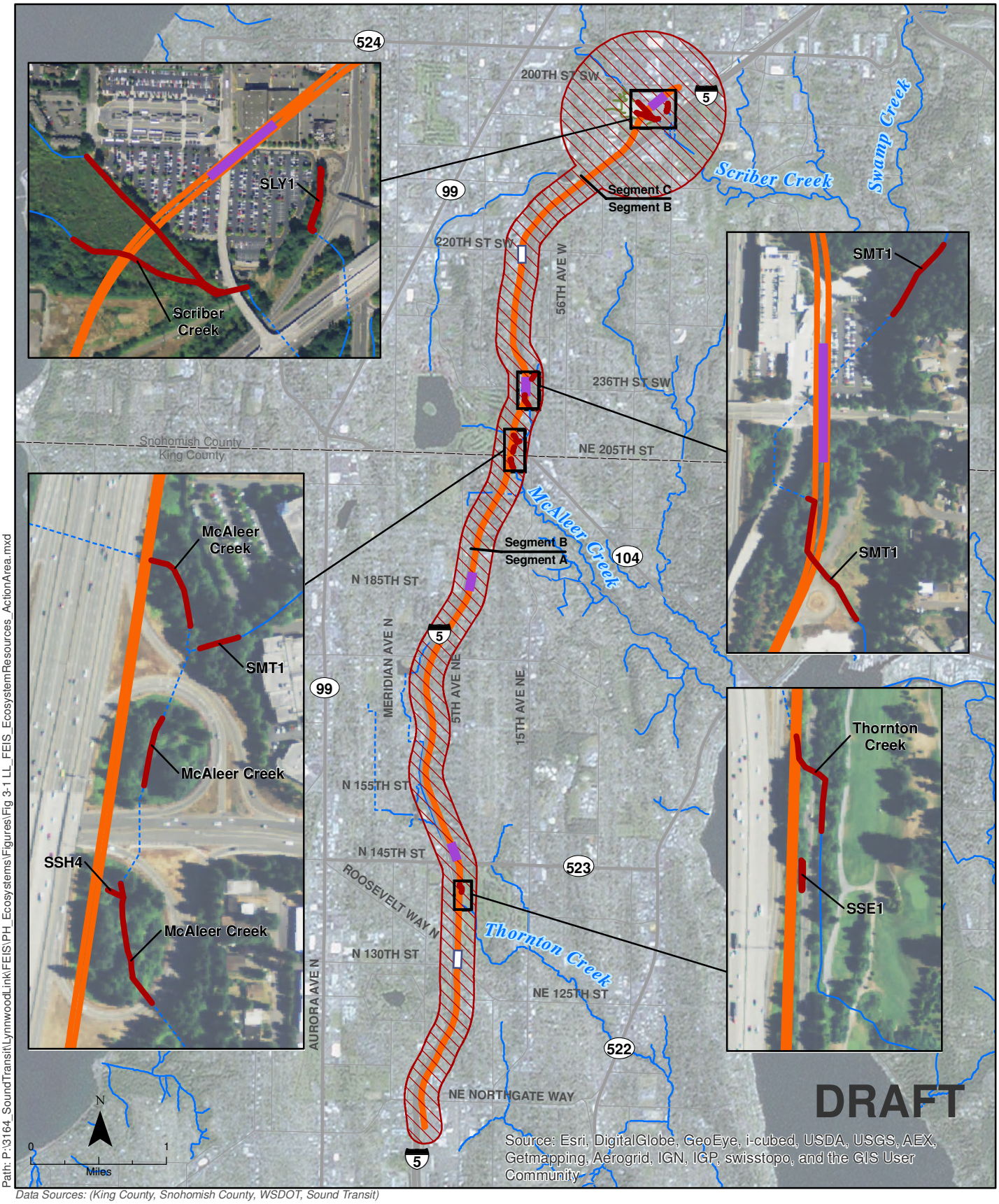
The action area is defined as the area with the potential to be affected directly or indirectly by the project actions. Project components with the potential to affect the species addressed in this analysis species include construction activities (which may contribute to increased turbidity and sedimentation in project area water bodies and elevated noise levels in terrestrial and aquatic areas), increases in the amount of impervious surface area (which may affect the quality and quantity of stormwater discharges to project area water bodies), and changes in the condition of riparian habitat. The action area for this project includes all aquatic habitats extending from the upstream extent of the project footprint, downstream to points 100 to 200 feet from the project footprint (varying by water body; see discussion below), the surface-flowing extent of streams within 200 feet of ground-disturbing activities in contiguous vegetated areas, and all terrestrial habitats within a 650- to 3,100-foot radius of the project footprint (Figure 3-1). The following subsections describe the basis for these determinations.

3.1 Terrestrial Considerations

Project components with the potential to affect the terrestrial environment include construction activities that generate noise levels that could potentially disturb sensitive wildlife species. Other sources of potential effects in terrestrial areas include vegetation removal and disturbance, habitat alteration, soil compaction, shading, and potential introduction of invasive species. All of these effects will be contained within the area potentially affected by noise from construction activities; therefore, the area potentially affected by construction noise was used as the basis for defining the terrestrial portion of the action area.

Baseline noise levels along the proposed project alignment are dominated by traffic noise from I-5 and major arterial roadways. Under current conditions, noise levels at locations near all three segments of the proposed project generally range between 60 and 70 decibels on the A-weighted scale (dBA) when averaged over the 1-hour period with peak noise levels (i.e., peak-hour Leq) (Sound Transit 2013).

Construction noise is expected to exceed noise generated from operation of the Lynnwood Link Extension; therefore, construction noise was used as a basis for defining the action area. Construction activities in most portions of all three segments are expected to result in maximum noise levels of approximately 88 dBA (Sound Transit 2013). Sound levels attenuate (i.e., lose intensity and become less audible) with increasing distance from the source of the noise. Buildings, vegetation, and noise walls absorb and deflect noise along all portions of the proposed alignment, resulting in an attenuation rate of 7.5 dBA per doubling of distance. Using that attenuation rate and a conservative estimate of 60 dBA for background noise levels, project-related construction noise will attenuate to the background levels approximately 650 feet from the project footprint.



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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Terrestrial Portion of the Action Area
Aquatic Portion of the Action Area
Proposed Alignment
Proposed Station
Optional Station

Figure 3-1
Action Area

Impact pile driving will likely be required for the construction of temporary work trestles across the Scriber Creek wetland complex near the Lynnwood Transit Center. Impact pile driving can produce maximum short-term noise levels of 99 dBA to 105 dBA at 50 feet (Sound Transit 2013). Using a conservative estimate of 105 dBA, project-related construction noise will attenuate to background levels approximately 3,100 feet from the project footprint.

These two distances—650 feet from most portions of the project footprint and 3,100 feet from locations where impact pile driving may occur—define the geographic extent of project effects relating to noise disturbance. Notably, no ESA-listed species that are sensitive to airborne noise are known or expected to use terrestrial habitats within 5 miles of the project footprint.

3.2 Aquatic Considerations

Project activities in or adjacent to water bodies and wetlands, including earthwork and construction, have the potential to introduce and transport sediment into the aquatic environment at and downstream of the immediate construction or work area. Project activities near water bodies also have the potential to affect riparian habitat, possibly resulting in indirect effects on fish species and habitat.

Sedimentation and turbidity could potentially affect all streams in the project area, with the exception of McAleer Creek tributary SSH2, which is entirely contained in culverts within the action area. The risk of increased sediment input to project area water bodies will be minimized by the use of conservation measures described in Chapter 2. In addition, Sound Transit must comply with water quality mixing zone requirements established by Ecology. For streams with flows of 10 cubic feet per second (cfs) or less during construction the water quality mixing zone is 100 feet downstream of project activities (WAC 173-201A-200-1[e]). For streams with flows between 10 and 100 cfs during construction, the water quality mixing zone is 200 feet.

Construction activities below the ordinary high water mark of water bodies in the action area will comply with the terms and conditions set forth in the HPA and other permits (such as the Clean Water Act Section 404 permit) issued for the project, including provisions designed to avoid or minimize the potential for adverse effects on habitat in receiving waters. Such provisions could include restrictions on construction below the ordinary high-water mark intended to minimize the risk of adverse effects on fish during highly sensitive life history stages (e.g., spawning, rearing). Permits for work in tributaries to Lake Washington commonly require in-water work to be conducted during the summer (likely July and August). During those months, mean daily flows in McAleer Creek are consistently less than 10 cfs (King County 2014a). Flows in Thornton Creek and Scriber Creek are generally less than 10 cfs during July and August, but Snohomish County (2014) and King County (2014a) have reported mean daily flows exceeding 10 cubic feet on a few occasions during those months (less than 5 percent of the July and August dates in the data record for either stream). No monitoring data are available for the tributaries to these streams in the action area, but flows in the tributary streams are substantially lower than flows in the main stem streams; therefore, the potential for any of the tributary streams to support flows exceeding 10 cfs during July or August is negligible. For this analysis, therefore, the mixing zones for Thornton Creek and Scriber

Creek are conservatively estimated to be 200 feet downstream of proposed stream crossings, and the mixing zones for all other potentially affected streams are estimated to be 100 feet downstream of proposed stream crossings. This defines the downstream extent of the aquatic portion of the action area as it relates to potential construction-related increases in turbidity. The only streams where work is proposed below the ordinary high water mark are Scriber Creek and Stream SMT1.

Changes in riparian habitat condition have the potential to affect habitat quality in surface-flowing streams up to 200 feet from the location of ground-disturbing activities. This distance is based on potential effects on riparian functions such as the provision of shade and the recruitment of large woody debris. Stream reaches that are separated from project activities by interruptions in surface flow (e.g., culverts) or vegetative cover (e.g., roadways and maintained clearings wider than 20 feet) are not likely to be affected.

Based on these considerations, the aquatic portion of the action area includes (1) the mixing zones defined above and (2) the surface-flowing extent of streams within 200 feet of ground-disturbing activities in contiguous vegetated areas. This defines the aquatic portion of the action area as it relates to potential construction-related increases in turbidity and potential effects on riparian habitat.

No in-water pile driving will occur in waters that are known or expected to support ESA-listed fish species. In-water pile driving may occur in Scriber Creek, where the stream has an ill-defined channel through the wetland complex west of the Lynnwood Transit Center, upstream of a total barrier to fish passage. Based on the sinuous, braided, and indistinct form of Scriber Creek's channel in the project area, sound energy from any in-water pile driving will not extend more than a few hundred feet upstream or downstream of the location of the activity, and will be blocked by the bends in the stream before it reaches the culvert under I-5 immediately downstream of the location of construction activities. The outlet of that culvert is more than 2,000 feet upstream of any stream reaches that are known or expected to support ESA-listed fish.

4 ENVIRONMENTAL BASELINE

The action area for the Lynnwood Link Extension is dominated by urban development where aquatic habitats have been subjected to moderate to high degrees of alteration. The degree of alteration varies from stream to stream, with the greatest alteration occurring where urban development is the greatest. Some of the smaller streams and headwater reaches have been placed in conveyance systems consisting of pipes and ditches, interfering with natural flow patterns and processes such as groundwater recharge.

The action area for the Lynnwood Link Extension is drained by three stream systems: Thornton Creek, McAleer Creek, and Scriber Creek (Figure 1-1). All three streams drain to Lake Washington. Thornton and McAleer creeks drain directly to the lake, while water from Scriber Creek flows to the lake via Swamp Creek and the Sammamish Slough. Table 4-1 summarizes information about streams in the action area.

Table 4-1. Summary of Streams in the Lynnwood Link Extension Action Area

Stream Name [a]	Stream Index No. [b]	Fish Habitat Status [c]	Local Jurisdiction	Local Jurisdiction Classification [d]	Local Jurisdiction Buffer Width (feet)
Thornton Creek, North Branch	08.0030	Documented	Seattle	Type 3	75
Thornton Creek Tributary (SSE1)	NA	Potential	Seattle	Type 3	75
McAleer Creek Tributary (SSH2)	NA	Unknown (Presumed Potential)	Shoreline	Piped	10
McAleer Creek Tributary (SSH4)	NA	Potential	Shoreline	Type III	65
McAleer Creek	08.0049	Documented	Shoreline	Type II	115
			Mountlake Terrace	Class II	100
McAleer Creek Tributary (SMT1)	08.0050	Potential	Mountlake Terrace	Class III	65
Scriber Creek	08.0061	Documented	Lynnwood	Category I	100
Scriber Creek Tributary (SLY1)	08.0064	Potential	Lynnwood	Category III	35

[a] Streams other than Thornton Creek, McAleer Creek, and Scriber Creek are identified with alphanumeric codes: SYYn. S stands for stream; YY = two-letter code for local jurisdiction (SE = Seattle, SH = Shoreline, MT = Mountlake Terrace, LY = Lynnwood); n = sequential identification number.

[b] Water Resource Inventory Area (WRIA) identification numbers according to Williams et al. (1975). 'NA' indicates watercourses that are not identified in that inventory.

[c] Documented = Fish have been observed in the action area; Potential = Potential fish habitat is present, based on field assessment of stream width and gradient, but stream segments in the action area are upstream of human-caused fish passage barriers; Unknown = No fish presence data are available and stream segments are contained within culverts in the action area.

[d] Identification and classification of streams for this analysis represent conservative estimates, based on available information and the provisions of local critical areas rules. Some of the watercourses identified in this analysis may not actually be defined as streams by the local jurisdictions, or they may be assigned smaller buffers. Actual impacts would be analyzed and mitigated as appropriate through local permitting processes.

Sound Transit identified 37 wetlands in the action area (Table 4-2). All wetlands within 100 feet of the footprint of the proposed alignment were formally delineated and rated according to local regulations and the *Washington State Wetland Rating System for Western Washington* (Hruby 2004). Other wetlands within public rights-of-way near the proposed alignment were mapped and rated as well.

Table 4-2. Summary of Wetlands in the Lynnwood Link Extension Action Area

Wetland[a]	Size (acres)	USFWS Class[b]	HGM Class[c]	City with Jurisdiction	Local Rating[d]	Buffer Width (feet)
Segment A						
WSE1	0.42	PFO	Riv	Seattle	III	60
WSE3	0.25	PFO,PEM	Dep,Slope	Seattle	III	60
WSE4	0.11	PFO	Dep	Seattle	III	60
WSE5	0.26	PFO	Dep	Seattle	III	60
WSE6	0.08	PSS	Dep	Seattle	III	60
WSE7	0.19	PSS,PEM	Dep	Seattle	III	60
WSE8	0.66	PFO,PSS	Dep	Seattle	III	60
WSH1	0.08	PFO,PSS,PEM	Dep,Slope	Shoreline	III	65
WSH2	0.36	PEM	Dep,Slope	Shoreline	IV	35
WSH3	0.03	PEM	Slope	Shoreline	IV	35
PWSH3	0.10	PFO,PEM	unknown	Shoreline	III	65
PWSH4	0.19	PFO	Slope	Shoreline	III	65
PWSH5	0.07	PEM	Slope	Shoreline	III	65
Segment B						
WSH4	0.10	PFO,PEM	Dep,Slope	Shoreline	III	65
WSH5	0.48	PFO	Dep	Shoreline	III	65
WMT1	0.49	PFO	Dep	Mtlk. Terrace	III	65
WMT2	0.11	PFO	Riv,Slope	Mtlk. Terrace	III	65
WMT3	0.07	PFO	Dep	Mtlk. Terrace	III	65
WMT4	0.43	PFO,PSS	Dep,Slope	Mtlk. Terrace	III	65
WMT5	0.34	PFO,PEM	Dep	Mtlk. Terrace	III	65
WMT6	1.12	PFO	Dep	Mtlk. Terrace	III	65
WMT7	0.42	PFO	Dep	Mtlk. Terrace	IV	50
WMT8	0.01	PFO	Slope	Mtlk. Terrace	IV	50
WMT9	0.03	PEM	Dep	Mtlk. Terrace	IV	50
WMT10	0.03	PSS	Dep	Mtlk. Terrace	III	65
WMT11[e]	0.07			Mtlk. Terrace		
PWMT2	0.02	PFO	Dep	Mtlk. Terrace	III	65
Segment C						
WLY3	0.26	PSS	Dep	Lynnwood	III	75
WLY4	16.59	PFO,PSS,PEM	Riv, Dep	Lynnwood	II	110
WLY6	0.04	PFO	Dep	Lynnwood	III	75
WLY7	0.15	PSS	Dep	Lynnwood	III	75
WLY8	0.08	PEM	Dep	Lynnwood	III	75
PWLY1	0.07	PSS	Dep	Lynnwood	III	75
PWLY2	0.26	PFO	Dep	Lynnwood	III	75
PWLY3	0.07	PEM	Dep	Lynnwood	III	75
PWLY4	0.03	PFO	Dep	Lynnwood	III	75
PWLY5	0.03	PUB	Dep	Lynnwood	III	75

[a] Wetlands are identified with alphanumeric codes; WYYn, W stands for wetland; PW stands for potential wetland; YY = two-letter code for local jurisdiction (SE = Seattle, SH = Shoreline, MT = Mountlake Terrace, LY = Lynnwood); n = sequential identification number.

[b] Cowardin et al. (1979); USFWS = U.S. Fish and Wildlife Service. PEM = palustrine emergent; PFO = palustrine forested; PSS = palustrine scrub-shrub; PUB = palustrine unconsolidated bottom.

[c] Brinson (1993). HGM = Hydrogeomorphic; Dep = Depressional; Riv = Riverine; Slope = Slope

[d] Seattle Municipal Code 25.09.160.A , only applicable to development on publicly or privately owned parcels; Shoreline Municipal Code 20.80.320, Mountlake Terrace Municipal Code 16.15.080; and Lynnwood Municipal Code 17.10.050

[e] Classification and rating are not yet complete for Wetland WMT11; based on preliminary data, it will likely be rated as Category III or Category IV.

Wetlands outside of public rights-of-way and more than 100 feet from the footprint of the proposed alignment were identified via existing documentation and public vantage points, and are identified as potential wetlands for this analysis. Sound Transit will request jurisdictional determinations of those wetlands that are likely to be affected along the proposed alignment during the permitting phase of this project.

All wetlands in the action area are in areas where the natural environment has been altered by urban development. Many are within maintained rights-of-way where they receive stormwater runoff from pipes, ditches, or overland flow. Other sources of hydrology include a shallow groundwater table, precipitation, and overbank flow from adjacent streams. With one exception, all of the wetlands in the study area have relatively low quality ratings (Category III or IV), indicating moderate to low levels of wetland function and moderate to high levels of disturbance. The exception is a Category II wetland (Wetland WLY4) associated with Scriber Creek. This large wetland/stream complex located near the Lynnwood Transit Center provides multiple water quantity, water quality, and habitat functions. In addition, WLY4 is the only wetland in the action area that is accessible to fish.

The following sections describe the streams and wetlands present in the action area and provide information about fish use[1], fish habitat quality, and riparian habitat conditions in the streams. Anthropogenic factors that influence habitat quality for each stream are also identified. Summary information about wetlands in the action area is also provided. Information is organized by the three project segments, progressing from south to north.

4.1 Segment A: Northgate to Shoreline

Segment A of the Lynnwood Link Extension alignment crosses Thornton Creek and runs parallel to Stream SSE1 (Figure 1-2). Construction and operation of light rail facilities for Segment A also have the potential to affect several wetlands and wetland buffers in the cities of Seattle and Shoreline.

4.1.1 Streams

Thornton Creek

The 7,200-acre Thornton Creek basin drains a substantial portion of northeastern Seattle and most of Shoreline. The stream flows generally south and east before discharging to Lake Washington. Land elevations range from 18 feet at the stream's mouth at Lake Washington to more than 500 feet in the northwestern portions of the basin.

[1] Note that in addition to providing information about known or expected occurrence, WDFW's SalmonScape fish database and mapping application (WDFW 2014b) also identifies stream segments with the potential to support salmonid use, based on stream gradient. Areas with a gradient of 12 percent or greater are considered to be natural barriers to access by most salmonids, including Chinook salmon and steelhead. Stream segments upstream of areas with known species presence but downstream of gradient-based barriers are categorized as 'modeled' habitat for these species. The 'modeled' category does not factor habitat quality, flow, or any other natural or human-caused conditions (including barriers to fish passage) that would otherwise prevent habitat use. For this analysis, a species is presumed to be absent from areas categorized as modeled habitat unless documented observations indicate otherwise.

Thornton Creek drains the southern half of the action area (south of NE 185th Street, approximately). Segments of the North Branch of Thornton Creek (WRIA No. 08.0030) within and immediately upstream of the Jackson Park Golf Course fall within the action area. The South Branch of Thornton Creek, also known as Maple Leaf Creek, originates in wetlands near Northgate, North Seattle Community College, and I-5 (City of Seattle 2007). The two branches join to form the 1.4-mile-long main stream near the Meadowbrook stormwater detention pond in northeast Seattle. The action area does not include any portions of the South Branch or the main stem of Thornton Creek.

The North Branch of Thornton Creek originates near Ronald Bog in Shoreline and flows 5 miles before joining the South Branch, draining an area of approximately 7 square miles (City of Seattle 2007). The only surface-flowing reach of Thornton Creek within the action area is a 100-foot-long segment that flows out of a pair of 1,500-foot-long, 72-inch-diameter culverts under I-5 and into a pair of 48-foot-long, 40-inch-diameter culverts under 5th Avenue NE. After emerging from the culverts under 5th Avenue NE, the stream flows in a ditch between the street and the Jackson Park Golf Course for approximately 700 feet before veering east into the golf course (Tetra Tech/KCM 2004b).

Anthropogenic Factors

Overall, approximately 59 percent of the Thornton Creek basin is covered by impervious surfaces such as roads, buildings, and parking lots (City of Seattle 2007). In portions of the basin north of the Seattle city limits, the City of Shoreline calculated existing impervious area values ranging between 45 and 48 percent (Tetra Tech/KCM 2004b). Kerwin (2001) estimated the effective impervious area in the basin at 31.9 percent. The City of Seattle (2007) identified the following problematic conditions in the system, due primarily to urban development in the basin:

- Altered hydrology, with high and flashy flows
- Degraded water quality, with temperatures and fecal coliform bacteria frequently at levels above state standards
- Excess nutrients under non-storm flow conditions
- Channel incision and degraded in-stream habitat, due to restricted channel width and loss of hydrologic connectivity to the floodplain
- Depressed levels of coarse sediment, in-stream wood, and riparian forest
- Fish passage barriers that limit anadromous fish to 30 percent of the watercourse length
- High pre-spawn mortality rates of coho salmon

Fish Use

The lower reaches of Thornton Creek support spawning anadromous salmonids. Chinook, coho, and sockeye salmon redds have been observed in the North Branch as far upstream as 35th Avenue NE and NE 115th Street, approximately 3 miles downstream of the action area (City of Seattle 2007,

WDFW 2014b). Individual chum salmon (likely strays from other basins [Kerwin 2001]) have also been sighted in the lower portions of the stream (McMillan 2007 in City of Seattle 2007), and steelhead have been observed throughout much of the system (WDFW 2014b).

Chinook salmon have been documented in the North Branch of Thornton Creek as far upstream as the confluence with Littlebrook Creek, approximately 2.5 miles downstream of the action area; the nearest stream reach where Chinook spawning has been documented is in the main stem of Thornton Creek, another 0.5 mile downstream (WDFW 2014b).

According to WDFW (2014b), steelhead are present in the North Branch of Thornton Creek as far upstream as the Jackson Park Golf Course, approximately 1,600 feet downstream of the action area. Based on the observation of an adult steelhead near Twin Ponds upstream of the action area (Tetra Tech/KCM 2004b), however, it is possible that steelhead may use stream habitats in the action area.

Resident salmonids are also present in the Thornton Creek system, including reaches that are within or upstream of the action area. Cutthroat trout (*Oncorhynchus clarki*) have been observed as far upstream as the Jackson Park Golf Course and rainbow trout have been observed another mile upstream, near Twin Ponds (City of Seattle 2007). According to WDFW (2012), resident cutthroat trout are expected to be present in Thornton Creek as far upstream as Ronald Bog. Native non-salmonid species that use Thornton Creek include threespine stickleback (*Gasterosteus aculeatus*), prickly sculpin (*Cottus asper*), coast-range sculpin (*C. aleuticus*), and lamprey (*Lampetra* sp.) (Tabor et al. 2010). Non-native fish species that have been introduced to Thornton Creek, either intentionally or unintentionally, include rock bass (*Ambloplites rupestris*), pumpkinseed (*Lepomis gibbosus*), largemouth bass (*Micropterus salmoides*), and oriental weatherfish (*Misgurnus anguillicaudatus*) (Tabor et al. 2010).

Migratory cutthroat trout are the most abundant salmonid in Thornton Creek, with an average annual adult count of more than 200 live fish on spawning grounds (City of Seattle 2007). Based on carcass counts from 1999 through 2005, the average annual anadromous run size in Thornton Creek is 33 coho, 7 sockeye, and 4 Chinook salmon (City of Seattle 2007).

WDFW (2014a) classified three of the culverts in Thornton Creek downstream of the action area as total barriers to fish passage. An additional 18 structures, including 7 culverts, 5 streambed control structures, 3 recreational dams, 2 bridges, and 1 artificial waterfall, are partial barriers (WDFW 2014a). Within the action area, the culverts under I-5 and 5th Avenue NE are also partial barriers (WDFW 2014a). However, the observation in 2004 of an adult steelhead upstream of Twin Ponds suggests that none of these structures, including the culvert under I-5, may present an absolute barrier to fish passage (Tetra Tech/KCM 2004b). Notably, steelhead are renowned for their ability to negotiate what would be considered barriers for most other salmonids (Tetra Tech/KCM 2004b).

Water Quality

No portions of Thornton Creek within the action area are listed as impaired water bodies under CWA Section 303(d) (Ecology 2012b). The main stem and the lower portions of the North and South Branches are listed as impaired, based on demonstrated exceedances of state water quality standards for temperature and dissolved oxygen (Ecology 2012b). The lowest reaches of the main

stem are also listed for fecal coliform bacteria. In addition, Ecology (2012b) has identified portions of Thornton Creek as a water of concern for both pH and mercury.

Since 1971, King County has monitored water quality in Thornton Creek at a station located near the stream's mouth. Results from a trend analysis of water quality data from 1971 to 2007 indicated that water quality might have declined during that 37-year analysis period, with statistically significant increases in water temperatures, total phosphorus, turbidity, and conductivity, as well as decreased concentrations dissolved oxygen (King County 2014a). Decreased levels of ortho-phosphorus, nitrate-nitrogen, and total nitrogen indicate some improvements in water quality during that period. In its most recent (2013) water quality report for Thornton Creek, King County assigned the stream a water quality index score of 45, indicating a moderate level of concern for water quality (King County 2014c). In general, scores between 40 and 80 indicate a moderate level of concern and scores below 40 indicate a high level of concern. The water quality index score for Thornton Creek was greater than 40 in only 2 of the 14 years from 2000 to 2013 (King County 2014c).

In-stream Habitat

In-stream habitat quality of the North Branch of Thornton Creek within the action area is rated as low, based on channel morphology, sediment regime, and existing physical habitat conditions (City of Seattle 2007). The stream valley in most of the action area has been modified by grading, fill, and excavation, particularly near I-5, where the stream has been straightened and confined. The channel has more sinuosity within the golf course (downstream of the action area), but the banks in many areas are hardened by riprap and the stream cannot migrate. Note that this description is based on surveys that were completed between 1999 and 2004, before stream restoration work was completed within the Jackson Park Golf Course. The habitat benefits of that effort are not reflected in the description (City of Seattle 2007).

Thornton Creek near 5th Avenue NE, looking upstream toward the outlets of the twin culverts under I-5

Throughout the segment of Thornton Creek within the action area, the channel is mostly eroding and degrading or has been locked into place through bank armoring. Gradients range between 1 and 2 percent. Gravel and sand are the dominant sediment types, and riffles and glides are the dominant habitat types; little in-stream structure is present to contribute to pool formation. This dearth of in-stream structure also reduces the channel's capacity to trap and store sediment (City of Seattle 2007). Based on the predominance of fine sediments, spawning habitat quality is considered poor. Based on the presence of overhanging vegetation and relatively deep water, portions of the stream within the action area likely provide suitable rearing habitat for juvenile fish (Tetra Tech/KCM 2004b).

Upstream of the I-5 culvert, Thornton Creek lies outside of the action area and on the opposite side of I-5 from the proposed alignment.

Riparian Habitat

Riparian habitat quality of Thornton Creek within the action area is rated low, based on riparian area width, connectivity, understory and canopy composition, canopy density, and the percentage of the stream shaded by vegetation (City of Seattle 2007). Stream banks in most portions of the action area are dominated by Himalayan blackberry (*Rubus armeniacus*). The riparian buffer within the footprint of the project alignment consists of a 40- to 50-foot-wide strip of trees (primarily red alder [*Alnus rubra*] and young Douglas-fir [*Pseudotsuga menziesii*]) between 5th Avenue NE and the off-ramp from I-5 to NE 130th Street.

On the opposite side of 5th Avenue NE from the project footprint, a 50- to 70-foot-wide strip of vegetation along the stream includes red alder, black cottonwood (*Populus balsamifera*), and scattered patches of immature western redcedar (*Thuja plicata*). This overstory canopy provides shade for the stream during spring and summer (when the deciduous trees have leaves), as well as the potential for contributing some woody debris. Within the golf course, the dominant riparian vegetation along Thornton Creek consists of non-native plants, turf, and landscaping.

Aerial view of riparian habitat along Thornton Creek and SSE1 in the action area

Thornton Creek Tributary SSE1

Approximately 300 feet south of Thornton Creek's crossing under 5th Avenue NE, a watercourse emerges from a culvert in the I-5 right-of-way, flows southward in the ditch on the west side of 5th Avenue NE for approximately 100 feet, and then drains eastward to Thornton Creek via a culvert under 5th Avenue NE. The watercourse was not catalogued as a stream by Williams et al. (1975), the source of the water in the ditch is not known, and historic maps of the area do not indicate the presence of a tributary to Thornton Creek at this location. However, field observations of flowing water during the summer months suggest the possibility that some flow may be derived from groundwater. For this analysis, this watercourse is provisionally identified as a stream (SSE1) and classified as Type 3, based on the presence of a 2-foot-wide channel and a gradient less than 16

percent. A formal determination of whether the watercourse is a stream (and if so, how it is classified) will occur through the process of project permitting with the City of Seattle. Riparian habitat for the surface-flowing segment of the watercourse consists of a strip of red alder and Himalayan blackberry in the I-5 right-of-way between 5th Avenue NE and the off-ramp from I-5 northbound to NE 145th Street.

4.1.2 Wetlands

None of the 13 wetlands identified in Segment A has a surface water connection to any streams that support ESA-listed fish. Collectively, however, the ecological functions of these wetlands (e.g., water quality maintenance, stormwater detention, groundwater recharge) likely contribute to the maintenance of fish habitat conditions in the Thornton Creek basin.

Seven of the wetlands fall within the Seattle city limits and six are within Shoreline (Table 4-2). All seven of the Seattle wetlands are rated as Category III, indicating moderate levels of wetland function. Four of these seven wetlands provide only one habitat class (forested or shrub); the other three provide combinations of two habitat classes (forested, scrub-shrub, or emergent). In Shoreline, four of the wetlands are rated as Category III and two are rated as Category IV (indicating low levels of wetland function). One of the Category III wetlands provides three different habitat classes (forested, scrub-shrub, and emergent), one provides two classes (forested and emergent), and each of other two provides one class (emergent or forested). The two Category IV wetlands provide only one habitat type (emergent). Vegetation in all of the wetlands is a mix of native and non-native species, many of which are disturbance-tolerant. Surrounding buffers range from forested to herbaceous cover; disturbance-tolerant species are common.

4.2 Segment B: Shoreline to Mountlake Terrace

Segment B of the Lynnwood Link Extension alignment crosses three streams: McAleer Creek, Stream SSH2, and Stream SMT1 (see Figures 1-3 and 1-4). Streams SSH2 and SMT1 are non-fish-bearing tributaries to McAleer Creek. Stream SSH2 is entirely contained in culverts through the action area. Construction and operation of light rail facilities for Segment B also have the potential to affect several wetlands and wetland buffers in the cities of Shoreline and Mountlake Terrace.

4.2.1 Streams

McAleer Creek

McAleer Creek (WRIA No. 08.0049) originates at Lake Ballinger and flows roughly 6 miles to the northeast corner of Lake Washington. The 5,300-acre drainage basin includes portions of Lynnwood, Edmonds, Mountlake Terrace, Shoreline, and Lake Forest Park. Land elevations range from 18 feet at the stream's mouth in Lake Washington to more than 500 feet north of the Mountlake Terrace Transit Center. Most of the northern portion of the action area (from NE 185th Street in Shoreline, north to about 208th Street SW in Lynnwood) drains to the McAleer Creek system. Areas north of 224th Street SW drain to Lake Ballinger, which empties to McAleer Creek.

Much of McAleer Creek within the action area is contained within culverts. The stream enters the action area from an open channel through the Nile Golf Course west of I-5. The stream segments in the action area are as follows, progressing from upstream to downstream:

- Culvert under I-5 (440 feet)
- Open channel adjacent to the on-ramp from SR 104 westbound to I-5 northbound (240 feet) (photo at right)
- Culvert under the cloverleaf interchange between I-5 northbound and SR 104 westbound (280 feet)
- Open channel in the area enclosed by the off-ramp from I-5 northbound to SR 104 westbound (200 feet) (photo below, left)
- 4-foot by 6-foot box culvert under SR 104 (320 feet)
- Channelized open water course in the area enclosed by the on-ramp from SR 104 eastbound to I-5 northbound (200 feet) (photo below, right)
- 66-inch-diameter culvert beneath the cloverleaf interchange between I-5 northbound and SR 104 eastbound (280 feet)

McAleer Creek near the outlet of the culvert under I-5, looking downstream (culvert at right is not the I-5 culvert)

McAleer Creek in the cloverleaf interchange between westbound SR 104 and northbound I-5, looking upstream near the middle of the segment

McAleer Creek in the cloverleaf interchange between eastbound SR 104 and northbound I-5, looking upstream from the downstream end of the segment

Anthropogenic Factors

In addition to the extensive portions of the stream that are contained within culverts, McAleer Creek has been affected by urban development throughout its basin. Kerwin (2001) estimated the

effective impervious area in the basin at 30.5 percent. Tetra Tech/KCM (2004a) calculated the total impervious area for portions of the McAleer Creek basin within the city of Shoreline to be 46 percent. Forested areas provide shade and other vital functions in some areas; in most of the basin, however, riparian habitat includes single-family homes, apartments, and lawns.

Fish Use

McAleer Creek supports anadromous fish as far upstream as Lake Ballinger. The presence of Chinook salmon has been documented approximately 1,000 feet downstream of the action area and spawning has been documented approximately 4,800 feet further downstream (WDFW 2014b). WDFW (2014b) has documented the presence of steelhead as far upstream as the mouth of the tributary (Stream SMT1) near the on-ramp from SR 104 westbound to I-5 northbound, within the action area. Tetra Tech/KCM (2004a) reported observations of steelhead spawning in McAleer Creek approximately 200 feet downstream of the action area, although WDFW (2014b) does not identify any parts of McAleer Creek as spawning habitat for steelhead. King County (2012) reported that volunteers with the Salmon Watcher Program have consistently seen Chinook, coho, and sockeye salmon in the stream but did not specify the upstream extent of observations or whether any spawning activity was observed.

Other salmonids known or expected to be present in the action area are coho salmon and cutthroat trout. Portions of McAleer Creek downstream of the confluence with Stream SMT1 provide spawning habitat for coho salmon, while those upstream of that point provide rearing habitat (WDFW 2014b). Resident cutthroat trout are present throughout the stream, even upstream of Lake Ballinger (WDFW 2012), and have been observed spawning in McAleer Creek immediately outside of the action area (Tetra Tech/KCM 2004a). The lower reaches of the stream provide spawning habitat for sockeye salmon (WDFW 2014b). Kokanee salmon and rainbow trout have also been observed in McAleer Creek, but locations for those observations have not been specified (Kerwin 2001).

WDFW (2014a) classified four culverts in McAleer Creek downstream of the project action as partial barriers to fish passage and one culvert as a possible barrier. Within the action area, the culverts under I-5 and under the off-ramp from I-5 northbound to SR 104 westbound are also partial barriers (WDFW 2014a). The culvert under I-5 may be a migration barrier to juvenile salmonids that prevents the use of Lake Ballinger for rearing (Kerwin 2001).

Water Quality

No portions of McAleer Creek within the action area are listed as impaired or waters of concern under the Clean Water Act (CWA) Section 303(d). The lower portions of McAleer Creek are listed as impaired water bodies, based on demonstrated exceedances of state water quality standards for fecal coliform and dissolved oxygen (Ecology 2012b). Lake Ballinger upstream of the action area is on the list for contaminants, including polychlorinated biphenyls (PCBs), dieldrin, and 2,3,7,8-TCDD, which have been detected in fish tissue samples (Ecology 2012b).

Sediment samples collected at a site approximately 1 mile upstream of the action area had chemical compounds at concentrations likely to cause adverse effects in aquatic animals living in the sediments (King County 2012). Sediment samples from a site approximately 0.25 mile downstream of the action area contained pyrene and nickel, but the potential for chemical effects is uncertain due to the contaminant levels (King County 2012).

Since 1976, King County has monitored water quality in McAleer Creek at a station located near the stream's mouth. Results from a trend analysis of water quality data from 1979 to 2004 did not indicate any significant changes in temperature; concentration of dissolved oxygen; or levels of bacteria, nitrogen, and total phosphorus (King County 2012). However, conductivity increased significantly during the analysis period, suggesting the presence of dissolved charged substances in the water, possibly related to metal concentrations in sediments (King County 2012). Decreasing levels of total suspended solids and decreased concentrations of ortho-phosphorus indicate some improvements in water quality during that 25-year period. In its most recent water quality report for McAleer Creek, King County assigned the stream a water quality index score of 74, indicating a moderate level of concern for water quality (King County 2014b). In general, scores between 40 and 80 indicate a moderate level of concern and scores above 80 indicate a low level of concern. Water quality index scores for McAleer Creek generally ranged between 50 and 60 from 2000 to 2008, dropping below 40 in two years (King County 2014b).

In-stream Habitat

Immediately downstream of the action area, the in-stream habitat of McAleer Creek has been rated as poor, based on the preponderance of fine sediments, as well as scouring and incision resulting from bank hardening (Tetra Tech/KCM 2004a). The channel provides poorly defined pool-riffle complexes; the only pool habitat consists of step-pools formed by weirs. The gravel/cobble stream substrate is heavily cemented with sediment, which reduces its spawning suitability (Tetra Tech/KCM 2004a). Based on benthic invertebrate samples collected in 2002 and 2003, King County (2012) rated conditions in McAleer Creek as poor for benthic invertebrates.

Riparian Habitat

Riparian habitat quality along the open-channel segments of McAleer Creek in the action area is generally good and is dominated by forest canopy that provides shade and the potential for recruitment of woody debris that contributes to channel complexity. The value of the riparian habitat is limited, however, by a lack of connectivity. The open-channel habitat and associated riparian areas of McAleer Creek occur in three discrete segments in the action area, separated by segments that are contained within culverts.

McAleer Creek Tributary SSH2

Approximately 1,800 feet south of the I-5/SR 104 interchange, a tributary to McAleer Creek (Stream SSH2) has been identified as passing under I-5 (Tetra Tech/KCM 2004a). This tributary was not

catalogued by Williams et al. (1975). The stream enters a culvert just west of I-5, is contained within culverts through the action area, and resurfaces approximately 1,500 feet later, shortly before its confluence with the main stem near a wastewater pumping station upstream of 15th Avenue NE (Tetra Tech/KCM 2004a). The open-water portions of the stream west of I-5 are within concrete-lined ditches along NE 200th Street. During site visits conducted for this analysis, flowing water was observed in this watercourse only during and immediately after rainfall.

Stream SSH2 in ditch along NE 200th Street, immediately upstream (west) of I-5

Based on the presence of human-created barriers to fish passage, no fish are known or expected to use Stream SSH2 in the action area (WDFW 2014b, 2012). In addition, all portions of the stream within and adjacent to the footprint of the Lynnwood Link Extension are contained within culverts. However, the basin size, channel width, and stream gradient of the tributary indicate the potential to support fish use in the future.

McAleer Creek Tributary SSH4

Within the cloverleaf interchange between eastbound SR 104 and northbound I-5, a watercourse emerges from a culvert under the roadway, flows approximately 30 feet, and then joins McAleer Creek. The watercourse was not catalogued as a stream by Williams et al. (1975), the source of the water is not known, and historic maps of the area do not indicate the presence of a tributary to McAleer Creek at this location. However, field observations of flowing water during the summer months suggest the possibility that some flow may be derived from groundwater. For this analysis, this watercourse is provisionally identified as a stream (SSH4) and classified as Type III, based on the presence of a 2-foot-wide channel and a gradient less than 16 percent. A formal determination of whether the watercourse is a stream (and if so, how it is classified) will occur through the process of project permitting with the City of Shoreline. If the watercourse is classified as a Type III stream, its regulatory buffer will be contained entirely within the larger regulatory buffer for McAleer Creek. Riparian habitat conditions for Stream SSH4 are therefore as described for McAleer Creek, above.

McAleer Creek Tributary SMT1

North of the I-5/SR 104 interchange, a tributary (WRIA No. 08.0050; Stream SMT1) joins McAleer Creek in the wooded area adjacent to the on-ramp from SR 104 westbound to I-5 northbound. The tributary originates in Veterans Memorial Park northeast of the Mountlake Terrace Transit Center, then flows south through a series of open watercourses and culverts east of I-5. During site visits conducted for this analysis, flowing water was observed in this watercourse only during and immediately after rainfall. Farther downstream, along the eastern border of the Edmonds School

District property south of 236th Street SW, water from a culvert under the school property contributes flow on a more regular basis. The City of Mountlake Terrace has identified the uppermost reaches of this watercourse in the study area as a Class V (seasonal, non-fish-bearing) stream. City staff have not yet made a determination concerning the classification of the downstream reaches that have more consistent flow. The segment that is crossed by the proposed light rail alignments is upstream of the water source in the Edmonds School District property and is likely to be considered a Class V stream.

WDFW (2014a) identified the culvert at the mouth of Stream SMT1 as a total barrier to fish passage. Based on the presence of human-created barriers to fish passage, no fish are known or expected to use Stream SMT1 in the action area (WDFW 2014b, 2012). However, the basin size, channel width, and stream gradient of the tributary indicate the potential to support fish use in the future. Riparian habitat quality along the open-channel segments of Stream SMT1 in the action area is generally good and dominated by forest canopy that provides shade and the potential for recruitment of woody debris that contributes to channel complexity. The stream reach that falls within the footprint of the elevated guideway is contained within an ill-defined channel that shows minimal traces of surface flow.

Ill-defined channel of Stream SMT1 south of the off-ramp from I-5 to South 236th Street

Culvert at confluence of Stream SMT1 with McAleer Creek

4.2.2 Wetlands

None of the 14 wetlands identified in Segment B has a surface water connection to any streams that support ESA-listed fish. Collectively, however, the ecological functions of these wetlands (e.g., water quality maintenance, stormwater detention, groundwater recharge) likely contribute to the maintenance of fish habitat conditions in the McAleer Creek basin.

Two of the wetlands fall within the Shoreline city limits and twelve are within Mountlake Terrace (Table 4-2). Both of the Shoreline wetlands are rated as Category III, indicating moderate levels of wetland function. One has two habitat classes (forested and emergent) and the other has one (forested). In Mountlake Terrace, eight of the wetlands are rated as Category III and three are rated as Category IV (indicating low levels of wetland function). Classification and rating are not yet complete for one of the Mountlake Terrace wetlands; based on preliminary data, it will likely be rated as Category III or Category IV. Two of the Category III wetlands in Mountlake Terrace provide two different habitat classes (combinations of forested and scrub-shrub or emergent). The other six Category III wetlands in Mountlake Terrace provide only one habitat class: five are forested and one is scrub-shrub. The three Category IV wetlands in Mountlake Terrace provide only one habitat class (forested or emergent). Vegetation in all of the wetlands is a mix of native and non-native species, many of which are disturbance-tolerant. Surrounding buffers range from forested to herbaceous cover; disturbance-tolerant species are common.

4.3 Segment C: Mountlake Terrace to Lynnwood

Segment C of the proposed Lynnwood Link Extension alignment crosses Scriber Creek within a wetland complex immediately west of the Lynnwood Transit Center (Figure 1-4). Also, a tributary to Scriber Creek (Stream SLY1) west of the transit center may benefit from improvements in flow control and water quality treatment. Construction and operation of light rail facilities for Segment C also have the potential to affect several wetlands and wetland buffers in Lynnwood.

4.3.1 Streams

Scriber Creek

Scriber Creek (WRIA No. 08.0061) drains approximately 4,250 acres, including the extreme northern portion of the action area. Land elevations range from approximately 200 feet at the stream's confluence with Swamp Creek to more than 600 feet at the northwest watershed divide. The stream flows southeast, joining Swamp Creek approximately 2.6 miles downstream of the action area. Swamp Creek flows into the Sammamish River, which empties into the northern end of Lake Washington.

Scriber Creek within the wetland complex, looking downstream

For much of its length in the action area, the stream channel is braided and indistinct as it flows through the large wetland complex (Wetland WLY4) south and west of the Lynnwood Transit Center. The stream forms a defined channel as it exits the action area, flowing southeast and under I-5. Based on input provided by Ecology staff who collaborated on field delineations in July 2014, the ordinary high water mark of Scriber Creek through the wetland

complex is defined as encompassing the entire breadth of the complex. At most times of year, flowing water is confined to a few channels that make up a small portion of total wetland complex area. The locations of these channels likely change from year to year.

Anthropogenic Factors

Scriber Creek subbasin is the most highly developed of the Swamp Creek subbasins. Commercial development and transportation corridors account for approximately 40 percent of the subbasin, and medium-density, single-family development covers another approximately 30 percent (Snohomish County 2002). The effective impervious area in the subbasin is approximately 40 percent (Snohomish County 2002). Jones and Stokes (2000) identified untreated runoff from roads and new construction as a likely source of excessive fine sediment in the portion of Scriber Creek that falls within the action area. Street runoff from roads upstream of the action area also conveys oil and other pollutants to the stream system.

Fish Use

Anadromous salmonids have been observed in Scriber Creek, but sources differ about their habitat use as far upstream as the action area. WDFW (2014a) identified a total barrier to anadromous fish passage in a wooded area near 209th Place SW, approximately 2,900 feet downstream of the action area. According to WDFW (2014b), however, the upstream extent of anadromous salmonid presence in Scriber Creek is approximately 500 feet downstream of the action area, where coho salmon have been observed below the culvert under I-5. The picture is further complicated by reports from the City of Lynnwood (2004) of adult coho salmon in Scriber Creek as far upstream as Highway 99, approximately 1 mile above the action area.

Chinook salmon have been documented in Scriber Creek just upstream of Larch Way, approximately 3,100 feet downstream of the action area; the nearest stream reaches that provide spawning habitat for Chinook salmon are in Swamp Creek, approximately 2.6 miles downstream (WDFW 2014b). Steelhead are not currently known or expected to use habitats in Scriber Creek, although winter-run steelhead have been observed in Swamp Creek, to which Scriber Creek is a tributary (Snohomish County 2002, WDFW 2014b). There are no recent validated reports of bull trout in any of the subbasins of Swamp Creek (Snohomish County 2002, WDFW 2014b).

Along with the coho salmon noted above, the other salmonid species that has been documented in Scriber Creek is resident cutthroat trout, which is present throughout the action area and as far upstream as Scriber Lake Park (WDFW 2012). Other species in the stream include largemouth bass and yellow perch, which have been observed in Scriber Lake upstream of the action area (Jones and Stokes 2000).

WDFW (2014a) classified the culvert under I-5 immediately downstream of the action area as a partial barrier to fish passage, and identified a total barrier another 2,100 feet downstream (i.e., 2,900 feet downstream of the action area). As noted above, however, the classification of the latter site as a total barrier is not consistent with reported sightings of adult coho salmon as far as 1 mile upstream of the action area. Based on the lack of reported observations of other salmonid species in the

action area, combined with the presence of multiple barriers to fish passage downstream, it is assumed for this analysis that the information from WDFW (2014b) accurately reflects fish use, and that the only salmonids potentially present in Scriber Creek in the action area are coho salmon and cutthroat trout.

Water Quality

Scriber Creek is not on the 303(d) list of impaired waters in the State of Washington. Possible water quality problems may be indicated, however, by evidence of hydrocarbon pollution (oily sheen and odor) and the abundance of pollutant-tolerant stream invertebrates (Jones and Stokes 2000). Stream temperatures measured in the action area fall within the acceptable range for salmonid fish use, but the lack of shade-producing vegetation increases the risk of elevated temperatures (Jones and Stokes 2000).

In-stream Habitat

The main stem reach in the action area is dominated by the large scrub/shrub wetland adjacent to the Lynnwood Transit Center. Salmon spawning habitat conditions within this reach are poor due to limited canopy and vegetative cover, the presence of bank armoring, and the abundance of silt and other fine substrates (Jones and Stokes 2000). Side channels and other low-velocity areas may provide good rearing habitat, however (City of Lynnwood 2004).

Riparian Habitat

Riparian vegetation in the action area consists of a dense growth of salmonberry (*Rubus spectabilis*) and Himalayan blackberry, with a few red alder, western redcedar, bigleaf maple (*Acer macrophyllum*), and Pacific flowering dogwood (*Cornus nuttallii*). Jones and Stokes (2000) found little to no large woody debris in the stream and determined that the potential for large woody debris recruitment is low.

Scriber Creek riparian area, looking west from the Interurban Trail

Scriber Creek Tributary SLY1

Stream SLY1 near the culvert under the I-5 on-ramp, looking upstream

Stream SLY1 (WRIA No. 08.0064) is an unnamed, intermittent tributary that flows southward along the eastern edge of the Lynnwood Transit Center. The channel within the action area passes through a small patch of forest vegetation (the upper part has been recently planted) before the stream enters a culvert under the I-5 on-ramp and joins Scriber Creek southeast of I-5.

Stream SLY1 is not known or expected to support fish (Snohomish County 2002, WDFW 2014b). Channel morphology and hydrology have been altered by urban development throughout the stream basin (City of Lynnwood 2004). The stream channel in the action area is a channelized, straight ditch. The primary source of flow in the stream is urban runoff. Habitat quality, particularly in the lower reaches in the action area, is generally poor. Stormwater runoff from impervious surfaces likely contributes to a flashy flow regime during the fall and winter months (City of Lynnwood 2004). Almost the entire length of Stream SLY1 is enclosed within culverts. The exceptions are the short segments within and downstream of the action area, and a segment on the Lynnwood Civic Center campus approximately 0.6 mile north of the action area.

The portion of Stream SLY1 in the action area is separated from known fish-bearing waters by culverts under the off-ramp from I-5 northbound to 44th Avenue West, I-5 itself, and the on-ramp from 44th Avenue West to I-5 southbound. WDFW (2014a) has not evaluated the fish passage potential of these culverts because Stream SLY1 is considered a non-fish-bearing stream. Based on its basin size, channel width, and stream gradient, the stream may have the potential to support fish use in the future.

4.3.2 Wetlands

One of the ten wetlands in Segment C has a surface water connection to a fish-bearing stream. This is Wetland WLY4, the Scriber Creek wetland complex. However, based on the presence of a total barrier to fish passage about 2,900 feet downstream of the action area, no ESA-listed fish are expected to use habitats in the Scriber Creek wetland complex. None of the other nine wetlands identified in Segment C has a surface water connection to any streams that support ESA-listed fish. Collectively, however, the ecological functions of these wetlands (e.g., water quality maintenance, stormwater detention, groundwater recharge) likely contribute to the maintenance of fish habitat conditions in the Scriber Creek basin.

All 10 wetlands fall within the Lynnwood city limits (Table 4-2), and all but the Scriber Creek wetland complex (discussed below) are rated as Category III, indicating moderate levels of wetland

function. Each of the Category III wetlands has only one habitat class: three are forested, three are shrub-scrub, two are emergent, and one is unconsolidated bottom. Vegetation in the Category III wetlands is a mix of native and non-native species, many of which are disturbance-tolerant. Surrounding buffers range from forested to herbaceous cover; disturbance-tolerant species are common.

Wetland WLY4 is a large wetland/stream complex associated with Scriber Creek, located southwest of the Lynnwood Transit Center and northeast of 204th Street SW (see Figure 1-4). The wetland is classified as palustrine forested/palustrine scrub-shrub/palustrine emergent under the USFWS system, and riverine/depressional under the hydrogeomorphic system. Wetland WLY4 is rated as Category II according to the City of Lynnwood and Ecology.

The hydrology of Wetland WLY4 is supported primarily by Scriber Creek, which enters the wetland from the north. A high groundwater table and stormwater runoff likely contribute to the hydrology as well. Saturation of soils, inundation, a permanently flowing stream, and open water ponds were observed in areas of the wetland. The channel of Scriber Creek is well-defined near the northern and southern boundaries, becoming distinct in between. The wetland and Scriber Creek drain southeast, out of the study area.

Wetland WLY4 contains forested, scrub-shrub, and emergent communities. The forested areas are dominated by black cottonwood, Pacific willow (*Salix lucida*), and reed canarygrass (*Phalaris arundinacea*), with lesser amounts of western redcedar, Sitka spruce (*Picea sitchensis*), and salmonberry. The shrub community consists primarily of rose spirea (*Spiraea douglasii*), red-osier dogwood (*Cornus sericea*), twinberry honeysuckle (*Lonicera involucrata*), and Sitka willow (*Salix sitchensis*). Indian plum (*Oemleria cerasiformis)*, western skunk cabbage (*Lysichiton americanus*), and water parsley (*Oenanthe sarmentosa*) are also present. Reed canarygrass dominates the emergent community. The southern portion of the wetland adjacent to the Interurban Trail is actively maintained.

Soil was examined to a depth of 20 inches and consists of one layer. The soil is a black (10YR 2/1) mucky silt. High levels of organic content in various stages of decomposition were observed in the soil.

The wetland is in an urban setting and much of the buffer is a narrow line of trees located between the wetland and developed areas, such as parking lots, trails, or residential and commercial structures. Buffer vegetation includes Douglas-fir, western redcedar, red alder, black cottonwood, Himalayan blackberry, red-osier dogwood, English holly (*Ilex aquifolium*), Portugal laurel (*Prunus lusitanica*), western swordfern (*Polystichum munitum*), English ivy (*Hedera helix*), maintained grasses, and other disturbance-tolerant species. Plantings, a split rail fence, and Native Growth Protection Area signs were observed in the vicinity of the private property to the south along the wetland edge.

4.4 Mitigation Site(s)

Sound Transit is working with resource and regulatory agencies to develop a mitigation plan to offset the impacts of construction and operational effects on wetland and riparian habitat and buffers. Impacts to wetlands and wetland buffers will be mitigated through the use of available

approved mitigation banks, the King County in-lieu fee program, or project-specific wetland mitigation developed by Sound Transit. Compensatory mitigation will be implemented in accordance with applicable federal, state, and local requirements and guidelines. Mitigation for unavoidable impacts on riparian habitat will also be provided in accordance with the requirements of local critical areas ordinances. Current potential sites under consideration for project-specific mitigation are described below.

North Seattle Community College Campus

Various opportunities may be present on the North Seattle Community College Campus for wetland restoration and enhancement, although other projects proposed in the vicinity may reduce the area available.

Jackson Park Golf Course/5th Avenue NE

Potential wetland and riparian mitigation could be constructed along the east side of the 5th Avenue NE right-of-way and the Jackson Park Golf Course, particularly along North Branch Thornton Creek.

NE 145th Street Vicinity

Two potentially available parcels near Paramount Park in Shoreline may provide opportunities for wetland protection and restoration.

NE 155th Street Vicinity

Wetland creation may be possible south NE 155th Street near the locations of two wetlands identified near the I-5 right-of-way.

Ballinger Lake Golf Course

The City of Mountlake Terrace will be transitioning the Ballinger Lake Golf Course to a passive park/open space, which could create wetland restoration opportunities.

Scriber Creek Wetland Complex (Wetland WLY4)

Wetland and stream mitigation opportunities are present in the Scriber Creek vicinity near the Lynnwood Transit Center. These parcels are under both public and private ownership, including parcels that could be acquired by Sound Transit because they intersect with areas needed for the light rail right-of-way. A private parcel on Cedar Valley Road, along the western edge of the wetland complex, could also provide an opportunity for mitigation. These mitigation opportunities may include wetland creation, restoration, or enhancement.

5 SPECIES AND CRITICAL HABITAT STATUS AND OCCURRENCE

Species covered in this BA are Chinook salmon, steelhead, and bull trout. Although none of these species has a high likelihood of occurrence in any of the stream reaches that are crossed by the proposed Lynnwood Link Extension alignment, all three are known to use habitats in downstream reaches that receive stormwater runoff from the project area. In addition, it is possible that Chinook salmon and steelhead may venture into Thornton Creek and McAleer Creek in the action area. Table 5-1 identifies the ESA-listed species that are known or expected to be present in the stream reaches with the potential to be affected by project activities. No designated or proposed critical habitat for any species occurs in the action area.

Table 5-1. Presence of ESA-listed Species at Sites with Potential Impacts on Fish

Stream	ESA-Listed Species Potentially Affected	Comments
Project Segment A		
Thornton Creek, North Branch	Steelhead	Access to action area impeded by several total and partial barriers to fish passage downstream; however, a single adult steelhead was observed upstream of the action area in 2004.
Thornton Creek Tributary (SSE1)	None	Small, intermittent stream with no known or expected fish use; high levels of urban development likely contribute to flashy flow regime.
Project Segment B		
McAleer Creek Tributary (SSH2)	None	Entirely contained within pipes in action area; no known or expected use by fish.
McAleer Creek	Chinook Steelhead	Downstream barriers to access likely impede but do not necessarily preclude access to action area.
McAleer Creek Tributary (SMT1)	None	Small, intermittent stream with no known or expected fish use; high levels of urban development likely contribute to flashy flow regime.
Project Segment C		
Scriber Creek	None	Total barrier to fish passage approximately 2,900 feet downstream of action area.
Scriber Creek Tributary (SLY1)	None	Small, intermittent stream with no known or expected fish use; high levels of urban development likely contribute to flashy flow regime.

Species lists from the USFWS and the NMFS were obtained from the agencies' Web sites in March 2014. The lists are provided in Appendix C. In addition to the three species listed above, the USFWS species lists for King and Snohomish counties identify five ESA-listed wildlife species (Canada lynx, gray wolf, grizzly bear, marbled murrelet, and northern spotted owl), two species that are proposed for listing (North American wolverine and Oregon spotted frog), and two candidates for listing (Pacific fisher and yellow-billed cuckoo) that may occur in the two counties (USFWS 2014). None of these species is expected to occur in the action area, however, for the following reasons:

- Canada lynx, gray wolf, grizzly bear, and North American wolverine – The action area is in a lowland setting with relatively high levels of human activity and no nearby roadless areas and does not, therefore, provide suitable habitat for any of these species. No observations of any of these species have been documented within 5 miles of the action area (WDFW 2012).
- Marbled murrelet and northern spotted owl – Both of these species require old-growth forest for breeding, and marbled murrelets require marine habitat for foraging. No breeding or foraging habitat for either species is present in the action area, and no observations of either species have been documented within 5 miles (WDFW 2012).
- Oregon spotted frog – This species is known to occur in Washington only at large wetland complexes in Klickitat, Skamania, and Thurston counties. Oregon spotted frogs depend on perennial bodies of water and associated wetlands. No such habitat is present in the action area. The nearest location where Oregon spotted frog critical habitat has been proposed for designation is more than 50 miles from the action area.
- Pacific fisher – This species requires forests with diverse successional stages containing a high proportion of mid- and late-successional characteristics. No such habitat is present in or near the action area, and no observations of this species have been documented within 5 miles (WDFW 2012).
- Yellow-billed cuckoo – This species requires large blocks of riparian habitat for breeding. No such habitat is present in or near the action area. WDFW (2012) reports a single observation of a bird matching the description of a yellow-billed cuckoo flying across an on-ramp to I-5 in 2000. Based on the lack of suitable nesting habitat and the absence of any other documented sightings within 5 miles, yellow-billed cuckoos are not expected to breed or forage in the action area.

In addition, the action area contains no designated or proposed critical habitat for any of these species (USFWS 2014). Based on the above, the Lynnwood Link Extension has no potential to affect any of these species, and they will not be addressed further in this analysis.

Information from the Washington Department of Natural Resources (DNR) Natural Heritage database indicates that no threatened or endangered plants are known to occur within 5 miles of the project area (DNR 2014). The only ESA-listed plant with the potential to occur in King County is golden paintbrush (*Castilleja levisecta*), which is known from historical observations in the region. Suitable habitat for golden paintbrush (open grasslands in glacial outwash prairies) is not present at any locations where project–related actions will occur. For these reasons, the proposed project has no potential to affect this species.

5.1 Chinook Salmon

Puget Sound Chinook salmon were listed as threatened by NMFS on August 2, 1999 (64 Federal Register [FR] 41835). The Puget Sound evolutionarily significant unit (ESU) includes all naturally spawned Chinook salmon spawned in tributaries to the Puget Sound. The ESU also includes Chinook salmon from 26 artificial propagation programs, including the Issaquah Creek hatchery program in the Lake Washington system (79 FR 20802, April 14, 2014). Fish that use stream habitats in the Lake Washington system belong to the Sammamish population. The most recent 5-year (2005

to 2009) estimate of spawning abundance for the Sammamish population was 249 fish, making up less than 1 percent of the total number of spawning fish in the ESU (Ford 2011).

Chinook salmon have been documented in the lower reaches of Thornton, McAleer, and Scriber creeks. In all three streams, the reaches where Chinook salmon have been observed are separated from the action area by total or partial fish passage barriers. It is possible, however, that Chinook salmon may use habitat in McAleer Creek within the action area. None of the tributaries to Thornton, McAleer, and Scriber creeks in the action area are known or expected to support fish use. The known distribution of Puget Sound Chinook salmon in the vicinity of the action area is as follows:

- **Thornton Creek:** Chinook salmon presence has been documented approximately 2.5 miles downstream of the action area; spawning has been documented approximately 3 miles downstream of the action area (City of Seattle 2007, WDFW 2014b). WDFW (2014a) identified 3 total barriers and 15 partial barriers to fish passage between the action area and the downstream reaches where Chinook salmon presence has been documented. Based on the lack of observations and the presence of multiple total and partial barriers to fish passage downstream of the action area, Chinook salmon are not expected to use habitats in Thornton Creek or its tributaries in the action area.
- **McAleer Creek:** Chinook salmon presence has been documented approximately 1,000 feet downstream of the action area; spawning has been documented approximately 1.1 miles downstream of the action area (WDFW 2014b). WDFW (2014a) has identified a partial barrier to fish passage immediately downstream of the action area, where the stream passes through an approximately 60-foot-long culvert under Forest Park Drive NE. Although this structure likely impedes access into the action area by Chinook salmon, it cannot be considered an absolute barrier. Therefore, Chinook salmon may use habitat in McAleer Creek in the action area. Both of the tributaries to McAleer Creek in the action area (SSH2, SMT1) are separated from fish-bearing waters by total barriers to fish passage and are therefore not expected to support use by Chinook salmon.
- **Scriber Creek:** Chinook salmon presence has been documented approximately 3,100 feet downstream of the action area. No spawning has been documented in Scriber Creek, but spawning has been documented in Swamp Creek, approximately 2.6 miles downstream of the action area (WDFW 2014b). WDFW (2014a) has identified a partial barrier to fish passage in Scriber Creek immediately downstream of the action area, where the stream passes through a 360-foot-long culvert under I-5. In addition, there is a total fish passage barrier at a beaver pond approximately 2,900 feet downstream of the action area (WDFW 2014a). Based on the lack of observations and the presence of total and partial barriers to fish passage downstream of the action area, Chinook salmon are not expected to use habitats in Scriber Creek or its tributaries in the action area.

Adult Chinook salmon enter the Lake Washington system from Puget Sound through the Ballard Locks in July through September (Celedonia et al. 2011). Adult Chinook salmon begin entering the spawning streams in September and continue until November. Spawning occurs from October to December, with peak spawning activity usually in the first few weeks of October (Burton et al. 2009). Fry emerge from redds between January and early April (Kiyohara and Zimmerman 2009). Juvenile Chinook salmon in the Lake Washington system appear to have two rearing strategies:

some rear in their natal streams and emigrate to the lake as pre-smolts in May, June, or July; others emigrate as fry between January and mid-May and rear in the south or north end of Lake Washington or in Lake Sammamish for several months (Celedonia et al. 2011). All Lake Washington Chinook migrate to marine habitats during their first year.

Based on the above, Chinook salmon may be present in the action area from September through December. During these months, adult salmon spawning in downstream reaches of McAleer Creek may venture upstream into the action area. No other stream reaches in the action area are accessible to Chinook salmon. Juvenile Chinook salmon are not expected to be present in any streams in the action area at any time because no spawning is known or expected to occur in stream reaches within or upstream of the action area.

5.2 Chinook Salmon Critical Habitat

The final rule designating critical habitat for Puget Sound Chinook salmon (70 FR 52630, September 2, 2005) included habitat areas in Lake Washington and the Cedar River but excluded other tributaries to Lake Washington. Thus, the water bodies in the action area are not designated as critical habitat for Puget Sound Chinook salmon.

5.3 Steelhead

The Puget Sound steelhead distinct population segment (DPS) is listed as a threatened species (72 FR 26722, May 11, 2007). The DPS includes all naturally spawned anadromous *Oncorhynchus mykiss* originating below natural and manmade impassable barriers from rivers flowing into Puget Sound (79 FR 20802, April 14, 2014). The DPS also includes steelhead from six artificial propagation programs, none of which operate in the Lake Washington system. Fish that use stream habitats in the Lake Washington system belong to the Lake Washington population. The number of naturally spawned steelhead in this population is very low. The most recent 5-year (2005 to 2009) estimate of spawning abundance for the Lake Washington population was 12 fish (Ford 2011).

Steelhead have been documented in Thornton Creek and McAleer Creek in the action area. Steelhead are not currently known or expected to use habitats in Scriber Creek. None of the tributaries to Thornton, McAleer, and Scriber creeks in the action area are known or expected to support fish use. The known distribution of Puget Sound steelhead in the vicinity of the action area is as follows:

- **Thornton Creek:** According to WDFW (2014b), steelhead are present in the North Branch of Thornton Creek as far upstream as the Jackson Park Golf Course, approximately 2,100 feet downstream of the action area. Based on the observation of an adult steelhead near Twin Ponds upstream of the action area (Tetra Tech/KCM 2004b), however, it is possible that steelhead might use stream habitats in the action area. The tributary to Thornton Creek in the action area (Stream SSE1) is neither known nor expected to support fish use (WDFW 2014b, 2012).
- **McAleer Creek:** According WDFW (2014b), steelhead are present in McAleer Creek as far upstream as the mouth of the tributary (Stream SMT1) near the on-ramp from SR 104

westbound to I-5 northbound, within the action area. Tetra Tech/KCM (2004a) reported observations of steelhead spawning in McAleer Creek approximately 200 feet downstream of the action area, although WDFW (2014b) does not identify any parts of McAleer Creek as spawning habitat for steelhead. The site where Tetra Tech/KCM (2004a) reported observations of steelhead spawning is separated from the action area by a culvert under Forest Park Drive NE that has been identified by WDFW (2014a) as a partial barrier to fish passage. Based on this information, steelhead may use stream habitats in McAleer Creek in the action area, but they are not expected to spawn there. Both of the tributaries to McAleer Creek in the action area (SSH2, SMT1) are separated from fish-bearing waters by total barriers to fish passage and are therefore not expected to support use by steelhead.

- **Scriber Creek:** Steelhead are not currently known or expected to use habitats in Scriber Creek, although winter-run steelhead have been observed in Swamp Creek, which is approximately 2.6 miles downstream of the action area (Snohomish County 2002, WDFW 2014b). There is a total barrier to fish passage at a beaver pond approximately 2,900 feet downstream of the action area (WDFW 2014a). Based on the lack of observations and the presence of total and partial barriers to fish passage downstream of the action area, steelhead are not expected to use habitats in Scriber Creek or its tributaries in the action area.

Adult steelhead begin entering rivers and streams in the Lake Washington system in November; spawning occurs from March through June of the following year (WDFW 2002). After hatching, Puget Sound steelhead typically mature by 18 months of age and migrate to sea at age 2, with smaller numbers of fish emigrating to the ocean between 1 and 3 years of age. Seaward migration by juveniles commonly occurs from April to mid-May, with fish typically spending 1 to 3 years in the ocean before returning to fresh water (Busby et al. 1996). In some populations, not all adult steelhead die immediately after spawning. These surviving adults (kelts) migrate back to marine environments, possibly returning to freshwater habitats to spawn again in future years. Most kelts move downstream immediately after spawning (Shapovalov and Taft 1954, Null et al. 2013, Johnson and Jones 2000). A small proportion of kelts may remain in freshwater habitats for longer periods. Such emigration delays are associated with late snow pack and cold water temperatures (Johnson and Jones 2000)—conditions that are not likely to occur in the action area.

Based on the above, steelhead may be present in the action area from November through June. During these months, adult steelhead spawning in downstream reaches of Thornton Creek and McAleer Creek may venture upstream into the action area in both streams. Based on the low number of naturally spawned (i.e., ESA-listed) steelhead in the Lake Washington system, the probability that any of the fish that spawn in these streams may belong to the Puget Sound DPS is very low. No other stream reaches in the action area are accessible to steelhead. Juvenile fish are not expected to be present in any streams in the action area at any time because no spawning is known or expected to occur in stream reaches within or upstream of the action area. The presence of residual kelts in the action area outside of the months of November through June is extremely unlikely because (1) the number of fish in the Lake Washington population is extremely small, (2) kelts generally make up a small proportion of any population, (3) only a small proportion of kelts may remain in freshwater habitats beyond the typical spawning period, and (4) emigration delays are associated with climatic conditions that are not likely to occur in the action area.

5.4 Steelhead Critical Habitat

Critical habitat for Puget Sound steelhead was proposed for designation in 2013 (78 FR 9 2726, January 14, 2013). Habitat areas in the Lake Washington system were proposed for exclusion from designation due to economic impacts. None of the water bodies in the action area was included in the proposed designation.

5.5 Bull Trout

Bull trout is listed as a threatened species (64 FR 58910, November 1, 1999). All bull trout in the coterminous United States, including the Coastal-Puget Sound DPS, are included in the listing. Bull trout have been observed entering Lake Washington in small numbers, but none of the streams in the action area is known or expected to support bull trout spawning or rearing. The only spawning population of bull trout documented in the Lake Washington system is in the upper Cedar River above Chester Morse Lake, which is upstream of a natural barrier to upstream migration (Shared Strategy for Puget Sound 2007). No spawning activity or juvenile rearing has been observed anywhere else in the basin. No bull trout have been documented in any of the tributaries to Lake Washington within the action area (WDFW 2014b).

WDFW (1999) determined that successful spawning by bull trout occurs only upstream of the winter snow line (i.e., the elevation at which snow is present on the ground for much of the winter). No such areas are found in the Thornton Creek, McAleer Creek, or Scriber Creek basins. There is no potential, therefore, for the streams in the action area to be used by spawning or rearing bull trout.

USFWS (2004) has identified bull trout foraging, migration, and overwintering habitat in the Lake Washington basin in the lower Cedar River, Sammamish River, Lake Washington, Lake Sammamish, Lake Union, the Lake Washington Ship Canal, and all accessible tributaries. However, based on the number of fish passage barriers between the action area and Lake Washington (where bull trout have been observed), the streams in the action area are unlikely to be accessible tributaries. In addition, habitat conditions in these streams are not expected to support use by bull trout. Stream temperatures in Thornton Creek, McAleer Creek, and Scriber Creek exceed the optimal requirements for all life stages of bull trout (less than 15 degrees Celsius) for much of the year. Any fish attempting to gain access to any of the streams in the action area would have to negotiate several miles of stream habitat with elevated temperatures and multiple barriers. In light of these impediments, the potential for bull trout to use habitats in the action area for foraging, migration, or overwintering is negligible.

5.6 Bull Trout Critical Habitat

Critical habitat was designated for bull trout in 2005 and redesignated in 2010 (75 FR 63898, October 18, 2010). The final rule identified Lake Washington as designated critical habitat for bull trout but excluded tributary streams to Lake Washington (75 FR 63898, October 18, 2010). The action area thus does not include any designated critical habitat for bull trout.

6 EFFECTS ANALYSIS AND EFFECTS DETERMINATIONS

6.1 Direct Effects

Direct effects are defined as direct or immediate effects of the project on the species or its habitat. Potential direct effects of the Lynnwood Link Extension include short-term construction impacts and effects from operation of the light rail system.

6.1.1 Direct Effects from Construction Activities

Construction effects are considered short term, meaning the ecological functions of affected area are expected to return to pre-impact performance within about 1 year or one growing season of the completion of construction activities. Project activities with the potential for direct effects on ESA-listed species include ground-disturbing work and equipment use near streams. In addition, it is possible that some in-water work may take place within the wetland complex surrounding Scriber Creek near the Lynnwood Transit Center. Potential effects of these activities include temporary loss or degradation of in-stream or riparian habitat (including hydrology or water quality), and disturbance of fish in waters where in-water work occurs. Table 6-1 provides an overview summary of effects.

Table 6-1. Summary of Potential Impacts from Construction Activities

Segment	Stream	ESA-Listed Species Potentially Present	Construction Activities	Potential Impacts
A–C	All streams	Chinook salmon, steelhead	Earthwork and grading	Potential release of turbid water or pollutants. Temporary disturbance of riparian vegetation, wetlands, and wetland buffers.
A	Thornton Creek	Steelhead	Elevated crossing, grading and earthwork	Potential release of turbid water or pollutants, temporary disturbance of riparian vegetation, wetlands, and wetland buffers.
A	Stream SSE1	None	Elevated guideway through stream buffer	Potential release of turbid water or pollutants, temporary disturbance of riparian vegetation, wetlands, and wetland buffers.
B	Stream SSH2	None	Elevated crossing of piped stream	None: No potential for runoff from construction areas to reach surface-flowing reaches.
B	McAleer Creek	Chinook salmon, steelhead	Elevated crossing, grading and earthwork	Potential release of turbid water or pollutants, temporary disturbance of riparian vegetation, wetlands, and wetland buffers.
B	Stream SSH4	None	Elevated guideway through stream buffer	Potential release of turbid water or pollutants, temporary disturbance of riparian vegetation, wetlands, and wetland buffers.
B	Stream SMT1	None	Elevated crossing, grading and earthwork	Potential release of turbid water or pollutants, temporary disturbance of riparian vegetation, wetlands, and wetland buffers.
C	Scriber Creek	None	Elevated crossing, possible in-water construction	Potential release of turbid water or pollutants, temporary disturbance of riparian vegetation, wetlands, and wetland buffers.
C	Stream SLY1	None	Earthwork and grading in paved areas nearby	Potential release of turbid water or pollutants.

Construction-related Sedimentation, Turbidity, and Pollutants

Project activities, including clearing, grading, excavation, and other earthwork in the action area (including construction of stormwater detention facilities), could result in increased sediment loads entering streams and other water bodies. Any earthwork conducted within a basin has the potential to cause sedimentation and turbidity that would adversely affect the streams in the basin downstream of the work activity. The most obvious situation in which this could occur is where earthwork construction occurs in or next to a stream channel. However, any earthwork in a basin might contribute to the already serious sedimentation problems that exist in the streams in the project vicinity. This is because most stormwater in urban settings is collected in a system of pipes or ditches and conveyed directly to the nearest stream. An exception to this practice is in newer developments, where stormwater detention facilities trap much of the sediment carried by upstream sources before discharging into streams. But even in these developments, some of the finer sediments might be discharged to streams as the ponds fill with stormwater and overflow.

Where drilled shafts are used to support elevated guideways, shafts may need to be dewatered before concrete is poured. Drilling spoils may also need to be dewatered. Water recovered during the dewatering process can cause increased turbidity in receiving waters if it is not properly detained and treated. Recovered water will be treated to meet the appropriate permit requirements before being discharged.

As discussed in Chapter 3, Action Area, construction-related sedimentation and turbidity could extend downstream to points 200 feet from the stream crossings of Thornton Creek and Scriber Creek, and 100 from the crossings of the other surface-flowing streams in the action area (McAleer Creek and Stream SMT1). Any fish present in those areas would be exposed to an elevated risk of adverse effects, such as gill abrasion, interference with vision, and decreased availability of food sources. However, BMPs will be implemented during project construction to reduce the potential for the introduction of sediment into water bodies (including wetlands) in the action area. BMPs recommended for the project are identified in Chapter 2, Best Management Practices and Minimization Measures.

Potential effects will be substantially minimized or eliminated because work near or within streams (such as for the construction of the elevated guideway across Scriber Creek) will comply with the terms of permits obtained from federal, state, and local agencies. All work below the ordinary high water mark of any waterbodies will be conducted in accordance with the HPA issued by WDFW and by the Clean Water Act Section 404 permit issued by the Corps. Such permits typically include seasonal restrictions and/or other measures intended to minimize the risk of adverse effects on fish during highly sensitive life history stages (e.g., spawning, rearing). Permits for work in tributaries to Lake Washington commonly require in-water work to be conducted during the summer (likely July and August). During those months, no ESA-listed fish species are expected to be present in any of the streams in the action area. Permits required under local critical areas ordinances typically include provisions for the protection of water quality and riparian habitat, further reducing the potential for adverse effects on fish and fish habitat. In addition, BMPs such as silt fences and erosion control devices will reduce the risk of sediment delivery. Although ESA-listed fish species could occasionally

occur in water bodies within or downstream of the action area, the timing of construction activities and the implementation of BMPs are expected to minimize or possibly eliminate the potential for any adverse effects of construction-related sedimentation or turbidity on these species.

Project activities in or adjacent to water bodies also have the potential to introduce pollutants through spills of fuel, hydraulic fluid, or other substances. As discussed above, all work in or near water bodies in the action area will comply with the terms of federal, state, and local permits, minimizing the potential for pollutants to be carried from work sites to water bodies by stormwater. In addition, all work will be conducted in compliance with the SPCC plan for the project, and BMPs will be implemented to prevent construction-related pollutants from entering streams. Based on these factors, the potential for construction activities to result in the introduction of pollutants into waters that support ESA-listed fish is extremely low.

Where the proposed alignment crosses Scriber Creek, construction of the elevated guideway will entail the placement of support columns below the ordinary high water mark, which is currently defined as encompassing the entire wetland complex that surrounds the creek. Temporary work trestles will be constructed for equipment access. Trestle construction will require the use of impact pile driving. However, no ESA-listed species occur in this area. The potentially affected reach of Scriber Creek is approximately 2,900 feet upstream of a barrier that prevents access to the action area by ESA-listed fish species. In addition, work will take place in accordance with federal and state permits that will likely limit work below the ordinary high water mark to periods when water levels are at their lowest. During these periods, surface water in the wetland complex is generally found only in the actively flowing stream channels of Scriber Creek, which make up only a small portion of total wetland complex area. Most work below the ordinary high water mark will take place in areas where no standing or flowing water is present. Any work areas where surface water is present will be isolated from other surface waters with a coffer dam or similar system to prevent suspended sediment or pollutants from leaving the work area. For these reasons, in-water work in Scriber Creek, if it occurs, is not expected to contribute to elevated levels of sediment or pollutants in waters that support ESA-listed fish.

In-water Work

No in-water work is proposed in streams where ESA-listed species are known or expected to occur (Thornton and McAleer creeks). As noted above, some work will occur below the ordinary high-water mark of Scriber Creek where the stream has an ill-defined channel through the wetland complex west of the Lynnwood Transit Center. However, no ESA-listed species occur in this area, and most work below the ordinary high water mark will take place in areas where no standing or flowing water is present. A vibratory hammer will be used for initial installation of most piles. If substrates preclude the use of a vibratory hammer, an impact hammer will be used. For all piles, an impact hammer will be used to complete the installation and to confirm the load-bearing capacity of each pile. Any work below the ordinary high water mark of Scriber Creek will be conducted in accordance with the terms of the HPA and other applicable permits obtained for this project.

Potential effects of in-water work in Scriber Creek include the delivery of sediment and pollutants (discussed in Section 6.1.1.1) and the disturbance or injury of fish due to elevated sound energy levels. If any vibratory or impact pile driving occurs in wetted areas, sound energy will travel in straight lines and not follow the contours of the stream channel. Based on the sinuous, braided, and indistinct form of Scriber Creek's channel in the action area, sound energy from any in-water pile driving will not extend more than a few hundred feet upstream or downstream of the location of the activity and will be blocked by the bends in the stream before it reaches the culvert under I-5 immediately downstream of the action area. The outlet of that culvert is more than 2,000 feet upstream of any stream reaches that are known or expected to support ESA-listed fish. Therefore, noise from in-water work will have no potential to adversely affect ESA-listed fish species.

Temporary Loss of Riparian and Wetland Vegetation

Project construction will result in the temporary loss of riparian vegetation adjacent to Thornton Creek, Stream SSE1, Stream SSH4, McAleer Creek, Scriber Creek, and Stream SMT1 (tributary to McAleer Creek). The other two watercourses in the action area (SSH2 and SLY1) will not be affected. Stream SSH2 will not be affected because it has no surface-flowing segments within 200 feet of ground-disturbing activities. All project construction activities within 200 feet of SLY1 will occur in currently paved areas and therefore will not affect the condition of the stream's riparian buffer.

Riparian vegetation may need to be cleared for site access to construct sections of elevated guideway that cross over streams. Short-term clearing may result in reduced shading, potentially leading to elevated stream temperatures until vegetation becomes reestablished in disturbed areas. Riparian vegetation removal can also reduce insect recruitment to the water bodies below and limit recruitment of large woody debris. In addition, existing trees will be replaced with lower-growing native vegetation.

The project will result in the temporary disturbance of up to 0.7 acre of wetland buffer and up to 0.5 acre of wetland habitat (see Table 6-2). These areas will be cleared to access the work areas where support column foundations will be placed. Wetlands and buffers will be avoided to the extent possible when placing support columns. Temporary fill may be placed for equipment access; this fill will be removed when construction is complete. All cleared areas will be revegetated after construction. In some of the potentially affected areas, existing vegetation is dominated by non-

Table 6-2. Temporary Direct Impacts on Riparian Areas, Wetlands, and Wetland Buffers

Segment	Riparian Area Affected (acres) [1]	Wetland Area Affected (acres)[1]	Wetland Buffer Area Affected (acres) [1]	Comments
A	0	0	0	Impacts will be permanent, not temporary
B	0.6	0.2	0.6	McAleer Creek riparian area: 0.4 acre. Stream SMT1 riparian area: 0.2 acre.
C	0.4	0.3	0.1	Scriber Creek riparian area impacts estimated as sum of wetland and wetland buffer impacts.
Total	1.0	0.5	0.7	

[1] All values in this table are estimates based on preliminary surveys conducted before formal delineations were complete.

native and invasive plant species. Sound Transit anticipates that replanted vegetation will result in improved habitat function where non-native species are replaced with native plants.

6.1.2 Direct Effects from Operation Activities

Permanent effects of Lynnwood Link Extension operations include long-term effects for which habitat functions will not be restored over time. Permanent effects include permanent loss of vegetation, new impervious area, and shading from elevated structures (see Table 6-3).

Table 6-3. Summary of Potential Permanent Operational Impacts

Segment	Stream	ESA-Listed Species Potentially Present	Operation/Structure	Potential Impacts (*Will Be Mitigated*)
A–C	All streams	Chinook salmon, steelhead	New impervious area from guideway and other light rail facilities	Permanent loss of riparian vegetation, wetlands, and wetland buffer vegetation. Overall increase in impervious surface area, slight decrease in total PGIS.
A	Thornton Creek	Steelhead	Elevated crossing	New impervious surface. Permanent loss of riparian vegetation, wetlands, and wetland buffer vegetation.
A	Stream SSE1	None	Elevated guideway through stream buffer	New impervious surface. Permanent loss of riparian vegetation, wetlands, and wetland buffer vegetation.
B	Stream SSH2	None	Elevated crossing of piped stream	None: No modifications to riparian habitat within 200 feet of surface-flowing reaches, no discharges to stream from new impervious surfaces.
B	McAleer Creek	Chinook salmon, steelhead	Elevated crossing	New impervious surface. Permanent loss of riparian vegetation, wetlands, and wetland buffer vegetation.
B	Stream SSH4	None	Elevated guideway through stream buffer	New impervious surface. Permanent loss of riparian vegetation, wetlands, and wetland buffer vegetation.
B	Stream SMT1	None	Elevated crossing	New impervious surface. Permanent loss of riparian vegetation, wetlands, and wetland buffer vegetation. Potential for guideway support columns to interfere with possible future habitat restoration projects.
C	Scriber Creek	None	Elevated crossing, possible in-water construction	New impervious surface. Permanent loss of riparian vegetation, wetlands, and wetland buffer vegetation.
C	Stream SLY1	None	Additional facilities in paved areas nearby	Potential for stormwater discharge.

Operation of the Lynnwood Link Extension is not expected to result in any increases in nighttime illumination of fish-bearing waters (which could increase the risk of predation on juvenile salmonids) because the tracks will have no overhead lighting and the train headlights will be directed parallel to the tracks. Lighting at light rail stations is not expected to result in any adverse effects because no stations are proposed within 200 feet of surface-flowing streams that are known or expected to support ESA-listed fish. No impacts on fish passage are anticipated because no new culverts will be added in streams with documented or potential fish habitat and no existing culverts in such streams will be extended. Construction of at-grade or elevated guideways, stations, and ancillary features above streams in culverts (i.e., Stream SSH2) is not expected to affect stream habitat.

Stormwater Management

Sound Transit has a written stormwater policy that guides site selection, design, and operation of stormwater facilities. Sound Transit's policy requires that project managers and engineers first consider low-impact stormwater management (e.g., infiltration, permeable pavements, rain gardens, and engineered soils) before traditional stormwater design options. If LID techniques are not proposed, a written justification must be provided for agency review. Currently, only preliminary stormwater design has been completed. Analyses in this BA incorporate conservative assumptions about stormwater design details. However, it is likely that at least some of the traditional stormwater treatment methods described below will be replaced with LID options with equal or greater treatment and detention benefit.

Overall, the project will increase the amount of impervious surface in the action area by 52 acres (approximately 26 percent). Impervious surfaces can increase stormwater runoff rates, volumes, and pollutant loads. Without mitigation measures such as detention and treatment facilities, these can cause higher flows and degraded water quality in storm sewers and streams. Project impervious areas include new tracks and guideways, stations, park-and-ride lots, maintenance facilities, and new or relocated roads. Project-related parking lots and road realignments are subject to motor vehicle traffic and are considered to be PGIS. The guideway and stations will not be subject to motor vehicle traffic or other sources of potential pollution and will therefore be classified as non-PGIS.

Stormwater from project-related PGIS will be treated to at least basic treatment levels (i.e., a goal of removal of at least 80 percent of suspended solids) and be infiltrated or routed to existing municipal stormwater systems wherever possible. Roadways relocated as a result of the rail alignment will be treated even though the pollutant loading will not be increased, resulting in a modest increase in stormwater treatment in the area. Roadways where average daily traffic volume exceeds 7,500 vehicles will receive enhanced treatment, as will drainage outfalls that do not discharge to basic treatment water bodies. Where enhanced treatment is implemented, it will reduce heavy metal and hydrocarbon contaminants in stormwater. Basic treatment will reduce hydrocarbon contaminants.

The WSDOT Highway Runoff Dilution and Loading (HI-RUN) model was used to assess the potential for project-related changes in PGIS to affect water quality in streams where ESA-listed fish may be present. The results of this exercise are summarized below and presented in greater detail in Appendix D.

In most areas where the Lynnwood Link Extension will change the amount of PGIS draining to streams where ESA-listed fish may be present, model results indicate that pollutant loading will decrease under proposed conditions, suggesting probable improvements in water quality. Therefore, stormwater runoff from the Lynnwood Link Extension will not have any adverse effects on ESA-listed fish in nearly all portions of the action area.

At one location, model results indicate a probable increase in pollutant loadings in receiving waters, necessitating additional analysis of the potential for adverse effects on ESA-listed fish. The area in question is in the vicinity of the NE 185th Street Station, where construction of the station and associated parking areas, combined with the relocation of 5th Avenue NE, will result in the creation

of 2.45 acres of new PGIS, all of which will be treated in new facilities. These facilities include two enhanced treatment facilities for the parking garage and relocated portions of 5th Avenue NE, and an infiltration facility for the bus turnaround area east of I-5 and north of NE 185th Street. The increase in PGIS will be offset partially but not entirely by decreases resulting from the relocation of 5th Avenue NE south and east of I-5. None of the existing PGIS currently receives water quality treatment.

Under most conditions, there will be no surface connection between the infiltration facility and any streams in the action area. However, the emergency overflow from the facility, as well as treated water from the other two facilities, will drain north in an existing stormwater trunk line, emptying to a non-fish-bearing tributary to McAleer Creek (Stream SSH2) approximately 3,500 to 4,200 feet away. The treated water will then travel another 1,400 feet, mostly in pipes, before emptying to a reach of McAleer Creek where steelhead and Chinook salmon may be present. Neither species is known or expected to use that reach for spawning.

Because the HI-RUN model results indicate a high likelihood of increased pollutant loadings at this location, additional modeling (the HI-RUN dilution subroutine) was conducted to investigate the potential for adverse effects on ESA-listed fish in McAleer Creek. The output of the dilution subroutine presents a conservative distance (mixing zone) downstream of the outfall, where there is a 5 percent chance that pollutant concentrations will exceed thresholds for effects on fish. The effects thresholds are based on potential increases of dissolved copper and dissolved zinc above background concentrations.

Results of the HI-RUN dilution subroutine showed mixing zone distances less than 1 foot under both baseline and proposed conditions, indicating a minimal risk of adverse effects. These results suggest an extremely low probability for stormwater runoff from the Lynnwood Link Extension to result in adverse effects on ESA-listed fish in McAleer Creek.

Sound Transit's preliminary engineering for the Lynnwood Link Extension includes development of a conceptual layout for major stormwater facilities to comply with the *Stormwater Management Manual for Western Washington* (Ecology 2012a). These facilities include stormwater ponds and underground vaults. Additional measures to reduce stormwater runoff, such as LID or other on-site measures, will be considered in accordance with Sound Transit's stormwater policy.

Peak stream flows in the action area are not expected to increase substantially because the stormwater systems built for the project will be designed to simulate predevelopment hydrology. As stated in the *Stormwater Management Manual for Western Washington*, "The Manual is intended to provide project proponents, regulatory agencies and others with technically sound stormwater management practices which are presumed to protect water quality and in-stream habitat – and meet the stated environmental objectives of the regulations described in this chapter." It is possible, however, that discharges from detention facilities could result in increased velocities and durations of peak flows in receiving waters, potentially reducing the availability of forage and displacing juvenile salmonids from cover (Tschaplinski and Hartman 1983).

In addition, impervious surfaces preclude natural infiltration of precipitation into the ground, which decreases groundwater recharge. Less precipitation entering groundwater aquifers might decrease dry-season base flows by decreasing water inputs to streams from groundwater sources such as springs. Dry-season base flows have been identified as one of the most important natural limiting factors controlling salmonid production in lowland Puget Sound streams (Mathews and Olson 1980).

Where low-impact development measures are implemented, some stormwater runoff from project-related impervious surfaces will be collected and infiltrated into the ground. In some areas, this could result in increased groundwater recharge compared to existing conditions (under which stormwater runoff is managed mainly through vaults and ponds that do not infiltrate). However, some soil types in the project area are not conducive to infiltration of precipitation into the ground.

Permanent Impacts to Riparian and Wetland Areas

Permanent impacts could occur where the project limits cross streams, riparian areas, wetlands, or wetland buffers. The project limits include the guideway, station footprints (including parking), roadway improvements, storm drainage ponds, and other ancillary features. In addition, a 15-foot clear zone will be maintained on either side of the guideway to prevent damage to catenary wires from falling vegetation. Existing trees in this zone will be cleared and replaced with lower-growing native shrubs or trees. Also, some trees in areas beyond the 15-foot clear zone may need to be removed to protect light rail safety and reliability. Removal of such hazard trees may continue as a maintenance activity throughout the operational life of project facilities.

Where existing riparian and wetland vegetation will be cleared at the elevated stream crossing sites, there are many areas where the existing vegetation consists of invasive species, especially Himalayan blackberry and reed canarygrass. These areas will be cleared of invasive species and replanted with native vegetation after construction.

Up to 2.3 acres of riparian area, 2.4 acres of wetlands, and 3.0 acres of wetland buffers will be affected by the project (see Table 6-4). Much of the affected area falls within the footprint of elevated guideways and thus may not be subject to long-term impacts (see below for additional discussion of long-term effects of elevated guideways). Sound Transit will use compensatory mitigation to replace the area and functions lost for any riparian areas, wetlands, and wetland buffers that cannot be avoided or adequately minimized. Mitigation for impacts to wetlands and wetland buffers that are also within riparian areas will meet the local and federal mitigation requirements for wetlands or wetland buffers because those requirements are more stringent and specific than those for riparian mitigation. As appropriate, Sound Transit will apply the federal Final Compensatory Mitigation Rule (40 CFR Part 230); appropriate current available agency regulations; guidelines established jointly by Ecology, the Corps, and U.S. Environmental Protection Agency in *Wetland Mitigation in Washington State* (Ecology et al. 2006); and local critical areas ordinances for the cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood.

Table 6-4. Permanent Direct Impacts on Riparian Areas, Wetlands, and Wetland Buffers

Segment	Riparian Area Affected (acres) [1]	Wetland Area Affected (acres)[1]	Wetland Buffer Area Affected (acres) [1]	Comments
A	0.7	0.9	0.4	Thornton Creek riparian area: 0.5 acre. Stream SSE1 riparian area: 0.2 acre.
B	1.1	0.8	1.6	McAleer Creek riparian area: 0.5 acre. Stream SMT1 riparian area: 0.5 acre. SSH2 and SSH4 riparian areas: <0.1 acre each.
C	0.5	0.7	1.0	Scriber Creek riparian area impacts are estimated as the area of the project footprint overlapping the Scriber Creek wetland complex.
Total	2.3	2.4	3.0	

[1] Values in this table are estimates based on preliminary surveys conducted before formal delineations were complete. In addition, estimates of riparian area impacts are based on the total area within riparian buffers, including road surfaces and other areas that do not currently provide riparian functions. Moreover, these estimates include all areas within the project limits, including both at-grade and elevated guideways. Based on factors such as the structure's height, width, and orientation, some areas within the footprint of elevated guideways may not be subject to long-term impacts. As such, values in this table are likely overestimates of the extent of potential impacts on riparian areas, wetlands, and wetland buffers. Also, as noted above, mitigation for overlapping impacts will be based on local and federal mitigation requirements for wetlands or wetland buffers rather than requirements for riparian areas.

For this analysis, estimates of the amount of potentially affected riparian habitat area are based on the amount existing vegetation within the regulatory buffer that each local jurisdiction requires for each potentially affected stream. These buffer distances were selected because little functional riparian habitat currently exists or is likely to persist outside of these buffers. In addition, most riparian functions are provided by vegetation within the areas defined by these buffers. For example, studies conducted in western Washington, western Oregon, and southeast Alaska indicate that more than 90 percent of large woody debris input to streams from riparian areas is recruited from the areas within one-half of a site's potential tree height[2] (Murphy and Koski 1989, McDade et al. 1990, McKinley 1997, Martin et al. 1998). Based on an estimated site potential tree height of 200 feet, most potential recruitment of large woody debris to streams in the action area would be expected to come from the areas within regulatory buffers, and nearly all recruitment would come from within 100 feet. Construction of at-grade facilities outside of regulatory buffers, therefore, is expected to result in minimal (if any) reductions in wood recruitment to action area streams.

No construction of at-grade guideways, stations, or ancillary features will occur within the regulatory buffers of any surface-flowing streams in the study area. The only permanent project-related impacts on riparian habitat will occur where elevated guideways span areas of riparian vegetation. Within the Scriber Creek wetland complex, placement of guideway support columns will result in the permanent loss of some riparian habitat for that stream. Trees and other tall vegetation underneath and within 15 feet of all elevated guideways will be permanently cleared for safety. In addition, construction of elevated guideways above vegetation will reduce the amount of water the vegetation receives from precipitation. In addition, guideways with low clearance (generally, less than 15 feet) may limit sunlight. In some areas, vegetation cleared from beneath

[2] Site potential tree height is the average maximum height of the tallest dominant trees (200 years or older) at a given location, based on the soil and climatic conditions at that site. Site potential tree heights in the Puget Sound lowlands can extend up to 200 feet.

elevated guideways may not grow back. The presence of elevated guideways will preclude the development of mature forest habitat in such areas, reducing the potential for the recruitment of large woody debris to nearby streams.

Because the elevated guideway structures will be relatively narrow (31 feet wide) and generally more than 15 feet above the ground surface, shading impacts on riparian vegetation would be limited in most areas, although some impacts would result from shading and water interception. As learned from the Sound Transit Central Link project, herbaceous plants and shrubs are generally able to grow beneath narrow guideways that are at least 15 feet above the ground (Sound Transit 2011). Based on the nature and location of buffer impacts, as well as the current condition of vegetation within the buffers, no substantial degradation of riparian functions (e.g., fish and wildlife habitat, food chain support, or water temperature maintenance) or processes is expected to result from project-related clearing. The riparian processes not expected to be affected include water flow; erosion and accretion; infiltration; groundwater recharge and discharge; sediment delivery, transport, and storage; organic matter input; nutrient and pathogen removal; and stream channel formation and maintenance.

Another factor influencing the potential effects of elevated guideways on vegetation is the orientation of the guideway relative to the path of the sun across the sky. Over the course of a day, the sun appears to travel from east to west. If a relatively narrow feature such as a guideway is oriented north-to-south, most areas under the feature will receive sunlight during the morning and afternoon hours, when the sun is in the eastern and western sectors of the sky. The potential for sunlight to reach areas underneath a feature that is oriented east-to-west is much more limited.

The potential for the project to result in long-term effects on ESA-listed species in specific areas of each project segment is discussed further in the following subsections.

Segment A: Northgate to Shoreline

Thornton Creek

The elevated guideway will be approximately 40 feet above the surface-flowing segment of Thornton Creek in the action area. Based on the observation of a single adult steelhead upstream of this location in 2004, it is possible that steelhead could use stream habitats in this reach. Most or all trees currently in this riparian area will likely be removed and replaced with shrubs and other lower-growing native vegetation. The guideway will be oriented north-to-south, allowing sunlight to reach the new vegetation. Both the guideway and the new vegetation will provide shade to the stream. The loss of riparian trees could reduce the potential for delivery of large woody debris to the stream. Only the reach immediately beneath the guideway will be affected, however, because the culverts under 5th Avenue NE and other physical barriers already prevent large woody debris from being carried to other reaches downstream. Impacts to wetlands and wetland buffers will be mitigated as required by local and federal agencies.

Stream SSE1

The elevated guideway will be approximately 40 feet above the vegetated area adjacent to the surface-flowing segment of this non-fish-bearing watercourse in the action area. Some existing trees in the riparian area of this watercourse will likely be removed and replaced with shrubs and other lower-growing native vegetation. The guideway will be oriented north-to-south, allowing sunlight to reach the new vegetation. Both the guideway and the new vegetation will provide shade to the water. The loss of riparian trees could reduce the potential for delivery of large woody debris to the watercourse. Only the 100-foot-long reach immediately adjacent to the project alignment will be affected, however, because several culverts in the project area already prevent large woody debris from being carried to other reaches downstream. Impacts to wetlands and wetland buffers will be mitigated as required by local and federal agencies.

Segment B: Shoreline to Mountlake Terrace

McAleer Creek and Stream SSH4

The elevated guideway will pass through the riparian buffers of two segments of McAleer Creek where it flows at surface through cloverleaf interchanges between I-5 and SR 104; vegetation in the southeastern cloverleaf also provides riparian habitat for Stream SSH4. Both Chinook salmon and steelhead may use stream habitats in McAleer Creek in the action area. The route will also cross McAleer Creek as an elevated guideway where the stream emerges from a 400-foot culvert under I-5. The guideway will be approximately 60 feet above the stream at that location.

Some existing trees in the riparian areas of the surface-flowing segments in the two cloverleaf interchanges will likely be removed and replaced with shrubs and other lower-growing native vegetation. The guideway will be oriented north-to-south, allowing sunlight to reach the new vegetation. Both the guideway and the new vegetation will provide shade to the stream. The loss of riparian trees could reduce the potential for delivery of large woody debris to the stream. Only the reaches immediately adjacent to the Lynnwood Link Extension alignment will be affected, however, because the culverts under SR 104 and the I-5 on-ramps and off-ramps already prevent large woody debris from being carried to other reaches downstream. Impacts to wetlands and wetland buffers will be mitigated as required by local and federal agencies.

Stream SSH2

The entire length of this non-fish-bearing watercourse through the action area is contained in a culvert. Construction of the elevated guideway at the crossing location will not affect any vegetation within the riparian buffer of any surface-flowing segments of the stream.

Stream SMT1

The elevated guideway will be approximately 60 feet above this non-fish-bearing intermittent stream. Some existing trees in the riparian area of this stream will likely be removed and replaced with shrubs and other lower-growing native vegetation. The guideway will be oriented north-to-south, allowing sunlight to reach the new vegetation. Both the guideway and the new vegetation will provide shade to the stream. The loss of riparian trees could reduce the potential for delivery of

large woody debris to the stream. Only the reaches immediately adjacent to the project alignment will be affected, however, because several culverts in the project area already prevent large woody debris from being carried to other reaches downstream. Impacts to wetlands and wetland buffers will be mitigated as required by local and federal agencies.

Segment C: Lynnwood

Scriber Creek

The elevated guideway will be approximately 50 to 60 feet above this stream where it flows through the Scriber Creek wetland complex. No ESA-listed species are known or expected to use habitats in this stream reach, which is approximately 2,900 feet upstream of a total barrier to fish passage.

Most existing vegetation in the riparian area consists of willows and other low-growing species that may not need to be removed for safety reasons. However, some cottonwoods and other tall trees at the southern periphery of the wetland complex may be removed and replaced with shrubs and other lower-growing native vegetation. The guideway orientation in this area will be northeast-to-southwest, meaning sunlight will be able to reach new vegetation but possibly not to as great an extent as in the riparian areas of Thornton Creek and McAleer Creek. Both the guideway and the new vegetation will provide shade to the stream. The loss of riparian trees could reduce the potential for delivery of large woody debris to the stream. Only the reaches immediately adjacent to the project alignment will be affected, however, because several culverts in the action area already prevent large woody debris from being carried to other reaches downstream. As noted in Chapter 4, Environmental Baseline, Jones and Stokes (2000) found little to no large woody debris in the stream and determined that the potential for large woody debris recruitment is low. Impacts to wetlands and wetland buffers will be mitigated as required by local and federal agencies.

Stream SLY1

No portions of the project footprint intersect the vegetated area of the riparian buffer of this non-fish-bearing stream. All project construction activities within 200 feet of the stream will occur in currently paved portions of the transit center and therefore will not have any potential to affect the stream or its riparian buffer.

6.2 Indirect Effects

Indirect effects are defined as those that are caused by the proposed action and are later in time, but still are reasonably certain to occur (50 CFR § 402.02).

The Lynnwood Link Extension light rail system is projected to be used for approximately 68,000 trips per day in 2035, more than double the bus ridership that would be expected in the absence of the project (Sound Transit and Federal Transit Administration 2013). This is expected to reduce vehicle miles traveled by approximately 270,000 to 290,000 miles per day, and vehicle hours traveled by approximately 23,000 to 25,000 per day, with corresponding reductions in energy use, emissions, and related pollutants from vehicular traffic. A substantial portion of the anticipated reduction is expected to occur within the project corridor as new riders shift from automobiles to transit.

During the scoping process and preparation of the Lynnwood Link Extension Draft EIS (Sound Transit and Federal Transit Administration 2013), Sound Transit gathered information from other agencies and the public to identify proposed development projects that are reasonably certain to occur and that are contingent upon or caused by the project. Examples of information sources include land use plans, transportation plans, neighborhood plans, major transportation and land use proposals, and growth management plans from local municipalities, the Puget Sound Regional Council, and other organizations and the public.

Based on the information reviewed, no proposed development projects contingent upon or caused by the Lynnwood Link Extension are reasonably certain to occur. Light rail transit may contribute to existing market forces that can increase the potential for transit-oriented development. The experience of other U.S. communities has shown that, although light rail transit may not by itself create new development, with transit-supporting plans and policies in place, it can influence where development would occur and the types of development that occur. The Lynnwood Link Extension will provide mobility options that could help achieve higher land use densities, thereby encouraging reduction of land development area in ways that are consistent with regional and local plans and policies. Density will increase without construction of light rail; however, light rail will help achieve goals that encourage high-density, transit-oriented development (Sound Transit and Federal Transit Administration 2013).

6.3 Interrelated/Interdependent Actions

Interrelated actions are defined as actions that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration (50 CFR § 402.02). The Lynnwood Link Extension light rail line is part of a regional transportation improvement plan, but it does not depend on any other portion of the plan for its justification. The Lynnwood Link Extension is a stand-alone project that has independent utility, and no other proposed actions depend upon the Lynnwood Link Extension for their utility.

6.4 Effects Determinations

Table 6-5 summarizes the effects determinations for each species and critical habitat considered in this analysis. The rationale for each determination is provided in the following subsections.

6.4.1 Puget Sound Chinook Salmon

Project activities with the potential to affect Chinook salmon include construction and operation of light rail facilities near streams where this species might occur, as well as changes in runoff rates, volumes, and pollutant loads in water bodies that receive discharge from stormwater treatment facilities associated with the project.

The project may affect Puget Sound Chinook salmon for the following reasons:

- Adult Chinook salmon may occur in reaches of McAleer Creek within the action area.

Table 6-5. Effects Determinations for ESA-Listed Species and Critical Habitat

Species	Status	Federal Jurisdiction	Effects Determination
Chinook salmon, Puget Sound ESU	Threatened	NMFS	NLAA
Chinook salmon critical habitat	Designated	NMFS	NE
Steelhead, Puget Sound DPS	Threatened	NMFS	NLAA
Steelhead critical habitat	Proposed	NMFS	NE
Bull trout	Threatened	USFWS	NE
Bull trout critical habitat	Designated	USFWS	NE

ESU–Evolutionarily Significant Unit
DPS–Distinct Population Segment
NE–No Effect
NLAA–Not Likely to Adversely Affect
NMFS–National Marine Fisheries Service
USFWS–United States Fish and Wildlife Service

- Sediment or pollutants generated by construction activities could be released into surface waters.
- Increases in the amount of impervious surface in the action area could result in increased velocities and durations of peak flows in receiving waters.
- Removal of riparian vegetation due to project construction could disrupt riparian functions in stream reaches where Chinook salmon may be present.

The project is not likely to adversely affect Puget Sound Chinook salmon for the following reasons:

- None of the streams in the action area provide spawning habitat for Chinook salmon; therefore, potential impacts to that life stage are considered discountable.
- The potential for stream reaches in the action area to provide suitable rearing, foraging, or refuge habitat for Chinook salmon is low, based on limited access and poor habitat quality.
- All work below the ordinary high water mark of any waterbodies will be conducted in accordance with the HPA issued by WDFW and with the Clean Water Act Section 404 permit issued by the Corps. Such permits typically include provisions designed to avoid or minimize the risk of adverse effects on fish during sensitive life history stages. Provisions could include restrictions on construction periods below the ordinary high-water mark and/or other measures to avoid or minimize the potential for construction activities to deliver sediment or pollutants to streams.
- Work near streams will comply with permits obtained under local critical areas ordinances, which will likely include provisions for the protection of water quality and riparian habitat, further reducing the potential for adverse effects on fish and fish habitat.
- BMPs will be employed to prevent sediment and pollutants from entering any water body.
- Stormwater runoff from all new PGIS in the action area will receive water quality treatment, minimizing the risk of degradation of water discharged to action area streams.
- To minimize the potential impacts of increased impervious surface, stormwater detention facilities will be constructed as part of the project; the volume detained will be sufficient to offset any increase in impervious surface area in each segment.

- Native riparian vegetation will be replanted immediately after construction. Monitoring and adaptive management will ensure survival of plants in revegetated areas.
- Impacts to wetlands and riparian areas will be mitigated in accordance with regulatory requirements.
- The project is not expected to result in induced growth that would adversely affect habitat for Chinook salmon.

6.4.2 Puget Sound Chinook Salmon Critical Habitat

The areas potentially affected by construction and operation of the Lynnwood Link Extension do not overlap any areas of designated critical habitat for Puget Sound Chinook salmon. The nearest designated critical habitat is in Lake Washington, which is more than 3 miles downstream of the action area. Therefore, the project will have no effect on designated critical habitat for Puget Sound Chinook salmon.

6.4.3 Steelhead

Project activities with the potential to affect steelhead include construction and operation of light rail facilities near streams where this species may occur, as well as changes in runoff rates, volumes, and pollutant loads in water bodies that receive discharge from stormwater treatment facilities associated with the project.

The project may affect Puget Sound steelhead for the following reasons:

- Adult steelhead may occur in reaches of Thornton Creek and McAleer Creek within the action area.
- Sediment or pollutants generated by construction activities could be released into surface waters.
- Increases in the amount of impervious surface in the action area could result in increased velocities and durations of peak flows in receiving waters.
- Removal of riparian vegetation due to project construction could disrupt riparian functions in stream reaches where steelhead may be present.

The project is not likely to adversely affect Puget Sound steelhead for the following reasons:

- None of the streams in the action area provide spawning habitat for steelhead; therefore, potential impacts to that life stage are considered discountable.
- The potential for stream reaches in the action area to provide suitable rearing, foraging, or refuge habitat for steelhead is low, based on limited access and poor habitat quality.
- Based on the low abundance of spawning steelhead in the Lake Washington population (approximately 12 fish), combined with the large amount of readily accessible spawning habitat in the many tributary streams to Lake Washington, the possibility of adult steelhead returning to stream reaches in the action area is very remote.

- All work below the ordinary high water mark of any waterbodies will be conducted in accordance with the HPA issued by WDFW and with the Clean Water Act Section 404 permit issued by the Corps. Such permits typically include provisions designed to avoid or minimize the risk of adverse effects on fish during sensitive life history stages. Provisions could include restrictions on construction periods below the ordinary high-water mark and/or other measures to avoid or minimize the potential for construction activities to deliver sediment or pollutants to streams.
- Work near streams will comply with permits obtained under local critical areas ordinances, which will likely include provisions for the protection of water quality and riparian habitat, further reducing the potential for adverse effects on fish and fish habitat.
- BMPs will be employed to prevent sediment and pollutants from entering any water body.
- Stormwater runoff from all new PGIS in the action area will receive water quality treatment, minimizing the risk of degradation of water discharged to action area streams.
- To minimize the potential impacts of increased impervious surface, stormwater detention facilities will be constructed as part of the project; the volume detained will be sufficient to offset any increase in impervious surface area in each segment.
- Native riparian vegetation will be replanted immediately after construction. Monitoring and adaptive management will ensure survival of plants in revegetated areas.
- Impacts to wetlands and riparian areas will be mitigated in accordance with regulatory requirements.
- The project is not expected to result in induced growth that would adversely affect habitat for steelhead.

6.4.4 Steelhead Critical Habitat

The areas potentially affected by construction and operation of the Lynnwood Link Extension do not overlap any areas of proposed critical habitat for Puget Sound steelhead. The nearest proposed critical habitat is in Lake Washington, which is more than 3 miles downstream of the action area. The project will not destroy or adversely modify any proposed critical habitat for steelhead because no such areas occur in locations that may be affected by project activities.

If steelhead critical habitat is designated before completion of this project, a provisional effect determination for critical habitat is as follows: the project will have no effect on designated critical habitat for Puget Sound steelhead.

6.4.5 Bull Trout

Project activities are expected to have no effect on bull trout because bull trout are neither known nor expected to use habitats in the streams in the action area. None of the streams in the action area has been documented as supporting spawning or rearing by bull trout. Any fish attempting to gain access to any of the streams in the action area would have to negotiate several miles of stream habitat with elevated temperatures and multiple physical barriers. In light of these impediments, the

potential for bull trout to use habitats in the action area for spawning, rearing, foraging, migration, or overwintering is negligible.

6.4.6 Bull Trout Critical Habitat

The areas potentially affected by construction and operation of the Lynnwood Link Extension do not overlap any areas of designated critical habitat for bull trout. The nearest designated critical habitat is in Lake Washington, which is more than 3 miles downstream of the action area. Therefore, the project will have no effect on designated critical habitat for bull trout.

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APPENDIX A

Essential Fish Habitat Consultation

ESSENTIAL FISH HABITAT CONSULTATION

Public Law 104-297, the Sustainable Fisheries Act of 1996, amended the Magnuson-Stevens Fishery Conservation and Management Act to establish new requirements for Essential Fish Habitat (EFH) descriptions in federal fishery management plans and to require federal agencies to consult with the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) on activities that may adversely affect EFH.

The Magnuson-Stevens Act requires all fishery management councils to amend their fishery management plans to describe and identify EFH for each managed fishery. The Pacific Fishery Management Council (1999) has issued such an amendment in the form of Amendment 14 to the Pacific Coast Salmon Plan, and this amendment covers EFH for the Pacific salmon (Chinook salmon, coho salmon, and pink salmon) under NMFS jurisdiction that would potentially be affected by the proposed action.

EFH for Pacific salmon in freshwater includes all streams, lakes, ponds, wetlands, and other currently viable bodies of freshwater and the substrates within those water bodies accessible to Pacific salmon. Activities occurring above impassable barriers that are likely to adversely affect EFH below impassable barriers are subject to the consultation provisions of the Magnuson-Stevens Act.

EFH for groundfish and coastal pelagic species includes all waters from the mean high water line along the coasts of Washington upstream to the extent of saltwater intrusion and seaward to the boundary of the U.S. exclusive economic zone (370.4 km.) (PFMC 1998a and 1998b). Designated EFH for salmonid species in estuarine and marine areas includes nearshore and tidally submerged environments within state territorial water out to the full extent of the exclusive economic zone (370.4 km) offshore of Washington (PFMC 1999). No such areas are present in the action area,

The Magnuson-Stevens Act requires consultation for all federal agency actions that may adversely affect EFH. EFH consultation with NMFS is required by federal agencies undertaking, permitting, or funding activities that may adversely affect EFH, regardless of its location. Under Section 305(b)(4) of the Magnuson-Stevens Act, NMFS is required to provide EFH conservation and enhancement recommendations to federal and state agencies for actions that adversely affect EFH. Wherever possible, NMFS uses existing interagency coordination processes to fulfill EFH consultations with federal agencies. For the proposed action, this goal is being met by incorporating EFH consultation to the Endangered Species Act (ESA) Section 7 consultation, as represented by this Biological Assessment (BA).

The following guilds may be affected by project activities:

☒ Pacific Salmon ☐ Groundfish ☐ Coastal Pelagic Species

Location

In the Lake Washington-Sammamish basin, EFH includes Lake Washington and all of its tributaries currently or historically accessible to salmon, including Thornton Creek, McAleer Creek, and Scriber Creek.

Chinook Salmon

As discussed in Chapter 5, Species and Critical Habitat Status and Occurrence, adult Chinook salmon may use habitat in McAleer Creek within the action area but not for spawning. Access by Chinook salmon to other streams in the action area is blocked by impassable culverts downstream, and flow regimes and substrate structure are not conducive to spawning.

Coho Salmon

Coho salmon have been observed in the action area, within Thornton Creek, McAleer Creek, and Scriber Creek. Portions of McAleer Creek downstream of the confluence with Stream SMT1 provide spawning habitat for coho salmon, while those upstream of that point provide rearing habitat (WDFW 2014b). None of the other streams in the action area is considered to be accessible to coho salmon.

Pink Salmon

Pink salmon are not known or expected to use Lake Washington or its tributaries (WDFW 2014b).

Description of Project Activities

The project activities covered by this BA are described in Chapter 1, Introduction and Project Description. Potential effects of the project to salmonids are discussed in detail in Chapter 6, Effects Analysis and Effects Determination.

Conservation Measures and Best Management Practices

Conservation measures and best management practices (BMPs) are included for project activities and are described in Chapter 2 of this BA. Notably, no work will occur within stream reaches where salmon use has been documented, and project construction is not expected to result in any adverse effects on any salmon species. The project alignment at the crossings of Thornton Creek and McAleer Creek will be elevated, thereby avoiding any direct impacts on stream habitat and minimizing the potential for adverse effects on riparian habitat. WDFW (2014b) has not documented any observations of any salmon species in the action area. Conservation measures will avoid or minimize potential effects to existing habitat conditions, including EFH, within the action area.

Conclusions

In accordance with the EFH requirements of the Magnuson-Stevens Fishery Conservation and Management Act, it has been determined that the project will have the following effect on EFH for the guilds identified below:

☒ Pacific Salmon	☒ No Adverse Effect	☐ Adverse Effect
☐ Groundfish	☒ No Adverse Effect	☐ Adverse Effect
☐ Coastal Pelagic Species	☒ No Adverse Effect	☐ Adverse Effect

The project will have no adverse effects on EFH for groundfish or coastal pelagic species because they do not occur in the areas directly or indirectly affected by the project.

The project will have no adverse effects on EFH for Pacific salmon (including Chinook, coho, and pink salmon) because project construction, including implementation of the conservation measures identified above, is not expected to result in any permanent reduction of quantity or quality of EFH.

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APPENDIX B

Biology of Species Addressed in this Analysis

BIOLOGY OF SPECIES ADDRESSED IN THIS ANALYSIS

This appendix details the life history of the species covered in this Lynnwood Link Extension Biological Assessment (BA).

Puget Sound Chinook Salmon (*Oncorhynchus tshawytscha*)

The Puget Sound Chinook salmon evolutionarily significant unit (ESU) encompasses all runs of Chinook salmon from the Elwha River in the Strait of Juan de Fuca eastward, including rivers and streams flowing into Hood Canal, Puget Sound, and the Strait of Georgia in Washington. Of an estimated 31 original populations, there are 22 extant geographically distinct populations representing the primary historical spawning areas of Chinook salmon in the ESU (Good et al. 2005). Of the nine extinct populations, eight were spring Chinook salmon. The extinct spring Chinook salmon populations represented a significant portion of the historical life history diversity and spatial structure of the ESU. Their loss has increased the ESU's risk of extinction.

Long-term trends in abundance and median population growth rates for naturally spawning populations of Puget Sound Chinook salmon indicate that approximately half of the populations are declining and the other half are increasing in abundance. Eight of the 22 populations are declining over the short term, and 11 or 12 populations are experiencing long-term declines (Good et al. 2005). Factors contributing to the downward trends are widespread blockages of streams, degraded freshwater and marine habitat, poor forest practices in upper river tributaries, and urbanization and agriculture in lower tributaries and main stem rivers.

Chinook salmon spawning areas are generally characterized by stream gradients of less than 2 percent, velocities between 1.0 and 3.6 feet per second, depths greater than 0.8 feet, and gravel and cobble substrates as large as 4 inches. Chinook salmon favor the head of riffles and side channels for their redd locations (Healey 1991). The eggs are deposited in gravel that has well-oxygenated water percolating through it (Healey 1991). The eggs overwinter and hatch in the gravel to become juveniles with a yolk-sac. Juveniles emerge from the gravel (usually in late winter), begin to forage on their own, and move downstream into estuaries, where they continue to forage before moving into the North Pacific Ocean and reside for 1 to 5 or more years (Healey 1991).

Stream-type Chinook salmon (spring-run Puget Sound Chinook salmon) migrate into nearshore waters and return to natal streams in spring to early summer. They usually spawn greater distances from salt water than the ocean-type stocks. Ocean-type Chinook salmon (commonly called the fall-run) move to their natal streams in late summer and early fall. These individuals usually spawn lower in rivers than the stream-type stocks. Spring-run Puget Sound Chinook salmon spawn in late August through early October, while fall-run Puget Sound Chinook salmon spawn in late September through October (Healey 1991).

Spring-run Chinook salmon return to rivers when they are reproductively immature and typically hold in deep pools with flowing water for summer holding prior to spawning. Suitable holding pools have depths greater than 5 feet; contain cover from undercut banks, overhanging vegetation, boulders, or woody debris (Lindsay et al. 1986); and have water velocities ranging

from 0.5 to 1.2 feet per second (Marcotte 1984). In the summer, Chinook salmon juveniles prefer areas with water velocities less than 0.7 feet per second, depths between 0.7 and 2.6 feet, and cover (Hillman et al. 1987).

Adult Chinook salmon enter the Lake Washington system from Puget Sound through the Ballard Locks in July through September (Celedonia et al. 2011). Adult Chinook salmon begin entering the spawning streams in September and continue until November. Spawning occurs from October to December, with peak spawning activity usually in the first few weeks of October (Burton et al. 2009). Fry emerge from redds between January and early April (Kiyohara and Zimmerman 2009). Juvenile Chinook salmon in the Lake Washington system appear to have two rearing strategies: some rear in their natal streams and emigrate to the lake as pre-smolts in May, June, or July; others emigrate as fry between January and mid-May and rear in the south or north end of Lake Washington or in Lake Sammamish for several months (Celedonia et al. 2011). All Lake Washington Chinook migrate to marine habitats during their first year.

The largest run of naturally produced Chinook salmon in the Lake Washington basin occurs in the Cedar River. Large numbers of adult fish also spawn in Bear Creek. Small numbers of Chinook salmon spawn in several tributaries to Lake Washington and Lake Sammamish. Most hatchery production occurs at the Washington Department of Fish and Wildlife's Issaquah Creek Hatchery.

The size of historical runs of the ESU were estimated at 670,000. During a recent 5-year period, the geometric mean of natural spawners in populations of Puget Sound Chinook salmon ranged from 222 to just over 9,489 fish. The historical estimates of spawner capacity are several orders of magnitude higher than spawner abundances currently observed throughout the ESU (Good et al. 2005). The NMFS Biological Review Team identified the following risks: (1) the concentration of the majority of natural production in just two basins; (2) high levels of hatchery production in many areas of the ESU; and (3) widespread loss of estuary and lower floodplain habitat diversity. Populations in this ESU have not experienced the sharp increases in the late 1990s seen in many other ESUs, though more populations have increased than decreased since the last Biological Review Team assessment (Good et al. 2005).

Habitat requirements for Chinook salmon are listed by the NMFS in terms of Primary Constituent Elements (PCEs), which include sites that are essential to supporting one or more life stages of the ESU and which contain physical or biological features essential to the conservation of the ESU.

Specific sites and features designated for Puget Sound Chinook salmon include the following:

1) Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning incubation and larval development
2) Freshwater rearing sites with water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility; water quality and forage supporting juvenile development; and natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks

3) Freshwater migration corridors free of obstruction with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival

4) Estuarine areas free of obstruction with water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between freshwater and saltwater, natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels, and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation

5) Nearshore marine areas free of obstruction with water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation, and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels

6) Offshore marine areas with water quality conditions and forage, including aquatic invertebrates and fishes supporting growth and maturation

Puget Sound Steelhead (*Oncorhynchus mykiss*)

Steelhead are the anadromous form of freshwater resident rainbow or redband *O. mykiss* trout species. The present distribution of steelhead extends from Asia to Alaska, and south to the U.S.-Mexico border (Busby et al. 1996; 67 FR 21586, May 1, 2002). Unlike many salmonid species, *O. mykiss* exhibits extremely complex and plastic life history characteristics, such that their offspring can exhibit different life history forms from the parental generation. For example, offspring of resident fish may migrate to sea, and offspring of anadromous steelhead may remain in streams as resident fish (Burgner et al. 1992).

Those that are anadromous can spend up to 7 years in freshwater prior to smoltification (the physiological and behavioral changes required for the transition to salt water), and then spend up to 3 years in salt water before returning to freshwater to spawn. However, they typically return to their natal stream to spawn as 4- or 5-year-old fish. Unlike Pacific salmon, steelhead trout are iteroparous, meaning they are capable of spawning more than once before they die. However, it is rare for steelhead to spawn more than twice before dying, and those that do are usually females (Busby et al. 1996).

Over their entire range, West Coast steelhead spawning migrations occur throughout the year, with seasonal peaks of migration activity varying by location. However, even in a given river basin there might be more than one seasonal migration peak, typically referred to as winter, spring, summer, or fall steelhead runs. Although there are generally four migration seasons, steelhead are typically divided into two basic reproductive ecotypes (summer and winter), based on the state of sexual maturity at the time they enter freshwater and the duration of spawning migration (Burgner et al. 1992). The summer or stream-maturing type enters fresh water in a sexually immature condition between May and October, and sexually matures in freshwater over several months. In contrast, the winter or ocean-maturing type enters fresh water in a sexually mature condition between November

and April, and spawns shortly thereafter. In basins with ecotypes, the summer run generally spawns farther upstream than winter run fish. However, the winter run of steelhead is the predominant run in Puget Sound.

Depending on water temperature, fertilized steelhead eggs may incubate in redds for 1.5 to 4 months before hatching as alevins. Following yolk sac absorption, young juveniles (fry) emerge from the gravel and begin active feeding. As they grow, steelhead move to deeper parts of the stream and establish territories and diet changes from microscopic aquatic organisms to larger organisms such as isopods, amphipods, and aquatic and terrestrial insects, primarily associated with the stream bottom (Wydoski and Whitney 1979). Riparian vegetation and submerged cover (logs, rocks, and aquatic vegetation) are important for providing cover, food, temperature stability, and protection from predators. As a result, densities of juvenile steelhead are highest in areas containing in-stream cover (Reiser and Bjornn 1979; Johnson and Kucera 1985).

Bull Trout (*Salvelinus confluentus*)

Bull trout are members of the family Salmonidae and are char native to Washington, Oregon, Idaho, Nevada, Montana, and western Canada. Compared to other salmonids, bull trout have more specific habitat requirements that appear to influence their distribution and abundance. They need cold water to survive, so they are seldom found in waters where temperatures exceed 59 to 64 degrees Fahrenheit (°F). They also require stable stream channels, clean spawning and rearing gravel, complex and diverse cover, and unblocked migratory corridors.

Bull trout exhibit a number of life history strategies. Stream-resident bull trout complete their entire life cycle in the tributary streams where they spawn and rear. Migratory bull trout spawn in tributary streams. Juvenile fish from migratory populations usually rear from 1 to 4 years in natal streams before migrating (typically downstream) to either a larger river (fluvial form) or lake (adfluvial form), where they spend their adult life, returning to the tributary stream to spawn (Fraley and Shepard 1989). These migratory forms occur in areas where conditions allow for movement from upper watershed spawning streams to larger waters that contain greater foraging opportunities (Dunham and Rieman 1999). Resident and migratory forms may be found together, and either form can produce resident or migratory offspring (Rieman and McIntyre 1993). An anadromous form of bull trout also exists in the Coastal-Puget Sound population, which spawns in rivers and streams but rears young in the ocean. Unlike strictly anadromous species, such as Pacific salmon, bull trout can also exhibit an amphidromous life form, meaning they return seasonally to fresh water as subadults, sometimes for several years, before returning to spawn (Wilson 1997; Brenkman and Corbett 2005). The amphidromous life history form of bull trout is unique to the Coastal Puget Sound population (64 FR 58921, November 1, 1999).

Bull trout have more specific habitat requirements than most other salmonids (Rieman and McIntyre 1993). Habitat components that particularly influence their distribution and abundance include water temperature, cover, channel form, spawning and rearing substrate conditions, and migration habitat (Fraley and Shepard 1989; Goetz 1989; Watson and Hillman 1997).

Watson and Hillman (1997) concluded watersheds must have specific physical characteristics to provide the necessary habitat requirements for bull trout spawning and rearing, and that these characteristics are not ubiquitous throughout the watersheds in which bull trout occur. The preferred spawning habitat of bull trout consists of low-gradient stream reaches with loose, clean gravel (Fraley and Shepard 1989). Bull trout typically spawn in a narrow time window of a couple weeks during periods of decreasing water temperatures, but spawning ranges from August to November depending on local conditions (Swanberg 1997). However, migratory forms are known to begin spawning migrations as early as April and to move upstream as much as 250 km (155 mi) to spawning areas (Fraley and Shepard 1989; Swanberg 1997).

Fraley and Shepard (1989) reported that the initiation of spawning by bull trout in the Flathead River system appeared to be related to water temperature, with spawning generally initiated when water temperatures dropped below 50°F). Goetz (1989) reported a spawning temperature range from 39°F to 50°F, but the range could be wider in some areas (Howell et al. 2010). Selection of spawning habitat by bull trout is also influenced across multiple spatial scales by hyporheic flow (Baxter and Hauer 2000), defined as a mixing of shallow groundwater and surface water beneath and lateral to a stream bed. Hyporheic flow is influenced by geomorphic complexity of the streambed and recognized to be important for surface water/groundwater interaction. Spawning areas are often associated with cold-water springs, glacial and snow melt, or groundwater upwelling (Rieman et al. 1997; Baxter et al. 1999). Fraley and Shepard (1989) also found groundwater influence and proximity to cover are important factors influencing spawning site selection. They reported the combination of relatively specific requirements resulted in a restricted spawning distribution in relation to available stream habitat. While bull trout are critically dependent on large, cold-water habitats, individuals can range widely through stream networks and use habitat that may have limited amounts of cold-water refuge (64 FR 58921, November 1, 1999).

Depending on water temperature, egg incubation is normally 100 to 145 days (Pratt 1992). Water temperatures of 34°F to 42°F have been reported for incubation, with an optimum (best embryo survivorship) temperature reported to be from 36°F to 39°F (Fraley and Shepard 1989; McPhail and Baxter 1996). Juveniles remain in the substrate after hatching. The time from egg deposition to emergence of fry can exceed 200 days. During the relatively long incubation period in the gravel, bull trout eggs and embryos are especially vulnerable to fine sediments (i.e., fine silt to coarse sand) and water quality degradation (Fraley and Shepard 1989). Increases in fine sediment appear to reduce egg survival and emergence (Pratt 1992) by restricting intragravel circulation and/or causing entombment of newly hatched alevins (young salmon that have the yolk sac still attached). Juveniles are likely also affected by reduced interstitial habitat and cover. High juvenile densities have been reported in areas characterized by a diverse cobble substrate and a low percentage of fine sediments (Shepard et al. 1984).

Habitat requirements for bull trout are listed by the U.S. Fish and Wildlife Service (USFWS) in terms of functions and PCEs. Bull trout require the following habitat functions:

1) Spawning, rearing, foraging, or over-wintering habitat to support essential existing local populations

2) Movement corridors necessary for maintaining essential migratory life history forms

3) Suitable habitat that is considered essential for recovering existing local populations that have declined or that need to be re-established to achieve recovery

These functions are provided by areas containing these PCEs:

1) Water temperatures ranging from 36°F to 59°F, with adequate thermal refugia available for temperatures at the upper end of this range. Specific temperatures within this range will vary depending on bull trout life history stage and form, geography, elevation, diurnal and seasonal variation, shade such as that provided by riparian habitat, and local groundwater influence.

2) Complex stream channels with features such as woody debris, side channels, pools, and undercut banks to provide a variety of depths, velocities, and in-stream structures.

3) Substrates of sufficient amount, size, and composition to ensure success of egg and embryo overwinter survival, fry emergence, and young-of-the-year and juvenile survival. A minimal amount of fine substrate less than 0.25 inch (0.63 centimeter) in diameter and minimal substrate embeddedness are characteristic of these conditions.

4) A natural hydrograph, including peak, high, low, and base flows within historic ranges or, if regulated, a hydrograph that demonstrates the ability to support bull trout populations by minimizing daily and day-to-day fluctuations and minimizing departures from the natural cycle of flow levels corresponding with seasonal variation.

5) Springs, seeps, groundwater sources, and subsurface water connectivity to contribute to water quality and quantity.

6) Migratory corridors with minimal physical, biological, or water quality impediments between spawning, rearing, overwintering, and foraging habitats, including intermittent or seasonal barriers induced by high water temperatures or low flows.

7) An abundant food base including terrestrial organisms of riparian origin, aquatic macroinvertebrates, and forage fish.

8) Permanent water of sufficient quantity and quality such that normal reproduction, growth, and survival are not inhibited.

9) Few or no nonnative predatory species (e.g., lake trout, walleye, northern pike, smallmouth bass); inbreeding (e.g., brook trout); or competitive (e.g., brown trout) species present.

Lake Washington provides PCEs 1, 4, 5, 6, 7, and 8 for bull trout critical habitat. Lake Washington provides a stable water body with few obstacles to fish passage and an abundant food base. Lake Washington is hydrologically connected to a network of streams, associated wetlands, and subsurface water. Water temperatures in Lake Washington are generally warmer than 15° C during the summer (King County Department of Natural Resources 2000). Non-native smallmouth bass, which are potential bull trout predators, are present in Lake Washington (WDFW 2014).

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APPENDIX C

Species Lists

Status of ESA Listings & Critical Habitat Designations for West Coast Salmon & Steelhead

Puget Sound Domain

- Puget Sound Chinook (T) [FCH 9/2/05]
- Hood Canal Summer Chum (T) [FCH 9/2/05]
- Ozette Lake Sockeye (T) [FCH 9/2/05]
- Puget Sound Steelhead (T) [CH under dev.; ANPR 1/10/11]

Willamette/Lower Columbia Domain

- Columbia River Chum (T) [FCH 9/2/05]
- Lower Columbia River Coho (T) [CH Under dev.; ANPR 1/10/11]
- Lower Columbia River Chinook (T) [FCH 9/2/05]
- Lower Columbia River Steelhead (T) [FCH 9/2/05]
- Upper Willamette River Chinook (T) [FCH 9/2/05]
- Upper Willamette River Steelhead (T) [FCH 9/2/05]

Oregon Coast Domain

- Oregon Coast Coho (T) [FCH 2/11/08]

Southern Oregon/Northern California Coast Domain

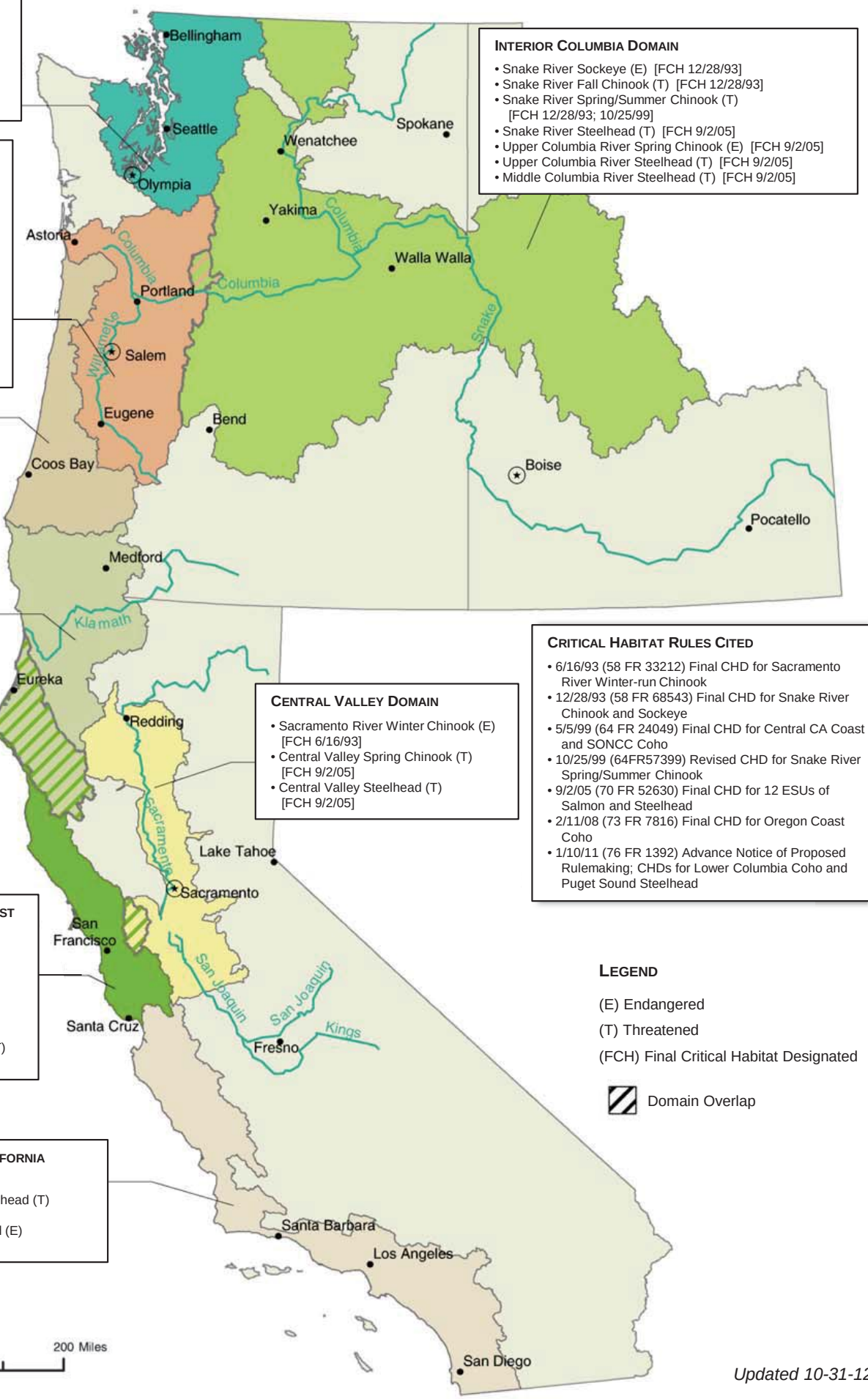
- Southern Oregon/Northern California Coast Coho (T) [FCH 5/5/99]

North-Central California Coast Domain

- Central California Coast Coho (E) [FCH 5/5/99]
- California Coastal Chinook (T) [FCH 9/2/05]
- Northern California Steelhead (T) [FCH 9/2/05]
- Central California Coast Steelhead (T) [FCH 9/2/05]

South-Central/Southern California Coast Domain

- South-Central California Coast Steelhead (T) [FCH 9/2/05]
- Southern California Coast Steelhead (E) [FCH 9/2/05]



Interior Columbia Domain

- Snake River Sockeye (E) [FCH 12/28/93]
- Snake River Fall Chinook (T) [FCH 12/28/93]
- Snake River Spring/Summer Chinook (T) [FCH 12/28/93; 10/25/99]
- Snake River Steelhead (T) [FCH 9/2/05]
- Upper Columbia River Spring Chinook (E) [FCH 9/2/05]
- Upper Columbia River Steelhead (T) [FCH 9/2/05]
- Middle Columbia River Steelhead (T) [FCH 9/2/05]

Central Valley Domain

- Sacramento River Winter Chinook (E) [FCH 6/16/93]
- Central Valley Spring Chinook (T) [FCH 9/2/05]
- Central Valley Steelhead (T) [FCH 9/2/05]

Critical Habitat Rules Cited

- 6/16/93 (58 FR 33212) Final CHD for Sacramento River Winter-run Chinook
- 12/28/93 (58 FR 68543) Final CHD for Snake River Chinook and Sockeye
- 5/5/99 (64 FR 24049) Final CHD for Central CA Coast and SONCC Coho
- 10/25/99 (64FR57399) Revised CHD for Snake River Spring/Summer Chinook
- 9/2/05 (70 FR 52630) Final CHD for 12 ESUs of Salmon and Steelhead
- 2/11/08 (73 FR 7816) Final CHD for Oregon Coast Coho
- 1/10/11 (76 FR 1392) Advance Notice of Proposed Rulemaking; CHDs for Lower Columbia Coho and Puget Sound Steelhead

Legend

(E) Endangered

(T) Threatened

(FCH) Final Critical Habitat Designated

Domain Overlap

Updated 10-31-12

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CRITICAL HABITAT; CANDIDATE SPECIES; AND SPECIES OF CONCERN
IN KING COUNTY
AS PREPARED BY
THE U.S. FISH AND WILDLIFE SERVICE
WASHINGTON FISH AND WILDLIFE OFFICE

(Revised September 3, 2013)

LISTED

Bull trout *(Salvelinus confluentus)*
Canada lynx *(Lynx canadensis)*
Gray wolf *(Canis lupus)*
Grizzly bear *(Ursus arctos = U. a. horribilis)*
Marbled murrelet *(Brachyramphus marmoratus)*
Northern spotted owl *(Strix occidentalis caurina)*

Major concerns that should be addressed in your Biological Assessment of project impacts to listed animal species include:

1. Level of use of the project area by listed species.

2. Effect of the project on listed species' primary food stocks, prey species, and foraging areas in all areas influenced by the project.

3. Impacts from project activities and implementation (e.g., increased noise levels, increased human activity and/or access, loss or degradation of habitat) that may result in disturbance to listed species and/or their avoidance of the project area.

Castilleja levisecta (golden paintbrush) [historic]

Major concerns that should be addressed in your Biological Assessment of project impacts to listed plant species include:

1. Distribution of taxon in project vicinity.

2. Disturbance (trampling, uprooting, collecting, etc.) of individual plants and loss of habitat.

1. Changes in hydrology where taxon is found.

DESIGNATED

Critical habitat for bull trout
Critical habitat for the marbled murrelet
Critical habitat for the northern spotted owl

PROPOSED

North American wolverine *(Gulo gulo luteus)* – contiguous U.S. DPS
Oregon spotted frog *(Rana pretiosa)* [historical]

CANDIDATE

Fisher *(Martes pennanti)* – West Coast DPS
Yellow-billed cuckoo *(Coccyzus americanus)*
Pinus albicaulis (whitebark pine)

SPECIES OF CONCERN

Bald eagle *(Haliaeetus leucocephalus)*
Beller's ground beetle *(Agonum belleri)*
Cascades frog *(Rana cascadae)*
Hatch's click beetle *(Eanus hatchi)*
Larch Mountain salamander *(Plethodon larselli)*
Long-eared myotis *(Myotis evotis)*
Long-legged myotis *(Myotis volans)*
Northern goshawk *(Accipiter gentilis)*
Northern sea otter *(Enhydra lutris kenyoni)*
Northwestern pond turtle *(Emys (= Clemmys) marmorata marmorata)*
Olive-sided flycatcher *(Contopus cooperi)*
Pacific lamprey *(Lampetra tridentata)*
Pacific Townsend's big-eared bat *(Corynorhinus townsendii townsendii)*
Peregrine falcon *(Falco peregrinus)*
River lamprey *(Lampetra ayresi)*
Tailed frog *(Ascaphus truei)*
Valley silverspot *(Speyeria zerene bremeri)*
Western toad *(Bufo boreas)*
Aster curtus (white-top aster)
Botrychium pedunculosum (stalked moonwort)
Cimicifuga elata (tall bugbane)

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CRITICAL HABITAT; CANDIDATE SPECIES; AND SPECIES OF CONCERN IN SNOHOMISH COUNTY AS PREPARED BY THE U.S. FISH AND WILDLIFE SERVICE WASHINGTON FISH AND WILDLIFE OFFICE

(Revised September 3, 2013)

LISTED

Bull trout (*Salvelinus confluentus*)
Canada lynx (*Lynx canadensis*)
Gray wolf (*Canis lupus*)
Grizzly bear (*Ursus arctos* = *U. a. horribilis*)
Marbled murrelet (*Brachyramphus marmoratus*)
Northern spotted owl (*Strix occidentalis caurina*)

Major concerns that should be addressed in your Biological Assessment of project impacts to listed species include:

1. Level of use of the project area by listed species.

2. Effect of the project on listed species' primary food stocks, prey species, and foraging areas in all areas influenced by the project.

3. Impacts from project activities and implementation (e.g., increased noise levels, increased human activity and/or access, loss or degradation of habitat) that may result in disturbance to listed species and/or their avoidance of the project area.

DESIGNATED

Critical habitat for bull trout
Critical habitat for the marbled murrelet
Critical habitat for the northern spotted owl

PROPOSED

North American wolverine *(Gulo gulo luteus)* – contiguous U.S. DPS
Oregon spotted frog (*Rana pretiosa*) [historical]

CANDIDATE

Fisher *(Martes pennanti)* – West Coast DPS
Yellow-billed cuckoo (*Coccyzus americanus*)
Pinus albicaulis (whitebark pine)

SPECIES OF CONCERN

Bald eagle (*Haliaeetus leucocephalus*)
Beller's ground beetle (*Agonum belleri*)
Cascades frog (*Rana cascadae*)
Long-eared myotis (*Myotis evotis*)
Long-legged myotis (*Myotis volans*)
Northern goshawk (*Accipiter gentilis*)
Olive-sided flycatcher (*Contopus cooperi*)
Pacific lamprey (*Lampetra tridentata*)
Pacific Townsend's big-eared bat (*Corynorhinus townsendii townsendii*)
Peregrine falcon (*Falco peregrinus*)
River lamprey (*Lampetra ayresi*)
Tailed frog (*Ascaphus truei*)
Western toad (*Bufo boreas*)
Botrychium pedunculosum (stalked moonwort)

APPENDIX D

Stormwater Analysis Memorandum

DETAILED STORMWATER ANALYSIS

This appendix presents the results of modeling conducted to support the analysis of stormwater-related impacts of the Lynnwood Link Extension. As requested by NMFS staff during pre-consultation meetings for this BA, the WSDOT Highway Runoff and Dilution Loading (HI-RUN) model was used to generate estimates of current and anticipated future loadings and concentrations of dissolved copper and dissolved zinc in runoff from the Lynnwood Link Extension. This appendix also presents additional information about the path traveled by water after it leaves proposed stormwater treatment facilities, the traffic volumes on roadways that will be new PGIS, and the sources of existing stormwater runoff in the analysis area.

Table D-1 on the following page presents detailed information about the areas of new PGIS that will result from the Lynnwood Link Extension, including estimates of the average daily number of vehicles on each roadway or parking area. The table also describes the path traveled by water discharged from the facilities that Sound Transit proposes creating to provide water quality treatment for the runoff from new areas of PGIS.

Consistent with the requirements of the Washington Department of Transportation's Highway Runoff Manual, threshold discharge areas (TDAs) were delineated in the analysis area. Four of these TDAs have outfalls to streams (Thornton Creek and McAleer Creek) at locations where ESA-listed species may be present (Table D-1).

In all TDAs, runoff from PGIS that will be created or removed by the Lynnwood Link Extension will comingle with runoff from numerous other sources. The greatest contributor is I-5, which has traffic volumes of approximately 150,000 to 200,000 vehicles per day in the analysis area. In contrast, more than 95 percent of the new PGIS created by the project will be used by 10,000 or fewer vehicles per day (Table D-1).

Treated water discharged from TDA 7 North and from the NE 130th Street overpass in TDA 3 will travel a substantial distance (between 1,500 and 2,600 feet) through vegetated ditches before entering any fish-bearing waters. Concentrations of dissolved metals traveling in ditches will be reduced through uptake by vegetation growing in the ditches and through chemical reactions with negative ions in the soils that support the vegetation.

Treated water discharged from TDA 4 and from portions of TDA 3 other than the NE 130th Street overpass will travel primarily through pipes before entering Thornton Creek. Notably, these outfalls discharge more than 3,000 feet upstream of any reaches where ESA-listed species are known or expected to be present. As a result, runoff discharged from those areas is highly unlikely to affect ESA-listed species.

Table D-1. Acreage and Approximate Traffic Volumes on PGIS Areas To Be Added by the Lynnwood Link Extension, and the Routes Traveled by Water Discharged from New Stormwater Treatment Facilities

PGIS Source	Traffic Volume [1]	PGIS Area (acres)	Post-treatment Path
TDA 3			
NE 130th	20,000	0.28	Water leaving the facility will flow approximately 2,600 feet through vegetated ditches along the west side of I-5 before entering a culvert under the freeway, joining Thornton Creek approximately 1,700 feet upstream of where steelhead are known or expected to be present. (Sub-basin 1)
NE 145th Station Parking	500	0.33	Water leaving the facility will enter an existing pipe that discharges to Thornton Creek approximately 3,000 feet upstream of where steelhead are known or expected to be present. (Sub-basin 2)
I-5 onramp	10,000	0.26	Water leaving the facility will enter an existing enclosed pipe system that discharges to the culverts containing Thornton Creek approximately 3,500 feet upstream of where steelhead are known or expected to be present. (Sub-basin 3)
NE 148th	100	0.08	As above (Sub-basin 3)
NE 145th Station Parking	500	0.64	As above (Sub-basin 3)
TDA 4			
1st Ave NE	500	0.21	Water leaving the facility will flow approximately 1,500 feet, mostly in pipes, before entering Thornton Creek approximately 1 mile upstream of where steelhead are known or expected to be present.
TDA 7 South			
5th Ave NE east of I-5	3,000	0.33	Water leaving the facility will flow approximately 4,900 feet, mostly in pipes, before entering McAleer Creek where steelhead and Chinook salmon may be present; the nearest spawning habitat (for Chinook salmon only) is approximately 1 mile downstream.
Parking	500	0.74	As above
5th Ave NE west of I-5	2,000	0.59	As above
Bus Turnaround	300	0.79	Infiltration facility (emergency overflow will follow the path described above)
TDA 7 North			
Southbound I-5 onramp at 220th Street	8,000	0.40	Water leaving the facility will flow approximately 7,000 feet, including approximately 1,500 feet in vegetated ditches, before entering a vegetated stormwater detention pond at the I-5/SR 104 interchange. Water from the pond discharges onto a riprap pad then flows at surface approximately 100 feet before joining McAleer Creek where steelhead salmon may be present but approximately 1,600 feet upstream of where Chinook salmon are known or expected to occur.

[1] Average annual daily traffic, vehicles per day

Treated water discharged from TDA 7 South will travel primarily through pipes before entering McAleer Creek, limiting opportunities for infiltration and other types of incidental improvements to water quality between the treatment facilities and fish-bearing waters.

Because most of the stormwater runoff from PGIS in the project area comes from sources other than the Lynnwood Link Extension, NMFS suggested that Sound Transit employ a "pipe-within-a-pipe" approach when using the HI-RUN model to analyze project-related stormwater impacts. This approach assumes that stormwater from the new PGIS resulting from the Lynnwood Link Extension will not combine with water from other sources before reaching the discharge point. In other words, the pipe-within-a-pipe approach recognizes the need to consider the project's contribution to water quality independently of the much greater contribution of contaminants from I-5 and other sources. The results of these model runs are presented on the following pages and summarized below.

The model results using this approach show that pollutant loading in TDAs 3, 4, and 7 North will decrease compared to current conditions. This conclusion is based on the P(exceed) values generated by the model (WSDOT 2008). P(exceed) values less than 0.50 represent conditions under which runoff quality is expected to improve. Given the inherent uncertainty and variability in the data, a P(exceed) threshold value of 0.45 was selected to provide a level of confidence that proposed conditions would not be degraded when compared to background conditions (WSDOT 2008). The P(exceed) values for dissolved copper in these three TDAs range from 0.00 to 0.34 and the values for dissolved zinc range from 0.00 to 0.25. These results are consistent with expectations based on the combined effects of treating all new PGIS and removing some areas of existing PGIS in these TDAs, and of treating an additional 0.83 acre of existing PGIS in TDA 3, sub-basin 1.

In TDA 7 South, the HI-RUN model results indicate the potential for increased pollutant loadings, with P(exceed) values of 0.74 and 0.61 for dissolved copper and dissolved zinc, respectively, necessitating the use of the dilution subroutine for a closer look at the potential for adverse effects on ESA-listed fish. The output of the dilution subroutine presents a conservative distance (mixing zone) downstream of the outfall, where there is a 5 percent chance that pollutant concentrations will exceed thresholds for effects on fish. The established thresholds are based on potential increases of 2.0 μg/L above background concentrations of dissolved copper and 5.6 μg/L above background concentrations dissolved zinc.

The dilution subroutine showed mixing zone distances less than 1 foot under both baseline and proposed conditions, indicating a minimal risk of adverse effects. During the November 19, 2014, meeting with representatives of Sound Transit and FTA, NMFS noted that modeled mixing zone distances less than 5 to 10 feet are typically considered to be consistent with an effects determination of "not likely to adversely affect."

Based on these results, the potential for stormwater runoff from the Lynnwood Link Extension to result in adverse effects on ESA-listed fish will be insignificant and discountable. The model results support the determination in the draft biological assessment that construction and operation of the Lynnwood Link Extension may affect but is not likely to adversely affect Puget Sound Chinook salmon and Puget Sound steelhead.

Literature Cited

WSDOT (Washington State Department of Transportation). 2008. Highway runoff dilution and loading model user's guide: analysis of highway stormwater water quality effects for Endangered Species Act consultations. Prepared by Herrera Environmental Consultants, Inc. Seattle, WA. October 6, 2008.

HI-RUN Pollutant Loading Subroutine Modeling (Pipe-Within-Pipe) Input and Results for the Lynnwood Link Extension

TDA 3

Input Summary

Outfall ID: LLE TDA 3
Rain Gauge: Puget East 36
Description:

Discharge Areas

Subbasin 1 - Baseline Conditions - 1.29 acres
no treatment - 0% infiltration - 1.29 acres

Subbasin 1 - Proposed Conditions - 1.11 acres
enhanced treatment - 20% infiltration - 1.11 acres
(includes 0.28 acre of new PGIS and 0.83 acre of existing PGIS)

Subbasin 2 - Baseline Conditions - 0.26 acres
no treatment - 0% infiltration - 0.26 acres

Subbasin 2 - Proposed Conditions - 0.33 acres
enhanced treatment - 20% infiltration - 0.33 acres

Subbasin 3 - Baseline Conditions - 0.44 acres
no treatment - 0% infiltration - 0.44 acres

Subbasin 3 - Proposed Conditions - 0.98 acres
enhanced treatment - 20% infiltration - 0.98 acres

Load Analysis

	Dissolved Copper Load (lb/yr)		Dissolved Zinc Load (lb/yr)	
	Baseline	Proposed	Baseline	Proposed
Max	1.43	0.54	24	3.1
75th Percentile	0.083	0.047	0.672	0.25
Median	0.047	0.03	0.351	0.16
25th Percentile	0.026	0.02	0.183	0.099
Min	0.002	0.001	0.006	0.01
P (exceed)		**0.342**		**0.247**

TDA 4

Input Summary

Run Date/Time: 11/25/14 15:30
Outfall ID: LLE TDA 4 pipe-within-pipe
Rain Gauge: Puget East 36
Description:

Discharge Areas

Subbasin 1 - Baseline Conditions - 0.14 acres
no treatment - 0% infiltration - 0.14 acres

Subbasin 1 - Proposed Conditions - 0.21 acres
enhanced treatment - 80% infiltration - 0.01 acres
infiltration bmp - 100% infiltration - 0.2 acres

Load Analysis

	Dissolved Copper Load (lb/yr)		Dissolved Zinc Load (lb/yr)	
	Baseline	Proposed	Baseline	Proposed
Max	0.1	0	1.69	0.001
75th Percentile	0.006	0	0.047	0
Median	0.003	0	0.025	0
25th Percentile	0.002	0	0.013	0
Min	0	0	0	0
P (exceed)		**0**		**0**

(Note that all new PGIS in this TDA will be treated in an infiltration facility; in order for the HI-RUN model to accept the input values, it was necessary to model 0.01 acre of the new PGIS as receiving enhanced treatment rather than being infiltrated.)

TDA 7 North

Input Summary

Run Date/Time: 12/1/14 16:03
Outfall ID: LLE TDA 7 North
Rain Gauge: Puget East 36
Description:

Discharge Areas

Subbasin 1 - Baseline Conditions - 0.69 acres
no treatment - 0% infiltration - 0.69 acres

Subbasin 1 - Proposed Conditions - 0.4 acres
enhanced treatment - 20% infiltration - 0.4 acres

Load Analysis

	Dissolved Copper Load (lb/yr)		Dissolved Zinc Load (lb/yr)	
	Baseline	**Proposed**	**Baseline**	**Proposed**
Max	0.516	0.085	6.88	0.54
75th Percentile	0.029	0.008	0.233	0.041
Median	0.016	0.005	0.122	0.026
25th Percentile	0.009	0.003	0.063	0.016
Min	0	0	0.002	0.001
P (exceed)		**0.132**		**0.094**

TDA 7 South

Input Summary

Run Date/Time: 12/1/14 16:12
Outfall ID: LLE TDA 7 South
Rain Gauge: Puget East 36
Description:

Baseline conditions - 0.44 acres
no treatment - 0% infiltration - 0.44 acres

Proposed Conditions - 2.45 acres
Enhanced - 20 % Infiltration - 1.22 acres with detention
Enhanced - 20 % Infiltration - 0.44 acres
infiltration bmp - 100 % infiltration - 0.79 acres

Load Analysis

	Dissolved Copper Load (lb/yr)		Dissolved Zinc Load (lb/yr)	
	Baseline	**Proposed**	**Baseline**	**Proposed**
Max	0.372	0.41	6.06	2.6
75th Percentile	0.018	0.032	0.147	0.17
Median	0.01	0.021	0.077	0.11
25th Percentile	0.006	0.013	0.041	0.068
Min	0	0	0.001	0.004
P (exceed)		**0.742**		**0.609**

HI-RUN Dilution Subroutine Modeling (Pipe-Within-Pipe) Input and Results for TDA 7 South

Project: LLE TDA 7 South
Precipitation Series: Puget East 36
Description:

Background Concentrations (mg/L)
Dissolved Copper: 0.001
Dissolved Zinc: 0.003

Baseline Conditions:
No Treatment Infiltration 0% - 0.44 acres

Proposed Conditions:
Enhanced Treatment Infiltration 20% - 1.22 acres with detention
Enhanced Treatment Infiltration 20% - 0.44 acres
Infiltration BMP - 100% infiltration - 0.79 acres

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Depth (ft)		1	0.93	0.93	0.86	0.78	0.72			0.73	0.81	0.97	1.02
Velocity (fps)		1.48	1.39	1.38	1.28	1.16	1.07			1.09	1.21	1.44	1.52
Width (ft)		11	10.4	10.3	9.5	8.6	7.9			8.1	9	10.7	11.3
Manning Roughness		0.035	0.035	0.035	0.035	0.035	0.035			0.035	0.035	0.035	0.035
Discharge Distance (ft)		0	0	0	0	0	0			0	0	0	0
Distance Downstream in feet to Meet Biological Threshold													
Dissolved Copper	Baseline	< 1	< 1	< 1	< 1	< 1	< 1			< 1	< 1	< 1	< 1
	Proposed	< 1	< 1	< 1	< 1	< 1	< 1			< 1	< 1	< 1	< 1
Dissolved Zinc	Baseline	< 1	< 1	< 1	< 1	< 1	< 1			< 1	< 1	< 1	< 1
	Proposed	< 1	< 1	< 1	< 1	< 1	< 1			< 1	< 1	< 1	< 1

Appendix Q

Northgate to Lynnwood Light Rail and I-5 Compatibility Report

North Corridor Transit Project

Northgate to Lynnwood Light Rail and I-5 Compatibility Report

Prepared For:

Washington State Department of Transportation

SOUND TRANSIT

401 South Jackson Street
Seattle, WA 98104-2826

January 2012

Prepared By:

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PARAMETRIX + PARSONS BRINCKERHOFF

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Acronyms and Abbreviations

DEIS	Draft Environmental Impact Statement
ETLs	express toll lanes
FTA	Federal Transit Administration
HOV	high-occupancy vehicle
HSR	Hard Shoulder Running
I-5	Interstate 5
ITS	Intelligent Transportation Systems
Link	Link light rail system
LRT	Light Rail Transit
NCTP	North Corridor Transit Project
Sound Transit	Central Puget Sound Regional Transit Authority
SR	State Route
WSDOT	Washington State Department of Transportation

1 INTRODUCTION

1.1 Background

Sound Transit is preparing to extend mass transit from Northgate to Lynnwood, which voters approved as part of the Sound Transit 2 Plan in 2008, along with funding to continue planning future service all the way to Everett. The project, called the North Corridor Transit Project (NCTP), will connect to and build on the Link light rail line that opened for service between downtown Seattle and Sea-Tac Airport in 2009.

Sound Transit has just completed an Alternative Analysis (AA) in compliance with Federal Transit Administration guidelines for New Starts grant funding. The AA, entitled the "NCTP Alternatives Analysis Report and SEPA Addendum" (Sept 2011), evaluated a range of potential alternatives for addressing mobility needs within the Project area, including transit modes, routes, stations, and operating features.

The AA concluded that light rail was the only mode that can satisfy the NCTP's Purpose and Need related to transportation effectiveness in meeting the corridor's mobility, access, and capacity needs, as well as consistency with Sound Transit's Long-Range Plan. Interstate 5 (I-5) was one of the corridors evaluated by the AA for light rail service. The proposed I-5 alternative is shown in Figure 1.

The next step for the project is to begin the conceptual design and environmental review activities associated with the NEPA/SEPA Draft Environmental Impact Statement (DEIS). This process will more closely define the footprint requirements for light rail infrastructure and will identify potential impacts associated with alternative alignments.

1.2 Purpose of Report

This report was prepared by North Corridor Transit Partners for the Washington State Department of Transportation (WSDOT) and Sound Transit (Central Puget Sound Regional Transit Authority). This report documents WSDOT and Sound Transit's agreement on reasonable I-5 highway and light rail areas that will ensure WSDOT's ability to make future highway improvements while accommodating light rail infrastructure and minimizing impacts to adjacent properties. This report documents WSDOT's and Sound Transit's assumptions for beginning the design process of light rail alternatives along I-5.

1.3 Approach

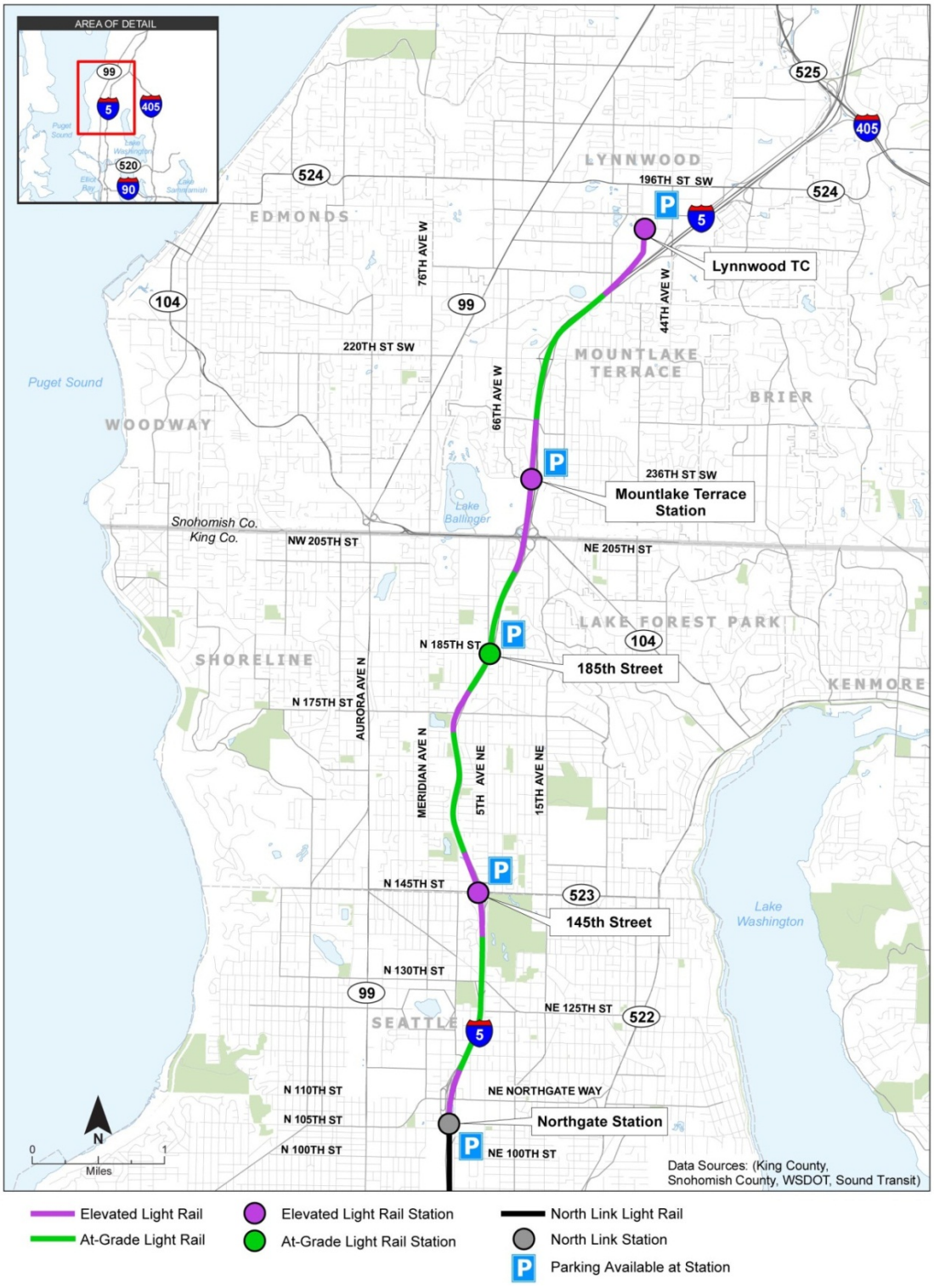
The analysis for this report takes into account previous studies prepared by WSDOT and Sound Transit. WSDOT studies include the I-5 Pavement Replacement Project and the Express Toll Lanes Study. The Pavement Reconstruction Project (Existing Pavement Conditions and Traffic Operations Analysis Results Report, November 2007) identified several operational improvements that included creating four continuous lanes between the Washington Ship Canal Bridge and the northern terminus of the express lanes. The Express Toll Lanes Study, currently in progress, is analyzing the conversion of the existing HOV lane and possible addition of a new lane north of the express lanes that could be available for a tolled lane system.

The Sound Transit Alternatives Analysis Report (September 2011) for the light rail extension from Northgate to Lynnwood identifies the east side of I-5 up to SW 236th Street and the median from SW 236th Street to Lynnwood as a likely location for light rail. For that reason, this report is limited to reviewing the northbound (east side) portion of I-5. This report could be amended in the future if an analysis of the southbound portion of I-5 is determined necessary. Additional details will be developed during the DEIS process to further define issues that are beyond the scope of this report's analysis.

WSDOT's I-5 highway requirements for the I-5 right-of-way include the need for space adjacent to the existing travel lanes to maintain the flexibility for future improvements to the highway infrastructure such as improving safety, upgrading environmental conditions, improving highway technology (ITS), and/or adding capacity.

Sound Transit's needs for light rail include providing adequate space for the rail guideway infrastructure for each direction of travel, a pedestrian walkway, poles to support the overhead catenary system, signal systems, bridge railing, noise walls, and retaining walls. For the NCTP DEIS analysis, the light rail footprint will be located outside of the highway area. The DEIS will evaluate the width and location requirements of the proposed rail alignments, including construction impacts outside of the highway area.

The concepts presented in the following analysis identify a range of possible improvements that support WSDOT's and Sound Transit's interests and do not represent a specific approved or proposed project. These concepts provide a basis to identify a reasonable space allocation that will be flexible for WSDOT to make future highway improvements that would not require relocation of the light rail infrastructure.



Depicted is one of several alternative concepts for light rail service on the I-5 corridor, additional alignment and station alternatives will be considered in the DEIS, but those have not been defined in detail at this time.

Figure 1. NCTP Conceptual I-5 Corridor for Light Rail Service

2 EXISTING ROADWAY CONDITIONS

In addition to the existing mainline general purpose lanes, HOV lanes and interchanges, the I-5 corridor includes infrastructure to support traffic operations, bus operations, safety and environmental requirements.

Within the corridor, infrastructure to support buses includes outside freeway stops and a park-and-ride lot at NE 145th Street, a transit only interchange to King County Metro's North Base, a transit only median freeway station at Mountlake Terrace, and an HOV median direct access ramp system in Lynnwood. Transit also benefits from the high-occupancy vehicle (HOV) lanes located throughout the I-5 corridor. Figure 2 illustrates the existing lane and ramp configuration of I-5 from Northgate to Lynnwood.

Additional highway infrastructure supports safety and operations along the corridor. This infrastructure includes barriers, guardrails, retaining walls, noise walls, drainage piping systems, stormwater treatment and detention, signs, illumination, and intelligent transportation systems (ITS). ITS includes features such as traffic cameras, vehicle data collectors, variable message signs, ramp meters and signals and fiber optic cables, as well as associated electrical cabinets and junction boxes. Landscaping and natural vegetation buffers, although not a specific highway function, are typically important features to communities to provide separation between the highway lanes and the private properties. All of these features occupy additional space beyond the edge of pavement to provide the existing and future functions.

Existing features also use some of the space within the existing right of way. At several locations, local streets were constructed within the I-5 right of way or are located adjacent to the right of way. The terrain has constant variation throughout the project limits and in many cases these slopes and retaining walls take up much of the space between the existing highway pavement and the edge of the I-5 right-of-way.

Existing right-of-way varies along the entire length of this corridor. The greatest variability occurs through the interchanges where additional width is required for the ramps. Between ramps, there is also variability due to the original property boundary lines that existed prior to construction of I-5 and the land purchases that were negotiated to create the I-5 right-of-way. As a result, the right-of-way width is rarely constant along this project corridor. To summarize the right-of-way widths, Table 1 describes the variability in the right-of-way width along mainline I-5 measured approximately from the existing center barrier to the eastern edge of the right-of-way, The data in Table 1 is segmented from one interchange to the next, but does not include the additional width at each interchange to accommodate ramps.

Table 1*. Existing I-5 Northbound Roadway Right-of-Way

Segment	Eastern Half ROW width
Northgate Way to 130th	125-220 feet
130th to 145th	215-220 feet
145th to North Base	125-150 feet
North Base to 175th	120-185 feet
175th to 205th (County Line)	135-220 feet
205th to 236th	185-350 feet
236th to 220th	125-320 feet
220th to 44th	130-210 feet

*The data in Table 1 is segmented from one interchange to the next, and does not include the additional width required at each interchange to accommodate ramps.

3 FUTURE ROADWAY NEEDS

3.1 Maintaining Flexibility for Future Decisions

WSDOT has studied a number of possible modifications to the I-5 corridor between Northgate and Lynnwood but has not adopted specific plans for improvements. As noted previously, space within the I-5 right-of-way and adjacent to the existing travel lanes needs to be reserved to maintain the flexibility for future improvements to the highway infrastructure such as improving safety, upgrading environmental conditions, improving highway technology (ITS), or adding capacity. These improvements could include the following:

- Upgrade existing shoulders and maintain existing 12-foot lanes to meet current design standards,
- Create additional capacity by adding lanes,
- Modify interchanges,
- Upgrade ITS systems (variable speed limits, cameras, tolls, illumination, etc.),
- Update drainage infrastructure to meet current or future stormwater standards,
- Provide additional noise mitigation, and
- Provide additional landscaping buffers and enhancements.

The highway area is based on the ability to add one extra lane from the express lane ramps at Northgate to I-405. The additional lane could be added as an additional general purpose lane, an HOV lane, or as a hard shoulder running lane. Figure 2 shows the existing lane configuration and the future concept of how one additional lane could be added to the corridor. Lane continuity (providing continuous lanes for as long as possible) was also a factor in developing the future concept and as a result the future lane concept includes two additional lanes at the 175th interchange. In summary, the future concept could have six continuous lanes between the north end of the express lanes and the county line at the 205th Street interchange, then five continuous lanes north of the county line.

3.2 Northbound Roadway Cross Sections

Space allocations for potential roadway modifications were evaluated using a series of cross sections for variable quantity of lanes and widths of lanes. Figure 3 shows the existing cross section and four potential options for widening the cross section with additional lanes or widened shoulders. Each option shows the same 84-foot total width cross section, the variability of the lane, shoulder, and buffer widths and the resulting quantity of lanes possible for each option. The table on the right side of the figure shows the total cross section width as a result of varying the quantity of lanes. The four options studied are as follows:

- Option 1- 7 lanes: Minimum widths for lanes and shoulders.

- Option 2 – 6 lanes: Hard Shoulder Running (HSR) option with larger left shoulder and a peak period HSR lane on the right shoulder.
- Option 3 – 6 lanes: Dual Express Lane option with narrower left shoulder and full right shoulder, and narrower lanes.
- Option 4 – 5 lanes: Full Standards option that includes the maximum lane, shoulder, and buffer widths.

Since specific future freeway improvements have not been identified, it is important to define a pavement envelope that will provide reasonable flexibility for a variety of future options. After careful review and analysis of a variety of cross-section options, WSDOT and Sound Transit concluded that a pavement width of 84 feet from the center barrier to the edge of the roadway will provide the desired flexibility. This width allows for future lane configurations that could range between five and seven lanes. With the exception of areas around the freeway interchanges, an 84-foot pavement width for mainline lanes is adequate to provide the desired flexibility along the entire length of the North Corridor Transit Project.

Additional space outside of the pavement may be required for other safety, environmental, and technology highway elements. Space beyond the pavement is required for barriers or guardrails, signs, illumination, ITS infrastructure, fencing, and retaining walls. In general, a 10-foot width on the outside edge of the mainline is recommended for these elements. Where light rail might be located in the median of I-5, specific elements would need to be designed into the light rail infrastructure, which could include barriers, walls, drainage collection, and structure support columns. At isolated locations, the 10-foot space could be reduced or a light rail guideway column could be located within this area if additional design studies provide documentation that the space is not required for highway uses.

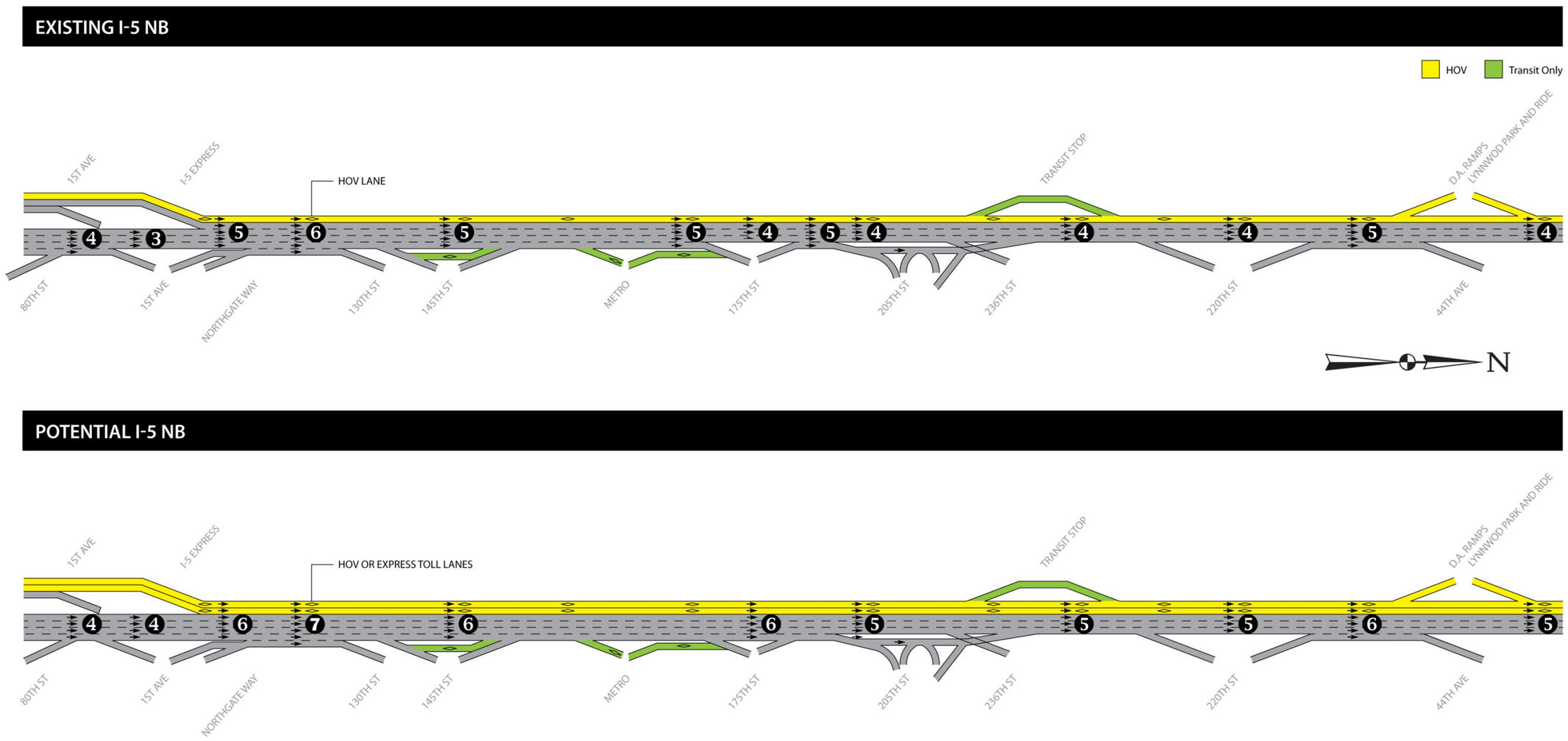


Figure 2. Existing and Potential Future I-5 Northbound Lane Schematics

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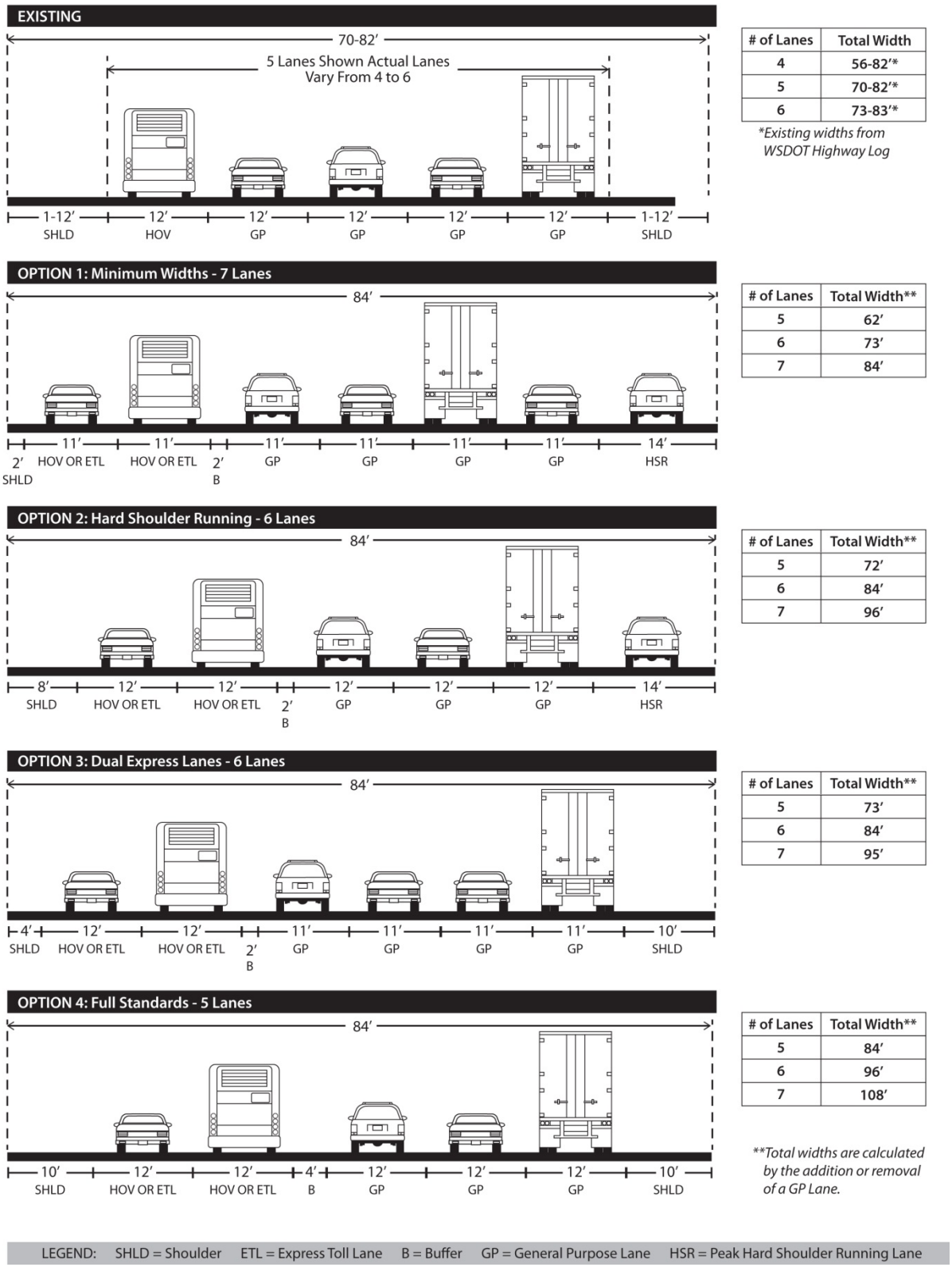


# of Lanes	Total Width
4	56-82′*
5	70-82′*
6	73-83′*

*Existing widths from WSDOT Highway Log

# of Lanes	Total Width**
5	62′
6	73′
7	84′

# of Lanes	Total Width**
5	72′
6	84′
7	96′

# of Lanes	Total Width**
5	73′
6	84′
7	95′

# of Lanes	Total Width**
5	84′
6	96′
7	108′

**Total widths are calculated by the addition or removal of a GP Lane.

Figure 3. Future Potential Northbound I-5 Roadway Cross Sections

3.3 Interchanges

While an 84-foot roadway width between interchanges is adequate to maintain WSDOT's flexibility to make a range of future freeway improvements, each interchange between Northgate and Lynnwood needs to be evaluated individually to determine the highway area needed for potential mainline lane additions and for potential modifications to the interchange ramps. To accommodate mainline lane additions, further evaluation of the tapers and gore areas is required to define how existing interchanges could be connected to the wider mainline. This area is variable for each ramp at each interchange. WSDOT and Sound Transit will continue to define the space allocation for the I-5 ramps.

At each interchange, space should be preserved for cross-street widening that could include bicycle and pedestrian improvements and safety elements such as clear zone and sight distance. In general along this corridor, interchange ramp terminals are separated from the mainline by slopes and vegetation. If mainline lanes are widened, it is assumed that the widening would occur within the vegetated area and interchange ramp terminals would not be affected. WSDOT may undertake interchange modifications in the future at NE 130th and NE 145th Streets but a specific configuration has not been determined at this time. WSDOT and Sound Transit will work together during Sound Transit's North Corridor Transit Project DEIS process to further define thehighway area at these two interchanges or define the modifications needed as a result of impacts from the light rail project. Where ramps are parallel and adjacent to mainline lanes, the reservation area includes space for relocation of the ramps outside the northbound mainline 84-foot width.

Each interchange has been reviewed to identify potential issues that could require modifications and therefore require a reservation for improvements. Each interchange is outlined in the sections that follow with a list of issues that could be considered at each interchange.

3.3.1 NE Northgate Way Interchange

- Southbound collector/distributor ramp weaving and capacity issues may be addressed in the future by WSDOT. The southbound ramp is outside the assumed alignment for light rail.
- Preserve the ability to enhance existing pedestrian and bicycle treatments along the local street.

Figure 4. Northgate Way Interchange

3.3.2 NE 130th Street Interchange

- Northbound ramp intersection configuration at 5th Avenue is not a typical interchange layout and could be considered for eventual modification by WSDOT.
- Roosevelt Way/130th Street/5th Avenue intersection configuration does not meet current standards for intersection alignments due to the curve on the east leg of the intersection.
- Preserve the ability to enhance existing pedestrian and bicycle treatments along the local street.
- Completing the interchange by adding southbound off and northbound on ramps is not under consideration.

Figure 5. NE 130th Street Interchange

3.3.3 NE 145th Street Interchange

- Northbound ramp intersection configuration at 5th Avenue is not a typical interchange layout and could be considered for modifications.
- 145th Street/5th Avenue intersection capacity should be evaluated with the addition of a light rail station and park and ride. Intersection modifications may be necessary to improve the capacity for the potential increase in traffic.
- Preserve the ability to enhance existing pedestrian and bicycle treatments along the local street.
- Existing bus transit freeway stops will be removed once light rail service is in operation.
- WSDOT may consider adding HOV/ETL direct access ramps within this interchange.

Figure 6. NE 145th Street Interchange

3.3.4 Metro North Base Interchange

- No future changes identified.

Figure 7. Metro North Base interchange

3.3.5 NE 175th Street Interchange

- Preserve the ability to enhance existing pedestrian and bicycle treatments along the local street.

Figure 8. NE 175th Street Interchange

3.3.6 SR 104 (NE 205th Street) Interchange

- Preservation of open space for potential stormwater or wetland mitigation is desirable.
- WSDOT may consider adding HOV/ETL direct access ramps within this interchange.

Figure 9. SR 104 (NE 205th Street) Interchange

3.3.7 236th Street SW Interchange

- Preserve the ability to enhance existing pedestrian and bicycle treatments along the local street.
- Completion of interchange by adding southbound off and northbound on ramps is not under consideration.

Figure 10. 236th Street SW Interchange

3.3.8 220th Street SW Interchange

- Potential for intersection widening to improve the intersection level of service.
- Potential addition of southbound mainline auxiliary lane between 44th and 220th Streets.

Figure 11. 220th Street SW interchange

3.3.9 Lynnwood Transit Center Direct Access Ramp/44th Avenue W Interchange

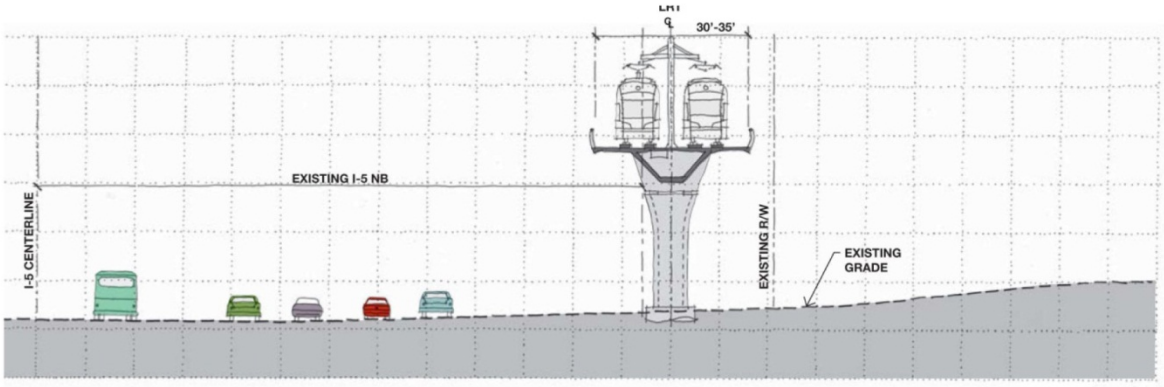
- Southbound on-ramp from 44th Avenue W is configured for high vehicle speeds and makes non-motorized travel through the intersection along the south side of 44th difficult. Modified intersection geometry could be considered by WSDOT.

Figure 12. 44th Avenue W Interchange and Lynnwood Transit Center Direct Access Ramp

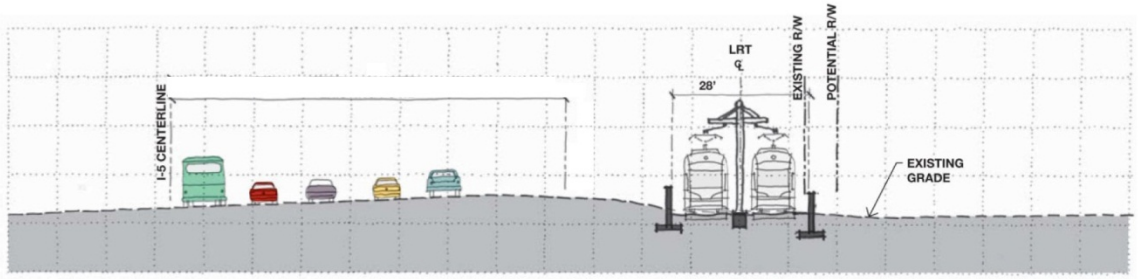
4 LIGHT RAIL AREA

Light rail will extend from the planned Northgate Link light rail station to the existing Transit Center in Lynnwood. Sound Transit's recent North Corridor alternatives analysis process identified the east side of I-5, from Northgate to SW 236th Street in Snohomish County and then the median from SW 236th Street to the Lynnwood Transit Center as a promising general location for a light rail alignment. Additional alignment and station alternatives will be considered in the DEIS, but those have not been defined in detail at this time.

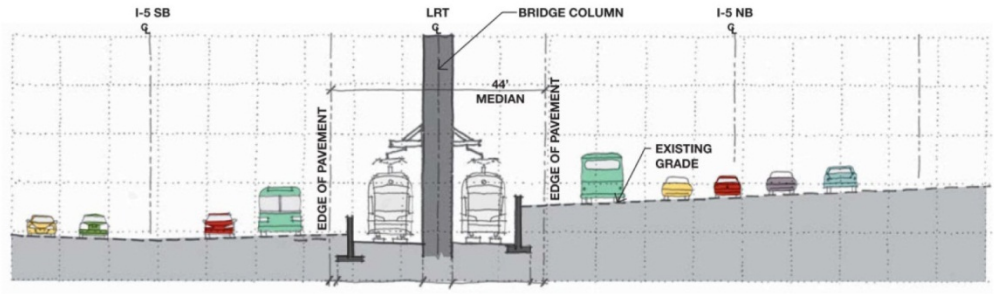
Critical space elements for the light rail include the rail guideway infrastructure for each direction of travel, a pedestrian walkway along the guideway for emergency and maintenance use, poles to support the overhead catenary system, signal systems, drainage systems, bridge railing, noise walls, and retaining walls. Widths to accommodate these elements range between 28 and 35 feet, except in the median of I-5 up to 44-feet may be needed where columns support structures over I-5. Figure 13 illustrates potential cross-section configurations for light rail along the I-5 corridor. In many locations additional space may be required for light rail retaining walls, fencing, noise walls, or relocating freeway infrastructure. The light rail alignment cannot always be located parallel to the edge of the highway due to light rail geometric requirements or other design conflicts; therefore there could be additional space between the highway area and the light rail area. Existing highway noise walls may also need to be relocated nearer the right-of-way line to provide noise abatement for both light rail and highway noises.



TYPICAL CROSS-SECTION OF ELEVATED RAIL ON EAST SIDE OF ROADWAY



TYPICAL CROSS-SECTION OF AT-GRADE RAIL ON EAST SIDE OF ROADWAY



TYPICAL CROSS-SECTION OF AT-GRADE RAIL IN MEDIAN OF ROADWAY

The light rail alignment cannot always be located parallel to the edge of the highway due to light rail geometric requirements; therefore there could be additional space between the WSDOT pavement reservation and the light rail reservation.

Figure 13. Typical Light Rail Cross Sections

5 CONCLUSIONS AND NEXT STEPS

The next step for the North Corridor Transit Project is to begin the conceptual design activities associated with the NEPA/SEPA Draft Environmental Impact Statement (DEIS). This process will more closely define the footprint of the light rail infrastructure and the identification of impacts associated with the project. The footprint will be developed to preserve space for future modifications of I-5 and will provide the I-5 areas described above. In summary, the assumptions that WSDOT and Sound Transit have agreed to are as follows and as shown in Figure 14:

- For the mainline I-5 northbound roadway, provide 84 feet pavement area for future pavement width from center barrier to the edge of I-5 mainline.
- North of 236th Street SW, where I-5 includes a median between the northbound and southbound roadways, sufficient right of way exists to provide the 84 foot pavement area on the outside of the existing highway without encroaching into the median. For this segment, it is contemplated that the light rail infrastructure would be built in the median of I-5.
- Provide an additional 10 feet beyond the outside edge of the roadway to accommodate barriers, ITS, signals, etc. This area could potentially be used for light rail guideway columns.
- Interchange gore area needed to support an additional lane should be defined during the DEIS design development process.
- Additional modifications may be considered by WSDOT and Sound Transit during the DEIS design development. The following locations are currently identified for additional design coordination:
    - 117th/1st Avenue NE
    - 130th interchange
    - 145th interchange
    - Lynnwood Transit Center (direct access and 44th on-ramp vicinity)
- Cross-street improvements may also occur in the future and therefore LRT guideway columns, abutments, etc. should be located away from the existing edge of streets. Specific structure locations will be defined during the final design phase and coordinated with the appropriate jurisdiction.
- Light Rail will be placed outside the minimum highway area and the specific location will vary based on meeting the Sound Transit Design Criteria Manual and project needs.

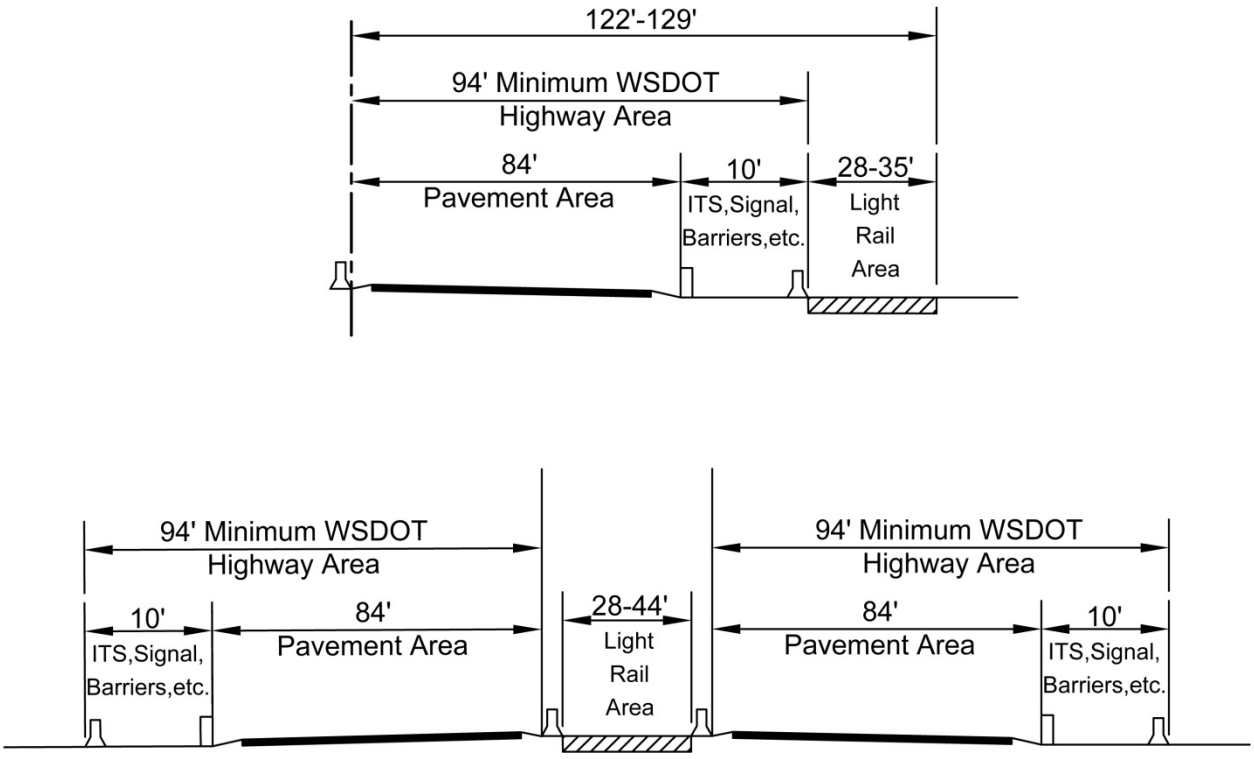


Figure 14. Minimum Highway and Light Rail Areas

Appendix R

Link Operations and Maintenance Satellite Facility Analysis

APPENDIX R – LINK OPERATIONS AND MAINTENANCE SATELLITE FACILITY ANALYSIS

As described in Chapter 2, Sound Transit plans to construct and operate a Link Operations and Maintenance Satellite Facility (OMSF) to support light rail operations and maintenance needs for the ST2 program of projects across the Sound Transit district. Sound Transit and FTA issued a separate NEPA/SEPA Draft EIS for this facility in May 2014 and are now preparing its Final EIS. The new OMSF would operate in conjunction with Sound Transit's existing Forest Street Operations and Maintenance Facility (OMF) in Seattle to support the 80 additional light rail vehicles required for ST2's expanded system.

The OMSF Draft EIS evaluated one alternative in Lynnwood and three alternatives in Bellevue (see Figure R-1):

Lynnwood Alternative—This alternative is north of I-5, west of the Lynnwood Transit Center, and east of 52nd Avenue West/Cedar Valley Road, with additional light rail storage tracks, operator report facilities, and interior cleaning functions in Bellevue north of NE 12th Street and south of SR 520.

BNSF Alternative—This alternative is located in Bellevue between the Eastside Rail Corridor on the west and 120th Avenue NE on the east, south of SR 520 and north of NE 12th Street.

BNSF Modified Alternative—This alternative would be in the same location as the BNSF Alternative, but it would construct the OMSF on both sides of the Eastside Rail Corridor west of 120th Avenue NE.

SR 520 Alternative—This alternative would be constructed south of SR 520 and north of Northup Way/NE 20th Street, east of 130th Avenue NE and west of 140th Avenue NE.

On July 24, 2014, the Sound Transit Board identified the BNSF Alternative as the Preferred Alternative for evaluation in the final EIS along with other alternatives (Motion M2014-51). A final decision on the OMSF site will be made after publication of the project's Final EIS, expected in summer 2015. Table R-1 summarizes the potential impacts of the OMSF build alternatives.

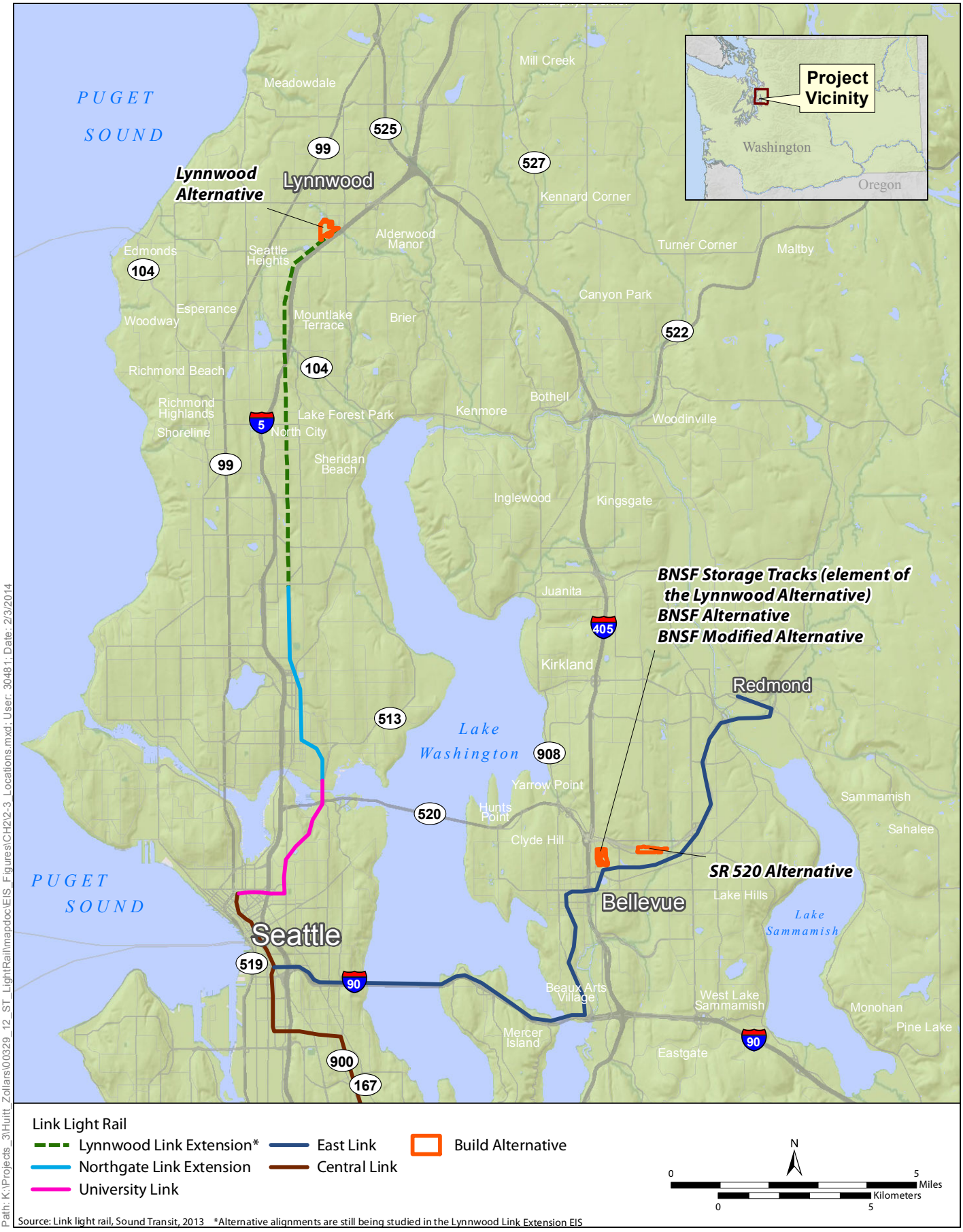


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Figure R-1
Locations of the Build Alternatives
Sound Transit Link Light Rail
OMSF Draft EIS

Table R-1. Differentiating Characteristics and Impacts of the OMSF Build Alternatives

Differentiating Characteristic	Lynnwood Alternative	BNSF Alternative	BNSF Modified Alternative	SR 520 Alternative
Operations				
Requires off-site storage tracks	Yes	No	No	No
Acquisitions, Displacements, and Relocations				
Number of parcels acquired	14–15	6	14	13
Number of existing land uses displaced	11–14	14	25	101
Land Use				
Consistent with zoning/comprehensive plan designations	No; would require comp. plan and zoning change and a conditional use permit.	No; would require a conditional use permit.	No; would require a conditional use permit.	No; would require a conditional use permit.
Surplus land available for redevelopment	9–13 acres	4 acres	8 acres	0 acres
Economics				
Loss of annual property tax revenue (2012)	$413,100–$450,400	$464,200	$572,400	$630,500
Noise and Vibration				
Affected sensitive receptors and adjacent land uses (number after mitigation)	2 homes (None)	None	None	None
Ecosystems and Water Resources				
Aquatic impacts	≤ 0.1 acre of stream buffer	0 acres of stream buffer	0 acres of stream buffer	Piping approx. 700 feet of Goff Creek and 0.64 acre of stream buffer
Vegetation and wildlife impacts (vegetation removal)	11–12 acres	3 acres	6 acres	2 acres
Wetland impacts (direct)	1.98–2.18 acres	0.07 acre	0.6 acre	0.39 acre
Wetland buffer impacts	1.79 acres	0.25 acre	1.33 acres	0.29 acre
Groundwater and stream baseflow impacts	No	No	No	Yes
Public Services				
Number of direct impacts on essential public facilities	1	0	1	0
Parkland and Open Space				
Number of temporary impacts on park resources	1	0	0	0

Link Light Rail Operations and Maintenance Satellite Facility Draft Environmental Impact Statement, May 2014

This Lynnwood Link Extension EIS analysis assumes the OMSF along with other ST2 projects as part of the No Build and all build alternatives. Even if the Lynnwood Link Extension does not go forward, Sound Transit will construct the OMSF to accommodate other elements of the ST2 Plan.

Sound Transit does not require the OMSF in order to build and operate the Lynnwood Link Extension, although the OMSF is needed to operate Lynnwood Link at the level of light rail service assumed for the ST2 program. If the OMSF is delayed or not constructed, Link operation and maintenance would occur exclusively at the Forest Street OMF. Therefore, Lynnwood Link Extension and the Link OMSF are related but have independent utility under NEPA and SEPA.

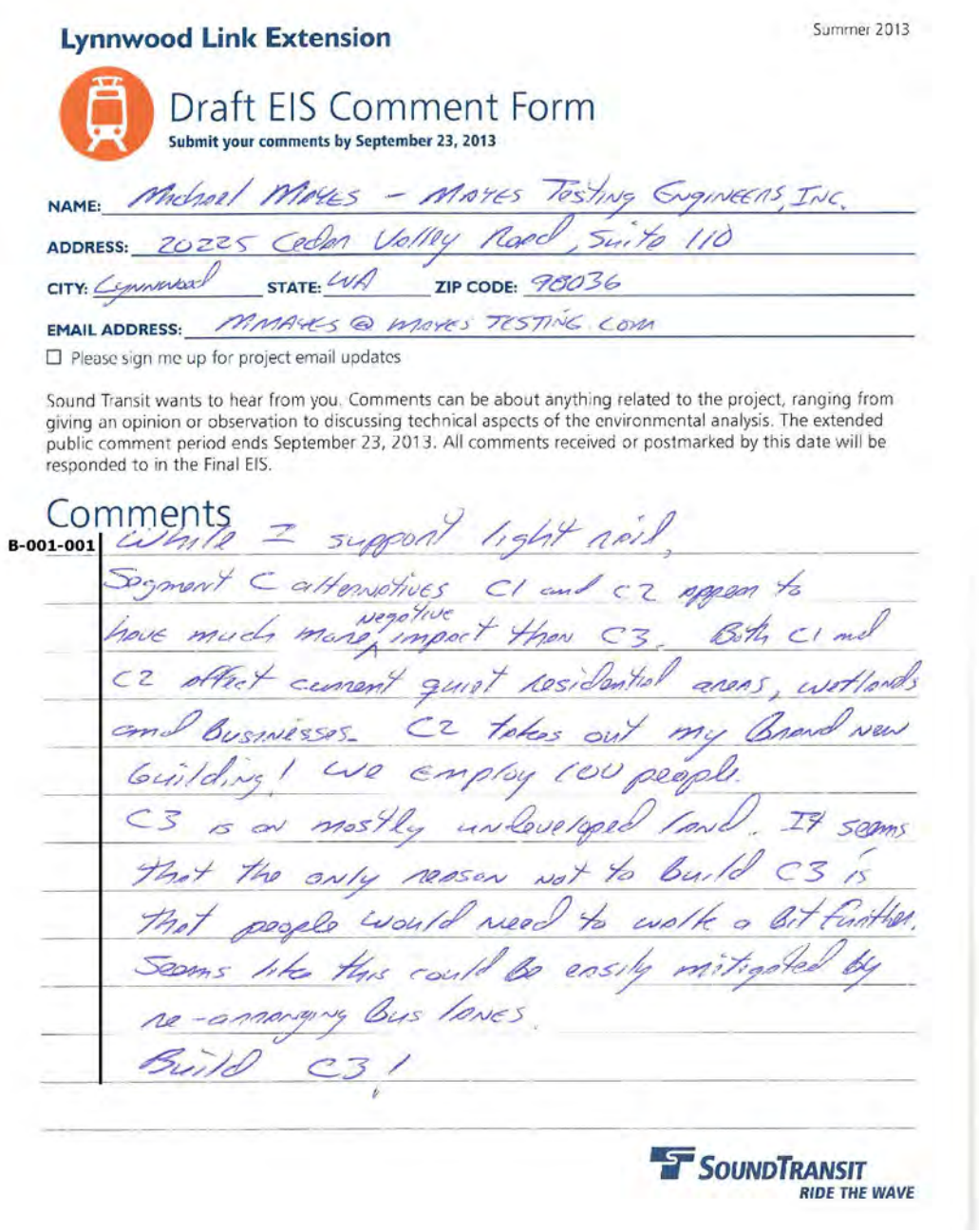
However, Lynnwood Link Extension service levels without the OMSF would be substantially lower than if the OMSF were constructed. During peak periods, the OMSF will enable four-car trains at 4-minute headways between the Lynnwood Transit Center and International District Station in Seattle. Without the OMSF, the Lynnwood Link Extension would run three-car trains and have longer peak-hour headways, reducing passenger capacity by more than 40 percent. Table R-2 compares potential effects of the Lynnwood Link Extension project with the service levels assumed in No Build and light rail alternatives as analyzed in the Lynnwood Link Extension EIS with potential impacts at reduced service levels without the OMSF.

Table R-2. Comparison of Potential Effects of Lynnwood Link Extension Without OMSF

Effect		Comparative Impacts with Reduced Capacity/No OMSF
Ridership		Reduced ridership due to reduced capacity and overcrowding.
Transportation	Number of intersections requiring mitigation	Same or fewer due to reduced ridership.
	I-5 congestion	Increased congestion.
	I-5 bridges rebuilt	Similar, project facilities would be unchanged.
	I-5 ramps relocated	Similar, project facilities would be unchanged.
	Realigned streets	Similar, project facilities would be unchanged.
	Number of parking spaces removed	Similar, project facilities would be unchanged.
Acquisitions, Displacements and Relocations		Similar, project facilities would be unchanged.
Land Use		Similar, project facilities would be unchanged.
Economics		Similar, project facilities would be unchanged.
Social Impacts, Community Facilities, and Neighborhoods		Similar, project facilities would be unchanged.
Visual and Aesthetic Resources		Similar, project facilities would be unchanged.

Table R-2. Comparison of Potential Effects of Lynnwood Link Extension Without OMSF

Effect	Comparative Impacts with Reduced Capacity/No OMSF
Air Quality and Greenhouse Gases	Predicted reduction in VMT would be less, resulting in less air quality benefit. Construction impact would be the same as project facilities would be unchanged.
Noise and Vibration	Slightly reduced due to fewer and shorter train pass-bys.
Ecosystem Resources	Similar, project facilities would be unchanged.
Water Resources	Similar, project facilities would be unchanged.
Energy	Reduction in energy consumption for travel would be less due to a smaller reduction in VMT.
Geology and Soils	Similar, project facilities would be unchanged.
Hazardous Materials	Similar, project facilities would be unchanged.
Electromagnetic Fields	Negligible reduction due to fewer train pass-bys.
Public Services, Safety and Security	Similar because project facilities would be unchanged. Fewer passengers could reduce potential for accidents.
Utilities	Similar, project facilities would be unchanged. Electricity demand to power the system would be reduced.
Cultural Resources	Similar, project facilities would be unchanged.
Parks and Recreational Resources	Similar, project facilities would be unchanged.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Michael Mayes - Mayes Testing Engineers, Inc.

ADDRESS: 20225 Cedar Valley Road, Suite 110

CITY: Lynnwood STATE: WA ZIP CODE: 98036

EMAIL ADDRESS: MMAYES@MAYESTESTING.COM

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

B-001-001 While I support light rail, Segment C alternatives C1 and C2 appear to have much more negative impact than C3. Both C1 and C2 affect current quiet residential areas, wetlands and businesses. C2 takes out my brand new building! We employ 100 people. C3 is on mostly undeveloped land. It seems that the only reason not to build C3 is that people would need to walk a bit further. Seems like this could be easily mitigated by re-arranging bus lanes. Build C3!

SOUNDTRANSIT RIDE THE WAVE

B-001-001

Your comment stating a preference for Alternative C3, and describing the impact Alternative C2 would have on your business is noted.

From: Brian Sodorff <brian@gmgloan.com>
Sent: Thursday, September 12, 2013 12:27 PM
To: Lynnwood Link DEIS
Subject: comment on transit station

B-002-001 If the transit station is anywhere other than the current location, we will relocate our business operations. We will not remain in any area of Lynnwood. This would be devastating for all of the small businesses. C3 would be the only location we could live with. All of our business associates in the area will do the same….

Brian Sodorff
Loan Officer, Lynnwood Branch - License # MLO-114429
Mortgage Capital Associates, Inc.
4610 200th Street SW, Suite D
Lynnwood, WA 98036
425-275-0600 Office
425-275-0610 Direct
206-919-6333 Cell
425-275-0649 Fax

Electronic Privacy Notice; this e-mail, and any attachments, contains information that is, or may be, covered by electronic communications privacy laws, and is also confidential and proprietary in nature. If you are not the intended recipient, please be advised that you are legally prohibited from retaining, using, copying, distributing, or otherwise disclosing this information in any manner. Instead, please reply to the sender that you have received this communication in error, and then immediately delete it.

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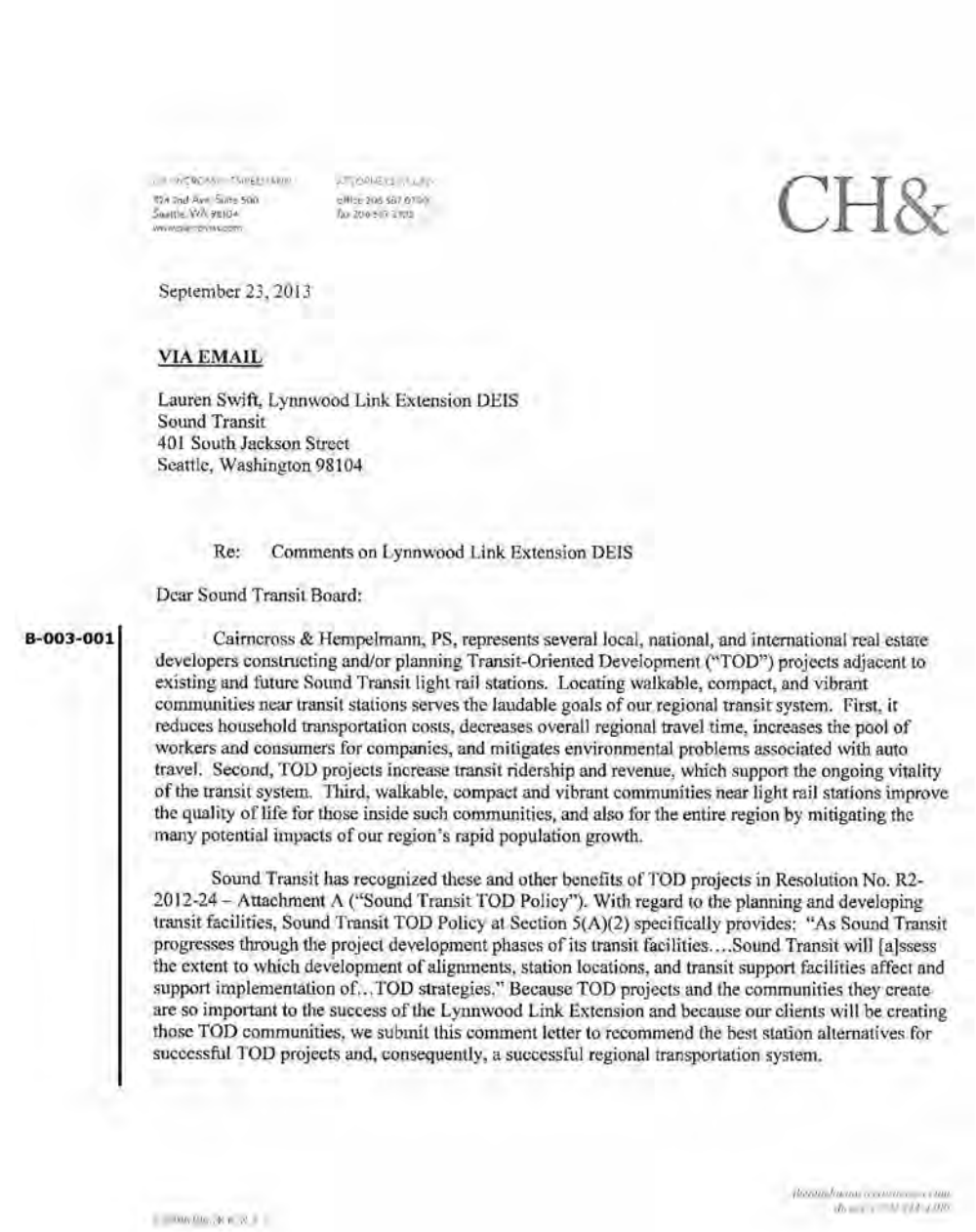
B-002-001

Your preference for Alternative C3 is noted.



CH&

September 23, 2013

VIA EMAIL

Lauren Swift, Lynnwood Link Extension DEIS
Sound Transit
401 South Jackson Street
Seattle, Washington 98104

Re: Comments on Lynnwood Link Extension DEIS

Dear Sound Transit Board:

B-003-001

Cairncross & Hempelmann, PS, represents several local, national, and international real estate developers constructing and/or planning Transit-Oriented Development ("TOD") projects adjacent to existing and future Sound Transit light rail stations. Locating walkable, compact, and vibrant communities near transit stations serves the laudable goals of our regional transit system. First, it reduces household transportation costs, decreases overall regional travel time, increases the pool of workers and consumers for companies, and mitigates environmental problems associated with auto travel. Second, TOD projects increase transit ridership and revenue, which support the ongoing vitality of the transit system. Third, walkable, compact and vibrant communities near light rail stations improve the quality of life for those inside such communities, and also for the entire region by mitigating the many potential impacts of our region's rapid population growth.

Sound Transit has recognized these and other benefits of TOD projects in Resolution No. R2-2012-24 – Attachment A ("Sound Transit TOD Policy"). With regard to the planning and developing transit facilities, Sound Transit TOD Policy at Section 5(A)(2) specifically provides: "As Sound Transit progresses through the project development phases of its transit facilities….Sound Transit will [a]ssess the extent to which development of alignments, station locations, and transit support facilities affect and support implementation of…TOD strategies." Because TOD projects and the communities they create are so important to the success of the Lynnwood Link Extension and because our clients will be creating those TOD communities, we submit this comment letter to recommend the best station alternatives for successful TOD projects and, consequently, a successful regional transportation system.

B-003-001

Thank you for providing your assessment of the transit-oriented development (TOD) potential for station alternatives considered in the Draft EIS. Sound Transit is committed to supporting TOD around its light rail stations. To that end, the agency's planning process has included public involvement and the evaluation of TOD potential for the station alternatives considered in the EIS. Sound Transit appreciates your recommendations.

B-003-002

Segment A: Northgate to Shoreline

The proposed station at NE 145th Street has great TOD potential. NE 145th Street is a major thoroughfare (SR 523). It will allow for increased accessibility to the station and adjacent TOD projects. Also, the proximity of 15th Avenue NE and its mix of uses will help draw passengers eastward from the station and facilitate the type of density needed between 15th Avenue NE and the station area.

The proposed station at NE 155th Street should be rejected. Station locations at NE 145th Street and NE 185th Street are preferable for several reasons. First, NE 145th Street (SR 523) has greater accessibility from the surrounding areas, including Bothell Way NE and Lake City Way NE (SR 522). The NE 145th Street station will serve the residents of Lake Forest Park, Kenmore, and Bothell, among others. Second, NE 145th Street is a main thoroughfare capable of handling the increased capacity of transit riders traveling to the station. Third, unlike NE 155th Street which is primarily a single-family neighborhood, NE 145th Street already contains a mix of uses nearby that will allow for a smoother transition to the kind of density that is appropriate near a regional light rail station. Finally, the City of Shoreline already has begun planning for increased density around the NE 145th Street station to facilitate TOD projects and the community and city-wide benefits they will provide. *See* City of Shoreline Comment letter dated September 16, 2013.

All of the Alternatives for Segment A include a station at NE 185th Street. Except for Alternative A-1, all of the Alternatives include a parking garage or parking lot immediately east of the station. A large parking structure adjacent to the station has the potential to discourage potential riders from walking or biking to the station. However, if carefully located, designed, and scaled, parking east of the station could be integrated successfully into a TOD community. Any parking should be integrated into the TOD community, rather than act as a physical or visual barrier between pedestrians and the station.

Conclusion: Alternative A-3 provides the best TOD potential for the NE 145th Street and NE 185th Street stations.

B-003-003

Segment B: Shoreline to Mountlake Terrace

Alternative B-4 should be rejected. It locates the Mountlake Terrace station within the I-5 median, which would not encourage pedestrian access from nearby residents. B-1, B-2, and B-2A are the better options for facilitating a successful TOD community.

Conclusion: Alternatives B-1, B-2, and B-2A provide the best TOD potential for the Mountlake Terrace station.

Segment C: Mountlake Terrace to Lynnwood

B-003-002

Your preference for Alternative A3 based on your assessment of its TOD potential is noted. The Preferred Alternative incorporates several elements you identify as supporting TOD in the NE 145th Street and NE 185th Street station areas.

B-003-003

Your preference for Alternatives B1, B2, and B2A based on TOD potential is noted.

B-003-004

Alternative C-1 provides the best TOD potential for the Lynnwood Park-and-Ride station. We disagree with the conclusion in the DEIS (see Table S-4) that the Alternative C-2 and C-3 station locations have the same development/TOD potential as C-1. C-1 is a shorter walking distance to the city center. Additionally, C-1 is located adjacent to several sites with strong development potential. Further, C-2 and C-3 are at a lower elevation than C-1 and therefore would require a more burdensome walk up the hill to the transit station, thereby discouraging ridership.

Conclusion: Alternative C-1 provides the best TOD potential for the Lynnwood Park-and-Ride station.

Thank you for consideration of our comments.

Very truly yours,

John W. Hempelmann

JWH:msd

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B-003-004

While you conclude that Alternative C1 provides the best TOD potential, Sound Transit's TOD assessment summarized in Section 4.2.4 (Land Use Indirect and Secondary Impacts) of the Draft and Final EIS considers a wider range of factors than just the potential for redevelopment on immediately adjacent parcels. Sound Transit assessed TOD potential at the station areas using four elements: (1) existing conditions supporting transit-oriented development, (2) transit-supportive plans and policies, (3) station access, and (4) potential development opportunities.

CASCADE TROPHY

20815 52nd Ave W
Lynnwood, WA 98036

cascade.trophy@integra.net
(425)775-3109

September 22, 2013

Sound Transit DEIS
Comments, c/o Lauren Swift
401 S Jackson St.
Seattle, WA 98104

Dear Ms. Swift,

We lease commercial space located at 20815 52nd Ave West in Lynnwood, owned by Jeff Carter and Lisa Peterson. We have been in business since 1973 (40 years!), and at this location since 1994. The bulk of our customers are schools, churches, sports teams, clubs, and other groups from the nearby surrounding areas. With other trophy shops in close proximity to us, the fact that we have had long-term stability in one place has been a benefit to our business. We have watched other trophy shops move over the years and with that we have picked up MANY of their customers due to the fact it was no longer convenient to track down where they moved. We cannot afford to have the same thing happen.

B-004-001 We are writing to express our support for the alignments that do **not** run up 52nd Ave West. Alternatives C-1 and C-2 would have an extremely detrimental impact on us, forcing us to either move or sell our business, or to close up completely.

B-004-002 As we stated above...IF we were to move, we would lose customers who have become accustomed to coming to the same location for some 20 years. At any new location, we would have to remodel the space to fit our needs, would have to move inventory and equipment, and change all of our advertising. All of this time and expense would result in significant lost income. It would be difficult to find a comparable location that has good parking, easy access to I-5 and I-405, a space that gives us both a working area and a retail store front – all at a long-term lease for the same rate.

The value of our business would be negatively impacted if we were to sell, because any new buyer would inherit the reduced street access, limited visibility, and other environmental impacts.

B-004-003 We are also concerned about the ability of our company to maintain the quality of work for which it is known. Our customers keep coming back because we offer them custom designs, excellent customer service, and always deliver a quality product. Vibration from either the construction and/or the train itself would make the laser, tools and presses that we use to both design and fabricate the awards more difficult to maintain and cause them to put out poorer quality. The could cause us to have to work our schedules around the construction or train interference and those times would not coincide with our customer base needs.

B-004-004 Noise is also an issue. When customers come to our shop, it is important for them to be able to communicate with us about their custom orders, and loud noises from either construction or the train would make that difficult. Plus we do a lot of communication on the phone as well. That can already at times be difficult but with this new possibility it would make it almost impossible.

B-004-005 We also live in this neighborhood – on 208th, just a few blocks away from our business. This area is both home and work, and the light rail, if situated on 52nd Ave West, would put both our house

B-004-001

Your concerns regarding the potential impacts of Alternative C1 and C2 to your business are noted.

B-004-002

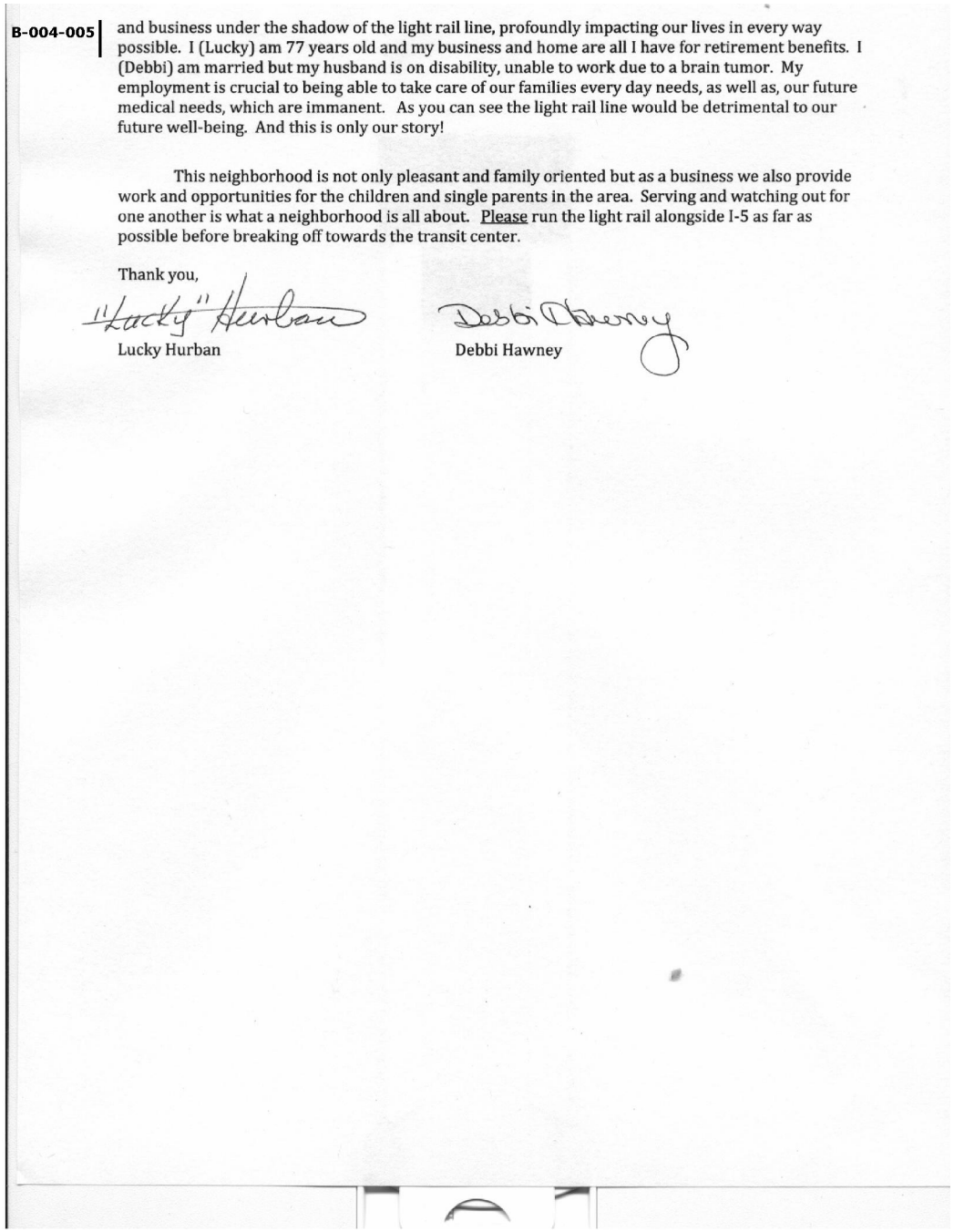
Thank you for your comment about your concerns about business displacement under Alternatives C1 and C2.

If your business were to be displaced (which the Preferred Alternative avoids), Sound Transit would provide relocation services as well as compensation. An interview would be conducted to determine your needs for a comparable and affordable replacement property. Services would include ongoing information on the availability and lease costs of commercial properties meeting your needs. Compensation could include expenses related to finding a replacement property, existing tenant-owned improvements, permits and improvements at the new building, moving expenses, operating permits and licenses, as well as new advertising materials and stationary.

For additional information, please see Section 4.1 Acquisitions, Displacements, and Relocations.

B-004-003

The Noise and Vibration Technical Report, included with the Final EIS on CD, has additional discussion of the standards used to define vibration levels and impacts for permanent or construction-related activities. Sound Transit does not anticipate vibration levels to disrupt normal operations at your business. Construction vibration mitigation described in the Final EIS would be implemented during work at the property, if Alternatives C1 or C2 were implemented. Where construction activity close to the building is unavoidable, Sound Transit would work with the owners/tenants to stage work in ways that would be less disruptive to their operations.



B-004-005 and business under the shadow of the light rail line, profoundly impacting our lives in every way possible. I (Lucky) am 77 years old and my business and home are all I have for retirement benefits. I (Debbi) am married but my husband is on disability, unable to work due to a brain tumor. My employment is crucial to being able to take care of our families every day needs, as well as, our future medical needs, which are immanent. As you can see the light rail line would be detrimental to our future well-being. And this is only our story!

This neighborhood is not only pleasant and family oriented but as a business we also provide work and opportunities for the children and single parents in the area. Serving and watching out for one another is what a neighborhood is all about. Please run the light rail alongside I-5 as far as possible before breaking off towards the transit center.

Thank you,

"Lucky" Hurban — Lucky Hurban

Debbi Hawney — Debbi Hawney

B-004-004

The FTA criteria for transit noise are based on exterior noise levels, which makes them a more conservative measure of impacts for interior noise. If your business is able to perform with the traffic noise in this area, noise from the light rail, while possibly audible, would not be expected to affect your operations.

For construction, the City of Lynnwood construction noise ordinance would be applicable, and Sound Transit is committed to maintaining construction noise levels within the criteria. Further, construction noise for this project is similar to construction noise for a paving project, building construction, or any other construction project, and Sound Transit works with local residences and businesses to minimize construction impacts.

B-004-005

Sound Transit notes your concerns about Alternatives C1 and C2. The Preferred Alternative does not use the 52nd Avenue W alignment, and would avoid impacting the businesses and residences along the street.

Jeff Carter and Lisa Peterson
20815 52nd Ave W
Lynnwood, WA 98036
lisapete56@comcast.net

September 21, 2013

Sound Transit
Draft EIS Comments
c/o Lauren Swift
401 S Jackson St
Seattle, WA 98104

Dear Ms. Swift,

We own property located at 20815 52nd Ave W in Lynnwood (tax lot numbers 27042100403600 and 4100). Our small business, JC Auto Restoration, Inc., is located in this building, as is our long-term tenant, Cascade Trophy. We appreciate this opportunity to submit our feedback on the Draft EIS for the proposed Lynnwood Link Extension Alignments.

B-005-001

We much prefer the alternatives that do not run up 52nd Ave West. Alternative C-3 and the City of Lynnwood's proposed C-4 alternative would have the least impact on our property and business, to Cascade Trophy, and be least disruptive to the neighborhood. If Sound Transit were to acquire all, or a portion, of our property, it would have a huge impact on us personally, on our business, and on our tenant's business.

Jeff is self-employed and has no employer-established retirement fund. In the late 1990s, our business was outgrowing its location. As we looked for a new space, Jeff also looked to see what other people were doing who were in a similar line of work. The only ones who could retire were those who owned their shop property. The rest were working into their 70s and 80s, just scraping by. In 2000 we took out all of the equity we could from our home, and purchased this commercial building. It would be both the new location for the shop and our investment in Jeff's retirement. For many years our income and cash supply was greatly restricted because of this purchase. We felt that in the long run, it would give us good retirement income, whether we decide to lease the space once Jeff is no longer working, or if we sold the building. We will have it paid off in 2025.

If the Lynnwood Link Light Rail were to run on Alignments C-1 or C-2, Sound Transit, as we understand it, would acquire either part or all of our property. In either case we would lose market value and future income for Jeff's retirement.

If Sound Transit were to acquire the entire property, we would lose our existing tenant, Cascade Trophy, and have to relocate our business. We would lose future rental income, and depending upon the replacement building, lose future increase in property value as well. If JC Auto Restoration had to move, we would have to move all of our equipment, customized shelving, tools, customer cars and extensive vintage auto parts inventory. The estimated time to pack up, remodel the new building as needed, set up, and return to normal business operations is over one year. We would likely have to lay off our employees, Jeff would lose all personal and business income for this time, and JC Auto Restoration would be responsible for significant unemployment taxes for our employees for several years. Many customers would go elsewhere and not return, resulting in loss of future business.

Even if Sound Transit were to acquire just part of the property for the right of way and/or pylon placement, we would see a significant negative impact. Not only would the value of the property drop, but the rate that we could charge to future lease-holders would drop as well.

Our current tenant, Cascade Trophy, has been one of the best tenants you could ask for. They have been at this location since before we bought our building. We rely on their rent for our mortgage payment, and if Sound Transit were to choose alternatives C-1 or C-2, the chances are excellent that the owner, August "Lucky" Hurban, would either sell the business to a new owner at a new location, or

B-005-001

Thank you for your comment stating a preference for a modified Alternative C3. Sound Transit identified a modified Alternative C3 as its Preferred Alternative in the Final EIS, and this alternative would avoid impacting your property and business. Please note that Sound Transit policy provides for a fair and equitable means of addressing real property impacts across its projects. Consistent with state and federal law, this policy requires Sound Transit to fairly compensate for property acquisitions, and to provide compensation and relocation for displaced businesses. If an alternative affecting your property were to move forward, Sound Transit would work with you and any affected businesses to negotiate fair compensation and relocation benefits.

B-005-001 would close completely. In either case, we would lose an outstanding tenant. It would be extremely difficult, if not impossible, to find a new tenant who would be willing to pay the same rate per square footage, would need no modifications to the space, and would commit to a long-term lease.

B-005-002 Like all retail businesses, both JC Auto Restoration and Cascade Trophy need easy in-and-out street access for customers, good visibility from the street, and adequate parking. Cascade Trophy frequently has people driving in to drop off and pick up orders. JC Auto needs ample parking, with a large enough area for an enclosed car hauler to safely drop off and pick up customers' valuable vintage automobiles. It also needs comfortable access to its two garage doors, keeping in mind that vintage automobiles have a wider turning radius than a modern subcompact, and require more space for maneuverability. Both Cascade Trophy and JC also need access for delivery trucks on a daily basis.

B-005-003 The vibration of both the construction and the running of the light rail could have a negative impact as well. Cascade Trophy uses sensitive laser cutting equipment to etch sophisticated designs and lettering on plaques, trophies, and signs. JC Auto uses vintage equipment to calibrate and adjust gauges, speedometers, automotive record players, and other electrical and mechanical components of antique automobiles. All of these tools are affected by vibration, as are their computers and security systems.

B-005-004 Noise is a concern as well. It is already difficult to have a conversation outside, especially on the phone, over the freeway noise, and it would be impossible over the sound of either the construction or the train itself. We anticipate that during construction there will be significant noise impacts even inside the building, which will greatly affect communication with customers for both companies.

B-005-005 On a larger scale, we are concerned about the wider impact on the neighborhood if alignments C-1 or C-2 are chosen. The small businesses in the area provide employment for local residents. Many of have been in the same location for years, if not decades, providing stability and income to the area. Relocating the DSHS, Vocational Rehabilitation and Work Source offices would be a hardship for economically disadvantaged and disabled individuals. The 2010 census shows that this area is home to a high percentage of individuals who live in rentals, are from minority backgrounds, are low income, have never gone to college, and who speak a language other than English at home. Some are more recent immigrants who do not have full awareness of how they can express their opinion about this decision. Many come from countries where the population – particularly the women - not only does not, but cannot, participate in the political process. Many are children. Therefore, a significant percentage of the population affected may be essentially without a voice in this process.

B-005-006 We would much prefer to have the Link Extension Alignment sited parallel to the freeway rather than on 52nd Ave West. This option would preserve parkland, residences, apartment buildings, and businesses – including our own - and would be the least disruptive to the community.

We have participated in Sound Transit information sessions, as well as sessions hosted by the City of Lynnwood. Those meetings have been informative and helpful, particularly the ones hosted by Sound Transit. Thank you for giving the community opportunities to learn about the project and provide feedback.

Sincerely,

Jeff Carter
Owner, JC Auto Restoration, Inc.
www.jcauto.com
206-375-2696

Lisa Peterson, MS
Director, UW GenOM Project
http://depts.washington.edu/genomics/index.shtml
206-499-6085

B-005-002

Thank you for your comments about property access, parking, and circulation needs for your property at 52nd Ave W. If Alternative C1 or C2 is selected for the project to be built, properties that are not fully acquired would retain their functional access, and would have sufficient levels of parking, circulation, and freight/delivery accessiblity as needed for their operations.

B-005-003

The Noise and Vibration Technical Report accompanying the Final EIS has additional discussion of the standards used to define vibration levels and impacts for permanent or construction-related activities. Sound Transit does not anticipate vibration levels to disrupt normal operations at your business. Construction vibration mitigation described in the Final EIS would be implemented during work at the property as appropriate, if Alternatives C1 or C2 were implemented. Where construction activity close to the building is unavoidable, Sound Transit would work with the owners/tenants to stage work in ways that would be less disruptive to their operations.

B-005-004

The FTA criteria for noise are based on exterior noise levels, which makes them a more conservative predictor of potential impacts for noise-sensitive building interiors. If your business is able to perform with the traffic noise in this area, noise from the light rail, while possibly audible, would not be expected to affect your operations. Light rail is typically quieter than the heavy trucks on the roadway near you.

For construction, the City of Lynnwood construction noise ordinance would apply. Sound Transit expects to limit construction noise levels to be within the City's criteria. Further, construction noise for this project is similar to construction noise for a paving project, building construction, or

any other construction project, and Sound Transit works with the city, local residences and businesses to minimize construction impacts.

B-005-005

Sound Transit appreciates your concerns about the potential community impacts of Alternatives C1 and C2. As described in your comments, the Lynnwood community is very diverse and includes racial and ethnic minorities, persons with limited English proficiency, and those with low and moderate income. As part of Sound Transit's community outreach efforts during project planning and the environmental review process, special outreach activities have been conducted to involve these community groups in the public decision-making process leading to the selection of a preferred alternative for the Lynnwood Link Extension project. These efforts included the availability of translated materials and interpreters upon request. See Chapter 7 of the Final EIS for a summary of the public comments received on the Draft EIS and Appendix C for a listing of outreach activities and comments specifically targeted for minority and low-income populations.

B-005-006

Your preference for an alternative parallel to the freeway rather than on 52nd Avenue W due to business impacts and impacts to Work Source are noted.

MULLALLY DEVELOPMENT COMPANY

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September 23, 2013

Via Email: lynnwoodlinkdeis@soundtransit.org

Sound Transit
Attn: Lauren Swift, Lynnwood Link Extension DEIS
401 S. Jackson Street
Seattle, WA 98104

Re: *Comments on Lynnwood Link Extension Draft Environmental Impact Statement (Draft EIS)*

Dear Ms. Swift:

B-006-001

We are the owners of the Northgate Plaza Apartments property at 11200 1st Avenue NE, north of Northgate Way and east of Interstate 5/1st Avenue NE. All of the Segment A alternatives place the light rail line between our property and the freeway. The Draft EIS acknowledges adverse impacts to our property and the need for mitigation. However, we do not believe the Draft EIS analysis fully takes account of the impacts to our property, in part because portions of the analysis are based on the existing use of the property, and not its planned use. We offer the following comments to be considered in preparation of the Final EIS and in implementation of the project.

Information about the Northgate Plaza Apartments Site

Our property is approximately 7.86 acres in size (342,548 square feet). It is presently developed with 34 one-story to two-story apartment buildings with 207 units that were constructed in 1951. In recognition that the existing buildings are nearing the end of their lifespan and require frequent repair to maintain them as rental units, we have spent a substantial amount of time and effort working with the City of Seattle on future development options for the property. The property is located within the Northgate Urban Center, and the City's Comprehensive Plan calls for much greater density than exists on the site at present.

In 2010 we proposed a rezone of the property from a Midrise to a Neighborhood Commercial 3 – 85 foot height limit designation. The purpose of the zoning change was to accommodate future mixed-use, commercial and multi-family residential development of substantially greater density. This zoning change was unanimously approved by the Seattle City Council in November 2012. The zoning change resulted in an increase of nearly 600,000 square feet of allowable building square footage. The new site zoning allows a wide mix of commercial and residential uses totaling over two million square feet of development.

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B-006-001

Thank you for writing of your concerns about the potential impacts to your property at NE 11200 Street and First Avenue NE, and for describing your plans for the property.

The analysis of land use impacts in the Final EIS is based on existing land uses, approved land use plans, and other permitted developments. The potential for impacts is discussed in in Section 4.2.2 Long-Term Impacts. A site-specific analysis of potential impacts to a future development in the absence of approved plans or permits would be speculative, and therefore not considered in the EIS. However, in Appendix 4.2.2, Sound Transit has reviewed the consistency of the proposed alternatives against adopted plans and policies of the city, including the City of Seattle's Northgate Urban Center, and finds that the alternatives would support the City's intent to create a more compact urban center in the area. In addition, based on the current designs for the Preferred Alternative, the project would be across the street from your parcel and would not place any new restrictions on the use of your property.

B-006-001 Since the time the rezone was approved, we have identified development concepts for the property and anticipate proceeding with initial City approvals for portions of the site next year. Development along the eastern edge of the site, in proximity to the proposed light rail route, is anticipated to consist of office, hotel, and assisted living or multi-family residential uses. That development will be able to utilize the full allowed zoning height of 85 feet.

Comment on Preferred Alignment

B-006-002 Of the alternatives presented in the Draft EIS, we prefer Alternative A1 as it locates the alignment furthest from our property line and proposed development. The other alternatives come fairly close to the northwest corner of our property and could impair access to our site. Development options for the property have envisioned an internal access road along our northern property line, with a driveway at the northwest corner of the site. Thus, an alignment in close proximity to that corner is problematic in terms of our future development options and access.

We would appreciate the opportunity to meet with Sound Transit to obtain further information on the exact distance of the alignment and its associated structures vis-à-vis our property line.

B-006-003 **Access Impacts**

The Draft EIS states that the project would cause the adverse impact of "reduced access" to our property in particular. Draft EIS, p. 4-206. However, in the section on Transportation Construction Impacts, the Draft EIS states that "Local access would be maintained." The EIS needs to have a more complete discussion of access impacts on particular properties, such as ours, during the construction process. There should be a commitment to work with property owners in devising appropriate mitigation for those impacts.

In addition, there needs to be full disclosure of any long-term access impacts and a commitment to appropriate mitigation.

B-006-004 **Noise and Vibration Impacts**

Given the proximity of the alignment and inclusion of crossover switches, the Draft EIS acknowledges that at and near our property, noise and vibration impacts would be "moderate to severe for all alternatives" unless mitigation is implemented. The Draft EIS states that mitigation would be incorporated as part of the project, but then states that it is "Sound Transit's policy" to mitigate noise that would otherwise result in moderate or severe impacts. Draft EIS, p. 4-125. However, mitigation of impacts (both noise and vibration) should be more than a matter of "policy" and instead should be clearly incorporated into the project as required mitigation.

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B-006-002

Your comment in favor of Alternative A1 is noted Alternative A1 is the basis for the Preferred Alternative, which would be across 1st Avenue from your property. Based on current plans for construction, there would be no physical impacts to your property and no changes to your access due to the light rail project.

B-006-003

The Draft EIS text regarding "reduced access" in the cultural resources section of the document referred to construction period effects, but a revised description in the Final EIS clarifies that access could be modified. Access would be maintained, consistent with the text in the Transportation Technical Report. There could be modified access for travel from some directions during construction periods,such as when flaggers are present on 1st Avenue or other nearby streets to accommodate construction activities. Delays could occur, but access to adjacent properties (land and buildings) would be maintained. Depending on required construction activities, access to the property may need to be reduced (e.g., one lane instead of two lanes) or otherwise altered (e.g., short-term reroute of the access) from conditions prior to the start of construction. Parcel-specific details would be determined during final design, in coordination with the City of Seattle and affected property owners. Section 3.6.9 also lists a variety of mitigation measures that Sound Transit will use to reduce impacts on adjacent property owners, residents, and businesses. These include communication about construction activities using a variety of methods and obtaining written permission from property owners to make temporary changes to access. Moreover, should construction activities require temporary use of a small portion of your property, then the conditions of use would be negotiated in a legally binding temporary construction easement.

B-006-005

Historic Resources

The Draft EIS concluded that the Northgate Plaza Apartments are eligible under Criterion C for listing on the National Register of Historic Places (NRHP). We do not agree with that conclusion. And we note that a private property may not be nominated for or placed on the NRHP unless the private property owner agrees.

As part of our rezone process, the history of site development was fully documented. That information was then reviewed by City Staff and resulted in a determination by the City of Seattle Landmarks Preservation Board that the structures were unlikely to meet the standard for designation as historic landmarks. (Department of Neighborhoods, LPB 58/11). This determination governed for purposes of the State Environmental Policy Act and City review of the rezone.

It should be noted that although there are some differences between Seattle Landmark criteria and NRHP criteria, NRHP Criterion C (under which our buildings are considered eligible by the Draft EIS) is in substance the same as the City's Landmark criteria. Thus, the City's determination of non-eligibility should be factored into the analysis in the Sound Transit EIS.

Conclusion

We appreciate your consideration of our comments and would welcome the opportunity to discuss the project with you further.

Very truly yours,

Vincent J. Mullally
Managing Member, Northgate Plaza LLC

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B-006-004

Sound Transit's policy is to mitigate noise and vibration impacts consistent with federal, state, and local criteria. Section 4.7.7 of the Draft and Final EIS identify potential mitigation to be incorporated into the project. Mitigation measures may be refined during final design but will continue to meet applicable federal, state, and local noise criteria.

B-006-005

Federal agencies must comply with Section 106 of the National Historic Preservation Act, which addresses properties eligible for listing in the National Register of Historic Places (NRHP). Local land use and landmark decisions are not relevant to NRHP eligibility. While the designation criteria are similar, their application by the Washington Department of Archaeology and Historic Preservation (DAHP) and the Seattle Landmarks Preservation Board may differ. FTA determined, and DAHP concurred, that the Northgate Plaza Apartments are eligible for NRHP listing because they are an intact example of a particular type of apartment complex typical of the post-war era. This determination does not constitute nomination to the NRHP and owner consent is not required.

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September 23, 2013

Via Email and US Mail

Sound Transit DEIS
Comments c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104
LynnwoodLinkDEIS@soundtransit.org

Re: Lynnwood Link Extension Draft Environmental Impact Statement ("DEIS")

Dear Ms. Swift,

On behalf of the Northgate Mall Partnership, which is owned by the Simon Property Group (collectively "Simon"), we submit the following comments with respect to the DEIS. Simon owns and operates the Northgate Mall ("Mall") located in the Northgate neighborhood in Seattle (located between Northgate Way and NE 103rd Street and 1st and 5th Avenues NE). The Northgate Mall is located at the terminus of Sound Transit's proposed Northgate Link and the beginning of the proposed Lynnwood Link.

Simon is the largest retail real estate company in the world. Simon owns or has interests in 325 properties throughout North America and Asia. In Washington, in addition to the Mall, Simon owns the Tacoma Mall, Columbia Center Mall in Kennewick, North Bend Premium Outlets, and Seattle Premium Outlets in Tulalip. A number of Simon's mall properties are located at or near public transit/rail stations, including on the west coast the Fashion Valley Mall (San Diego Trolley), and Stanford Mall and Stoneridge Mall in the Bay Area (BART), with Stoneridge experiencing the addition of a new BART stop and BART parking deck in 2011. Simon has extensive experience from these projects – both in the effects and potential mitigation of their cost, construction/implementation and post-construction operation – that it believes is relevant to evaluate and consider in order for Sound Transit to improve its plans, lower its project costs, and avoid, reduce and mitigate its impacts on the Northgate Mall and its neighbors.

B-007-001 The probable significant, unmitigated, direct, indirect and cumulative adverse environmental impacts of Sound Transit's proposed Lynnwood Link Extension, the Northgate Extension, together with King County's more recently unveiled plans for transit-oriented development on the current Northgate Transit Station site (proposed for the property directly to the south of the Northgate Mall) that Sound Transit is facilitating, hereafter collectively referred to as the "Projects", will be substantial, particularly with the traffic and overused public parking impacts that already exist and the many years of continuous construction and traffic impacts from the Projects that will persist in the future.

B-007-001

Sound Transit, King County, and the City of Seattle have been involved in planning transit improvements and related developments in the Northgate area for over a decade. The projects and plans to extend high-capacity transit to and beyond the Northgate transit center reflect the designation of the Northgate area as a regional growth center. Sound Transit is committed to working coorperatively with Simon, other stakeholders, the City and King County throughout the development of the Northgate Link Extension, as well as for the future Lynnwood Link Extension.

There is also a long history of environmental documents examining enviromental impacts and identifying mitigation commitments for the Northgate Link Extension, and now for the Lynnwood Link Extension. (The King County Transit Oriented development project has not yet advanced to the stage of planning or permitting involving environmental review.) The extension to a station at Northgate was originally part of the Central Link Draft and Final EIS (1998-1999) and the subsequent North Link Draft and Final Supplemental EIS (2002-2006).

In addition, the Lynnwood Link Extension Draft and Final EIS examine direct, indirect and cumulative impacts in Chapters 3 and 4 (in direct, indirect as well as cumulative effects discussions by environmental topic). The primary other project discussed in the Northgate area is Sound Transit's Northgate Extension, which is assumed under the No Build Alternative, as is the underlying growth in development, population and employment for the Northgate area and the region through 2035. (Plans for King County's Transit-Oriented Development project remain conceptual).

As the following responses to comments explain, Sound Transit expects that many of the primary issues of concern in your letter (largely traffic and construction period impacts) will be resolved through continued

B-007-001 The Projects will impact:

- Mall traffic ingress, egress and access at several key points,
- visibility and clarity of mall access for customers from I-5 and 1st Avenue NE,
- visibility of the Mall - interrupted in the short to medium term with construction, and in the long term freeway views will be permanently diminished or blocked (which are key for these type of regional retail facilities that serve large (300,000+) population bases),
- traffic on the roads and arterials surrounding the Mall from the initial planned work on Northgate Station facilities as early as 2014, to 2023 upon expected completion of the Lynnwood Link line,
- exacerbation of the already existing "Hide and Ride/Park" problems in the vicinity, associated not only with undersized Metro park and ride facilities, but also other undersized public parking facilities such as the local library branch to the east of the Mall, and
- Mall patron parking and circulation due to the proposed use of the most heavily patronized Mall parking lot as both a long-term construction staging area for both the Northgate Station and Extension and the Lynnwood Link Extension, and potentially for placement of a Sound Transit park-and-ride garage on Mall property if not placed on King County's current Transit Station site.

B-007-002 There are substantial reasons to be concerned that the cumulative impacts of the Projects will be very disruptive to the Mall and its commercial and residential neighbors, for perhaps as much as ten years of continuous intensive construction activity, as well as the longer-term conditions with the transit network in place and the significantly higher density development occurring immediately surrounding the 60+ year old facility.

Simon has engaged Transportation Engineering NorthWest ("TENW") to conduct a more in-depth analysis of potential impacts and expects a formal report of their findings later in October 2013. Simon will supplement these comments with TENW's report when completed.

B-007-003 To help address and minimize impacts to the Mall and surrounding business and residential neighbors, it is critical that Sound Transit carefully consider and coordinate construction plans and cumulative traffic for the Northgate Extension with the Lynnwood Link and Metro's plans for transit-oriented development (TOD) south of the Mall, for:

(a) the potential overlapping construction periods prior to the opening of the Northgate Station,

coordination for the final design and construction planning work for the Northgate Link Extension. This approach is consistent with the impacts and mitgation commitments originally defined in the North Link Final EIS and its Record of Decision. Many of the areas that are identified as sources of concern in your letter would not be further aggravated by the construction and operation of the Lynnwood Link Extension. The Lynnwood project would be less intensive and more physically removed from the Northgate station and transit-oriented development (TOD) areas, bringing a lower potential for higher cumulative impacts than for any of the other projects alone. In addition, the development of the Lynnwood Link Extension would actually reduce the number of riders/patrons needing to access the Link system at Northgate, which would lessen rather than increase long term traffic compared to the Northgate Link Extension alone.

To help further illustrate this point, the Final EIS for the Lynnwood Link Extension has updated its discussion of the Northgate Link Extension and has added a description of the King County TOD project. In earlier planning for the Lynnwood Link Extension Draft EIS, Sound Transit and the City of Seattle considered intersections of concern for worsened conditions with the Lynnwood Extension, and had concluded that no adverse impacts were likely because the Lynnwood Link project would reduce the number of trips destined to Northgate. Finally, Sound Transit has developed further information on its planned construction approaches, and is incorporating the latest information on the Northgate Link Extension's construction program, and further discussions of these issues are included in the Transportation Technical Report.

B-007-002

Sound Transit does not anticipate a continuous 10 years of major construction activities for the combined projects. The Lynnwood Link Extension's major construction activities near Northgate would be about one year, shorter than the other projects, and involving primarily the

B-007-003

(b) the construction window for the Lynnwood extension coupled with the anticipated extraordinary use of the area around Northgate Station for parking for commuters when Northgate Station is open, but Lynnwood is still under construction, and

(c) for the longer term conditions when the Lynnwood Station is finally open, and Northgate area is no longer the critical transfer point from automobiles to transit for the general public.

The analyses should also include understanding the relationship between what is already a fully utilized park-and-ride condition today, how that will change when the Northgate Link is open and the end node for commuters from the north, and considered in concert with the potential loss of the existing surface lots of the Metro Transit Center today for planned TOD development over that entire site. Simon expects there to be a period of time before the Lynnwood Link is open when there will be an extraordinary burden on parking, as well as on traffic in the areas as noted above, but the unique impact to the Mall for the likelihood of significant commuter use of the Mall's private parking (as "park-and-hide" or "hide and ride") that is provided for, required for, and intended for the Mall's retailers/customers. This "hide and ride" activity would be a direct impact to the Mall and in direct conflict with the Mall's operating hours. The Mall's neighbors, both business and residential, face similar burdens that will be dramatically exacerbated by Sound Transit's plans for North Link and Lynnwood Link, and King County's related "Transit Oriented Development" proposal.

This is of significant concern, especially for those weekday evenings when commuters have not returned to their cars and Mall customers cannot find parking because commuters (who have parked on the Mall property all day) are still occupying spaces in Mall lots (and most likely the most preferred spaces along the west side of the Mall). If Sound Transit's expectations regarding ridership are even remotely realized (recognizing that the State's auditor has found them to have been overstated and has requested they be reconsidered), the problem will likely be worse on local sports weekends for Seahawk and Husky games, and on the evenings throughout the spring, summer and early fall for Mariner games, when Mall parking is in most demand for shopping. These are real, foreseeable adverse impacts and ones Simon has experienced elsewhere that should reasonably be expected to occur once the Northgate Station and Link opens. Moreover, the impacts will continue to be exacerbated by the overlapping continuation of construction of the Lynnwood Link, and would be further exacerbated by potential implementation of a high density TOD on King County land that would shift the existing substantial parking demand off of that site, and most likely onto the Mall's, and add to the area's already strained traffic and parking demands.

Simon has been working with Sound Transit staff on ways to minimize construction-related parking impacts to the Mall, such as by placing the proposed Sound Transit/Metro park-and-ride garage on the Metro site to the south of the Mall. But to this point, those discussions have been looking at the Northgate Station and line extension project in a vacuum. As this next phase (Lynnwood Link) takes form, and the potential of a fully utilized King County TOD starts to take shape, the impacts on the Mall property and on the surrounding community must be analyzed in

construction of the guideway adjacent to the I-5 right of way. This would be north of the areas where the Northgate Station, park-and-ride, and Metro's Transit Oriented Development project would occur.

The analysis of traffic in the EIS through 2035 considers an underlying increase in traffic growth in the area due to the planned growth in jobs and housing in the Northgate Urban Center. The major investments in transit in the area have been considered in the analysis of traffic. This was the method used for the assessments of traffic for the Lynnwood Link Extension, as well as for the Northgate Link Extension.

For both projects, Sound Transit's mitigation commitments include measures to maintain access to the mall and surrounding neighborhoods, and to work with the City, County, Simon and other stakeholders to minimize impacts.

B-007-003

The North Link Final SEIS included a detailed review of parking impacts for the project and identified mitigation where appropriate. Sound Transit agrees that the planning and coordination of overlapping construction activities would help reduce individual as well as potential cumulative effects to traffic, access and parking. The Final EIS identifies such coordination as a mitigation measure for cumulative effects in section Section 3.6 of the Final EIS. The potential TOD on King County Metro property has not been reflected in Sound Transit projects' construction traffic analysis because there are no detailed plans available for that project, including a proposed date for construction. However, Sound Transit expects the development would be within assumed future growth in traffic levels that are already assumed as part of the No Build Alternative for the area, which incorporates more jobs, housing and trips in the Northgate district. In addition, park and ride supply at the Northgate Station is expected to be fully occupied. As the Lynnwood Link Extension project would include stations with new park and ride facilities

B-007-003 their totality, not segmented. Discussions between Simon and Sound Transit staff are ongoing, and we hope to develop better mitigation through those processes that should be included as part of Sound Transit's final Lynnwood Link EIS, and likely in a supplemental EIS for North Link, particularly if King County's proposal to convert its existing park and ride lot to a transit oriented development (eliminating the already oversubscribed parking) is not abandoned or at least substantially modified.

B-007-004 **I. Other Projects Considered for Cumulative Effects.**

In Appendix H, Sound Transit identified certain other projects that are "reasonably foreseeable" as part of the analysis of cumulative effects and the predictions of conditions for the future regional transportation system. However, Sound Transit did not identify the North Link Station and Extension nor the King County Metro Northgate TOD Project in the cumulative effects analysis. Both of these should be considered in the EIS analysis, and particularly in the Transportation Technical Report analysis to address private property and local circulation impacts to the Mall and other immediately surrounding businesses and residential neighborhoods. These projects should not be considered as "baseline" existing infrastructure.

B-007-005 **A. North Link.**

As you know, the North Link and Lynnwood Link are two "phases" of Sound Transit's larger light rail system plans. The North Link phase is essential to the purpose and function of the Lynnwood Link phase, and the North Link impacts should be considered in the Lynnwood Link EIS analysis. To that end, the Lynnwood Link DEIS should reconsider the Northgate Station Area local area traffic circulation, parking, and construction impacts along 1st Avenue NE, NE Northgate Way, the local freeway interchange system with I-5, Mall access and parking, all in an effort to address impacts in a comprehensive manner. In addition, alternatives presented in the Lynnwood Link DEIS demonstrate a "range" of ridership impacts that would occur at the Northgate Link Station area, yet no evaluation of increased parking or local area traffic impacts that would occur as a result of these ridership levels are evaluated. For Simon and its neighbors, it is crucial that Sound Transit consider how to best coordinate the construction and design of both phases in order to minimize long-term and short-term transportation and construction-related impacts to the Mall, located at the proposed intersection of these two phases.

B. King County Metro Site - Transit Oriented Development Plans.

B-007-006 The North Link Final SEIS (2006) included the following description for the transit oriented development plans for the Metro site south of the Mall:

> "King County Metro: Northgate Transit-Oriented Development Project
>
> King County is planning a high-density, mixed-use urban development on the existing Northgate Transit Center site. The site will continue to be an important transfer point and could accommodate additional services such as a light rail

to the north of Northgate, capturing trips to the north, this would help reduce demand for parking spaces at the Northgate Station, and is projected to reduce bus trips and vehicle trips as well, compared to levels experienced with the Northgate Extension alone.

B-007-004

The Northgate Extension is considered as part of No Build because the decision to build and operate the Northgate Link Extension has been made, the project has completed is environmental review, and it is fully funded. It will be in place and operating before the Lynnwood Link Extension is completed. The King County TOD project at Northgate has been added to this list of projects considered in the cumulative effects analysis in Final EIS, although further details and timing of the project remain unconfirmed at this time. In addition, in response to your comment, the cumulative construction effects for all three projects together are now discussed in more detail in the Final EIS, including in Chapter 3 of the Final EIS, as well as in the Transportation Technical Report.

As noted above, in terms of long term impacts, the Lynnwood Link Extension would attract transit trips to the north of the Northgate Station, which would help reduce demand for parking spaces at Northgate, and would reduce bus trips and vehicle trips as well, reducing the potential for adverse cumulative effects.

B-007-005

Based on modeling data for the Lynnwood Link Extension, which shows lower ridership and reduced trips to Northgate after Lynnwood Link opens, Sound Transit projects decreased transit-related traffic accessing Northgate. This supports a conclusion that there are no additional Link-related parking and traffic impacts in the Northgate Station area due to the Lynnwood Link Extension, and a detailed reexamination of long term

B-007-006

station. The existing capacity of the four park-and-ride lots in the Northgate area is approximately 1,400 stalls. The TOD project would replace these stalls and provide more spaces for commercial and residential use. Two new parking structures with 575 apartments; retail, restaurant, health club, hotel, or office space; a cinema; and a daycare center above the parking structure on the south lot are planned. A second parking structure at the northeast corner of First Avenue NE and NE 103rd Street would serve the north end of the future light rail station. Traffic congestion on First Avenue NE and Fifth Avenue NE would be relieved by intersection and signal improvements, additional lanes on NE 103rd Street, and the creation of a new street, Third Avenue NE, that connects the existing office park south of NE 100th Street with the mall north of NE 103rd Street. King County could "surplus" the park-and-ride lot at Fifth Avenue NE and NE 112th Street, located next to Target and Best Buy, giving the City of Seattle the opportunity to purchase it for creation of a park. By relocating the Northgate Transit Center to 1st Avenue NE, King County could provide excellent connections for passengers transferring between Metro buses and the future Sound Transit light rail station. King County Metro Transit and the City of Seattle have tentatively agreed that this proposal should be considered for further study. King County is studying the feasibility of sustainable building practices, such as "green roofs" for the buildings. Stormwater from the TOD project would be detained on site and potentially directed to the City of Seattle's stormwater treatment feature, "the Channel" at Thornton Creek. The following projects describe the development in Northgate in more detail . . ."

Source: North Link Final SEIS (2006), Appendix P4.18: Cumulative Effects Information at p. P4.18-3.

However, Appendix H of the DEIS does not identify the Metro Northgate TOD Project as a project considered in the cumulative effects analysis. This project should be included in the analysis, particularly if Sound Transit plans to support this project by building the mitigation/replacement park-and-ride garage on the Mall site. And, in addition, the potential impacts of the TOD if Lynnwood Link is NOT constructed, or even significantly delayed, should also be considered, since Sound Transit cannot guarantee Lynnwood Link's construction, let alone that it will be completed on schedule.

II. Impacts to Mall Access.

B-007-007

Figure 6-1 of the DEIS Transportation Technical Report (July 2013) shows a proposed construction staging area located on the Mall's western parking lot just south of NE 107th Street, with truck haul routes to and from the staging area and I-5 through the NE 107th Street on-ramps and off-ramps and also having truck haul routes use 1st Avenue NE north of NE 107th Street. There is also a note on Figure 6-1 that there may be "Temporary Closures (e.g., structure placement)" on the Mall parking lot. In addition, Sound Transit has plans (i) to use the Mall site for construction staging for the Northgate Station from 2016-2019, (ii) to temporarily take the

traffic conditions near the station is not necessary as part of the Lynnwood Link Extension.

B-007-006

Appendix H in the Final EIS lists the King County TOD project as part of the set of projects considered for long term and construction cumulative effects. Individual environmental topics also have added discussion where relevant, including in transportation (Chapter 3) and Land Use (Chapter 4, Section 4.2). If construction for the Northgate Link Extension and Lynnwood Link Extension overlap, Sound Transit will coordinate the separate projects to minimize traffic impacts during construction, as described in Section 3.6.9 of the Final EIS. The Lynnwood Link Extension is not proposing additional parking in the Northgate area, and because the King County TOD is not a Sound Transit project, Sound Transit is not responsible for addressing impacts of that project, whether or not Lynnwood Link is constructed. The King County TOD project remains conceptual at this point, and with its elements or construction timing yet to be determined.

B-007-007

The indication of a construction staging area within the mall property in Figure 6-1 of the Transportation Technical Report is primarily related to the Northgate Link Extension, but Sound Transit is working with Simon Properties to allow the site to be used for an early element of Lynnwood Link Extension, which should help reduce overall construction durations for the two projects in this area. Parking impacts associated with Northgate Link Extension construction and operation are addressed in the Final SEIS and ROD for the Northgate Link Extension (known as North Link at the time of the Final SEIS).

B-007-007 parking lot at the southeast corner of the Mall site and apparently use it to mitigate Sound Transit's parking impacts during the Maple Leaf portal construction, and (iii) to permanently take a portion of the Mall parking lot on the southwest corner of the Mall site in order to build a Sound Transit/Metro park-and-ride garage so as to facilitate Metro's TOD plans. These actions could reduce the Mall's total private parking by 15% to 20% when overlapped, and create real and enduring parking problems in the area for the Mall and its neighbors, for years. This is not "temporary" from the Mall's perspective. And, it will exacerbate the existing "Hide and Ride" problems for all of the local area residents.

B-007-008 Further, it appears possible that as part of the pending Northgate Station construction effort, Sound Transit may also attempt to close off one of four key access points off of 1st Avenue to the Shopping Center (105th private) for some portion of the suggested 40 month utilization of the Mall site for this temporary Northgate Station construction staging. The traffic impacts associated with the removal of access from the Mall's most heavily utilized parking fields, for several months, rerouting customers from the most heavily used parking fields on the west side back around to the 5th Avenue lots, and transporting the primary customer traffic that arrives from I-5 around on the adjacent streets to account for these significant changes during construction, have not been properly analyzed. This will be further exacerbated if the Lynnwood Link or King County TOD work overlaps, do not adequately account for cumulative parking and traffic pattern changes that ultimately push those burdens on the Mall, or both. The secondary neighboring streets are not designed to handle these burdens, so again there will be burdens not just on the Mall, but its neighbors.

B-007-009 Access to the Mall, particularly to and from I-5 and particularly on the western side, are the most important elements of the Mall's customers' means to reach the Mall and the adjacent freeway interchange that serves the larger Northgate Neighborhood and business district. Peak directional flows at this interchange system operate at or near capacity during peak weekday and weekend periods. This interchange also serves as the first access/last terminus for local connection onto the reversible I-5 Express Lanes. As a result, added pressure onto local arterials is generated along 1st Avenue NE, 103rd Avenue NE, and NE Northgate Way. Moreover, regular freeway congestion along the I-5 corridor occurs on a consistent basis, and regional traffic spillover already regularly utilizes these arterials that serve as the primary Mall access. A recent collision at the I-5 northbound off ramp that closed a single lane on 1st Avenue NE indirectly sent traffic for hours "through Mall property", essentially stopping and blocking traffic flow within the Mall interior drive aisles for hours as drivers diverted around congested roadways.

The Mall's primary trade area of regular shoppers (from which 70% of its retailers' sales are generated) extends south as far as Lake Union and Westlake, and north to the King County/Snohomish County Line. The Northgate/I-5 off-ramp is the Mall's primary point of customer access for a significant majority of those customers coming northbound, given the already bottlenecked conditions at the Northgate Way/I-5 underpass, and the lack of any significant east-west routes over/under I-5 to the south.

B-007-008

This specific proposal is not an element of the Lynnwood Link Extension. Responses above address Sound Transit's approach and commitments to coordination construction period planning that would occur regardless of details of any of the other projects or activities in the area.

B-007-009

Sound Transit recognizes the importance of the I-5 ramps and 1st Avenue as access points for the Northgate District as well as for the mall and its patrons. The Draft and Final EIS and the Transportation Technical Report all indicate the Northgate/I-5 off-ramp experiences high levels of congestion and delays, and predict increasing levels of congestion through 2035. The continued congestion on major highways and local streets is among the reasons light rail is to be developed in this area, particularly as the Northgate District continues to absorb growth and development as a regional growth center defined in regional and city plans.

B-007-010 Construction impacts are not just related to interruption or alteration of existing roadways, access or circulation. One also needs to factor in the construction activities, and the vehicles/equipment used for construction, and their added burden to the adjacent roadway network. The DEIS does not provide any information regarding the size or timeframe of the proposed construction staging nor the duration and intensity of use of the truck haul routes to and from the Mall, so from the existing DEIS it is not possible to meaningfully understand the extent of these impacts. The

B-007-011 DEIS also fails to analyze the cumulative impacts of the foregoing when combined with the Northgate Link station and guideway construction and construction of the park-and-ride garage, nor for the potential construction of King County's TOD plans immediately to the south of the Mall. Currently, the Sound Transit/Metro garage is proposed for construction in or around 2014/2015, the Northgate Station construction staging is proposed to occur from 2016 to 2019 on the Mall site, and the Lynnwood Link construction is proposed to occur from 2018-2023. The potential timing of the King County TOD is unclear, but representations have been made that suggest several hundred units might possibly be complete by the time Northgate Station is open. If not coordinated, continuous and possibly conflicting construction on the Mall site could occur from 2014 through 2023, a 10-year period, impacting vehicular/pedestrian access, freeway interchanges, and parking facilities and availability for both the Mall and its neighbors. The Mall requests that a focused comprehensive study of these issues be undertaken to ensure that traffic circulation is maintained, public or TOD parking impacts do not occur, and economic impacts to Mall tenants and their employees are minimized as a result of these cumulative impacts expected to result.

B-007-012 It is important to understand that for regional destinations such as Northgate, long-term, burdensome conditions are likely to permanently divert customers to alternatives. Getting these customers to come back once the public infrastructure projects are completed is not only not guaranteed, for many it is likely to permanently alter their shopping patterns. This phenomenon is well documented across America. Once a customer is alienated for any period, it is difficult to lure them back. The ability to keep the Mall occupied with quality retailers and dining options, as well as to maintain the quality and vibrancy of the Mall as a regional center, depends on that convenient and continuous access and availability of parking as they are currently accustomed to.

B-007-013 Sound Transit's FEIS should provide additional information and analysis of these issues, along with carefully considered alternatives for minimizing impacts that could permanently shift customer shopping patterns away from Northgate, given the duration of the combined impacts for the Projects, and their cumulative overlapping activities. Sound Transit should analyze how timing and coordination of construction for the Northgate Link and the Lynnwood Link can minimize impacts to the Mall, especially recognizing the potential TOD overlapping concerns.

III. Impacts to Mall Parking and Circulation.

B-007-014 As noted above, Sound Transit is proposing to use the parking lot on the western side of the Mall for construction staging for the Northgate Link. Given constraints on 1st Ave up to Northgate Way, it is reasonable to assume continued desire on Sound Transit's part to use of some Mall property for this purpose beyond the North Link project's construction timeframe. Moreover,

B-007-010

The Lynnwood Link Extension's Northgate area construction activities will primarily involve the construction of the elevated guideway. Therefore, the duration and intensity of the construction activities are expected to be about a year, less than what is needed for the Northgate Link Extension, which involves a tunnel portal, guideways, the station, the parking garage, guideways and tailtracks. Truck traffic to serve construction activities would also be less, with less need for spoils removal or fill, fewer materials, and fewer crossings of existing streets and roadways. The Draft EIS had a summary of activities, but deferred discussion of specific details to the Transportation Technical Report, which identified the types of activities including potential night-time periodic closures in the Northgate area on pages 6-10 to 6-19. Additional discussion is now included in the Final EIS in Chapter 3, and updated information is in the Transportation Technical Report.

B-007-011

Using the general construction and project development period for the Lynnwood Link Extension (or the Northgate Link Extension) does not accurately reflect the duration of construction activities with the potential for higher construction period traffic impacts. As page 2-27 of the Draft EIS notes, in any given location, heavy civil construction is expected to be completed within one to two years. Construction of elevated sections of the guideway would be staged to minimize major traffic impacts, with most closures or detours occurring at night. Depending on a contractor's approach to staging, the guideway segment could be placed within 3 months of relatively continuous work, or 6 to 12 months of intermittent work. Therefore, there is not a high potential for the Lynnwood Link Extension to create higher cumulative construction effects than those already identified for the projects individually, and a continuous ten or more years of heavy construction adversely affecting access to the Northgate area is not expected considering the projects in the area. The Transportation Technical Report gives further detail on likely sequencing

B-007-014 Sound Transit is proposing to permanently take the parking area on the southwest corner of the Mall site to build a Sound Transit/Metro garage. The DEIS does not include sufficient information to understand the scope of the parking impacts from the Lynnwood Link construction staging, nor the cumulative impacts of the Northgate Link, Lynnwood Link and Metro TOD plans.

Additional information and analysis should be provided, along with alternatives for minimizing parking and circulation impacts. In particular, as discussed above, Sound Transit should analyze how timing and coordination of construction for the Northgate Link and the Lynnwood Link can minimize impacts to the Mall, factoring in realistic assumptions for King County's TOD prospects.

IV. Hide and Ride.

B-007-015 Currently, the King County-Metro transit center is located south of NE 103rd Street, immediately south of the Mall. Surface and structured parking is heavily used in close proximity to this facility, as commuters limit their parking desire to the shortest walking distance. Relocation and expansion of the major transit access points further north to include the Mall and adjacent property will significantly increase the likelihood of commuters using the private surface parking lots of the Mall for "hide-and-ride".[1] This happens routinely in Simon centers, including at its Stoneridge Mall in Pleasanton with the new BART station (completed 2011) abutting that mall. With added pressure during construction of the Northgate Station, the proposed Sound Transit parking garage, extension of Link north along 1st Avenue NE, and King County TOD all generating additional demand or displacing existing supply within the Mall, and with new demand generated by Lynnwood Link trips, parking demand impacts on the Mall should be considered in a cumulative and comprehensive manner. During each stage of construction, upon completion of the Northgate Station and line but prior to Lynnwood being operational, and thence forward.

Given understating of parking demands during the critical construction period windows (when Sound Transit currently anticipates reducing the Mall parking supply for many years to build facilities on and adjacent to Mall property), and perhaps most acutely once Northgate Station is open, but the Lynnwood extension is not complete, several years of continuous loss of parking is likely to affect Mall retailers' ability to be successful absent mitigation of impacts to what is already a very tight parking arrangement at Northgate Mall. The Mall is at the low end of parking requirements for regional malls in suburban settings. The Mall and its tenants cannot afford for inadequate commuter parking to make what is already going to be a challenging

[1] In addition to "hide and ride" parking, similar activity and impacts to the Mall result from other public facilities located nearby. For example, on August 20, 2013, from 5:30 pm - 8:00 pm, Sound Transit held an open house/public hearing on the DEIS at the Northgate Community Center Gymnasium at 10510 5th Ave NE, Seattle (corner of 105th and 5th Ave. NE, adjacent to Northgate Mall). The lot was full before the meeting started. Therefore, members of the public who did not simply give up in frustration parked in the private Mall parking lot closest to the community center to reach the open house meeting, or in the residential neighborhood to the south.

by area to help support the finding that construction impacts can be managed to avoid severe impacts.

As noted above, Sound Transit's construction period mitigation commitments will include coordinating planning with other projects as well as with stakeholders, the City and WSDOT, which would further reduce potential construction impacts for individual projects as well as potential cumulative or sequential projects. As part of final design for the Northgate Link Extension, Sound Transit has continued to develop details of the construction sequencing and phasing.

B-007-012

Sound Transit recognizes the concerns of the Mall in retaining its customer base. The construction planning and mitigation approach for the project includes a commitment to maintain effective access to the mall and to parking to reduce the potential for impacts to the long term customer base of the mall. In addition, the long-term presence of the light rail line near the mall and the high visibility and accessibility of the mall for Sound Transit riders has the potential to attract customers to the mall.

Measures identified in Section 4.3.6 (Economic Impact Mitigation) of the Final EIS describes communication, marketing and promotional measures Sound Transit would implement with businesses and business districts to minimize impacts. This would include working with Simon Properties to publicize that businesses are open during construction, and to develop signage and wayfinding systems for the construction period.

B-007-013

The Final EIS includes additional discussion clarifying the areas of potential construction overlap with the other projects noted in your letter, and also has further detail on the types of construction activities by location for the Lynnwood Link Extension. However, many of the

B-007-015 situation worse. Yet, these unmitigated public spill-over public parking impacts are going to occur for a number of years as these overlapping Projects proceed.
Simon and its retailers are highly motivated to help Sound Transit make sure they do not experience the negative consequences that Simon tenants in other "transit project-proximate" locations already experienced elsewhere. And one can look at the current conditions, where commuters fill up virtually all of the close park-and-ride lots, and then park on Mall property, and fill up most of the surface streets surrounding the existing Northgate Transit Center most weekdays, to know that significant anticipated increases in utilization of public transit here will undoubtedly not result in reduced parking demand. It is incumbent upon Sound Transit's environmental analysis to compare current "boardings" of transit systems to anticipated future boardings, identify how many of those incremental boardings are likely to come from automobiles, and properly plan to accommodate them without burdening the Mall and surrounding streets and neighborhoods. This needs to be looked at for each step in the process of transitioning the area surrounding Northgate Station, up until Lynnwood is open and operating, and relieving this community of the likely peak parking demand as the end node of the system until that new link is open and operational.

V. Impacts to Visibility from I-5.

B-007-016 The Northgate Station, the Northgate and Lynnwood guideway, and the Sound Transit garage will all impact visibility of the Mall from I-5 and to some degree 1st Avenue NE. The DEIS states that "Views of Northgate Mall from I-5 would not be impaired." DEIS at Table 4.5-1 (Summary of Potential Visual Quality Impacts of the Light Rail Alternatives). That statement is factually incorrect, particularly when considering the cumulative visibility impacts of the Lynnwood Link, the Northgate Station and Link, the proposal for a Sound Transit/Metro garage on the southwest corner of the Mall site, and the King County Northgate TOD plans. The DEIS should correct this inaccuracy and analyze and address how visibility impacts might be minimized, such as by providing temporary or new permanent replacement signage for the Mall, or otherwise compensating for such impacts. Though Northgate Mall generates a good deal of business from the local community, the reality is Northgate Mall, as with most shopping malls of this kind, generates customer traffic primarily from a much broader clientele. In the Mall's case via the freeway system up to the King County line, and as far down as U Village and Westlake. The Mall's trade area of regular shoppers has a population base of close to 500,000 people. And thus visibility and awareness from that broad audience is critical to the Mall retailers' success.

VI. Traffic Impacts on Roads and Arterials Surrounding the Mall.

B-007-017 The DEIS Transportation Technical Report (July 2013) recognizes that arterial and local street impacts would be highest at stations that provide the greatest number of park-and-ride access opportunities. This review however, does not consider the impacts (increase or decrease) in those specific types of traffic impacts relative to the Northgate Link station area, nor the cumulative impacts that could very likely be experienced with overlapping construction activities. As noted above, these specific impacts should be included in a "focused" Northgate Station Area Traffic and Parking Impact Study. This study would address short-term,

mitigation measures already defined in the Draft EIS and that now accompany the Preferred Alternative in the Final EIS are designed to address the stated concerns over construction and potential impacts to business and economic activity in the Northgate district. This includes a commitment to coordinate construction planning and mitigation with other projects.

B-007-014

Northgate Link Extension has been discussing with Simon Properties the use of the southwest corner of the Mall site for construction staging and guideway construction. Impacts related to displaced parking supply are being addressed by Sound Transit as part of the Northgate Link Extension.

Figure 6-1 of the Transportation Technical Report indicated a construction staging area in the mall lot based on preliminary plans; the Final EIS has updated conceptual design plans for construction staging, which supercedes the figures that were used in the technical report, but still shows the edge of the property being potentially used. Construction staging planning is still in early stages, and the areas to be used would depend on final design details as well as property availability, including both public and private properties. The Draft EIS for the Lynnwood Link Extension identified the mall property as being affected by partial acquisition in Section 4.1, Acquisitions, and Appendix I-4.1, and includes conceptual plans in Appendix F that show the potential for parking stalls on the far west edge of the lot to be impacted in order to construct structural supports for the guideway as it crosses to the west side of 1st Avenue NE. The Final EIS updates that information for the Preferred Alternative. The number of potentially affected spaces is small (less than 20) compared to the overall supply available at the mall, and the EIS identifies measures to mitigate any loss of parking on private property (primarily compensation when the amount of displaced parking is small).

B-007-017 intermediate, and long-term traffic and parking impacts to the Mall and the I-5 Northgate area freeway interchange system and local arterial system. This type of study will be especially vital in the evaluation of construction impacts, that include construction staging, Mall access closures, temporary parking impacts, etc. And it should be able to help identify upfront traffic mitigation efforts that can partially mitigate for the impacts during years of construction, before the area is finally free from construction related impacts in the 2021 thru 2024 years, as best as the Mall can foresee. Anticipated TOD densities and timing will also need to be factored into the analysis.

VII. Alternatives.

B-007-018 The DEIS also fails to take a hard, fair look at reasonable alternatives. Given the direct, indirect and cumulative, and enduring, adverse environmental impacts the light rail and TOD plans would create, this analysis should not be piecemealed, but rather should carefully assess impacts and alternatives across all of these "segments" of Sound Transit's proposal.

B-007-019
- Sound Transit currently plans to condemn a portion of the Mall land, and to construct the replacement parking for the King County Metro park-and-ride patrons in a parking structure on the Mall's property. Given the burdens the Mall and its retailers and customers are already going to shoulder for a decade during coincident construction of rail facilities, the multi-modal transit station and the TOD project contemplated, the Mall recommends that Sound Transit reconsider, and fully analyze, the placement of the Northgate park-and-ride facility on the King County Metro TOD site (similar to the preferred alternative in the Northgate FEIS (2006)). Simon further recommends that such an alternative consider the scope and timing of the otherwise intensive TOD project (and coordinate Sound Transit plans with Mall plans to build its own garage to mitigate the Projects' parking impacts during Sound Transit's construction staging on the Mall site).

B-007-020
- The Mall recognizes that its site will be used as laydown for construction staging for the Northgate extension project, but it is not clear if that "need" extends further into the future with the proposed Lynnwood project. Given the tight physical constraints between I-5 and 1st Street as one approaches a heavily congested Northgate Way interchange, the Mall and its tenants would like to understand whether Sound Transit anticipates using the Mall further for additional laydown as part of the construction of the Lynnwood Extension. In that regard, Simon's representatives were advised that that was a distinct possibility during Sound Transit's Northgate open house. Simon requests that the need, scope and extent of any additional laydown be clarified and analyzed.

B-007-021
- For the long term, it is clear that moving the planned park-and-ride garage to the current Transit Center site would reduce traffic impacts/conflicts with the 500,000 person population in the Mall trade area that is driving to Northgate to shop, and result in less pressure for "hide and ride" that would impact the Mall's available parking for Mall patrons, as well as its retailers success and its neighbors' parking options and residential neighborhood ambiance.

B-007-015

The Northgate Link Extension project is proposing the use of the southwest corner of the mall parking lot, and impacts related to displaced parking supply as well as the potential for managing potential hide-and-ride effects, are being addressed by Sound Transit as part of that project, consistent with the North Link Final SEIS and that project's Record of Decision. The Final EIS and the Transportation Technical Report for the Lynnwood Link Extension have further detail about construction staging and sequencing in the Northgate area, and describe both the types of activities, the timing, and the nature of construction staging areas, which are generally west of 1st Avenue. In addition, the Transportation Technical Report and Chapter 3 of the Final EIS both indicate that ridership at the Northgate Station would be lower after the Lynnwood Link Extension opens, which would reduce the potential for transit-related traffic and parking impacts around the Northgate station.

B-007-016

The conclusions in the Draft EIS, with the visual simulation in Figure G-3, shows that views would not be impaired because the prominent buildings within the mall would continue to be visible above the elevated guideway. The elevation of I-5 slopes down from south to north from an elevation of about 310 feet at NE 92nd Street to an elevation of about 270 feet at NE 100th Street and continues at that level until it begins to climb again at about 310 feet at Northgate Way. The buildings of the Northgate Mall are at an elevation of about 300 feet. Parking lots slope to the west and south to about 280 feet. Vegetation along I-5 and the canopy of trees in the parking areas screen the lower portions of the mall buildings from most of I-5, however the mall is still a prominent landmark because of the visibility of upper floors of buildings. The light rail guideway is generally at an elevation of 325 feet. As shown in Figure G-3 (at about NE 97th at an I-5 elevation of about 284 feet) the guideway obscures the lower elevations of buildings. The upper portions of buildings and the general presence of the features of the mall are still

Conclusion

B-007-022 For the foregoing reasons, Simon requests that the FEIS fully assess the cumulative impacts and effects of the North Link, the Lynnwood Link, and the King County TOD proposal, particularly in light of the existing infrastructure deficiencies in the area around the Mall. When viewed together, it is clear that the impacts to the Mall and its neighbors will be substantial during the extended 10+ year construction period, and that the final result will be dramatic parking and traffic impacts, and associated damage to the economic vibrancy of the Mall and its business neighbors, as well as the livability of the Mall's neighboring residential areas. We look forward to working with Sound Transit (and King County) staff to help avoid, reduce and mitigate these impacts, with the goal of helping to make the North Link and Lynnwood Link the successes the public is hoping for.

Very truly yours,

R. Gerard Lutz

cc: Charles W. Davis, Jr., Sr. Vice President Development - West, Simon Property Group

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clearly visible. As I-5 slopes downward to the north, views of mall from northbound traffic are increasingly obscured by retained vegetation along I-5 and tree canopy in parking lots. Southbound traffic north of Northgate Way has few views of the mall because the roadway curves to the east and views from vehicles are oriented to the southwest. South of Northgate Way, views of the mall are out of the line of sight of drivers. Passengers can see major features of the mall by looking sideways. The elevated portions of the light rail guideway rise from an elevation of about 310 feet to about 325 feet between 107th Street and Northgate Way and are above the level of the base of the mall, but is still below the level of the tree canopy in the mall parking lots. The upper levels of buildings are still visible. Occupants of vehicles on I-5 have extensive views of complex urban development on both sides of I-5 and of the upper portions of buildings, including the mall. The presence of the mall and other development remains the dominant feature in views from the road. The portion of the guideway shown in Figure G-3 is part of the Northgate Link Extension south of the current project, and therefore illustrates the cumulative impacts of both projects. This figure also shows the existing parking structures. Proposed station impacts were analyzed in the Sound Transit North Link Final EIS on pages 4-54 and are illustrated in Appendix P4.4 View Location 1.

B-007-017

As noted in responses above, the Final EIS and the Transportation Technical Report provide more detail on construction and how the Lynnwood Link Extension would reduce the demand for transit-related trips at the Northgate Station, compared to No Build. Therefore, a detailed assessment of traffic conditions in Northgate, in addition to the more detailed analysis conducted for the Northgate Link Extension would not be needed to confirm that the Lynnwood Link Extension would not increase traffic impacts compared to the Northgate Extension alone.

B-007-018

The alternatives in the Lynnwood Link Extension EIS assess the potential impacts of a project defined as providing an extension of mass transit from Northgate to Lynnwood. The Northgate Link Extension and the Lynnwood Link Extension are separate projects, with the Northgate Link Extension being part of previous decisions, environmental reviews and funding commitments that have allowed the Central Link system to be built for the corridor connecting SeaTac to Northgate. Potential refinements to the Northgate Link Extension are not being considered as part of the Lynnwood Link Extension. However, as Sound Transit continues to complete final design for the terminus of the Northgate Link Extension, the agency is coordinating with Simon Properties, the City, King County Metro and others to address the concerns that your letter identifies.

In addition, the Lynnwood Link Extension EIS identifies actions that are related to the connections between other projects as indirect, secondary or cumulative. In this way, Sound Transit has evaluated the potential for significant environmental impacts arising as a result of the Lynnwood Link Extension, whether it arises directly from the project or whether it would occur as part of other reasonably foreseeable activities in the area. This discussion is found in the Final EIS in Chapter 4 for each resource evaluated, and mitigation measures to address cumulative effects are identified in the Final EIS.

B-007-019

For the Northgate Extension, Sound Transit has coordinated the project's final design planning with Simon Property Group and King County Metro to confirm the location of the park and ride facility at Northgate Station. The areas that were considered would not be directly affected by the construction of alternatives being considered for the Lynnwood Link Extension. Sound Transit has also entered discussions with Simon Property Group about the use of an area within the west part of the mall

parking for construction staging for the guideway north of the Northgate Station. Depending on the final outcome of those discussions and negotiations, the Lynnwood Link Extension could propose using this area for construction staging.

B-007-020

Sound Transit generally plans to maintain construction staging along the Segment A alignment within the proposed guideway, stations, and other available rights-of-way. Properties proposed for permanent acquisition or that are available for lease are also often considered for contruction staging. Appendix F of the Final EIS updates the areas that Sound Transit expects to utilize for construction activities, which includes the western edge of the parking lot to the mall where the guideway would begin before crossing over to the west side of 1st Avenue. As you know, Sound Transit has been in discussions with Simon Properties for this area as part of the Northgate project as well. As part of coordinating construction for both projects, Sound Transit is also considering opportunities to combine some aspects of construction of the projects into a single construction period to help reduce overall impacts.

B-007-021

This issue is related to the Northgate Link Extension and King County's Transit-Oriented Development project, and is not related to the decisions being made for the Lynnwood Link Extension.

B-007-022

In the Final EIS and in responses to this letter's individual comments, Sound Transit has added further information describing the relationship between the Lynnwood Link Extension to Northgate Link Extension, and the King County TOD project. This includes further information showing that the potential combined construction periods would not involve more

than 10 years of intensive activities that would not be addressed by mitigation measures already in place in the Lynnwood Link Extension and North Link EIS documents, that the Lynnwood Link Extension would have a more limited range and duration of construction activities, generally north and west of the mall property, and also demonstrating that the Lynnwood Link Extension would reduce the potential for long term traffic and parking impacts in the district.

Sound Transit remains committed to working with Simon Properties, the City of Seattle, King County and others as final design and construction continues on Northgate Link Extension, and as the County ultimately advances its TOD project.

From: Mike Raskin <Mike@mjrdevelopment.com>
Sent: Sunday, September 22, 2013 9:59 PM
To: Lynnwood Link DEIS
Cc: Mike Raskin
Subject: Lynnwood Link Extension Comments
Attachments: Site_N - Labeled pdf.pdf; Building Photo.jpg.jpg

September 21, 2013

Re: Sound Transit – Lynnwood Link Extension

Dear Sound Transit

I would like to provide my thoughts and comments about the proposed options for the Lynnwood Link. It is my sincere hope that Sound Transit will support Option C-3 or the newly proposed Option C-4 as opposed to Options C-1 or C-2.

B-008-001 I am the owner of a three story office 72,000 s.f. Class "A" office building located on 20311 52nd Avenue in Lynnwood, just north of the Edmonds School District Property. I also own two other adjacent properties and have plans on those properties for an additional 50,000 s.f. of office to be developed in the near future. I have attached a map showing the location of the building and a picture showing the building.

My building is leased to the State of Washington and houses a number of agencies including DSHS (Department of Social and Health Services) and DCFS (Department of Children and Family Services) that provide valuable services to the Lynnwood and South Snohomish County communities. Many of the roughly 250 people that work in the building live in the Lynnwood area and they, and the many visitors to the building, shop at local Lynnwood businesses during their work week. If Route C-1 or C-2 is chosen it will negatively impact valuable community services both during and after construction as well as have a negative effect on local Lynnwood businesses. These people and their many clients in the community will suffer. If C-1 or C-2 is chosen it will hurt important State services and the effect on the buildings and plans for the property will be significant.

If C-1 or C-2 is selected homes and businesses will be destroyed, parks and pristine wetlands will be damaged, companies and residents will be displaced. There will be significant negative effects on the environment including water, air, soil, parklands, noise, ecosystems, vegetation and wildlife. The construction alone will take years in which time the entire area which is residential as well as commercial will be effected. How can that make sense when other options closer to Interstate Five with

B-008-002 lower impacts on residents and business are available. I would also be surprised if options C-1 and C-2 are not far more expensive than either C-3 or C-4. I know that Sound Transit provides estimates of the impact of each option to the City and Community but do these studies include the possible economic loss to Lynnwood's businesses if tenants move away and businesses are forced to close from options C-1 and C-2. I would hope that Sound Transit will consider these ramifications before making its choice.

B-008-003 It appears that the Lynnwood City Council has in the past favored option C-1 as opposed to option C-3. Staff reports present that the C-1 alignment "might be" more favorable for the proposed City Center project than the C-3 alignment. If the City Center project happens it will likely be many, many years from

1

B-008-001

Thank you for identifying your concerns about your building and the potential impacts to businesses and operations it houses, as well as to other residences, businesses, and employees along the Alternatives C1 and C2 alignments. While these alternatives would acquire properties and displace businesses and operations, requiring their relocation, the mitigation measures identified in Section 4.1 (Acquisitions, Displacements and Relocations), as well as in Section 4.3 (Economics), would offset many of the impacts. Sound Transit would also work closely with tenants, including any affected service agencies, to ensure that their services would continue to be available during any relocation process. While these and other mitigation measures are available for those alternatives to reduce impacts, some impacts would be unavoidable, and the alternatives indeed vary in terms of which properties and parties would be affected. Still, larger scale impacts to the overall area are not likely, because access to the surrounding area and properties would be maintained throughout construction.

Following the Draft EIS, Sound Transit received a considerable number of other comments voicing similar concerns about Alternatives C1 and C2. The Sound Transit Board has identified a modified Alternative C3 as the Preferred Alternative in the Final EIS. If this alternative is selected for construction, then the property impacts along 52nd Avenue W would be avoided. Again, the Draft EIS and the Final EIS both identify mitigation measures to help reduce the severity of the impacts, and some of the areas of impact that are noted in your comment (water, air, soil, vegetation, and wildlife, for example) would not result in adverse effects to the environment after mitigation has been applied.

B-008-002

The Final EIS provides cost estimate comparisons for all the alternatives in Chapter 5. The Segment C alternatives have similar cost ranges. The Draft EIS and Final EIS do not analyze an Alternative C4, but the Final

B-008-003

now. Locating the Lynnwood Link at locations C-1 or C-2 will cause real harm to the City now. It seems shocking that responsible City leaders could choose to impact a significant number of residents, citizens and businesses now for some potential uncertain gain that "might" occur many years from now. I would hope that Sound Transit would carefully look at any disadvantages of C-3. A case could be made that C-3 will make the City Center buildings more valuable since the elevated rail would provide visibility to the buildings in the City Center blocks effected in the same way as the Monorail does in downtown Seattle. Any potential future harm from C-3 is at best speculative, C-1 and C-2 on the other hand will cause real harm to the City now.

I am encouraged that the City of Lynnwood and Sound Transit is now considering a new option C-4. This option does not damage existing businesses and residences in the way that C-1 and C-2 does and it appears that the alignment might not affect the City Center Block in question. Selecting C-1 or C-2 will hurt Lynwood, the community, valuable State services and the area in general. A choice of C-3 or C-4 makes sense and is good for the community.

Thank you for the opportunity to provide thoughts on this important decision.

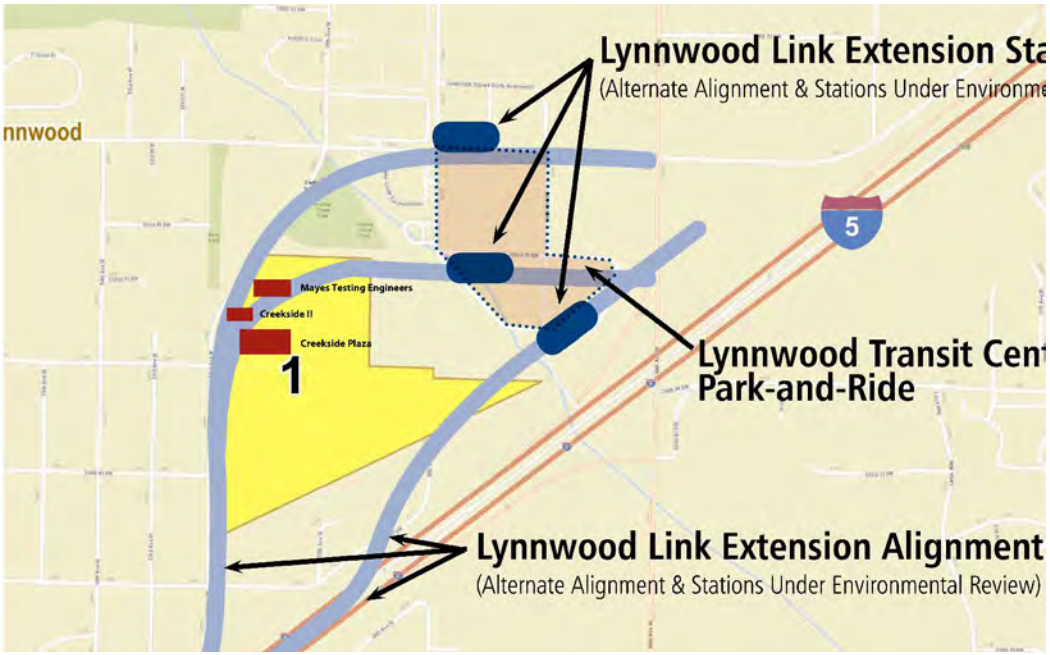
Michael Raskin
President MJR Development
Manager – MR Creekside LLC

2

EIS does include a Modified Alternative C3, which is similar to an option proposed by the City of Lynnwood. As discussed in Section 4.3, Economics, of the Draft and Final EIS, Sound Transit does evaluate the economic effects of the alternatives, including loss of property tax revenue, and the section also considers the potential for other types of effects occurring during construction or operation.

B-008-003

Thank you for your comments regarding near-term conditions and impacts of the alternatives, compared to the longer range goals to develop Lynnwood's City Center area. Please see the Final EIS for updated analyses of the alternatives, including the modified Alternative C3.


Lynnwood Link Extension Sta
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5
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Creekside II
Creekside Plaza
1
Lynnwood Transit Cent
Park-and-Ride
Lynnwood Link Extension Alignment
(Alternate Alignment & Stations Under Environmental Review)

From: LInda Willemarck <savescribercreekpark@yahoo.com>
Sent: Monday, August 12, 2013 10:08 AM
To: Lynnwood Link DEIS
Subject: Lynnwood Link - Scriber Creek Park - 875 Signatures anti Alternative C-1

----- Forwarded Message -----
From: LInda Willemarck <savescribercreekpark@yahoo.com>
To: Maryellen Walsh <tambosassy@gmail.com>; shoreline news <tips@shorelineareanews.com>; seattle times <mlindblom@seattletimes.com>; News Tribune <rob.carson@thenewstribune.com>; Daniel Drais <daniel.drais@dot.gov>; Edmonds Beacon <edmondseditor@yourbeacon.net>; Mukilteo <mukilteoeditor@yourbeacon.net>; Snohomish <editor@snoho.com>; KOMO4 News <tips@komo4news.com>; Sierra Club <cascade.chapter@sierraclub.org>; "Fish & Wildlife" <director@dfw.wa.gov>; Habitat Program <habitatprogram@dfw.wa.gov>; Public Affairs <publicaffairs@dfw.wa.gov>; Team Mill Creek <TeamMillCreek@dfw.wa.gov>; DFW W <wildthing@dfw.wa.gov>; L Sordel <lsordel@ci.lynnwood.wa.us>; E Flesher <eflesher@ci.lynnwood.wa.us>; Lynnwood Today <lynnwoodtodayeditor@gmail.com>; Jim Smith <jimsmithcfi@msn.com>; Mike Gibson <Mike.Gibson@bankwithsterling.com>; P Robinson <PRobinson@BannerBank.com>; Larry Bowlandskate <larry@bowlandskate.com>; J Bloomquist <jbloomquist@nwtitleco.com>; Manager <northernlightsmanager@gmail.com>; Pam <Pam@BeBlessedRealty.com>; Jan <jan@groovieimpressions.com>; M Clark <mclark@scc.wa.gov>; Bill Knutsen <bill.knutsen@kingcd.org>; Snowberry <snowberry@gorge.net>; Kent Hale <kent.hale@soundtransit.org>; Executive <pcexecutive@co.pierce.wa.us>; Julia patterson <julia.patterson@kingcounty.gov>; C Balducci <cbalducci@bellevuewa.gov>; Richard Conlin <richard.conlin@seattle.gov>; Dave Earling <dave.earling@edmondswa.gov>; Mayor Redmond <mayor@redmond.gov>; Lynnwood WSDOT <lynnp@wsdot.wa.gov>; Marilyn Strickland <marilyn.strickland@cityoftacoma.org>; P Roberts <PRoberts@ci.everett.wa.us>; Fred <fredb@ci.issaquah.wa.us>; Constantine <dow.constantine@kingcounty.gov>; Denslow <denslow@ci.sumner.wa.us>; Joe McDermott <joe.mcdermott@kingcounty.gov>; M Moss <mmoss@cityoflakewood.us>; Larry Phillips <larry.phillips@kingcounty.gov>; Pete Vonreichbauer <pete.vonreichbauer@kingcounty.gov>; S Roberts <sroberts@ci.lynnwood.wa.us>; Vaubuchon <vaubuchon@ci.lynnwood.wa.us>; C Boyer <cboyer@ci.lynnwood.wa.us>; K Lonergan <klonergan@ci.lynnwood.wa.us>; B Goodwin <bgoodwin@ci.lynnwood.wa.us>; Mark Smith <marksmith@ci.lynnwood.wa.us>; Albert Roberts <albert_roberts@hotmail.com>
Cc: Maryellen Walsh <tambosassy@gmail.com>; "tallgleb@hotmail.com" <tallgleb@hotmail.com>; Julie Fielder <jmfielder27@yahoo.com>
Sent: Monday, August 12, 2013 10:03 AM
Subject: Lynnwood Link - Scriber Creek Park - 875 Signatures anti Alternative C-1

FYI: The following petition was signed this past week by **875** people. We will continue getting signatures through the September 23 deadline and will be present at every community meeting.

Petition

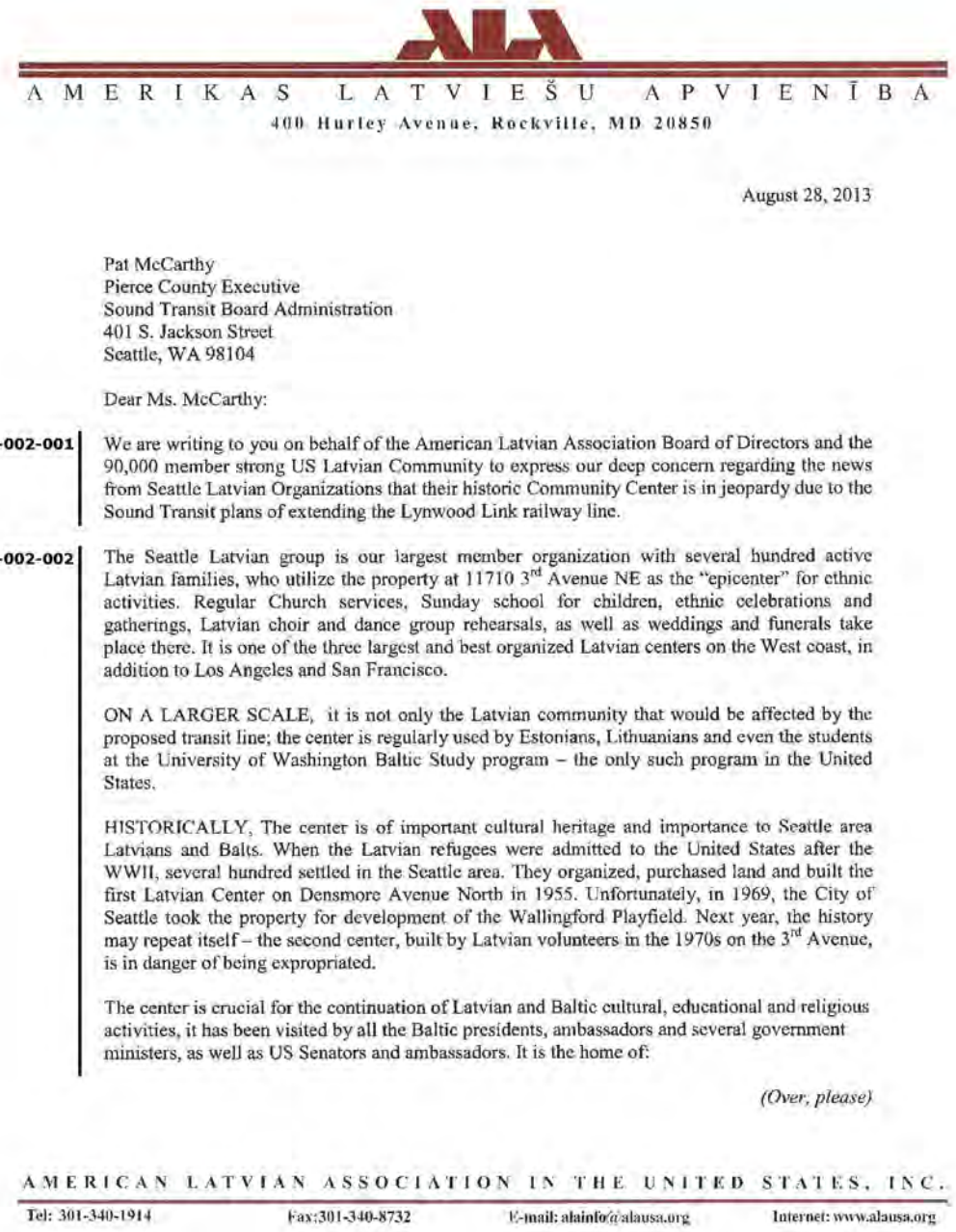
Save Scriber Creek Park – No on Alternative C-1

C-001-001 The signers of this petition are opposed to Alternative C-1 route for the Sound Transit Link Light Rail Lynnwood Extension because this alternative would have the most significant negative environmental impacts to Scriber Creek Park and its associated forested wetlands and wildlife habitat and quality of life of the residents in the area.

2

C-001-001

Sound Transit acknowledges your opposition to Alternative C1 due to its residential impacts and impacts to Scriber Creek Park and wetlands.



AMERIKAS LATVIEŠU APVIENĪBA
400 Hurley Avenue, Rockville, MD 20850

August 28, 2013

Pat McCarthy
Pierce County Executive
Sound Transit Board Administration
401 S. Jackson Street
Seattle, WA 98104

Dear Ms. McCarthy:

C-002-001 We are writing to you on behalf of the American Latvian Association Board of Directors and the 90,000 member strong US Latvian Community to express our deep concern regarding the news from Seattle Latvian Organizations that their historic Community Center is in jeopardy due to the Sound Transit plans of extending the Lynwood Link railway line.

C-002-002 The Seattle Latvian group is our largest member organization with several hundred active Latvian families, who utilize the property at 11710 3rd Avenue NE as the "epicenter" for ethnic activities. Regular Church services, Sunday school for children, ethnic celebrations and gatherings, Latvian choir and dance group rehearsals, as well as weddings and funerals take place there. It is one of the three largest and best organized Latvian centers on the West coast, in addition to Los Angeles and San Francisco.

ON A LARGER SCALE, it is not only the Latvian community that would be affected by the proposed transit line; the center is regularly used by Estonians, Lithuanians and even the students at the University of Washington Baltic Study program – the only such program in the United States.

HISTORICALLY, The center is of important cultural heritage and importance to Seattle area Latvians and Balts. When the Latvian refugees were admitted to the United States after the WWII, several hundred settled in the Seattle area. They organized, purchased land and built the first Latvian Center on Densmore Avenue North in 1955. Unfortunately, in 1969, the City of Seattle took the property for development of the Wallingford Playfield. Next year, the history may repeat itself – the second center, built by Latvian volunteers in the 1970s on the 3rd Avenue, is in danger of being expropriated.

The center is crucial for the continuation of Latvian and Baltic cultural, educational and religious activities, it has been visited by all the Baltic presidents, ambassadors and several government ministers, as well as US Senators and ambassadors. It is the home of:

(Over, please)

AMERICAN LATVIAN ASSOCIATION IN THE UNITED STATES, INC.
Tel: 301-340-1914 Fax:301-340-8732 E-mail: alainfo@alausa.org Internet: www.alausa.org

C-002-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

C-002-002

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Please see Section 2.5.1 for a description of the refined Segment A alternatives that avoid displacing the Church.

C-002-002

- Seattle Latvian Evangelical Lutheran Church, established in 1950
- Washington State Latvian Association, established in 1949
- Seattle Latvian School, established in 1950
- Latvian Folk dance group "Trejdeksnītis", established in 1962
- Seattle Latvian Choir
- Seattle Latvian Library
- Latvian student fraternities and sororities
- Latvian Seniors' club.

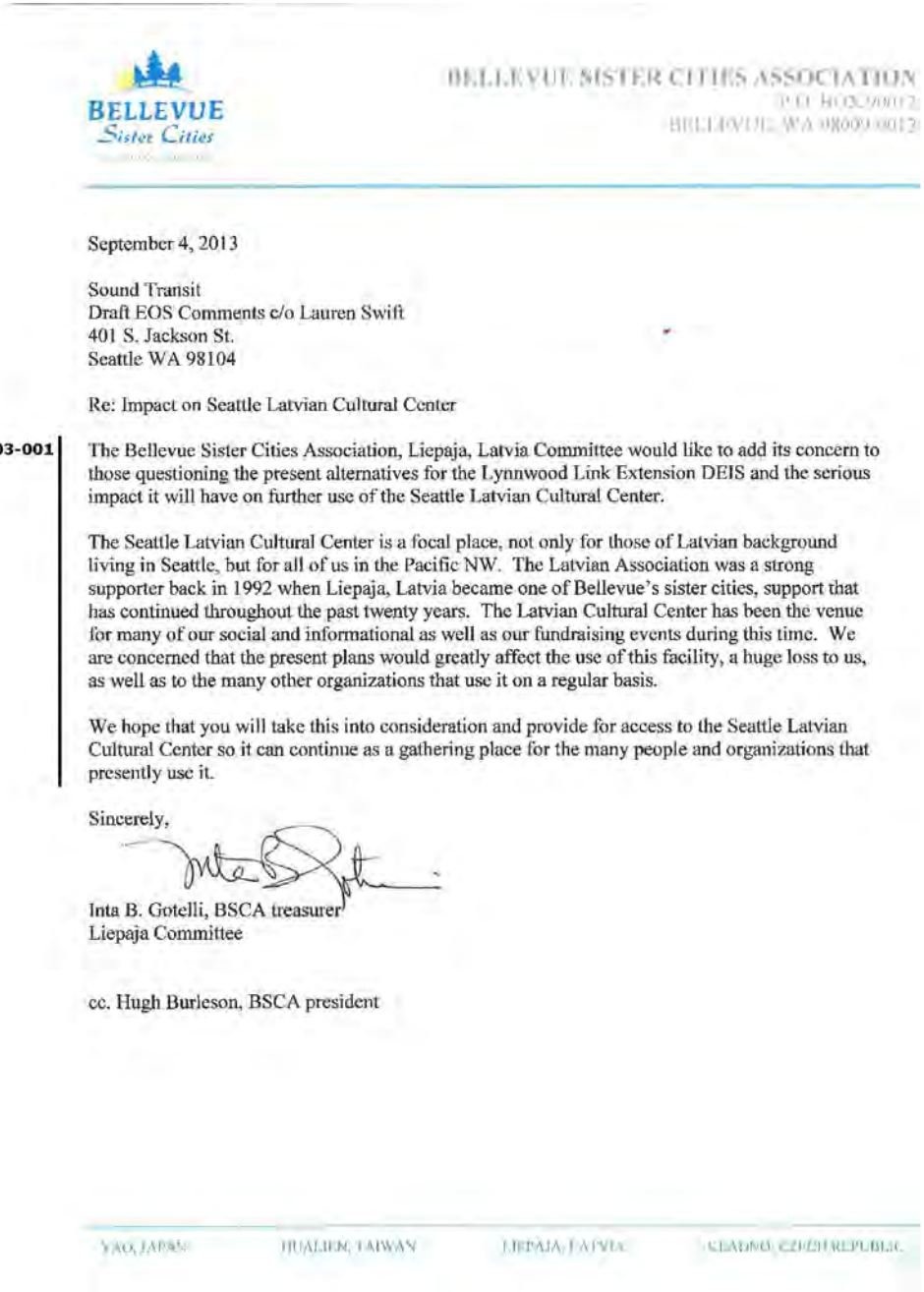
IN ADDITION, it is the place for one of the 15 polling centers in the United States organized by the Latvian government and the American Latvian Association for Seattle area Latvian citizens to cast their ballots in Latvia's National Elections.

Please keep Seattle diverse! Do not allow the proposed transit line destroy the Latvian Center! If we lose this site, we lose more than a building, and we fear that the local Latvian community will not have the means, manpower and moral strength to rebuild their center for the third time!

Sincerely,

Anita Batarags
President and Board Chair

Raits Eglitis
Secretary General



BELLEVUE Sister Cities

BELLEVUE SISTER CITIES ASSOCIATION
P.O. BOX 90012
BELLEVUE, WA 98009-9012

September 4, 2013

Sound Transit
Draft EOS Comments c/o Lauren Swift
401 S. Jackson St.
Seattle WA 98104

Re: Impact on Seattle Latvian Cultural Center

C-003-001 The Bellevue Sister Cities Association, Liepaja, Latvia Committee would like to add its concern to those questioning the present alternatives for the Lynnwood Link Extension DEIS and the serious impact it will have on further use of the Seattle Latvian Cultural Center.

The Seattle Latvian Cultural Center is a focal place, not only for those of Latvian background living in Seattle, but for all of us in the Pacific NW. The Latvian Association was a strong supporter back in 1992 when Liepaja, Latvia became one of Bellevue's sister cities, support that has continued throughout the past twenty years. The Latvian Cultural Center has been the venue for many of our social and informational as well as our fundraising events during this time. We are concerned that the present plans would greatly affect the use of this facility, a huge loss to us, as well as to the many other organizations that use it on a regular basis.

We hope that you will take this into consideration and provide for access to the Seattle Latvian Cultural Center so it can continue as a gathering place for the many people and organizations that presently use it.

Sincerely,

Inta B. Gotelli, BSCA treasurer
Liepaja Committee

cc. Hugh Burleson, BSCA president

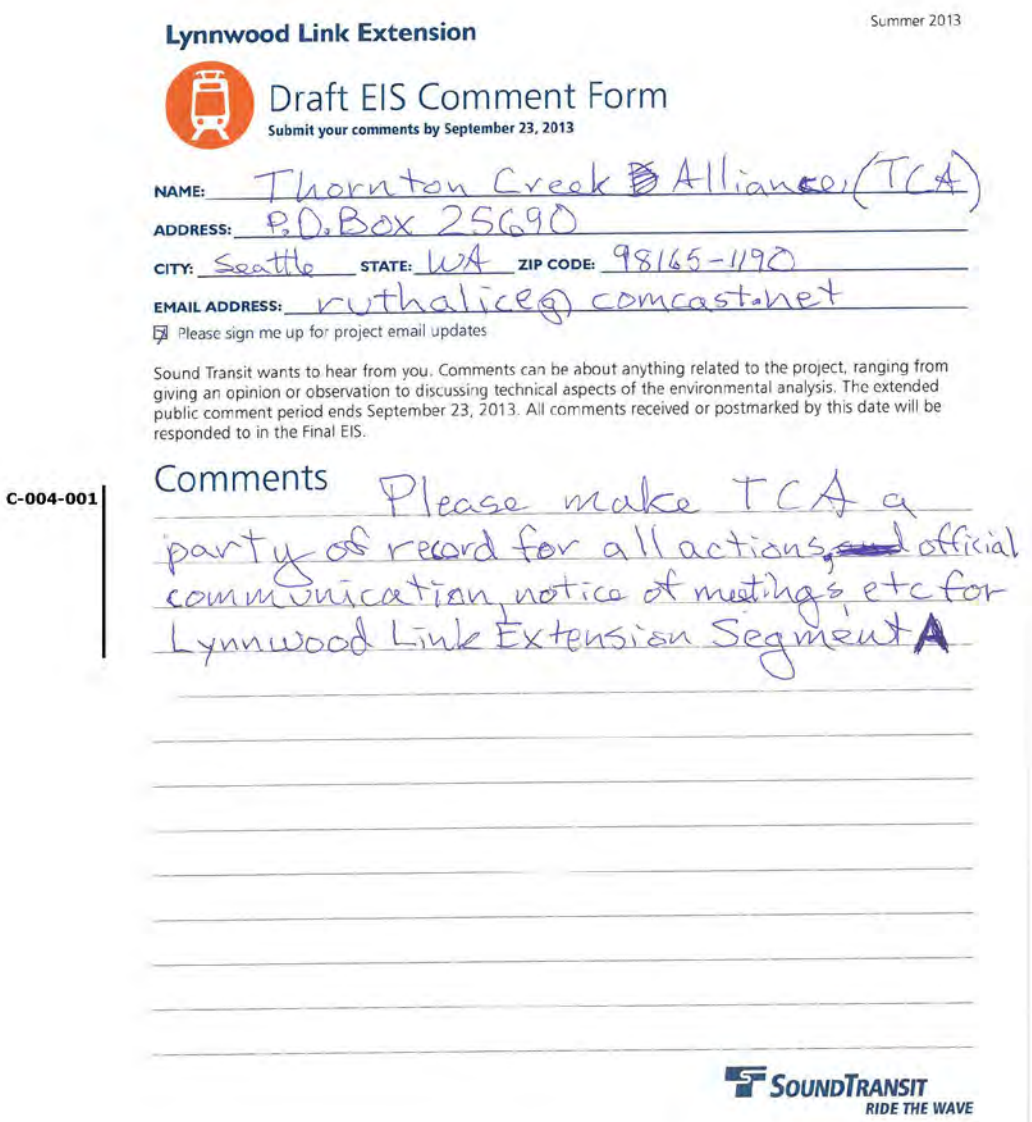
YAO, JAPAN HUALIEN, TAIWAN LIEPAJA, LATVIA CEADAS, CZECH REPUBLIC

C-003-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Thornton Creek Alliance (TCA)

ADDRESS: P.O. Box 25690

CITY: Seattle STATE: WA ZIP CODE: 98165-1190

EMAIL ADDRESS: ruthalice@comcast.net

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

C-004-001

Comments Please make TCA a party of record for all actions, and official communication, notice of meetings, etc for Lynnwood Link Extension Segment A

SOUNDTRANSIT RIDE THE WAVE

C-004-001

Sound Transit does not have a "party of record" designation for those interested in the project. However, Ruth Williams has been added to the project's email update list, per this written request.

Honorary Consul of the Republic of Estonia
in Seattle, Washington

September 11, 2013

Sound Transit
Draft EIS comments
c/o Lauren Swift
401 S. Jackson St.
Seattle, WA 98104

Dear Members of the Sound Transit Board,

C-005-001 I am writing to you in hopes of helping convey a strong message in support of preserving the Latvian Community Church and Meeting Hall located at 11710 – 3rd Ave. NE, Seattle, WA. It is my understanding that Sound Transit is considering possible routes through northeast Seattle which might impact the Latvian Hall.

C-005-002 As a member of the Seattle Estonian Community, the Latvian Hall represents as much of a "home" to our community as it does to Seattle-area Latvians as well as Lithuanians. As our community is smaller than the Latvian community, we have for decades rented the Latvian Hall as the centerpiece of our community meetings, holiday celebrations and cultural gatherings. The Latvian Hall has hosted visiting Estonian Presidents, members of Parliament and other dignitaries. It has also, on a personal note, naturally served as the site of my wedding in 2004, and hosted the funerals of my family members.

The Seattle Estonian community cherishes the Latvian Hall and our relationship with the Latvian and Lithuanian communities. The Latvian Hall is the foundation of that relationship and with its large auditorium, church and meeting rooms, it uniquely serves this purpose for our mutual use. The history we have shared over the decades within the walls of the Latvian Hall is immeasurable. During the Soviet occupation of the Baltic States, the Latvian Hall was a rallying place for legislative and political efforts in support of re-establishing independence in our homelands. Subsequent to the

9133 View Avenue NW
Seattle, Washington 98117

Phone: (206) 310-2153
Fax: (206) 284-4061

C-005-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

C-005-002

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Please see Section 2.5.1 of the Final EIS for a description of the refined Segment A alternatives that avoid displacing the church.

Honorary Consul of the Republic of Estonia
in Seattle, Washington

C-005-002

culmination of those efforts, the Latvian Hall continues to bind our communities through co-hosted community celebrations, fundraisers and commemorations.

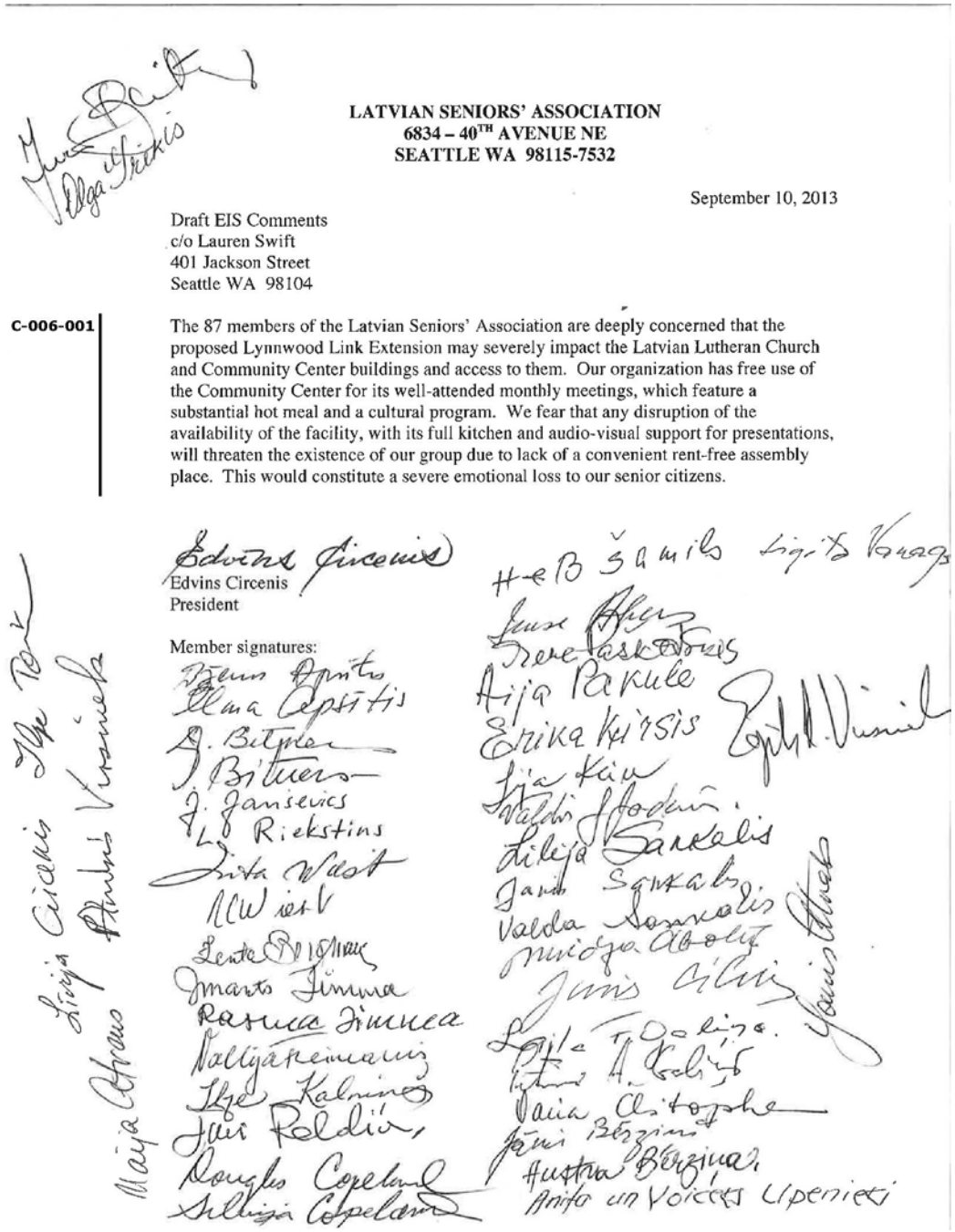
I simply cannot imagine a vibrant Estonian, Latvian or Lithuanian community existing in Seattle without the Latvian Hall. I implore you to preserve this most important foundation of our shared community.

Most sincerely,

Paul A. Raidna
Honorary Consul
Republic of Estonia

9133 View Avenue NW
Seattle, Washington 98117

Phone: (206) 310-2153
Fax: (206) 284-4061



LATVIAN SENIORS' ASSOCIATION
6834 – 40TH AVENUE NE
SEATTLE WA 98115-7532

September 10, 2013

Draft EIS Comments
c/o Lauren Swift
401 Jackson Street
Seattle WA 98104

C-006-001

The 87 members of the Latvian Seniors' Association are deeply concerned that the proposed Lynnwood Link Extension may severely impact the Latvian Lutheran Church and Community Center buildings and access to them. Our organization has free use of the Community Center for its well-attended monthly meetings, which feature a substantial hot meal and a cultural program. We fear that any disruption of the availability of the facility, with its full kitchen and audio-visual support for presentations, will threaten the existence of our group due to lack of a convenient rent-free assembly place. This would constitute a severe emotional loss to our senior citizens.

Edvins Circenis
President

Member signatures:

C-006-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Please see Section 2.5.1 of the Final EIS for a description of the refined Segment A alternatives that avoid displacing the church.

North King County
MOBILITY COALITION

Mr. Perry Weinberg, Director
Office of Environmental Affairs and Sustainability
Sound Transit
401 South Jackson Street
Seattle, WA, 98104-2826

Dear Mr. Weinberg:

The North King County Mobility Coalition is comprised of agencies and individuals from North King County cities that share a concern for seniors, people with disabilities, youth, low-income households, and those with limited language skills who require access to public transportation. This letter is written to address their needs and concerns for the Lynnwood Link alternative.

C-007-001 Generally thorough and well-written, the DEIS puts its focus primarily on the needs of able-bodied commuters. It is not clear how Sound Transit will make the stations accessible to people with limited mobility. Page 3-14 states that sidewalks will meet ADA requirements. How far from the stations this will apply? The Coalition urges Sound Transit to support actions that assure the necessary upgrades occur in coordination with the opening of the line.

C-007-002 This may be complicated by the multi-jurisdictional ownership of NE 145th (WSDOT, the cities of Shoreline and Seattle, and King County) but the Coalition urges Sound Transit to work in collaboration with all owners to ensure that NE 145th meets the needs of nearby residents. Furthermore, the Coalition strongly supports better east/west transit connections for those who live in proximity, but not close enough to walk, to the LINK line. Our expectation is that Sound Transit will cooperate with Metro to make connecting buses interface well with the train.

C-007-003 The Coalition supports the selection of a station at NE 145th due to the amount of housing for special needs populations within one mile of the proposed station. This includes many residential sites owned by the King County Housing Authority (such as Paramount House) as well as several other apartment complexes that serve veterans, seniors, and people with disabilities. A station at 155th would put the train out of reach for most of these residents. Therefore, the Coalition favors Alternatives with a station at NE 145th, including Alternatives A1, A3, A10, and A11.

C-007-004 Finally, the Coalition is concerned that Sound Transit's public involvement efforts have not reached enough people with special transit needs. Page 4-63 states that the agency is obliged to reach out to people with limited access. However, the meetings described in the DEIS to discuss the Lynnwood extension seemed to have been oriented toward people with cars. In our experience, outreach to special needs communities is most effective when taken to the community rather than expecting the community to travel to a meeting space. Therefore, Sound Transit should plan for more community-based outreach, especially to special-needs populations.

C-007-005 In summary, the Coalition recommends three actions moving forward: 1) the selection of the NE 145th station; 2) increased cooperation with other transportation agencies and concerned local governments: and, 3) greater outreach to and input from special needs communities.

Thank you for the opportunity to comment on the Lynnwood LINK DEIS.

Sincerely,

Robin McClelland	Dori Gillam	James Seeks	Chris Eggen	Candace Ives
Coalition Member	Senior Services	Transportation Manager Northshore Senior Center	Deputy Mayor City of Shoreline	Resident Services Coordinator King County Housing Authority

14812 Main Street, Bellevue, WA 98007

C-007-001

Sound Transit will meet ADA standards for all of its facilities and projects, and a commitment for full access for all persons is an element of Sound Transit's adopted System Access Policy. Current designs for the project alternatives generally include new or rebuilt facilities to ADA standards for the station sites, to and from feeder bus stops and nearby intersections, and for any streets or other transportation facilities reconstructed or otherwise improved for the project. During final design, Sound Transit will also work with local jurisdictions on planning for access improvements for other facilities connecting to station areas.

C-007-002

Sound Transit will continue to work cooperatively with both Seattle and Shoreline to design a station that serves all users, including regional commuters and people coming to and from the surrounding neighborhoods. Sound Transit will coordinate with King County Metro to plan for changes in their transit service to support the station. Ultimately, route and service changes are determined by the local transit agency for the routes they operate.

C-007-003

Your preference for alternatives that include a station at NE 145th Street because it would be more easily accessible by those with special needs is noted.

C-007-004

As described in Chapter 6 Public Involvement and Agency Coordination, Sound Transit used a variety of outreach activities and methods to engage the community beginning at the early stage of alternatives analysis through the Draft EIS, and into identification of the Preferred Alternative and development of the Final EIS. For the Draft EIS, all of the sites for the public meetings were accessible by transit and were in

community facilities throughout the corridor. Activities and methods for public outreach included kiosks, community events, drop-in sessions, a project website, news media, fact sheets, brochures, newsletters, and an email subscription list.

C-007-005

Sound Transit will continue to coordinate with other transportation agencies, jurisdictions, and interested community organizations, including for people with special needs.

futurewise
Building communities
Protecting the land

September 20, 2013

Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

RE: Lynnwood Link Extension DEIS Comments

Dear Ms. Swift,

Thank you for this opportunity to provide comments on the Lynnwood Link Extension Draft Environmental Impact Statement. I am writing on behalf of Futurewise, and our organization is a statewide public interest group working to promote healthy communities and cities while protecting farmland, forests and shorelines. Our Urban Program promotes a livable and sustainable region that can accommodate growth while providing necessary public amenities and a strong urban sense of place. Our primary objective is to promote policies for affordable, transit-oriented development in our region's urban centers and high-capacity transit areas.

We are excited about the Lynnwood extension as it will help provide convenient, reliable, economically and environmentally sustainable ways for our growing population to reach their jobs, homes and services.

Our overall priority to meet the goals of long term community health is to make station-area decisions that maximize the potential for ridership and meaningful Transit-Oriented Development (TOD). Successful TOD projects provide a rich array of amenities, housing and transportation choices in proximity to high-capacity transit. As a central strategy to accommodating growth *well* in our region, we believe this is critically important to system alignment and station siting decisions. Based on these priorities, our comments on the DEIS are as follows:

C-008-001

- We support Alternatives A10 or A11 for Segment A, with three stations at 130th, 145th and 185th. Maximizing potential ridership and long term TOD is the responsible decision for our regional growth. While TOD potential is currently less than optimal at the three station areas, we believe this will change over time and will be well worth the additional cost for the third station.
- Between NE 145th and NE 155th Street, we strongly support 145th due to greater proximity to a main thoroughfare, greater TOD potential, and better improvement options for accommodating multi-modal access to the station.

C-008-002

- Similar to Segment A, we support Alternative B2A in order to maximize our long term investment. The construction of two stations, Montlake Terrace Transit Center and 220th Street SW, will increase ridership and TOD potential.

816 Second Avenue, Suite 200 Seattle, WA 98104 www.futurewise.org phone 206 343 0681

C-008-001

Your preference for more stations, rather than fewer, is acknowledged. The Final EIS evaluates (as did the Draft EIS) three-station Alternatives A10 and A11. The Sound Transit Board will select the project to be built after the publication of the Final EIS. The Preferred Alternative includes the general alignment and stations of Alternative A1, and the Final EIS also reviews options for a future station at NE 130th Street.

C-008-002

In addition to Alternative B2A, the Final EIS evaluates the Preferred Alternative, as identified by the Sound Transit Board. The Sound Transit Board identified a modified Alternative B2 as the Preferred Alternative, which includes a station at the Mountlake Transit Center. The Sound Transit Board also directed further study of options to add a station at 220th Street SW or to make provisions for a future station at this location. Please see the Chapter 2 of the Final EIS for details.

C-008-003

- For Segment C, we are not comfortable providing support for any of the proposed alternatives, and encourage Sound Transit to explore a C-4 alternative. It is important for the station to be in close proximity to the existing transit center, and therefore we are not supportive of C3 for that reason.

C-008-004

- Multi-modal access to the stations should be a high priority for Sound Transit and it will be essential to accommodate all modes, including bus, bicycle, on foot and car. We are pleased with the System Access Policy recently approved by the Sound Transit Board to increase transit ridership through improved connections with local transit, paratransit, bicycle and pedestrian infrastructure, kiss-and-rides, and private vehicle parking.

C-008-005

- It is also critical to integrate safety, convenience and comfort into the design of all facilities and improvements serving the station areas. Having been involved with Shoreline's Public and Stakeholder Involvement Plan, we repeatedly heard concerns from community members about traffic, safety and ease of access. In addition, there was a common interest in community space being programmed into the station area to make it more integral and accessible to the surrounding neighborhoods.

Thank you for this opportunity to comment on the Draft EIS. We look forward to continuing to work with Sound Transit and the communities as the project evolves. Please contact us if we can provide any additional information.

Regards,

Monica Smith
Urban Policy Director
206.550.9725 cell

C-008-003

Following the publication of the Draft EIS, Sound Transit developed a modification of Alternative C3 for the Final EIS in collaboration with the City of Lynnwood, with the goals of improving transit integration, better opportunities for future development, and minimizing natural resource impacts. Alternative C3 Modified (as named in the Final EIS) includes moving the station closer to the transit center and is the Preferred Alternative.

C-008-004

Comment acknowledged. The Sound Transit System Access Policy is referred to in the Transportation mitigation section (Section 3.6.5) for nonmotorized transportation.

C-008-005

Sound Transit designs and maintains all of its stations to be safe, secure and clean, and station platforms include weather protection. The stations are well lit, have security cameras, and are regularly monitored by security personnel. The current conceptual plans for the stations include open areas, and Sound Transit policy encourages partnerships with other parties that indicate an interest in coordinated developments in station areas.

LITHUANIAN-AMERICAN COMMUNITY
WASHINGTON STATE CHAPTER
1019 NE 130th Street, Seattle, WA 98125-4069
(206) 282-9910 • lithseattle@hotmail.com

September 16, 2013

Sound Transit
401 S. Jackson St.
Seattle, WA 98104

Dear Sound Transit Board,

C-009-001

I am writing to express my concern regarding how the proposed light rail line will affect the Latvian Lutheran Church. The Latvian Center (the Church and its large hall) is used heavily not only by Latvian-Americans but Lithuanians and Estonians as well. Negative impacts must be minimized at all costs.

We Lithuanians do not have our own church, school or office buildings. We rely heavily on our brother Balts, the Latvians, to share their Latvian Center with us. Although over the last 40 years we have been "renters" and not "owners" of the facility, we have come to cherish it as our own.

The Lithuanian-American Community of Seattle has enjoyed the use of the Latvian Center for community celebrations and other events such as fundraisers for the Baltic Studies Program at the University of Washington.

The Latvian Center has been the site of folk dance practices and performances, concerts by local and visiting Lithuanian musicians, wedding receptions and memorial services. The hall has hosted visiting dignitaries such as Vytautas Landsbergis, the first head of state of newly independent Lithuania, Senator Maria Cantwell, Congressman Jim McDermott, two Lithuanian Ambassadors to the United States, and trade delegations from Lithuania.

We have gathered at the Center for these and many other community-centered commemorations, often in conjunction with our Baltic brothers and sisters (for example, the annual joint church service and commemoration of the deportations of Estonians, Latvians, and Lithuanians to Siberia). We have held educational lectures, fundraisers, and political meetings. And for decades during the Soviet occupation of the Baltics, the Latvian Hall was the gathering place for community activists working together on critical items related to re-establishing the independence of our three countries.

The Center, with its many organizations and activities, serves as our extended family, especially to those of us who immigrated to America without grandparents, uncles, aunts and cousins. Once torn, the rich social fabric of the Latvian Center may be irreparably compromised.

The Seattle Lithuanian-American Community feels very strongly that preserving the Latvian church and community hall in its present location, and keeping it open during construction, is of paramount importance not only to the Latvian community but to the Lithuanian and Estonian communities as well.

Rimas Miksys
Rimas Miksys
President
Lithuanian-American Community, WA State Chapter

C-009-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. See Section 2.5.1 for how Sound Transit modified the design for all at-grade Segment A alternatives to avoid displacing the church. Chapters 3 and 4 provide more detail on how construction would be managed, with Section 4.4 providing more detail on how impacts would be mitigated to allow the church and center to remain open during construction.

1429 Avenue D, PMB 198
Snohomish, WA 98290

PILCHUCK AUDUBON SOCIETY

425-252-0926
www.pilchuckaudubon.org

September 20, 2013

Sound Transit DEIS
c/o Lauren Swift
401 S. Jackson Street
Seattle WA 98104

RE: Lynnwood Link Route Alignments

Dear Sir:

We are writing on behalf of the Pilchuck Audubon Society. Our organization has around 1200 members in Snohomish County and Camano Island. We advocate conservation and habitat preservation, especially as it relates to birds. We strongly support the benefits of light rail but do not want see negative impacts on the natural environment due to siting issues.

Wild birds and other wildlife along the proposed light rail routes depend on many natural attributes of the ecosystem that encompasses (a) Scriber Park, (b) the much larger, non-park wetland that is connected with it, and (c) undeveloped upland areas (natural and semi-natural non-wetlands) that adjoin the park and wetland. Each of these land types provides habitat for wildlife to use for such essential activities as foraging, concealment from predators, visual isolation from competitors, daily and seasonal movement routes, or courtship display and nesting. In addition, juxtapositions of the land types are important in meeting such needs for certain forms of wildlife.

C-010-001

All presently proposed alternate light rail routes (C 1, C 2, and C 3, as well as the City of Lynnwood's "C 4") cross wetland and adjacent natural or semi-natural upland. These options would physically intrude upon and eliminate wildlife habitat and obstruct wildlife use in various ways. Associated problems for wildlife and for the vegetation they depend on would include (but not be restricted to) noise, unnatural shade, and pollution by falling material. These matters would adversely affect wetland wildlife, upland wildlife that must occasionally seek water, and wildlife that otherwise depend on the interfaces between wetland and upland. The "edge effect" of interfaces between habitat types is well known as important for some birds and other wild animals.

C-010-002

Route C 1 crosses less wetland (and probably less upland natural area) than the other present alternatives but intrudes on Scriber Park (EIS drawing C1M-PP02)[1]. Therefore, it would detract from the park's function of bringing people into contact with nature and would degrade enjoyment of what many people seek in a natural park. We are also concerned about destruction and impairment of park land purchased with Conservation Future funds and intended to be protected in perpetuity.

[1] The drawings referred to exist in the Sound Transit 2 Plan's Draft EIS Appendix F, Part 3 (http://www.soundtransit.org/Documents/pdf/projects/North_het/Lynnwood%20DEIS/201307_DraftEIS_09_Appendix_F_part3.pdf).

C-010-001

Thank you for stating your groups' concerns about the alternatives crossing Scriber Creek wetlands. Most of the issues you raise are consistent with the Draft EIS discussions on pages 4-135 and 4-136, although falling materials and subsequent pollution are not predicted. During construction and operation, Sound Transit will abide by all applicable federal, state, and local environmental laws and regulations. Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts on environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure no net loss of ecosystem function and acreage as a result of agency projects.

C-010-002

Thank you for sharing your concerns regarding Scriber Creek Park. For what is now the Segment C Preferred Alternative, Sound Transit worked with the City of Lynnwood to develop a modified Alternative C3 that minimizes impacts to both Scriber Creek Park and the adjacent wetlands, while accomplishing other goals for the station site and its connection to the city center area. The Draft EIS identified potential impacts to the park with Alternatives C1 and C2 and identified potential mitigation for these impacts.

The Preferred Alternative does not require any property from the park. If Alternative C1 moved forward and required the use of Scriber Park property for the project, Sound Transit would seek approvals for conversion of property acquired using Conservation Futures funds, as well as mitigation for any impacts.

1429 Avenue D, PMB 198
Snohomish, WA 98290

PILCHUCK AUDUBON SOCIETY

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C-010-002 Route C 2 would cross much more wetland than the other alternatives (EIS drawing C2M-PP03), and because it runs along the south boundary of Scriber Park, its physical presence and noise would degrade normal park functions of natural aesthetics and tranquility, as well as adversely affecting wildlife and their habitat in the adjacent part of the park.

The parts of Scriber Park from which either route C 1 or route C 2 could be seen or heard would be made distinctly unpleasant for visitors. Presence of major artificial structures, as well as the train noise involved, would detract immensely from the park's natural character and from human enjoyment of the park.

C-010-003 Route C 3 (EIS drawing C3M-PP02) crosses slightly more wetland than C 1 does, and it lies far from the park, but it would affect much more undeveloped upland than the others do and consequently would have a substantial negative impact on wildlife and their habitat.

C-010-004 Each of the proposed routes (C 1, C2, and C 3, as well as the City of Lynnwood's "C 4") would reduce resources needed by our wildlife and human community. Adverse effects of the increasing separation of humans from the natural world are of great concern to us. Accessible urban parks and open space help to counteract this "nature deficiency."

Consequently, Pilchuck Audubon recommends that Sound Transit design a "C 5" route superimposed on Highway I-5 for a further distance than C 3 does. It could then either (a) curve more or less northward (bending to the degree that C 1 does in approaching Scriber Park) in order to reach the Lynnwood Transit Center or (b) continue to Alderwood Mall.

Sincerely,

Kathleen Snyder, President

Ray White, Ph.D.
Member and Consulting Biologist

C-010-003

While it is true that Alternative C3 would affect more undeveloped upland than Alternative C1 or Alternative C2, the EIS analysis does not find these effects as having a substantially greater negative impact on wildlife and wildlife habitat than the other alternatives. As shown in Figure 4.8-1c of the Draft EIS, the upland areas crossed by Alternative C3 are dominated by maintained vegetation. This classification is consistent with the aerial imagery in drawing C3M-PP02 in Appendix F. As defined in the Draft EIS Table 4.8-2, maintained vegetation generally consists of exotic grasses or annuals such as mown grasses and other low vegetation. Such areas are unlikely to support abundant or diverse populations of wildlife. The guideway in that area would be elevated. As noted on the Draft EIS page 4-137, shading and other impacts on vegetation underneath elevated guideways at most locations would likely be minimal, as guideways 15 feet high or more would be able to support herbaceous plants and shrubs similar to those currently present.

C-010-004

Each of the proposed Segment C alternatives would impact resources used by either wildlife or humans, but to different degrees. Sound Transit appreciates your suggestion for the development of a fourth alternative that would be placed on I-5. The proposed alignment is not being considered further because an alignment along I-5 beyond where Alternative C3 crosses to the Lynnwood Transit Center has a higher potential to impact the Snohomish County PUD Substation and the existing direct access ramps, and is less able to balance impacts and benefits such as effective multimodal connections, minimizing walking distances to the transit center, retain/enhance TOD opportunities, minimizing wetland impacts, reducing property, displacement and economic impacts, and connecting to the future City Center. An array of alignment options were considered as Sound Transit considered modifications to Alternative C3.

From: Stefanie G <lebbonbird@yahoo.com>
Sent: Friday, September 13, 2013 8:33 AM
To: Lynnwood Link DEIS
Cc: rmarkle@shorelinewa.gov; Miranda Redinger; amcintire@shorelinewa.gov; dtarry@shorelinewa.gov; ceggen@shorelinewa.gov; kmcglashan@shorelinewa.gov; whall@shorelinewa.gov; dmcconnell@shorelinewa.gov; jsalomon@shorelinewa.gov; swinstead@shorelinewa.gov; Sowers, Nytasha; Iwata, Roger
Subject: Lynnwood Link DEIS Comment - Ridgecrest Neighborhood Association
Attachments: Sound Transit Letter.docx

Sound Transit
DEIS Comments c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

September 13, 2013
Ms. Swift,
My name is Stefanie Gendreau. I am the Chair for the Ridgecrest Neighborhood Association (RNA) Board of Directors. The largest single-family residence neighborhood in Shoreline, we border the east side of Interstate 5, from 145th to 175th NE.
I am submitting this letter of initial comments on behalf of the RNA Board of Directors and our residents. Even though this project will result in an unfortunate loss of homes for some of our residents, without a doubt, we are excited about Light Rail coming to Shoreline. Specifically we look forward to the development potential in the Ridgecrest Neighborhood and the availability of effective regional transit for our community.

C-011-001

Members of our board have been debating the station options as detailed in the D.E.I.S. for many months. Not unlike our residents, our board members are not unanimous regarding the preference of station at either 145th Street or 155th Street. However, our group is definitely leaning towards 155th Street as our station location of choice.
In general, we see the 155th Street option as a station with a neighborhood focus and the 145th Street option as a commuter-oriented station, that would primarily serve those driving to/from the station. The 155th Street station would better serve a larger population of residents in South Shoreline compared to a station placed on 145th Street, at the periphery of our population base. Also, 155th Street serves as a more effective east/west thoroughfare with existing bike lanes, a direct path to neighborhoods and businesses east of Aurora, and easy access to parks and businesses located on both 155th and 5th NE.

C-011-002

Regardless of the final station location, we are unanimous in what is important to the residents of the Ridgecrest Neighborhood. In regards to the station itself, some of the important points are;

- A smaller scale parking structure sufficient in capacity to minimize overflow parking on neighborhood streets but small enough to encourage bike, bus, and foot travel.
- Consideration of implementing "pay to park" for vehicles, again to encourage alternate methods of reaching the station.

1

C-011-001

Your thoughts on the potential NE 145th Street and NE 155th Street stations are appreciated. The Sound Transit Board identified the NE 145th Street Station as the Preferred Alternative. The Board will make a final decision selecting the project to be built after publication of the Final EIS.

C-011-002

Your recommendations regarding the capacity of the parking garage and potential charges for parking are noted. The stations along the alignment would provide balanced access for a variety of modes, including transit, walking, biking and, in several locations, parking, consistent with Sound Transit's System Access Policy. "Pay to Park" options are being considered by Sound Transit throughout its system.

C-011-003 • A structure that has adequate and safe facilities for bicycles (access, storage, etc.).

C-011-004 • An effective solution, including enhanced signal controls, for traffic flow on 155th with a clear plan regarding emergency vehicles exiting the Shoreline Fire Station.

C-011-005 • A station design that does not overpower the single-family neighborhood.

C-011-006 • Inclusion of a green space that could be used for neighborhood events and to offset the loss of a portion of Ridgecrest Park.

• The addition of mature trees and plantings to replace trees that will need to be removed and to help alleviate sound impacts.

Other points deemed essential to our residents include;

C-011-007 • The development of a robust sidewalk and biking network on both main and residential streets.

• An increase in street lighting and effective crosswalk signals.

C-011-008 • Effective noise mitigation, including the detailed study of sound that travels up the ridge, (hence our RIDGEcrest name) into the heart of our neighborhood.

C-011-009 • More frequent service by KC Metro during peak travel times, with a focus on an increase of east/west routes.

C-011-010 • Purposeful rezoning to encourage the development of multi-family structures that include potential for new business and will support redevelopment of the 5th/165th business area.

As the project moves forward, the Ridgecrest Neighborhood Association will continue to be part of the visioning process and will work within our neighborhood to be a conduit for information between our residents and both Sound Transit and the City of Shoreline.

We are both excited and optimistic that we can work together to create a successful segment of the Link light rail system through Shoreline that best serves City of Shoreline residents (more specifically Ridgecrest Neighborhood residents) and enhances regional mobility for all. Thank you for this opportunity to comment on the DEIS and convey our interests and preferences.

Sincerely,

Stefanie S. Gendreau
Ridgecrest Neighborhood Association
Chair - Board of Directors
stefanie@RidgecrestNeighborhood.info

cc-City of Shoreline Interim City Manager Debbie Tarry, Planning & Community Development Director Rachael Markle, Senior Planner-Transportation Alicia McIntire, Associate Planner Miranda Redinger, Mayor Keith McGlashan, Deputy Mayor Chris Eggen, Councilmember Will Hall, Councilmember Doris McConnell, Councilmember Chris Roberts, Councilmember Jesse Salomon, Councilmember Shari Winstead, Sound Transit Community Outreach Coordinators Roger Iwata and Nytasha Sowers

2

C-011-003

As described in *Chapter 2 Alternatives Considered*, Section 2.3, all stations would provide for effective pedestrian and bicycle access to and from nearby bus stops, park-and-ride facilities, and surrounding streets. Bicycle parking facilities would be provided. They would be designed to satisfy all applicable design standards, public access requirements, and fire, life and safety standards.

C-011-004

Design for the NE 155th Street Station would include accommodation for emergency vehicle priority and access to and along the arterial. Potential traffic enhancements along NE 155th Street could include transit signal priority treatments at traffic signals.

C-011-005

If a NE 155th Street Station were to move forward as part of the project to be built, a range of architectural concepts would be explored during final design to minimize potential adverse effects of the new structures, noise walls, station area lighting, landscaping, and connections with local roadways.

C-011-006

In coordination with the City of Shoreline, Sound Transit has defined mitigation measures to offset the impact to a portion of Ridgecrest Park, including replacement of property for park areas converted to transportation use and installation of landscaping and a berm or barrier to provide visual screening. Trees do not typically offer notable sound reduction, but Sound Transit will work with WSDOT and Shoreline for tree replacement. Section 4.5 in the Final EIS discusses tree replacement.

C-011-007

All streets reconstructed with the project will meet local standards, which in Shoreline includes pedestrian and bicycle facilities as well as lighting and crosswalks. The Preferred Alternative plans have further details on these features, most of which are focused on the station areas and where streets are realigned for the project (near Ridgecrest Park and at the NE 145th Street and NE 185th Street Stations).

C-011-008

The noise and vibration impacts analysis considered topographical conditions in neighborhoods, including Ridgecrest, as described in Section 4.7 of the EIS and further detailed in the Noise and Vibration Technical Report. The Final EIS has updated information on potential noise impacts and mitigation, and Sound Transit's commitment is to mitigate all moderate to severe transit noise impacts in accordance to FTA standards.

C-011-009

The alternatives all assume an integrated transit service plan featuring local buses feeding the stations; for the EIS, Sound Transit worked with King County Metro and Community Transit to develop a conceptual plan, and east-west routes were prominent elements of the assumed network. King County Metro and Community Transit are ultimately the lead agencies for the actual service plans and any revisions, but their public planning for service revisions would be coordinated with Sound Transit, and typically occurs about a year prior to light rail project opening.

C-011-010

Thank you for your comment regarding rezoning to encourage higher-density mixed-use development. The rezoning of station areas, however, is not part of the Lynnwood Link Extension project. Rather,

revisions to land use plans and regulation is the responsibility of the local government. Section 4.2.4 Indirect and Secondary Impacts discusses these potential land use impacts in station areas. Rezoning in the Fifth Avenue NE and NE 165th Street business district would not likely occur, but could occur, as an indirect action related to the Lynnwood Link Extension project. Sound Transit is considering a light rail station at NE 155th Avenues, which is more than 0.5 mile from the district.

11710 3rd Ave NE
Seattle, Wa 98125

Seatles Latviešu Ev. Lut. Draudze
Latvian Ev. Lutheran Congregation of Seattle

Latviešu Biedrība Vašingtona Štatē
The Latvian Association of the State of Washington

September 18, 2013

Sound Transit
Attn: Lauren Swift
401 Jackson Street
Seattle, WA 98104
LynwoodlinkDEIS@soundtransit.org

Re: Comments on the Sound Transit Lynwood Link Extension Draft Environmental Impact Statement Dated July 26, 2013, (the "DEIS")

To Whom It May Concern:

The Latvian Evangelical Lutheran Congregation of Seattle and the Latvian Association of the State of Washington jointly own and operate the church and community center building (the "Center") located at 11710 3rd Ave NE, Seattle, WA 98125 (the "Property"). This letter is written on behalf of our members and the multitude of people that regularly use our Center. We also write on behalf of the Estonian and Lithuanian communities in the Pacific Northwest who use the Center and share our deep concern with the alternatives Sound Transit has developed for the Lynnwood Link Light Rail extension.

The City of Seattle acquired our first church and community center through eminent domain in 1970. Our community members donated their time, money and resources to acquire the new Property, build the Center and renovate an existing residence for caretaker use. Since completion of the new Center in 1971, our members, and many others from the surrounding region, have regularly used the Center for a variety of religious, educational and culturally significant activities. The Center can be best described as the religious and cultural hub of the Baltic community in the Northwest. We have attached documents summarizing the Center's history as well as current uses for your reference. In addition we have attached letters expressing concerns with the DEIS submitted by individual groups that regularly use the Center. The following are our comments regarding the DEIS.

I. Overall Impact

C-012-001 After careful review, we have concluded that none of the alternatives, as currently presented in the DEIS is acceptable to our church and community. All of the alternatives considered in the DEIS, other than the no build alternative, threaten the continued viability of the Center. The alternatives proposed in the DEIS, whether at-grade or elevated, at best significantly impact the current uses of the church and center and at worst, render the Center unusable in its

C-012-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

C-012-001 entirety. The DEIS contains insufficient information to meaningfully evaluate how community events, our language school and church worship services would be impacted by the proposed

C-012-002 alternatives. That said, noise and vibration levels at similarly situated properties in relation to existing light rail routes, indicate that the impacts to the Property would be intolerable without significant noise, vibration and other mitigation. All of the alternatives appear to take a substantial number of parking spaces or impact those spaces such that they may be unusable. In

C-012-003 addition, the elevated alternatives would also create a negative visual impact and create a disturbance during any solemn event inside or outside the building.

C-012-004 Our main message regarding the DEIS is that all of the alternatives proposed will have significant negative impact to the Property and threaten the viability of our culturally rich ethnic community and activities that can continue only by virtue of the existence and functionality of the Center in its current location. Accordingly, our strong preference would be for the no build alternative. However, to the extent Sound Transit elects any alternative other than not building segment A, the following are our comments to the DEIS regarding the impacts caused and mitigation required.

II. At Grade Alternatives - Impacts and Mitigation Required

The at-grade alternatives (A1, A5, or A10), would require substantial changes from what is currently proposed in the DEIS if the Center is to remain in its current location. One change involves moving the route West far enough to avoid or minimize encroachment on the Property. This appears physically feasible and would substantially mitigate the impact of the alternatives to the Property.

In addition, the mitigation required would be acquisition of other property to restore lost parking, replace the caretaker's residence, and provide for a new ingress/egress. There are several adjacent residential properties that may be acceptable. In addition to mitigation for sound, vibration, and light among other things, these mitigation options for the impact of the at-grade alternatives would allow the Center to continue its existence at the current location, while at the same time allowing construction of the light rail line. Acquisition of a neighboring property would also partially mitigate the impact of the construction process, during which, it is also anticipated ingress and egress would be curtailed.

As currently proposed in the DEIS, the at-grade alternatives call for acquisition of our Property. As noted above, a second forced relocation of the Center in the 63 year history of the Baltic Community would be devastating and may lead to the demise of the Baltic community as a regional presence. The scope and cost of a re-location is incalculable on a cultural level, and difficult to assess on an economic level. If an at-grade alternative is selected without the above changes and mitigation, Sound Transit should immediately begin identifying three substantially comparable facilities within five miles of the Center that could be acquired and updated as necessary for our relocation and use.

C-012-002

The vibration and noise analysis for the church uses the FTA impact criteria. It is Sound Transit's policy to mitigate light rail transit noise that would otherwise result in moderate or severe impacts. See Section 4.7 of the Final EIS for updated impact and proposed mitigation information. Sound Transit's design for the Preferred Alternative also maintains the parking supply for the church and the center, although the configuration would be changed in some areas.

C-012-003

Your concern regarding visual impacts is noted and is consistent with information in the EIS. The impacts of the at-grade alternatives are rated as medium and include relocation of noise walls to the east and loss of vegetation as is illustrated in Figures G-16 and G-18. The impacts of the elevated alternatives are rated as high and include the visibility of the elevated guideways, which reduced intactness and unity of views and are illustrated in Figure G-17. Final design will continue to consider these impacts and potential mitigation.

C-012-004

Please see responses to C-012-001 and C-012-002.

III. Elevated Alternatives - Impacts and Mitigation Required

C-012-005

Based on the currently available information, the elevated alternatives will have similar impacts to our Property including increased noise, vibration and visual ill-effects. The DEIS fails to discuss the height or precise alignment of the track so we are left to speculate about these impacts. The DEIS also fails to provide sound testing results or information specific to our very unique property.

C-012-006

Regardless of the height of the elevated track, significant mitigation would be required. First, the track should be high enough to allow ingress and egress by large truck/trailers to the Property at its current location, otherwise new ingress and egress must be acquired. Second, the sound, vibration, visual and other ill-effects must be substantially mitigated to allow for continued use of the Property.

It is unknown to us at this time whether sufficient mitigation solutions exist to allow activities inside and outside the Center to occur without interruption under any of the above-grade alternatives. The elevated alternatives may allow for ingress and egress, depending upon track height, but do not reduce the mitigation requirements for the caretaker's residence and parking, which would require relocation or replacement. While the elevated route appears to avoid the necessity of the acquisition of the Property, we are concerned about the impact the noise, vibration and light effects would have on a candlelight service, a funeral service, a choir performance, or a class of seven year olds trying to learn Latvian language outdoors on a nice spring day.

IV. Concerns and Impacts Not Adequately Analyzed in DEIS

Regardless of which alternative is ultimately selected by Sound Transit, at-grade or elevated, there are a number of issues that affect the Property and our community which were not specifically addressed in the DEIS and therefore require further study. These issues include but are not limited to the following:

C-012-007

- The DEIS fails to include our property in several portions of the Technical Report for Noise and Vibration ("TRNV"). Section 3.1.1, Figure 3-1 and Section 3.2, of the TRNV note other churches and culturally significant properties along Segment A that were tested and studied for noise and vibration impacts and mitigation. Sound Transit needs to conduct the same study and testing with regard to our property.

- TRNV attachments C and D of the DEIS lack noise and vibration projections for our property with regard to alternatives A1, A5, or A10. Since mitigation of the impacts of those alternatives may include relocating ingress and egress through the acquisition of additional property, the DEIS should include the noise and vibration projections for alternatives A1, A5 and A10.

- Additional consideration needs to be given to designing the light rail alignment more to the West into the WSDOT right of way. The current alternatives presented in the DEIS appear to emphasize maintaining a separation between the freeway and rail line, as opposed to maximizing the separation between the rail line and our Center.

3

C-012-005

The elevated alternatives are rated as having a high visual impact on adjacent residential areas in the text and maps on pages 4-75 and 4-84 in Section 4.5.3 of the Draft EIS. In this case, the elevated guideway and overhead catenary would be readily visible and reduce intactness and unity of views from viewpoints to the east. The height of the elevated guideway relative to surroundings, including the Latvian Evangelical Lutheran Church, is shown in Figure G-17 in Appendix G of the Draft EIS. The conceptual plans provided in Appendix F of the Draft EIS provide greater detail on the alignment and the proposed light rail profile, including structural heights. Where applicable, information has been updated for the Final EIS.

Noise monitor location M-6 measured noise levels near the Latvian Evangelical Lutheran Church. The existing noise levels are described on page 4-110 and the extent of noise impacts are described on page 4-113 in Section 4.7.3 of the Draft EIS. The noise and vibration technical report provided further detail, but the monitoring location was used to predict noise levels and mitigation not only for the church, but also for surrounding residences, which are highly noise-sensitive.

C-012-006

Based on the design modifications developed for the Preferred Alternative (which were also applied to all of the at-grade alternatives) access to the property has been maintained through the realignment of the city street providing access to the church. See Section 3.2 of the Final EIS for a better understanding of the differences in impacts among the alternatives.

Depending on the alternative, noise mitigation includes a noise wall for at-grade alignment and the introduction of a 4-foot-tall to 8-foot-tall barrier at the edge of the elevated alignment. Vibration impacts would be mitigated by design measures that reduce the amount of vibration

C-012-008
- The DEIS fails to discuss temporary construction impacts on the day-to-day operation of our church and center. Major considerations would include, but are not limited to, equipment staging, earth moving and pile driving. These activities have the potential to not only impact normal activities, but would also inevitably dramatically impact special social events and performances due to dust, noise, limited access and restricted parking. This will, in effect, discourage attendance of events, thereby causing lost revenues at fund-raising activities as well as an overall decrease in utilization.

C-012-009
- The DEIS fails to recognize the significance of the caretaker's residence on the overall operations of Property. The presence of this structure at the entrance of the Property provides around-the-clock monitored access and security for the Center. In addition, the caretakers maintain the Center's building and surrounding grounds and provide real-time event scheduling. The Center could not function without such an arrangement in place and hence the role of this residence as an essential component must be discussed in the EIS and a replacement structure provided as mitigation, regardless of which option is selected.

C-012-010
- The DEIS needs to identify and mitigate the site specific impact of a rail line which as proposed runs very close to the Center and the current ingress and egress. To assure adequate mitigation is provided site specific engineering and geotechnical studies must be performed. The noise, vibration, light and electro-magnetic interference impacts of trains operating in such close proximity during church services might severely curtail or possibly even eliminate our ability to hold church services. These impacts may also eliminate our ability to facilitate the events that frequently occur at the Center including but not limited to: rehearsals, musical performances, dinners, presentations, speeches, as well as special social and holiday events that make up the core of our community.

C-012-011
- The DEIS fails to address the disruption caused at the Center's entry and within landscaped areas to religious gatherings, social events and Latvian school functions. A noise study that specifically addresses these potential impacts and defines necessary mitigation solutions must be performed, in view of trains coming through at 4-10 minute intervals.

C-012-012
C-012-013
- The DEIS fails to note that the WSDOT felt that the noise and aesthetic impacts to the Center from I-5 were significant enough in magnitude to justify the installation of a full abatement sound wall along our property. Certainly, with the installation of any rail line, we would expect Sound Transit to replicate this level of mitigation. Additionally, the DEIS needs to recognize the aesthetic impact of a potentially large wall adjacent to the Center and caretaker's house. The DEIS must identify mitigation incorporating architectural design features into the wall face to soften its effect on nearby viewers.

C-012-014
- The DEIS notes that our Center may be eligible for the city of Seattle Landmark status, but that it does not meet the 50 year requirement for NRHP. The DEIS fails to consider that at the time of construction of any of the alternatives, our Property will meet the 50 year requirement for NRHP and may then be NRHP eligible. The DEIS should evaluate mitigation as though the Property is NRHP eligible.

4

energy from passing trains to the ground. See Section 3.6 for proposed transportation-related mitigation, Section 4.5.6 for proposed visual impacts mitigation, and Section 4.7.7 for proposed vibration and noise mitigation. Both the Transportation and Noise and Vibration Technical Reports have also been updated in the Final EIS to reflect changed conditions.

C-012-007

Individual properties are indicated in the Noise and Vibration Technical Report, and although we did not mention the church specifically in the affected environment section, because elevated alternatives did not have vibration impacts, it has since been added to the Final EIS Noise and Vibration Technical Report for all alternatives. However, here is a synopsis for the Latvian Evangelical Lutheran Church in the Noise and Vibration Technical Report for the Final EIS:

- The church impacts are mentioned under the elevated alternatives in Chapter 7.
- Noise monitoring sites are shown in Attachment A, and site M-6 is right behind the church at a residence.
- Detailed noise impact tables are in Attachment B, the Latvian Evangelical Lutheran Church is typically near the top on the second page of each set of tables (one set for each alternative; the church is only under Segment A).
- Attachment C has maps showing the impacts, for example, the Latvian Evangelical Lutheran Church is shown as an impact on Figure C-2a, Alternative A3 impacts.
- Attachments D and E are for vibration and the church is included by address only in Attachment D, and there is an analysis for each alternative, just like the noise. Attachment E is vibration data, and not relevant to the church.

In response to concerns raised about impacts to your church property, Sound Transit has revisited the alignments of the alternatives in Segment A. As now described in the Final EIS, none of the Segment A

C-012-015

- The DEIS needs to address changes to the wheel screeching and other sound issues readily discernible in existing rail lines and identify appropriate mitigation beyond that outlined in the DEIS.

V. Conclusion

C-012-016

It is essential that we preserve the Center at its present location and off-set any adverse impact with acceptable mitigating measures. For instances where the mitigation is insufficient, we expect adequate compensation to off-set any reduction of usefulness, enjoyment or economic value of the Center. In the event of acquisition by Sound Transit, unlike a house, or a commercial building, the dollar value of this kind of loss would be difficult to calculate due to the Center's cultural and historical significance.

We respectfully request that you review these materials and address our concerns carefully and favorably when coming to a conclusion about which of the alternatives to select. We also look forward to working with Sound Transit, and cooperating to mitigate any impacts to our Property. Thank you in advance for your consideration of our comments.

Sincerely,

Latvian Evangelical Lutheran Congregation of Seattle

Andrejs Zamelis, President

Latvian Association of the State of Washington

Sarma Davidson, Chairman

5

alignments would displace the church building, but the western part of the property would be needed. However, Sound Transit's intent is to avoid displacing your church and community operations from the property due to light rail operation.

C-012-008

While the Draft EIS does not detail property by property the specific construction effects for each alternative, it did note that properties along the alignment would be subject to typical construction impacts. See section Section 4.5.3 (Visual), Section 4.7.3 (Noise and Vibration), and Section 3.2.4 (Traffic and Access). Section 4.4.6 also described the construction planning and coordination with affected property owners that would occur. See the Noise and Vibration Technical Report for property-specific information. Mitigation measures are also identified in the EIS for visual (Section 4.5.6) and noise and vibration (Section 4.7.7) impacts.

C-012-009

The realigned roadway needed to maintain access to the property would involve relocating the caretaker's residence, but Sound Transit would provide financial assistance and other services for the relocation, which would include a review of options for relocating near the church. Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for the alternatives.

C-012-010

Please see response to C-012-001 regarding revisions to the A alternatives and response to C-012-002 regarding visual impacts. The noise analysis for the church uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below that criteria. The

THE LATVIAN COMMUNITY CENTER
HISTORICAL & CULTURAL OVERVIEW

Over 1000 people of Latvian origin sought refuge in the Pacific Northwest after the end of World War II, rather than return to their homelands which had been illegally annexed by the Soviet Union. There were also immigrants of two other Baltic nations: Lithuania and Estonia. Latvian immigrants founded the Washington State Latvian Association in 1949 and the Latvian Lutheran Evangelical Congregation of Seattle in 1950. Their first Seattle home, purchased in 1955, was located at 4233 Densmore Avenue North in Seattle. The desire to congregate with fellow Balts led to developing the building for use as a church, school and social center. Thirteen years later in 1968, the City of Seattle announced its intent to acquire this property through the process of eminent domain in favor of developing the Wallingford Playfield and by 1970 the acquisition was completed.

The Latvian community raised funds and broke ground at 11710 3rd Avenue NE, Seattle on March 31, 1971. The new Latvian Center was designed and constructed by volunteers who donated over 8500 hours of their time after work and on weekends. The Center includes a church, minister's office, a large hall with stage and kitchen, classrooms and meeting rooms, a library, a playground, a caretaker's home and a parking lot. The dedication ceremony was held at this site on February 6, 1972. It was officiated by the Archbishop of the Latvian Evangelical Lutheran Church in Exile Arnold Lūsis, Dean Robert Āboliņš of the Seattle congregation and 11 other clergymen. The attendance of so many church leaders from across North America attests to the significance of this event well beyond Seattle.

The Latvian Community Center is the sole facility in Washington State serving the Latvian, Estonian and Lithuanian communities. It has been visited by Baltic presidents, ambassadors and governmental ministers, as well as U.S. Senators and Representatives. The current president of Latvia, Andris Bērziņš, is scheduled to visit on September 22, 2013. It is an official voting precinct for the Latvian government, serving citizens of Latvia who reside in our region. The Center is crucial for the continuation of Baltic cultural, educational and religious activities in the Northwest.

The Latvian Community Center, in addition to its broader cultural events, has also been the site of many family and personal celebrations. Both the church and center's hall have been used for weddings, christenings and confirmations, as well as anniversaries and birthdays. Many members of our community have had their memorial services and funerals at the very same location.

Multiple generations of Latvians work hard with each other to pass on their rich heritage at the Seattle Latvian Community Center. The Center's large dance hall and stage accommodates weekly Latvian folk dancing and choir rehearsals. We are proud to share this cultural wealth by performing folk dances at the Seattle Public Library, singing and dancing at Bellevue Sister City events and at Northwest Folklife, as well as opening the Center's doors to the general public for events such as the Christmas bazaar, spring rummage sale and concerts. Losing the Latvian Community Center would be a severe and eventually fatal blow to this vital community. An outline is attached describing the many groups that currently use the Latvian Community Center on a regular basis.

FTA criteria for noise are based on exterior noise levels and are more stringent than the criteria for traffic. It is Sound Transit's policy to mitigate moderate or severe impacts. Section 4.7.7 of the Final EIS describes the potential mitigation measures. As described in earlier responses, the Final EIS includes updated information on impacts and mitigation now that the at-grade alternatives do not displace the church. Section 4.13 of the Final EIS discusses electromagnetic fields, which are produced whenever electricity is used. No sensitive receptors (i.e. hospitals, radio stations) are within the range of the light rail line. It is not expected that the light rail would interfere with the Latvian Evangelical Lutheran Church's radio.

C-012-011

Please see noise discussion in response to C-12-010.

C-012-012

Noise walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, if any existing WSDOT noise walls are removed and replaced as part of the project, they will be placed and designed to provide the same or better noise reduction as the existing wall, with no increases in highway noise levels.

C-012-013

Please see responses to C-12-003 and C-12-005.

C-012-014

The Latvian Evangelical Lutheran Church, built in 1971, does not meet the age criteria for the National Register of Historic Properties (NHRP), but it does meet Seattle's 25-year threshold for landmarks. See Section 4.16.1 and Section 4.16.2 of the Final EIS for additional information on the landmark process.

THE LATVIAN COMMUNITY CENTER
11710 3rd Avenue NE, Seattle, WA 98125

USE BY LATVIAN GROUPS

Latvian Evangelical Lutheran Congregation of Seattle

- Established in 1950
- Over 300 members in 2013
- 48 church services in 2012; three per month in Latvian, one in English
- Site of christenings, confirmations, weddings, funerals, ordinations and archbishop visits
- Congregational breakfasts and potlucks follow services on holidays
- Funds are raised to support congregations and rebuild churches in Latvia
- Daira Cilne, the congregation's fourth pastor, has served since 2002

Ladies' Committee of the Latvian Evangelical Lutheran Congregation of Seattle

- Prepares food for church socials
- Raises funds to support the church and other charitable causes

Latvian Association of the State of Washington

- Established in 1949
- 295 members in 2012; over 800 Latvians in Washington state
- Organizes cultural and educational activities at the Center
    - Observance of Latvian national holidays and anniversaries
    - Performances by touring Latvian musicians and theatrical groups
        - Performances and events typically attended by 80 – 200 people
    - Christmas Bazaar; food and culture shared with the Seattle community
    - Rummage Sale; raises funds for Center maintenance
        - Christmas Bazaar and Rummage Sale visited by hundreds from the Latvian, Seattle and greater Puget Sound communities
    - Art shows by local Latvian artists
- Supports education
    - Scholarships for youth to attend Latvian summer high schools
    - Donations to the Seattle Latvian School and summer high schools
    - University of Washington Baltic Studies Program fundraising events
- Publishes a bi-monthly newsletter of events and news in Latvian and English. Mailed to 335 current and former members of the Association. A few times a year it is mailed to an expanded list of 650 Latvian addresses in Washington State.

Seattle Latvian School

- Established in 1950
- The curriculum includes Latvian language, literature, history and culture
- Twenty students in the 2012-2013 academic year
- Classes take place Saturday mornings from fall through spring

C-012-015

Wheel squeal only occurs on tight radius curves, not on a straight section of track, like the ones along this segment of the corridor.

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. The FTA criteria for noise are based on exterior noise levels and are more stringent than the criteria for traffic. Sound Transit's policy is to mitigate moderate or severe impacts. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

C-012-016

Please see the previous response to comment C-012-004.

As noted in Section 4.1, any acquisition of property would involve compensation to the property owner in accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970; the Washington State property acquisition policies and procedures in Chapter 8.26 Revised Code of Washington (RCW); and Sound Transit's adopted Real Property Acquisition and Relocation Policy, Procedures, and Guidelines.

- The school prepares students to attend Latvian summer high schools and university programs in the US and Latvia
- School graduate, Pēteris Elferts, was a member of Latvian Parliament and served as Latvian Ambassador to Ireland.

Latvian Folk Dance Group Trejdeksnītis

- Established in 1962 for teaching traditional Latvian folk dances
- 28 dancers in 2012, mostly high school and college students
- Rehearsals at the Center every Sunday, September through July
- Annual performances and events at the Latvian Center
  - Trejdeksnītis Spring Program; in 2013 it served as a fundraiser for the group's trip to Latvia to take part in the Latvian Song and Dance Festival
  - Christmas Bazaar
  - Host the New Year's Eve celebration for the Latvian community
  - Skandia Folkdance Society Annual Ball
- Annual performances for the Seattle area community
  - Seattle Public Library's Baltic Rites of Spring, in its 9th year in 2013
  - Yulefest at the Nordic Heritage Museum
  - Folklife Festival at the Seattle Center
- Performances at Latvian Song and Dance Festivals
  - In the past ten years alone: San Francisco, Toronto, Indianapolis, Ventura, Milwaukee, and Hamilton, Canada
  - In 1990, 1998 and 2013 – Riga, Latvia

Seattle Latvian Choir

- The Latvian choir "Sigulda" rehearses at the Center weekly
- Its 25 members perform in church on holidays, and in the hall at various events, including the commemoration of Latvia's Independence Day
- The choir has performed at many Latvian Song and Dance Festivals
- In 2012 "Sigulda" performed at Bellevue City Hall to honor the 20th anniversary of the sister city relationship between Bellevue and Liepaja

Latvian Cooking and Handcraft Groups

- The Latvian cooking group meets in the Center kitchen on Saturdays. Experienced chefs and bakers share Latvian recipes with younger generations.
- Two handcraft groups meet regularly at the Center to create traditional handcrafts and assist folk dancers in making Latvian folk costumes. One member, Skaidrīte Ābolina, was recognized by the City of Seattle and the Governor for her culturally significant work.
- Raises funds hosting lunches and events for Center maintenance and charities

Use of the Latvian Community Center
11710 3rd Ave NE Seattle

Seattle Latvian Library

- A volunteer-run lending library of books and recorded materials in Latvian
- Duplicates received from private collections are donated to libraries in Latvia
- Provides reading material for the Latvian Book Club

Latvian Fraternities and Sororities

- Meetings and events, including the annual University Ball
- Fundraising and charitable activities

Latvian Seniors

- Meet at the Center monthly for lunch and activities
  - Presentations and discussions about culture and current events
  - Show movies, TV specials and slides from Latvia or on Baltic issues
  - Entertain on another with skits, songs and poetry

Seattle Latvian Golf Association.

- Annual golf tournaments at Jackson Park Golf Course are followed by an awards dinner at the Center; in its 12th year in 2013
- In 2013 - 72 participants from Seattle, California, Arizona, Illinois and Michigan

USE BY THE LATVIAN GOVERNMENT

Voting precinct

- The Center is one of 15 voting precincts in the U.S. for Latvian national elections
- 125 people from Washington state and B.C. cast votes for the Latvian Parliament in 2011
- Many American Latvians have dual U.S. and Latvian citizenship, with voting rights in both countries

USE BY BALTIC AND ACADEMIC COMMUNITIES

Estonians and Lithuanians

- Estonians hold a church service at the Center once a month
- Lithuanians and Estonians celebrate national holidays and special events at the Center
- Memorial church service and program to remember Balts deported by the Soviets, organized and attended annually by Estonians, Latvians and Lithuanians

Baltic Studies Program at the University of Washington

- Annual fundraising auction and dance at the Center for the Baltic Program Fund

- Since 1994 Estonian, Latvian and Lithuanian languages, culture, literature and history have been taught at the University of Washington. This is the only such program in the U.S.
- The Baltic Program Fund, also since 1994, supplements the Program's budget and is building the Endowment for the Baltic Program to ensure a permanent program
- The University of Washington Tour Choir visited Estonia and participated in the Latvian Song and Dance Festival in July, 2013

LATVIAN COMMUNITY CENTER CARETAKER HOME

- For 25 years the Petersons family has lived in the home on the property and cared for the Center building and grounds
- Their round-the-clock presence provides added security
- Selga Petersons coordinates the Center calendar and caters many events there, including a monthly lunch for Latvian seniors

A TYPICAL WEEK AT THE LATVIAN COMMUNITY CENTER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Latvian Lutheran Church (weekly) Latvian folk dance rchearsal (weekly) Estonian Church (monthly)		Latvian senior lunch (monthly)	Latvian choir rehearsal (weekly) Latvian Association Board meeting (monthly)			Latvian school (weekly) Latvian cooking and handcrafts groups (weekly)

LITHUANIAN-AMERICAN COMMUNITY

WASHINGTON STATE CHAPTER
1019 NE 130th Street, Seattle, WA 98125-4069
(206) 282-9910 • lithseattle@hotmail.com

September 16, 2013

Sound Transit
401 S. Jackson St.
Seattle, WA 98104

Dear Sound Transit Board,

C-012-017

I am writing to express my concern regarding how the proposed light rail line will affect the Latvian Lutheran Church. The Latvian Center (the Church and its large hall) is used heavily not only by Latvian-Americans but Lithuanians and Estonians as well. Negative impacts must be minimized at all costs.

We Lithuanians do not have our own church, school or office buildings. We rely heavily on our brother Balts, the Latvians, to share their Latvian Center with us. Although over the last 40 years we have been "renters" and not "owners" of the facility, we have come to cherish it as our own.

The Lithuanian-American Community of Seattle has enjoyed the use of the Latvian Center for community celebrations and other events such as fundraisers for the Baltic Studies Program at the University of Washington.

The Latvian Center has been the site of folk dance practices and performances, concerts by local and visiting Lithuanian musicians, wedding receptions and memorial services. The hall has hosted visiting dignitaries such as Vytautas Landsbergis, the first head of state of newly independent Lithuania, Senator Maria Cantwell, Congressman Jim McDermott, two Lithuanian Ambassadors to the United States, and trade delegations from Lithuania.

We have gathered at the Center for these and many other community-centered commemorations, often in conjunction with our Baltic brothers and sisters (for example, the annual joint church service and commemoration of the deportations of Estonians, Latvians, and Lithuanians to Siberia). We have held educational lectures, fundraisers, and political meetings. And for decades during the Soviet occupation of the Baltics, the Latvian Hall was the gathering place for community activists working together on critical items related to re-establishing the independence of our three countries.

The Center, with its many organizations and activities, serves as our extended family, especially to those of us who immigrated to America without grandparents, uncles, aunts and cousins. Once torn, the rich social fabric of the Latvian Center may be irreparably compromised.

The Seattle Lithuanian-American Community feels very strongly that preserving the Latvian church and community hall in its present location, and keeping it open during construction, is of paramount importance not only to the Latvian community but to the Lithuanian and Estonian communities as well.

Rimas Miksys
Rimas Miksys
President
Lithuanian-American Community, WA State Chapter

C-012-017

Please see the response to C-009-001.

Honorary Consul of the Republic of Estonia
in Seattle, Washington

September 11, 2013

Sound Transit
Draft EIS comments
c/o Lauren Swift
401 S. Jackson St.
Seattle, WA 98104

Dear Members of the Sound Transit Board,

C-012-018

I am writing to you in hopes of helping convey a strong message in support of preserving the Latvian Community Church and Meeting Hall located at 11710 – 3rd Ave. NE, Seattle, WA. It is my understanding that Sound Transit is considering possible routes through northeast Seattle which might impact the Latvian Hall.

C-012-019

As a member of the Seattle Estonian Community, the Latvian Hall represents as much of a "home" to our community as it does to Seattle-area Latvians as well as Lithuanians. As our community is smaller than the Latvian community, we have for decades rented the Latvian Hall as the centerpiece of our community meetings, holiday celebrations and cultural gatherings. The Latvian Hall has hosted visiting Estonian Presidents, members of Parliament and other dignitaries. It has also, on a personal note, naturally served as the site of my wedding in 2004, and hosted the funerals of my family members.

The Seattle Estonian community cherishes the Latvian Hall and our relationship with the Latvian and Lithuanian communities. The Latvian Hall is the foundation of that relationship and with its large auditorium, church and meeting rooms, it uniquely serves this purpose for our mutual use. The history we have shared over the decades within the walls of the Latvian Hall is immeasurable. During the Soviet occupation of the Baltic States, the Latvian Hall was a rallying place for legislative and political efforts in support of re-establishing independence in our homelands. Subsequent to the

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Seattle, Washington 98117

Phone: (206) 310-2153
Fax: (206) 284-4061

C-012-018

Please see the response to C-005-001.

C-012-019

Please see the response to C-005-002.

Honorary Consul of the Republic of Estonia
in Seattle, Washington

C-012-019

culmination of those efforts, the Latvian Hall continues to bind our communities through co-hosted community celebrations, fundraisers and commemorations.

I simply cannot imagine a vibrant Estonian, Latvian or Lithuanian community existing in Seattle without the Latvian Hall. I implore you to preserve this most important foundation of our shared community.

Most sincerely,

Paul A. Raidna
Honorary Consul
Republic of Estonia

9133 View Avenue NW
Seattle, Washington 98117

Phone: (206) 310-2153
Fax: (206) 284-4061

SCANDINAVIAN STUDIES
UNIVERSITY of WASHINGTON

September 16, 2013

Sound Transit
Draft EIS Comments, c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

To the Sound Transit Board:

C-012-020 We are writing to express our concern for the future of the Latvian Community Center, located at 11710 - 3rd Avenue Northeast. As you know, the Center's activities will be affected by the light rail extension that is planned along Interstate 5.

The University of Washington's Department of Scandinavian Studies maintains close ties to Seattle's Latvian, Estonian, and Lithuanian communities, who all organize many events at the Latvian Center. Students and instructors in UW's international studies programs attend concerts, lectures, films, and theater performances, to learn about these countries and their people. Student tickets and parking are inexpensive (much cheaper than flying to the countries!), because the Center is owned by the Latvian community. The Scandinavian Department's Baltic Studies Program is the only program in the United States to teach Estonian, Latvian, and Lithuanian, three languages that are often spoken at Latvian Center events where UW's foreign language students can practice their language skills.

The UW Scandinavian Department also organizes events at the Latvian Center. The Center's central location, parking lot, and kitchen facilities make it an ideal place for community outreach activities such as our annual "Baltic Saint Martin's Day" celebration, lectures, and other events that UW co-hosts with community organizations.

C-012-021 For the next few years, construction of the light rail line will disrupt these educational events for our students and faculty, as well as UW community outreach opportunities at the Latvian Center. We hope that when construction is finished, the Latvian Center will be able to continue hosting the vibrant cultural life that enriches the education of our students and teachers and off-campus communities.

We hope that representatives of Sound Transit will be able to attend the UW Baltic Program's "Martin's Day" celebration on October 26, 2013, to see for themselves that the Latvian Center is an incredible gift to the Seattle community. We hope that Sound Transit will take every possible step to ensure that the Center can continue its activities during and after light rail construction.

Please contact the Department of Scandinavian Studies if further information is needed.

Sincerely,

Jan Sjåvik, Chair

Guntis Šmidchens, Associate Professor

UW Department of Scandinavian Studies, 206-543-0645; uwscand@uw.edu

318 Raitt Hall Box 353420 Seattle, WA 98195-3420
206.543.0645 fax 206.685.9173 uwscand@uw.edu https://scandinavian.washington.edu/

C-012-020

Please see the response to S-002-001.

C-012-021

Please see the response to S-002-001.

Ann-Marie Petersons
Co-Director
Seattle Latvian School
11710 3rd Ave N
Seattle, WA

September 20, 2013

Sound Transit
C/o Lauren Swift
401 Jackson Street
Seattle, WA 98104

Dear Sound Transit:

C-012-022

On behalf of the Seattle Latvian school students, families and graduates we would like to express our concerns about the Northgate light rail expansion.

The Seattle Latvian School was established in 1950 for the purpose of teaching Latvian language, culture, and history. Since its inception, it has been a significant pillar in the small but active Latvian community in the Pacific Northwest. Hundreds of students have graduated from the school and as adults most students continue to be active participants within the larger community. The effect is that the school has a generational impact on our community. Almost all of the parents of our current students attended our school when they were young.

The Latvian Center and Church has several dedicated classrooms for the school. This enables our teachers to create an immersive cultural environment for our children. It would be very difficult to re-create this environment should we need to look for an alternative location to hold our school.

Our enrollment ranges in size from 25 to 50 students and this fall we will welcome 25-30 pupils. Currently, all of our students are under 9 years of age, although typically we have students from 3 to 14 years old. We are disheartened to think that these children might not have an environment to further their Latvian education as they grow older.

C-012-022

Please see the response to C-041-001.

C-012-023

Sound Transit
September 20, 2013
Page 2

We urge the transit commission to work closely with the Latvian and Northgate communities to find a solution that allows continued access to the building and mitigates all impacts so that our School can continue operating successfully. Impacts to the school from the light rail include, but are not limited to, noise coming from the tracks during outdoor time, vibration, and lack of parking in the event any of the alternatives result in reduction in parking. In addition, Sound Transit should plan to relocate the school temporarily during construction since a closure of the school for any period would be disruptive to the children and the education we provide.

While school is primarily on Saturday mornings, we also have several events that are held on weekend evenings with adults and community members are present. If parking is severely limited, this will impact our ability to hold those events.

Thank you in advance for reviewing our school's comments and taking them into consideration when considering this expansion of mass transit.

Sincerely,

Ann-Marie Petersons

C-012-023

Please see the response to C-041-002.

SIGULDA

Sound Transit DEIS Comments
c/o Lauren Swift
401 S. Jackson St
Seattle WA 98104

September 18, 2013

Re: Lynnwood Link Light Rail Extension

I am writing on behalf of the Latvian choral ensemble Sigulda, based in Seattle. Our 25 member group was established in 1985 and has performed at multiple events in the Seattle area over the years. Sigulda sings for Latvian functions and church services, as well as for other community performances, including Northwest Folklife and the Bellevue Sister Cities Association.

C-012-024

It is a great concern to us that the Seattle Latvian Community Center is endangered by all of the alternatives currently proposed in the DEIS. We hold weekly rehearsals in the hall at the Center, located at 11710 3rd Avenue NE. We have always had a need for piano accompaniment and hence have never been able to fit rehearsals of that size in any one individual's home.

We urge Sound Transit to find an acceptable version of developing the light rail project through the Northgate area that allows the Seattle Latvian Community Center & Church to remain a vital, functioning property. There simply is no other location within the Baltic community that serves such a prominent role throughout the Pacific Northwest.

Please consider the needs of the local citizens who use this Center so frequently and on so many different levels, as you move forward with this project. Thank you for your consideration.

Sincerely,

Inese Bergman, Sigulda member
611 Birch St
Edmonds WA 98020

C-012-024

Please see the response to C-035-001.

Sound Transit
Draft EIS Comments
c/o Lauren Swift
401 S. Jackson St.
Seattle, WA 98104
LynnwoodLinkDEIS@soundtransit.org

Dear Sir or Madam:

C-012-025

I am writing today regarding access to the Latvian Cultural Center (next to I-5 near 117th and 3rd) during and after construction of the planned light rail extension to Lynnwood. As the current Artistic Director of Seattle's Latvian folk dance ensemble, Trejdeksnitis, I would like to impress upon you the need for access to our rehearsal and performance space.

Trejdeksnitis has 3 hour rehearsals every Sunday evening during the dance season, roughly September through the following July. We are not only learning the traditional dances that have been taught to Latvians for many years, we are learning new dances from Latvia as well. We also have a number of choreographers in our group that create dances each and every year for us to learn. A number of these have received top awards at the North American Latvian Song and Dance Festivals. These festivals are just a few of the performances we participate in.

Currently, we regularly perform around the greater Seattle area at a number of functions including: Yulefest at the Nordic Heritage Museum, annual Christmas Bazaar at the Seattle Latvian Cultural Center, Baltic Rites of Spring (initiated almost 10 years ago by the Seattle Public Library) at the Downtown branch of the Seattle Public Library, annual Spring Program at the Seattle Latvian Center, Folklife at the Seattle Center, and the Midsummer Festival called Jani at the West Coast Latvian Educational Center near Shelton. Last year we were also asked to perform at the annual meeting for the American Latvian Association, and the annual Ball for the Skandia Folkdance Society, which was held at the Seattle Latvian Center for the first time. The Skandia Folkdance Society was so impressed with the venue that they immediately booked it for the following year. This year we have already been asked to perform at the holiday bazaar at the Portland, OR Latvian Center, and at the annual St. Martin's Eve fundraiser for the Baltic Studies Program at the University of Washington held at the Seattle Latvian Center.

Last Sumner we danced in Riga, Latvia as performers in the Latvian National Song and Dance Festival. This event occurs every 5 years and this year involved almost 15,000 dancers. It was

TREJDEKSNĪTIS - 11710 3rd Ave N.E. - SEATTLE, WA 98125 – www.trejdeksnitis.org

C-012-025

In response to concerns raised about impacts to the church property, Sound Transit has revisited the design details of the Segment A alternatives. As now described in the Final EIS, none of the Segment A alternatives would displace the church building, but the western part of the property would be needed. However, Sound Transit's intent is to avoid displacing your church and community operations from the property due to light rail operation.

an amazing experience for us, and for some a once in a lifetime event. Trejdeksnitis participated in the same event back in 1990, 1993, 1998, and we hope to be there in 2018.

C-012-026

However, to make it there we must have access to our rehearsal space. Currently we don't pay any rent at the SeattlenLatvian Center since we are under the umbrella of the Latvian Association of the State of Washington. If we had to go elsewhere for practice we would have to pay an average of $300 per week, and dancers would have to start paying dues to cover the cost. Currently we pay none. If this occurs, we would loose many if not all of our dancers. The majority of the dancers are in school, (High School - Graduate level) and would not be able to afford it.

It is imperative that all construction related impacts to the Seattle Latvian Center be mitigated in a manner which allows our continued use of this facility during construction and that the long term impact resulting from the operation of the light rail system be mitigated in a manner allowing our continued use of this facility.

If we lose access to the Seattle Latvian Center, even for a few months, this will not only cost us money for rehearsal space rental that we cannot afford, but might cost us dancers as well. We are a volunteer organization and the harder you make it for people to attend, the harder it is to get them to keep coming back. Currently we have 4 performances scheduled between now and Thanksgiving. This could well be the case every year from now on. Thus we desperately need access to the Seattle Latvian Center to be uninterrupted each and every year.

If you are interested in seeing what sort of dancing we do, I invite you to look us up on youtube, and to take a look at our facebook page

https://www.facebook.com/pages/Trejdeksnitis/160625053988041?ref=hl

Thank you for your time, and I look forward to hearing from you.

Kathrine Young
Artistic Director, Trejdeksnitis

TREJDEKSNĪTIS - 11710 3rd Ave N.E. - SEATTLE, WA 98125 – www.trejdeksnitis.org

C-012-026

Thank you for your concerns about the potential displacement of the Latvian Evangelical Lutheran Church and for highlighting its significance to the region's Baltic community. This was the most frequent topic noted in the Draft EIS's public comment, and the Sound Transit Board subsequently directed Sound Transit to explore a Preferred Alternative that would avoid displacing the church. Since the publication of the Lynnwood Link Extension Draft EIS in June 2013, additional engineering was undertaken to reduce adverse effects on the Latvian Evangelical Lutheran Church property and facilities located at 11710 Third Avenue NE, Seattle. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). Access to the property and its functions have been maintained.

Several sections in the environmental document have been updated to address these changes including: Section 2.5.1 describes the refined alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods; Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative. Compensation would be provided if the alternative selected for construction would require acquisition of land or improvements as is required by the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970; the Washington State property acquisition policies and procedures in Chapter 8.26 Revised Code of Washington (RCW); and Sound Transit's adopted Real Property Acquisition and Relocation Policy, Procedures, and Guidelines.

Construction of the light rail guideway in proximity to the Latvian Evangelical Lutheran Church would take approximately 1 to 2 years, a

AMERIKAS LATVIEŠU APVIENĪBA

American Latvian Association in the United States, Inc.

400 HURLEY AVENUE
ROCKVILLE, MD 20850-3121
TEL: (301) 340-1914; FAX: (301) 340-8732

August 28, 2013

Pat McCarthy
Pierce County Executive
Sound Transit Board Administration
401 S. Jackson Street
Seattle, WA 98104

Dear Ms. McCarthy:

C-012-027 We are writing to you on behalf of the American Latvian Association Board of Directors and the 90,000 member strong US Latvian Community to express our deep concern regarding the news from Seattle Latvian Organizations that their historic Community Center is in jeopardy due to the Sound Transit plans of extending the Lynwood Link railway line.

C-012-028 The Seattle Latvian group is our largest member organization with several hundred active Latvian families, who utilize the property at 11710 3rd Avenue NE as the "epicenter" for ethnic activities. Regular Church services, Sunday school for children, ethnic celebrations and gatherings, Latvian choir and dance group rehearsals, as well as weddings and funerals take place there. It is one of the three largest and best organized Latvian centers on the West coast, in addition to Los Angeles and San Francisco.

ON A LARGER SCALE, it is not only the Latvian community that would be affected by the proposed transit line; the center is regularly used by Estonians, Lithuanians and even the students at the University of Washington Baltic Study program – the only such program in the United States.

HISTORICALLY, The center is of important cultural heritage and importance to Seattle area Latvians and Balts. When the Latvian refugees were admitted to the United States after the WWII, several hundred settled in the Seattle area. They organized, purchased land and built the first Latvian Center on Densmore Avenue North in 1955. Unfortunately, in 1969, the City of Seattle took the property for development of the Wallingford Playfield. Next year, the history may repeat itself – the second center, built by Latvian volunteers in the 1970s on the 3rd Avenue, is in danger of being expropriated.

The center is crucial for the continuation of Latvian and Baltic cultural, educational and religious activities, it has been visited by all the Baltic presidents, ambassadors and several government ministers, as well as US Senators and ambassadors. It is the home of:

- Seattle Latvian Evangelical Lutheran Church, established in 1950
- Washington State Latvian Association, established in 1949
- Seattle Latvian School, established in 1950
- Latvian Folk dance group "Trejdeksnītis", established in 1962
- Seattle Latvian Choir
- Seattle Latvian Library
- Latvian student fraternities and sororities
- Latvian Seniors' club.

(Over, please)

longer period for elevated alternatives. Construction work would predominantly occur between 8 am and 6 pm during weekdays with occasional nighttime and weekend construction. Near-term construction activities would be communicated to adjacent property owners through a proactive community outreach plan and may include newsletters, Internet postings, community meetings, and direct contact by a Sound Transit representative. Reconstruction of the noise wall on the west edge of the church property would require negotiation of a temporary construction easement that would be negotiated prior to the start of construction.

Sound Transit intends to maintain access to the church and community center buildings during construction, though the access may differ somewhat from existing conditions for short periods. Other short-term impacts would include visual, air quality, and noise impacts. They would be avoided and minimized with the implementation of best management practices. These would include fencing the construction area for public safety, spraying the construction area with water to reduce dust, and use of temporary noise walls where practical. For additional information, see Sections 4.5.7, 4.6.7, and 4.7.7, respectively.

C-012-027

Please see response to C-002-001.

C-012-028

Please see response to C-002-002.

IN ADDITION, it is the place for one of the 15 polling centers in the United States organized by the Latvian government and the American Latvian Association for Seattle area Latvian citizens to cast their ballots in Latvia's National Elections.

C-012-029

Please keep Seattle diverse! Do not allow the proposed transit line destroy the Latvian Center! If we lose this site, we lose more than a building, and we fear that the local Latvian community will not have the means, manpower and moral strength to rebuild their center for the third time!

Sincerely,

Anita Batarags
President and Board Chair

Raits Eglitis
Secretary General

C-012-029

Please see response to C-002-003.

SEATTLE LATVIAN LUTHERAN CHURCH
11710 3rd Ave. NE, Seattle, WA 98125

Pastor Daira Cilnis, D.Min.
10702 Lakeside Ave. NE, Seattle, WA 98125
206-674-9600
cilnis@earthlink.net

September 18, 2013

Sound Transit Comments c/o Lauren Swift
401 Jackson St.
Seattle, WA 98104

To the Board of Sound Transit:

C-012-030

The Seattle Latvian Lutheran congregation is experiencing a feeling of *deja vu.* Yet again it has become a possibility that our church and community center will be taken from us, as it was 44 years ago. For the older members—this is the place they built with their hands, volunteering their time, after work and on weekends. Built not only with brick and mortar, but also with hopes and dreams—a center for their children and grandchildren, so that they too could learn about their Latvian heritage.

In the 42 years since we are in our present location, this has become our Latvian church home. It's where we gather on Sundays to worship in the language of our heart—the only place in Seattle, where services are held in Latvian. And, since our community has now grown to include many "adopted Latvians" who many not speak the language, but do feel at home—we also have services once a month in English.

It's the spiritual home to which our children and grandchildren return for Christmas and Easter. It's where we celebrate the birth and baptism of our little ones. (Next Sunday, we will be baptizing Kevin Erik, whose mother was also baptized in our church—a continuity that adds richness of meaning for both parents and grandparents!)

It's where we rejoice with young couples (and occasionally, not so young!) as they set out on the journey of marriage—and where we mourn those whose life journey has come to an end. In church, our family home.

I speak for all of us—the founding members who built our church, their children who are now bringing their own children here, as well as our dear "adopted" Latvians: it is our hope and our prayer that this time it won't be *deja vu,* that Sound Transit will find a way to let us remain in our church home that is so important to our lives.

Sincerely,

Pastor Daira Cilnis

C-012-030

Please see response to C-034-001.

LBVS **Latvian Association of the State of Washington**

P.O. Box 75081
Seattle, WA 98175-0081

Sound Transit
c/o Lauren Swift
401 S. Jackson St.
Seattle, WA 98104

C-012-031 We, the 300+ members of the Latvian Association of the State of Washington, are deeply concerned and bitterly disappointed about your proposed Light Rail plan. If the plan proceeds, it will drastically disrupt the well-being and perhaps even destroy the existence of the Latvian Lutheran Church and Cultural Center. Your planned construction of the Light Rail link between Northgate and Lynnwood does not seriously consider the social, cultural and physical impact on our old and well established multifunctional Center.

C-012-032 As you know, our first church and cultural center was taken for a park by the city of Seattle in 1969. Now it appears that we are facing possible condemnation and eviction for the second time in our 62-year history. In addition to our bitterness about the proposed plan, we most emphatically feel that virtually no consideration was given in your earlier planning to our facilities and the organizations which depend upon the Center. Although your current options do take minor note of our existence, those options are nonetheless inadequately thought through and need considerable further study. Issues of concern include, among others, track alignment, access, construction impact, noise abatement, geotechnical matters and the destruction of our caretaker's house.

C-012-033 In our opinion, Sound Transit has not fully examined nor addressed and given clear responses to our concerns. There also has been no meaningful rail alignment option given, such as relocation of the rail bed. There have been no solutions offered for the noise problems, vibration, lights and radio interference nor is there evidence of geotechnical studies having been performed.

For these reasons we request that you seriously review your plans and reconsider the DEIS and provide us with other workable alternatives.

Sarma Davidson

Sarma Davidson,
Chairperson

Sarma Davidson	Inta Wiest	Valdis Jodais	Talis Jaundalderis	Aina Uskurs	Ingrid Doherty	Paul Kalnins Daina Kusins
Chairperson	Vice-Chairperson	Treasurer	Assistant Treasurer	Secretary	Membership	Board Members

C-012-031

Please see response to C-030-001.

C-012-032

Please see response to C-030-001.

C-012-033

Please see response to C-030-001.

PULCINA PĀRBTĀV UZTUR

Karlis Lenšs
Amerikas Latviešu Jautatnes Apvieniba

September 18, 2013

SOUND TRANSIT
c/o Lauren Swift
401 S. Jackson St.
Seattle, WA 98104

To Whom It May Concern,

I am writing to you on behalf of the American Latvian Youth Association ("ALJA"). Our mission, since our founding in 1952, has been the furtherance of Latvian culture, language, and knowledge among Latvian youth across all of the United States. Over the past 61 years, we have had thousands of members throughout the country, and we are currently as active as ever in our history. While most of our membership resides in the Midwest, a core component of our ability to succeed in our mission is broad support from all of the Latvian community centers in the country. Since 1971, we have frequently used the Seattle Latvian Center for meetings and events. In addition, on several occasions, we have held our biggest annual event, Congress, in Seattle. From our perspective, The Latvian-American "experience" in Seattle is not rooted in Pike Place Market or the Space Needle. It is the Seattle Latvian Center, nestled amongst towering evergreens on the north Side of town, that for generations has served and nurtured our tight-knit community. While it may seem like another just another social hall or private structure standing in the way of a public works project, to us the Seattle Latvian Center truly *IS* Seattle. Countless weddings, confirmations, Youth Congresses, and other special events within the Latvian community have happened there. The Seattle Latvian Center is the largest and most vibrant in the Pacific Northwest, and I personally consider it the most uniquely beautiful Latvian community center in the United States. It is not just a simple social hall, but also a church and Latvian language school for our children. It was built from the ground-up by our fathers and grandfathers and to us, its importance goes beyond the bricks and mortar of the building itself.

This is especially true to our aging community members throughout America. To them their local Latvian community center is home. The Seattle Latvian Center is no different. Having lived through the horrors of World War II and the Soviet Occupation, our elderly population would definitely be the most affected by the loss or relocation of the Latvian Center. It will be recalled that the Soviet Union used eminent domain to make public their homes and possessions. To allow that to happen again, albeit with completely different motives, would no doubt be seen a slap in the face to the elderly Latvian population in Seattle. Our cultural centers embody the decades of work, decades of struggle, and decades of pride within our ethnic community. In Seattle, the Latvian community is vibrant and alive largely as a result of having such a fine facility. For many in Seattle, the Latvian center represents their unique struggle and shows that with grit and perseverance they were able to build a community thousands of miles away from home. The term "negative impact" does not even begin to describe the toll that this project would take on the local Latvian community. The impact on our organization would be the loss of a facility that is integral to the furtherance of our mission.

C-012-034 Accordingly, we request that Sound Transit review each of the alternative routes in the DEIS, and select the one that has the least impact on the activities of the Seattle Latvian Center. To the extent there is an option that allows the Latvian Center to remain in its current location, we respectfully request that such alternative be reviewed and selected, and that any impacts be fully mitigated. The relocation of such a culturally significant facility would have substantial impact on ALJA and would be devastating to the local community in Seattle.

C-012-034

Please see response to C-026-001.

C-012-034 While we understand the need and demand for public transit expansion in the city, our organization, ALJA, on behalf of our members nationwide, urge Sound Transit and the City of Seattle to re-route the proposed railroad to save our largest cultural, educational, and social hub in the Pacific Northwest.

Respectfully yours,

Karlis Lenss
President, American Latvian Youth Association
1777 W Altgeld D
Chicago IL 60614

Pat McCarthy
Sound Transit Board Administration
401 So. Jackson Street
Seattle, Wa. 98104

Dear Ms Pat McCarthy,

C-012-035

We, the members of the Latvian Sorority GUNDEGA, have reviewed the Draft Environmental Impact Statement, attended the community meetings and we are now expressing our deep concern regarding the possible destruction of the Latvian Center and the Church, the cultural pillars of the long standing Latvian and Baltic community. Our sorority members have attended important and historical events at the Church and the Center to meet the presidents of the Baltic countries, to support the UW Baltic study program, to participate in religious services and educational gatherings, as well as to share in ethnic and personal life celebrations. The Church and the Center are the glue holding our organization and our community together, allowing it to grow while preserving Latvian ethnicity and culture. The Latvian sorority tradition dates back to1920s and remains an important part of the Latvian women's lives across generations. Interrupting or eliminating the access to the Church and the Center would severely disrupt our ability to continue our traditions and share our rich cultural heritage with the city of Seattle.

C-012-036

It is of utmost importance that the Lynwood Link Extension construction allows the continued access to the Center, that the caretaker's house is reconstructed and that there is a minimal long-term disruption to the Center's function due to noise disturbance.

C-012-037

Do not allow the proposed transit line to destroy the Latvian Center, Church and the Latvian community.
We have enclosed our signatures.

Sincerely,

Zaiga Alksne Phillips
The president, Latvian Sorority Gundega
10040 Ne 27th Street
Bellevue, Wa.98004

C-012-035

Please see response to C-015-001.

C-012-036

Please see response to C-015-002.

C-012-037

Please see response to C-015-002.

EELK SEATTLE KOGUDUS

Seattle Congregation of the Estonian Ev. Lutheran Church

(Services at the **Latvian Lutheran Church**)

Sound Transit, Comments

c/o Lauren Swift

401 Jackson Street

Seattle, Washington 98104

Dear Folks at Sound Transit!

C-012-038

We have just received some most disturbing news: that you are planning to take away the driveway of the Latvian Lutheran Church at Northgate. That would remove any access to that beautiful and essential building, rendering it totally useless! Please, please try to do what you have to do in some other way! Our Estonian Congregation and other cultural organizations have been using that facility for many years!

Thanking you for your consideration,

Sincerely yours,

The Rev. Hendrik Laur, Pastor

C: The Rev. Daira Cilnis

C-012-038

Please see response to C-021-001.

Latvian Evangelical Lutheran Church Abroad

Archbishop Elmārs Ernsts Rozītis
Schelztorstr.25, D-73728 Esslingen
Germany
Tel +49-711-354623
ERozitis@t-online.de

Ms. Pat McCarthy, Chair of the Board
Sound Transit
County – City Building, Room 737
930 Tacoma Avenue South
Tacoma, WA 98402-2100
U. S. A.

August 16th, 2013

Ms. Pat MacCarthy, Chair of the Board, Sound Transit

Dear Ms. McCarthy,

C-012-039

We have learned, with concern, about the probable adverse effects of a proposed train line on our Seattle Latvian Lutheran Church.

This congregation is a key element for us not only in the US Pacific Northwest, but for our Church in general.

The Seattle congregation also is historically significant to our Church. The late archbishop Dr. Kārlis Kundziņš was part of the congregation while the head of the entire Latvian Evangelical Lutheran Church Outside Latvia. Also, my predecessor archbishop Arnolds Lūsis was consecrated here.

Our Seattle congregation not only provides spiritual care for over 300 members and shelters a school, but its social hall is used for a wide range of religious, cultural and education events.

The Seattle Estonian Lutheran Congregation also has its regular services in the church.

Forcing the congregation from its property, or even compromising its ability to function effectively because of loss of space, or because of noise and vibration, would deal a blow to the community from which it may not recover. Please consider the effects of this on the membership – particularly children, youth and the elderly.

Please choose construction alternatives which would allow this church and community to continue its important work.

Sincerely yours

+ Elmārs Ernsts Rozītis
Archbishop

EVANGELISCH-LUTHERISCHE KIRCHE LETTLANDS IM AUSLAND
LATVIJAS EVANGĒLISKI LŪTERISKĀ BAZNĪCA ĀRPUS LATVIJAS
2. Kor. 12,9

C-012-039

Please see response to C-020-001.

BELLEVUE
Sister Cities

BELLEVUE SISTER CITIES ASSOCIATION
P.O. BOX 90012
BELLEVUE, WA 98009-9012

September 4, 2013

Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St.
Seattle WA 98104

Re: Impact on Seattle Latvian Cultural Center

C-012-040

The Bellevue Sister Cities Association, Liepaja, Latvia Committee would like to add its concern to those questioning the present alternatives for the Lynnwood Link Extension DEIS and the serious impact it will have on further use of the Seattle Latvian Cultural Center.

The Seattle Latvian Cultural Center is a focal place, not only for those of Latvian background living in Seattle, but for all of us in the Pacific NW. The Latvian Association was a strong supporter back in 1992 when Liepaja, Latvia became one of Bellevue's sister cities, support that has continued throughout the past twenty years. The Latvian Cultural Center has been the venue for many of our social and informational as well as our fundraising events during this time. We are concerned that the present plans would greatly affect the use of this facility, a huge loss to us, as well as to the many other organizations that use it on a regular basis.

We hope that you will take this into consideration and provide for access to the Seattle Latvian Cultural Center so it can continue as a gathering place for the many people and organizations that presently use it.

Sincerely,

Inta B. Gotelli, BSCA treasurer
Liepaja Committee

cc. Hugh Burleson, BSCA president

YAO JIANG, HUALIEN, TAIWAN, LIEPAJA, LATVIA, CESKO, CZECH REPUBLIC

C-012-040

Please see response to C-003-001.

C-012-041

Please see response to C-019-001.

World Federation of Free Latvians
400 Hurley Avenue, Rockville, MD 20850-3121 U.S.A.
Tel. (301)340-7646, e-mail: pblaASV@verizon.net

August 29, 2013

Sound Transit
Comments c/o Lauren Swift
401 Jackson St.
Seattle. WA 98104

To whom it may concern:

C-012-041

It has come to our attention that with the extension of the Sound Transit system in the Seattle area the Latvian church and community house may perish. The World Federation of Free Latvians (WFFL), which is the umbrella organization for Latvian communities outside of Latvia, and among whose duties it is to preserve the Latvian heritage - language and culture - as long as possible, hopes that an alternate solution can be found and this particular property will stay unaffected.

The Latvian community in the USA is not a large one and with every passing year, it is more and more challenging for the various Latvian groups to maintain their churches and community centers. The Latvian church and community center in Seattle is particularly important as it is the only one is the state of Washington.

Please give this matter your closest attention and consideration.

Respectfully yours,

Jānis Kukainis
President, WFFL

September 8, 2013

Mežotne, Latvian Children's Language Camp
Inese Graudiņš, Director
3902 San Mar Drive NE
Olympia WA 98506

Sound Transit
Comments c/o Lauren Swift
401 Jackson St
Seattle WA 98104

C-012-042

Having reviewed the Lynnwood Link Extension DEIS, I am very concerned that all of the proposed alternatives will severely impact the Latvian Church and Community Center and the activities of hundreds of families who consider it their „ethnic home".

As a Latvian language camp for 3 to 14 year olds, Mežotne draws its camp participants, counselors, and staff from the various Latvian communities along the West Coast, predominantly from the Seattle metropolitan area. The Latvian language and knowledge of our heritage is a critical staff requirement in order for the camp to function. Thus the continued existence of the Latvian Church and Community Center is of major importance to our existence as well. This is the place where our families have a common bond, a common history, and a language school for their children.

We are now in the third generation of community members born in the U.S. who are still highly immersed in the language and the culture of Latvia, while being just as involved in their American communities. It takes a great deal of effort, time, and money to live in two parallel cultures, and the Latvian community is doing it! We do not want that jeopardized!

Access to and continued use of the Latvian Church and Community Center during construction and long term operation of the Lynnwood Link Extension without undue noise and access problems needs to be guaranteed so that our community does not lose its continuity, so that we are not displaced by obstacles not under our control.

Respectfully yours,

Inese Graudiņš

Inese Graudiņš, Director
Mežotne, Latvian Children's Language Camp
inesegraudins@comcast.net

C-012-042

Please see response to C-016-001.

September 5, 2013

To: Sound Transit
DEIS comments
Lauren Swift

C-012-043

We, members of "United in Art", are extremely concerned about losing our access to the "**Latvian Cultural Center**". It has been our home for many years and a refuge where Latvian artists from the West coast of the U.S. and Canada have organized Art Exebitions and Artist's Conventions. The intrusion of Light Rail will affect a great number of people other than just artists. The location of the "**Latvian Cultural Center**" is ideal because it is close to I-5 and easily accessible by car, therefore, a large parking area is vital.

We understand that Light Rail will bring a lot of good in the way of transportation to a lot of people, but hopefully, **not at the expense of destroying a whole community.** We are begging you to consider all possibilities in solving the parking problem for the "**Latvian Cultural Center**", in order that all the people who have used the center and enjoyed half a century of educational and recreational activities, may continue to do so.

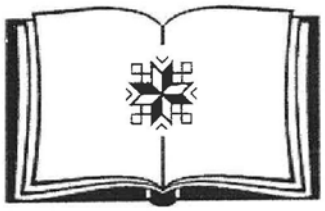
Yours truly,

United in Art, Secretary

C-012-043

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. See Section 2.5.1 for a description of the refined Segment A alternatives that avoid displacing the church.

The modifications for the project include a realignment of the city street serving the church, which will provide a street meeting current city standards, including sidewalks. The parking area would be modified but Sound Transit anticipates the current levels of parking for the church would be maintained.



Sietlas latviešu bibliotēka
11710-3rd Ave NE
Seattle, WA 98125

September 12, 2013

Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St.,
Seattle, WA 98104

C-012-044

Along with other members of the Washington State Latvian community, I am very concerned about the future of our church and community center because of the impact that the Light Rail extension north to Lynnwood will have on our facility.

We have at the center a library with several thousand volumes of Latvian books and journals. The library serves the entire community: older people who feel the need to read in their native language; younger people who want to learn about Latvian authors and Latvia's history; and children in Latvian school, who are studying the Latvian language and learning about the culture of their parents and grandparents.

The library is a source of reading material for our Latvian Book Club, which meets regularly throughout the year. By donating not insubstantial sums to the Baltic Studies fund each time we meet, the Book Club supports the Baltic Studies program in the Scandinavian Department at the University of Washington. UW officials have consistently expressed their gratitude for the great support from the Latvian community.

Each year our Latvian library ships hundreds of books by Latvian authors living in the west to libraries and schools in Latvia. These books were not available, and indeed forbidden, to readers in Latvia during the 50 years of communist occupation.

If we lose the Latvian Center, the library will cease to exist and our community will be deprived of the strong link to its cultural heritage that books provide. We ask you to do everything possible to let us keep the church and center.

Sincerely,

Dr. Vaira Pelekis-Christopher

Dr. Vaira Pelekis-Christopher

Librarian
Seattle Latvian Community Center

C-012-044

Please see response to C-040-001.

LETTONIA
STATE OF WASHINGTON ALUMNI ASSOCIATION

September 14, 2013
Mukilteo

Sound Transit
Draft EIS Comments
c/o Lauren Swift

I am writing to you on behalf of the 22 current members of Latvian fraternity Lettonia State of Washington Alumni Association. Lettonia uses the Seattle Latvian Community Center several times a year for our chapter meetings and important celebrations, like our annual anniversary of the founding of the fraternity in 1870. More importantly many of Lettonia's members were among the Latvians who volunteered both time and money to build the existing facility at 11710 3rd Avenue NE. Because of the work and money the many Latvian fraternities devoted to the Center, we were granted free use of the Center's facilities. Losing this means we will have to use our membership dues to pay for facilities, rather than donating the money to educational causes, like the Latvian school.

All of us have been or still are active in other groups (church, seniors group, choir, folk dancing, golf association) associated with the center, including in leadership roles in these groups, so we will feel the disruption due to the impacts there too.

C-012-045

We request that the Sound Transit board take into account the needs of the Baltic community that utilizes this facility, find mitigations that will allow the Center to remain in its current location and continue to serve this very unique population.

Eric Raisters

fil! Eric Raisters
Secretary
Lettonia, State of Washington Alumni Association
10507 64th Place West
Mukilteo, WA 98275

C-012-045

Please see response to C-031-001.

STUDENTU KORPORACIJA
Fraternitas Metropolitana
1896/1924

To Sound Transit Sept. 3, 2013

Comments c/o Lauren Swift

401 Jackson Street

Seattle, WA 98104

C-012-046 Our organization has reviewed the Lynnwood Link Extension DEIS and concluded that all the alternatives presented severely impact the Latvian Church and Community Center. Our organization, Fraternitas Metropolitana, relies heavily on this facility for fund raising, meetings and annual holiday celebrations. Any disruptions to its availability, whether temporary or permanent , will either severely disrupt our daily activities or lead to its ceasing to exist because the availability of the facilities guarantee our very own existence.

It is imperative that ball construction related impacts to the Center be mitigated in a manner which allows our continued use of this facility during construction and that long term impact resulting from the operation the light rail system be mitigated in a manner allowing our continued use of the facility.

Paul A. Krastins, President

Fraternitas Metropolitana

West Coast Alumni Association Chapter

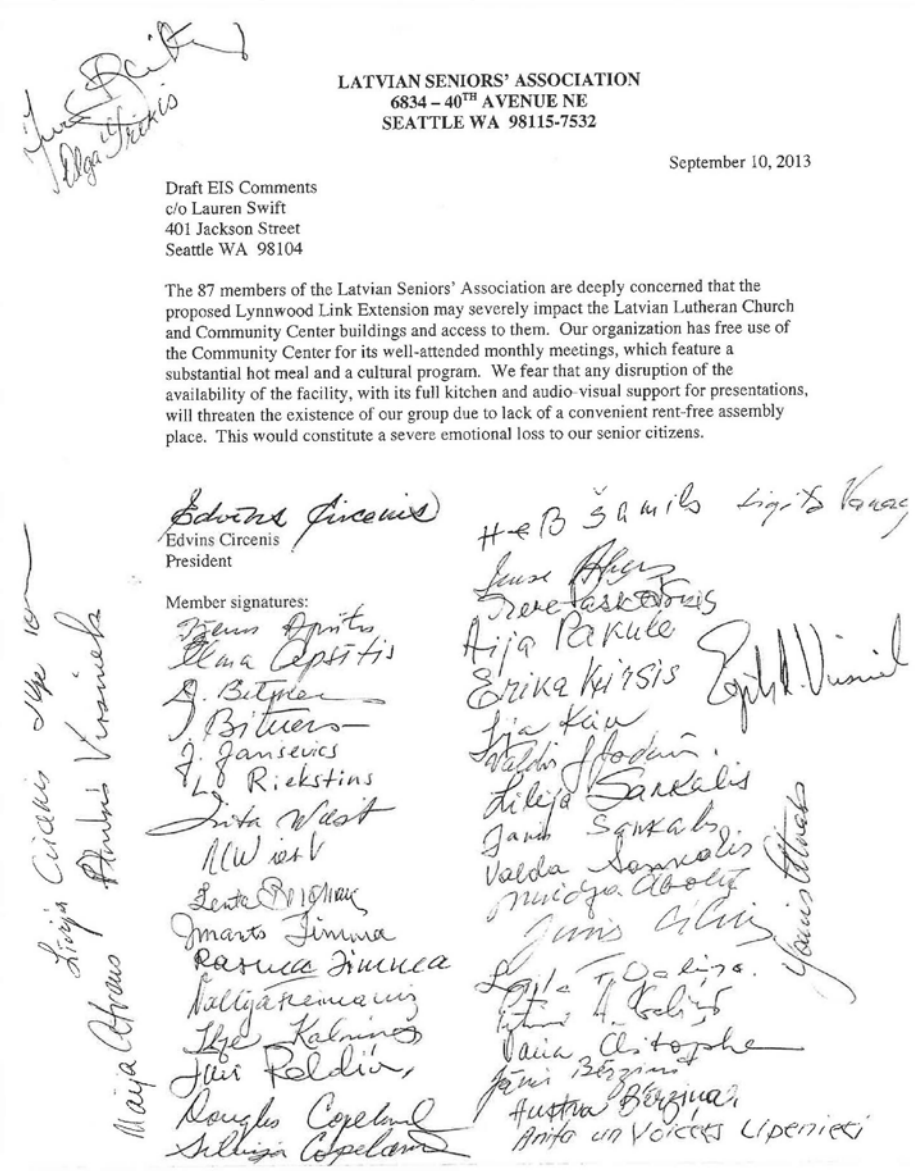
C-012-046

Thank you for your concerns about the potential displacement of the Latvian Evangelical Lutheran Church. Since the publication of the Lynnwood Link Extension Draft EIS in June 2013, additional engineering was undertaken to reduce adverse effects on the Latvian Evangelical Lutheran Church property and facilities. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). Access to the property and its functions have been maintained.

Several sections in the environmental document have been updated to address these changes including: Section 2.5.1 describes the refined alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods; Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative. Construction of the light rail guideway in proximity to the Latvian Evangelical Lutheran Church would take approximately 1 to 2 years, a longer period for elevated alternatives.

Construction work would predominantly occur between 8 am and 6 pm during weekdays with occasional nighttime and weekend construction. Near-term construction activities would be communicated to adjacent property owners through a proactive community outreach plan and may include newsletters, Internet postings, community meetings, and direct contact by a Sound Transit representative. Reconstruction of the noise wall on the west edge of the church property would require negotiation of a temporary construction easement that would be negotiated prior to the start of construction. Sound Transit's intent is to maintain access to the church and community center for duration of construction, though the access may change somewhat from existing conditions for short periods.

C-012-047



LATVIAN SENIORS' ASSOCIATION
6834 – 40TH AVENUE NE
SEATTLE WA 98115-7532

September 10, 2013

Draft EIS Comments
c/o Lauren Swift
401 Jackson Street
Seattle WA 98104

The 87 members of the Latvian Seniors' Association are deeply concerned that the proposed Lynnwood Link Extension may severely impact the Latvian Lutheran Church and Community Center buildings and access to them. Our organization has free use of the Community Center for its well-attended monthly meetings, which feature a substantial hot meal and a cultural program. We fear that any disruption of the availability of the facility, with its full kitchen and audio-visual support for presentations, will threaten the existence of our group due to lack of a convenient rent-free assembly place. This would constitute a severe emotional loss to our senior citizens.

Edvins Circenis
President

Member signatures:

Short-term visual, air quality, and noise impacts would be avoided and minimized with the implementation of best management practices. These would include fencing the construction area for public safety, spraying the construction area with water to reduce dust, and use of temporary noise walls where practical. For additional information, see Sections 4.5.7, 4.6.7, and 4.7.7, respectively. As an adjacent property, the church property would be affected long term during operation of the light rail train, but impacts would be mitigated to allow for the continuance of ongoing cultural activities. The discussion of impacts in the Final EIS has been updated to reflect the refined alternatives. Access would be maintained to the property and the church and community center would remain. See Sections 3.2 and 3.6 that discuss these transportation impacts. With the required reconstruction of the noise wall, some vegetation would be removed from the property. See Sections 4.5.2 and 4.5.7 for additional information. Noise impacts also would vary by alternative. See Sections 4.7.3 and 4.7.7 for additional information on impacts and mitigation, respectively.

C-012-047

Please see response to C-006-001.

September 11, 2013

Laura Swift
401 S. Jackson Street

Seattle, WA 98104

C-012-048

As members of The Seattle Latvian Evangelical Lutheran Church/Center, and the founding members of the SLGA (Seattle Latvian Golf Association) we would like to express our concerns for the proposed future plans of our center. We have been organizing a golf tournament for the Baltic community over the past 12 years. We have just wrapped up our most recent golf tournament September 7th and participant levels continue to grow. This year tournament was played by 72 golfers with others on a waiting list. Following our golf tournament, golfers and their guests attend an awards banquet and dinner at our Latvian Center. Our tournament is held at Jackson Park Golf Course and the close proximity of the course to our Latvian Center has been instrumental in our continued ability to attract more Latvian golfers and their guests year over year. Our most recent awards banquet was attended by no less than 140 guests and a great time was had by all! Our concern stems from the very importance of our Latvian center being in close proximity to our tournament golf course (Jackson Park). We feel our tournament/ awards banquet will lose interest and momentum if the convenience for many Latvian community members (many of them elderly) is altered.

We appreciate the opportunity to express our concerns and await your reply,

Respectfully,

Rolands J Abermanis

Edmunds Leitis

C-012-048

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

KURSA
WEST COAST LATVIAN EDUCATION CENTER
P.O. Box 1221
W. 3381 Dayton-Airport Rd., Shelton, WA 98584

www.kursa.com / www.wclec.com / www.klavs.org

September 15, 2013

Sound Transit
Draft EIS Comments
401 S. Jackson St.
Seattle, WA 98104

Dear Sirs:

KURSA is the Latvian community's centerpiece school program to connect high school students of Latvian descent to their Latvian language and artistic traditions. It is hosted every year in July at the West Coast Latvian Education Center (WCLEC), a 160 acre camp facility outside of Shelton, Washington. Next summer, the 4 week program will begin its 40th educational year, and the 31st at the WCLEC.

Because of KURSA's length, the planning and preparation already begins in September for the school's opening in July of the following year. The academic program includes classes in language, literature, history, ethics, music and folk dancing. The students have an option in the afternoons to pursue embroidery, ceramics, stain glass and jewelry design with emphasis on integrating traditional Latvian design elements.

As you can imagine, the academic planning is a major undertaking every year, and it takes place at the Latvian Community Center in Seattle at Northgate. The Planning Committee's practise is to meet at least monthly, on Sunday's, after church services. Not only does this facilitate meeting with Latvian Evangelical Lutheran congregation members, but also with members of the Latvian Association of the State of Washington and parents of the Center's Latvian School. It is a convenient and effective way to remain in sync with our community, discuss our planning and seek community support when necessary.

In many ways, what we do as a community is not so unusual. In the Pacific Northwest, we continue to experience reminders of the driving power of language and culture. We see it especially among the Native Americans - from the Tulalip tribe dedicating their new Hibulb Cultural Center in Marysville, Washington, to the Klallam tribe compiling its first dictionary and having it published in 2012 by the University of Washington Press. We see it also in the Scandinavian community in Seattle which has embarked upon a major undertaking to build a new Nordic Heritage Museum with expanded space for its exhibits and cultural programs.

C-012-049

It is, therefore, with trepidation that we ponder the news that the Latvian Community Center may not exist when Sound Transit completes its light-rail from the University District, past Northgate, to Everett. The access which we have to the community through the Latvian Center is invaluable. The loss of the Center sets our community adrift after decades of shaping it character and its cultural life. KURSA's Planning Committee, therefore, urges Sound Transit to carefully review its light-rail options to minimize the impact on a thriving cultural community.

Sincerely yours,

Janis Rogainis, Interim Kursa Director and President of the WCLEC Board

C-012-049

Thank you for your concerns about the potential displacement of the Latvian Evangelical Lutheran Church and for highlighting its significance to the region's Baltic community. Since the publication of the Lynnwood Link Extension Draft EIS in June 2013, substantial additional engineering was undertaken to reduce adverse effects on the Latvian Evangelical Lutheran Church property and facilities. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). Access to the property and its functions have been maintained.

Several sections in the environmental document have been updated to address these changes including: Section 2.5.1 describes the refined alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods; Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative. Compensation also would be provided if the alternative selected for construction would require acquisition of land or improvements as is required by the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970; the Washington State property acquisition policies and procedures in Chapter 8.26 Revised Code of Washington (RCW); and Sound Transit's adopted Real Property Acquisition and Relocation Policy, Procedures, and Guidelines.

WEST COAST LATVIAN EDUCATION CENTER
P.O. Box 1221
W. 3381 Dayton-Airport Rd., Shelton, WA 98584
www.wclec.org / www.wclec.com / www.kursa.org

September 15, 2013

Sound Transit
Draft EIS Comments
401 S. Jackson St.
Seattle, WA 98104

Dear Sirs:

The West Coast Latvian Education Center (WCLEC) is a 160 acre camp facility outside of Shelton, Washington. It was founded in 1983 as a non-profit 501(c)(3) corporation for the expressed purpose of fostering Latvian culture through educational activities and events. During July and August, for example, it hosts a heritage camp, „Mezotne", for children of Latvian descent and „Kursa", a Latvian language summer school for high school students. The programs attract children and teenagers from the United States and Canada.

Because of the character of the facility, and other Latvian events there in May, June and September, the WCLEC is an extension of the cultural center of the Latvian community in Washington State. That cultural center is the Latvian Community Center in Seattle at Northgate. Built in 1972, it is governed by the Community Center Board, the Seattle Latvian Evangelical Lutheran Church and the Latvian Association of the State of Washington.

These two facilities and their combined cultural and educational activities have shaped, over time, an integrated Latvian community. The Latvian church uses the WCLEC facility to host congregation events, the Community Center's Latvian School sends young people to WCLEC's Latvian camps, and WCLEC sponsored events over Memorial Day, in June and the camping weekend over Labor Day, attract Latvians both young and old to weekends of work, celebration, and just plain recreation in a beautiful wooded facility bordering Armstrong Lake. In parallel, WCLEC uses the Latvian Community Center for monthly business meetings, recruiting volunteers, publicizing WCLEC events and camps, fundraising, hosting a Valentine's Day dinner and movie night, and maintaining rapport with the Latvian community's older generation who were the principal creators, and financial supporters, of both facilities for all these years.

C-012-050

Thus, it is with dismay that the Board of the West Coast Latvian Education Center receives the news that the Latvian Community Center may not exist when Sound Transit completes its light-rail from the University District, past Northgate, to Everett. The loss of the Community Center puts at risk the integrated community we have so painstakingly built since the 1970's, the programs at WCLEC and the outreach to the community which the Center facilitates. The Board urges Sound Transit to carefully review its light-rail options to minimize the impact on a thriving community in this multi-cultural city of Seattle and in Washington State.

Sincerely yours,

Janis Rogainis, Interim Kursa Director and President of the WCLEC Board

C-012-050

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

September 20, 2013

To the Seattle Sound Transit Board Members,

C-013-001

I am writing regarding the proposed Lynnwood Link extension of the Sound Transit Link Light Rail system which, as currently under discussion, would impact the Seattle Latvian Center and Church at 11710 3rd Ave NE.

Although not a resident of Seattle or Washington State, I can attest that the Seattle Latvian Center serves not only area residents but also Latvian communities in British Columbia and Alberta, Canada. It is the closest active Latvian Center and resource for all of western Canada, and members of our Latvian community have certainly visited there over the years.

As a focal point for area Latvians for many decades, the Seattle Latvian Center enabled and encouraged its members to develop a strong, supportive sense of community with exceptionally viable music, dance and youth groups. These groups branched out by sharing their talents with other communities. Both Alberta and British Columbia have hosted Seattle performers at local Latvian events. The energetic Seattle youth who worked at Latvian summer camp in Shelton, WA, were a highly positive influence on my children, who grew up in a city with a much smaller Latvian population.

I applaud Seattle Sound Transit for striving to improve light rail access for its citizens. I ask that you consider such improvements in a manner than would enhance and maintain the current Seattle Latvian Center and the many communities it serves. In this case, a building is much more than a building. It's the core of a community that extends far beyond its physical boundaries.

Respectfully,

Ena Rudovics
President,
Edmonton Latvian Society "Imanta"
9308 - 82 Street
Edmonton AB T6C 2X5
Canada

C-013-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to the Latvian community in western Canada. See Section 2.5.1 for a description of the refined Segment A alternatives that avoid displacing the church.

West Coast Latvian Song Festival

www.westcoastlatviansongfest.org

10731 Viking Avenue
Northridge, CA 91326
818 366 4972
Berkolds@aol.com

September 20, 2013

Sound Transit DEIS
Comments c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

Dear Sirs:

C-014-001

I am writing to express my concern regarding your planned expansion of the Northbound I-5 corridor and the impact it will have the adjacent community, and specifically the Latvian Community Center at 11710 3rd Ave, Seattle.

The West Coast Latvian Song Festival has been producing events for the Latvian community in the western United States since 1962. Seattle has been the site of numerous festivals which have been attended by thousands of Latvians and Americans from the throughout the Americas. The Latvian Center in Seattle has been a cornerstone staging area for most of these activities for the last 40 years. Moving or changing the existing edifice, accessibility or its location would have a severe negative impact on the organizing efforts of our community and would bring into question the feasibility of future festival activities.

I am confident the Latvians support the continued development of mass transit in the greater Seattle area and applaud the city's efforts in this regard. The West Coast Latvian Song Festival Executive Committee strongly urges you to consider developing projects in such a way that do not negatively impact the diverse communities that flourish Seattle.

With regards,

Dr. Paul Berkolds, Executive Director
West Coast Latvian Song Festival Executive Committee
Los Angeles, CA
(818) 645-8754
berkolds@calarts.edu

C-014-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Please see Section 2.5.1 of the Final EIS for a description of the refined Segment A alternatives that avoid displacing the church.

Studentu Korporācija
GUNDEGA
Seattle's grupa

copy

Pat McCarthy
Sound Transit Board Administration
401 So. Jackson Street
Seattle, Wa. 98104

September 14, 2013

Dear Ms Pat McCarthy,

C-015-001 We, the members of the Latvian Sorority GUNDEGA, have reviewed the Draft Environmental Impact Statement, attended the community meetings and we are now expressing our deep concern regarding the possible destruction of the Latvian Center and the Church, the cultural pillars of the long standing Latvian and Baltic community. Our sorority members have attended important and historical events at the Church and the Center to meet the presidents of the Baltic countries, to support the UW Baltic study program, to participate in religious services and educational gatherings, as well as to share in ethnic and personal life celebrations. The Church and the Center are the glue holding our organization and our community together, allowing it to grow while preserving Latvian ethnicity and culture. The Latvian sorority tradition dates back to1920s and remains an important part of the Latvian women's lives across generations. Interrupting or eliminating the access to the Church and the Center would severely disrupt our ability to continue our traditions and share our rich cultural heritage with the city of Seattle.

C-015-002 It is of utmost importance that the Lynwood Link Extension construction allows the continued access to the Center, that the caretaker's house is reconstructed and that there is a minimal long-term disruption to the Center's function due to noise disturbance.

Do not allow the proposed transit line to destroy the Latvian Center, Church and the Latvian community.
We have enclosed our signatures.

Sincerely,

Zaiga Alksne Phillips
The president, Latvian Sorority Gundega
10040 Ne 27th Street
Bellevue, Wa.98004

C-015-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. See Section 2.5.1 for a description of the refined Segment A alternatives that avoid displacing the church.

C-015-002

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

Marisa Way-Reginis 11535 Corliss Ave N Seattle 98133

ZAIGA A. PHILLIPS 10040 NE 27th ST BELLEVUE 98004

INESEC. ABERS 18534 Meridian Ave N SHORELINE 98133

Nija Rauda 1741 NE 105th Seattle WA 98125

Janija Matiss 20726 S. 15th Ave So, Seatac 98198

Indra OZOLNIEKS 15534-4th St. Kirkland Wa. 98033

Vija Hafermann 7610 SE 76th St. Mercer Island, WA 98040

Maija Udris-Bitte 4637-129th Lane SE. Bellevue, Wa. 98006

Maija Ikstens 7244-89th Ave S.E. Mercer Island, WA 98040

Ruta Yorke 14527 SE 183 Street, Renton, WA 98058

Daidra R. UPANS 11515 - 4th Ave. NE, Seattle, WA 98125

Melissa Funn 15824 SE 170th Street, Renton, WA 98058

Sintija Phillips 11624 NE 92nd ST. Kirkland WA 98033

NIAKUTA MATISS PO Box 98765 Des Moines WA 98198

September 8, 2013

Mežotne, Latvian Children's Language Camp
Inese Graudiņš, Director
3902 San Mar Drive NE
Olympia WA 98506

Sound Transit
Comments c/o Lauren Swift
401 Jackson St
Seattle WA 98104

C-016-001

Having reviewed the Lynnwood Link Extension DEIS, I am very concerned that all of the proposed alternatives will severely impact the Latvian Church and Community Center and the activities of hundreds of families who consider it their „ethnic home".

As a Latvian language camp for 3 to 14 year olds, Mežotne draws its camp participants, counselors, and staff from the various Latvian communities along the West Coast, predominantly from the Seattle metropolitan area. The Latvian language and knowledge of our heritage is a critical staff requirement in order for the camp to function. Thus the continued existence of the Latvian Church and Community Center is of major importance to our existence as well. This is the place where our families have a common bond, a common history, and a language school for their children.

We are now in the third generation of community members born in the U.S. who are still highly immersed in the language and the culture of Latvia, while being just as involved in their American communities. It takes a great deal of effort, time, and money to live in two parallel cultures, and the Latvian community is doing it! We do not want that jeopardized!

Access to and continued use of the Latvian Church and Community Center during construction and long term operation of the Lynnwood Link Extension without undue noise and access problems needs to be guaranteed so that our community does not lose its continuity, so that we are not displaced by obstacles not under our control.

Respectfully yours,

Inese Graudiņš

Inese Graudiņš, Director
Mežotne, Latvian Children's Language Camp
inesegraudins@comcast.net

C-016-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. See Section 2.5.1 for a description of the refined Segment A alternatives that avoid displacing the church. Construction of the light rail guideway in proximity to the Latvian Evangelical Lutheran Church would take approximately 1 to 2 years.

Construction work would predominantly occur between 8 am and 6 pm during weekdays with occasional nighttime and weekend construction. Near-term construction activities would be communicated to adjacent property owners through a proactive community outreach plan and may include newsletters, Internet postings, community meetings, and direct contact by a Sound Transit representative. Reconstruction of the noise wall on the west edge of the church property would require negotiation of a temporary construction easement that would be negotiated prior to the start of construction. Sound Transit's intent is to maintain access to the church and community center during construction, although the access may shift as the realigned city street is constructed. Please see the following sections of the Final EIS regarding noise: Section 4.7.3 long term impacts, Section 4.7.4 construction impacts, and Section 4.7.7 for proposed mitigation measures.

185th STATION CITIZEN COMMITTEE
SHORELINE, WASHINGTON

September 10th, 2013

c/o Lauren Swift

401 S. Jackson Street

Seattle, WA. 98104

Dear Sound Transit Board,

On behalf of the 185th Station Citizen Committee (185SCC), I submit the following letter of comment concerning the Draft EIS report Sound Transit prepared for the Lynnwood Link Extension project.

The 185th Station Citizen Committee is a neighbor-led community group that helps to educate our neighborhoods about Sound Transit's plans; serves as a public forum to discuss the ramifications of these plans on our area; and then in turn functions as a liaison to Sound Transit to present our community's concerns, issues, and priorities. For the last year 185SCC has been working with the City of Shoreline, Futurewise and Senior Services to educate and collect public input comments about the design of the 185th Street Station and surrounding station-area. The comments listed in this letter reflect comments collected during three community visioning meetings, monthly public meetings, and four public outreach events.

The 185SCC commends the work that Sound Transit has conducted for the last two years resulting in the Lynnwood Link Extension DEIS.

C-017-001 As residents of the surrounding neighborhoods, we stand ready to embrace, work for, and support the creation of an integrated station area which fully connects and complements our neighborhood. Unfortunately, in reviewing the Lynnwood Link DEIS, we are greatly concerned by some of the options and details outlined. In broad terms, it would seem that the City of Shoreline is being asked to accommodate a large Park & Ride facility for a commuter railroad. While we recognize that one of the goals of Sound Transit's Light Rail system is to meet the needs of commuters, this is not its only use, nor the only goal identified by the Sound Transit Board. The station needs to support, and be oriented towards, the community; just as much as the community is ready to support the station.

1

C-017-001

The proposed parking facility at the NE 185th Street site was developed considering the project's objectives of good multi-modal connections to fast, frequent and reliable two-way transit service serving the corridor communities. The 500-space parking garage would be one element of access for a station expected to serve 6,600 daily riders, most of which are expected to be coming from the surrounding community via transit, biking or walking. Other proposed stations for the corridor at about 2 mile intervals also help distribute the need for parking. The overall station site for the Preferred Alternative features a parking garage that is adjacent to and west of I-5 and across the freeway from the station area. Other alternatives include a parking garage to the east of I-5, adjacent to the station. Sound Transit has also worked closely with the City of Shoreline, which has undergone its own station planning study and environmental review focusing on the areas surrounding the station.

We advocate for a complete and connected community around the future Link light rail station along I-5 at NE 185th Street. In general, we as a community have three goals for the final design of the 185th Street Station.

C-017-002

I. PUBLIC SAFETY & ACCESSIBILITY

First and foremost we want to ensure the safety of our neighbors and fellow travelers by prioritizing pedestrian, transit connectivity, and bicycle access to the station. We recognize that optimizing pedestrian access will also require an analysis of the transit stops surrounding the station to ensure maximum ridership. Studies show that out-of-vehicle waiting experience at transit stops can be even more important than in-vehicle experience (1).

C-017-003

II. TRANSIT-ORIENTED DEVELOPEMNT

Secondly, we want to increase the potential for transit oriented development (TOD) surrounding this station. Following Sound Transit's TOD policy, the station's conceptual design was analyzed 5 months ago to determine the potential for TOD, and it was found to be "limited" rising only to "moderate" assuming that a nearby landholder (Shoreline Schools) eventually transfers the property to be re-developed. This seems like a faulty assumption, since the presence of a light rail station is bound to encourage increased residential density and might require the school district to utilize its North City Elementary property. Most of the details proposed in the DEIS do not follow the Sound Transit Board's guidance to facilitate TOD strategies on its own property and in areas around its transit facilities (2).

III. STATION DESIGN

Finally, we want to minimize the visual and audible impact of the trains for the surrounding residential neighborhoods. We also wish to have a station that is inviting, serves as a focal point of our neighborhood, and reflects our community's cultural diversity.

C-017-004

The Draft EIS lays out 3 conceptual design options for the 185th Street Station and we strongly prefer the specific design features listed below:

2

C-017-002

Access to the proposed light rail stations for non-motorized users and feeder bus lines is described in Section 3.2 of the Final EIS. Features include pedestrian and bicycle access to and from feeder bus lines, park-and-ride facilities, and surrounding streets. Each station would include bicycle storage. Section 2.5.1 of the Final EIS describes factors affecting the range of alternatives, one of them being the maximization of existing transit infrastructure. Analysis of the existing regional transit including service characteristics, ridership, and travel times; transit level of service; and local and sub-regional transit is provided in Section 3.1.2. Section 3.2.2 provides an overview of long-term impacts to regional transit.

C-017-003

The Draft EIS considered TOD potential in the comparison of alternatives and impacts analysis, particularly in the assessment of potential indirect impacts related to the project. As noted in your letter, Sound Transit's TOD policy states that the agency will assess TOD during project development to help determine the potential for future development in and around a proposed station location. Assessments were conducted at all proposed station locations based on existing conditions. When the assessment was conducted for the Draft EIS, zoning around the NE 185th Street Station was primarily single-family residential. Shoreline has subsequently conducted a station area planning and environmental review process for the area, examining potential changes in the types of development that could be allowed in the station area, with the city's final plan updates occurring in 2015. For the Final EIS, Sound Transit updated the TOD report, which is available on the project web site. Implementation of TOD policy continues through final design, construction, and post construction. Implementation includes identifying TOD opportunities and strategies as well as partnerships with public and private interests as noted in Section 4.2.4 of the Draft EIS.

C-017-004
- We strongly prefer the at-grade train tracks and center platform design shown in Option 1. The vast majority of the public input we've collected in relation to track design preferred the at-grade option.

C-017-005
- When Sound Transit rebuilds the NE 185th St Bridge to install at-grade tracks (as shown in Option 1), enhanced pedestrian, bike and transit access should be prioritized. This should include covered walkways, bike lanes, and dedicated transit lanes.
- Encourage pedestrian safety and access by building sidewalks to/from the station.

C-017-006
- Add appropriate traffic control devices and/or design elements to promote safety for commuters, neighborhood residents, and vehicles at the redesigned intersection of NE 185th St and 5 Ave NE (as shown in option 1).
- Transit access loop turning into the station from 8th Ave NE and exiting the station via NE 185th St (as shown in Option 1).

C-017-007
- Parking garage to be located on the West side of I-5 along NE 185th St (as shown in Option 1).

C-017-008
- Reconfigure the station site (as shown in Option 1) to maximize potential Transit-Oriented-Development (TOD) immediately adjacent to the station.
    1. Move the bioretention cells currently located in the "Landscaped Area" if possible.
    2. Move service vehicle parking & ancillary buildings (locate south of/under the 185th St Bridge?) if possible.
    3. Rather than include a large (.75 acre) blank "Landscaped Area" next to the station, design to include a smaller town-square type public space-point to allow more room, and a focus for TOD.
- Enhance potential TOD development by designing station "overbuild" to provide commercial and/or community space above the station. Besides allowing the best possible integration of the station with local businesses, this would further shield the neighborhood from the sights and sounds of the highway and light rail.

C-017-009
- Include architectural and artistic elements to the station building and surrounding area to create a station with an aesthetic and 'personality' that reflect our community's cultural diversity. For instance, one suggestion that

3

C-017-004

Your preference for Option 1 for the NE 185th Street Station design is noted.

C-017-005

Section 2.4 of the Final EIS describes the typical features of light rail alternatives, including accommodations for pedestrians, bicyclists, and feeder bus services at light rail stations. Section 2.2 of the Final EIS has updates for the Preferred Alternative. Section 3.2 of the Final EIS discusses features of the proposed project as it relates transit features and non-motorized facilities, and describes the effects that are associated with the different alternatives. Further details are shown in the Conceptual Plans (Appendix F) and the *Transportation Technical Report,* both provided on CD with the Draft and Final EIS and available on the project website.

C-017-006

Thank you for your comments and recommendations for improved circulation and safety near the NE 185th Street Station. Design for the NE 185th Street Station area would include intersection traffic control to manage the many travel modes and access to the station.

C-017-007

Your preference for Option 1 is noted.

C-017-008

Thank you for your comment regarding transit-oriented development (TOD). Overbuilding of a station or parking garage to provide development opportunities involves a number of trade-offs. As you mentioned, the option to develop the stations in this way is allowed in Sound Transit's TOD Policy, and the current designs do not preclude the opportunity. Sound Transit will consider a joint development project if a

C-017-009 we received from the Korean community was to add a contemporary Korean pagoda roof top to the design.

C-017-010
- Our neighborhood prizes its many green spaces, and especially its trees. In designing the station, re-location of streets and services, and organizing the construction at the site we encourage Sound Transit to preserve as many of our mature trees as possible, and to re-plant the areas disturbed to restore and maintain our 'urban forest'.

C-017-011
- Consider shifting the station (as shown in Option 1) towards the south approximately 150 feet, partially "under" the 185th St Bridge so east bound pedestrian and bicycle traffic on NE 185th St can access the station via an escalator. This would decrease the amount of vehicles making left turns into the station, and significantly reduce the number people needing to use the crosswalk across NE 185th St - a busy arterial that will become more congested with the opening of the station.

Thank you for your consideration. We look forward to working with Sound Transit and representing the needs of our community as the design process for the 185th Street Station moves forward. We accept that great changes are coming to our neighborhoods with the arrival of Light Rail, and we understand that many more commuters will begin travelling through our community. However, as the future neighbors of a Sound Transit Station we remain dedicated to the idea that this must be much more than a commuter-centric park-and-ride. We need you to work with us so that this station will be a vital community hub as part of the entire regional public transit system. It is what our neighborhood demands and deserves. We hope that together with Sound Transit and the City of Shoreline we can create a truly great station, station area, and transit-oriented neighborhood.

Sincerely,

Suzanne Wynne
Co-Chair, 185th Station Citizen Committee

References:
1) http://www.transitwiki.org/TransitWiki/index.php?title=Pedestrian_connections
2) http://www.soundtransit.org/Documents/pdf/about/board/resolutions/2012/Reso2012-24-Attachment%20A.pdf

4

number of conditions are met, including having an interested development partner. Currently, there have been no proposals from parties interested in joint development at the Lynnwood Link Extension stations, but Sound Transit will continue to investigate possibilities.

C-017-009

In Section 4.5.2 of the Draft EIS, it states that Sound Transit would develop design criteria with input from local jurisdictions and WSDOT; and Sound Transit would adhere to the local jurisdiction's design standards in station areas, if applicable, to promote visual unity in these areas.

C-017-010

Sound Transit will comply with all applicable tree protection standards in City of Shoreline Municipal Code 20.50 Subchapter 5. Sound Transit would minimize vegetation clearing, as noted in Section 4.8.6 of the Draft EIS.

C-017-011

In the Final EIS, all alternatives include a station at NE 185th Street to the north. Because siting of a station requires a straight track, an alignment south of NE 185th Street is infeasible. The Final EIS Chapter 2 has more detail on the Preferred Alternative.

SEA SHORE Transportation Forum

September 12, 2013

Ms. Lauren Swift
Sound Transit
401 S. Jackson Street
Seattle, WA 98104

RE: Lynnwood Link Draft Environmental Impact Statement

Dear Ms. Swift:

On behalf of the SeaShore Transportation Forum, an advisory board of elected officials from Seattle, Shoreline, Lake Forest Park, Kenmore, Bothell, Woodinville, Edmonds, Mountlake Terrace, King County, and Snohomish County, we are writing to provide our input on the station locations being considered for Sound Transit's Lynnwood Link extension as part of the Draft Environmental Impact Statement (DEIS). Several of our member jurisdictions have already provided input, but we wanted to add our comments that reflect our mutual positions.

C-018-001 The SeaShore Transportation Forum supports stations at 145th and 185th, and suggests that Sound Transit should give strong consideration to an additional station at 130th if the funds are available. In addition, the SeaShore Transportation Forum supports the eastern alternative for the Mountlake Terrace station over the freeway alternative.

C-018-002 In addition to support for these station locations, we want to emphasize the importance of providing access to transit, including local bus feeder service and enhanced bicycle and pedestrian facilities to improve the transfer experience. We strongly encourage Sound Transit and its transit partners to look at the entire system when making decisions such as where to locate parking facilities and the requisite size of the facilities with the goal of improved access for all modes and reduced congestion near the stations. Transit oriented development at key station locations should also be considered as a way to increase access to transit.

C-018-001

Your preference for stations at NE 145th Street and NE 185th Street, and support for further consideration of a station at NE 130th Street is noted. In November 2013, the Sound Transit Board identified an at-grade and elevated alignment with stations at NE 145th and NE 185th streets (Alternative A1 with modifications) as the Preferred Alternative in Segment A. The Board also directed further study of options to add a station at NE 130th Street or to make provisions for a future station. The Sound Transit Board identified an elevated station crossing over NE 236th Street east of I-5 as the station alignment for the Preferred Alternative in Segment B. The freeway station remains part of Alternative B4. The 130th Street Station remains part of the other A alternatives (A5, A7, A10, A11) aside from the Preferred Alternative.

C-018-002

Sound Transit designed the project to provide good access for all modes, and worked with local jurisdictions and transit agencies to identify effective station sites and access plans for the proposed alternatives. Access to the proposed light rail stations for non-motorized users and feeder bus lines is described in Section 3.2 of the Draft EIS. Features include pedestrian and bicycle access to and from feeder bus lines, park-and-ride facilities, and surrounding streets. Each station would have bicycle storage. Section 2.6.1 of the Draft EIS describes factors affecting the range of alternatives, one of them being the maximization of existing transit infrastructure. Analysis of the existing regional transit including service characteristics, ridership, and travel times; transit level of service; and local and sub-regional transit is provided in Section 3.1.2. Section 3.2.2 provides an overview of long-term impacts to regional transit.

Implementation of TOD policy continues through final design, construction, and post construction. Implementation includes identifying

We hope that the Sound Transit Board will consider this input as it makes decisions about station locations and related transit improvements.

Thank you for your consideration.

Sincerely,

John Wright
Councilmember
Lake Forest Park
Co-Chair
SeaShore Transportation Forum

Chris Eggen
Deputy Mayor
Shoreline
Co-Chair
SeaShore Transportation Forum

cc: SeaShore Forum members
Governor Jay Inslee

TOD opportunities and strategies as well as partnerships with public and private interests as noted in Section 4.2.4 of the Draft EIS.

World Federation of Free Latvians
400 Hurley Avenue, Rockville, MD 20850-3121 U.S.A.
Tel. (301)340-7646, e-mail: pblaASV@verizon.net

August 29, 2013

Sound Transit
Comments c/o Lauren Swift
401 Jackson St.
Seattle. WA 98104

To whom it may concern:

C-019-001 It has come to our attention that with the extension of the Sound Transit system in the Seattle area the Latvian church and community house may perish. The World Federation of Free Latvians (WFFL), which is the umbrella organization for Latvian communities outside of Latvia, and among whose duties it is to preserve the Latvian heritage - language and culture - as long as possible, hopes that an alternate solution can be found and this particular property will stay unaffected.

The Latvian community in the USA is not a large one and with every passing year, it is more and more challenging for the various Latvian groups to maintain their churches and community centers. The Latvian church and community center in Seattle is particularly important as it is the only one is the state of Washington.

Please give this matter your closest attention and consideration.

Respectfully yours,

Jānis Kukainis
President, WFFL

C-019-001

After the publication of the Draft EIS, the Sound Transit Board subsequently directed Sound Transit to explore a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). Access to the property and its functions have been maintained, although a small portion of land on the property's edge would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property, but an elevated design by the church is not the Preferred Alternative.

Several sections in the Final EIS have been updated to address these changes including: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods; Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

Latvian Evangelical Lutheran Church Abroad

Archbishop Elmārs Ernsts Rozītis
Schelztorstr.25, D-73728 Esslingen
Germany
Tel +49-711-354623
ERozitis@t-online.de

Ms. Pat McCarthy, Chair of the Board
Sound Transit
County – City Building, Room 737
930 Tacoma Avenue South
Tacoma, WA 98402-2100
U. S. A.

August 16th, 2013

Ms. Pat MacCarthy, Chair of the Board, Sound Transit

Dear Ms. McCarthy,

C-020-001

We have learned, with concern, about the probable adverse effects of a proposed train line on our Seattle Latvian Lutheran Church.

This congregation is a key element for us not only in the US Pacific Northwest, but for our Church in general.

The Seattle congregation also is historically significant to our Church. The late archbishop Dr. Kārlis Kundziņš was part of the congregation while the head of the entire Latvian Evangelical Lutheran Church Outside Latvia. Also, my predecessor archbishop Arnolds Lūsis was consecrated here.

Our Seattle congregation not only provides spiritual care for over 300 members and shelters a school, but its social hall is used for a wide range of religious, cultural and education events.

The Seattle Estonian Lutheran Congregation also has its regular services in the church.

Forcing the congregation from its property, or even compromising its ability to function effectively because of loss of space, or because of noise and vibration, would deal a blow to the community from which it may not recover. Please consider the effects of this on the membership – particularly children, youth and the elderly.

Please choose construction alternatives which would allow this church and community to continue its important work.

Sincerely yours

+ Elmārs Ernsts Rozītis
Archbishop

EVANGELISCH-LUTHERISCHE KIRCHE LETTLANDS IM AUSLAND
LATVIJAS EVANGĒLISKI LUTERISKĀ BAZNĪCA ĀRPUS LATVIJAS
2. Kor. 12,9

C-020-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes including: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods; Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations. Section 4.7.3 of the Final EIS discusses noise and vibration impacts and Section 4.7.7 describes the proposed mitigation measures that would be applied.

EELK SEATTLE KOGUDUS

Seattle Congregation of the Estonian Ev. Lutheran Church

(Services at the **Latvian Lutheran Church**)

Sound Transit, Comments

c/o Lauren Swift

401 Jackson Street

Seattle, Washington 98104

Dear Folks at Sound Transit!

C-021-001

We have just received some most disturbing news: that you are planning to take away the driveway of the Latvian Lutheran Church at Northgate. That would remove any access to that beautiful and essential building, rendering it totally useless! Please, please try to do what you have to do in some other way! Our Estonian Congregation and other cultural organizations have been using that facility for many years!

Thanking you for your consideration,

Sincerely yours,

The Rev. Hendrik Laur, Pastor

September 11, 2013

C: The Rev. Daira Cilnis

C-021-001

The Sound Transit Board directed Sound Transit to explore a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering that Sound Transit undertook to avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). Access to the property and its functions have been maintained, although a small portion of land on the property's edge would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property, but the existing roadway access would remain in place.

Several sections in the Final EIS have been updated to address these changes including: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods; Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

Seattle Estonian Society
3010 North 24th Street
Tacoma, WA 98406

September 19, 2013

Sound Transit
401 South Jackson Street
Seattle, WA 98104

Dear Transit Board:

Please do all you can to preserve the dignity of the Latvian Community Center and Church. We respectfully request that the Latvian Center remain at its present location and that it remain accessible to the Baltic community during link construction.

C-022-001

The Latvian Center serves as the heart of the Baltic community in the Seattle area. The Center is where we come to:

- Celebrate our heritage and teach our children the Estonian, Latvian and Lithuanian languages;
- Give back to our community by raising funds for the University of Washington Baltic Program (one of only a handful of University programs in the United States that teaches Estonian, Latvian, and Lithuanian languages, literature, and culture);
- Honor our fallen veterans who fought for independence in Estonia, Latvian, and Lithuania against the Soviets;
- Honor our veterans who fought in Korea (most not yet citizens), Vietnam, and the Gulf Wars; and Afghanistan;
- Welcome newly minted U.S. citizens who have immigrated from Estonia, Latvian, and Lithuania, helping them to acclimate to the United States;
- Remember the thousands forcibly deported to Siberia, many never to return to their native land;
- Host visiting dignitaries, notably the Presidents of and Ambassadors from Estonia, Latvian and Lithuania (the Latvian Center is no stranger to Secret Service agents conducting security sweeps).
- Celebrate christenings and weddings, and mourn our fallen friends.

Looking back to our homelands is not an exercise in history; many members of our Estonian, Latvian, and Lithuanian communities are first generation immigrants who know what it means to have their homeland stolen by the Soviets, fight for that homeland, and live to see it independent once again.

The Seattle Estonian Society, which represents Estonians across Washington State, but has the greatest proportion of members in Seattle, earnestly requests that you consider the reverberating consequences of closing the Latvian Community Center. We respectfully request that the Latvian Center remain at its present location and that it remain accessible to the community during link construction.

In hope of a positive response,

Ene Kristi Urv-Wong
President
Seattle Estonian Society

cc: IW
DPK

C-022-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Please see Section 2.5.1 of the Final EIS for a description of the refined Segment A alternatives that avoid displacing the church.

Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

September 23, 2013

Delivered via email to: LynnwoodLinkDEIS@soundtransit.org

RE: Parkwood Neighborhood Association Comments on the Draft EIS for the Lynnwood Link Extension

Dear Ms. Swift,

The Parkwood Neighborhood Association is pleased to have the opportunity to submit these comments on the Draft Environmental Impact Statement for the Lynnwood Link Extension. The location of Shoreline's Parkwood Neighborhood on the west side of I-5 (opposite the proposed light rail line but within close proximity to both the 145th and 155th proposed stations) means that our neighborhood would experience few direct impacts from the physical placement of either station and the light rail line on the east side of I-5, but could be subject to indirect impacts to traffic, mobility (walking, biking, and bus transit), schools, Twin Ponds Park, and the natural environment. With these factors in mind, we have focused our review of the Draft EIS and our comments by identifying potential impacts to the Parkwood Neighborhood from the stations proposed at 145th and 155th streets.

C-023-001

Traffic Impacts: Both stations would increase traffic and local street congestion in our neighborhood during peak commute times. Parkwood Elementary School is located on the south side of N. 155th St. (at Wallingford Ave. N) within one-half mile of the proposed 155th station. Increased traffic on 155th is a safety concern for our students at pedestrian crosswalks located at Meridian Ave. N and at Wallingford Ave. N and also for bus and parent drop-off/pick-up traffic at the school. In addition, the 20 mph speed limit on 155th within the school zone would cause backups and increase traffic congestion for commuters heading to and from the 155th Station during portions of the morning commute that overlap with the beginning and end of the school day. School crossing guards and a lighted crosswalk currently stop traffic for students crossing at 155th and Wallingford in front of the school. This busy crossing would further delay commuter traffic to and from the 155th station and increase the risk to students crossing at this intersection. Adding a traffic signal at Wallingford might improve pedestrian safety but may not ease congestion on 155th and may prove to be problematic because of the steep hill and poor sight distance on 155th. In contrast, a station located at 145th would avoid these traffic impacts because the posted speed limit is 35 mph, and the entrance to Lakeside School is off of 1st Ave NE in Seattle.

Our familiarity with neighborhood traffic patterns suggests that both the 145th and the 155th stations would increase traffic on both Meridian Ave. N and on 1st Ave. NE as commuters seek out neighborhood streets for routes to the north and south. The 155th station could result in more traffic impacts to Meridian Ave. N and to 1st Ave. NE because there are no freeway ramps at

C-023-001

Traffic impacts and multi-modal conflicts were addressed in the Draft EIS and updated in the Final EIS. The Sound Transit Board identified the NE 145th Street Station as part of the Preferred Alternative rather than the NE 155th Street Station, although the Final EIS continues to evaluate all of the alternatives. The Sound Transit Board will ultimately determine the alternative to implement and the project to be built after the Final EIS has been issued.

C-023-001 155th like there are at 145th. The Evergreen Elementary School is located on Meridian Ave. N between 145th and 155th and is already a source of traffic congestions on Meridian due to student traffic and the 20 mph speed limit when school is in session. We are concerned that both station locations would add to the existing traffic congestion on Meridian and compromise the safety of Evergreen students. Regardless of which station is chosen, Impacts to Meridian Ave. N and 1st Ave. NE will require careful consideration and possible mitigation. It helps put the potential traffic impacts on the schools and local roads in perspective by considering that the anticipated boardings at the 155th station (and the increase in people moving through our neighborhood) is about twice the combined student body population of the Parkwood and Evergreen elementary schools (700 students) that are an existing source of traffic congestion. A station at 155th would essentially add the traffic of two more elementary schools to our neighborhood.

We feel that a station located at 145th would result in fewer traffic impacts to our neighborhood than a station located at 155th because 155th lacks freeway ramps and because 145th is a major arterial with four lanes of traffic and higher speed limit. Most traffic on 155th is currently local and not tied to I-5. In contrast, 145th is used for both local, cross-town traffic and for access to I-5. Presumably some of the commuter traffic on 145th bound for I-5 would instead go to the 145th station or be replaced by public transit, biking, and walking. Traffic volumes on 145th are considerably higher than 155th, so any increase in traffic on 145th caused by a light rail station there would be relatively less compared to the increased traffic on 155th caused by a station at 155th. In addition, 145th is better suited for a station because the road provides better eastward connectivity to communities located beyond Lake City Way, whereas 155th ends at 15th Ave. NE and forces eastbound traffic to split north and south around Fircrest and Hamlin Park.

C-023-002 Regardless of the station location, the station design should discourage automobile use (by constructing smaller parking garages than proposed in the Draft EIS) and encourage infrastructure improvements that favor alternative means of transportation such as bus, bikes, and walking. Because the City of Seattle has prohibited a parking structure at the 130th station, a 500- to 650-car parking garage at 145th would draw more vehicles to Shoreline's 145th station under Alternatives A10 and A11 (which also include a station at 130th). We prefer smaller parking garages at the Shoreline stations to reduce vehicle traffic on our neighborhood streets, reduce property acquisitions in the Ridgecrest neighborhood, and to preserve the character and

C-023-003 safety of our neighborhoods. The station designs should also consider the potential for increased cut-through traffic on residential streets and mitigate these impacts with traffic-calming or other measures. In particular, we are concerned about cut-through traffic on N 147th and N 148th streets between 1st Ave. NE and Meridian Ave. N. for a station located at 145th and cut-through traffic on Corliss Ave. N and N 160th St. for a station located at 155th.

C-023-004 **Pedestrian and Bike Accessibility:** Both the 145th and 155th stations will increase pedestrian and bicycle activity in the Parkwood Neighborhood, which are more desirable modes of travel than vehicular traffic and the parking facilities that would be needed for cars. Bicycle access to the 145th station location is currently poor due to a lack of existing bike facilities in the area, the dangerous sidewalks and limited right of way along 145th, and the poor connectivity of neighborhood streets imposed by I-5 and the hilly topography. Although future bike facilities

C-023-002

As described in Section 2.3 of the Final EIS, station access is intended to serve a variety of user types including non-motorized users, those commuting by automobile, and those arriving on bus. Park-and-ride spaces are part of a balanced approach to access, and they can help minimize parking impacts to neighborhoods while providing access to light rail for areas transitioning from suburban to urban densities. Consistent with its adopted System Access Policy, Sound Transit will continue to refine the station access plans for the project during final design.

C-023-003

In the areas that you reference, the potential for cut-through traffic may exist with or without the light rail project and parking garages. Along N 145th Street, the potential would be related to how existing signals operate (and where left-turn pockets are available) for southbound traffic accessing N 145th Street; as well as the reverse movement, i.e., northbound traffic from N 145th Street accessing Meridian Avenue. General traffic could seek cut-through routes between these two points, not just light rail station traffic. Likewise, the second location noted on Corliss at N 160th is a location with a pre-existing issue related to cut through traffic.

At NE 148th Street between 5th and 8th Avenues, near the 145th Street station, there is the potential for cut through traffic more directly related to station traffic.

In Section 3.6.4, the EIS notes that in areas where cut-through traffic due to the stations may occur, signage as well as more active calming treatments could be considered, and Sound Transit would coordinate with the City to determine the most appropriate measures.

C-023-004 connecting to 145th are planned by the City of Shoreline on Meridian Ave. N and 5th Ave. NE, safe access for pedestrians and cyclists from these streets to the 145th station would need to be provided along 145th, where sidewalks are dangerously narrow and lack any sort of buffer from four lanes of 35-mph traffic. Creating space for pedestrian and bike facilities along 145th would need to consider a road diet, property acquisition, or a combination of both. Alternatively, east-west bicycle traffic could be routed one block north and south of 145th to neighborhood streets converted to greenways with safer east-west connectivity to regional bike facilities. Both options would require widening the sidewalk on the north side of the 145th overpass at I-5 or adding a new pedestrian/bike bridge over I-5 to replace the dangerously narrow sidewalk. In lieu of improvements to 145th, Parkwood residents that choose to bike or walk to the 145th station might be best served by a pedestrian and bicycle trail that parallels the west side of the southbound I-5 exit ramp and connects with the east end of NE 147th St. and leads safely to bike facilities and sidewalks along 1st Ave. NE and established bike facilities along 155th (which connects with the Interurban Trail). This trail could also be extended south, combined with the partial daylighting of Thornton Creek behind Aegis, and connected to the trail through Twin Ponds Park.

C-023-005 **Twin Ponds Park:** Both stations would increase traffic on 1st Ave. NE and impact the character of Twin Ponds Park and the park amenities. Parking along 1st Ave. NE is already at capacity during soccer games and is a safety concern with vehicle loading and unloading along the road. Increased traffic on 1st Ave. NE would also impact the safety of senior residents from Aegis that periodically cross the street to visit Twin Ponds Park. Parking restrictions would need to be imposed at the park to prevent overflow parking from a station located only one block away on 155th. Regardless of which station is selected, sidewalks should be extended along the entire length of 1st Ave. NE from 145th to 155th to increase walkability to the light rail station and pedestrian safety. More crosswalks and a lighted, pedestrian-activated crosswalk on 1st Ave. NE would address some of these safety concerns.

C-023-006 **Natural Environment:** As indicated previously, daylighting portions of Thornton Creek along a new pedestrian and bike trail west of the freeway would encourage mobility to either station while improving aquatic and riparian habitat and providing a natural amenity for the residents of Parkwood. Pedestrian use of the existing trail through Twin Ponds Park from Meridian Ave. (across from the Evergreen School) might also increase under either station option. Widening, lighting, and other improvements to this trail would encourage walking to either station. Extending a new trail spur eastward to 1st Ave. NE south of the ponds would also encourage walking to the 145th station.

C-023-007 **Summary:** Based on a consideration of both the impacts and the benefits of the Segment A Alternatives, the majority of the Parkwood Neighborhood Association Board favors a station located at NE 145th Street. Alternatives A1 and A3 (145th station) would result in similar impacts to Parkwood, and so we do not strongly favor one of these alternatives over the other. Alternatives A10 and A11 (Stations at 130th and 145th) could result in fewer impacts to Parkwood due to reduced boardings anticipated at 145th relative to other alternatives; however, the station footprint at 145th would be comparable to Alternatives A1 and A3. Consequently, we do not have a strong preference for Alternatives A10/A11 over Alternatives A1/A3. Alternatives

C-023-004

The streets reconstructed with the project would meet applicable city standards, which typically include sidewalks providing for pedestrian and bicycle use; station access plans also are considering all modes of access, including bicycling and walking. The Draft EIS Transportation Technical Report includes an inventory of pedestrian facilities within 1/2 mile of stations and bicycle facilities within 1 mile of stations. This inventory helped Sound Transit work with local jurisdictions on pedestrian and bicycle access planning in the station areas.

C-023-005

The NE 155th Street Station is one of the alternative station locations with the lowest forecasted ridership and therefore one of the lower pedestrian volume estimates. The estimated future PM peak hour period volume leaving the NE 155th Street Station is estimated at approximately 40 pedestrians per hour, based on the ridership forecasts (other riders are assumed to transfer to bus or are park-and-ride patrons). The pedestrians will primarily walk to the east and west from the station. While many pedestrian amenities are desirable near stations, the volume at the NE 155th Street Station is not anticipated to result in an impact to existing facilities.

The station garage is expected to accommodate the projected demand for park-and-ride; however, if the demand for transit increases, it is possible that all day parking of transit riders could occur where on-street parking is available within walking distance of the station. Section 3.6.7 of the EIS identifies measures that could be applied to discourage parking by transit users in the station areas For example, signs restricting parking duration could be installed at Twin Ponds Park and along 1st Avenue NE.

C-023-006

Sound Transit appreciates your suggestions for park, trail and other

C-023-007 A5 and A7 (155th station) would have the greatest adverse impact on the Parkwood neighborhood while not serving local transit needs as much as other stations because the low anticipated boardings.

The Parkwood Neighborhood Association appreciates the opportunity to comment on the 145th and 155th station alternatives for the Draft Environmental Impact Statement for the Lynnwood Link Extension. We welcome Light Rail to the community because of the many benefits it will provide long into the future. We encourage Sound Transit to work the cities of Seattle and Shoreline and King County Metro Transit to encourage walking, biking, and bus transit over cars to get people to and from the stations. The Parkwood Neighborhood Association is committed to working with Sound Transit and the City of Shoreline to identify potential impacts to our neighborhood and to work collaboratively toward solutions that best serve the needs of our community.

Sincerely,

Chris Brummer, Parkwood Neighborhood Association Light Rail Committee Chair
Katie Schielke, Parkwood Neighborhood Association Chair

neighborhood amenities that could complement the regional investment in a light rail station serving the area. However, such improvements are beyond the scope of the proposed project.

C-023-007

Thank you for your comments on the Lynnwood Link Extension Draft EIS. Sound Transit acknowledges your preference for a station at NE 145th Street and your discussion of the pros and cons associated with the Segment A station alternatives. The Final EIS evaluates all the alternatives evaluated in the Draft EIS (with updated analysis when needed). The Final EIS also evaluates the Preferred Alternative the Sound Transit Board identified in November 2013, with a station at NE 145th Street.

Sound Transit
DEIS Comments c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

September 22, 2013

Dear Ms. Swift,

I am writing to you as a representative of the 145th/155th Street Station Citizens Committee. We are a group of neighbors who have recently formed to share information and ideas about the coming light rail and to be involved as much as we can in the process of reshaping our part of Shoreline. We all live in the Ridgecrest or Parkwood neighborhoods, both of which stand to see significant changes as a result of the light rail station. We are excited at the thought of rapid transit at our doorsteps, yet at the same time we have many concerns and questions about how it will affect our neighborhoods. Thank you for the opportunity to provide feedback on the Lynnwood Link Extension Draft Environmental Impact Statement.

Though not all members of our committee agree about which proposed station location will be best for the neighborhoods, our comments favoring both stations are outlined below.

C-024-001 General comments favoring the 155th station location:

- A station at 155th would split the impacts on the neighborhoods more evenly
- A station at 155th is more central to southern Shoreline, allowing more residents easy access
- A station at 155th is closer to Shoreline businesses
- 155th street already has bike lanes and turn lanes in place

C-024-002 General comments favoring the 145th station location:

- A station at 145th would allow for the redevelopment of 145th street (which is already badly needed) which won't happen if the station is located at 155th
- The 145th location has more room available around the interchange area for parking and fewer houses will be lost
- Station construction will make a smaller impact upon both Seattle and Shoreline residential areas at this location and the result will have a positive impact upon community development with minimum disruption
- Station development/art/grounds development are more open, do not require massive habitat removal, and place smaller commuter pressure from the surrounding neighborhood arterials

Though we do not unanimously agree on station location, we are united in our concerns for impacts to both neighborhoods. The remainder of this letter details our feedback on each of the relevant sections of the DEIS.

C-024-001

Your reasons for favoring a station at 155th Street are noted.

C-024-002

Your reasons favoring a NE 145th Street Station location are noted.

C-024-003 Acquisition – property impacts

We would like to request that the fewest possible number of residents be displaced, and that the fewest possible number of properties be taken for the light rail line and the stations combined.

C-024-004 Land use

Shoreline was recently named a Tree City, USA. We would like to request that Sound Transit retain as many trees as possible.

C-024-005 Economics

We would like to request that Sound Transit pay special attention to commercial traffic during construction, and to mitigate negative impacts such as noise, dirt, and heavy loads on residential streets.

Some members view a 155th street station to be a better location for Shoreline business. In particular, the 155th street location is a direct line to the proposed Aurora Square redevelopment project.

Neighborhoods

Many of the concerns we discussed are about safety:

C-024-006
- Many residents have expressed opposition to a parking garage at the station location, as it will encourage more traffic

C-024-007
- Concern that the homeless population will be drawn to the station as a refuge
- Concern about an increase in crime around the station
- Concern about the safety of school crossings as more traffic comes into neighborhoods
- Concern about the lack of adequate sidewalks and crosswalks at intersections
- Concern about inadequate lighting in and near stations

C-024-008
- Concern that increased traffic at 145th will result in using side streets as "cut-throughs"

C-024-009
- Concern that light rail tracks may create a divide between east and west Shoreline

C-024-010
- Suggestion to mitigate traffic impacts by adding traffic circles to discourage "cut-throughs"
- Concern about increased traffic in general, no matter where a station is located

C-024-011
- Request to separate pedestrian walkways from vehicle traffic on major streets leading to a station

Visual and Aesthetic Resources

We have concerns about trees, noise, and views:

C-024-012
- Concern in general about tree loss
- Request to preserve as many existing trees as possible on 5th Ave NE
- Request to replace any removed trees with mature trees
- Request that the rail line be at grade as much as possible
- Request mitigation in upper Ridgecrest for noise and views

C-024-003

As described in Chapter 2, Alternatives Considered (Section 2.6.1), Sound Transit's planning of the alternatives emphasized opportunities to minimize environmental impacts, particularly property acquisitions and displacements.

C-024-004

Sound Transit will comply with all applicable tree protection standards in City of Shoreline Municipal Code 20.50 Subchapter 5 and minimize vegetation and tree removal to the extent practical.

C-024-005

Mitigation measures to reduce impacts to residential streets during construction are described in Section 3.6 of the Draft EIS. The members' preference for 155th Station due to better access to existing businesses is noted.

C-024-006

Sound Transit would mitigate impacts on NE 145th Street or NE 155th Street as a result of additional traffic using the park-and-ride garages. Please refer to the Final EIS.

C-024-007

Sound Transit maintains all of its stations to ensure they remain clean and safe. The stations will be well lit, feature security cameras, and are regularly monitored in person by security personnel. As described in Section 4.14 of the Draft EIS, crime is not expected to increase as a result of operation of the stations, in part because of project design and because most areas in the project corridor have low crime rates. Presence on station platforms requires proof of fare payment and fare-paid areas will be regularly patrolled by fare inspectors and security personnel.

C-024-012

- Concern about westerly views from Ridgecrest

Air Quality and Greenhouse Gases

C-024-013 We have several requests to address concerns that increased traffic around stations will degrade air quality during and after construction:

- Request design of parking structures is easy-in, easy-out to minimize exhaust
- Request dedicated freeway ramps to and from parking structures
- Request adequate dedicated motorcycle parking
- Request adequate bike stalls

Noise and Vibration

C-024-014 We are concerned that removal of many trees will increase freeway noise for many neighbors. As a mitigation, we would like to request replanting of trees along the rail line and up into the Ridgecrest neighborhood.

Ecosystem Resources

C-024-015 We would like Sound Transit to address any potential issues from runoff, and request that there is continued monitoring of streams that light rail will cross for pollutants.

Water Resources

C-024-016 We request permeable sidewalks and driveways at the station to help minimize increased runoff caused by the station footprint.

Energy Impacts

C-024-017 We request that utilities to and from the station be run underground, and that solar energy be used where possible to power stations.

Geology and Soils

C-024-018 We have two concerns here: Ridgecrest Community Park and the two peat bog parks. We believe Ridgecrest Community Park could be destabilized by constructions and regrading, so we would like Sound Transit to ensure a soil study is done here.

Twin Ponds Park and Ronald Bog Park have peat bogs. We have questions about whether vibration may adversely affect the soil under those parks.

Parks and Recreation

C-024-019 Our concerns here are mainly about Ridgecrest Community Park:

- What about the existing berm and trees? We would like those to be replaced

None of the alternatives would have an operating school close by and they would not affect travel times or routes for school buses. Lakeside School is the closest school to a station (NE 145th Street Station). As described in Section 4.14.2 of the Draft EIS, the safety-related improvements (sidewalks and protected crossings) to serve all pedestrians accessing the station would also improve the walking environment for Lakeside students. Section 3.6.9 of the Draft EIS discusses notification and communication with school officials so they may provide advanced and ongoing notice to students and parents concerning construction near schools.

C-024-008

As described in Section 3.6.4 of the Draft EIS, measures to address cut-through traffic impacts could include signage, traffic calming measures or other cut-through restrictions, and would be determined in conjunction with local jurisdictions.

C-024-009

Sound Transit evaluated the potential for disruption or separation of the community in the Draft EIS in Section 4.4 Social Impacts, Community Facilities, and Neighborhoods. In Section 4.4.1, the point is made that the City of Shoreline is currently bisected by I-5, which limits the east-west street network. Tall trees, sound barriers, and the noise of vehicular traffic further define this existing line in the city. The light rail project would not remove east-west connection points over the freeway. Stations at major arterial crossings is more likely to encourage east-west movements within the community. Please see Section 4.4.2 for more information.

C-024-010

Please see response to C-024-008.

C-024-019

- Request that Sound Transit ensure that the playing fields remain the same size
- Request that Sound Transit ensure to replace any lost public land with new public land
- Request that Sound Transit mitigate noise in the park

Thank you in advance for considering our comments. All of the members of our committee look forward to providing additional input as the plans for the station move forward.

Sincerely,

Robin Lombard for the 145th/155th Street Station Citizens Committee

C-024-011

As described in Section 3.2.5 of the Final EIS, Sound Transit would provide pedestrian and bicycle improvements at Lynnwood Link Extension stations consistent with its current System Access Policy to safely accommodate projected increases in pedestrian and bicycle travel associated with the project. Sound Transit would also work with local agencies to determine which pedestrian and bicycle improvements would be most appropriate to support station access and safety. Any new facilities would be designed and constructed to meet or exceed local jurisdictional standards for pedestrian and bicycle mobility.

C-024-012

Tree loss was discussed in the Draft EIS discussion (loss of mature vegetation in Viewshed 5) on pages 4-77 and 4-78. Mitigation measures such as preserving trees and replanting vegetation is discussed in the Draft EIS on page 94. Planting of mature trees is generally not recommended due to lower levels of survival of larger specimens, but other measures to help soften the initial impacts as replacement vegetation matures are available. See section 4.5.6 of the Final EIS for an updated discussion of the mitigation measures proposed. As described in Section 4.7, severe to moderate noise impacts due to the project will be mitigated.

Your preference for an at grade design is noted.

C-024-013

The potential for air quality and greenhouse gas emission impacts was examined by modeling the emissions at several of the more congested and high volume locations along the corridor, including near stations, as discussed in Section 4.6.3. Sound Transit found no violations of federal air quality standards in these locations. Design for the station and parking facility will be based on Sound Transit Design Standards and local agency input and review, as well as by WSDOT and

FHWA. Direct access to an interstate from a park and ride structure is not being considered because new access points to I-5 are not allowed by FHWA, but modified ramp access is being considered for several alternatives that would provide effective connections to the freeway. Access plans and designs for the station will address all modes, including the provision of bicycle facilities and storage.

C-024-014

Foliage, if dense, can provide slight reductions in noise levels. There is up to a 3-dBA reduction in transportation noise for locations with at least 100 feet of dense foliage that contains leaves all year. Also, a 3-dB reduction in noise level is barely perceptible to most people; therefore, foliage in virtually all areas of this project corridor will have little overall effect on light rail or traffic noise. On the subject of replanting removed foliage, please see the response to C-024-12.

C-024-015

Managing stormwater volumes and pollutant discharges to natural water bodies is a priority for Sound Transit. Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts on environmentally sensitive resources (including water resources) to the maximum extent practicable and to provide adequate mitigation to ensure no net loss of ecosystem function and acreage as a result of agency projects. The project would be designed to comply with all federal, state, and local regulations to remove pollutants and control potential risks to water resources through project planning, design, and the application of best management practices.

C-024-016

Sound Transit requires all projects to consider low-impact development (LID) methods, such as permeable pavement, as a first choice for

stormwater treatment (Design Criteria Manual, July 2012). As summarized in Section 4.9.1 of the Draft EIS, the most common soil group in the project area is Type C, which is predominantly till-type soil that has a low infiltration and high runoff potential, generally not compatible with many LID approaches such as permeable pavement that require soil to infiltrate. However, some other locations in the project area contain Soil Types A and B, which have high to moderate infiltration potential, respectively, and are generally compatible with many types of LID stormwater facilities. Sound Transit will evaluate the feasibility of permeable pavement throughout the project area.

C-024-017

As described in Section 4.15.2 of the Draft EIS, power connections for the traction power substations to the nearest existing power source would be either overhead or underground. Section 4.15.3 of the Draft EIS describes existing utilities that may be relocated where they intersect the alternative alignments. The method of relocation would be consistent with Sound Transit's policy of replacing existing utilities in-kind when the relocation is to be funded by Sound Transit. The potential for using solar energy or other renewable energy sources is consistent with Sound Transit's Sustainability Policy, and would be reviewed during final design.

C-024-018

A geotechnical evaluation of the potential impacts of this project on Ridgecrest Park was completed as a component of design development. At both Twin Ponds Park and Ronald Bog Park, the preferred alignment is located on the east side of the freeway. Due to the distance of the project from the park, the vibrations during construction and operation of light rail are unlikely to affect the soils below the parks. Vibration monitoring equipment will also be routinely deployed along the alignment during construction to assess vibrations. If potentially damaging vibrations associated with construction activities are recorded, mitigation

measures (such as different types of equipment, protection at receptor locations, etc.) would be implemented.

C-024-019

Thank you for sharing your concerns regarding Ridgecrest Park. Sound Transit is working closely with the City of Shoreline to minimize impacts to Ridgecrest Park and mitigate unavoidable impacts. Based on preliminary design, a portion of the existing berm and trees will likely need to be removed. Sound Transit will coordinate with the City to replace the screening and noise reducing function of the berm and trees where possible. No impacts to the playing fields are anticipated.

LINWOOD LINK DEIS COMMENTS Att: Lauren Swift
401 Jackson St.
Seattle WA 98104

C-025-001

I write regarding the fate of the Latvian Lutheran Church and Cultural Center at 11710 3d Ave. NE under plans to extend Light Rail northward in Seattle. It will be a tragedy if this ethnic and community resource were to be demolished.

On the heels of WWII, many thousands of Latvians found refuge in the United States from the Soviet occupation of their small Eastern European country. Many of them settled in large urban areas, including Seattle. While becoming responsible and productive citizens in their new land, they nevertheless managed to retain their language and many aspects of their culture heritage. They created self-help organizations, started Latvian language schools for their children, organized cultural events, and built their own churches, largely with volunteer labor. Their children's children still benefit from their labors and carry on the tradition.

Latvian church buildings serve not only their congregations' spiritual needs, they function as community centers for broader audiences, venues for cultural and sports events. Over the generations many smaller Latvian communities in the United States have disappeared or have greatly diminished their activities. Not so Seattle; it is one of the most active Latvia-American communities on the North American continent. In addition, its facility on 3rd Avenue is used by many other organizations.

I urge you to avoid demolishing this both symbolic and real example of successful American multiculturalism at work. If the building can be saved, then all steps should be taken to maintain access to the site during construction to prevent interruption of its community services.

Sincerely,

Lilita Bergs
Director, The Latvian Museum
The American Latvian Association in the United States, Inc.
400 Hurley Avenue, Rockville, MD 20850

C-025-001

The Sound Transit Board directed Sound Transit to explore a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). Access to the property and its functions have been maintained, although a small portion of land on the property's edge would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes including: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods; Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

PULCINA PĀRSTĀV UZTUR

Karlis Lenšs
Amerikas Latviešu Jautatnes Apvieniba

September 18, 2013

SOUND TRANSIT
c/o Lauren Swift
401 S. Jackson St.
Seattle, WA 98104

To Whom It May Concern,

I am writing to you on behalf of the American Latvian Youth Association ("ALJA"). Our mission, since our founding in 1952, has been the furtherance of Latvian culture, language, and knowledge among Latvian youth across all of the United States. Over the past 61 years, we have had thousands of members throughout the country, and we are currently as active as ever in our history. While most of our membership resides in the Midwest, a core component of our ability to succeed in our mission is broad support from all of the Latvian community centers in the country. Since 1971, we have frequently used the Seattle Latvian Center for meetings and events. In addition, on several occasions, we have held our biggest annual event, Congress, in Seattle. From our perspective, The Latvian-American "experience" in Seattle is not rooted in Pike Place Market or the Space Needle. It is the Seattle Latvian Center, nestled amongst towering evergreens on the north Side of town, that for generations has served and nurtured our tight-knit community. While it may seem like another just another social hall or private structure standing in the way of a public works project, to us the Seattle Latvian Center truly *IS* Seattle. Countless weddings, confirmations, Youth Congresses, and other special events within the Latvian community have happened there. The Seattle Latvian Center is the largest and most vibrant in the Pacific Northwest, and I personally consider it the most uniquely beautiful Latvian community center in the United States. It is not just a simple social hall, but also a church and Latvian language school for our children. It was built from the ground-up by our fathers and grandfathers and to us, its importance goes beyond the bricks and mortar of the building itself.

This is especially true to our aging community members throughout America. To them their local Latvian community center is home. The Seattle Latvian Center is no different. Having lived through the horrors of World War II and the Soviet Occupation, our elderly population would definitely be the most affected by the loss or relocation of the Latvian Center. It will be recalled that the Soviet Union used eminent domain to make public their homes and possessions. To allow that to happen again, albeit with completely different motives, would no doubt be seen a slap in the face to the elderly Latvian population in Seattle. Our cultural centers embody the decades of work, decades of struggle, and decades of pride within our ethnic community. In Seattle, the Latvian community is vibrant and alive largely as a result of having such a fine facility. For many in Seattle, the Latvian center represents their unique struggle and shows that with grit and perseverance they were able to build a community thousands of miles away from home. The term "negative impact" does not even begin to describe the toll that this project would take on the local Latvian community. The impact on our organization would be the loss of a facility that is integral to the furtherance of our mission.

C-026-001

Accordingly, we request that Sound Transit review each of the alternative routes in the DEIS, and select the one that has the least impact on the activities of the Seattle Latvian Center. To the extent there is an option that allows the Latvian Center to remain in its current location, we respectfully request that such alternative be reviewed and selected, and that any impacts be fully mitigated. The relocation of such a culturally significant facility would have substantial impact on ALJA and would be devastating to the local community in Seattle.

C-026-001

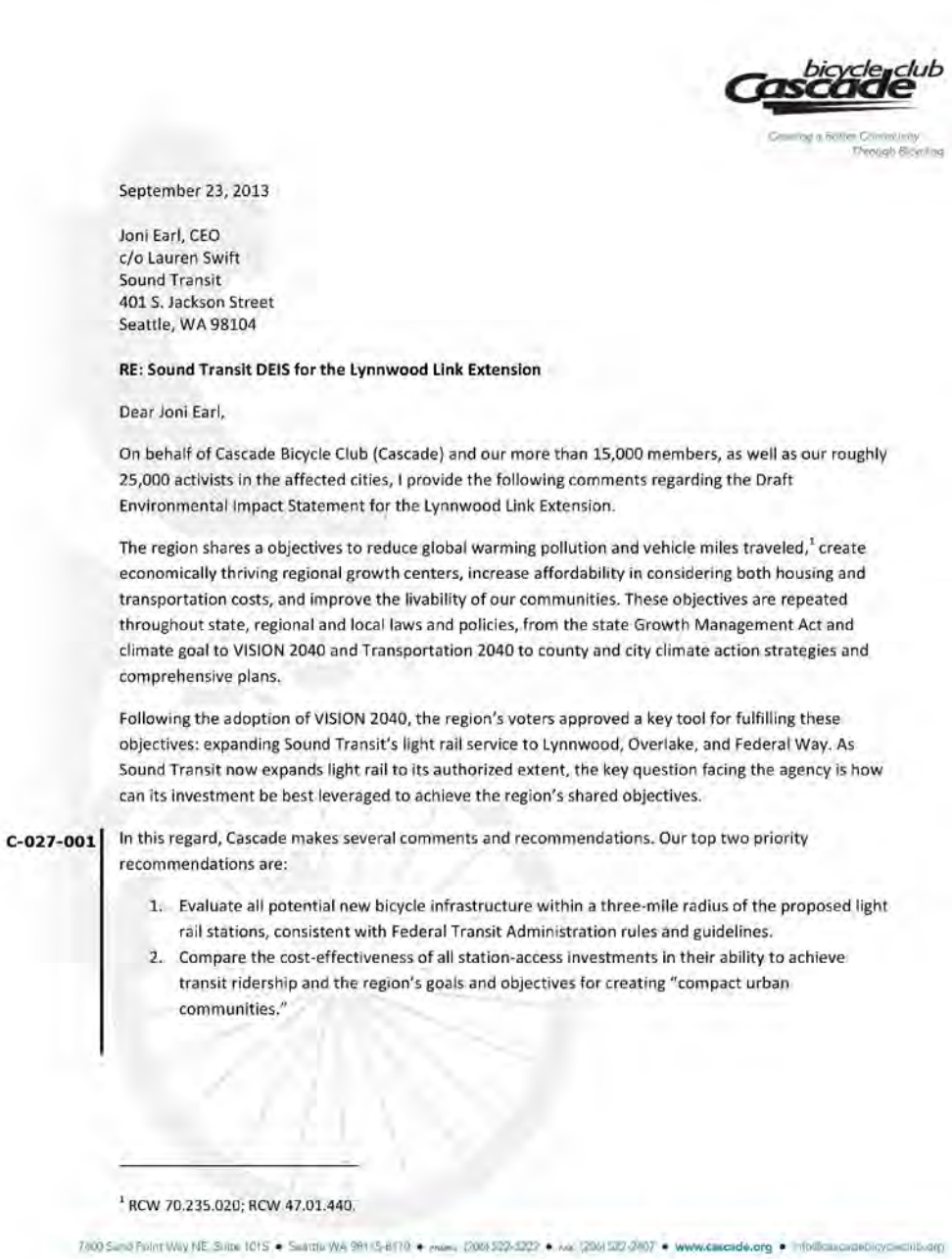
The Sound Transit Board directed Sound Transit to explore a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook so that none of the Segment A alternatives in the Final EIS would displace the church or the church hall (also called the cultural center). Access to the property and its functions have been maintained, although a small portion of land on the property's edge would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a small portion of the church property.

Several sections in the Final EIS have been updated to address these changes including: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods; Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

C-026-001 While we understand the need and demand for public transit expansion in the city, our organization, ALJA, on behalf of our members nationwide, urge Sound Transit and the City of Seattle to re-route the proposed railroad to save our largest cultural, educational, and social hub in the Pacific Northwest.

Respectfully yours,

Karlis Lenss
President, American Latvian Youth Association
1777 W Altgeld D
Chicago IL 60614



bicycle club Cascade

Creating a better Community Through Bicycling

September 23, 2013

Joni Earl, CEO
c/o Lauren Swift
Sound Transit
401 S. Jackson Street
Seattle, WA 98104

RE: Sound Transit DEIS for the Lynnwood Link Extension

Dear Joni Earl,

On behalf of Cascade Bicycle Club (Cascade) and our more than 15,000 members, as well as our roughly 25,000 activists in the affected cities, I provide the following comments regarding the Draft Environmental Impact Statement for the Lynnwood Link Extension.

The region shares a objectives to reduce global warming pollution and vehicle miles traveled,[1] create economically thriving regional growth centers, increase affordability in considering both housing and transportation costs, and improve the livability of our communities. These objectives are repeated throughout state, regional and local laws and policies, from the state Growth Management Act and climate goal to VISION 2040 and Transportation 2040 to county and city climate action strategies and comprehensive plans.

Following the adoption of VISION 2040, the region's voters approved a key tool for fulfilling these objectives: expanding Sound Transit's light rail service to Lynnwood, Overlake, and Federal Way. As Sound Transit now expands light rail to its authorized extent, the key question facing the agency is how can its investment be best leveraged to achieve the region's shared objectives.

C-027-001

In this regard, Cascade makes several comments and recommendations. Our top two priority recommendations are:

1. Evaluate all potential new bicycle infrastructure within a three-mile radius of the proposed light rail stations, consistent with Federal Transit Administration rules and guidelines.
2. Compare the cost-effectiveness of all station-access investments in their ability to achieve transit ridership and the region's goals and objectives for creating "compact urban communities."

[1] RCW 70.235.020; RCW 47.01.440.

7300 Sand Point Way NE, Suite 101S • Seattle WA 98115-8110 • phone: (206) 522-3222 • fax: (206) 522-2807 • www.cascade.org • info@cascadebicycleclub.org

C-027-001

As described in Section 1.4 of the Final EIS, the light rail alternatives, including potential stations, are in response to the project's purpose and need, as defined in Chapter 1. While bicycle access remains an important consideration for the project, further study and detailed evaluations of bicycle access would not substantially differentiate the alternatives under consideration. All of the alternatives are designed to provide for effective pedestrian and bicycle access, including to and from the stations to feeder bus lines/stations, park-and-ride facilities, and to the surrounding street system. The project would be designed to satisfy all applicable public access, facility design standards, and life safety requirements. As described in Section 3.2.5 of the Final EIS, Sound Transit would provide for pedestrian and bicycle access at Lynnwood Link Extension stations and on streets reconstructed as part of the project, consistent with the agency's adopted System Access Policy. Finally, the Federal Transit Administration's rules and guidelines for a New Start project EIS do not dictate a 3-mile radius study area for bicycle facility inventories, but the project's EIS did include an inventory of facilities within 1 mile of potential stations.

bicycle club Cascade

Creating a better Community Through Bicycling

C-027-002

Station Location Selection

These region's objectives are to reduce greenhouse gas emissions and vehicle miles traveled and to encourage compact urban development in regional growth centers and along high-capacity transit. VISION 2040 states:

> Compact urban communities offer transportation, housing, and shopping choices that reduce the need for automobile travel and allow residents to walk or bicycle to neighborhood stores. Streets are laid out in a grid pattern or are interconnected, rather than as cul-de-sacs, to support efficient transit operations, as well as walking and bicycling. Typically there are a variety of housing types, such as single-family homes on smaller lots and small apartment buildings. Often small neighborhood activity hubs serve as centers for shopping and local services.
>
> Compact development can be more efficient and cost-effective to serve with infrastructure and services. By creating an environment that is more conducive to walking, bicycling, and using transit, compact development can also contribute to reducing greenhouse gases and other pollutants.
>
> Many of the region's transportation thoroughfares are lined with single-story, single-use developments. These areas present opportunities for redevelopment and infill. Along major transit routes, redevelopment can occur in the form of transit-oriented development, where mixed-use projects that provide housing, employment, and retail can focus around a transit station or hub and serve as an activity node for adjacent neighborhoods.
>
> VISION 2040 supports compact urban communities and promotes the development of vacant or underutilized urban land in a manner that supports transit, conserves resources, and builds communities. VISION 2040 also supports redevelopment of selected low-density commercial corridors to make them more transit-oriented and pedestrian-friendly.[2]

As Sound Transit chooses station locations, the agency should make sure its selection matches the region's vision for compact communities.

Cascade strongly supports locating stations as far from Interstate 5 as possible. Interstates divide communities and significantly reduce the potential for transit-oriented development and the creation of a cohesive compact urban community. Interstates are also detrimental air quality, so building the central node farther away from the interstate can help reduce the potential number of people affected. Of the potential Lynnwood station locations, option C1 is the farthest from I-5 and the most centrally located toward likely transit-oriented development in the future. In addition, pedestrians and bicyclists may find navigating to get to the C2 and C3 locations difficult due to distance, signage, and unattractiveness. Likewise, Cascade strongly supports the Mountlake Terrace Transit Station instead of the freeway median station because the station would be nearer to redevelopment opportunities in Mountlake Terrace.

[2] VISION 2040, p. 52.

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C-027-002

Alternative routes away from the I-5 corridor were considered during the Alternatives Analysis and early EIS planning, with participation from the public and jurisdictions. This included alignments along Lake City Way, 15th Avenue NE, and SR 99. Ultimately, the current station sites are in locations that still provide good multimodal access to nearby centers, but avoid higher impacts to the surrounding neighborhoods and the natural environment. Section 2.5, Descriptions of Light Rail Alternatives by Segment, gives further details on the planning, environmental, transportation, engineering and cost considerations that shaped the EIS alternatives, and the project's Alternative Analysis report is appended to the EIS. In Segment B, the Preferred Alternative has the station at the transit center, nearer the areas Mountlake Terrace targets for transit-oriented development. In Segment C, while Alternative C1 has the station closest to the city center, the connecting alignment also carried the highest level residential and displacement impacts, and impacted a city park. The Preferred Alternative, a modified C3, brings the station closer than the original Alternative C3 while still retaining that alternative's lower overall environmental impacts. The station area design also offers good visibility and allows effective bicycle and pedestrian connections from multiple directions.

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C-027-003 **Cascade encourages Sound Transit to select stations that are already near existing business areas.** The improvement of existing urban activity centers is an easier task than the creating whole new urban centers. The evaluation of the 130th, 145th, and 155th stations would be well-informed by this perspective.

C-027-004 **In selecting station locations, Cascade requests Sound Transit to evaluate how potential investments in pedestrian and bicycle infrastructure and transit circulator service could impact transit ridership and transit-oriented development.** For example, the NE 145th Station may score better with pedestrian and bicycle connections to the business district on 15th Avenue, and the NE 155th Station may score better with transit circulator service and protected bike lane to the Shoreline Community College and Shorecrest High School.

C-027-005 **Cascade supports the addition of more stations, including two or three stations in segment A and two stations in segment B.** More stations mean that more people will not have to go as far to access light rail, thereby favoring walking and bicycling as modes of access to the light rail system instead of automobile driving. Stations at NE 130th Street, NE 155th Street, and 220th Street SW, in combination with the NE 185th Street and Mountlake Terrace Transit Center stations, would best support a balanced access to the transit system that would support placemaking and access via bicycling and walking.

Purpose & Needs Statement

C-027-006 Transit is not an end in itself, it is a tool toward achieving a set of goals and objectives. Unfortunately, the DEIS's "purpose and needs statement" confuses the purpose and need of transit by making highlighting the first purpose in itself. It's a circular argument: we must build transit because we must build transit.

The region's transportation and land use goals and objectives are set out in VISION 2040 and Transportation, as quoted above. The extension of light rail is a tool to achieve those goals and objectives. As such, **Cascade urges Sound Transit to add the following statements to the beginning of the the DEIS purpose and needs statements.**

- New Purpose Statement, to lead the other purpose statements:
  "Catalyze the development of compact urban communities consistent with VISION 2040 that improves household affordability of transportation and housing costs, reduces greenhouse gas emissions and vehicle miles traveled, and fosters transit-oriented development."
- New Needs Statement, to lead the other needs statements:
  "Address the need to accommodate the region's population growth in compact urban communities consistent with VISION 2040 in order to improve household affordability combined transportation and housing costs, reduce greenhouse gas emissions and vehicle miles traveled, and foster economic development."

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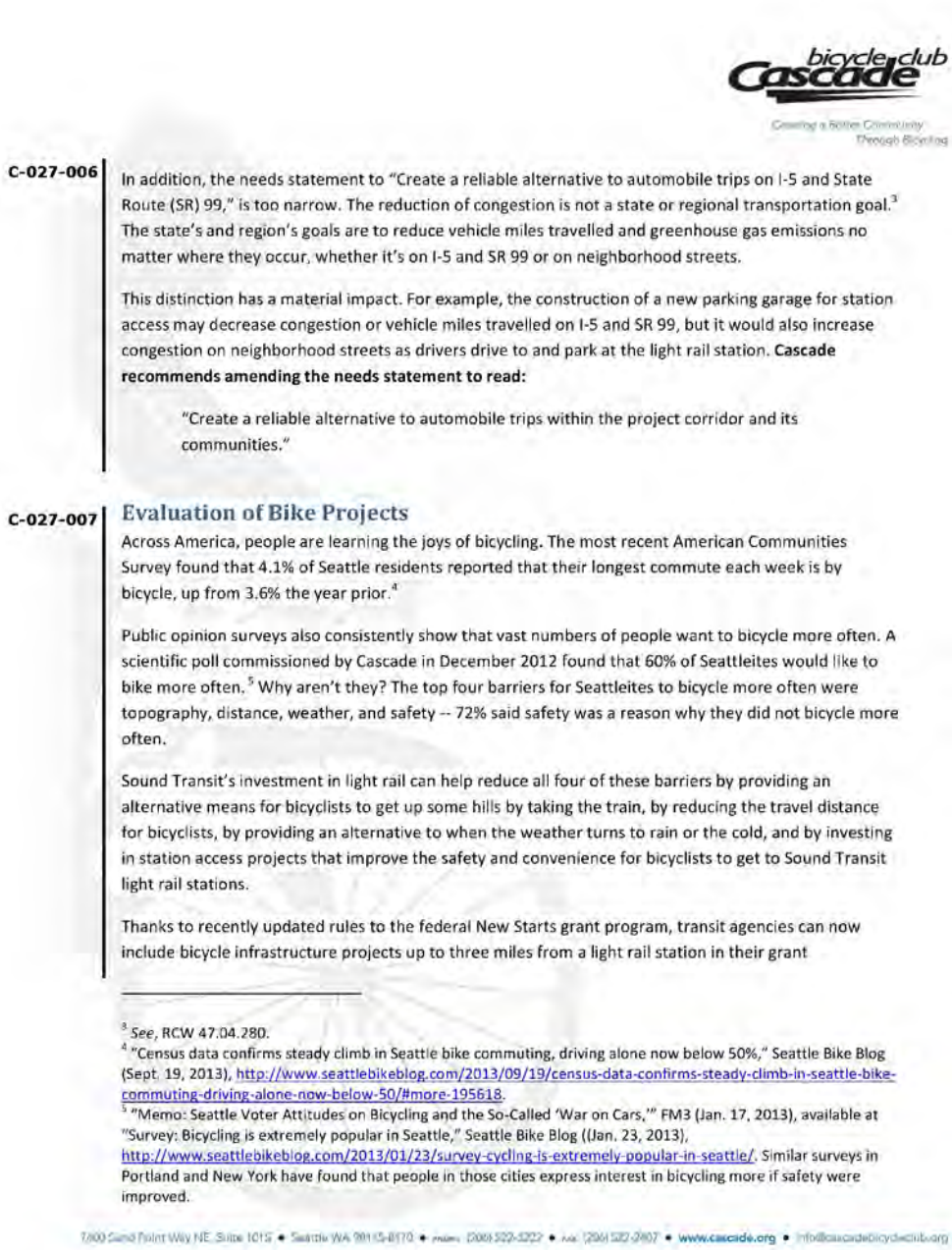
C-027-003

Section 2.5.1 describes the factors Sound Transit considered in developing its alignment and station alternatives, which in this corridor needed to balance transportation, access, land use, economic development, environmental and cost factors. As noted in the station by station qualitative ratings of station area transit oriented development, including for potential stations at NE 130th Street, NE 145th Street, and NE 155th Street, there are few business districts near the general alignment along I-5, outside of the two regional centers at Northgate and Lynnwood. Other alignments farther from the freeway would carry much higher environmental impacts and would carry longer travel times. Chapter 4, Section 4.2.4 summarizes the station area development potential by station area.

C-027-004

In the Draft EIS Chapter 5, Evaluation of Alternatives, Transit Oriented Development ratings were provided (see Tables 5-2, 5-3 and 5-4), based on a range of factors including multimodal access, as well as land use and development conditions. During the Alternatives Analysis and continuing into the EIS alternatives assessment, general station sites were identified for the project, bicycle and pedestrian qualitative measures were also considered (see the Alternative Analysis Report, Chapter 5, and Chapter 2 of the EIS). These measures, along with the other measures of potential mobility, ridership, and land use benefits, transportation impacts, environmental impacts, and constructability, have helped determine the range of station sites and the general features and access plans for the EIS analysis. Transit ridership estimates are primarily driven by population, employment, regional characteristics such as transportation conditions between origins and destinations (including highway conditions), and general accessibility to the station, rather by access by mode. During final design, consistent with the agency's System Access Policy, Sound Transit will continue to collaborate with the local jurisdictions on opportunities to improve bicycle and pedestrian



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C-027-006

In addition, the needs statement to "Create a reliable alternative to automobile trips on I-5 and State Route (SR) 99," is too narrow. The reduction of congestion is not a state or regional transportation goal.[3] The state's and region's goals are to reduce vehicle miles travelled and greenhouse gas emissions no matter where they occur, whether it's on I-5 and SR 99 or on neighborhood streets.

This distinction has a material impact. For example, the construction of a new parking garage for station access may decrease congestion or vehicle miles travelled on I-5 and SR 99, but it would also increase congestion on neighborhood streets as drivers drive to and park at the light rail station. **Cascade recommends amending the needs statement to read:**

> "Create a reliable alternative to automobile trips within the project corridor and its communities."

C-027-007

Evaluation of Bike Projects

Across America, people are learning the joys of bicycling. The most recent American Communities Survey found that 4.1% of Seattle residents reported that their longest commute each week is by bicycle, up from 3.6% the year prior.[4]

Public opinion surveys also consistently show that vast numbers of people want to bicycle more often. A scientific poll commissioned by Cascade in December 2012 found that 60% of Seattleites would like to bike more often.[5] Why aren't they? The top four barriers for Seattleites to bicycle more often were topography, distance, weather, and safety -- 72% said safety was a reason why they did not bicycle more often.

Sound Transit's investment in light rail can help reduce all four of these barriers by providing an alternative means for bicyclists to get up some hills by taking the train, by reducing the travel distance for bicyclists, by providing an alternative to when the weather turns to rain or the cold, and by investing in station access projects that improve the safety and convenience for bicyclists to get to Sound Transit light rail stations.

Thanks to recently updated rules to the federal New Starts grant program, transit agencies can now include bicycle infrastructure projects up to three miles from a light rail station in their grant

[3] *See*, RCW 47.04.280.
[4] "Census data confirms steady climb in Seattle bike commuting, driving alone now below 50%," Seattle Bike Blog (Sept. 19, 2013), http://www.seattlebikeblog.com/2013/09/19/census-data-confirms-steady-climb-in-seattle-bike-commuting-driving-alone-now-below-50/#more-195618.
[5] "Memo: Seattle Voter Attitudes on Bicycling and the So-Called 'War on Cars,'" FM3 (Jan. 17, 2013), available at "Survey: Bicycling is extremely popular in Seattle," Seattle Bike Blog ((Jan. 23, 2013), http://www.seattlebikeblog.com/2013/01/23/survey-cycling-is-extremely-popular-in-seattle/. Similar surveys in Portland and New York have found that people in those cities express interest in bicycling more if safety were improved.

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networks serving the station, as an element of a balanced multimodal access plan that would effectively serve the transit riders expected at the station.

C-027-005

Your preference for more stations, including stations at NE 130th Street, NE 155th Street, NE 185th Street, and 220th Street is noted. The Preferred Alternative has options for additional stations at NE 130th Street and 220th Street.

C-027-006

Comment noted. The need for the project, as described in Section 1.2.2 of the Draft EIS, includes language on regional mobility and a decrease in transportation-related energy consumption and GHG emissions. The Purpose and Need also refers to environment and supporting regions' adopted land use plans.

C-027-007

The increased use of bicycling is very consistent with trends showing greater use of transit and walking, and slower growth in vehicle use. The light rail project is part of an integrated solution encouraging other alternative modes, including bicycling, in the corridor and the region. In the EIS assessment of impacts, Sound Transit inventoried bicycle facilities within a 1-mile radius of potential stations, and considered potential conflicts as well as access needs, as described in Chapter 3, Sections 3.1.5 and 3.2.5 of the Draft EIS. The Final EIS has updated information. While bicycle and trail improvements within a 3-mile radius of transit stations can be grant-eligible under New Starts, they do not impose a minimum study area or a required set of non-motorized access improvements for New Start projects. As noted in the responses above, Sound Transit will continue to work on access planning with local jurisdictions during final design. This effort could include developing

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C-027-007 applications without justifying the expense with a ridership study and without the additional cost weighing against the grant application's cost-effectiveness.[6]

In other words, transit agencies can now build any bicycle infrastructure project within a three mile radius and the only constraint in the Federal Transit Administration (FTA)'s evaluation process is the total available funds. In addition, bicycle infrastructure projects outside the three mile radius are also eligible for New Starts funding, but require justification based on ridership and would count against the cost-effectiveness of grant application.

Using a three-mile radius to evaluate and invest in bicycle infrastructure makes sense. For example, access to potentially big trip generators could be evaluated, such as protected bike lanes from the NE 155th Street Station to Shoreline Community College and Shorecrest High School, and from the 220th Street SW Station to Edmonds Community College. In addition, such a larger analysis would provide a more regional focus toward improving nonmotorized transportation options and access to light rail in Lake Forest Park, Edmonds, and Mukilteo.

Unfortunately, in discussing the mitigation to potential impacts on bicycle facilities (3.2.5), the Draft Environmental Impact Statement fails to commit Sound Transit to evaluating new bicycle infrastructure within a three-mile radius.

Given that all bicycle projects within a three-mile radius can be funded by New Starts without negatively affecting a grant application, **Cascade urges Sound Transit to go beyond its stated one-mile radius and evaluate all projects within a three-mile radius of each proposed station.**

C-027-008 Beyond the planning documents identified on page 3-38, planned bicycle infrastructure is identified in, or supported by, the 2013 update to the Seattle Bicycle Master Plan; all cities' capital improvement plans; cities' "complete streets" and "safe routes to school" policies; the Mukilteo Pedestrian, Bicycle, and Trails Plan; and the Lynnwood Transportation and Bicycle Plan. All bicycle infrastructure identified within these plans, and within a three-mile radius of any light rail station, should be evaluated by Sound Transit for investment.

Best practices for bikeways designs are constantly evolving. In order to make sure infrastructure is as safe as possible, as well as regionally consistent, we encourage Sound Transit to use the "Urban Bikeway Design Guide," produced by the National Association of City Transportation Officials (NACTO).[7] The Federal Highway Administration recently adopted the NACTO guide as its baseline for bikeway design.[8]

In addition, Cascade finds that Sound Transit excessively restricts the evaluation and construction of bike infrastructure. The DEIS states that both mitigation and planned bike infrastructure would only be

[6] "New and Small Starts Evaluation and Rating Process – Final Policy Guidance," Federal Transit Administration (Aug. 2013), available at http://www.fta.dot.gov/documents/NS-SS_Final_PolicyGuidance_August_2013.pdf.
[7] http://nacto.org/cities-for-cycling/design-guide/.
[8] http://nacto.org/2013/09/13/city-transportation-officials-praise-federal-highway-guidance-on-bicycle-design/

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strategies to assist the local agencies in identifying and prioritizing improvements, establishing partnerships, and seeking funding including other grants for supporting improvements.

C-027-008

Project designers will use the Urban Bikeway Design Guide by the National Association of City Transportation Officials, in conjunction with Sound Transit design standards and applicable WSDOT and local jurisdictional design standards. Please also see the response to C-027-007. The statements in the Draft EIS (page 3-38 and 3-39) relate to how Sound Transit would provide for pedestrian and bicycle access on roadways reconstructed as part of the project. Although other roadways in the study area may be reconstructed by the cities over time, bringing those facilities up to current standards, Sound Transit's conclusions about bicycle and pedestrian access immediately around stations generally did not assume such improvements.

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C-027-008 "implemented with reconstructed roadways." Roadway reconstruction is too infrequent to make this a meaningful approach toward increasing the safety and convenience of accessing light rail stations. This is wholly inadequate. Investments in bicycle infrastructure need to be made proactively to encourage access, not wait forty years until a street is reconstructed.

C-027-009 **Encourage Non-Motorized Station Access**

The construction of parking lots or garages should not be considered a given. Sufficient parking already exists in many of the station-areas, the DEIS fails to fully analyze the potential environmental impact of the parking garages, parking garages are an expensive means to achieve ridership, and any investment in car parking spaces should be evaluated in comparison to other station-area access investments. To the extent that additional parking is deemed to be necessary, the surface lot or structure should be designed to allow future repurposing for transit-oriented development.

Cascade recommends better utilizing the existing available parking instead of building parking lots or garages. The DEIS itself found sufficient parking in most of the station areas, calling into question whether additional parking lots or structures are necessary. According to Table 3-5, there are a total of 6,130 unused parking spots available within a quarter-mile of the stations.[9] In fact, only 15.6% of available on-street parking is utilized and 57.7% of off-street parking is utilized. Parking management strategies that utilizes the existing available parking would be a more cost-effective strategy for providing parking access while achieving regional goals for creating compact urban communities that rely more on bicycling and transit.

C-027-010 **Cascade recommends analyzing the vehicle miles travelled and greenhouse gas emissions induced by building a parking garage.** By building a parking garage as a means for drivers to access the light rail station, Sound Transit will be inducing people to drive to the station. Embedded in that inducement are greater greenhouse gas emissions and vehicle miles traveled. Sound Transit needs to calculate this environmental impact.

C-027-011 **Cascade recommends evaluating the cost of building a parking garage based on the marginal cost per stall and rider.** At $30,000 to $40,000 per stall within a parking structure, a stall in a parking garage is significantly more expensive than on a surface lot. However, in reality the cost is much more than even the $30,000 to $40,000 per stall. A stall in parking lot (without a structure) costs about $4,000. Thus, if Sound Transit decides to build 350 stalls in a parking structure instead of 100 stalls in a parking lot (a price difference of $14 million versus $400,000, assuming per-stall costs of $40,000 and $4,000, respectively), the marginal cost of the additional 250 stalls is actually $54,400 – or 36% greater. In evaluating the cost-effectiveness of a parking structure to increase transit ridership and achieve the

[9] The Mountlake Terrace Freeway Station, Lynnwood Park & Ride, and Lynnwood Transit Center stations not included in the calculation in order to prevent any double counting.

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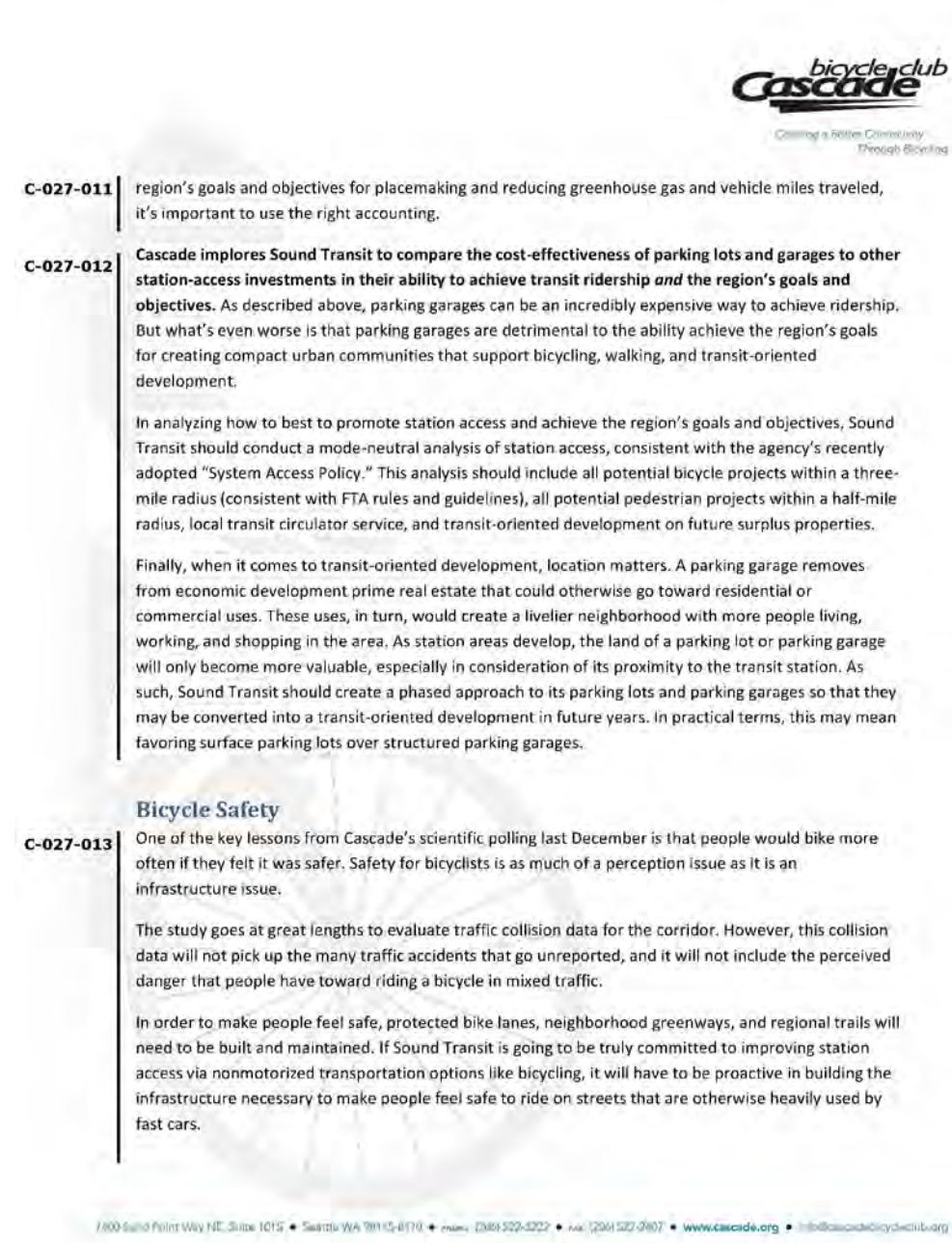
C-027-009

Park-and-ride spaces minimize parking impacts to neighborhoods and provide access to light rail for areas transitioning from suburban to urban densities. As described in Section 3.2.7 of the Draft EIS, park-and-ride lots are generally sized to accommodate future parking demand, and the amount of parking at each station may be further refined in future phases of the project.

As described in Section 4.2.4 of the Draft EIS, analysis of alternatives included assessments for all proposed station locations based on existing conditions that support transit-oriented development, transit-supportive plans and policies, station access, and potential development opportunities. In addition, Sound Transit's TOD policy includes goals that encourage safe multi-modal access to the transit system, with an emphasis on non-motorized access; and support economic development efforts. Implementation of TOD policy continues through final design, construction, and post construction. Implementation includes identifying TOD opportunities and strategies as well as partnerships with public and private interests.

C-027-010

Vehicles traveling to and from parking garages were included in the traffic analysis and are reflected in the vehicle miles traveled and greenhouse gas emissions projections, the "hot spot" air quality analysis, and as part of the other evaluations of impacts for each of the project alternatives. This responds to the need for the EIS to identify significant environmental impacts and appropriate mitigation for the alternatives considered. During final design, Sound Transit's System Access Policy will continue to be applied as Sound Transit further evaluates the multimodal access needs of the project, working collaboratively with the communities to be served.



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C-027-011 region's goals and objectives for placemaking and reducing greenhouse gas and vehicle miles traveled, it's important to use the right accounting.

C-027-012 **Cascade implores Sound Transit to compare the cost-effectiveness of parking lots and garages to other station-access investments in their ability to achieve transit ridership *and* the region's goals and objectives.** As described above, parking garages can be an incredibly expensive way to achieve ridership. But what's even worse is that parking garages are detrimental to the ability achieve the region's goals for creating compact urban communities that support bicycling, walking, and transit-oriented development.

In analyzing how to best to promote station access and achieve the region's goals and objectives, Sound Transit should conduct a mode-neutral analysis of station access, consistent with the agency's recently adopted "System Access Policy." This analysis should include all potential bicycle projects within a three-mile radius (consistent with FTA rules and guidelines), all potential pedestrian projects within a half-mile radius, local transit circulator service, and transit-oriented development on future surplus properties.

Finally, when it comes to transit-oriented development, location matters. A parking garage removes from economic development prime real estate that could otherwise go toward residential or commercial uses. These uses, in turn, would create a livelier neighborhood with more people living, working, and shopping in the area. As station areas develop, the land of a parking lot or parking garage will only become more valuable, especially in consideration of its proximity to the transit station. As such, Sound Transit should create a phased approach to its parking lots and parking garages so that they may be converted into a transit-oriented development in future years. In practical terms, this may mean favoring surface parking lots over structured parking garages.

Bicycle Safety

C-027-013 One of the key lessons from Cascade's scientific polling last December is that people would bike more often if they felt it was safer. Safety for bicyclists is as much of a perception issue as it is an infrastructure issue.

The study goes at great lengths to evaluate traffic collision data for the corridor. However, this collision data will not pick up the many traffic accidents that go unreported, and it will not include the perceived danger that people have toward riding a bicycle in mixed traffic.

In order to make people feel safe, protected bike lanes, neighborhood greenways, and regional trails will need to be built and maintained. If Sound Transit is going to be truly committed to improving station access via nonmotorized transportation options like bicycling, it will have to be proactive in building the infrastructure necessary to make people feel safe to ride on streets that are otherwise heavily used by fast cars.

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C-027-011

As part of final design for the project, Sound Transit will continue to examine options to increase the cost-effectiveness of the project. The alternatives involving parking garages rather than expanded surface parking reflect the limited availability of right-of-way along the corridor, much of which is already developed, although in some station sites there are options for surface parking. Overall, the EIS's range of alternatives, including the station locations and the parking capacity assumed, are in response to projected demand. Parking is one element of a balanced approach for a regional system that provides access via a variety of modes. The current demand for parking at all transit centers and major park & ride lots along this extension is greater than supply, with most lots full by 8 am or earlier on weekdays. It is reasonable to expect that as population and employment grows in the corridor, growth in transit center parking will also continue, as would growth in the use of other modes of access.

C-027-012

Sound Transit does not consider parking investments to be in competition with other access components of the project, nor does it consider parking to be inconsistent with local and regional goals for creating compact and walkable communities. Provisions for parking are part of a balanced approach to developing effective multimodal access to the regional system. The alternatives considered in the EIS, including provisions for parking garages, represents a long history of alternatives planning that is detailed in Chapter 2, and which includes the results of many rounds of public participation and comment. Additional parking as part of the project reflects the project description included in the ST2 Plan, funding for which was approved by voters in 2008, and which itself involved extensive public planning. The multimodal access reflects Sound Transit's adopted Systems Access Policy, which recognizes that people may choose among a variety of modes as they access a station, depending on their own needs and circumstances. As noted in

responses above, Sound Transit will continue to develop the more detailed station access plans for the adopted project during final design, and cost-effectiveness of a variety of project elements and design approaches will continue to be considered.

C-027-013

Sound Transit remains committed to developing effective multimodal access to its stations, but the project's purpose is focused on transit improvements rather than repairing existing deficiencies in the road, bike, and pedestrian network. The review of collision data was primarily intended to assist in evaluating whether the project would aggravate existing safety concerns or create new safety conflicts for bicyclists. Sound Transit is also committed to working with its partners to advance opportunities to increase the use of bicycles and other alternative modes that would connect the stations to the surrounding communities.

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September 23, 2013

Lauren Swift
Sound Transit
401 S. Jackson Street
Seattle, WA 98104

RE: Lynnwood Link Extension Draft Environmental Impact Statement

Dear Ms. Swift:

Since 2001, Feet First has worked to ensure that all communities in Washington are walkable. We represent people of all ages looking for safe, accessible, and inviting ways to go by foot. Walking is a vital transportation mode that strengthens communities, reduces pollution, and promotes good health.

Feet First strongly supports the development of vibrant, walkable communities throughout the region. If done right, the construction of Sound Transit's link light rail system presents a great opportunity to foster the development of such communities. Station placement is arguably the most critical factor in creating walkable transit-oriented communities near stations. Consequently, we are following with great interest the environmental review for the Lynnwood link extension for light rail between Northgate and Lynnwood. Below are our comments on the recently-released draft environmental statement (DEIS).

C-028-001

The DEIS analysis of long-term TOD potential at each potential station seems to be largely based on existing local and regional land use plans. While this is a prudent approach, it's very possible that the area surrounding identified station sites will be subsequently upzoned to accommodate more development. The land use analysis should include potential additional development beyond that allowed in adopted plans, perhaps as a separate scenario in addition to the current plan scenario presented in the DEIS.

C-028-002

As a general rule, Feet First encourages locating stations away from the immediate vicinity of the I-5 freeway corridor. Locating stations right next to freeways decreases the amount of adjacent land available for transit-oriented development (TOD) and also reduces the size of the fifteen-minute walkshed surrounding the station.

C-028-003

Feet First supports the addition of an additional light rail station at NE 130th Street. This station would place an additional 5700 people within a fifteen-

C-028-001

The Draft EIS long term (direct) impacts assessment considered existing land use plans as well as plans in progress, focusing on consistency with existing or officially proposed local government land use plans and policies. Please see Section 4.2.4 Indirect and Secondary Impacts for potential impacts associated with possible changes in zoning by the local jurisdictions, which in some cases would be needed to allow higher density and mixed-use land uses in station areas.

C-028-002

As described in Section 2.5 of the Draft EIS (*Chapter 2 Alternatives Considered*), prior to the Draft EIS and Final EIS, Sound Transit evaluated a variety of options for this project based on a number of criteria. Future development potential was one of the criteria assessed during the Alternatives Analysis. The Sound Transit Board chose an I-5 alignment. Sound Transit continues to work with jurisdictions on planning for the areas around the stations to ensure multi-modal access is achieved.

C-028-003

Thank you for identifying the advantages Feet First sees in a NE 130th Street Station. The Sound Transit Board identified an at-grade and elevated alignment with stations at NE 145th and NE 185th streets (Alternative A1 with modifications) as the Preferred Alternative, and also directed further study of options to add a station at NE 130th Street or to make provisions for a future station. A station at NE 155th Street was not identified for the Preferred Alternative, but is still evaluated in the Final EIS under Alternatives A5 and A7. The Preferred Alternative also includes a station at the Mountlake Terrace Transit Station in Segment B. The Segment C Preferred Alternative is a modified Alternative C3 that places that station closer to the urban center and away from I-5, and includes improved walk access.

C-028-003

minute walk of the station and increase system-wide daily boardings of 400 riders under the current zoning. A station at NE 130th carries the additional advantage of opening the NE 125th/130th Street corridor to east-west feeder bus service. This will provide good bus access between the light rail system and the urban villages of Lake City and Bitter Lake.

We prefer a station at NE 155th Street instead of NE 145th Street. A NE 145th Street station has very limited potential for TOD, assuming that Jackson Park Golf Course and Lakeside School are off limits for development. NE 145th street is currently a terrible pedestrian street, with a large interchange, fast-moving traffic, wide intersections, and narrow sidewalks which will be difficult to widen. By contrast, NE 155th Street has a good, pedestrian-friendly, grid network of streets and more room for development.

Feet First strongly prefers the Montlake Terrace Transit Center over the Montlake Terrace Freeway Station. The Transit Center site puts the station within the Montlake Terrace Town Center. A station here will be much more accessible to pedestrians and a stronger TOD catalyst. The Freeway Station site puts the station about two minutes further away from the Town Center. Using the Transit Center site will increase system-wide transit ridership by 1000 riders per day.

Feet First prefers alternative C-1 (200th Street SW) for the Lynnwood station. This location is several blocks closer to the emerging Lynnwood urban village and is furthest away from I-5.

C-028-004

The current plan for the Lynnwood Link Extension includes thousands of new park & ride lots at most of the new light rail stations. Feet First believes that such a heavy reliance on structured parking is problematic. Structured parking attracts additional peak hour traffic to nearby arterials. Heavy traffic degrades pedestrian safety and discourages people from walking. Street intersections must be widened to accommodate additional turn lanes, thereby increasing pedestrian crossing distances. Traffic also brings increased noise and air pollution to the streetscape, creating a pedestrian-hostile environment. Structured parking also carries an opportunity cost in that land devoted to parking cannot be used for residential and retail development that contributes to the development of vibrant urban centers. Parking is also very expensive; the typical cost for structured parking is up to $30,000 to $40,000 per space. We feel very strongly that the final EIS should include a cost benefit analysis of structured parking along the Lynnwood Link Light Rail.

Thank you for considering our thoughts on the Lynnwood Link Extension DEIS. We look forward to working with Sound Transit in the coming months towards the development walkable transit-oriented communities. If you have any questions or concerns, please contact me by calling 206.652.2310 ext. 6 or emailing me at lisa@feetfirst.org.

Sincerely yours,

Lisa Quinn
Executive Director

C-028-004

As described in Section 2.3 of the Final EIS, the project is applying a balanced multimodal approach to plan for effective station access, consistent with Sound Transit's adopted System Access Policy. Parking along with other features of the stations would help serve a variety of user types including non-motorized users, those commuting by automobile, and those arriving on feeder bus lines. Park-and-ride spaces help minimize transit-related parking impacts to neighborhoods, and also provide access to light rail for areas transitioning from suburban to urban densities, as well as for areas that are more distant from the alignment or with less convenient connections via transit or other non-automobile modes. The use of parking garages, while more expensive than a surface lot, helps preserve the future potential for transit-supportive developments within the larger station area. Section 4.2.4 of the Draft EIS summarized an assessment of station locations based on conditions that could support transit-oriented development.

As described in Section 3.2.7 of the Draft EIS, park-and-ride lots are generally sized to accommodate predicted parking demand, although the amount of parking at each station may be further refined in future phases of the project.

FABS
Fellowship of American Baltic Spouses

A Washington State Organization Whose Members Have Spouses of Estonian, Latvian or Lithuanian Heritage

Richard C. Wiest
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September 23, 2013

Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St.,
Seattle, WA 98104

C-029-001

I write to add the voice of the organization which I chair to the chorus of concern (which I hope has turned into an avalanche) about the fate of Latvian Church & Community Center in the face of light rail expansion to Lynnwood. FABS has a few dozen core members, but our extended families and friends number much more. We exist to support the efforts our ethnic wives and husbands, and our often bilingual children and grandchildren, to celebrate and preserve their heritage. None of our group is of Baltic background but we have married into rich, vibrant and diverse cultures. All of us share in our own lives a deep experience of the uniqueness and worth of the traditions of the three countries.

We can approach the matter with a degree of an outsider's critical detachment and at the same time feel the insider's passion. One aspect, however, is crystal clear: the Latvian Community Center & Church is the node or nexus or focus, call it what you will, of the ability of all three cultures to continue to flourish in Washington State. It is the physical tie that both binds and allows for freedom. If the many threads of activity that run through the institution are seriously frayed or severed, the survival of the cultures and their wider beneficial effect in our state are threatened.

We support in principle the expansion of light rail but we urge you to recast your designs in order to leave the unique and irreplaceable Center and Church as unaffected as possible.

Yours very truly,

Richard C. Wiest
FABS Chair

C-029-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

LBVŠ **Latvian Association of the State of Washington**

P.O. Box 75081
Seattle, WA 98175-0081

Sound Transit
c/o Lauren Swift
401 S. Jackson St.
Seattle, WA 98104

C-030-001 We, the 300+ members of the Latvian Association of the State of Washington, are deeply concerned and bitterly disappointed about your proposed Light Rail plan. If the plan proceeds, it will drastically disrupt the well-being and perhaps even destroy the existence of the Latvian Lutheran Church and Cultural Center. Your planned construction of the Light Rail link between Northgate and Lynnwood does not seriously consider the social, cultural and physical impact on our old and well established multifunctional Center.

C-030-002 As you know, our first church and cultural center was taken for a park by the city of Seattle in 1969. Now it appears that we are facing possible condemnation and eviction for the second time in our 62-year history. In addition to our bitterness about the proposed plan, we most emphatically feel that virtually no consideration was given in your earlier planning to our facilities and the organizations which depend upon the Center. Although your current options do take minor note of our existence, those options are nonetheless inadequately thought through and need considerable further study. Issues of concern include, among others, track alignment, access, construction impact, noise abatement, geotechnical matters and the destruction of our caretaker's house.

In our opinion, Sound Transit has not fully examined nor addressed and given clear responses to our concerns. There also has been no meaningful rail alignment option given, such as relocation of the rail bed. There have been no solutions offered for the noise problems, vibration, lights and radio interference nor is there evidence of geotechnical studies having been performed.

For these reasons we request that you seriously review your plans and reconsider the DEIS and provide us with other workable alternatives.

Sarma Davidson

Sarma Davidson,
Chairperson

Sarma Davidson	Inta Wiest	Valdis Jodais	Talis Jaundalderis	Aina Uskurs	Ingrid Doherty	Paul Kalnins Daina Kusins
Chairperson	Vice-Chairperson	Treasurer	Assistant Treasurer	Secretary	Membership	Board Members

C-030-001

The Sound Transit Board directed Sound Transit to explore a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). Access to the property and its functions have been maintained, although a small portion of land on the properties edge would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property, but an elevated design by the church is not the Preferred Alternative.

Several sections in the Final EIS have been updated to address these changes including: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods; Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

C-030-002

Based on the comments from the Association, the church and many others, Sound Transit has updated the design of the at-grade alternatives as well as the discussions of impacts to the church. The Final EIS has further discussion of the avoidance, minimization and mitigation measures that the Preferred Alternative and other alternatives would incorporate. The presence of I-5 to the west limited options for realigning the tracks without creating more impacts to adjacent properties, but the Preferred Alternative and other at-grade alternatives, have a revised design that maintains access to the church. The design and analysis for the Final EIS has also further defined a realigned

access road that would be rebuilt to current standards, along with a rebuilt sound wall. The caretaker's building would be relocated, and Sound Transit would work closely with the church to identify a suitable relocation option. Vibration and noise impact information has been updated as well. The vibration analysis incorporated the results of geotechnical studies that included borings along with soils analysis. Section 4.7.3 of the Final EIS discusses noise and vibration impacts and Section 4.7.7 describes the proposed mitigation measures that would be applied. Section 4.5.2 discusses long term visual impacts and Section 4.5.3 discusses short term visual impacts, and mitigation measures for visual impacts are discussed in Section 4.5.6. Section 4.13 of the Final EIS discusses electromagnetic fields, which are produced whenever electricity is used. No sensitive receptors (i.e. hospitals, radio stations) are within the range of the light rail line, and it is not expected that the light rail would interfere with the Latvian Evangelical Lutheran Church's radio.

LETTONIA
STATE OF WASHINGTON ALUMNI ASSOCIATION

September 14, 2013
Mukilteo

Sound Transit
Draft EIS Comments
c/o Lauren Swift

I am writing to you on behalf of the 22 current members of Latvian fraternity Lettonia State of Washington Alumni Association. Lettonia uses the Seattle Latvian Community Center several times a year for our chapter meetings and important celebrations, like our annual anniversary of the founding of the fraternity in 1870. More importantly many of Lettonia's members were among the Latvians who volunteered both time and money to build the existing facility at 11710 3rd Avenue NE. Because of the work and money the many Latvian fraternities devoted to the Center, we were granted free use of the Center's facilities. Losing this means we will have to use our membership dues to pay for facilities, rather than donating the money to educational causes, like the Latvian school.

All of us have been or still are active in other groups (church, seniors group, choir, folk dancing, golf association) associated with the center, including in leadership roles in these groups, so we will feel the disruption due to the impacts there too.

C-031-001

We request that the Sound Transit board take into account the needs of the Baltic community that utilizes this facility, find mitigations that will allow the Center to remain in its current location and continue to serve this very unique population.

Eric Raist

fil! Eric Raisters
Secretary
Lettonia, State of Washington Alumni Association
10507 64th Place West
Mukilteo, WA 98275

C-031-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

Swift, Lauren

From:	Eriks Raisters <raisters@comcast.net>
Sent:	Saturday, September 14, 2013 9:04 AM
To:	Lynnwood Link DEIS
Cc:	Raisters@Home
Subject:	Comments on Lynnwood Link DEIS
Attachments:	LettoniaSoundTransitLetter.pdf

Attached please find comments on the Lynnwood Link DEIS from the Latvian fraternity Lettonia regarding the effect on our organization due to the impacts stated to Seattle Latvian Church and Community Center at 11710 3rd Avenue NE, Seattle.

Regards,
Eric Raisters
Secretary
Lettonia, Sate of Washington Alumni Association
10507 64th PL. W
Mukilteo, WA 98275

Northgate West Condominiums
11300 1st Avenue Northeast
Seattle, Washington 98125

Sound Transit
401 South Jackson Street
Seattle, Washington 98104
Attention: Lauren Swift, Lynnwood Link Extension DEIS

Dear Seattle Sound Transit:

The owners and residents of Northgate West Condominium have the following concerns and suggestions regarding the proposed route of light rail from Northgate to Lynnwood.

C-032-001 First, we wish to throw our support for the A1 proposal. We feel this will have the least impact along First Avenue Northeast. However, Sound Transit *must* make sure that we have ingress to and egress from our property at all times, as that is the only unencumbered entry/exit from our property.

C-032-002 Additionally, we ask that Sound Transit work with the City of Seattle to install a left-turn signal from Northgate Way on to First Avenue Northeast to mitigate the loss of the bridge that crosses I-5. Without that mitigation, it will be difficult for vehicles exiting and entering our property.

We also wish to express our concerns:

C-032-003 The trees that line First Avenue Northeast are over 30 years old and irreplaceable. They screen noise from the highway, act as a dust screen to clean the air, and are visually attractive. Additionally, they provide shade and offer protection from the wind. Many studies have shown that people are happier and healthier when they look at natural, green scenery. We would hope that Sound Transit will do everything possible to preserve these trees, up to and including relocating them along the avenue, before considering chopping them down and replacing them with younger trees.

C-032-004 Damage to our property as a result of construction must be monitored. We are specifically concerned about cracks in the asphalt and the foundation of the building on our property. We understand that soil samples were taken, and we would like to see a copy of the report in order to better understand any potential impact on our property.

C-032-005 We also would like noise-monitoring and vibration-monitoring devices placed on our property to monitor the noise and vibration levels during and after the construction of the light rail and the running of the trains.

Very truly yours,

The Owners and Residents of Northgate West Condominium (see attached list for signatures).

C-032-001

Your support for Alternative A1 is noted. During construction, access to your property will be maintained.

C-032-002

Although Alternative A1 was the basis for the Preferred Alternative, the Preferred Alternative does not require a reconstruction of the NE 117th Street overpass. If the overpass were to be reconstructed for the project, Sound Transit would coordinate with the City of Seattle for any changes to the intersection configuration or signal operation at Northgate Way and First Avenue NE, or for any other solution needed to maintain access via First Avenue NE.

C-032-003

As shown in Appendix F, Conceptual Plans, the proposed alignment extends through the trees on the east side of 1st Avenue NE in the vicinity of Northgate West Condominiums, and some tree removal would be required. Trees provide fairly low levels of noise reduction, but Sound Transit has evaluated the potential for increased noise due to the light rail project at the condominiums, and noise barriers on the elevated guideway would be part of the project as mitigation. Sound Transit will also comply with all applicable tree protection and replacement standards in City of Seattle Municipal Code Chapter 25.11. Potential mitigation measures are described in Section 4.5.5 (Visual and Aesthetic Resources) of the Final EIS.

C-032-004

During construction, Sound Transit would minimize the use of vibratory soil compactors and vibratory hammers near structures that are determined to be vibration-sensitive. Sound Transit would also avoid conventional vibratory hammers that have the potential to cause objectionable vibration and risk cosmetic damage. See Section 4.7.7 of

Below is my signature to be appended to the letter to Sound Transit regarding the lightrail extension Lynnwood.

Print Name of Owner or Resident	Signature of Owner or Resident
Linda Demeroff	
Frances Zarides	
Carolyn Darcy	
RANDY WHIPP	
Anna Segal	
Chao-Lin Hsieh	
Jon Jacobus	
CHERYL CRAWFORD	
MAIZEL DJAJDANI	
James VANDERHOEK	
VICTOR NELSON	
Jai Li	
Amelia PHILLIPS	
Lester Logan	
BETTY HILTBRUNE	
Karen Welt	
ANNA CONDREA	
Soon Suk Seo	
EMILIE PADIERNOS	
TRAVIS WILLIAMS	
VALERIY GYACHT	
Ginger Rebstock	
JASON NEWMAN	
CAROLYN CAMPBELL	

Page 1

the Final EIS for further information on potential mitigation measures. Geotechnical analysis continues through final design. Geotechnical Reports can be obtained by contacting community outreach staff identified in the Draft and Final EIS.

C-032-005

The Draft EIS identifies two construction activities with the potential to cause damage to adjacent buildings due to vibration during construction of the Lynnwood Link: vibratory pile driving and soil compaction using vibratory rollers. Sensitive structures along the alignment are at risk of cosmetic damage (the earliest indication of damage) wherever vibratory pile driving is conducted within 80 feet of a sensitive structure or a vibratory roller is operated within 40 feet of a sensitive structure. The distance to the nearest track at 11300 1st Avenue NE, Seattle is 38-45 feet, depending upon the alignment alternative. Therefore, vibration monitoring will be conducted at the building if any of the above activities are conducted next to the property. See Section 4.7.4 of the Final EIS for more information on construction impacts and Section 4.7.7 discussion of mitigation measures.

Vibration levels from running trains will be below the threshold of human perception at the property and, subsequently, will be far below levels posing any risk to the structure. Therefore, vibration monitoring of running trains is not warranted. See Section 4.7.1 of the Final EIS regarding the FTA criteria used to evaluate sensitivity to noise and vibration.

Below is my signature to be appended to the letter to Sound Transit regarding the lightrail extension Lynnwood.

Print Name of Owner or Resident	Signature of Owner or Resident
Jonavon Wilhelm	
Lynn Powell	
Meriste Riggs	
Ana Pastor	
EDNA HARRIS	
GARNET FORD	
Chelsea Entrup	
VERNA L. SAMUELS	
SHAN-CHU PENG	
Johnny Kim	
Chris Nguyen	
Roy No	
Mildred L. Nisco	
Holly Quimby	
KATY CHOW	
Monica Alquist	
RENEE LEET	
LEILA BENHABRATS	
Ronald + Gloria Jefferson	
Kavonne Wynn	
Nikki Harvey	
ELENA ANASTASIA	
Tadesse Wodajo	
ROBERT LU	
ALISON DAHMEN	
KARLA KOON	

Page 2

Below is my signature to be appended to the letter to Sound Transit regarding the lightrail extension Lynnwood.

Print Name of Owner or Resident	Signature of Owner or Resident
Robert Provencano	
Joann Dokka	
Pratima Kunwar	
Josette McCracken	

Page 3

Paramount Park Neighborhood Group
c/o Janet Way
940 NE 147th St.
Shoreline, WA 98155

September 23, 2013

Sound Transit Board
c/o Roger Iwata
mailto:roger.iwata@soundtransit.org
Union Station
401 S Jackson St
Seattle, WA 98104

Subject: Comment on Lynnwood Link Light Rail Draft EIS

Dear Mr. Iwata and Sound Transit Board:

Please accept our comments on the Draft EIS for Lynnwood Link Light Rail Project.

Paramount Park Neighborhood Group is a non-profit, grassroots organization incorporated in 1994, working for the protection and preservation of the neighborhood and ecosystem as it relates to Paramount Park Open Space and its related watersheds. It is composed of citizens and board members who all live in the neighborhood directly affected by the proposed North Corridor Transit Project and Light Rail Station area.

The Group seeks to bring individuals, groups and governmental entities and businesses together to address the issues relevant to preserving and protecting the beauty, natural features, hydrology and wildlife habitat found in and around Paramount Park Open Space.

The Group undertakes projects to preserve, protect and restore the eco-system native to the park, including, but not limited to: vegetation, streams that flow through the park, wetland areas within and around the park, and wildlife habitat within and around the park.

The Group sponsors and promotes educational programs, increased public awareness, facilitation of the exchange of ideas and information regarding events, projects or developments relevant to the park and related water shed preservation and protection projects.

C-033-001

We request "party of record" status with Legal Standing in this matter.

Please include our comments in the hearing record, and consider them in your administrative review and notify us of any and all meetings, hearings or updates on this proposed project.

We are concerned about severe, adverse environmental impacts of this project, which cannot be mitigated with the current proposal. These impacts would include direct, indirect and cumulative impacts of the project to the environment, especially to the surrounding neighborhood. We believe our citizens, neighborhood and our environment would be impacted in a number of ways by the current proposal including, but not limited to: increased traffic congestion, reduced traffic safety, inappropriate housing density, reduced water quality and quantity, increased localized flooding, increased taxes and other financial costs including reduced property values, increased air pollution, noise and glare, loss of wildlife and habitat, tree loss, loss of scenic and other aesthetic values, increased carbon impacts, and loss of their procedural due process rights.

We incorporate by reference, our original scoping letter dated April 23, 2012, and all of the comment letters received at that time. We also incorporate by reference all documents, studies and comment letters submitted to date on the DEIS process. We also incorporate the Shoreline South East Subarea Plan, adopted by the Council in 2012

http://www.shorelinewa.gov/index.aspx?page=178

and the Shoreline Sustainability Strategy adopted in 2008.
http://cosweb.ci.shoreline.wa.us/uploads/attachments/pds/esc/COMPLETE_FinalSESStrategy2008July.pdf

Position on Best Alternative

C-033-002

Paramount Park Neighborhood Group recognizes (with some trepidation) that the NE 145th proposed location would likely be the best for the Lynnwood Link Station Area. We agree with the position taken by the City and some in the 145th/155th Station Citizens Committee that the 145th Station offers the best access and the best opportunity for improvements to NE 145th (St Rt 523). And though it will bring about huge changes to our immediate neighborhood, it may be less disruptive than if it were built at NE 155th.

C-033-003

However, we are extremely concerned that the DEIS states in section 4.2.6 that "no mitigation related to land use would be required during construction or operation." It seems obvious to us that when you have a huge project plowing through an entirely single-family neighborhood, there would naturally have to be an "adverse impact" which needs to be mitigated.

Recommendation — *We recommend that the project administrators look for ways to specifically address all negative impacts whether perceived or tangible and mitigate them.*

C-033-001

There is no "party of record" designation for the environmental review process. Janet Way, member of the Paramount Park Neighborhood Group, has been added to the Lynnwood Link Extension project email update list.

The Draft EIS identified specific impacts due to each of the alternatives in various elements of the environment, and also described potential mitigation measures. High levels of adverse impacts in the areas of concern listed would not result with the proposed project design and the incorporation of best practices and mitigation measures. The project would not result in additional flooding, and in several areas would address existing problems for stormwater treatment and retention. Worsened congestion and safety are also not anticipated, and in a number of cases would involve improvements compared to No Build. Sound Transit is not proposing changes in zoning or densities in surrounding neighborhoods, although the potential for local jurisdictions to consider changes is evaluated as an indirect impact.

For impacts and proposed mitigation associated with traffic congestion and safety, please see Chapter 3 Transportation. See Chapter 4 Environmental Impacts and Mitigation for impacts and proposed mitigation associated with housing density changes as an indirect potential impact (Section 4.2 Land Use); water quality and quantity, including flooding (Section 4.9 Water Resources); tax base and property values (Section 4.3 Economics); air pollution and carbon impacts (Section 4.6 Air Quality and Greenhouse Gases); noise (Section 4.7 Noise and Vibration); glare, scenic and aesthetic values, including trees (Section 4.5 Visual and Aesthetic Resources); and loss of wildlife and habitat, including tree loss (Section 4.8 Ecosystem Resources).

C-033-002

Your preference for the 145th Street Station location is noted.

C-033-004

1) **Noise -**
Elevated Rail has been shown to be a major problem for noise and vibration pollution for nearby communities which have already experienced Light Rail projects. The DEIS admits in section 4.3.4 that there will be "Indirect or Secondary Impacts" which could bring "Disruptive noise levels" potentially from elevated transit that could impact communities economically. But we do not agree that these are "indirect impacts." These would be more accurately labeled as "Direct Impacts." They could result in health or safety problems for residents and property value reductions in adjacent areas.

Recommendation *– Noise and vibration must be addressed to reduce impacts that could negatively damage and degrade the community as they have in other neighborhoods where Light Rail has been established. More studies should be done to develop technology that will reduce the noise and vibrations. It seems to us that noise and vibration generated from Elevated Transit would be a "Direct Impact", and should be mitigated by tree planting, walls or berms to eliminate negative blows to community well-being.*

2) **Traffic and Parking –**

C-033-005

State Rt 523 is a major highway and traffic connection between Shoreline, Seattle, Lake Forest Park and cities on the "Eastside" and Interstate 5 and Aurora Ave N (Hwy 99). It is a major alternative route for commuters and community users who avoid the tolling on the 520 Bridge. Many sensitive single-family neighborhoods lie just to the north of this route within the half-mile station area. This stretch of road is currently very congested during rush hours and experiences many vehicle collisions and other safety problems.

It is also a major Metro Transit route which could provide access to the Light Rail station and provide alternatives to single automobile trips, but only if the narrow highway is improved and retrofitted. This route also poses major safety problems for pedestrians and bicycle riders, but which could also offer improved use and safety if it were widened and improved.

Currently this route is also a major source of noise and air pollution.

Without mitigation and major improvements for this route the 145th Station Area would not be successful. The problems cited above must be addressed in order to provide a truly walkable Station Area for Light Rail.

We are also very concerned that the City of Shoreline and City of Seattle and their taxpayers will be left with the economic burden of upgrading and retrofitting all of the roads and other infrastructure that will be necessary to integrate and connect this

C-033-003

No mitigation is presented under the discussion of land use because the light rail project would support long-range planning and growth management policies and goals as stated in Section 4.2. The Lynnwood Link Extension project is consistent with the City of Shoreline *2012 Comprehensive Plan*. The discussion of land use impacts in Section 4.2.2 also acknowledges other related long-term and construction impacts to the neighborhood in the introductory paragraphs of Section 4.2. Please see the discussion of impacts and proposed mitigation in the following sections: Chapter 3 Transportation; Section 4.1 Acquisition, Displacements, and Relocations; Section 4.4 Social Impacts, Community Facilities, and Neighborhoods; Section 4.5 Visual and Aesthetic Resources; Section 4.6 Air Quality and Greenhouse Gases; Section 4.7 Noise and Vibration; and Section 4.17 Parks and Recreation Resources.

C-033-004

It is Sound Transit's policy to mitigate light rail transit noise and vibration impacts that would otherwise result in moderate or severe impacts, consistent with published FTA guidance. See Section 4.7 of the Final EIS for updated direct impact and mitigation information for noise and vibration. Noise walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts.

The discussion of noise as a potential indirect economic impact in Section 4.3.4 was in the context of a review of combined effects of the project in ways that could reduce economic or business activity; with mitigation of the direct noise, traffic, property and other related impacts, the section describes a low potential for adverse economic impacts, and a good potential for positive economic effects.

Tree replacements and replanting are being considered for mitigation for visual impacts, and both WSDOT and local jurisdictions have tree or

C-033-005

Light Rail service to our community. Our taxpayers are already paying a great deal of revenue into this system with little benefit thus far.

Recommendation *– Follow through with studies on how to retrofit Rt 523 to accept the traffic, transit stops, widen sidewalks, add bike lanes, and pedestrian crossings, potentially with a traffic light, mitigate noise and air pollution and radically improve safety to improve access for the public to utilize the Light Rail Station to the maximum extent.*

C-033-006

3) **Walkability, Bicycle and Transit Impacts –**

There are many opportunities to improve walkability and public safety and quality of life that could easily be implemented in the Ridgecrest neighborhood with the Light Rail project.

Paramount Park Open Space and Jackson Park contain excellent trail opportunities that are currently, already used by bike and pedestrian commuters. But the existing trail on 148th across Littles Creek experiences wash-outs nearly every year. The undersized culvert there needs to be replaced with a "box culvert." The replacement of this culvert would serve several purposes, improving stream function and enhancing the trail for safety.

C-033-007

Light Rail should not displace bus ridership, but it should be designed to be coordinated and build transit of all forms.

Circulator buses should be provided for cross-town to bring riders from all parts of Shoreline and North Seattle, especially from schools and Shoreline Community College. There should also be improved opportunities for handicapped access to sidewalks and transit, with increased usage of handicapped access vans. The DEIS mentions little about serving this community.

C-033-008

Development of light rail should not be an excuse to put tolling in place on I-5 to increase revenues. This would only decrease support for Light Rail ultimately and not increase likelihood of success.

C-033-009

Recommendation *–we suggest that planners refer to the SE Subarea Planning documents for ideas on how to improve pedestrian safety throughout this older neighborhood. Particularly, attention should be paid to connections between Jackson Park, Paramount Park Open Space and 15th Ave NE. Sidewalks and LID projects should be deployed to improve drainage as well as walkabiltiy. Bike lanes and biking facilities should be developed at the Light Rail station area, with bike lockers and storage.*

C-033-010

4) **We believe that the stormwater runoff is not being adequately addressed, and negative impacts to Thornton Creek will be adverse.**

Light Rail **cannot** be built to Shoreline along the I-5 corridor without impacting

vegetation replacement requirements that will apply to the project, but vegetation offers limited noise abatement value.

C-033-005

Table 3-26 in the Draft EIS identified where mitigation would be needed to address the project's impacts near the NE 145th Street Station, including due to additional traffic using NE 145th Street (SR 523) to access the station and/or park-and-ride garage. This information has been updated in Table 3-27 of the Final EIS. Other features of the project, including for station area improvements for transit, pedestrians, and bicyclists, have been identified through further planning for the Preferred Alternative; please see section 2.5 of the Final EIS for more details. Sound Transit is not required to improve existing deficiencies in areas that are not adversely affected by the project. In a separate effort, the City of Shoreline, in coordination with Sound Transit and WSDOT, is conducting a study to review potential improvements along NE 145th Street, including at the NE 145th Street and I-5 interchange, to improve traffic operations, connections and safety for all modes in the area.

C-033-006

The project is being designed to encourage the use of walking and biking to reach the station and connect to the surrounding communities. Streets and station areas reconstructed as part of the project will accommodate pedestrians and bicyclists consistent with applicable city standards and plans. Sound Transit is aware of the community's interest in enhancements at Paramount Park and the open space, and the agency has included these areas in a planning review of potential candidate sites for natural resource mitigation, but site requirements would depend on the permitting requirements for the project to be built. As the project enters final design and permitting, Sound Transit will continue to coordinate with the City of Shoreline and other permitting agencies to finalize the project's approach to meeting permitting requirements.

C-033-010

Thornton Creek and its associated wetlands. This is just a reality. Interstate 5 was built in the middle of an extensive wetland system. The remnants of that system remain alongside the freeway. There is a significant wetland at 148th and the Freeway. It is mapped. There are wetlands quite obviously associated with the creek corridor along Fifth Ave and at Twin Ponds area (Peverly Pond at Aegis is another example). While these wetlands are somewhat degraded, but continue to be important headwaters wetlands for Thornton Creek and must be protected!

C-033-011

Thornton Creek is the largest watershed in Seattle and Shoreline. The creek runs under I-5 and has a major tributary, Littles Creek running under NE 145th. Littles Creek at Paramount Park Open Space is associated with largest wetland system in Shoreline. Over 40 bird species have been observed in Paramount Park, including Pilleated Woodpecker, Raptors (Bald Eagle, Sharp-shinned Hawk, Red-tailed Hawk, Peregrine Falcon), Great Blue Heron, and Band-tailed Pigeon. Thornton Creek is critical habitat for five species of salmonids, including Chinook and Steelhead (a steelhead was observed in a reach of Thornton Creek, just north of NE 155th St in 2004. It was confirmed by three biologists from several governing authorities, including WDFW). There are also sensitive wetlands associated with the creek corridor, which are constrained next to Fifth Ave NE in the path of the Lynnwood Link route.

The DEIS failed to study the upstream areas or the overall, cumulative impacts of Elevated or At Grade Light Rail Tracks and Station areas on wildlife habitat.

Other Critical Areas and stream systems are mentioned in the DEIS, including McAleer Creek. It well known to contain important salmonid populations.

All the creeks in the study area are distressed due to impacts from stormwater inundation. LID teechnologies utilizing natural drainage systems, swales, native plantings and should be used to retrofit existing drainage along with this project development.

Recommendation *– We request that more study and LID methods be detailed and deployed to find ways to retrofit Thornton Creek where the Lynnwood Link intersects with it and also mitigate the damages by providing more quality open space and improvements for Littles Creek to enhance pedestrian and bike usage and water quality and wildlife habitat. The culvert under I-5 should be retrofitted for improved fish passage. There are existing technologies that can do this with a minimal effort. The mistakes of the past in Thornton Creek need not be perpetuated by our State, regional and local governments. Salmon will return if fish passage is improved to allow return to existing wildlife habitat upstream. Salmon recovery is a goal of every governing body that is charged with completing a Light Rail system. It should not just be a lofty goal, but an achievable objective.*

5) **Open Space and Parks –**

C-033-007

Sound Transit coordinated with King County Metro and Community Transit on initial assumptions on bus service to the stations, but decisions on final service levels and routes would be defined through a public planning process occurring closer to system opening. The conceptual service plan assumes higher levels of feeder service to the station along east-west arterials, but also includes north-south connections. Service on some current routes that duplicate the project's proposed service and major regional connections could be redirected by Metro because riders are likely to prefer the faster, more frequent and reliable service offered by light rail. As described in Section 2.3 of the Final EIS, all stations would be accessible as required under the Americans with Disabilities Act (ADA), and would include pedestrian and bicycle access to and from feeder bus lines, park-and-ride facilities, and surrounding streets. They would be designed to satisfy all applicable public access, and life safety requirements. As described in Section 3.2.5 of the Final EIS, Sound Transit would continue to develop the project's pedestrian and bicycle improvements at Lynnwood Link Extension stations consistent with its current System Access Policy.

C-033-008

Tolling I-5 is not a component of the Lynnwood Link Extension project. Tolling I-5 would be a decision of the Washington State Legislature and wholly independent of this project.

C-033-009

Currently, the project is assuming that all streets reconstructed with the project will be built to current standards for bicycle and pedestrian facilities. The station sites will also accommodate pedestrian and bicycle connections, and will include areas for bike parking and storage. Several of the streets being rebuilt in station areas include bike lanes, as called for in City of Seattle and City of Shoreline transportation and bicycle plans. Improvements to other areas not altered or adversely

C-033-012

With increased density, more Open Space is a crucial element of successful communities and walkability, and one that is called for the Shoreline Comprehensive Plan. Protecting critical habitat is also a necessity in order to protect our water and air quality.

There are several important parks that are in the Station Area that should be enhanced and retrofitted for the expanded use that should naturally come from increased density and walkability desired by planners and citizens anticipating the Lynnwood Link Light Rail project.

However, it is a major oversight in the DEIS that many important parks, open space and environmental assets are NOT EVEN MENTIONED! For instance, in Section 4.17.1, Jackson Park and Twin Ponds Park are discussed, but Thornton Creek (the largest creek system in both Shoreline and Seattle) is not mentioned! Neither is Paramount Park Open Space, which offers major commuter trail and recreational trail routes and contains the largest wetland in Shoreline and a vital tributary, Littles Creek. Paramount Park Open Space is within a .5 mile of the Light Rail route, but it is not included in Open Space analysis. This is not acceptable.

C-033-013

Paramount Park Open Space and Jackson Park are the closest parks to the 145th Alternatives. These two parks should have a natural connection at Eleventh Ave NE, both for the community and for wildlife. Both have very important pedestrian access components and needs for improvements. Also, there are several other parks nearby. Paramount School Park is an important recreational asset, with the Skateboard facility and Ridgecrest Park has handball courts and ball fields that are valued by a segment of the citizenry. Also, Twin Ponds Park has a significant section of the North Branch of Thornton Creek running through it.

A traffic light and crosswalk should be installed at Eleventh NE or Tenth NE to allow for safe pedestrian crossing and an alternate entrance to Paramount Park Open Space. The City has considered purchasing the "Jackson Plateau" property there, as an addition to Paramount Park Open Space, since a development of a cul de sac project there failed. It has been listed on the Shoreline "Pro Parks" plan as a possible acquisition. It is a natural wildlife corridor, which could connect these two assets for recreation and walkability in the Seattle *and* Shoreline neighborhoods of the station area.

Paramount Park also needs a great deal of work on trail improvements. A "box culvert" should be installed at 148th to better contain flooding in Paramount Park. And the culvert for Littles Creek under NE 145th must be replaced to restore fish passage. These are all relatively inexpensive improvements that need to be addressed to provide walkability and mitigate damage to the Thornton Creek Watershed, which Light Rail will inevitably affect.

affected by the project are not proposed. Sound Transit will continue to work with local jurisdictions to finalize the projects' station access plans, consistent with Sound Transit's System Access Policy.

C-033-010

Sound Transit recognizes the importance of Thornton Creek and its associated wetlands, and the agency has conducted initial mitigation and permitting planning for the project that considers opportunities for mitigation sites within the Thornton Creek watershed. Federal, state, and local regulations may require Sound Transit to mitigate impacts on wetlands and buffers using an approved mitigation bank (if available in the future), King County in-lieu fee program, or project-specific mitigation developed by Sound Transit. If project-specific mitigation is developed for this project, site selection would emphasize a watershed approach. Section 4.8 of the Draft EIS describes resources and potential impacts and proposed mitigation.

C-033-011

Sound Transit's Ecosystems Technical Report accompanied the DEIS and provided greater detail on resources in the project area. The technical report, now updated for the Final EIS, also describes the study area and the methods used to identify areas likely to be affected by the project construction and operation. During scoping for the EIS, the project's proposed analytical methods were reviewed by a variety of agencies with jurisdiction and natural resource expertise. The analysis of ecosystems impacts, including impacts to fisheries and wildlife habitat, was conducted and coordinated with the water resources analysis discussed in section 4.9. Finally, further information has been developed for a Biological Assessment in conjunction with Endangered Species Act compliance; see Appendix O of the Final EIS. Sound Transit policy requires all projects to consider low-impact development (LID) methods as a first choice for stormwater treatment. The project will review the feasibility of LID strategies as part of the project design, in conjunction

C-033-013

Recommendation *– Follow up with studies and implementation to improve open space access and walkability in the immediate neighborhood. Review and reanalyze impacts to environmental assets in local parks and how the Lynnwood Link might affect them. Include Paramount Park Open Space and Thornton Creek in this analysis. Consider improvements to these assets as mitigation for needed improvements to walkability and bicycle commuting.*

C-033-014

6) **Neighborhood** –

If the Lynnwood Link is to be built, there will undoubtedly be many changes to our quiet, single-family neighborhood. These changes must be carefully implemented and properties that are affected must be adequately compensated and transitions to single-family neighborhoods must be gradual and carefully planned. Quality community design elements must be included to improve walkability and preserve quality of life.

Recommendation *– Use the recommendations in the Southeast Subarea Planning Effort completed in 2012 to improve the neighborhood when Light Rail is implemented.*

C-033-015

7) **Air Pollution and Carbon Footprint** –

We are concerned about what the true "carbon footprint" impacts of this project would actually be. Considering the likely possible tree losses in the route of the rail line between Northgate and through Shoreline and carbon footprint of the massive amounts of concrete which would be utilized for construction of elevated pilings, parking garages, plazas, and station areas, we question the actual calculation and ultimate value in the region's investment in the Lynnwood Link.

C-033-016

There are literally thousands of valuable mature trees of many varieties along the proposed route. These trees are now providing excellent services mitigating the air pollution, shading, wildlife habitat and stormwater runoff in the corridor from freeway traffic and vehicle pollutants. The corridor and associated development proposed for the elevated structure for the Lynnwood Link would most likely destroy most of those trees. There must be mitigation included which would provide a 3-1 replacement value for those trees particularly the "native" conifers which offer the most in environmental services.

C-033-017

Also we are concerned about additional traffic congestion, which will undoubtedly result from this project in the immediate and nearby neighborhoods and the pollutants that will be generated. How will those impacts be mitigated? The answer cannot be that no parking will be provided for the passengers of Light Rail, otherwise ridership will be inadequate to justify the entire project.

with project permitting. Sound Transit would minimize the potential for interference with possible future fish habitat restoration projects from construction of the light rail alternatives by designing and locating project features to avoid Thornton Creek.

C-033-012

As described in Section 4.17 of the Draft EIS, parks, recreational resources, and open spaces located more than 0.25 mile from station locations or 300 feet from light rail tracks would not experience direct impacts from the project. Paramount Park is outside the general study area used for parks (see Figure 4.17-1), and there were no environmental topic areas that identified adverse effects extending beyond that distance. Based on the Draft EIS analysis and the updated Final EIS findings, a station at NE 145th Street would not result in adverse direct or indirect impacts to any designated open spaces associated with Thornton Creek (Park #1 was identified in Table 4-17-1). Impacts to Jackson Park would be primarily visual. Therefore, no mitigation at those parks is proposed except to address visual impacts at Jackson Park. Potential changes in allowable density would be an action taken by local jurisdictions, if at all, and not by Sound Transit, but are discussed in the indirect impacts section in each environmental topic area. The potential impacts and any mitigation due to increased density would be considered during the planning and environmental review for any comprehensive plan changes by the local jurisdictions, as well as for the local approvals for potential developments by others.

Potential impacts to Thornton Creek are discussed in Section 4.8 of the Draft EIS, Ecosystem Resources.

C-033-013

Please see response for comment C-033-012.

C-033-018

Recommendation –

We request that the maximum number of trees should be retained whenever feasible, and any that are cut should be replaced on site or nearby with a 3-1 ratio, preferably with

C-033-019

conifers and native species. The carbon generation should be offset with solar and other renewable technologies in the development of the station area.

C-033-020

8) <u>Light Rail Station Area Planning</u> –

The Light Rail Station area should be a major center for community connection, architecturally attractive and economic improvement and not just an expensive, huge concrete mausoleum for parking and a reason to cut a huge number of trees that have grown up to screen our neighborhoods from I-5 over the last 50 years.

We believe it should include opportunities for retail establishments, which can provide useful services to commuters and local residents. Restaurants and other service providers should be included. Lighting and glare should be considered and designs should provide technologies to save energy and shield surrounding communities form their impacts. Signage should be attractive but not dominant.

Recommendation –
We recommend maximum usage of green technologies in the construction of these buildings and additions of community assets such as opportunities for smart cars sharing, bike share, bike lockers, adequate parking to increase ridership, numerous transit connections, meeting rooms, plazas with eating areas, shading, native landscaping, artistic and decorative design which reflect the Northwest culture.

We look forward to working with the Sound Transit Board and all the entities that will be doing the implementation of this planning effort.

Thank you for your consideration.

Respectfully submitted,

C-033-014

The Draft EIS acknowledged that construction of the station, parking garage, and other facilities would alter the visual characteristics between the highway and the adjacent single-family residential neighborhood, and would also remove several single family homes at the edge of the neighborhood. After mitigation and improvements to address traffic and circulation needs, other direct changes to the neighborhood would be limited. For a more detailed discussion of visual impacts and mitigation, see Sections 4.5.2 and 4.5.7, respectively. Other sections found low to moderate effects for a station adjacent to I-5 at an existing freeway interchange and at the intersection of two major arterials. For additional information refer to Section 4.4 - Social Impacts, Community Facilities, and Neighborhoods in the Final EIS.

Longer-term changes in the neighborhood could occur if local jurisdictions amend plans governing allowable uses of properties adjacent to the light rail transit station. These would be local decisions made by local jurisdictions, and are not proposed by Sound Transit. Section 4.2.4 discussed the potential for impacts due to land use changes by local jurisdictions.

The project also includes amenities and improvements such as bike facilities on rebuilt sections of 5th Avenue NE and improved sidewalks in the station area.

C-033-015

During final design, Sound Transit would consider opportunities to plant trees, consistent with the sustainability policy, which recognizes the benefits tree plantings would have; plantings are also likely to be a condition under various permits required for the project. Please refer to the visual and ecosystems sections for more details on specific mitigation commitments that would include replacement plantings.

Janet Way, President
Paramount Park Neighborhood Group

The Draft EIS estimated the greenhouse gas emissions during construction by using several sources, including information based on the agency's own projects that are similar in scale and construction methods to the Lynnwood Link Extension. Producing and disposing of materials needed to build the project will also produce greenhouse gas emissions, which would be an indirect effect of the project. However, at this time, there is no standardized methodology for calculating the embodied and lifecycle emissions from transportation projects.

C-033-016

Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts on environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure no net loss of ecosystem function and acreage as a result of agency projects. Sound Transit will comply with all applicable tree protection standards in local jurisdiction codes.

C-033-017

Mitigation measures for any impacts from traffic congestion as a result of traffic accessing a station or park and ride will be included as part of the project. No adverse air quality impacts are expected. Analysis of potential air quality impacts is provided in Section 4.6 of the Draft EIS.

C-033-018

Please see response to C-033-016.

C-033-019

Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on petroleum conservation and renewable fuel and energy is to work with energy providers to maximize the percentage of renewable energy purchased.

Sound Transit's approach to incorporating sustainability opportunities into its facilities is summarized in Section 2.6 of the Draft EIS.

C-033-020

The project does not propose specific other uses such as retail, but Sound Transit policy encourages potential partnerships for transit-oriented developments (TOD). Sound Transit's TOD and Sustainability Policies will continue to be applied during final design. See Section 4.5 for visual impacts and mitigation.

SEATTLE LATVIAN LUTHERAN CHURCH
11710 3rd Ave. NE, Seattle, WA 98125

Pastor Daira Cilnis, D.Min.
10702 Lakeside Ave. NE, Seattle, WA 98125
206-674-9600
cilnis@earthlink.net

September 18, 2013

Sound Transit Comments c/o Lauren Swift
401 Jackson St.
Seattle, WA 98104

To the Board of Sound Transit:

C-034-001

The Seattle Latvian Lutheran congregation is experiencing a feeling of *deja vu.* Yet again it has become a possibility that our church and community center will be taken from us, as it was 44 years ago. For the older members—this is the place they built with their hands, volunteering their time, after work and on weekends. Built not only with brick and mortar, but also with hopes and dreams—a center for their children and grandchildren, so that they too could learn about their Latvian heritage.

In the 42 years since we are in our present location, this has become our Latvian church home. It's where we gather on Sundays to worship in the language of our heart—the only place in Seattle, where services are held in Latvian. And, since our community has now grown to include many "adopted Latvians" who many not speak the language, but do feel at home—we also have services once a month in English.

It's the spiritual home to which our children and grandchildren return for Christmas and Easter. It's where we celebrate the birth and baptism of our little ones. (Next Sunday, we will be baptizing Kevin Erik, whose mother was also baptized in our church—a continuity that adds richness of meaning for both parents and grandparents!)

It's where we rejoice with young couples (and occasionally, not so young!) as they set out on the journey of marriage—and where we mourn those whose life journey has come to an end. In church, our family home.

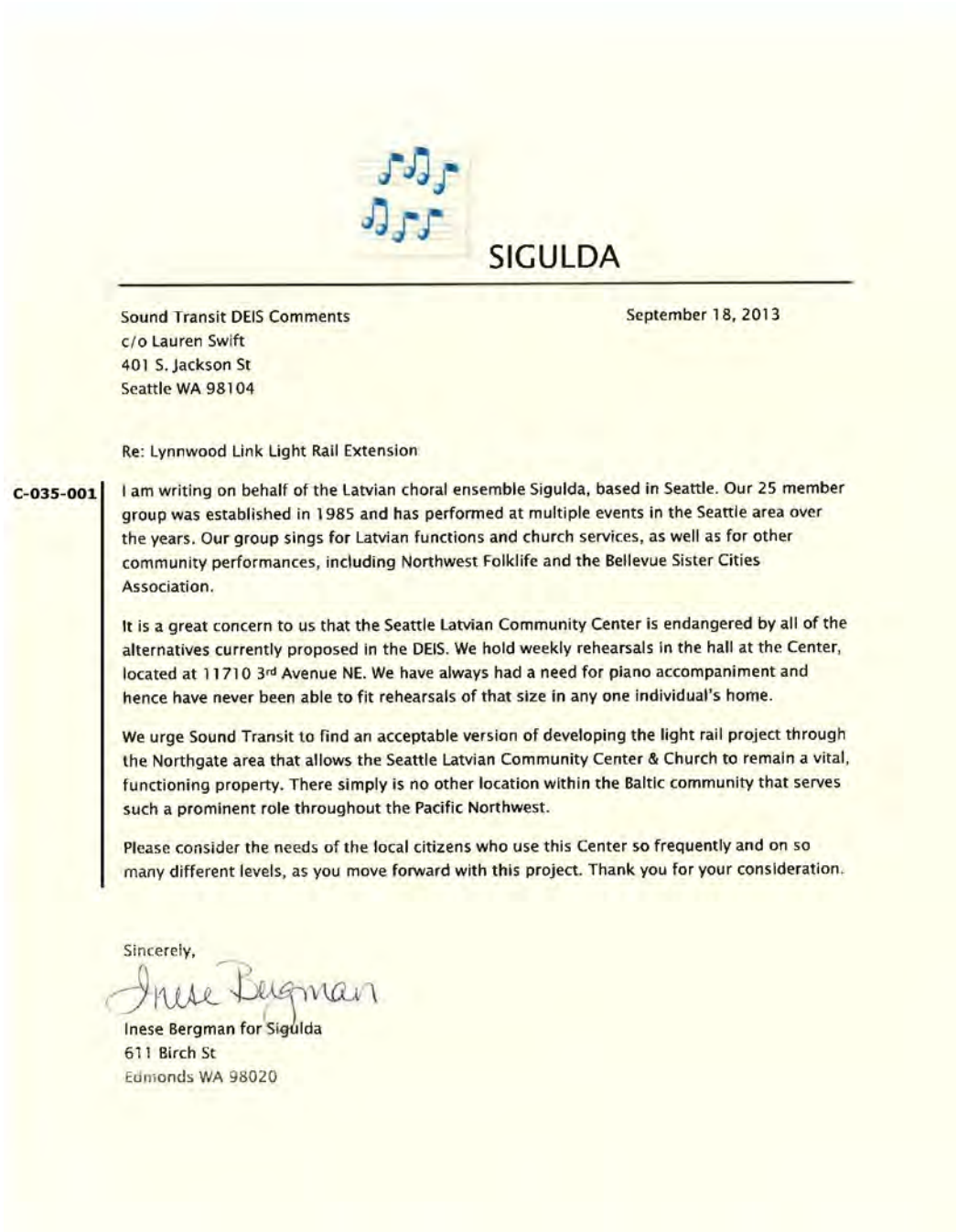
I speak for all of us—the founding members who built our church, their children who are now bringing their own children here, as well as our dear "adopted" Latvians: it is our hope and our prayer that this time it won't be *deja vu,* that Sound Transit will find a way to let us remain in our church home that is so important to our lives.

Sincerely,

Pastor Daira Cilnis

C-034-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. See Section 2.5.1 for a description of the refined Segment A alternatives that avoid displacing the church.



SIGULDA

Sound Transit DEIS Comments
c/o Lauren Swift
401 S. Jackson St
Seattle WA 98104

September 18, 2013

Re: Lynnwood Link Light Rail Extension

C-035-001 I am writing on behalf of the Latvian choral ensemble Sigulda, based in Seattle. Our 25 member group was established in 1985 and has performed at multiple events in the Seattle area over the years. Our group sings for Latvian functions and church services, as well as for other community performances, including Northwest Folklife and the Bellevue Sister Cities Association.

It is a great concern to us that the Seattle Latvian Community Center is endangered by all of the alternatives currently proposed in the DEIS. We hold weekly rehearsals in the hall at the Center, located at 11710 3rd Avenue NE. We have always had a need for piano accompaniment and hence have never been able to fit rehearsals of that size in any one individual's home.

We urge Sound Transit to find an acceptable version of developing the light rail project through the Northgate area that allows the Seattle Latvian Community Center & Church to remain a vital, functioning property. There simply is no other location within the Baltic community that serves such a prominent role throughout the Pacific Northwest.

Please consider the needs of the local citizens who use this Center so frequently and on so many different levels, as you move forward with this project. Thank you for your consideration.

Sincerely,

Inese Bergman

Inese Bergman for Sigulda
611 Birch St
Edmonds WA 98020

C-035-001

Thank you for your concerns about the potential displacement of the Latvian Evangelical Lutheran Church and for highlighting its significance to the region's Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

September 23, 2013

VIA EMAIL AND HAND DELIVERY

Sound Transit DEIS Comments
c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

Email: LynnwoodLinkDEIS@soundtransit.org

Re: Lynnwood Link - Petitions against Alternative Routes C1 and C2

To: Sound Transit Board:

C-036-001

Attached are approximately 1,800 signatures on petitions against Routes C1 and C2. There are more petitions against C1, only because our group, Save Scriber Creek Park, did not unite with the residents and business owners against C2 until after the Sound Transit Meeting on August 21.

When we petitioned, we used the comparison chart (Chapter 5, Table 5-4 Comparison of Segment C Alternatives) and the map (Summary, Figure S-8, Alternatives C1, C2, and C3) from the DEIS so that people would understand what they were signing and had extra copies available as hand-outs. (See attached documents.) Almost without exception, the signers said that C3 was "the way to go"; " a no brainer"; "why are the other two routes even in the picture?" These are a few examples of their pro C3 comments.

We also told the people who signed the petition that their information would be sent only to the Sound Transit Board because many people expressed concern about how their information would be used.

If you have questions, I can be reached at (425) 776-5374.

Very truly yours,

Maryellen Walsh

Maryellen Walsh

Enclosures (Comparison Chart, Map and Petitions - 181 pages with app. 1800 signatures)

Cc: Lynnwood City Council (Comparison Chart and Map only)
Save Scriber Creek Park and Wetlands Group

C-036-001

Thank you for providing signatures regarding opposition to Alternatives C1 and C2. Per the request of signatories, the signatures have not been included in the Final EIS.

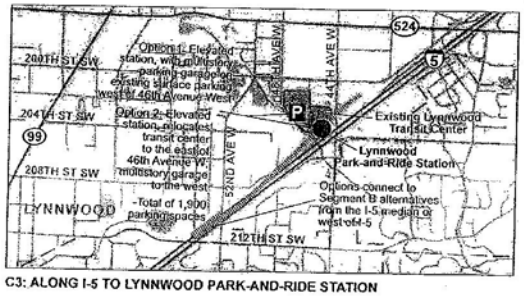
Table 5-4. Comparison of Segment C Alternatives

	Alternative	C1	C2	C3
	Station	200th Street SW	At transit center	At park-and-ride
Category[a]	Measure			
Capital Cost[b]	2012 dollars (in millions)	$190 to $250	$270 to $310	$270 to $340
Ridership	2035 daily boardings (net)[c]	19,400 to 19,800	19,400 to 19,800	19,400 to 19,800
Station Area Transit-Oriented Development	Qualitative rating of potential under existing conditions (limited-moderate-strong)	200th Street SW Station: moderate-strong	Lynnwood Transit Center: moderate-strong	Lynnwood Park-and-Ride: moderate-strong
Property	Number of parcels affected	108	28	15
	Number of residences displaced	77	1	0
	Businesses and institutions displaced	31	3	1
	Estimated WSDOT right-of-way needed (acres)	1	1	3
Transportation	Realigned streets	—	—	208th Street SW
	Number of parking spaces removed	6	4	0
Ecosystem Resources	Wetland / buffer acres affected	Less than 0.1 / 0.5-0.9	0.9-1.0 / 0.5 – 0.9	0.2 / 0.5 - 1.0
	Acres of vegetation removed	1	1	1-2
Visual and Aesthetic Resources	Qualitative rating (low-medium-high impact)	High	High	Medium
Noise	Number of properties affected before mitigation[d]	255–293	109–116	6–20
	Number of properties affected after mitigation	0	0	0
Parks and Recreational Resources	Resources directly affected	Interurban Trail, Scriber Creek Park, Scriber Creek Trail	Interurban Trail, Scriber Creek Trail	Interurban Trail, Scriber Creek Trail

[a] Only categories with notable impacts or differences among alternatives are shown; Chapters 3 and 4 include full results.
[b] Range reflects contingencies for a conceptual level design. Figures rounded to the nearest $10 million.
[c] Ridership range reflects total boardings at this station, but adjusted to reflect ridership changes caused by additional station(s) in Segment A or B and their effect on ridership in this segment.
[d] Includes park-and-ride noise impacts.

C1: 52ND AVE W TO 200TH ST STATION

C2: 52ND AVE W TO LYNNWOOD TRANSIT CENTER STATION



C3: ALONG I-5 TO LYNNWOOD PARK-AND-RIDE STATION

Figure S-8. Alternatives C1, C2, and C3

Senior Services
Promoting the well-being of older adults

September 19, 2013

Sound Transit Draft EIS Comments
c/o Lauren Swift
401 S. Jackson St.
Seattle, WA 98104

On behalf of what we learned from 700 Boomer aged participants who attended our Aging Your Way gatherings across King County including Shoreline, I would like to comment on the draft EIS. While most people associate Senior Services with the current elder cohorts, which would be the Silent and Greatest Generation, we are also engaging with the Boomers. They are a large, vocal cohort with different desires and values about what kind of community would support their aging.

What we consistently heard across the 12 gatherings and a summit we organized was a vision of the future that didn't require getting around in a car. We also heard a strong interest in sustainability and a desire to leave a positive legacy.

We are delighted that light rail is coming to Shoreline, the eastside, Capitol Hill and being extended south past the airport. This is how Boomers envisioned getting around along with a built environment that was pedestrian and bicycle friendly and with more frequent bus service. We also heard a lot about circulating shuttles. Boomers will more readily give up their keys when there are more transportation choices. This desire stands in stark contrast to their parents and grandparents who had to have the keys pried out of their hands.

C-037-001 So many Boomers we talked to would be puzzled about a project that is scheduled to come on line ten years from now that has parking garages at both of the proposed Shoreline stations. We understand that people who currently live there are concerned about people parking in their neighborhood. We wonder how relevant this will be 10-20 years from now when the station areas are rezoned for multi-family housing? Indeed this is the only kind of development that makes sense near a light rail station.

C-037-002 I would like to get back to the circulating shuttle idea which was popular amongst Boomers. Why wouldn't this work in the short term (ten years from now) for getting the people who don't want to drive to the station or for whom walking and cycling is not an option?

C-037-003 In closing, the Boomers we talked to support strategies that are sustainable. Auto dependent strategies are not sustainable and that translates into Boomers being bad ancestors.

Sincerely,

Joanne Donohue, VP

Cc: Shoreline City Council

A non-profit agency supported by United Way of King County investments
2208 Second Ave, Seattle, WA 98121
(p) 206 448-3110 • (TTY) 206 448-5025 • (f) 206 448-5766 • www.seniorservices.org

C-037-001

Please note that the majority of patrons for most stations would be arriving via transit, walking or biking, but parking is still expected as part of a solution that attracts patrons who might otherwise make the trip on congested highways.

The parking supply levels currently proposed reflect continued projections showing demand for parking as one element of an effective multimodal access plan, consistent with Sound Transit's adopted System Access Policy. Even with potential redevelopment in station areas, the project is being designed to serve the larger north corridor area, which is densely developed, largely residential and constitutes a large population that uses park and rides and transit today to reach jobs and destinations at the regional centers in the north and south, including downtown Seattle, Northgate and Lynnwood.

C-037-002

The plan for transit service connections to stations will be refined in coordination with partner transit agencies and local jurisdictions as the project approaches the start of operation; in King County, this planning would be led by King County Metro. The project's current transit integration plan for the project anticipates frequent local services connecting to the stations, most of which connect to other activity centers east or west of I-5, but circulators could be considered.

C-037-003

Comment noted.

Thornton Creek Legal Defense Fund
Patricia Sumption
10510 – 11th Ave NE
Seattle WA 98125

September 23, 2013

Sound Transit Board
c/o Roger Iwata
Union Station
401 S Jackson St
Seattle, WA 98104

Re: Lynwood Link Light Rail Draft EIS

Dear Mr. Iwata and Sound Transit Board members:

C-038-001

Thank you for this opportunity to comment on the Draft EIS for Lynwood Link Light Rail Project. Thornton Creek Legal Defense Fund hereby requests "party of record" status with legal standing in this matter, and also requests party of record status and legal standing for its board members, Janet Way and Patricia Sumption.

Although Thornton Creek Legal Defense Fund was present and made oral comments on the Lynwood Link Light Rail project in April 2012, we did not receive notice of this opportunity to comment on the Draft EIS. For that reason we were scrambling to get these comments written by the deadline. Please make sure Thornton Creek Legal Defense Fund stays in your records this time.

We request "party of record" status with Legal Standing in this matter

Thornton Creek Legal Defense Fund (TCLDF) is a non-profit organization begun to provide grassroots support to protect Thornton Creek, its tributaries, and their ecosystem.. TCLDF was incorporated in 1999. Its board and members are composed of citizens who live within the Thornton Creek watershed and beyond. These folks are concerned about the possible negative effects of the proposed North Corridor Transit Project and Light Rail Station area.

It is important to TCLDF that concerns of this and other neighborhood and citizens are heard, along with those of governments and businesses. TCLDF has worked in the past to accomplish goals that protect Thornton Creek and still accommodate other stakeholders and competing needs. We worked hard to bring all sectors to the table when we sought to daylight part of Thornton Creek south of the Northgate Mall and our efforts resulted in a project which included retail, condominiums and apartments, the daylighted creek, a small park, and parking facilities for the adjacent Metro Transit station.

C-038-001

There is no "party of record" designation for this project. Instead, interested parties are encouraged to sign up to receive periodic project updates and information disseminated by email. Sound Transit has added Patricia Sumption's and Janet Way's email addresses to the project update list.

C-038-002

Thornton Creek Legal Defense Fund and other citizen groups must be a part of the discussion and process again in the decisions to be made re the Lynwood Link Light Rail (LLLR). Urbanites need and desire to have natural beauty near where they live along with urban amenities. The Sound Transit Board must hear these voices and protect Thornton Creek and its wildlife, salmon, and other aquatic life. TCLDF also seeks to protect the hydrology, wetlands, and natural (native, where possible) vegetation. We also seek to protect amenities such as wildlife corridors, parks, and greenways for their own sakes and for the enjoyment of people living nearby. We are aware that this will not be easy since the I-5 Freeway is squeezed in tightly next to Thornton Creek in many areas through the proposed LLLR route, and that therefore the LLLR route will be very close to the Creek as well. The solutions to trying to put everything in the same place will not be easy to come by, but TCLDF feels it has expertise in helping to find solutions that will help the process, as evidenced by our success at the South Parking lot adjacent to Northgate Mall and the Metro Transit Center.

C-038-003

It appears that under the current proposal it may be impossible to mitigate harmful impacts on the environment. The proponents of the LLLR must consider direct, indirect and cumulative impacts on people living along this corridor and on the natural environment, including Thornton Creek. Since there may be problems achieving mitigation regarding these important issues, TCLDF must be allowed a place in the discussion of routes as well as mitigation efforts.

Together we must find solutions that deal with traffic safety, increased traffic congestion, potential excess housing density and height, effects on water quality and quantity necessary for humans and for fish and wildlife, loss of habitat and of wildlife. TCLDF seeks to protect the area against such impacts as well as others such as localized flooding, reduced property values, impaired air quality and added carbon emissions, reduced property values, loss of trees, increased noise and glare. If Thornton Creek Legal Defense Fund and Sound Transit Board accept such impacts as the necessary cost of expediting movement of people, we will create an environment which will send many people elsewhere, seeking a place where decision makers recognize the value of the natural environment and protect it as an absolute necessity.

C-038-004

Thornton Creek Legal Defense Fund has a number of concerns with the proposed Best Alternative for the LLLR. They include impacts related to problems with Increased Noise; Traffic and Parking; Walkability, Bicycle and Pedestrian Safety and Facilitation; Increased Stormwater Runnoff and its negative impacts on Thornton Creek and other water bodies; Open Space and Parks; Consideration for Neighborhoods; Air Pollution and Carbon Footprint; and Light Rail Station Area Planning. These points were all raised in the comment letter by Paramount Park Neighborhood Group on this Draft EIS and since we want to meet the deadline we will follow their lead on the specifics of these issues.

Having reviewed the comment letter from Paramount Park Neighborhood Group, TCLDF hereby adopts and incorporates into this comment letter on the D-EIS for the Best Alternative for the LLLR route, the comments in Paramount Park Neighborhood Group's

C-038-002

Sound Transit recognizes the importance of Thornton Creek and its associated wetlands. None of the alternatives would entail in-water work in Thornton Creek. Sound Transit also is designing the project to minimize the potential for construction impacts and for permanent facilities to interfere with possible future fish habitat restoration projects, including at Thornton Creek. Please see Section 4.8.6 Mitigation Measures in the Ecosystems section of the Final EIS. This section discusses Sound Transit's policy on ecosystems mitigation, calls for avoiding environmentally sensitive resources where possible, and requires mitigation to achieve no net loss of ecosystem function and acreage. The project's final design and permitting processes will also provide opportunities for interested parties to review design proposals and make comments.

C-038-003

The Draft EIS did not find a broad set of unavoidable and significant adverse effects that cannot be mitigated. The Draft EIS included a review of potential adverse direct, indirect, and cumulative effects in all topic areas required under NEPA and SEPA, and the Draft EIS has been subjected to the review of the public, including other resource agencies and jurisdictions. The Final EIS has further detail on Sound Transit's mitigation commitments for the Preferred Alternative and potential mitigation for other alternatives. The Summary section S.10 discusses areas where unavoidable adverse effects may remain after mitigation, and these would primarily be related to the removal of mature vegetation and trees in areas to be occupied by the guideway. The project would not directly lead to overbuilding or over-densification, as any other proposed plans or developments not allowed by currently adopted plans would require additional approvals by local jurisdictions.
Sound Transit remains open to suggestions for minimizing impacts and providing mitigation. It will also continue to explore ways to reduce impacts through final design and permitting. In conjunction with the

C-038-004

comment letter. Those comments parallel what Thornton Creek Legal Defense Fund would have written.

Please include our comments in the hearing record, and consider them in your administrative review and notify us of any and all meetings, hearings or updates on this proposed project.

We incorporate by reference, our original oral scoping comments at the April 23, 2012 hearing and all of the comment letters received at that time. We also incorporate by reference all documents and comment letters submitted to date on the DEIS process.

Thornton Creek Legal Defense Fund, knowing how important it is to have Stakeholders from all sectors involved for best results, is looking forward to working with the Sound Transit Board and other entities that will be work on the implementation of this planning effort.

Respectfully submitted,

Patricia Sumption, board member,
Thornton Creek Legal Defense Fund
10510 – 11th Avenue NE,
Seattle, WA 98125
206-525-1708

permit processes, Sound Transit will provide further opportunities to involve the public, including interested parties such as the TCLDF.

C-038-004

Please see responses to Paramount Park Neighborhood Group's comments C-033-001 through C-033-024.

Transportation Choices
transit for all

September 23, 2013

Lauren Swift, Lynnwood Link Extension DEIS
Sound Transit
401 South Jackson Street
Seattle, Washington 9810

Re: Lynnwood Link Extension Draft Environmental Impact Statement Comments

Dear Ms. Swift,

Thank you for this opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Lynnwood Link Extension.

Transportation Choices Coalition is a statewide nonprofit organization working to bring Washingtonians more and better transportation choices. We view this project and all projects that move light rail farther north as a vital component of the Central Puget Sound's future regional transportation infrastructure, providing a fast, reliable, economically and environmentally sustainable way for our growing population to reach homes, jobs and destinations. The Lynnwood extension will be an economic development engine, dramatically improving access throughout the region and stimulating additional public and private investments in Seattle, Shoreline, Montlake Terrace, Edmonds and Lynnwood. Finally, we hope that the introduction of high-capacity transit will maximize existing, and catalyze new, vibrant neighborhoods and urban centers, thereby creating great places for people to live and work.

In order to achieve these long-term goals, Lynnwood system alignment and station siting decisions must maximize the potential for meaningful Transit-Oriented Development (TOD) throughout the alignment. These vibrant neighborhood and urban centers—providing a complete array of amenities, housing and transportation choices, in proximity to high-capacity transit—have demonstrated countless long-term social and environmental benefits and are a central strategy to accommodating growth in a sustainable manner in our region. In addition, system alignment and station siting decisions must minimize the short-term and long-term environmental and social impacts of construction of the system.

We understand that reduced sales tax revenue and an agency wide shortfall may push you to look at up-front cost saving opportunities in the system design and construction. However these short-term cost saving measures should not compromise the potential benefits of the system by limiting long-term access and ridership of the system. It is imperative that the Lynnwood Link project optimizes access within and between urban centers, as promised in the overwhelmingly approved ST2 package in November 2008.

Based on these considerations, we make the following comments on the DEIS:

219 1st Ave S, Suite 420 | Seattle, WA 98104
p 206.329.2536 | transportationchoices.org

C-039-001

We strongly support Alternative A10 or A11 for Segment A for strong TOD and ridership potential – construction of 3 stations 130th, 145th and 185th

We believe this alternative maxes the ridership and TOD potential of the alternatives analyzed. The capital cost range for three stations instead of two, is lower or comparable, but the ridership and development potential is much greater. There is no compelling reason to choose A1 or A3 and those options should be removed from consideration. Increased ridership and TOD potential will lead to higher cost recovery in the long run and will maximize investment in this corridor. We must get the most out of our regional investments.

C-039-002

We strongly support Alternative B2A for Segment B for strong TOD and ridership potential – construction of two stations, Montlake Terrace Transit Center and 220th Street SW

We believe this alternative maxes out the ridership and TOD potential of the alternatives analyzed. It is imperative to support potential TOD in Mountlake Terrace's planned town center, by locating the stations east of I-5.

In closing, we believe the Lynnwood Extension, if well-designed to promote access and choices, will help achieve our region's and state's growth management and environmental requirements while generating economic development and supporting great places for people to live and work. As our region continues to grow in population and employment, moving between urban centers in a socially and environmentally sustainable manner is critically important.

We commend Sound Transit for the lengthy and comprehensive environmental review of Lynnwood station alternatives. Thank you for this opportunity to comment on the DEIS. Please contact us if we can provide any additional information or assistance.

Sincerely,

Carrie Dolwick

Carrie Dolwick
Policy Director
Transportation Choices Coalition

[illegible] Ave S, Suite 420 | Seattle, WA 98104
[illegible] 206.329.2536 | transportationchoices.org

C-039-001

Your reasons for preferring three stations in Segment A, as featured in Alternatives A10 and A11, are noted. The Preferred Alternative has stations at NE 145th Street and NE 185th Street and considers an option for a 130th Street station.

C-039-002

Your preference for Alternative B2A due to its two stations is noted. The Final EIS considers an option to the Preferred Alternative for a second station.

Sietlas latviešu bibliotēka
11710-3rd Ave NE
Seattle, WA 98125

September 12, 2013

Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St.,
Seattle, WA 98104

C-040-001

Along with other members of the Washington State Latvian community, I am very concerned about the future of our church and community center because of the impact that the Light Rail extension north to Lynnwood will have on our facility.

We have at the center a library with several thousand volumes of Latvian books and journals. The library serves the entire community: older people who feel the need to read in their native language; younger people who want to learn about Latvian authors and Latvia's history; and children in Latvian school, who are studying the Latvian language and learning about the culture of their parents and grandparents.

The library is a source of reading material for our Latvian Book Club, which meets regularly throughout the year. By donating not insubstantial sums to the Baltic Studies fund each time we meet, the Book Club supports the Baltic Studies program in the Scandinavian Department at the University of Washington. UW officials have consistently expressed their gratitude for the great support from the Latvian community.

Each year our Latvian library ships hundreds of books by Latvian authors living in the west to libraries and schools in Latvia. These books were not available, and indeed forbidden, to readers in Latvia during the 50 years of communist occupation.

If we lose the Latvian Center, the library will cease to exist and our community will be deprived of the strong link to its cultural heritage that books provide. We ask you to do everything possible to let us keep the church and center.

Sincerely,

Dr. Vaira Pelekis-Christopher

Dr. Vaira Pelekis-Christopher

Librarian
Seattle Latvian Community Center

C-040-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Please see Section 2.5.1 of the Final EIS for a description of the refined Segment A alternatives that avoid displacing the church.

Ann-Marie Petersons
Co-Director
Seattle Latvian School
11710 3rd Ave N
Seattle, WA

September 20, 2013

Sound Transit
C/o Lauren Swift
401 Jackson Street
Seattle, WA 98104

Dear Sound Transit:

C-041-001

On behalf of the Seattle Latvian school students, families and graduates we would like to express our concerns about the Northgate light rail expansion.

The Seattle Latvian School was established in 1950 for the purpose of teaching Latvian language, culture, and history. Since its inception, it has been a significant pillar in the small but active Latvian community in the Pacific Northwest. Hundreds of students have graduated from the school and as adults most students continue to be active participants within the larger community. The effect is that the school has a generational impact on our community. Almost all of the parents of our current students attended our school when they were young.

The Latvian Center and Church has several dedicated classrooms for the school. This enables our teachers to create an immersive cultural environment for our children. It would be very difficult to re-create this environment should we need to look for an alternative location to hold our school.

Our enrollment ranges in size from 25 to 50 students and this fall we will welcome 25-30 pupils. Currently, all of our students are under 9 years of age, although typically we have students from 3 to 14 years old. We are disheartened to think that these children might not have an environment to further their Latvian education as they grow older.

C-041-001

Thank you for your concerns about the potential displacement of the Latvian Evangelical Lutheran Church and for highlighting its significance to the region's Baltic community, including the Seattle Latvian School. The Sound Transit Board directed Sound Transit to explore a Preferred Alternative that would avoid displacing the church. Since the publication of the Draft EIS in June 2013, additional engineering was undertaken to reduce adverse effects on the Latvian Evangelical Lutheran Church property and facilities. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). Access to the property and its functions have been maintained. Several sections in the environmental document have been updated to address these changes including: Section 2.5.1 describes the refined alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods; Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative.

The church building was evaluated as a noise and vibration-sensitive property, as discussed in section 4.7 Noise and Vibration, and further detailed in the noise and vibration technical report. The technical report details noise levels at the church for existing conditions and for future years with and without the project. Sound Transit is replacing the existing noise wall with a higher noise wall, in part for the church but also to mitigate the residential properties around the church. As a result, there would be no remaining impacts to the church and the outside noise levels are predicted to be similar to existing noise levels.

Construction of the light rail project near the Latvian Evangelical Lutheran Church would take approximately 1 to 2 years. Access to the

C-041-001 We urge the transit commission to work closely with the Latvian and Northgate communities to find a solution that allows continued access to the building and mitigates all impacts so that our School can continue operating successfully. Impacts to the school from the light rail include, but are not limited to, noise coming from the tracks during outdoor time, vibration, and lack of parking in the event any of the alternatives result in reduction in parking. In addition, Sound Transit should plan to relocate the school temporarily during construction since a closure of the school for any period would be disruptive to the children and the education we provide.

While school is primarily on Saturday mornings, we also have several events that are held on weekend evenings with adults and community members are present. If parking is severely limited, this will impact our ability to hold those events.

Thank you in advance for reviewing our school's comments and taking them into consideration when considering this expansion of mass transit.

Sincerely,

Ann-Marie Petersons

church and community center buildings would be maintained during construction, and parking supply would be maintained as much as possible, although, access or parking areas may temporarily shift as the realigned access roadway is developed. During final design and construction planning, and throughout the construction period, Sound Transit will coordinate with the church and the school to minimize impacts on church and cultural center buildings and their related activities and functions.

Senior Services
Promoting the well-being of older adults

September 23, 2013
Sound Transit Draft EIS Comments
c/o Lauren Swift
401 S. Jackson St.
Seattle, WA 98104

Senior Services was fortunate to be awarded one of the Growing Transit Communities' Equity Grants for the Lynnwood Link Light Rail Planning. We focused on outreach and community organizing with Shoreline residents. Our goal was to create a process to assure that people from communities of color and those living on limited incomes had a voice in Transit Oriented Development.

We organized and held two events in Shoreline this year: one for the Korean Community, which was held in Korean, not English; and one for folks of limited incomes, of which about 20% were also disabled. As the convener, we are not officially representing either of these groups; we are submitting this comment letter to report what people in these groups said they wanted available in the station area when they stepped on or off of the trains in Shoreline. About 100 people attended these two events.

C-042-001

I'm attaching 3 documents: Summary Reports for each of the two events by sub-category, and the detailed comments as listed from each of the discussion tables. Some of the most repeated ideas were:

- Built environment features: water fountains, LEED construction, covered benches and waiting areas, restrooms, drinking fountains, open and green spaces, parks, gardens and pea patches
- Bike lanes and trails connected to stations; bike storage, rentals, zip bikes at stations
- Pedestrian features: sidewalks and trails connected to stations
- ADA Compliance and over-compliance: non-slip diamond plates; Universal Design; extra-wide drop-off zones and platforms; increased ADA parking; vision and hearing impaired signals.
- Parking: disabled, commuter-only, underground, van-pool, mixed use
- Fitness options: sports fields, areas for exercise in the morning, sport courts, a pool, a YMCA
- Safety: well-lit, pleasant, clean, patrolled, safe at night and day, security cameras
- Dense Housing: mixed density with emphasis on low-rise rather than high-rise
- Coffee Shops – High level of request for these!
- Mixed Income Housing – Affordable and subsidized; emphasizing lowest incomes
- Korean Grocery Store; and other ethnic markets
- Art – local, Native, humorous, murals and sculpture

Please understand that we spent several months encouraging these people to engage in this process. It is difficult to assure these voices are at the table when language barriers, physical barriers, and often time and cost constraints in just getting to meetings, can prohibit people from being involved. Please consider this input when planning for the two light rail stations in Shoreline.

Sincerely,

Dori Gillam
Program Manager, Aging Your Way

A non-profit agency supported by United Way of King County investments
2208 Second Ave, Seattle, WA 98121
(p) 206 448-3110 • (TTY) 206 448-5025 • (f) 206 448-5766 • www.seniorservices.org

C-042-001

Sound Transit appreciates receiving these documents from your events. Many of these components are discussed in the Draft EIS. During final design, Sound Transit will work with local jurisdictions and offer opportunities for public involvement as the detailed design of the station continues. The Sound Transit project does not yet define commercial or recreational space in the facilities, although Sound Transit does have a Transit Oriented Development policy as described in Section 4.2 of the Draft EIS, and is open to transit-oriented development partnerships.

Summary of Ideas from TOD Event for the Korean Community

On July 11, 2013 about 60 members from the Korean Community attended an event at the Shoreline Conference Center convened by Senior Services and facilitated by Yun Sook Kim. State Representative Cindy Ryu provided opening remarks and connected Senior Services to the Korean Community. The event was made possible by an Equity Grant from the Growing Transit Communities Project administered by Impact Capital. King County Council Member Rod Dembowski, Shoreline City Council Members Chris Eggen, Chris Roberts and Jesse Salomon attended the event. Successful transit communities are created through inclusive planning and decision making processes, which is why the event was held. Participants were given an opportunity to begin thinking and talking about what kind of community they wanted to live in. Their feedback is organized under the topic areas below.

C-042-002

Bicycle/Walking/Bus Connections

- Bicycle storage that is safe and secure
- Enough parking spaces particularly for commuters
- Accommodation for elders and people with disabilities
- Expanded bus service to connect the community to the station, especially East-West, but also between King and Snohomish
- Bicycle lanes that connect the community to the station
- Able to get to the station by walking or biking
- Circulating shuttles picking up people to take them to the station so they wouldn't have to bring their car; stopping at shops, the library and other popular destinations along the way
- Places to visit by foot that are near the station where people can shop, fitness center, grab coffee or a snack

C-042-002

Thank you for the suggestions on transit service and access features for the stations. As described in the EIS, Sound Transit developed preliminary station access plans in coordination with King County Metro, Community Transit, WSDOT and the local jurisdictions. This included a transit integration plan addressing potential changes to transit service to serve the stations. However, specific changes to routes and services would be made by each of the local transit agencies in a public planning process that would occur prior to system opening. Each of the stations include pedestrian and bicycle access features, and where streets are altered or reconstructed for the project, bicycle and pedestrian facilities are included consistent with local jurisdictional plans and standards.

C-042-003

Housing

- Senior Apartments with a green roof that includes vegetable garden
- Residential and commercial mixed use development
- More subsidized apartments
- Apartments in addition to what is mostly single family houses in Shoreline

C-042-004

Recreation/Community Services/Schools

- Sports fields and built environment that supports physical activity
- Exercise in the morning before heading to work; Fitness equipment for all to use
- Open space with water fountain or water feature
- Arts, dances, galleries
- Senior Center for Korean Elders
- Park and Playground

Businesses and Jobs

- Places for students, book stores, coffee shops
- Wedding venue
- Cultural center or concert venue
- Cafés where you can get breakfast before you head to work
- Flea market
- Food vendors and food trucks, especially in the morning
- Traditional Korean Tea House look for the station-roof tiled with Korean tiles
- Large Korean Grocery Market
- Gallery/Museum
- Business center/Internet Cafe near the station for business or personal use
- Day care center for parents to drop their children off before they go to work
- Drug store
- Job opportunities that allow people to work in Shoreline

Other

C-042-005

- Need to feel safe coming and going from the station at all hours; Security cameras to keep it safe; Clean and pleasant environment

C-042-006

- 155th station location not favored; no freeway exit; too "narrow"

C-042-007

- Expand light rail to Everett

Next Steps

- Get involved with the 185th Station Area Citizens Committee. For more info visit http://be.futurewise.org/content_item/Shoreline185
- Participate in events organized by the City of Shoreline. For a list of events visit www.shorelinewa.gov/lightrail
- Questions about this report: contact Joanne Donohue at Senior Services joanned@seniorservices.org or 206 727-6206

C-042-003

Thank you for your comment on the need for additional housing choices in the city of Shoreline. Although the zoning designations at the time of the Draft EIS did not permit multi-family or mixed-use development near any proposed light rail station, the City of Shoreline has since been conducting subarea planning and environmental review for the NE 185th Street Station area. The plan changes and related zoning could accommodate higher density residential and commercial mixed-use developments and apartments surrounding the light rail station area, and this would help to improve access to transit for populations that may not own automobiles. While the City's plan and any rezoning is an action of the City of Shoreline, it is evaluated as an indirect impact of the Lynnwood Link Extension project, which would develop a station within the city's action area; see Section 4.2.4 for details.

C-042-004

Thank you for your suggestions regarding possible amenities and businesses that could be associated with light rail facilities. Section 4.2.4 in the Land Use section of Chapter 4 of the Final EIS discusses Sound Transit's transit-oriented development program, as well as the transit-oriented development potential for each of this project's proposed station areas.

C-042-005

The stations are well lit, are continually monitored by security cameras, and are regularly monitored by security personnel. Sound Transit would implement a number of measures to deter crime in the station areas. Measures to minimize crime would include the use of equipment (e.g., closed-circuit TV [CCTV], sealed fare boxes, and automatically sealed exits), the use of anti-crime programs such as anti-graffiti programs, and the use of security personnel. See Section 4.14 - Public Services, Safety, and Security.

Summary Report from Shoreline Light Rail Event
Folks of Modest Means
August 7, 2013

On August 7, 2013 over 50 people of limited incomes including representatives from agencies that serve them attended an event at Prince of Peace Lutheran Church convened by Senior Services and facilitated by Dori Gillam. Deputy Mayor, Chris Eggen provided opening remarks with a special welcome from Kevin Osborn of Hopelink. The event was made possible by an Equity Grant from the Growing Transit Communities Project administered by Impact Capital. Shoreline City Council Member Jesse Salomon also attended the event. Successful transit communities are created through inclusive planning and decision making processes, which is why the event was held. Participants engaged in conversation about, and envisioned, the kind of community they want to live in, specifically, the amenities and services they would like to see at or near the Light Rail Stations in Shoreline. This is the first time people of more modest means have been organized to provide input to such a long-range and large-scale project. A summary of their feedback is organized under the topic areas below.

C-042-008

Transportation/Mobility

- Bicycle storage that is safe and secure
- Parking spaces for commuters only (keep them out of neighborhoods)
- Disabled parking and drop-off zones, and larger parking spaces
- Accommodations for: elders and people with disabilities; families with strollers; travelers with luggage
- Expanded bus service to connect with the station, especially East-West
- Full-service transit hub for trains, bus, bike, shuttles, walking; Orca card station
- Bicycle lanes and trails connecting community to the station
- Bicycle rentals including 3-wheeled bikes, zip bikes
- Safe, ADA compliant wide walking paths, sidewalks and cutouts (non-slip)
- Circulating shuttles that loop to the station, shops, library, grocery stores, etc.

C-042-009

Housing

- Housing with variety: for seniors; families with small children; pet-owners; immigrants; students; both subsidized and affordable; all ADA compliant
- Residential and commercial mixed-use development
- High number of subsidized units and low income vs. affordable

C-042-006

Your comment that a station at NE 155th Street is not favored is noted.

C-042-007

Comment noted. Sound Transit has completed a high-capacity transit corridor study from Lynnwood to Everett as part of the Long-Range Plan Update and ST 3 planning. See http://www.soundtransit.org/Projects-and-Plans/Long-range-Plan-update

C-042-008

Sound Transit light rail stations will have racks and/or lockers for bikes. The project includes bicycle and pedestrian access facilities at station areas and reconstructed streets, but longer routes or trails to the station area are not currently defined as part of the Lynnwood project. Sound Transit does not operate bike rental enterprises. Parking spaces would be provided at each of the station locations included in the Preferred Alternative. Stations and parking structures will be ADA-compliant, so they will accommodate people with disabilities, elders, and others. Sound Transit will work with local transit agencies and the cities to coordinate transit services to stations, but any changes to routes and services would be made by King County Metro or Community Transit, the local transit agencies.

C-042-009

Please see the response to comment C-042-003.

C-042-009

- LEED and other environmental friendly and sustainable housing
- Mixed density and type: low-rise, townhouses/condos, owned and rentals
- Layer-cake or stair-stepped skyline; departure from current SL style

C-042-010

Recreation/Community Services

- Fitness facilities, exercise area, courts
- Open spaces with water fountain or water feature and drinking fountains
- Art, especially local artists and native American, humorous, interactive art, murals
- Music venue
- Maintain current Senior Center and Community Center
- Park, pocket parks, playgrounds
- Small education/community commons with meeting spaces, library
- Community gardens or P-Patches, green spaces, picnic areas
- Dog park; skate park
- Social Services, Food bank, meal programs, DSHS

Jobs and Businesses

- Delis, coffee shops, bakeries, cafés, ethnic foods, bar
- Grocery stores, mini-marts; local or mom and pop; drug store
- Internet café, wi-fi, charging stations, small office space, copy and postal substation
- Bike shop and auto shop
- Pet care and child care
- Food carts and vendors
- Artist lofts
- Gym
- Dental/Healthcare/Urgent Care
- Affordable business sites

Other

C-042-011

- Safety/security by day and night; security cameras, clean, well-lit, bicycle patrolled
- Ample restrooms at and near the stations

C-042-012

- Maximum noise abatement

C-042-013

- 155th station not favored; must rebuilt all of 145th anyway

C-042-014

- Emphasis on locally-owned over chains
- Community reader boards
- Green and ADA construction for anything new built at or near the station
- Sound signals for visually impaired
- Covered areas, plenty of covered and uncovered benches at and near the station

Next Steps:

- Get involved with the 185th Station Area Citizens Committee: http://be.futurewise.org/content_item/Shoreline185
- Participate in events organized by the City of Shoreline: www.shorelinewa.gov/lightrail
- Questions about this report? Contact Dori Gillam at dorig@seniorservices.org or (206) 268-6737

C-042-010

Please see response to comment C-042-004.

C-042-011

Sound Transit designs and maintains its stations to be safe, secure and clean. The stations are well lit, feature security cameras, and are regularly monitored by security personnel. Crime is not expected to increase as a result of operation of the stations. Several studies have concluded that crime around stations mirrors crime rates in the surrounding neighborhoods. Most areas in the project corridor have low crime rates. Sound Transit would implement a number of measures to deter crime in the station areas. Measures to minimize crime would include the use of equipment (e.g., closed-circuit TV [CCTV], sealed fare boxes, and automatically sealed exits), the use of anti-crime programs such as anti-graffiti programs, and the use of security personnel. 2010 crime statistics related to already built Sound Transit facilities show that the crime rate per number of riders at transit facilities and on light rail and commuter rail trains is substantially lower compared to overall per capita crime rates in Seattle, Tukwila, and SeaTac.

Based on a system-wide policy adopted by the Sound Transit Board, Sound Transit stations generally do not include public restrooms, partly for health and safety/security reasons.

C-042-012

The noise analysis for the Lynnwood Link uses the FTA and local code impact criteria and Sound Transit mitigates noise impacts to levels below the criteria. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

C-042-013

Shoreline Light Rail
Event Ideas Matrix
For Two Events: Korean Community and Folks of Modest Means

Theme	Sub Category	Idea from Group Report Notes	Korean	Modest Means	Total
Housing	Density	Dense housing: Apartments/Condos, but low-rise	1	5	6
Housing	Density	Clustered housing		1	1
Housing	Density	Townhouses		2	2
Housing	Density	Mixed density		1	1
Housing	Intergenerational	Intergenerational housing		1	1
Housing	Mixed Income	Mixed Income: Subsidized housing and affordable	1	7	8
Housing	Mixed Use	Mixed-use buildings	3	3	6
Housing	Pet Friendly	Dog Owners		1	1
Housing	Senior	Senior Housing	1	1	2
Jobs/Business	Arts	Artist Lofts		1	1
Jobs/Business	Arts	Movie Theater		1	1
Jobs/Business	Arts	Music Venue		1	1
Jobs/Business	Arts	Craftspeople		1	1
Jobs/Business	Fitness	Fitness center	1	1	2
Jobs/Business	Food	Coffee shops	2	7	9
Jobs/Business	Food	Breakfast cafes	1	2	3
Jobs/Business	Food	Food vendors and Food Trucks	1	2	3
Jobs/Business	Food	Tea House at the station	1		1
Jobs/Business	Food	Family and ethnic restaurants		1	1
Jobs/Business	Food	Automat/vending machines		2	2
Jobs/Business	Food	Deli		1	1
Jobs/Business	Food	Bakery		1	1
Jobs/Business	Food	Bars and Restaurants		1	1
Jobs/Business	Food	Chains: McDonald's, Subway, Starbuck's		2	2
Jobs/Business	General	Affordable business sites		1	1
Jobs/Business	Health	Dental/Healthcare/Urgent Care/PT		2	2
Jobs/Business	Services	Business Center: fax, printer, internet café, Wi-Fi, charging station	1	2	3
Jobs/Business	Services	Professional services: CPA, Lawyers		1	1
Jobs/Business	Shops	Bike shop		1	1
Jobs/Business	Shops	Auto shop		1	1
Jobs/Business	Shops	Gas Station		1	1
Jobs/Business	Shops	Book stores	1		1
Jobs/Business	Shops	Korean Grocery Market/ other grocery stores	1	7	8
Jobs/Business	Shops	Shopping - General	1		1
Jobs/Business	Shops	Drug Store	1	2	3

Your comment stating that a station at 155th Street is not favored is noted.

C-042-014

Thank you for the suggestions. Decisions about future land uses and private development, such as the types of shops and restaurants around Sound Transit stations, is not determined by Sound Transit.

Sound Transit facilities will be ADA-compliant, and will be developed in accordance with Sound Transit's Sustainability Plan, as described in Chapter 2 of the Final EIS, which outlines goals to protect the environment and create a healthy community and economy.

Theme	Sub Category	Idea from Group Report Notes	Korean	Mtrans	Total
Jobs/Business	Shops	Mini-mart		4	4
Jobs/Business	Shops	Post office, "Mailboxes, ETC,", Kinko's Fed/Ex		2	2
Jobs/Business	Shops	Pet Care		1	1
Jobs/Business	Shops	Fabric Stores		1	1
Jobs/business	Shops	Chains: Target, Goodwill, Fred Meyer, Costco/Sam's Club		1	1
Recreation/Comm Svcs	Activites	Playground	1	3	4
Recreation/Comm Svcs	Activities	flea market	1		1
Recreation/Comm Svcs	Art	Art, murals, especially local, native, humorous	1	5	6
Recreation/Comm Svcs	Arts	Performance venue	1		1
Recreation/Comm Svcs	Arts	Museum	1		1
Recreation/Comm Svcs	Arts	Galleries	2		2
Recreation/Comm Svcs	Arts	Concert venue	1		1
Recreation/Comm Svcs	Arts	Cultural center	1		1
Recreation/Comm Svcs	Arts/activities	Dances	1		1
Recreation/Comm Svcs	Fitness	Skate Park		1	1
Recreation/Comm Svcs	Fitness	Sports fields	1		1
Recreation/Comm Svcs	Fitness	Built environment/equipment for sports/Physical activity/courts	2	3	5
Recreation/Comm Svcs	Fitness	exercise in the morning before work	1		1
Recreation/Comm Svcs	Fitness	Pool		3	3
Recreation/Comm Svcs	Fitness/Activities	YMCA		2	2
Recreation/Comm Svcs	Lifelong Learning	Classes and resource info		1	1
Recreation/Comm Svcs	Services	Child Care	1	2	3
Recreation/Comm Svcs	Services	Library		2	2
Recreation/Comm Svcs	Services	Social Services: Food Bank, Meal Programs, DSHS		1	1
Recreation/Comm Svcs	Third Places	Korean Senior Center	2		2
Recreation/Comm Svcs	Third Places	Community Center/educational center/meeting space		4	4
Recreation/Comm Svcs	Third Places	Commons, Third Places		3	3
Trans/Mobility	Transit	Full Service transit station: Orca station, Bus, Rail, Shuttle, Cab		2	2
Trans/Mobility	Bikes	safe, secure bike storage	1	5	6
Trans/Mobility	Bikes	Bike lanes/trails connecting to station/link to Interurban	4	4	8
Trans/Mobility	Bikes	Bike rentals, zip bikes, (and 3-wheeled)		2	2
Trans/Mobility	Bus	Expanded bus service - especially East/West, but King/Sno, too	2	9	11
Trans/Mobility	Cars	Cheaper alternatives than zip car and car2go; gypsy cabs?		1	1
Trans/Mobility	Parking	multi-use parking	1		1
Trans/Mobility	Parking	Disabled parking and disabled drop-off zones		3	3
Trans/Mobility	Parking	Ample Parking spaces	2	3	5
Trans/Mobility	Parking	Dedicated Commuter only parking spaces	1	2	3
Trans/Mobility	Parking	underground parking		1	1
Trans/Mobility	Shuttles	Circulating shuttles	1	3	4
Trans/Mobility	Train	Expand the rail to Everett	1		1
Trans/Mobility	Walking	Places to visit by foot	1		1

Theme	Sub Category	Idea from Group Report Notes	Iverson	Mirro	Total
Trans/Mobility	Walking	Pedestrian overpass		1	1
Trans/Mobility	Walking	Safe, wide ADA walking paths and sidewalks connecting to the station	1	11	12
Other	ADA	ADA for elders, handicapped, strollers, people with luggage	1	3	4
Other	ADA	ADA accessibility: curb cutouts, non-slip diamond plates	2	1	3
Other	ADA	All housing should be ADA		1	1
Other	ADA	Wide platforms for safe entry and exit		1	1
Other	ADA	Sound signals for visually impaired		1	1
Other	Built Environment	Water Fountain or water feature	1	2	3
Other	Built Environment	Environmentally friendly & sustainable building - LEED		3	3
Other	Built Environment	Benches and covered benches		3	3
Other	Built Environment	Covered waiting and sitting areas		1	1
Other	Built Environment	Restrooms		3	3
Other	Built Environment	Drinking Fountains		1	1
Other	Built Environment	open spaces	1	2	3
Other	Built Environment	Park and pocket parks, green space/picnic areas	1	7	8
Other	Built Environment	Pet grassy areas		2	2
Other	Built Environment	Rooftop gardens/community gardens/P-Patch	1	3	4
Other	Design	Korean Tea House "look" for the station	1		1
Other	Local Economies	Locally owned businesses	1	3	4
Other	Location	Prefer 145th over 155th	1	1	2
Other	Other	Smoking areas		1	1
Other	Other	Escalators and elevators		1	1
Other	Safety	safety at station night and day	1	2	3
Other	Safety	the more people using the station - the safer	1		1
Other	Safety	Clean, pleasant and safe	1		1
Other	Safety	Security cameras	1	1	2
Other	Safety	Well-lit		3	3
Other	Safety	Police Bike Patrol		1	1
Other	Third Places	Retain current Senior Center		1	1
Other	Third Places	Retain current Shoreline Center		1	1
Other	Third Places	Community Reader Board		2	2
Other	Venue	Wedding venue	1		1
NOTES:		Tallies are the number of times this idea was listed on a group table-discussion flip chart paper. These tallies become minimums: more than one person at a table might have had this idea, up to 6-7 at each table, but that is unknown. Some ideas may fit into duplicate categories, but there is no duplication here.			

ESTONIAN AMERICAN NATIONAL COUNCIL, INC.
EESTI RAHVUSKOMITEE ÜHENDRIIKIDES

Office of the President
9814 Hill Street
Kensington, MD 20895

www.ESTOSITE.ORG

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Executive Director
Linda Rink

C-043-001

September 20, 2013

Sound Transit
Draft DEIS Comments c/o Lauren Swift
401 Jackson Street
Seattle, WA 98104

Re: Lynnwood Link Extension DEIS

The Estonian American National Council (EANC) is the nationally-elected central organization of Estonian Americans. We help support Estonian American institutions and activities throughout the United States.

Estonian Americans in the greater Seattle area have informed us about the Lynnwood Link Extension DEIS and that all the alternatives presented severely impact the Latvian Church and Community Center. The Estonian Community in the greater Seattle area uses this space for the Estonian Church as well as for all of the Estonian community celebrations. Any disruption to its availability, whether temporary or permanent, will prohibit their ability to hold church services and gatherings.

it is imperative that all construction related impacts to the Center be mitigated in a manner which allows the Estonian American community's continued use of this facility during construction, and that long term impact resulting from the operation of the light rail system be mitigated in a manner allowing their continued use of this facility .

Thank you,

Linda Rink
Executive Director

Founded in 1952, the Estonian American National Council, Inc. is a nationally elected 501(c)(3) nonprofit organization representing the interests of Estonian Americans both in the United States and Estonia, and dedicated to preserving and sustaining their heritage.

C-043-001

Thank you for your comments describing the importance of the Latvian Evangelical Lutheran Church and community center to the Estonian community. See Section 2.5.1 for a description of the refined Segment A alternatives with reduced impacts on the church. Under all alternatives, the project now avoids the potential displacement of the church or community center.

During project construction, the Latvian Evangelical Lutheran Church and center would experience temporary effects from construction, but coordination and mitigation by Sound Transit would allow normal church and cultural center activities to continue. Construction would be ongoing for 1-2 years in proximity to the church. Construction would occur predominantly during weekdays between about 8 am and 6 pm, though evening and weekend construction may occasionally be required. In addition to truck traffic and temporary changes in access routes in the area, other effects such as noise, dust, light, and glare are described in Sections 3.3, 4.5.3, 4.6.4, and 4.7.4; mitigation is outlined in Sections 3.6, 4.5.6, 4.6.7, and 4.7.7. Longer term, mitigation with noise walls would avoid long-term noise impacts for the Latvian Evangelical Lutheran Church or community center, as discussed in Section 4.7.3, with mitigation measures in Section 4.7.7.

SCA

SOUND CITIES ASSOCIATION

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SCA@SoundCities.org
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September 23, 2013

The Honorable Pat McCarthy
Chair, Sound Transit Board of Directors
Pierce County
County-City Building
930 Tacoma Ave. S, Room 737
Tacoma, WA 98402

Re: Preferred alternative for Lynnwood Link Extension light rail station locations

Dear Chair McCarthy,

C-044-001

I write to you today with regards to the Lynnwood Link Extension Draft Environmental Impact Statement (DEIS). It is our understanding that the Sound Transit Board will be identifying a preferred alternative in October. On behalf of the Sound Cities Association Board of Directors, we urge the Sound Transit Board of Directors to support the City of Shoreline's preferred alternative for Lynnwood Link Extension light rail station locations at NE 145th Street and NE 185th Street.

As you know, the Sound Cities Association (formerly the Suburban Cities Association) was founded in the 1970s to help cities in King County act locally and partner regionally to create vital, livable communities through advocacy, education, leadership, mutual support, and networking. Collectively, our 35 member cities represent nearly one million constituents in King County.

C-044-002

At our meeting earlier this month, our Board of Directors unanimously adopted a position of support for the City of Shoreline's preferred alternative for Lynnwood Link Extension light rail station locations at NE 145th Street and NE 185th Street. A NE 145th street station would provide better connections throughout the region, is more closely aligned with Shoreline's long term planning goals, and would prevent negative traffic impacts on Shoreline residents.

This matter was discussed extensively at two meetings of our Public Issues Committee (PIC). Our members expressed support for this station location on a variety of factors including the fact that there would be no freeway access to a NE 155th Street station. Locating the station at this alternate location would require a high volume of commuters to drive through Shoreline neighborhoods, and would have a substantial negative impact on Shoreline residents. Conversely, locating the station at NE 145th Street will better serve commuters from neighboring jurisdictions including north Seattle, Lake Forest Park, Kenmore, Bothell, and Woodinville. Finally, where, as here, there is no substantive difference between the two proposed locations, our members believe that Sound Transit should give deference to the City hosting the proposed station, and its long term planning goals.

We thank you for your consideration. If you have any questions, please contact our Executive Director Deanna Dawson at (206) 433-7170, or Deanna@Soundcities.org.

Sincerely,

Denis Law

Mayor Denis Law
President, Sound Cities Association

Cc: Sound Transit Board of Directors
Keith McGlashan, Mayor, City of Shoreline
Sound Cities Association Board of Directors
Sound Cities Association Public Issues Committee

C-044-001

Your support for alternatives with stations at NE 145th Street and NE 185th Street is noted.

C-044-002

Thank you for your comments in support of stations at NE 145th Street and NE 185th Street.

Dear Mr. Iwata and Sound Transit Board:

This letter provides comments on the Link Extension DEIS, Chapter 4.8 Ecosystem Resources 4-147, July 2013, on behalf of the Friends of Jackson Park Trail. FOJPT is a community group that formed to establish a walking trail around the City-owned Jackson Park Golf Course. The trail opened this year and is already very popular with locals and people from further afield. Our group hopes to not only work with the City of Seattle to maintain the trail but to protect the healthy forested areas and restore impacted public lands the trail passes through. Currently, significant parts of the trail pass ivy-choked trees and thickets of blackberry, knotweed, holly, laurel and other invasive species that diminish the trail's appeal to humans and wildlife.

C-045-001 We understand that possible mitigation sites for the Lynnwood Link extension include an area east of 5th Ave NE and adjacent to Jackson Park Golf Course, particularly along North Branch Thornton Creek,

C-045-002 where wetland and riparian mitigation could be constructed. As long as access to and along the trail is not reduced, such a project would be very welcome! In addition to benefiting Thornton Creek water quality and habitat, it would greatly enhance trail users' experience and could help prompt and leverage work along other trail segments. Native trees and other vegetation along 5th NE could screen the trail from the visual and auditory impacts of I-5. We are currently starting our work to develop a plan for improvements. We would appreciate it if you would keep us informed of the status of mitigation plans so we can coordinate with you about the work, should this mitigation option be selected (please use my email: us_chickens@earthlink.net).

C-045-003 We understand that, while not mentioned in the DEIS, two properties are available in Shoreline just north of NE 145th St, the trail's northern border (tax ID 663290-0591and 663290-0830). While the Jackson Park trail is south of NE 145th St, a heavily used traffic corridor, the trees and undeveloped areas on the north side of NE 145th provide a green window that somewhat eases the impact on trail users of this busy street. It seems inevitable that changes in transit and related development near I-5 will bring even more people to the area, people who will need natural areas to provide visual and auditory relief. Preserving wetlands and green spaces in this area is a cost effective way to reduce the inevitable impacts of development, provide for public enjoyment of natural areas and open spaces that attracted so many of us to this area, and would support migrating birds, a specific mitigation need discussed in the DEIS.

C-045-004 Finally, the undeveloped areas north and south of NE 145th were once connected and perhaps in the future they can be again, if these undeveloped properties are preserved. We support Shoreline's efforts to purchase both properties to preserve wetlands and green space near Paramount Park.

C-045-005 Finally, we want to echo several points made by the Thornton Creek Alliance.

- Keeping mitigation in the watershed is important, given the totality of changes likely as a result of the Link Extension.
- Contiguous or proximal projects should be sought to maximize the ecological function of each.
- Planting three native trees for every tree removed for the transit project will help reduce impacts on migratory birds.

C-045-001

The Final EIS and the Ecosystems Technical Report provides further information on the impacted wetland areas and potential mitigation, based on current conceptual designs used for the EIS and other measures defined for the Preferred Alternative. Further details on the mitigation, including mitigation sites, would be developed by Sound Transit during final design and permitting stages for the project. Local jurisdiction and resource agency permitting processes will also provide further opportunities for public review and input by interested parties.

C-045-002

Thank you for sharing your thoughts on the potential benefits of developing mitigation in the Jackson Park Golf Course/Thornton Creek area. The project's design and permitting process would include extensive coordination between Sound Transit and city agencies with responsibility for issuing permits and approvals, but would also have opportunities for coordination with other interested parties.

C-045-003

Thank you for your comment and the suggestion on two sites/properties for mitigation.

C-045-004

Your comment supporting wetland and green space preservation with these properties is noted.

C-045-005

If project-specific mitigation is developed for this project, site selection would emphasize a watershed approach. Plans would be developed in cooperation with resource agencies. This project will follow all applicable federal, state, and local environmental laws and regulations, including tree protection standards and tree replacement ratios.

Thank you for considering our comments.

Ellen Hale
Friends of Jackson Park Trail
(206) 679-0935
Us_chickens@earthlink.net

Thornton Creek Alliance
P.O. Box 25690
Seattle, WA 98165-1190

October 5, 2013

Lauren Smith
Sound Transit Board
Union Station
401 S Jackson St
Seattle, WA 98104

Dear Ms. Smith and Sound Transit Board:

Please accept the enclosed comments from Thornton Creek Alliance (TCA) on the Draft Environmental Impact Statement for the Lynnwood Link Extension.

TCA's focus is restoring the ecological balance to the Thornton Creek Watershed. In our view, any major infrastructure project in the watershed, such as ST's rail extension, has a vital obligation to improve that balance that has been so heavily weighted against natural systems over the last 100-plus years.

Please make TCA a "party of record" for all matters relating to Lynnwood Link and include these comments in the hearing record and consider them during administrative review.

If you have any questions about TCA's comments, please don't hesitate to contact me at the address above, or 206-365-8965, or ruthalice@comcast.net.

Thank you for your consideration.

Sincerely,

Ruth Williams, President

Enclosure

Cc:
Seattle City Council
Shoreline City Council
Seattle Mayor

TCA is an all-volunteer grassroots, nonprofit organization of 115 members dedicated to preserving and restoring an ecological balance throughout the Thornton Creek watershed. Our goal is to benefit the watershed by encouraging individuals, groups, schools, businesses, and government to work together in addressing the environmental restoration of the creek system including: water quality, stabilization of water flow, flood prevention, and habitat improvement through education, collaboration, and community involvement.

Thornton-creek-alliance.org
and on **Facebook**!

Thornton Creek Alliance
P.O. Box 25690
Seattle, WA 98165-1190

Thursday, October 5, 2013

Comments on Lynnwood Link Extension Draft Environmental Impact Statement (DEIS)

C-046-001 Thornton Creek Alliance (TCA) applauds Sound Transit's (ST) mitigation policy "to avoid impacts on environmentally sensitive resources as much as possible" (Section 4.8.6, page 4-145). As the DEIS acknowledges, the impacts of the Lynnwood Link Extension would be accumulative and amplified by increases in traffic and density. Therefore it is imperative that ST goes beyond no net loss and move to improvement, restoration, and repair the ecosystem Lynnwood Link transects. To that end TCA advocates a number of actions and or recalculations in the DEIS:

- Look upstream 200 feet and 500 downstream in calculating impact areas

C-046-002
- What does Sound Transit understand to be adequate buffer width for wetlands? Impacted Buffers noted in Table 4.8-3 are quite low for the headwaters wetland complex that is the North Branch, but are stated only in terms of area, with no wetland area defined for comparative purposes. The total area impacted should be re-calculated to using increased buffers on all wetlands and riparian areas

C-046-003 All alternatives should be judged by not only by their impacts but also by the opportunities they provide to improve the ecosystem of Thornton Creek. Note that the City of Shoreline has determined that the watershed ecosystems should be left in better condition at the completion of this project than they are today. Furthermore, Thornton Creek aquatic and habitat connectivity is improving with court mandated culvert removals, citizen initiated barrier removal and Shoreline and Seattle City projects that re-establish wetland, riparian and even hyporheic connections. Instead of minimizing the value of what is present as the current DEIS does in numerous places, ST's Lynnwood Link Extension should acknowledge and seek to enhance potential to repair the largest watershed of Seattle and Shoreline. For example, added value should be given to any option that includes or encourages:

- Daylighting the creek where the rail right-of-way crosses or parallels the creek
- Replaces buried culverts with open channels and "bottomless" box culverts
- Restores instream, hyporheic, and riparian habitat
- Enhances the current north/south corridor of vegetation along I-5 using native plants

C-046-004 We appreciate that the project will construct sedimentation ponds and implement appropriate stream protection methods. With regard to impervious surfaces, what steps will be taken to decrease or keep them to a minimum? Paragraph 4.9.4, states that with increased density around the stations, there will be fewer vehicle trips in the area. This may be so, but there will certainly be many more vehicle trips in the immediate neighborhood of each station. The neighborhoods and the watershed need protection from this vehicle traffic and its associated impact. Spell out and evaluate the mitigations in each alternative. Also, if Northgate is any guide, greater density brings more pets, most obviously dogs, which need an outdoor area well away from sensitive forest/wetland areas.

C-046-001

The study area and methodology defined for the Lynnwood Link Extension project were reviewed by resource agencies and local jurisdictions. Sound Transit looked further than the area of direct impact for the Affected Environment.

C-046-002

This project will comply with all local critical area codes, including prescribed buffer widths within each local jurisdiction. See Section 4.8 - Ecosystem Resources in the Final EIS for current wetland impact information.

C-046-003

None of the alternatives would entail in-water work in Thornton Creek; therefore, Sound Transit does not have any plans to daylight the stream or replace culverts. Sound Transit designs would also avoid conflicts with anticipated fish habitat restoration projects, such as those on the state's fish passage project list. For example, where I-5 culvert replacements are anticipated, Sound Transit could design bridges or box culverts for the guideway to accommodate future restored stream channels.

C-046-004

This project will abide by all applicable federal, state, and local environmental laws and regulations. Minimization of impervious surfaces is a priority for Sound Transit in consideration not only of ecological factors, but also capital costs and long-term maintenance. As stated in the Draft EIS Section 4.9.2, Sound Transit is evaluating measures to control risks to water quality that include minimizing impervious footprints, avoiding the placement of project elements in or near water resources where possible, and installing appropriate surface water management facilities. Sound Transit is also evaluating potential cumulative impacts of growth in the surrounding area, considering that

Thornton Creek Alliance
P.O. Box 25690
Seattle, WA 98165-1190

C-046-005 In consideration of any mitigation, *the guiding principle must be to locate to those projects the watershed where the impacts occur.*

As noted in the DEIS, project area ecosystems are already degraded. We need to do what we can to restore them by keeping those compensatory mitigation funds here where they are badly needed and further damage is about to occur.

C-046-006 Page 4-146 states that measures will be taken to reduce impacts on migratory birds. One perfect measure, which would also reduce air pollution, would be to replace all removed trees with native ones, at a 3-1 ratio, and maintain them for three years, as we requested in our comments prior to this DEIS. It will be beneficial for many reasons to organize projects so that they are contiguous, or nearly so, with other eco-functional sites.

C-046-007 Page 4-147 suggests possible mitigation projects. The proposed project at Jackson Park and NE 5th Ave. would be a beneficial addition to the watershed system. We were quite surprised, however, at the contents of the paragraph on City of Seattle/SPU proposed projects. The first one, in the area of the confluence, is already funded by the City of Seattle. The second one, in Beaver Pond Natural Area, also is already funded by an Opportunity Fund grant (2008 Seattle Parks and Green Spaces Levy) sponsored by TCA! (http://www.seattle.gov/parks/projects/thornton_creek/naturalize_northgate.htm)

C-046-008 We would like to suggest assistance with two property acquisitions that would add a great deal to habitat development and human enjoyment of the urban forest. Both properties are for sale, under threat of development, and contain wetlands. They both abut Paramount Park in Shoreline, which contains what may be the largest remaining wetland in the watershed, and one is directly across NE 145th from Seattle's Jackson Park Golf Course with its new walking trail and beautiful artwork.

Here are the details on the two critical properties:

663290-0591 – Legal: PARAMOUNT PARK DIV #2 S 1/2 LOT 3 LESS E 148 FT THOF & LESS 23 FT THOF TGW POR LOT 2 LESS E 148 FT THOF & LESS S 37.5 FT THOF - AKA - PCL B SHORELINE LLA #SHLA-97-023 REC #9802231408

The King County web site is remiss in not describing this lot as a wetland. There are wetland plants and water everywhere you look, also many trees. This lot has never been developed. Locally it is referred to as the 'Kim Property', after some former owners. The price is something like $160,000, but please verify. Additionally, we understand that the City of Shoreline is hoping to find the funds to purchase this property as an addition to Paramount Park.

2 of 3

new developments would also be required to implement required stormwater best management practices.

C-046-005

Locating mitigation within the watershed impacted is a priority for Sound Transit. Federal, state, and local regulations may require Sound Transit to mitigate impacts on wetlands and buffers using an approved mitigation bank (if available in the future), King County in-lieu fee program, or project-specific mitigation developed by Sound Transit. If project-specific mitigation is developed for this project, site selection would emphasize a watershed approach.

C-046-006

This project will abide by all applicable federal, state, and local environmental laws and regulations, including tree protection standards and tree replacement ratios. Contiguous or proximal projects will be considered in wetland, stream, and buffer mitigation site selection.

C-046-007

Since the review of potential mitigation sites for the Draft EIS, these sites are no longer available. Both are scheduled for construction in 2014. The sites will be removed from Sound Transit's review of potential sites under consideration for project-specific mitigation.

C-046-008

Thank you for the suggestion on two other sites/properties. These have been added to list of properties considered for mitigation sites.

Thornton Creek Alliance
P.O. Box 25690
Seattle, WA 98165-1190

C-046-008

663290-0830 – Legal: PARAMOUNT PARK DIV #2 – Address: 14521 11th Ave NE. Shoreline, WA 98155

This property is listed as a wetland on the Army Corps of Engineers map. It is largely covered in mixed forest. If this property were to be acquired as an addition to Paramount Park it would preserve a great deal of habitat, as well as provide a wonderful pedestrian corridor from the park to NE 145th. Conversely, should it be developed with five or six homes, ingress and egress would be on NE 145th, adding to the significant problems this highway already poses for Sound Transit traffic. The asking price is $495,000.

Additional Comments:

C-046-009

Table 4.8-1: In the North Fork of Thornton Creek, coho, Chinook (listed as threatened) and sockeye salmon have also been observed. TCA suggests you contact Seattle Public Utilities for more information. Barriers downstream of the study area have been an issue so these species may not be found in the headwaters near the rail study area, but water quality impacts could affect them nonetheless. And, as mentioned, some of the barriers have been removed and more will likely be removed in the future, allowing fish access to the rail study area.

C-046-010

Page 4-134: paragraph following Table 4.8-2: Bald eagles, while no longer listed under the Endangered Species Act, are protected under the Federal Bald and Golden Eagle Protection Act (BGEPA) as well as the Migratory Bird Treaty Act (MBTA). A number of other migratory bird species and their habitat require consideration under MBTA.

Cc: Seattle City Council, Shoreline City Council, Seattle Mayor

3 of 3

C-046-009

The Ecosystem Resources Technical Report provides additional information on fish species in the North Branch of Thornton Creek, including observations of Chinook, coho, and sockeye salmon. The potential impacts on fish by guideway construction and operation under the light rail alternatives are discussed in Section 4.8.2, Long-term Impacts. Also see the Final EIS Appendix O, the Biological Assessment prepared in support of Endangered Species Act compliance for the project.

C-046-010

The Ecosystem Resources Technical Report provides additional information on the regulations pertinent to this analysis. Compliance with the Migratory Bird Treaty Act is discussed on page 4-146 of the Draft EIS.

From: Anderson, Suzanne NWS <Suzanne.L.Anderson@usace.army.mil>
Sent: Friday, July 19, 2013 8:51 AM
To: Swift, Lauren
Cc: Bennett, Matthew J NWS; Mcandrew, Rebecca E NWS
Subject: NWS-2011-964 Sound Transit (Lynnwood Link) (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Hi Lauren,

F-001-001

We received the box of documents related to the Sound Transit Lynnwood Link Extension project, including:

- Draft EIS
- Transportation Technical Report
- Ecosystems Technical Report
- Historic, Cultural, Archaeological Technical Report
- Noise and Vibration Technical Report

The transmittal cover letter indicated that the box included a copy of "*Executive Summary Lynnwood Link Extension Light Rail Project Draft EIS*", but I did not find that document.

I took a quick look through the Ecosystems Technical Report, and we have no comments at this time.

Since the wetland and stream assessments were conducted primarily at a reconnaissance level of effort, and compensatory mitigation is proposed only on a conceptual basis, we will expect submittal of a formal delineation report and mitigation plan concurrent with the JARPA submittal.

Please let me know if you have any questions.

Suzanne

Suzanne Anderson, PhD, PWS
Project Manager/Ecologist
Seattle District Regulatory Branch
U.S. Army Corps of Engineers CENWS-OD-RG
Mail Address: P.O. Box 3755
Seattle, WA 98124-3577
Building Location: 4735 East Marginal Way South
Seattle, WA 98134-3708

Phone: 206-764-3708
Fax: 206-764-6602

F-001-001

Thank you for your letter. The Executive Summary is a section of the bound Draft EIS. Thank you for your initial review of the Ecosystems report; several of the alternatives under consideration have wetlands impacts, and the Final EIS includes updated information on the wetlands in the area as well as design refinements that have been made since the Draft EIS. Potential mitigation measures have also been defined in more detail. A wetland delineation report and other materials will be provided as part of the project's Joint Aquatic Resources Permit Application.

Classification: UNCLASSIFIED
Caveats: NONE

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
620 SW Main Street, Suite 201
Portland, Oregon 97205-3026

9043.1
IN REPLY REFER TO
ER13/503

Electronically Filed

September 20, 2013

Lauren Swift
Sound Transit
401 S. Jackson St.
Seattle, WA 98104

Dear Ms. Swift:

F-002-001 The Department of the Interior has reviewed the Draft Environmental Impact Statement for the Lynnwood Link Extension. The Department does not have any comments to offer.

We appreciate the opportunity to comment.

Sincerely,

Allison O'Brien

Allison O'Brien
Regional Environmental Officer

F-002-001

Thank you for your review. Sound Transit and FTA have continued coordination with the Department in concluding the project's Section 4(f) analysis in the Final EIS.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ECOSYSTEMS,
TRIBAL AND PUBLIC
AFFAIRS

September 23, 2013

Mr. Dan Drais
Federal Transit Administration
915 Second Avenue, Suite 3142
Seattle, Washington 98174-1002

Mr. Perry Weinberg
Sound Transit
401 South Jackson Street
Seattle, Washington 98104-2826

Re: Lynnwood Link Extension Draft Environmental Impact Statement
EPA Region 10 Project Number: 11-4128-FTA.

Dear Mr. Drais and Mr. Weinberg:

The U.S. Environmental Protection Agency has reviewed the Lynnwood Link Extension Draft Environmental Impact Statement. We are submitting comments in accordance with our responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act. We appreciate this opportunity to participate in the NEPA process.

Sound Transit proposes to expand the regional light rail system north from Seattle to Lynnwood, Washington. The corridor is 8.5 miles long and generally follows I-5 from Northgate in King County to Lynnwood in Snohomish County. Six alternatives are evaluated in Segment A (Seattle to Shoreline); four alternatives in Segment B (Shoreline to Mountlake Terrace); and three alternatives in Segment C (Mountlake Terrace to Lynnwood). Because the Sound Transit Board of Directors will identify a preferred alternative based on information in the Final EIS, the Draft EIS does not identify a preferred alternative.

We commend FTA and Sound Transit for including an array of alternatives, which enable decision makers to avoid impacts to communities and the natural environment to a greater extent. We also appreciate your agencies' continued efforts to refine alternatives to further reduce impacts identified through the NEPA process.

F-003-001 Our overall rating for the Draft EIS is EC-2, Environmental Concerns, Insufficient Information. This is based on our concerns regarding specific alternative alignments within Segments B and C that would result in impacts to aquatic resources and Section 4(f) resources that are avoidable through the selection of other available alternatives. However, we rate most alternatives – specifically the alternatives within Segment A, and Alternatives B1, B4, and C3, as LO, lack of objections. An explanation of these ratings is enclosed for your use and information.

F-003-001

Thank you for your review and comment on the Draft EIS. The northern part of the Preferred Alternative analyzed in the Final EIS is a modification of the Alternative C3 that was discussed in the Draft EIS. Please see the Final EIS for the description of the Preferred Alternative and its potential effects. Sound Transit has provided responses to your specific comments in the following pages, but to summarize:

a. On the need for a full 404(b)(1) analysis, of the alternatives, please see response to comment 3.

b. On added discussion of Scriber Creek Park impacts, and potential impacts, please see our more detailed response to comment 7; however, the impacts to the park and surrounding wetland complex area for these alternatives were described in notable detail in the Draft EIS in sections 4.4. Social Impacts, 4.5, Visual and Aesthetics (including simulations of alternatives), 4.7 Noise and Vibration, 4.8 Ecosystem Resources, 4.17 Parks and Recreation, and 4.18 Section 4(f). Chapter 7 of the Final EIS describes the public comments received overall, and highlights the many comments opposing alternatives impacting the park and wetlands.

c. The information on Scriber Creek Park has been updated in the Final EIS in Section 4.17 to also note the funding source of the park. Similar information on the other directly impacted park, Ridgecrest Park in Shoreline, has also been included, along with a description of Sound Transit's commitment to meet the requirements of the funding programs where conversion of parkland is involved.

d. On ecological connectivity, please see response to comment 8.

e. On additional detail for the wetlands and ecological impacts of the OMSF facility, Sound Transit has since issued a Draft EIS on that project

F-003-001

We recommend that the following information be provided in the final EIS:

- A 404(b)(1) analysis of alternatives, particularly for Segments B and C.
- More complete disclosure of impacts from Alternatives C1 and C2 to describe the effects from construction and operation of the light rail project within Scriber Creek Park and Wetland Complex. For example, consider the change in experience for park users and wildlife with noise and disturbance from passing trains every 4 minutes, the potential for disproportionate impacts to low income, minority, disabled, and transit dependent populations, and the nature of public comments on the alternatives.
- Identification and listing of land purchase funding sources for and any use restrictions applied (such as Native Growth Protection Areas) to parks and natural areas that would be affected by the proposed project, including but not necessarily limited to Scriber Creek, Scriber Creek Park, Scriber Creek wetland complex and associated natural upland areas and buffers.
- Effects on and potential to maintain or restore ecological connectivity in the project area.
- More specific information regarding the impacts that would cumulatively accrue to the natural area habitats, functions, and values, and the community open space and values of Scriber Creek Park and Scriber Creek wetland complex from the potential selection of the Lynnwood alternative for the Sound Transit Light Rail Operations and Maintenance Satellite Facility (OMSF).
- Cost projections that factor in the likely lower mitigation costs associated with Alternative C3 vs. C1 and C2.
- Information regarding the adequacy of parking to meet demand during and after project construction

Our detailed comments and recommendations regarding the proposed project are enclosed. We thank you for the opportunity to participate in the Lynnwood Link Extension project, and are grateful for the site visit, which provided valuable information and insights on the project alternatives. If you have questions or would like to discuss these comments, please contact me at (206) 553-1601 or by electronic mail at reichgott.christine@epa.gov, or you may contact Elaine Somers of my staff at (206) 553-2966 or by electronic mail at somers.elaine@epa.gov.

Sincerely,

Christine B. Reichgott, Manager
Environmental Review and Sediment Management Unit

Enclosures

2

that incorporated the Lynnwood Project impact estimates, and Sound Transit is now completing a Final EIS for the OMSF; the Preferred Alternative for that project is a Bellevue site. The Lynnwood Link Extension Final EIS discussion in Section 4.8 Ecosystems incorporates the findings from the OMSF Draft EIS.

f. Please see response to comment 5.

g. Please see response to comment 13.

U.S. Environmental Protection Agency
Detailed Comments on
Lynnwood Link Extension Draft EIS

F-003-002 **Preferred Alternative Selection**
We have no objections or comments regarding the Segment A alternatives. However, there are a number of prominent issues that inform the selection of a preferred alternative in Segment C, and we discuss one with respect to Segment B. Among these are: impacts to ecosystem/aquatic resources, impacts to Section 4(f) resources, and community/environmental justice impacts. We discuss these aspects in their respective sections below:

F-003-003 **Aquatic Resources**
We appreciate that there are a range of alternatives for each project Segment, which affords the opportunity to avoid impacts to sensitive aquatic resources. The Draft EIS provides information that is usable for a 404(b)(1) analysis, such as the number of acres of wetlands, streams, and buffers that would be affected, but does not attempt to provide a complete 404(b)(1) analysis for the purposes of permitting under Section 404 of the Clean Water Act. The 404(b)(1) analysis would disclose information for the public and decision makers that is vital to selecting a preferred alternative.

Recommendation: Include a 404(b)(1) analysis in the Final EIS.

F-003-004 In Segment C, based on direct and indirect impacts to aquatic resources we would identify Alternative C3 as the environmentally preferred alternative, with Option 1 in the I-5 median as preferred over Option 2 west of I-5. While Alternative C1 has a slightly smaller wetland impact (a difference of 0.1 acre), it would result in other significant and difficult to mitigate impacts, including impacts to Scriber Creek Park and Park users and numerous residential and commercial displacements. Alternative C2 would result in the most direct and indirect wetland impacts to the high value Category II Scriber Creek wetlands through direct habitat loss, fragmentation of the Scriber Creek Wetland Complex, and all associated effects to the plant, animal, and human community of park users.

Recommendation: In Segment C, we support Alternative C3 as the Preferred Alternative.

F-003-005 The discussions regarding cost for the various Segment alignments (p. 5-13) do not appear to include the costs of environmental mitigation for unavoidable impacts, such as, wetland impacts.

F-003-006 In Segment B, Alternatives B1 and B4 have fewer wetland impacts, less impervious surface and resulting water quality impacts, and less cut and fill. Based on these factors, we would expect that either Alternative B1 or B4 could qualify as the Least Environmentally Damaging Alternative for the purposes of 404 permitting.

Recommendation: In Segment B, to minimize impacts to aquatic resources we support Alternative B1 or B4 as the Preferred Alternative.

F-003-007 **Community Impacts, Environmental Justice**
We commend FTA and Sound Transit for integrating the discussion of transportation, property, land use, economics, visual and aesthetic resources, air quality, noise and vibration, parks and recreation

3

F-003-002
Sound Transit appreciates EPA's comments on the alternatives by segment, including EPA's description of impacts that are of concern.

F-003-003
The wetlands analyses in the Draft and Final EIS were based on conceptual engineering. They estimate impacts conservatively without attempting to judge the effectiveness of potential avoidance and minimization measures. Because they are primarily intended to help decision makers compare the impacts of the alternatives, they lack the detail required to support an actual permit application. While the Final EIS analysis is more refined than the Draft EIS, with some field delineations performed, the level of design information and agency coordination on potential avoidance measures that could be incorporated would make a Sec. 404(b)(1) analysis premature. The Final EIS acknowledges the alternatives analysis requirement and also identifies which alternatives would have lower levels of wetlands impacts. If appropriate for the Preferred Alternative, Sound Transit will prepare a 404(b)(1) analysis as part of project permitting, but also anticipates that the impacts for the Preferred Alternative would be below the levels requiring the analysis.

F-003-004
Thank you for identifying the Segment C alternative EPA finds as environmentally preferred. Sound Transit has identified a modified Alternative C3, with an alignment west of I-5, as part of the Preferred Alternative.

F-003-005
The cost estimates presented in Chapter 5 for the alternatives consider the need for environmental mitigation. The estimates apply a risk-based contingency amount because project design is still underway and

F-003-007 resources, and public services in the section on "Social impacts, Community facilities, and Neighborhoods" (p. 4-48). We believe this adds value to the analysis and discussion of impacts in the NEPA document (and recommend that it be done in future analyses).

For example, within the Segment C project area, there is a higher than average population of minority residents (37% vs. 32.7% average for King and Snohomish Counties) and, as stated in the Draft EIS (p. 4-51), the residents within the project corridor are generally less well off than residents in the two-county region. Household income is lower than the regional median (85% of the regional median) and 11.3% live at or below the federal poverty level. An estimated 4% of households are transit-dependent, but 3 neighborhoods (Pinehurst, South Lynnwood, and Lynnwood City Center) have more transit-dependent households (7 to 8%). As further evidence of economic condition, 46% are renter-occupied homes; 54% are owner-occupied.

Lynnwood is a heavily urbanized area with few parks and open spaces to serve a largely disadvantaged population. We believe these conditions should weigh heavily in the selection of a preferred alternative within Segment C. Clearly, Alternative C3 would avoid and minimize residential and business displacements (1 business displacement), and would avoid and minimize impacts to Scriber Creek Park (a Section 4(f) resource) and wetland complex, which, based on citizen response to the proposed alternatives since release of the Draft EIS, is much beloved and of disproportionately high value for the affected community. Our site visit to the Park and wetland complex on 9-16-13 revealed it to be an exceptionally high value wetland and natural area, despite its relatively small size. It clearly serves as a tranquil island amid widespread human development.

Recommendations: Provide information in the Final EIS to disclose and characterize the high ecological and community values of Scriber Creek Park and Wetland Complex. Avoid and minimize impacts to Scriber Creek Park and Wetland Complex and residential and business displacements. Alternative C3 is most effective in both respects.

F-003-008 **Ecological Connectivity**
We agree that long term impacts on ecosystem resources (p. 4-135) may include loss or degradation of terrestrial habitat, including habitat connectivity. The Draft EIS does not provide adequate information about habitat connectivity and the extent to which it exists in the project area and beyond. If there are habitat corridors that are currently providing function in this manner, they should be identified and those functions protected and maintained or potentially enhanced as part of the project, where possible.

Recommendation: Describe the Affected Environment, Environmental Consequences, and possible mitigation for impacts to ecological connectivity for the proposed project.

F-003-009 **Cumulative Effects**
The Draft EIS includes the proposed Lynnwood site for the Light Rail Operations and Maintenance Satellite Facility in the discussion of cumulative effects. This is helpful and appropriate, however, more specific information regarding the location, extent, and nature of the potential impacts from the OMSF should be provided. While a full analysis will occur in a subsequent EIS, it is not possible to determine whether the direct and/or indirect effects of the OMSF Lynnwood site would compromise the integrity of Scriber Creek Park and wetland complex.

4

specifics about the extent and cost of mitigation would be affected by a variety of factors and decisions that would be considered with more advanced design and permitting as the project progresses. Sound Transit understands that the cost of mitigation will vary depending on the alternatives chosen, but believes that the cost ranges used in the Draft EIS accurately convey the potential difference that mitigation could make for the project alternatives.

F-003-006

Thank you for identifying the Segment B alternative EPA finds as environmentally preferred. The Final EIS contains additional information on refinements that Sound Transit has made to Alternative B2 to help reduce some of the ecosystem and water resource effects noted in EPA's comments.

F-003-007

Chapter 7 of the Final EIS describes public comments on the alternatives, including the comments regarding the importance of Scriber Creek Park and the associated wetland complex.

Sound Transit notes EPA's recommendations for Alternative C3, which identified the ability to avoid the park impacts, minimize Scriber Creek wetlands impacts, and reduce other property impacts. The Sound Transit Board selected a modified Alternative C3 as the Preferred Alternative for this segment of the light rail facility, requesting further consideration of other factors that could improve the alternative, including preserving redevelopable lands, improving the connections to the transit center, and minimizing stream and wetland impacts. The importance of the Scriber Creek wetland complex was identified in Ecosystems Technical Report as well as the Ecosystems section the Draft EIS (Section 4.8), but is also discussed in Section 4.4 Social. The Final EIS provides updated discussion of the park and its associated wetlands for all alternatives, as

F-003-009 *Recommendation:* In the Final EIS, provide more information regarding the potential effects of the OMSF Lynnwood site on the Scriber Creek Park and wetland complex.

F-003-010 **Land Use Legal Restrictions**
The Draft EIS states that no parklands were purchased with Land and Water Conservation Funds, and therefore there are no Section 6(f) resources. However, the Draft EIS provides no information regarding the actual source of funding or authorization to designate the project area parks, particularly Scriber Creek Park. Because the Scriber Creek Wetland Complex has been retained thus far, the legal restrictions and requirements relevant to its protection should be fully identified and disclosed. For example, federal, state, and local protections should be discussed and upheld, including any potential Native Growth Protection Areas, mitigation actions, or other designations that may have been established pursuant to past development activities.

Recommendation: In the Final EIS, disclose the above legal requirements and restrictions that apply to Scriber Creek, Scriber Creek Park, and Scriber Creek Wetland Complex.

F-003-011 **Project Cost and Mitigation**
The discussions regarding cost for the various Segment alignments (p. 5-13) do not appear to include the costs of environmental mitigation for unavoidable impacts, such as, wetland impacts. The Drat EIS indicates that Alternative C3 has the shortest guide way length and a slightly higher amount of property acquisition than C2. Because C2 would impact almost an acre of high value Category II wetlands (vs. 0.2 acre for C3), Alternative C2 mitigation costs would be higher than for C3.

Recommendation: Factor mitigation costs into any cost comparisons presented in the EIS.

F-003-012 The Draft EIS states (p. 4-145) that temporary work bridges could be used in extremely sensitive areas, such as the Scriber Creek wetland complex. While extremely sensitive areas should be avoided, for any work that may directly or indirectly affect them, such measures should be applied as needed.

Recommendation: Incorporate Context Sensitive Design, Solutions, and construction practices where and whenever there are highly sensitive resources, and as a routine way of doing business.

F-003-013 **Parking**
The Draft EIS indicates that the Lynnwood Park and Ride is currently at full capacity and that both on- and off-street parking are anticipated to be removed due to the placement of the light rail stations and other project modifications (p. 3-39). While further refinement of parking needs and provision may occur in future phases of the project (p. 3-40), to maximize ridership and availability of transit as a travel option, there needs to be adequate parking.

Recommendations: The amount of parking provided at each station should be further refined to ensure that supply would meet demand. We also encourage efforts to mitigate, i.e., provide some temporary parking, agreements with businesses to use underused lots, shuttle service, etc., the loss of available parking during construction that would affect the Lynnwood Park and Ride.

5

well as information about the Preferred Alternative with the modified Alternative C3.

F-003-008

The Final EIS provides more detail on habitat connectivity in Section 4.8.1, Affected Environment; Section 4.8.2, Long Term Impacts; and Section 4.8.3, Construction Impacts. Habitat connectivity will continue to be considered as part of the mitigation process for avoidance and minimization and included in selection of compensatory mitigation for ecosystem resources. Please note also that the Ecosystems Technical Report has more detailed discussions of connectivity and continuity issues, particularly for stream habitat.

F-003-009

At the time of the publication of this project's Draft EIS, design work and effects analysis for the Operations and Maintenance Satellite Facility (OMSF) project was still underway and details were not available for detailed discussion in this document. However, Sound Transit has augmented the discussion of OMSF cumulative effects in the Final EIS, and notes the higher level of potential effects to the Scriber Creek wetland complex if the Lynnwood Site for the OMSF project were developed. The OMSF Draft EIS was published on May 9, 2014**.**

F-003-010

Sound Transit has reviewed the funding sources used to develop directly impacted parklands and has included in the Final EIS a commitment to meet applicable park land or funding replacement requirements (Section 4.1 Acquisitions and Section 4.17 Parks and Recreation both have updated text). Section 4.8.2 and the Ecosystem Resources Technical Report of the Final EIS also have updated discussions of ecosystems impacts to the complex.

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements Definitions and Follow-Up Action*

Environmental Impact of the Action

LO – Lack of Objections
The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns
EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections
EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory
EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

6

The large undeveloped parcel directly south of Scriber Creek Park is publicly held, but does not appear to have other protections or designations for those properties other than critical area ordinances and other existing federal, state, and local regulation for streams and wetlands. Additional reviews would be conducted for any property Sound Transit would use for construction and operation of the project, and Sound Transit would satisfy any applicable regulatory or legal requirements.

F-003-011

Please see the response to comment F-003-005.

F-003-012

Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts on environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure no net loss of ecosystem function and acreage as a result of agency projects. The Final EIS includes further measures to minimize impacts and describes mitigation in more detail. For Scriber Creek, Sound Transit's potential mitigation includes temporary work trestles, although final design and permitting would confirm the ultimate approach.

F-003-013

Section 3.2.7 of the Final EIS and Section 5.7 of the Transportation Technical Report includes additional discussion of parking at the Lynnwood station. Section 5.1 of the Transportation Technical Report discusses how ridership estimates reflect the ways riders are expected to access the station; many future riders are expected to take transit, walk or bike, in addition to choosing to park. Sound Transit has also considered options that would increase the parking supply at the

station. However, the provision of parking for transit centers is not made solely on estimates of unconstrained demand for parking, but must factor in local and regional plans and policies, the cost of additional parking, and environmental impacts. In Lynnwood, where the current park-and-ride is already a major hub for transit transfers, Sound Transit anticipates that transit transfers at the station as well as walking and biking will continue to increase in popularity, in keeping with the higher-density developments that Lynnwood anticipates near the station. Finally, Sound Transit identifies mitigation measures to address potential spillover parking that could occur.

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
620 SW Main Street, Suite 201
Portland, Oregon 97205-3026

TAKE PRIDE IN AMERICA

9043.1
IN REPLY REFER TO:
ER13/503

Electronically Filed

September 27, 2013

Lauren Swift
Sound Transit
401 S. Jackson St.
Seattle, WA 98104

Dear Ms. Swift:

On September 20, 2013, the U.S. Department of the Interior (Department) submitted a letter to you stating that we had no comments to offer regarding the Draft Environmental Impact Statement (DEIS) for the Lynnwood Link Project. Although the comment period for the DEIS has ended, the Department respectfully submits the following comments focused on the Section 6(f) evaluation for the project.

F-004-001 Section 4.18.3 of the DEIS is incorrect in stating that there are no Land and Water Conservation Fund (LWCF) properties within the Project area. There are two LWCF protected parks within the Project area: Twin Ponds in Shoreline (53-00082) and Jack Long in Montlake Terrace (53-00072).

Furthermore, under Alternative A5, Sound Transit has identified that parking at Twin Ponds may be used for light rail purposes. The National Park Service, a component bureau of the Department, would consider this a conversion of recreation use to transportation use, and such a conversion has not been correctly identified in the accompanying Section 6(f) analysis as constituting an impact.

Thank you for the opportunity to review this document. For additional information or assistance with addressing these points in preparing the Final EIS, please contact Ms. Heather Ramsay, Program Officer, State & Local Assistance Programs, Pacific West Region, 909 First Avenue, Seattle, WA 98104 (206) 220-4123. If you have any other questions, please contact me at (503) 326-2489.

Sincerely,

Allison O'Brien

Allison O'Brien
Regional Environmental Officer

F-004-001

Thank you for the additional information on LWCF-funded resources in the project vicinity. Sound Transit has conducted additional reviews of the funding sources used to develop parklands and has included this information in the Final EIS. Sound Transit has also defined measures to avoid the potential for transit-related parking at Twin Ponds Park. Parking for transit purposes is not proposed at the park and signage restricting time periods would be an effective means of preventing unauthorized parking at the park. The project's Preferred Alternative does not include a station at NE 155th Street, which also avoids the potential for such impacts to the park.

AMBASSADOR OF THE REPUBLIC OF LATVIA
2306 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20008, USA

Washington D.C.
September 20, 2013
No. 221-912

Sound Transit
Comments c/o Lauren Swift
401 Jackson St.
Seattle, WA 98104

Dear Sir/Madam,

F-005-001

As the Ambassador of the Republic of Latvia to the United States I have been approached by the World Federation of Free Latvians, the American Latvian Association in the United States and the Latvian Community in Seattle regarding the next extension of the Sound Transit system in the Seattle area that might negatively affect the Latvian church and Community Center house in the city, possibly leading to the destruction of the Center.

The Latvian community in Seattle is among the largest and most active Latvian communities in the United States. Their Community Center house possesses an impressive cultural and historic heritage for Latvians living in the US. It would be of great loss to the very vibrant and exceptionally warm US-Latvian relations as well to see that the building might perish because of the extension of the Lynwood Link railway line.

I would like to hope that an alternate solution can be found and this particular property will remain unaffected.

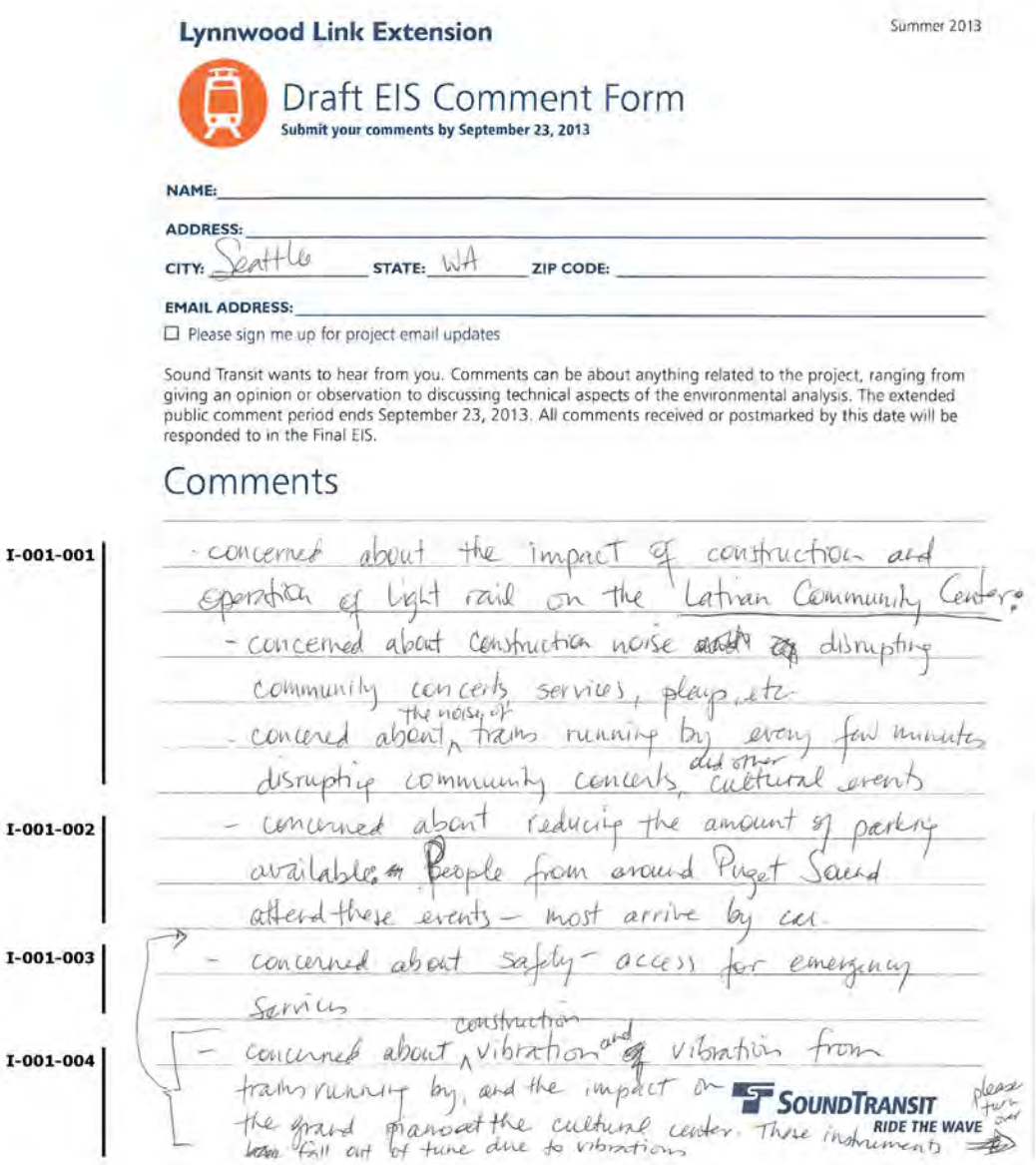
Please give this matter your closest attention.

Yours Sincerely,

Andris Razāns
Ambassador of Latvia in the US

F-005-001

Sound Transit and the Federal Transit Administration appreciate the letter describing your concerns about the potential displacement of the Latvian Evangelical Lutheran Church under the Draft EIS Alternatives A1, 5, and 10 of Sound Transit's Lynnwood Link Extension. Since the publication of the Draft EIS, Sound Transit performed additional engineering that eliminates the need to displace the Latvian Evangelical Lutheran Church. Chapter 2, Alternatives, in the Final EIS describes the refinements, and Section 4.1 describes the acquisition impacts. In addition, compensation would be provided to the church where minor acquisitions of land from the church property would be needed, as required by the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME:

ADDRESS:

CITY: Seattle STATE: WA ZIP CODE:

EMAIL ADDRESS:

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-001-001 - concerned about the impact of construction and operation of light rail on the Latvian Community Center.
- concerned about construction noise disrupting community concerts, services, plays, etc.
- concerned about the noise of trains running by every few minutes disrupting community concerts, and other cultural events

I-001-002 - concerned about reducing the amount of parking available. People from around Puget Sound attend these events – most arrive by car.

I-001-003 - concerned about safety – access for emergency services

I-001-004 - concerned about construction vibration and of vibration from trains running by, and the impact on the grand piano at the cultural center. These instruments have fall out of tune due to vibrations

SOUNDTRANSIT RIDE THE WAVE

please turn over

I-001-001

The noise analysis for the Lynnwood Link Extension uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. Sound Transit's policy is to mitigate moderate or severe impacts according to FTA criteria. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

For construction, the local construction noise ordinance would be applicable, and Sound Transit is committed to maintaining construction noise levels within the criteria. Further, construction noise for this project is similar to construction noise for a paving project, building construction or any other construction project and Sound Transit works with local residences and business to minimize construction impacts.

I-001-002

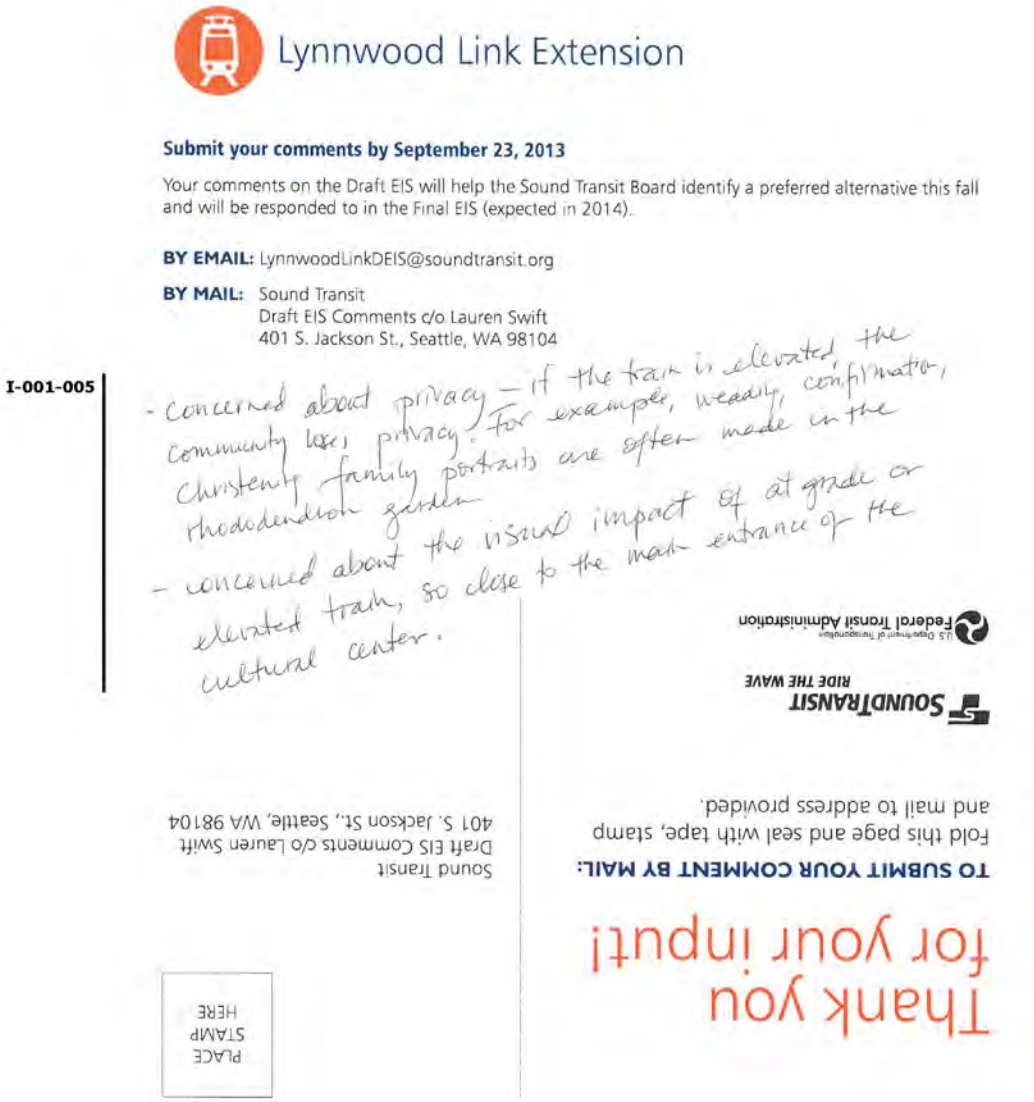
Thank you for your concerns about the potential displacement of the parking for the Latvian Evangelical Lutheran Church. Since the publication of the Draft EIS in July 2013, additional engineering was undertaken to reduce adverse effects on the Latvian Evangelical Lutheran Church property and facilities. As a result, access to the property has been maintained, and the church parking lot would be modified, but parking supply maintained; see Section 3.2.7 in the Final EIS.

I-001-003

Sound Transit will work with local jurisdictions to ensure that emergency services access is maintained to all occupied buildings, both during construction and after light rail begins operation.

I-001-004

Vibration from trains running will not contribute to the piano going out of tune. The vibration from moving trains will be much less than the



Lynnwood Link Extension

Submit your comments by September 23, 2013

Your comments on the Draft EIS will help the Sound Transit Board identify a preferred alternative this fall and will be responded to in the Final EIS (expected in 2014).

BY EMAIL: LynnwoodLinkDEIS@soundtransit.org

BY MAIL: Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

I-001-005

- concerned about privacy – if the train is elevated the community loses privacy. For example, weekly confirmation Christening family portraits are often made in the rhododendron garden
- concerned about the visual impact of at grade or elevated train, so close to the main entrance of the cultural center.

Federal Transit Administration

SOUNDTRANSIT
RIDE THE WAVE

Thank you for your input!

TO SUBMIT YOUR COMMENT BY MAIL:
Fold this page and seal with tape, stamp and mail to address provided.

Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

PLACE STAMP HERE

vibration generated within the instrument as it is being played. Construction vibration mitigation described in the Final EIS will be implemented during work at the property to minimize the risk of adverse effects at the church property.

I-001-005

It is correct that elevated trains may have views for passengers into adjacent properties, although noise walls, vegetation, and the speed of the trains would make views of individual properties less distinct and fleeting. At-grade trains would be at similar heights to I-5 traffic including buses.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Marco Saldana

ADDRESS: 21014 74th Ave W

CITY: Edmonds STATE: WA ZIP CODE: 98026

EMAIL ADDRESS:

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

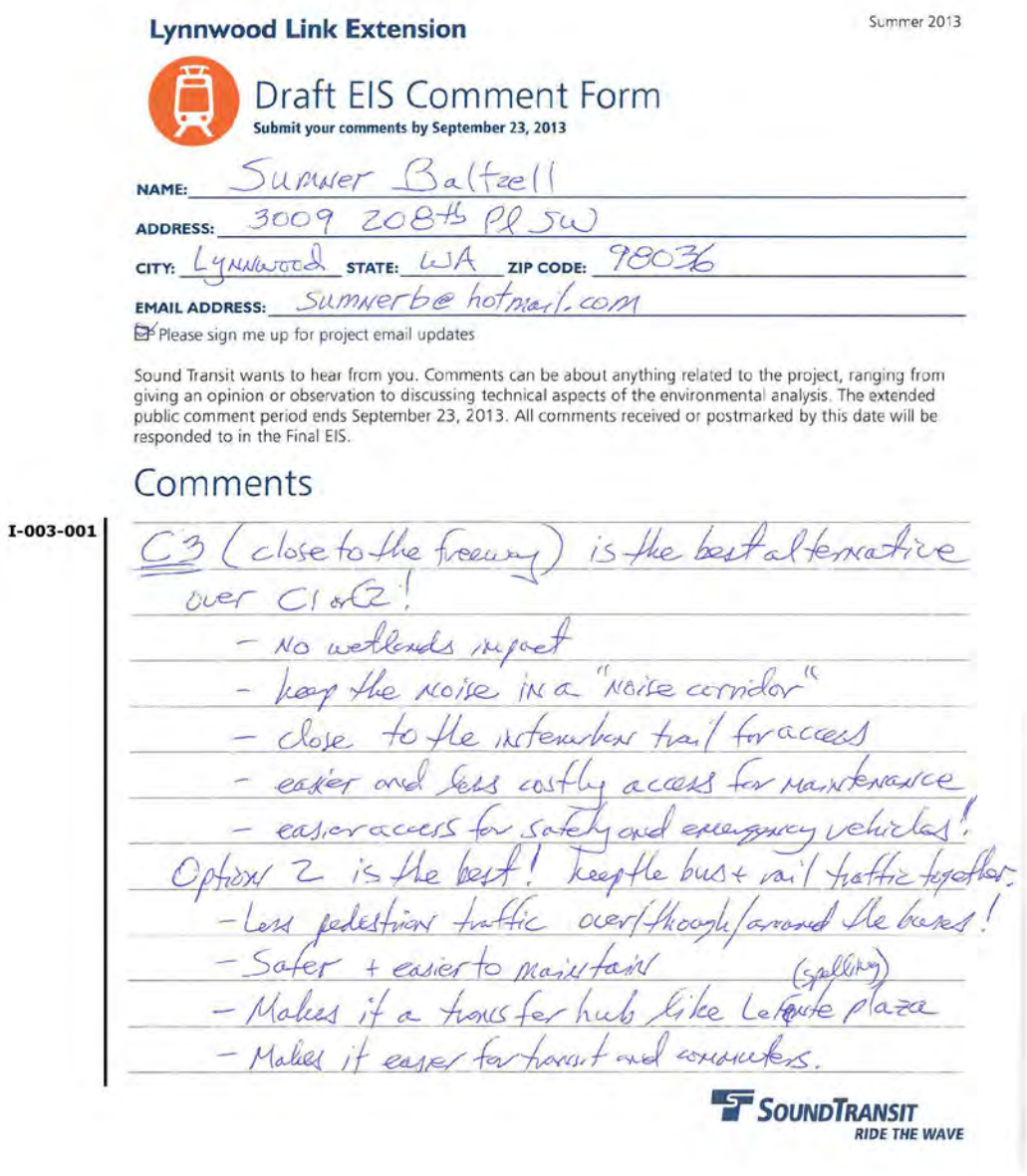
I-002-001

The max speed is 65mph and I believe that is too slow. The technology and planning is outdated by more than 2 decades. I think that by the time the project is complete this will be even more evident.

SOUNDTRANSIT
RIDE THE WAVE

I-002-001

Thank you for your comment.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Summer Baltzell

ADDRESS: 3009 208th Pl SW

CITY: Lynnwood STATE: WA ZIP CODE: 98036

EMAIL ADDRESS: Sumnerb@hotmail.com

☑ Please sign me up for project email updates

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Comments

I-003-001

C3 (close to the freeway) is the best alternative over C1 or C2!
- No wetlands impact
- keep the noise in a "noise corridor"
- close to the interurban trail for access
- easier and less costly access for maintenance
- easier access for safety and emergency vehicles!

Option 2 is the best! keep the bus + rail traffic together.
- Less pedestrian traffic over/through/around the buses!
- Safer + easier to maintain (spelling)
- Makes it a transfer hub like Lafayette plaza
- Makes it easier for transit and commuters.

SOUNDTRANSIT RIDE THE WAVE

I-003-001

Thank you for your comment stating a preference for Alternative C3 over the other two alternatives and for stating a preference for the Option 2 station alternative for an elevated station relocated east of 46th Avenue W. Following the publication of the Draft EIS, Sound Transit continued to work with the City of Lynnwood and others to define a modification to Alternative C3, which is evaluated in the Final EIS as the Preferred Alternative.

TO WHOM IT MAY CONCERN;

I-004-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Ariel Bautista 8-15-13
15411 34th Ave SE
Mill Creek, WA 98012

I-004-001

Thank you for your comment stating a preference for Alternative C1.

From: SAMUEL H BESS <shbess116@msn.com>
Sent: Tuesday, July 30, 2013 4:52 PM
To: Lynnwood Link DEIS
Cc: Iwata, Roger; Bess Nate; Lince Kevin & Leslie; Rep. Ruth Kagi; Council@shorelinewa.gov
Subject: Lynnwoodlink DEIS comments

Samuel H. Bess
116 NE 158th St.
Shoreline, WA 98155-5720
206-367-0728

I-005-001 Table 4:1-1 Does not identify WHICH "Residential single family" or "Residential multifamily" units are adversely selected
under the segment alternatives Seattle to Shoreline. They should be disclosed publicly.
Shoreline streets (ie. First Ave. NE from NE 156th to Ridgecrest Park) if adversely displaced (or modified)
are not noted specifically. They should be disclosed publicly.

I-005-002 Any infrastructure in the City of Shoreline; fire hydrants, water lines, sewer lines, curbs, gutters, drains should be
upgraded to current code and to fully improved status if projects impinge upon their existence or quality of access.
For example First Ave. NE from 156th to Ridgecrest Park.

I-005-003 Table 4.7-5b My address is directly impacted and rated as moderate to severe noise and vibration "requiring mitigation".

From NE 155th St. to Ridgecrest Park, all residential units along First Ave. NE and up-slope appear to be impacted
according to this table. Historically, since the I-5 opened in the early 60's, noise and vibration have
become an on-going nuisance. twenty years ago, neighbors banded together living then in what was
unincorporated North King County, requested the DOT to mitigate these conditions and address our concerns.
Some sound studies were selectively taken and the DOT refused to take mitigating remedies
along much of First Ave NE between NE 155th and Ridgecrest Park. the main reason stated was that

I-005-001

Thank you for your comment. Table 4.1-1 is a summary of the number of parcels that could potentially be affected by each alternative. Figures I-4.1-1 through I-4.1-4 identify these parcel locations, and Tables I-4.1-1 through I-4.1-3 identify parcel addresses. Streets that would require modification by the Preferred Alternative are identified in the Final EIS.

I-005-002

Permits are required for any Sound Transit Lynnwood Link Extension construction that falls under City of Shoreline jurisdiction, and infrastructure replaced due to such construction will be built to existing codes.

I-005-003

The noise analysis for the project uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. Sound Transit's policy is to mitigate moderate or severe impacts according to FTA criteria. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Sound walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail noise impacts. In addition, where existing WSDOT noise walls are removed and replaced as part of the project, they will meet the requirements of, and be approved by, WSDOT and FHWA.

Your suggestion for a lid is noted, but sound walls are planned at this location.

I-005-003 almost all residential single family units are built more than 20 feet above First Ave. NE and are foundationally imbedded upon hard-pan geological glacial fill (an excellent vibration transmitter and water conductor.)

I-005-004 How will your proposal to "mitigate" the increased vibrations and noise protect residences 4,5, and 6 up the eastern hill be conducted?

I propose an I-5 Lid from 156th to 162nd St. under which the Light Rail should run. (or a modified cantilever 2/3) West facing deflector to shield higher elevations yielding equal mitigation effects for all residences along that specific corridor.

I-005-005 Table 4.77 Visual quality impacts:

Removal of existing vegetation from NE 155th St. to the North boundary of Ridgecrest park would strip the only sound mitigation available at this time Including numerous conifers and deciduous trees. The ecosystems established in these urban greenways would be destroyed. Critter migrations would be expected. Loss of habitat would be tremendous along miles of green sward DOT right-of-way borders. This habitat would be irreplaceable.

I-005-006 There are sub surface water-courses along this I-5 eastern margin that would be eliminated that support Twin Ponds water quality. Most of the ground-water drains West down slope toward I-5 then South to Twin Ponds. Up-slope residents have encountered springs, seeps, and leaky basements due to run-off sub surface and pump by sump back out that feeds this drainage system. Interruption of that system down-slope may have a deleterious affect upon the Twin Ponds quality. This is an on-going issue year round.

Why is the removal of the Tree border at Ridgecrest Park necessary? These trees and their root systems absorb down-slope water from Third Ave NE that drains through the sub-perk of the park

I-005-007 to the West end. The report does not mention subsequent removal of the 12' Berm on the East Park margin under those trees..... destroying visual balance, habitat, and auditory natural abatement soil sound damping characteristics. Opening that East side of the Park will enhance an already intolerable noise venue

I-005-004

Please see response to comment I-005-003 regarding noise. For vibration, mitigation measures include track isolation systems, which are effective and typically reduce vibration to below the FTA criteria.

I-005-005

Existing vegetation is not a notable source of mitigation for noise. Noise impacts are calculated based on existing noise levels plus light rail noise, as described in Section 4.7. Removal of vegetation from NE 155th Street to Ridgecrest Park is addressed in the Draft EIS on page 4-77 and in the high visual impact ratings for all alternatives on pages 4-84 and 4-85.

Habitat loss is addressed on page 4-136 of the Draft EIS. The Final EIS has additional detail on mitigation proposed for the Preferred Alternative.

I-005-006

The EIS includes a summary of the existing groundwater conditions based on available information. Project-specific geotechnical borings, including monitoring wells, will be installed to further evaluate groundwater conditions along the project alignment. Subsurface drainage will be provided where required to intercept and control groundwater seepage. Collected groundwater seepage and surface water will be infiltrated where possible to provide recharge to the regional groundwater system.

I-005-007

The Draft EIS describes the partial replacement of the berm and row of cottonwoods in section 4.17.2, page 4-216. Section 4.17 of the Draft EIS describes potential mitigation measures for Ridgecrest Park to include replacement landscaping and other improvements to restore the park to the same or better condition, and to construct a barrier between the light rail facility and the park that replaces noise reduction and visual

I-005-007 due to the supination
North to South of I-5 past the Bus Barn deflecting noise into our neighborhoods already. This report does
not mention mitigation of that nuisance.

I-005-008 Visual sensitivity notes are slanted toward I-5 traffic (driver perceptions) North to South and the reverse.
Visual sensitivity from individual residential properties are substantially absent from the DEIS. We are not
encouraged by the lack of resident's perspectives from the residential specific viewpoints.
Whether at Grade level or at elevated level, along this specific stretch of I-5 negative views are
anticipated, and will be detrimental to residential real estate valuations un-recoverable by owners
at future points of sale....already, realtors approach these homes with the first negative from their lips saying "Oh, it
right next to the freeway". What we can not hear or see now is bad enough.

I-005-009 Table 4.5-2 Potential mitigation measures as applied to #4 should be noted from NE 155th St to NE 178th St.
A. "Additional Landscaping and buffers" What type? How high?
B. "landscaping to screen adjacent residences" Use of mature vegetation, not yearling starts is necessary.
Since removal of trees and densities to 40 ft. will happen, how will you landscape to protect properties
60' 100'and 200' or 500' East of I-5 with vegetation? NOT!
C. "...noise and retaining walls"---see prior comments on elevation southbound I-5 higher than Northbound
since partial lids are the only fully effective deflector for properties above 50' above grade to 3rd Ave. NE.
D. "Relocated streets" is First av. NE one of them????Partially????
E. "Landscaping between guideway columns" will not reduce visual impact above guideway track levels.
Rail and trackway visibility will be a new form of visual pollution for our residential area.
F. "Texture, Patterns, color on walls" "Nonsense! More cost for the project and benefits only the drivers who are
so busy texting and cell-phoning they would be further distracted.

Samuel H. Bess

3

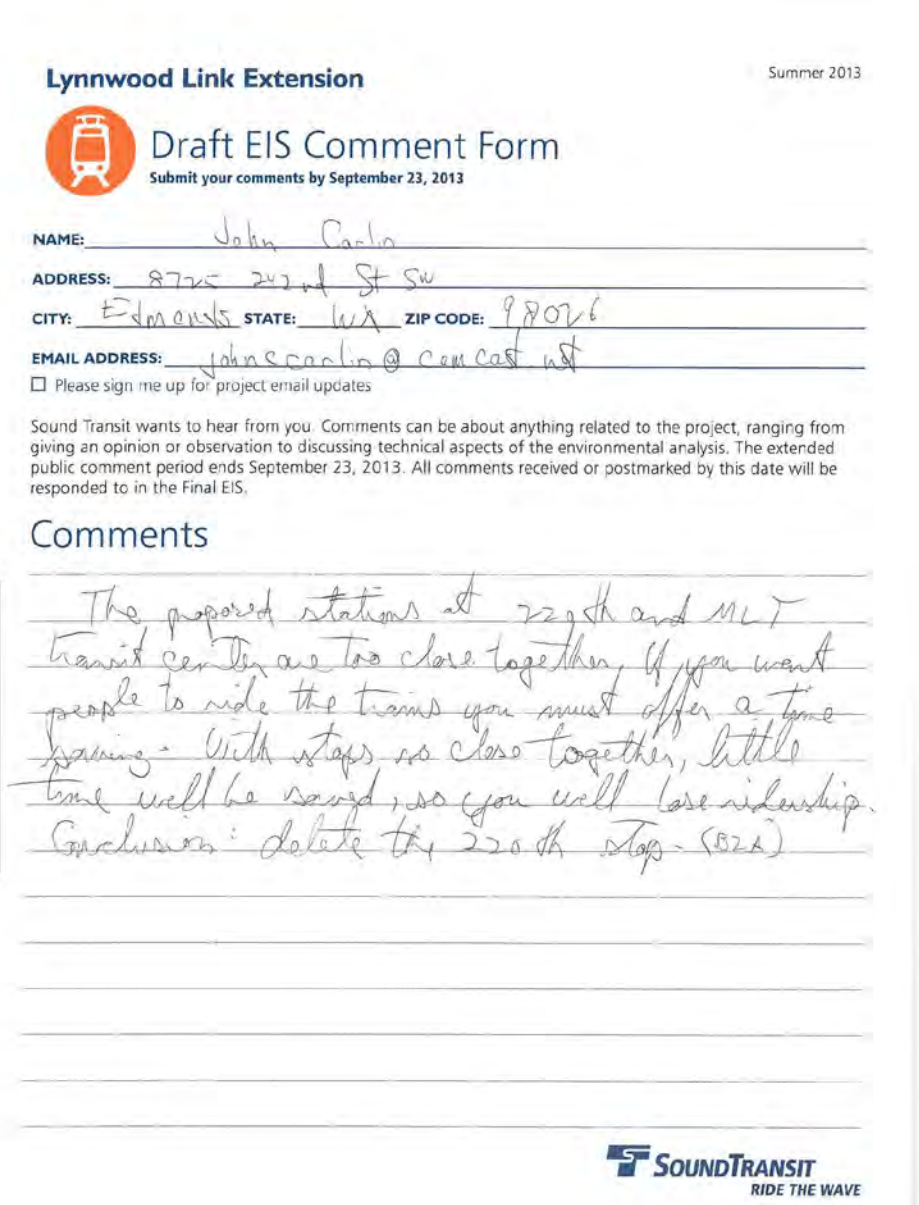
screening functions of the affected berm. The Final EIS has additional details.

I-005-008

The analysis in Table 4.5.1 includes more items directed at residential and other non-highway visual impacts than I-5 related impacts. The EIS addresses impacts on I-5 because of specific policies of state and federal agencies regarding highway appearance and specific state guidelines for roadside character. The extent to which vegetation removal, relocation of noise walls, and the elevated alternatives affect the visual integrity, unity and presence of encroaching elements is addressed throughout Section 4.5. The potential property value impacts of visual quality impacts are not addressed in this section. Section 4.3.4 addresses potential negative property value impacts of noise, light, shadow, views, access and parking.

I-005-009

Potential mitigation measures for visual quality impacts on Draft EIS pages 4-91 through 4-93 indicate general mitigation concepts and approaches. All of the potential mitigation measures identified have the potential for application to the area from NE 152nd Street to NE 178th Street as indicated in Table 4.5-2. Details such as the size and height will be developed during the final design phase of the project. As noted on page 4-91, it is likely to take 15 to 20 years to screen parking garages and noise walls and 30 to 50 years to replace the appearance of mature evergreen trees, and this is identified as an unavoidable adverse effect in the EIS.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: John Carlin

ADDRESS: 8725 242nd St SW

CITY: Edmonds STATE: WA ZIP CODE: 98026

EMAIL ADDRESS: johnscarlin@comcast.net

☐ Please sign me up for project email updates

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Comments

I-006-001

The proposed stations at 220th and MLT transit centers are too close together. If you want people to ride the trains you must offer a time saving. With stops so close together, little time will be saved, so you will lose ridership. Conclusion: delete the 220th Stop - (B2A)

SOUNDTRANSIT RIDE THE WAVE

I-006-001

A Mountlake Terrace Transit Center Station with no proposed transit station at 220th Street was considered in the Draft EIS for Alternative B2. However, all the alternatives would offer a time savings over existing and future transit service, and would be competitive with the automobile.

TO WHOM IT MAY CONCERN;

I-007-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

KC Chong

2421 118th EVERETT WA 98208

9/17/13

I-007-001

Thank you for your comment stating a preference for Alternative C1.

Sound Transit DEIS
401 S. Jackson St.
Seattle, WA 98104

Re: Sound Transit EIS comments

I-008-001

My wife and I own five rental properties along the west side of 5th Ave between 123rd and 125th NE. These properties have been specifically identified by Sound Transit to be acquired for the new light rail link between Northgate and Lynnwood. We are **really, seriously, absolutely, terribly worried and concerned** about Sound Transit's plan to condemn our property through eminent domain and the amount of compensation we will receive. We have met with staff at Sound Transit several times and have been informed that there is no other alternative route except through our property.

Our property consists of 27,000 sq. ft. of land with five equal tax parcels, with a total of 25,000 sq. ft. of living space and 30 parking spaces, 20 of which are under cover. Furthermore, since we own all the houses on the block face there is another 500 linear feet of street parking that our tenants can utilize. There are five separate buildings of 5,000 sq. ft. living space each. Three of the buildings were built in 2010 and the other two were completed in 2012. We have a 15 year fixed loan at 5.1% on the property. This project is so easy to manage we can do it all ourselves, in our spare time, and our only outside help is our accountant. We had a plan to have the property paid off at the end of the 15 year loan. This is probably the most perfect rental property in Seattle, in terms of age [new], cash flow, ease of management and ease of maintenance. It was designed and built in excess of the Seattle Building Codes, because we planned to keep it and will it to our daughter and grandson. Our daughter is already on the title. Our entire retirement plan is based on the income stream from this property, after 40 years of very hard work. This property provides very high quality affordable housing, including handicapped units, without any tax breaks, subsidies, or code variances; it is unique and irreplaceable.

Our property is located in the middle of what we call the tri-college area, surrounded by Shoreline Community College to the north, North Seattle Community College to the west, and the University of Washington to the south. In fact, we have had tenants from all three of these schools. It is only four blocks north of the Northgate Shopping Mall on the 41 bus line, one of the major bus lines in Seattle. I doubt you could find a better location in all of North Seattle to build affordable housing. We have had tenants from every conceivable slice of life with us in the last 4 years, and in that time we have received full rents for every unit for every day of every year since the buildings were completed.

I am 58 years old and in poor health, and my wife is 55 years old. I have a rare blood clotting condition as well as Type One diabetes and I had a catastrophic stroke in 2005. I was an invalid for two years, and by 2009 we were almost homeless. Since then we have worked 24/7 for the last 8 years to build our rental properties with the goal of them providing our retirement income. Since we are both the landlords and property managers when Sound Transit takes our property we will lose both our rental income and our jobs, both of which we love. We are both too old and worn out to start all over again in two or three years. We are already having stress and depression problems in trying to deal with this nightmare.

We **really need to know** that Sound Transit is going to be compensating us for the loss of our property. We need an equal replacement for what we are going to lose. The entire Puget Sound region is going to benefit from Sound Transit, but it shouldn't be built on the backs of people like us. When the taxpayers voted for Sound Transit [and we voted for it too] I doubt they intended for Sound Transit to abuse their power and take away the livelihood of little people like us without full, equal and just compensation. It is the only fair thing to do. If this is not your intention please let us know as soon as possible.

I-008-001

Thank you for your comment. Sound Transit recognizes that the relocation of a business or residence is an inconvenience and hardship for those involved. Sound Transit policy provides for a fair and equitable means of addressing real property impacts across its projects, and this includes a commitment to provide replacement structures in a manner consistent with state and federal law. This policy has been successfully implemented on several of the Link lines already. Sound Transit will help displaced parties to relocate in the same neighborhood or area where feasible. Similarly, when businesses are impacted, Sound Transit will conduct appraisals and work closely with business owners to determine the replacement value of impacted properties and enterprises, and to identify potential replacement properties. Section 4.1.7 discusses Sound Transit's acquisition and relocation policy.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: William Harley Davis

ADDRESS: 5311 201st SW PL

CITY: Lynnwood STATE: WA ZIP CODE: 98036

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-009-001

51st of Residents and Businesses will be Heavily and Adversely Impacted by Construction and Operations Please No C1, or C2-, No Conver ation to Apartment and condo ~~[redacted]~~ Residents and they can't fight Back

SOUNDTRANSIT RIDE THE WAVE

I-009-001

Thank you for your comments. Your opposition to Alternatives C1 and C2 has been noted, including your concerns about impacts to businesses and residences. Sound Transit recognizes that the relocation of a business or residence is an inconvenience and hardship for those involved. Sound Transit policy provides for a fair and equitable means of addressing real property impacts across its projects. Please refer to Section 4.1.7 for information on compensation and relocation processes.

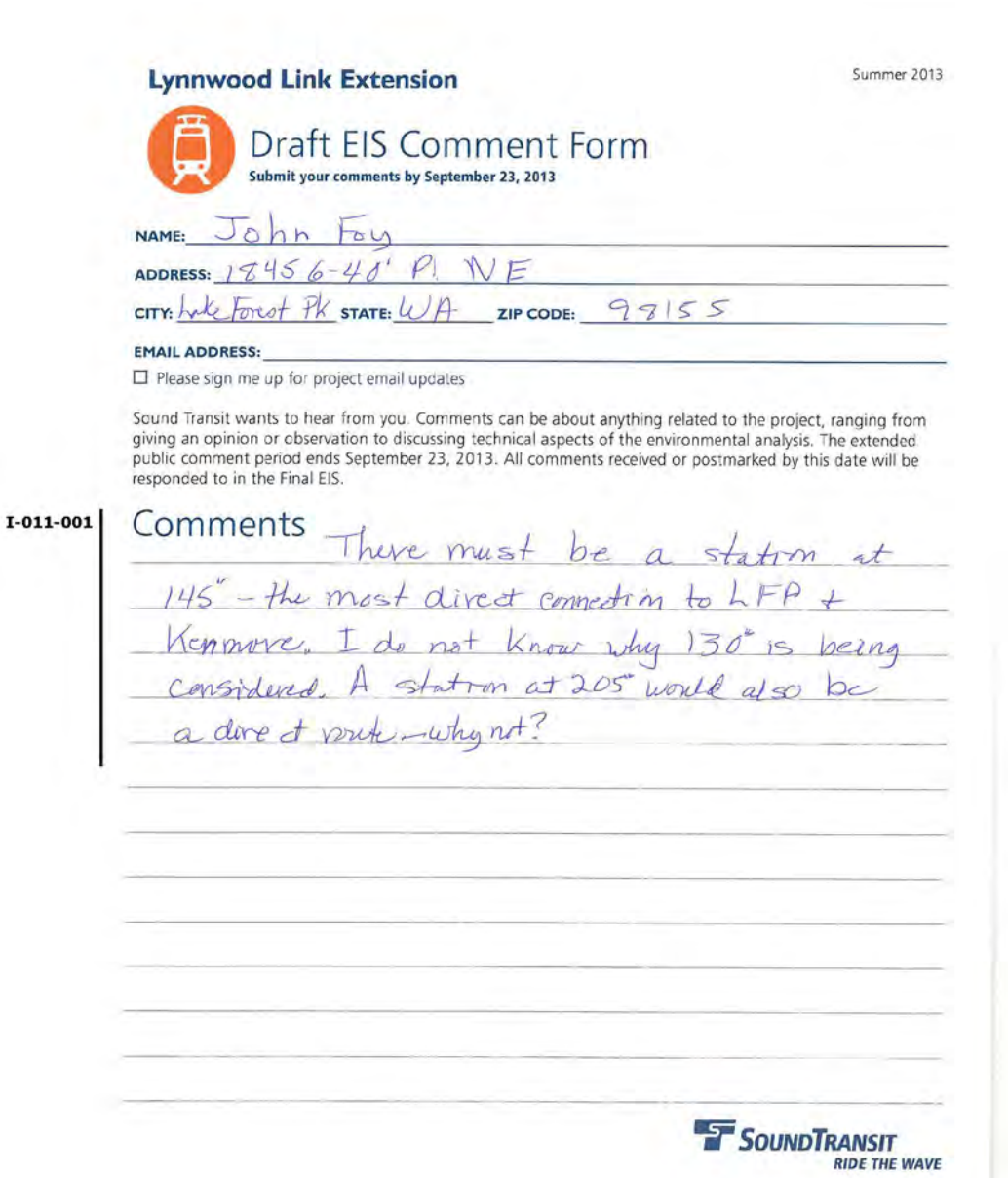
TO WHOM IT MAY CONCERN; KENNETH J. ERVIN
2201 LOMBARD AVE EUT 98201 (4255834773)

I-010-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

I-010-001

Thank you for your comment stating a preference for Alternative C1.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: John Foy

ADDRESS: 18456-40th Pl NE

CITY: Lake Forest Pk STATE: WA ZIP CODE: 98155

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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I-011-001

Comments There must be a station at 145th - the most direct connection to LFP + Kenmore. I do not know why 130th is being considered. A station at 205th would also be a direct route - why not?

SOUNDTRANSIT RIDE THE WAVE

I-011-001

Thank you for stating your preference for a station at NE 145th Street over a station at NE 130th Street.

Placing a station at NE 205th Street was considered during the initial alternatives analysis and determined to not be a reasonable option; see Section 2.6, which describes the alternative development process.

TO WHOM IT MAY CONCERN;

I-012-001 PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Karina Guzman

Karina E. Guzman 8/15/13

5126 172nd st sw

Lynnwood, WA 98037

I-012-001

Thank you for your comment stating a preference for Alternative C1.

From: Jono Hanks <jono.hanks@gmail.com>
Sent: Monday, July 29, 2013 9:09 AM
To: Lynnwood Link DEIS
Subject: Light Rail extension Comments

I-013-001 I am entirely in favor of extending the Light Rail north. In fact, I would prefer it if the train were able to make it all the way to the Everett Transit Center.

I-013-002 I would encourage the planners to utilize either of the open space options, so as to minimize the impact to the community as it currently stands. If ST has to buy or acquire existing buildings and land currently in use, it will create ill will in the community.

I currently live in Northgate, but have family in Everett and the Seatac areas, so a light rail connection that connected us all would be incredible.

--

Jono Hanks

1

I-013-001

Sound Transit recently performed a high-capacity transit corridor study from Lynnwood to Everett to explore extending high-capacity transit service to Everett. If you are interested in Sound Transit's future plans, please visit the agency's website at: www.soundtransit.org.

I-013-002

Thank you for your comment. It is not clear which open space options the comment is referencing, but the EIS alignments were selected based on available right-of-way, proximity to accessible stations, and environmental factors.

From: UBAHARISON@aol.com
Sent: Monday, August 19, 2013 12:09 PM
To: Lynnwood Link DEIS
Subject: To Lauren Swift

Dear Ms Swift:

I-014-001

This note is from my family: Jeff, Jurate, Daina and Maura Harrison. We are writing in regards to the construction of the Light Rail line which is to pass close to Latvian Hall in 3rd Street in the Northgate Area. We understand construction is to begin in that area in 2018. We are writing to beg of you to please do everything in your power to mitigate the impact of the construction on Latvian Hall, both in terms of noise and damage to the buildings.

Latvian Hall has served as the Community Center for most cultural and social events which happen in the Latvian, Lithuanian and Estonian Communities in the Puget Sound Region. My children have attended Lithuanian Dance Classes there weekly for many years, Many of our friend's sons and daughters, including my nieces, have gotten married there and I have attended many memorial services for members of our community who have passed away to mention but a few of the kinds of events we use the Latvian hall facility. We have celebrated Lithuanian Independence Day there in February for the past 22 years that we have lived in the Puget Sound area (Lynnwood). We have also hosted many fundraising events to support our activities as well as to support the Baltic Studies Program at the University of Washington.

These are just a few of the many activities we, as a family have attended at Latvian Hall. This building and property serves an extremely central and valuable role in our communities and would be an immeasurable loss were it to be damaged or seriously noise polluted.

Sincerely,

The Jeff Harrison Family
6610 161 Pl. SW
Edmonds WA 98026
ubaharison@aol.com

I-014-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, and the larger Baltic community. Following the publication of the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). With the realigned street, access to the property has been maintained. Sound Transit will mitigate moderate and severe noise impacts, as identified using FTA criteria; see Section 4.7, Noise and Vibration, of the EIS for the noise analysis. Sound Transit does not expect damage to the buildings on the church property as a result of this project.

TO WHOM IT MAY CONCERN;

I-015-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Robert H. Hausauer Jr
902 Elm ST
Sultan, Wa 98294

I-015-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

I-016-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Barbara Hawkins
4905 182nd PL SW
Lynnwood, WA 98037

I-016-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

I-017-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Allen Head
P.O. Box 55214
Seattle, wa. 98155

I-017-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

I-018-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Ken Hecht
13411 Ash Way
Everett WA. 98204
8/15/13

I-018-001

Thank you for your comment stating a preference for Alternative C1.

8/15/13

TO WHOM IT MAY CONCERN;

I-019-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Carole Hines
22020 Tonya Ln.
Brier WA
98036

I-019-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

I-020-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

I-020-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

I-021-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Edward R. [illegible]

15701 ADMIRALTY WAY

LYNNWOOD, WA 98087

I-021-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

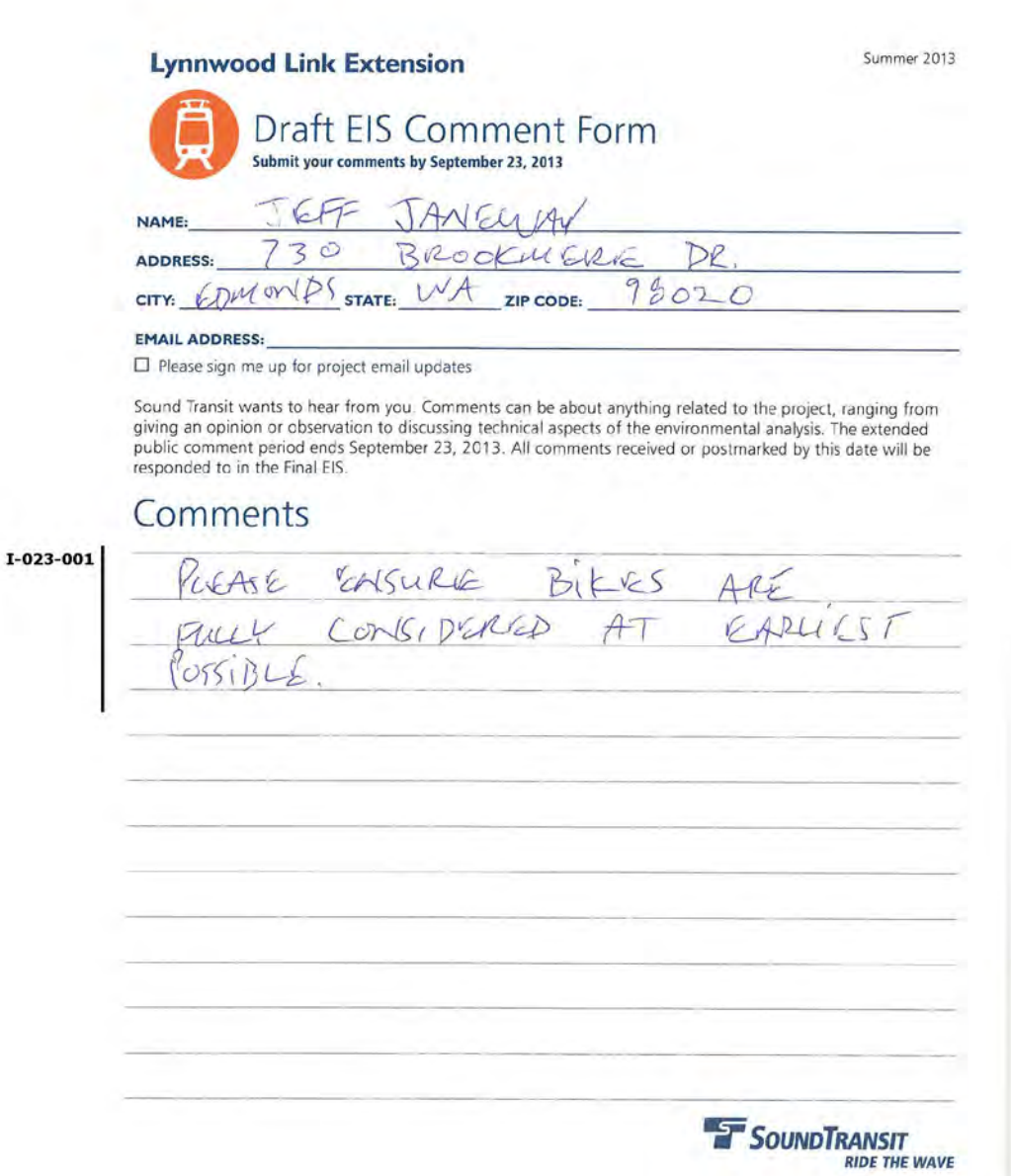
I-022-001 PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

ROBERT JAMES
6210 PARK WAY
LYNNWOOD, WA
98036

I-022-001

Thank you for your comment stating a preference for Alternative C1.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: JEFF JANELLAV

ADDRESS: 730 BROOKMERE DR.

CITY: EDMONDS STATE: WA ZIP CODE: 98020

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

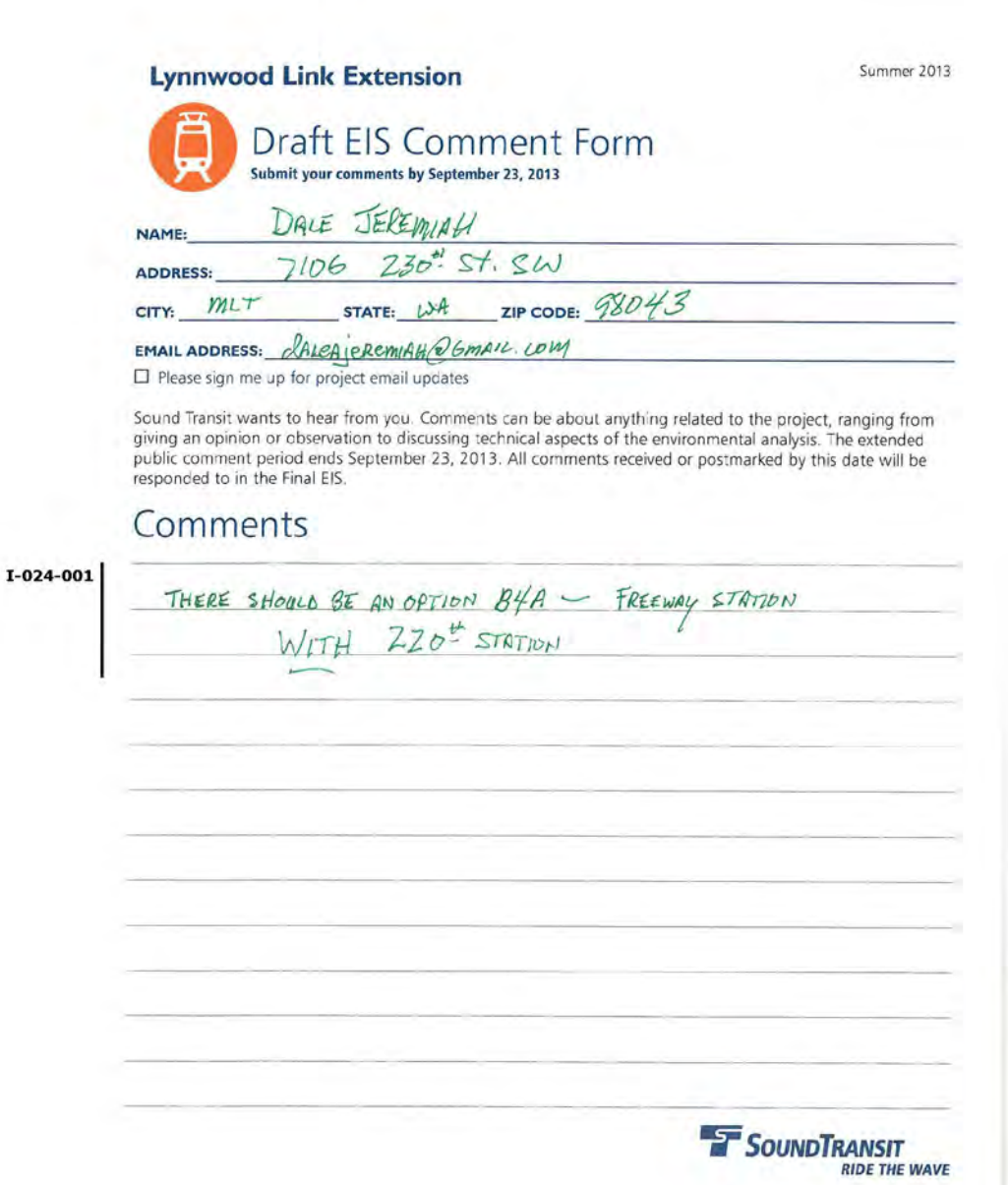
I-023-001

PLEASE ENSURE BIKES ARE FULLY CONSIDERED AT EARLIEST POSSIBLE.

SOUNDTRANSIT RIDE THE WAVE

I-023-001

Comment acknowledged. Accommodation of bicycle travel to and around the station areas, including bicycle parking, is a key consideration for the project. See Section 3.2.5 for information about the project's nonmotorized facilities.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: DALE JEREMIAH

ADDRESS: 7106 230th St. SW

CITY: MLT STATE: WA ZIP CODE: 98043

EMAIL ADDRESS: DALEAJEREMIAH@GMAIL.COM

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

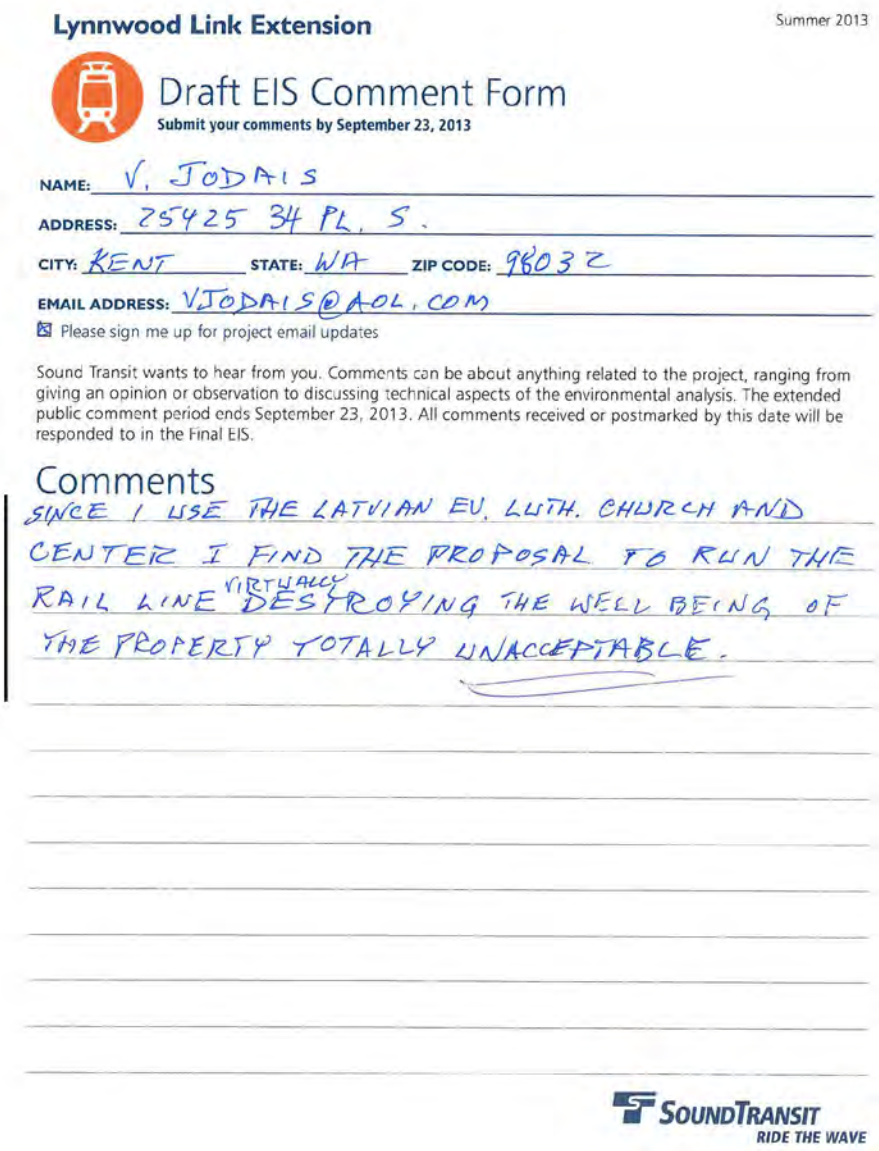
I-024-001

THERE SHOULD BE AN OPTION B4A – FREEWAY STATION WITH 220th STATION

SOUNDTRANSIT RIDE THE WAVE

I-024-001

Thank you for your comment stating a preference for Alternative B4 with a 220th Street Station. This option was considered during the initial alternatives analysis and determined to not be a reasonable option. The constraints of limited right-of-way in the median, the configuration of the existing bridge and less convenient access were the primary reasons this alternative was dropped during initial screening.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: V. JODAIS

ADDRESS: 25425 34 PL. S.

CITY: KENT STATE: WA ZIP CODE: 98032

EMAIL ADDRESS: VJODAIS@AOL.COM

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Comments

I-025-001 SINCE I USE THE LATVIAN EV. LUTH. CHURCH AND CENTER I FIND THE PROPOSAL TO RUN THE RAIL LINE VIRTUALLY DESTROYING THE WELL BEING OF THE PROPERTY TOTALLY UNACCEPTABLE.

SOUNDTRANSIT RIDE THE WAVE

I-025-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

TO WHOM IT MAY CONCERN;

Lauren Swift,

I-026-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

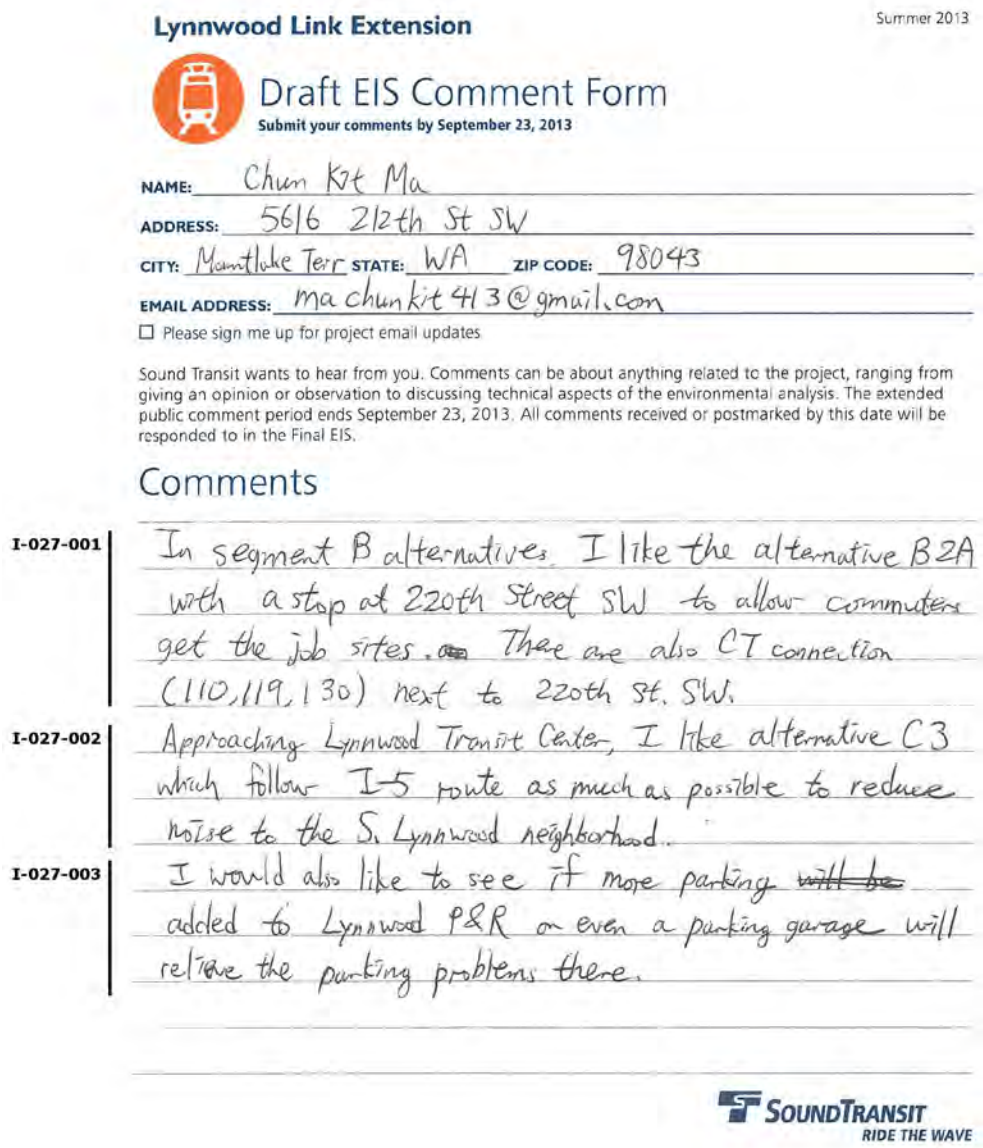
THANK YOU,

Chris Kelly - Owner
4800 - 200 st SW
E 305
Lynnwood, WA 98036 - 6363
Cedar Creek Condos

8-9-13

I-026-001

Thank you for your comment stating a preference for Alternative C1.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Chun Kit Ma

ADDRESS: 5616 212th St SW

CITY: Mountlake Terr STATE: WA ZIP CODE: 98043

EMAIL ADDRESS: machunkit413@gmail.com

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Comments

I-027-001 In segment B alternatives. I like the alternative B2A with a stop at 220th Street SW to allow commuters get the job sites. There are also CT connection (110, 119, 130) next to 220th St. SW.

I-027-002 Approaching Lynnwood Transit Center, I like alternative C3 which follow I-5 route as much as possible to reduce noise to the S. Lynnwood neighborhood.

I-027-003 I would also like to see if more parking ~~will be~~ added to Lynnwood P&R or even a parking garage will relieve the parking problems there.

SOUNDTRANSIT RIDE THE WAVE

I-027-001

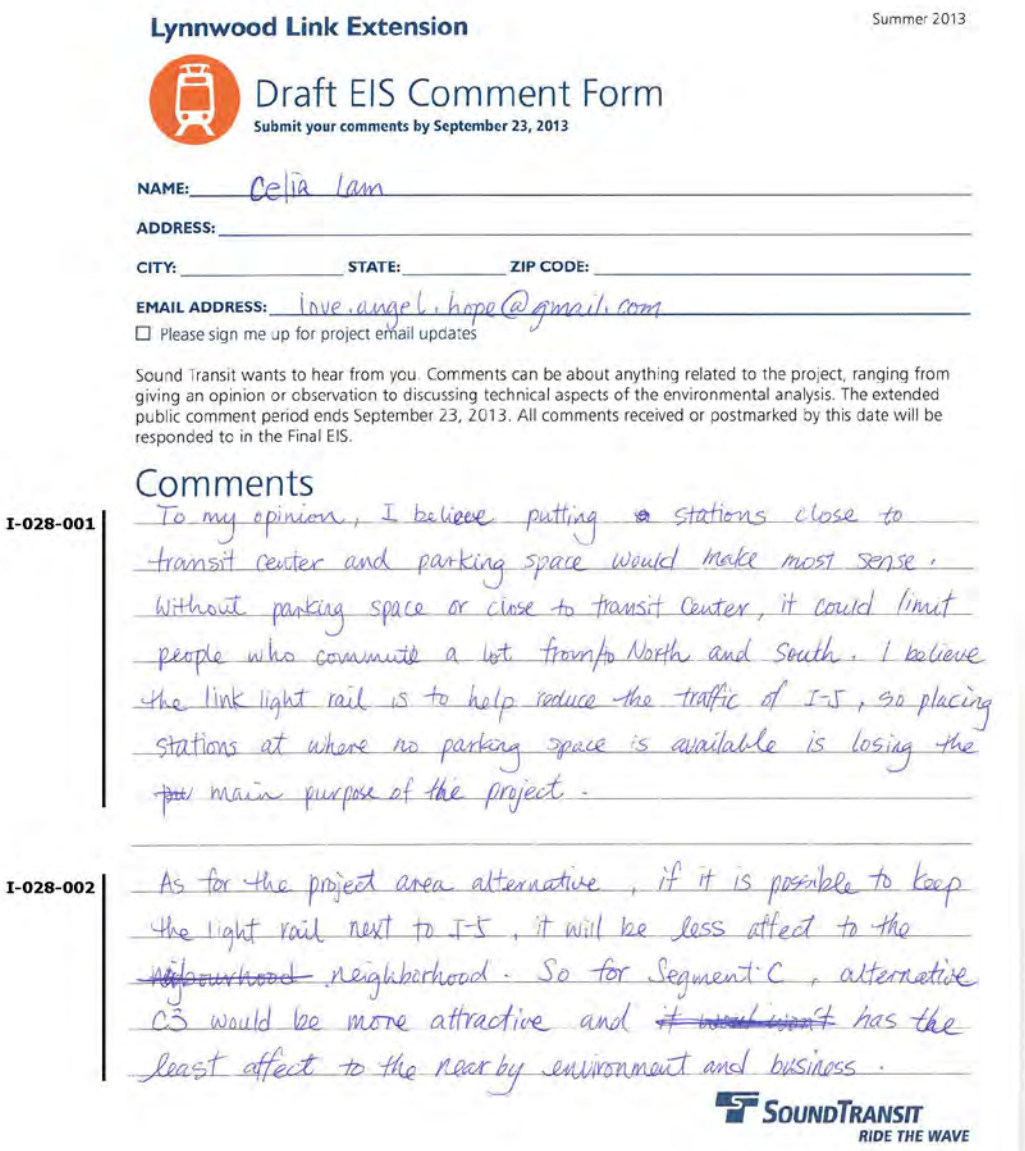
Thank you for your comment stating a preference for Alternative B2A due to job access and bus connections.

I-027-002

Your comment stating a preference for Alternative C3 alignment due to reduced noise impacts to south Lynnwood neighborhoods is noted.

I-027-003

The Preferred Alternative analyzed in the Final EIS would include approximately 530 new parking spaces at the Lynnwood Transit Center. This net increase of parking spaces would help address the current parking constraints at the transit center.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Celia Lam

ADDRESS:

CITY: STATE: ZIP CODE:

EMAIL ADDRESS: love.angel.hope@gmail.com

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Comments

I-028-001

To my opinion, I believe putting ~~a~~ stations close to transit center and parking space would make most sense. Without parking space or close to transit Center, it could limit people who commute a lot from/to North and South. I believe the link light rail is to help reduce the traffic of I-5, so placing stations at where no parking space is available is losing the ~~pu~~ main purpose of the project.

I-028-002

As for the project area alternative, if it is possible to keep the light rail next to I-5, it will be less affect to the ~~neighbourhood~~ neighborhood. So for Segment C, alternative C3 would be more attractive and ~~it would~~ has the least affect to the near by environment and business.

SOUNDTRANSIT RIDE THE WAVE

I-028-001

Park-and-ride lots are being planned at the majority of stations, with the exception of the NE 130th Street Station.

I-028-002

Your preference for Alternative C3 due to fewer neighborhood and business impacts is noted.

From: Lee, Marvin D <marvin.d.lee@boeing.com>
Sent: Thursday, August 15, 2013 4:49 PM
To: Lynnwood Link DEIS
Subject: Comments on the Draft EIS

I-029-001

My wife and I have read through much of the document obviously with an eye toward its impact to us. We find the document extensive with lots of information but little is said about proposed traffic mitigations and/or improvements in the neighborhoods surrounding the proposed stations. Perhaps we missed it. Our interest lies particularly in the 185th station. With regard to this station in particular we support what appears to be the leading option (#1) for its lower cost and that it puts the rail at ground level which would seem to minimize the environmental noise and visual impact. We also like the idea of a proposed parking garage to handle commuter traffic.

Thank you.

Marv and Norma Lee

1

I-029-001

Proposed traffic mitigation measures are identified in Section 3.6.4 of the EIS. Potential improvements at the NE 185th Street intersection are outlined in Table 3-27.

Your preference for the NE 185th Street Station Option 1 is noted.

TO WHOM IT MAY CONCERN;

I-030-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

I-030-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

I-031-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

8/16/13

Laurie Lewinsky

6915 12th ave

Mkwl Wa 98270

I-031-001

Thank you for your comment stating a preference for Alternative C1.

From: Anthony Lo <loanthony@yahoo.com>
Sent: Wednesday, August 07, 2013 3:25 PM
To: Lynnwood Link DEIS
Subject: Comments on Segment within City of Shoreline

Hi Lauren or other:

I-032-001 As a City of Shoreline resident, I am very excited about LINK extending through our city and serving us through two future stations. My family lives between I-5 and 5th Ave NE at approximately NE 167th Street and will therefore be somewhat impacted by the I-5 alignment. Not that it will sway anyone's decision, but my preference is for an at-grade vertical profile running along the east side of I-5 between the 145th/155th Street station and the 185th Street station. An elevated section, while perhaps more manageable in terms of WSDOT right of way use and the on-the-ground LINK footprint, would really be a blight on our neighborhood in my opinion.

I-032-002 In terms of station location, we also support a 155th Street station over a 145th Street station since it serves more of the "heart" of Shoreline and certainly our Ridgecrest neighborhood. Bike lanes and sidewalks (although both could use widening and improvement) already exist along 155th Street to support non-motorized travel and access to/from a future park-and-ride structure would not need to compete with I-5 interchange ramp traffic as would be the case at 145th Street. In addition, while the 155th Street corridor is not as extensive in connecting outlying areas compared to 145th Street, it would connect the LINK station to a large potential redevelopment site just east of the SR 99/155th Street intersection where the Central Market grocery store and Sears are located. 155th Street connects to Westminster Way which is a heavily traveled route to the Crown Hill, Ballard, and Greenwood neighborhoods of Seattle not to mention Magnolia and Queen Anne. As such, King County Metro connector sevice could leverage on a 155th Street station location quite well. High density development will be challenging to implement near a 155th Street station (not impossible though) but this will also be the case with 145th Street since the SE quadrant golf course (Jackson Park) is a 4F issue and Lakeside School occupies much of the SW parcels west of I-5. Over time, the Ridgecrest neighborhood will become ripe for upzoning if not already at that point now. Property values are relatively modest and older residents (> 65) are slowly giving way to a younger generation of families that will likely embrace higher density, mixed-use development and place greater value on transportation access and efficiency.

In any case, please consider an at-grade alternative for the LINK alignment through Shoreline as well as a 155th Street (vs. 145th Street).

Thank you for listening to the residents of Shoreline and I hope the EIS process and follow-on design and construction phases go smoothly.

Best Regards,

~ Anthony Lo

1

I-032-001

Thank you for your comment stating a preference for an at-grade profile due to visual impact concerns.

I-032-002

Sound Transit acknowledges your preference for a station at NE 155th Street over NE 145th Street and appreciates the summary of the benefits you see with a station at NE 155th Street.

TO WHOM IT MAY CONCERN;

I-033-001 PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Cynthia Mackell
13431 59th Ave SE
Everett WA 98208

8/16/13

I-033-001

Thank you for your comment stating a preference for Alternative C1.

From: Diane Martin-Rudnick <dianesvoice9497@yahoo.com>
Sent: Friday, August 16, 2013 7:27 PM
To: Lynnwood Link DEIS
Subject: I oppose a station in Lynnwood!!!

I-034-001

I'm all for this project, but not with a station in Lynnwood as other locations are available. I support the Edmonds School District, and they have a project already planned.
Thanks foryour consideration,
Diane Martin Rudnick
6527 193rd st sw
Lynnwood,
WA 98036

1

I-034-001

Thank you for stating support for alternatives that avoid impacting the Edmonds School District property. Based in part on comments from the public, Sound Transit selected Alternative C3, similar to the City's suggested concept, as part of the Preferred Alternative. The Final EIS provides further detail on how Sound Transit worked with the City and the School District during final design and in construction planning to minimize impacts to the District's operations.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Timothy mccall

ADDRESS: 1150 N 192nd St Apt 605

CITY: Shoreline STATE: WA ZIP CODE: 98133

EMAIL ADDRESS: tcmccall@comcast.net

☐ Please sign me up for project email updates

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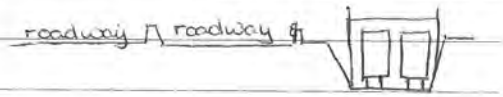
Comments

I-035-001

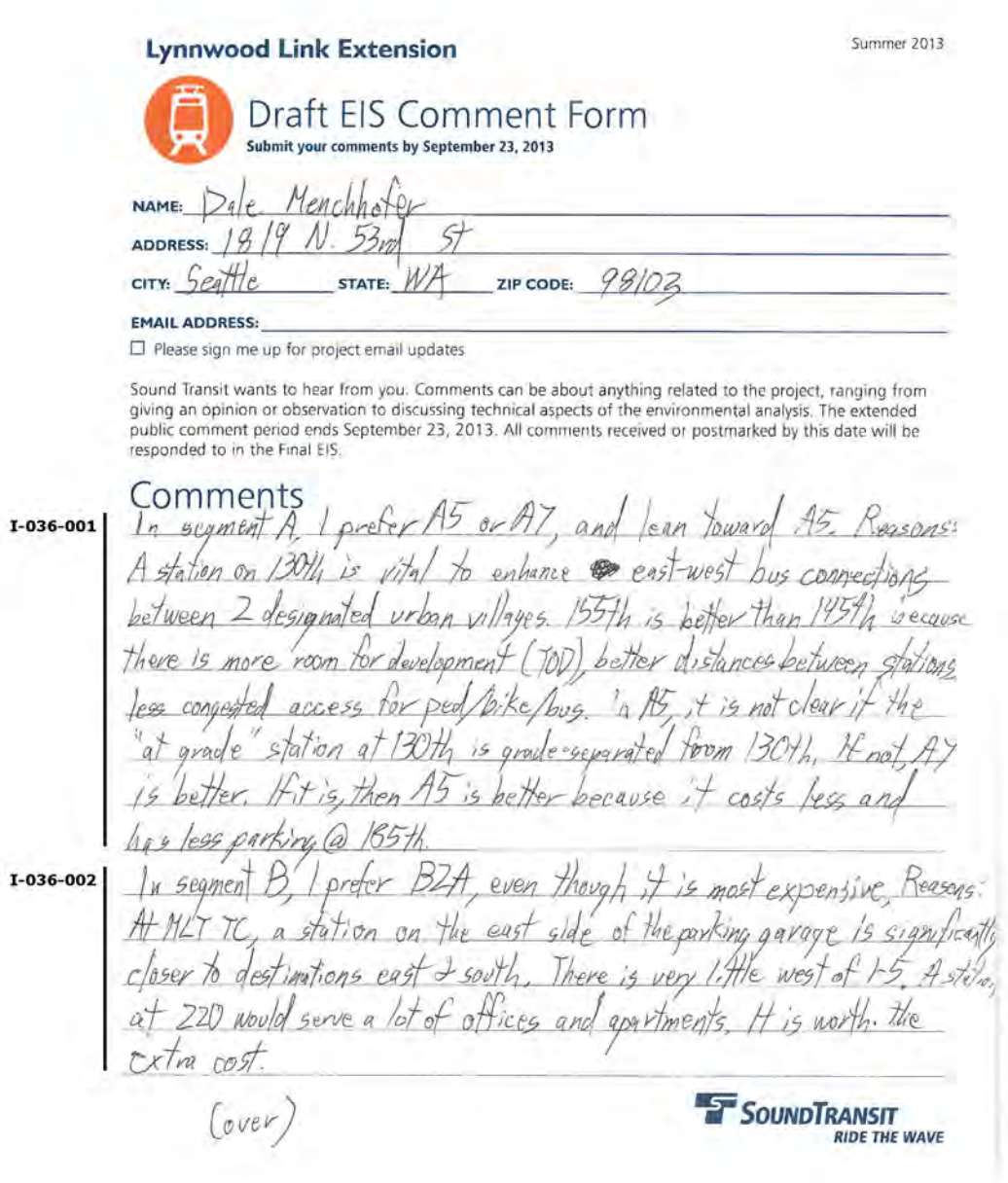
If possible look at more "low" elevated or surface options. This will minimize I-5 driver distraction which I often see along central link (SR518/I-5 Boeing Access). Incidents, transit vehicle racing ~~and other~~ and driver distraction are items that can be minimized with a surface or submerged line ~~thru~~ until a transit stop.



SOUNDTRANSIT
RIDE THE WAVE

I-035-001

Thank you for your comment noting your preference for alternatives that are lower elevation.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Dale Menchhofer

ADDRESS: 1819 N. 53rd St

CITY: Seattle STATE: WA ZIP CODE: 98103

EMAIL ADDRESS:

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Comments

I-036-001 In segment A, I prefer A5 or A7, and lean toward A5. Reasons: A station on 130th is vital to enhance east-west bus connections between 2 designated urban villages. 155th is better than 145th because there is more room for development (TOD), better distances between stations, less congested access for ped/bike/bus. In A5, it is not clear if the "at grade" station at 130th is grade-separated from 130th. If not, A7 is better. If it is, then A5 is better because it costs less and has less parking @ 185th.

I-036-002 In segment B, I prefer B2A, even though it is most expensive. Reasons: At NLT TC, a station on the east side of the parking garage is significantly closer to destinations east & south. There is very little west of I-5. A station at 220 would serve a lot of offices and apartments. It is worth the extra cost.

(over)

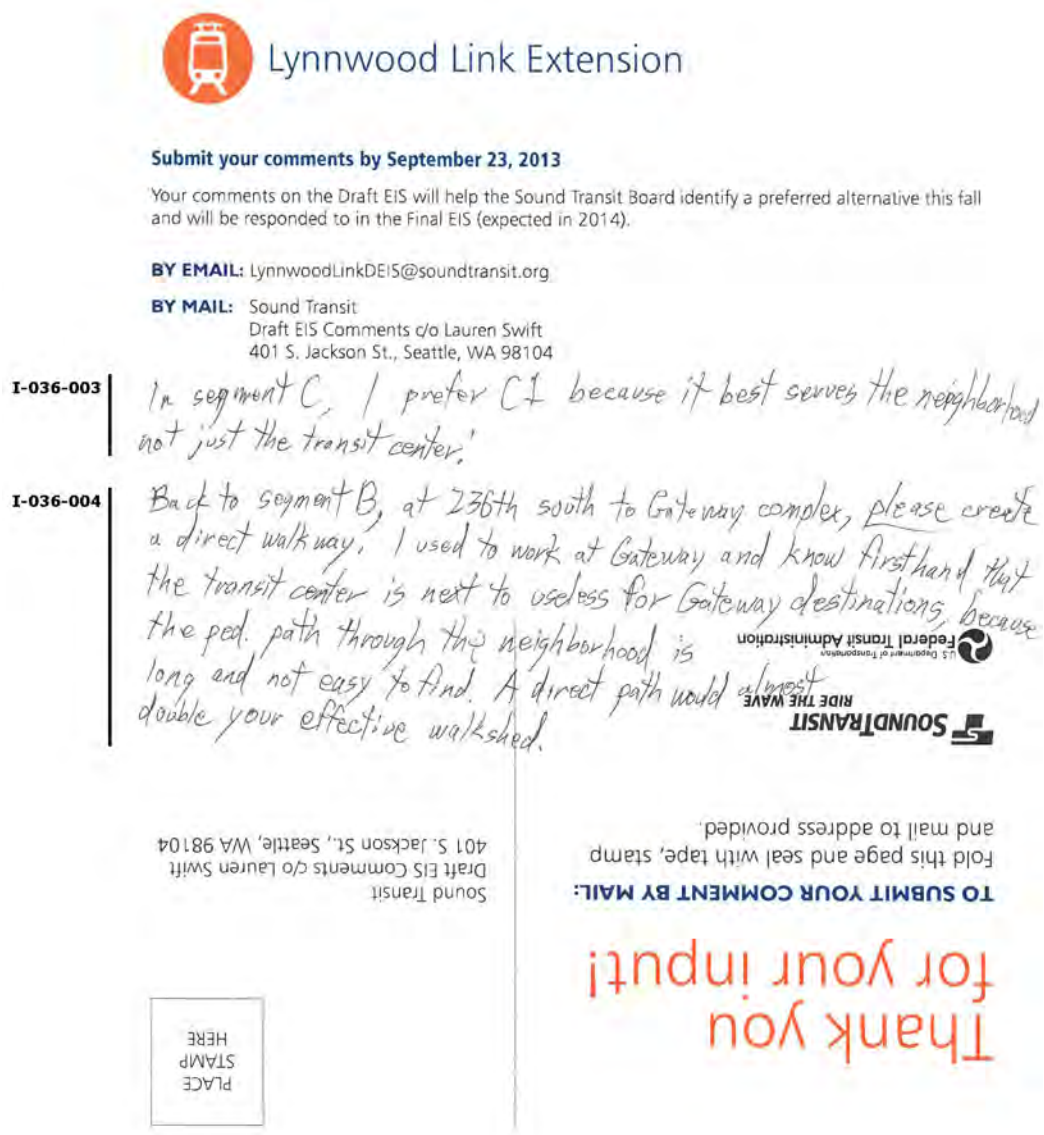
SOUNDTRANSIT RIDE THE WAVE

I-036-001

Sound Transit acknowledges your preference for a station at NE 130th Street and NE 155th Street and appreciates your summary of benefits related to siting stations at these locations. All stations and alternative alignments are grade separated from streets.

I-036-002

Sound Transit acknowledges your preference for Alternative B2A.



Lynnwood Link Extension

Submit your comments by September 23, 2013

Your comments on the Draft EIS will help the Sound Transit Board identify a preferred alternative this fall and will be responded to in the Final EIS (expected in 2014).

BY EMAIL: LynnwoodLinkDEIS@soundtransit.org

BY MAIL: Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

I-036-003 In segment C, I prefer C1 because it best serves the neighborhood not just the transit center.

I-036-004 Back to segment B, at 236th south to Gateway complex, please create a direct walkway. I used to work at Gateway and know firsthand that the transit center is next to useless for Gateway destinations, because the ped. path through the neighborhood is long and not easy to find. A direct path would almost double your effective walkshed.

U.S. Department of Transportation Federal Transit Administration

SOUNDTRANSIT RIDE THE WAVE

Thank you for your input!

TO SUBMIT YOUR COMMENT BY MAIL:
Fold this page and seal with tape, stamp and mail to address provided.

Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

PLACE STAMP HERE

I-036-003

Thank you for your comment stating your preference for Alternative C1, because it best serves the neighborhood.

I-036-004

Thank you for the suggestion. While the Preferred Alternative and other alternatives remain at a conceptual level of design that does not detail all potential access features, during final design Sound Transit will work closely with the City and other stakeholders to develop the station's access program.

TO WHOM IT MAY CONCERN;

I-037-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Paula Moore

8/15/13

14904 40th Ave W

Lynnwood WA 98037

I-037-001

Thank you for your comment stating a preference for Alternative C1.

From: Joshua Morgan <morgan.joshua@gmail.com>
Sent: Friday, July 26, 2013 3:52 PM
To: Lynnwood Link DEIS
Subject: Official Comment for Lynnwood light rail

I-038-001

I live in the Cedar Creek Condos, and after reading through the draft EIS, would like to voice my approval for option C1.

This option has the least environmental impact on the Scribe Creek Wetland, and these delicate ecosystems must be protected.

Thanks You,
Josh

1

I-038-001

Thank you for your comment stating a preference for Alternative C1 due to fewer environmental impacts to the Scriber Creek wetlands.

From: Peter Nalis <nalisaec@w-link.net>
Sent: Thursday, August 15, 2013 11:00 AM
To: Lynnwood Link DEIS
Subject: Sound Transit next to Latvian Center, Lauren Swift

I-039-001

Lauren,
I hope you understand how important it is for Sound Transit to co-exist with other unique and important institutions like "Latvian Center".
Please do all you can to mitigate and make this a win-win situation for everyone.
Thank you,
Peter Nalis, Architect and Engineer

1

I-039-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

TO WHOM IT MAY CONCERN;

I-040-001 PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

JEFFREY T NIKOLAIDIS

13329 2ND DR. SE
EVERETT, WA. 98208

I-040-001

Thank you for your comment stating a preference for Alternative C1.

From: salmonsteve65@comcast.net
Sent: Tuesday, July 30, 2013 7:26 PM
To: Lynnwood Link DEIS
Subject: comments on Lynnwood Link

I have several comments:

I-041-001 1) Please make every effort to avoid destroying even more Lynwood neighborhoods. Lynnwood is poorly laid out and neighborhoods here have to fight to keep them quite with single family homes.

I-041-002 2) Linking to Lynnwood sounds great, but without connecting to Alderwood Mall or to the 164th street Park and Ride it seems not very well integrated into the local transit network.

I-041-003 3) I have already suggest via another email to Metro that the local transit system should attempt to make public transportation easier to navigate. One simple thing is to add in the bus tunnels arrows at each station saying which station we just left, the current one and the next station.

Steve Pearson
425-778-1316

1

I-041-001

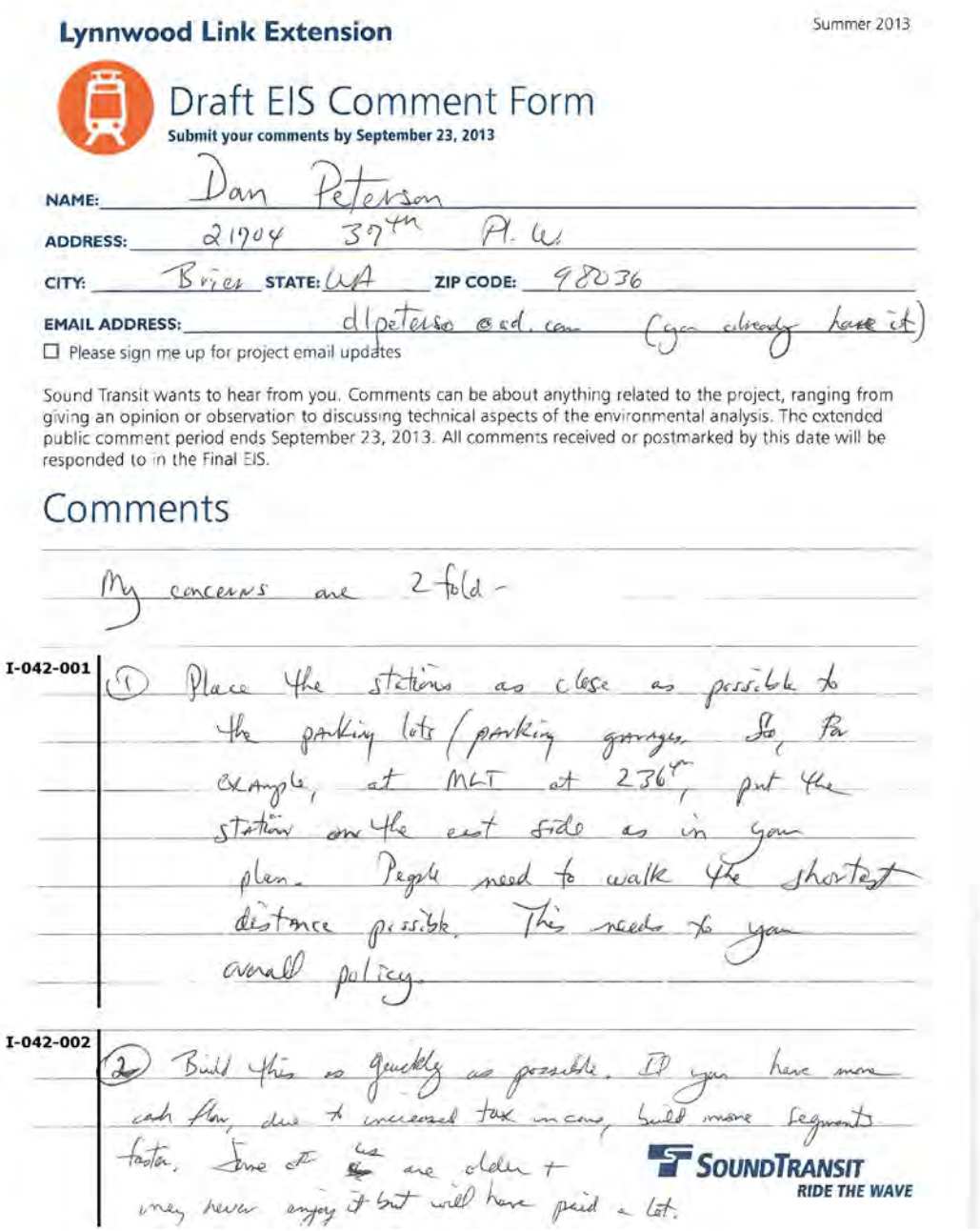
Thank you for your concerns about the impacts to Lynnwood neighborhoods' character and cohesion from the several alternatives under consideration in Segment C.

I-041-002

Multiple connections to local and commuter bus routes will be available at the Lynnwood Transit Center, providing service to nearby destinations. Current Sound Transit planning efforts are also considering extending high-capacity transit north beyond the Lynnwood Transit Center.

I-041-003

Your suggestion is noted, but the passenger information system for the larger transit system is not the subject of this EIS.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Dan Peterson

ADDRESS: 21704 37th Pl. W.

CITY: Brier STATE: WA ZIP CODE: 98036

EMAIL ADDRESS: dlpeterso@ed.com (you already have it)

☐ Please sign me up for project email updates

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Comments

My concerns are 2-fold -

I-042-001 (1) Place the stations as close as possible to the parking lots / parking garages. So, for example, at NLT at 236th, put the station on the east side as in your plan. People need to walk the shortest distance possible. This needs to be your overall policy.

I-042-002 (2) Build this as quickly as possible. If you have more cash flow, due to increased tax income, build more segments faster. Some of us are older + may never enjoy it but will have paid a lot.

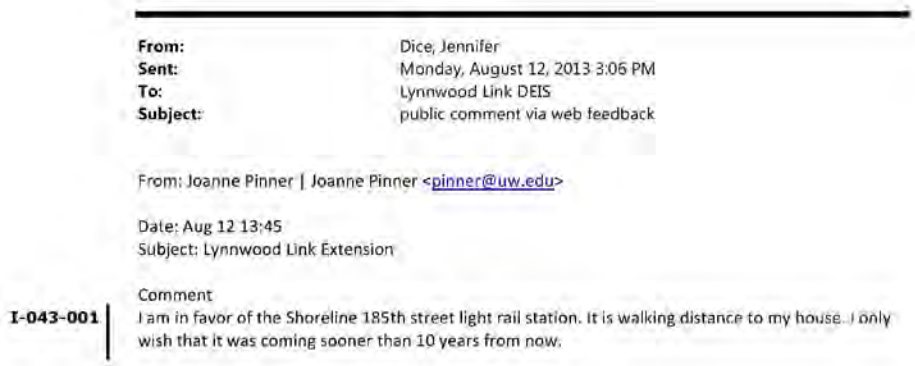
SOUNDTRANSIT RIDE THE WAVE

I-042-001

Your preference for stations located as close to parking as possible is noted.

I-042-002

The project schedule was provided in Figure S-9 in the Draft EIS Summary chapter. As depicted in Figure S-9, there are many steps that go into a large public transportation project such as the Lynnwood Link Extension. Starting in 2010 and slated for completion in 2023, the primary steps for the Lynnwood Link Extension includes an alternatives analysis, development of the Draft EIS, development of the Final EIS, design and permitting, and finally, construction. All these activities include public and agency coordination.



From: Dice, Jennifer
Sent: Monday, August 12, 2013 3:06 PM
To: Lynnwood Link DEIS
Subject: public comment via web feedback

From: Joanne Pinner | Joanne Pinner <pinner@uw.edu>

Date: Aug 12 13:45
Subject: Lynnwood Link Extension

Comment
I am in favor of the Shoreline 185th street light rail station. It is walking distance to my house. I only wish that it was coming sooner than 10 years from now.

I-043-001

I-043-001

Thank you for your comment in favor of the NE 185th Street Station location.

From: Ginger Rebstock <grebstock@gmail.com>
Sent: Sunday, August 18, 2013 5:26 PM
To: Lynnwood Link DEIS
Subject: comments on Lynnwood link extension

Hello,

I-044-001

I attended a meeting at Northgate West Condos last week and would like to say that I prefer alternative A1 because it would have the least impact on my property, and if I understand the options correctly, the least impact on the trees east of 1st Ave NE. The large trees between 1st Ave and the condo property should be preserved. Efficient public transit is a priority in the Puget Sound region, but so is preserving the urban tree canopy in Seattle. It's difficult to reach Seattle's goal of 30% canopy cover if we cut large trees down. The trees help with air quality and people's psychological (and hence physical) health. Please do whatever is possible to preserve those large trees.
Thank you.

Ginger Rebstock
11300 1st Ave NE #125
Seattle, WA 98125
206-783-4465

1

I-044-001

Thank you for your comment. During final design, Sound Transit will consider opportunities to protect and plant trees to the extent possible. Please refer to the visual and aesthetic resources and ecosystems sections of the Final EIS for more details on specific mitigation commitments, which includes meeting the replacement requirements of WSDOT and local jurisdictions.

TO WHOM IT MAY CONCERN;

I-045-001 PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Patricia Reed
19002 51st Pl. W
Lynnwood, WA
98036

8/15/13

I-045-001

Thank you for your comment stating a preference for Alternative C1.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Robert Reedy

ADDRESS: PO Box 61

CITY: MLT STATE: WA ZIP CODE: 98043

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

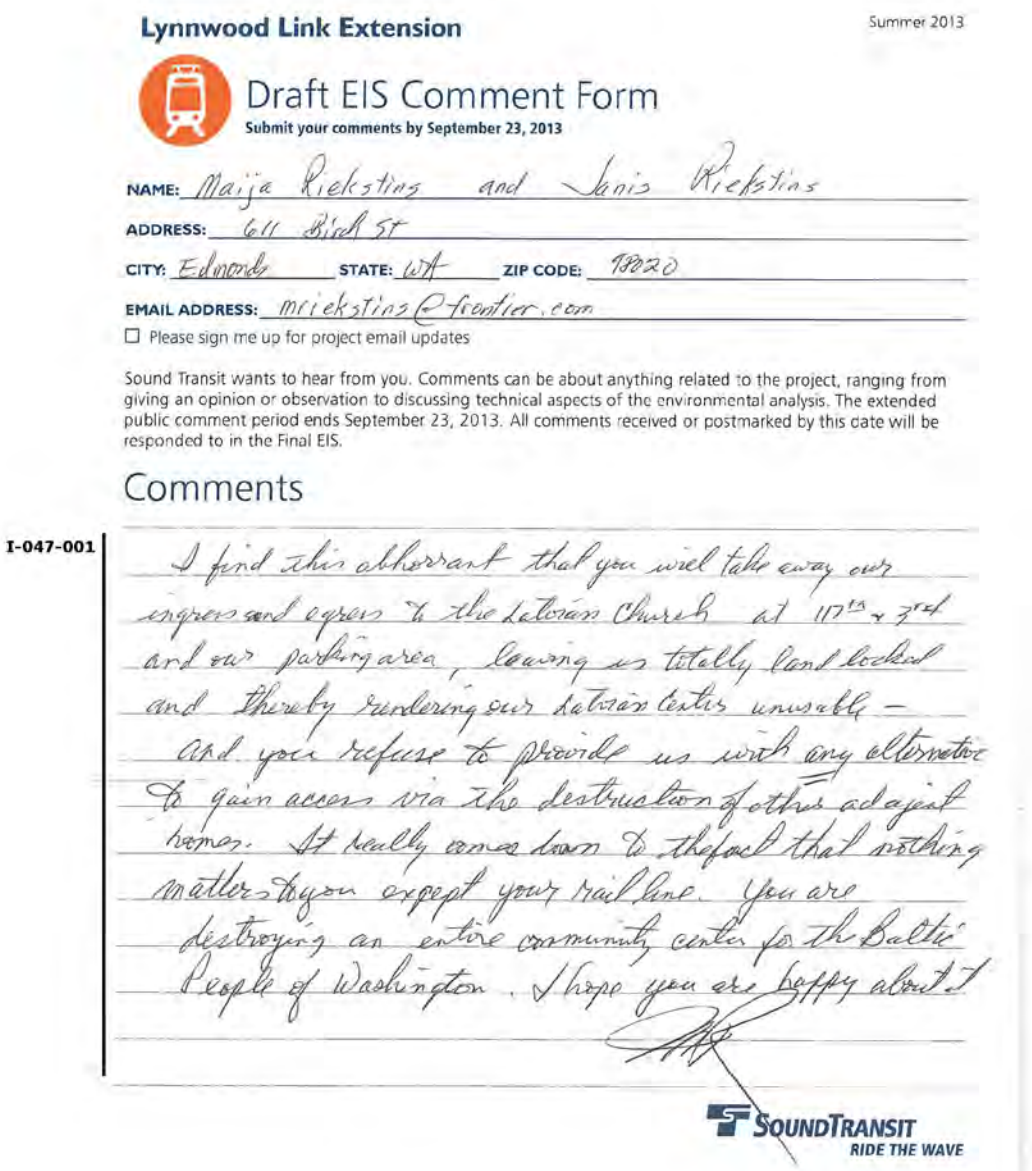
I-046-001

Good presentation.
The project looks good. We have been debating this for 50 years starting with the old Monorail in 1962. Lets go.

SOUNDTRANSIT
RIDE THE WAVE

I-046-001

Thank you.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Maija Riekstins and Janis Riekstins

ADDRESS: 611 Birch St

CITY: Edmonds STATE: WA ZIP CODE: 98020

EMAIL ADDRESS: mriekstins@frontier.com

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Comments

I-047-001

I find this abhorrant that you will take away our ingress and egress to the Latvian Church at 117th & 3rd and our parking area, leaving us totally land locked and thereby rendering our Latvian Center unusable — And you refuse to provide us with any alternative to gain access via the destruction of other adjoint homes. It really comes down to the fact that nothing matters to you except your rail line. You are destroying an entire community center for the Baltic People of Washington. I hope you are happy about it

SOUNDTRANSIT RIDE THE WAVE

I-047-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

TO WHOM IT MAY CONCERN;

I-048-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

(Curtis Roberts)

8/11/13

926 E marine view DR
everett, wa 98201

I-048-001

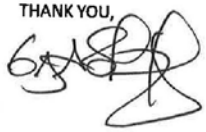
Thank you for your comment stating a preference for Alternative C1.

Greg A Schatwitz
8117 2nd Pl SE
Lake Stevens, WA
98258

TO WHOM IT MAY CONCERN;

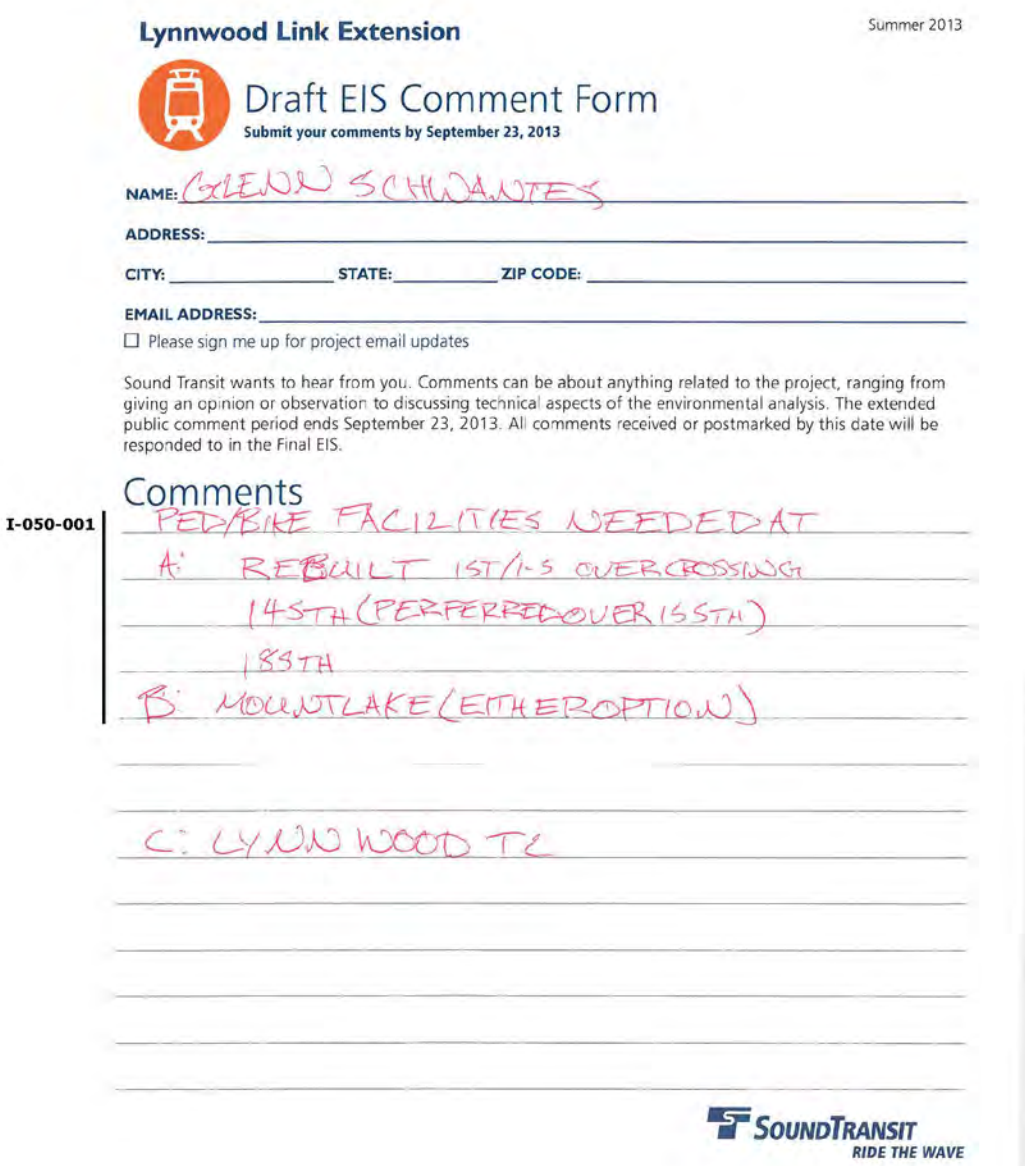
I-049-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,



I-049-001

Thank you for your comment stating a preference for Alternative C1.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: GLENN SCHWANTES

ADDRESS:

CITY: STATE: ZIP CODE:

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-050-001

PED/BIKE FACILITIES NEEDED AT

A: REBUILT 1ST/I-5 OVERCROSSING

145TH (PERFERRED OVER 155TH)

185TH

B: MOUNTLAKE (EITHER OPTION)

C: LYNNWOOD TC

SOUNDTRANSIT

RIDE THE WAVE

I-050-001

The 1st Avenue/N 117th Street overcrossing would include bicycle and pedestrian facilities with reconstruction. However, it would not be reconstructed with the Preferred Alternative alignment. All stations would include bicycle and pedestrian facilities. See Section 3.2.5 in the Final EIS for more information.

From: Steve Senter <steve.shoreline@gmail.com>
Sent: Friday, August 02, 2013 11:14 AM
To: Lynnwood Link DEIS
Subject: LLE Segment A Comments

Hello,

I-051-001 Thank you for preparing and providing the DEIS materials on your website. I found them to be comprehensive and detailed without devolving into 'legal-ese' and becoming completely incomprehensible.

I live near the proposed station and changes at 155th, so naturally these options are my focus of interest. I value the intention of extending light rail northward and look forward to using the services (when ready in a decade or so); I currently take buses to and from the Northgate center - downtown during the week.

I-051-002 My primary concern with the proposed station at 155th and I-5 is the potential loss of the Shoreline Fire Department Station 65 on the East side of I-5. I didn't find in the materials (though confess I didn't read every document) whether or not the station would be impacted, but I can only assume so given its proximity to the light rail route. Would the rail station require the loss of the fire station? The fire department provides coverage over a wide section of this part of town, and frequently responds to calls from the retirement center on 1st and 149th across from Twin Ponds park.

I-051-003 My other key concern relates to impacts on local traffic. The section covering this in the materials (section 3.1.4) clearly points out that 155th from Aurora to 15th is already at risk for poorer LOS with or without the proposed rail station, and I wonder what the City of Shoreline plans for the future. I already experience the stated peak AM and PM LOS along Meridian and can only anticipate how this and neighboring roads will be impacted - 1st Ave NE from 155th south in both direction could become impassible given its narrow roadway and no paved shoulders, with car and foot traffic to the park, wildlife crossing and the fire station responses in addition to the projected increase in light rail user congestion.

The task of determining the best location for the rail stations is daunting and I appreciate the care and concern put into the DEIS materials preparation and presentation. Please respond to my concerns, or direct me to the appropriate sections in the online materials.

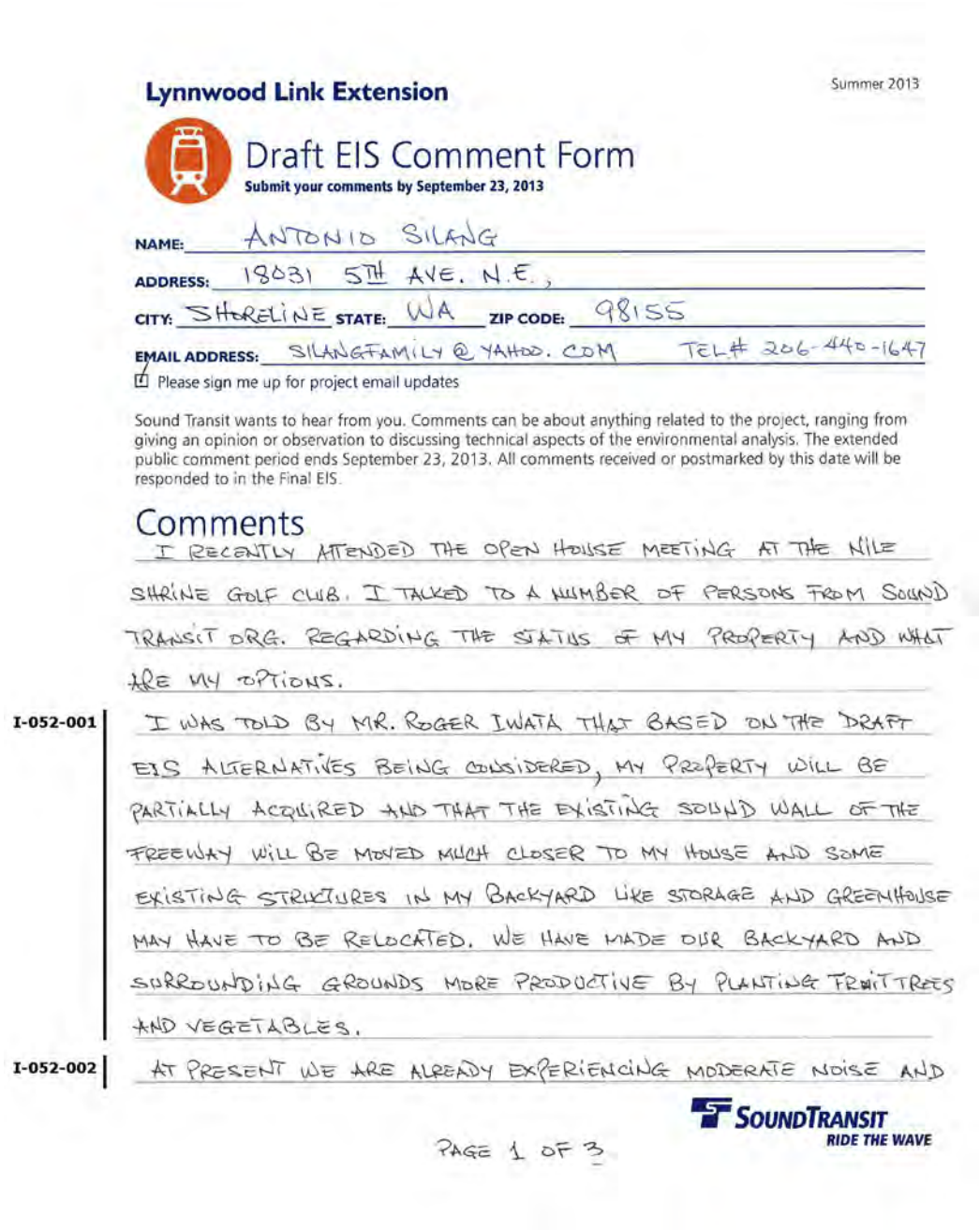
Thank you,

Steve Senter
15314 Corliss Pl N
Shoreline, 98133

I-051-001
Thank you for your comment.

I-051-002
None of the alternatives that include a station at NE 155th Street would displace the fire station, and the Preferred Alternative does not include one. Sound Transit is aware of concerns about the possible impacts of a station at NE 155th Street on the operations of the fire station at that location. If the project selected for construction includes a station at NE 155th Street, Sound Transit would work closely with the Fire Department to resolve any potential conflicts with bus and vehicle traffic to ensure that emergency response times would be maintained both during the construction period and operation of light rail.

I-051-003
Mitigation measures for any impacts from traffic congestion as a result of traffic accessing a station or park-and-ride will be included as part of the project; see Section 3.6.4 in the Final EIS.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: ANTONIO SILANG

ADDRESS: 18031 5TH AVE. N.E.,

CITY: SHORELINE STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: SILANGFAMILY@YAHOO.COM TEL# 206-440-1647

☑ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I RECENTLY ATTENDED THE OPEN HOUSE MEETING AT THE NILE SHRINE GOLF CLUB. I TALKED TO A NUMBER OF PERSONS FROM SOUND TRANSIT ORG. REGARDING THE STATUS OF MY PROPERTY AND WHAT ARE MY OPTIONS.

I-052-001 I WAS TOLD BY MR. ROGER IWATA THAT BASED ON THE DRAFT EIS ALTERNATIVES BEING CONSIDERED, MY PROPERTY WILL BE PARTIALLY ACQUIRED AND THAT THE EXISTING SOUND WALL OF THE FREEWAY WILL BE MOVED MUCH CLOSER TO MY HOUSE AND SOME EXISTING STRUCTURES IN MY BACKYARD LIKE STORAGE AND GREENHOUSE MAY HAVE TO BE RELOCATED. WE HAVE MADE OUR BACKYARD AND SURROUNDING GROUNDS MORE PRODUCTIVE BY PLANTING FRUIT TREES AND VEGETABLES.

I-052-002 AT PRESENT WE ARE ALREADY EXPERIENCING MODERATE NOISE AND

SOUNDTRANSIT RIDE THE WAVE

PAGE 1 OF 3

I-052-001

Mr. Iwata provided you with the information that we had available at the time of the publication of the Draft EIS. Since then, Sound Transit has made design modifications to some of the alternatives and has also identified its Preferred Alternative. Both of these actions have resulted in some changes to the potential property impact list. The final determinations about which properties will be a full or partial acquisition will not occur until final design, which is after the completion of the environmental process and Sound Transit's and FTA's selection of the alternative to be built. In the meantime, Sound Transit will continue to communicate with property owners as information becomes available. Sound Transit staff are available to discuss your concerns. Please contact Roger Iwata at: roger.iwata@soundtransit.org. Section 4.1 of the Final EIS discusses potential acquisitions and displacements.

I-052-002

The noise analysis for the Lynnwood Link uses the FTA impact criteria. Sound Transit's policy is to mitigate light rail transit noise that would otherwise result in moderate or severe impacts per FTA criteria. Potential mitigation measures are described in Section 4.7.7 of the Final EIS.

Sound walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, if any existing WSDOT noise walls are removed and replaced as part of the project, they will meet the requirements of, and be approved by, WSDOT and the FHWA.

Sound Transit will take measures to deter potential crime at stations and parking facilities; see Section 4.14.2 of the Final EIS.

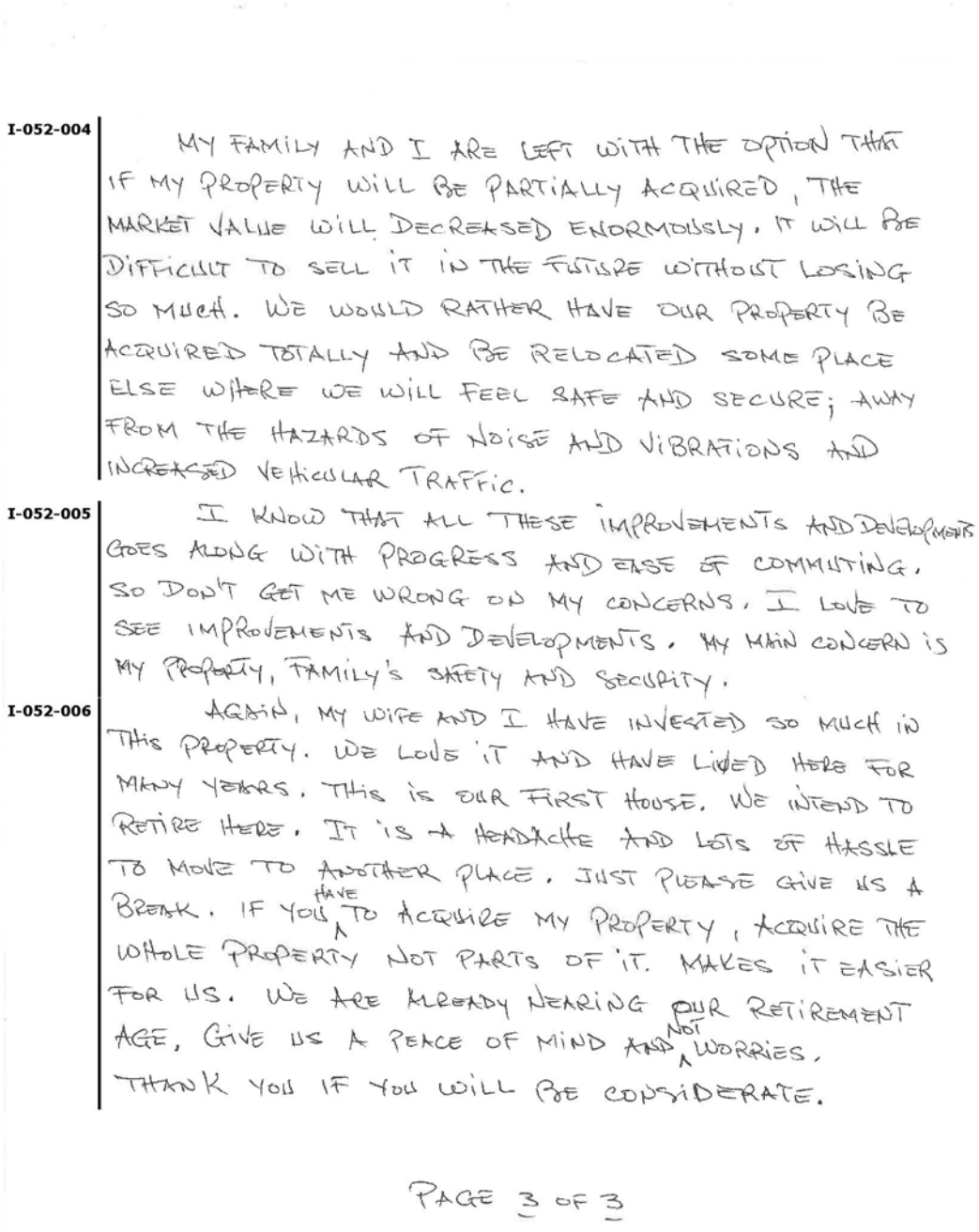
I-052-002 VIBRATIONS FROM THE FREEWAY CAUSED BY BIG TRUCKS AND TRAILERS. THESE WILL GET WORSE AND WILL BE COMPOUNDED WHEN THE LIGHT RAIL IS BUILT DURING CONSTRUCTION AND START OF OPERATION BECAUSE OF THE CLOSE PROXIMITY TO MY HOUSE. ALSO, ANOTHER CONCERN IS THE 5TH AVENUE, N.E. STREET INFRONT OF MY HOUSE, WHICH IS ALREADY BECOMING BUSIER OF VEHICULAR TRAFFIC ESPECIALLY DURING PEAK HOURS FOR DRIVERS AVOIDING THE I-5 TRAFFIC JAM. IT WILL EVEN GET WORSE WHEN THE CONSTRUCTION AND BUILDING OF RAIL STATION AND PARKING AREAS ON N.E. 185TH ST. AND THE BRIDGE. WHEN THE LIGHT RAIL STARTS OPERATION, THERE WILL BE MORE UNFAMILIAR FACES IN THE VICINITY OF MY HOUSE WHICH IS A SECURITY AND SAFETY CONCERN FOR MY FAMILY.

I-052-003 IN ONE OF THE ALTERNATIVES PRESENTED TO ME IS THE ELEVATED PORTIONS, THE HEIGHT OF THE RAILTRACT WILL BE SOMEWHERE AROUND 35 FEET IN WHICH CASE IT WILL BE OVERLOOKING MY HOUSE AND MY BACKYARD; NOT GOOD OPTION BECAUSE WE WILL LOSE OUR PRIVACY AND HIGH RISK ALSO FOR OUR SAFETY AND SECURITY. FOR SURE THERE WILL BE RIDERS IN THE TRAIN WHO MAY BE WATCHING MY PROPERTY AND MAY DEVELOP MALICIOUS INTENTS. PERSONS CAN TAKE PICTURES OF MY PROPERTY OR FAMILY FROM THEIR CELLPHONES. WE ARE IN THE HIGH TECH GENERATION NOW.

PAGE 2 OF 3

I-052-003

In addition to noise walls and guideway features, the trains would be moving at speeds of up to 55 miles per hour, and views of your property would likely be fleeting.



I-052-004 MY FAMILY AND I ARE LEFT WITH THE OPTION THAT IF MY PROPERTY WILL BE PARTIALLY ACQUIRED, THE MARKET VALUE WILL DECREASED ENORMOUSLY. IT WILL BE DIFFICULT TO SELL IT IN THE FUTURE WITHOUT LOSING SO MUCH. WE WOULD RATHER HAVE OUR PROPERTY BE ACQUIRED TOTALLY AND BE RELOCATED SOME PLACE ELSE WHERE WE WILL FEEL SAFE AND SECURE; AWAY FROM THE HAZARDS OF NOISE AND VIBRATIONS AND INCREASED VEHICULAR TRAFFIC.

I-052-005 I KNOW THAT ALL THESE IMPROVEMENTS AND DEVELOPMENTS GOES ALONG WITH PROGRESS AND EASE OF COMMUTING. SO DON'T GET ME WRONG ON MY CONCERNS. I LOVE TO SEE IMPROVEMENTS AND DEVELOPMENTS. MY MAIN CONCERN IS MY PROPERTY, FAMILY'S SAFETY AND SECURITY.

I-052-006 AGAIN, MY WIFE AND I HAVE INVESTED SO MUCH IN THIS PROPERTY. WE LOVE IT AND HAVE LIVED HERE FOR MANY YEARS. THIS IS OUR FIRST HOUSE. WE INTEND TO RETIRE HERE. IT IS A HEADACHE AND LOTS OF HASSLE TO MOVE TO ANOTHER PLACE. JUST PLEASE GIVE US A BREAK. IF YOU HAVE TO ACQUIRE MY PROPERTY, ACQUIRE THE WHOLE PROPERTY NOT PARTS OF IT. MAKES IT EASIER FOR US. WE ARE ALREADY NEARING OUR RETIREMENT AGE, GIVE US A PEACE OF MIND AND NOT WORRIES. THANK YOU IF YOU WILL BE CONSIDERATE.

PAGE 3 OF 3

I-052-004

Sound Transit recognizes that the acquisition of property for light rail projects is an inconvenience and hardship for those involved and understands your concern about the potential partial acquisition of your property. The direct loss of property value due to the partial acquisition will be compensated through the Sound Transit Acquisition and Relocation Policy as discussed in Section 4.1.7 of the EIS. Section 4.3.4 of the Final EIS discusses property values near light rail transit stations.

I-052-005

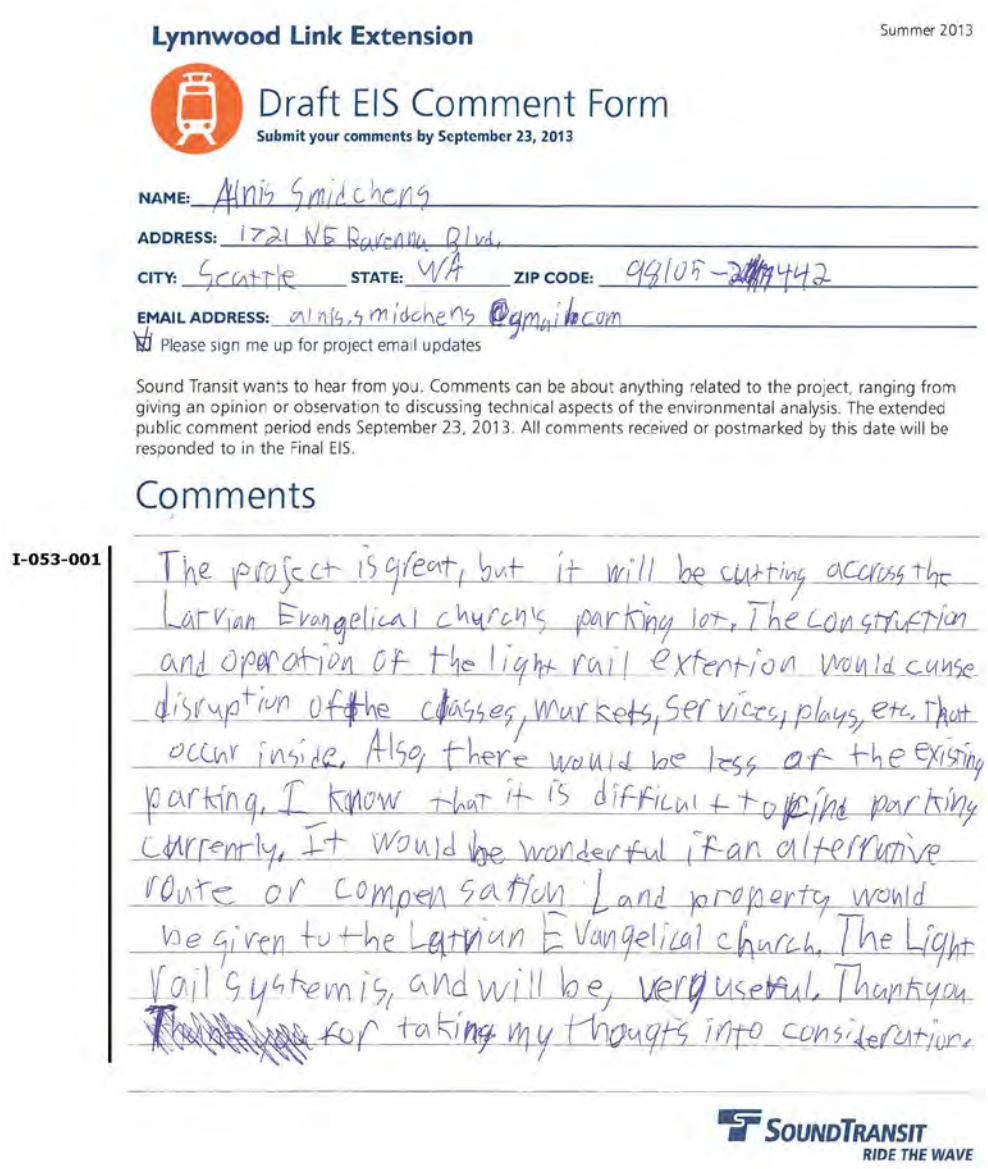
Crime is not expected to increase as a result of operation of the stations. Several studies have concluded that crime around stations mirrors crime rates in the surrounding neighborhoods. Most areas in the project corridor have low crime rates. The stations are well lit, are continually monitored by security cameras, and are regularly monitored by security personnel. Sound Transit would implement a number of measures to deter crime in the station areas. Measures to minimize crime would include the use of equipment (e.g., closed-circuit TV, sealed fare boxes, and automatically sealed exits), the use of anti-crime programs such as anti-graffiti programs, and the use of security personnel. 2010 crime statistics related to already built Sound Transit facilities show that the crime rate per number of riders at transit facilities and on light rail and commuter rail trains is substantially lower compared to overall per capita crime rates in Seattle, Tukwila, and SeaTac.

I-052-006

Sound Transit recognizes that the acquisition of property for light rail projects is an inconvenience and hardship for those involved and understands your concern about the potential partial acquisition of your property. Sound Transit determines a full or partial acquisition by considering several factors related to the potential impacts to the property. Please see the Final EIS Section 4.1 for the potential acquisitions related to Preferred Alternative, and updates for some of the

other alternatives. The final determination of acquisitions for this project will not occur until final design. Sound Transit will continue to communicate with property owners potentially affected by the project as information develops.

If your property remains on the list for a partial acquisition after final design, Sound Transit's Acquisition and Relocation Policy provides for a fair and equitable means of addressing real property impacts across its projects. The agency is available to answer questions about how full and partial acquisition determinations are made and to provide information about compensation for partial acquisitions.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Alnis Smidchens

ADDRESS: 1721 NE Ravenna Blvd.

CITY: Seattle STATE: WA ZIP CODE: 98105-2442

EMAIL ADDRESS: alnis.smidchens@gmail.com

☑ Please sign me up for project email updates

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Comments

I-053-001

The project is great, but it will be cutting across the Latvian Evangelical church's parking lot. The construction and operation of the light rail extention would cause disruption of the classes, markets, services, plays, etc. that occur inside. Also, there would be less of the existing parking. I know that it is difficult to find parking currently. It would be wonderful if an alternative route or compensation land property would be given to the Latvian Evangelical church. The Light rail system is, and will be, very useful. Thank you Thank you for taking my thoughts into consideration.

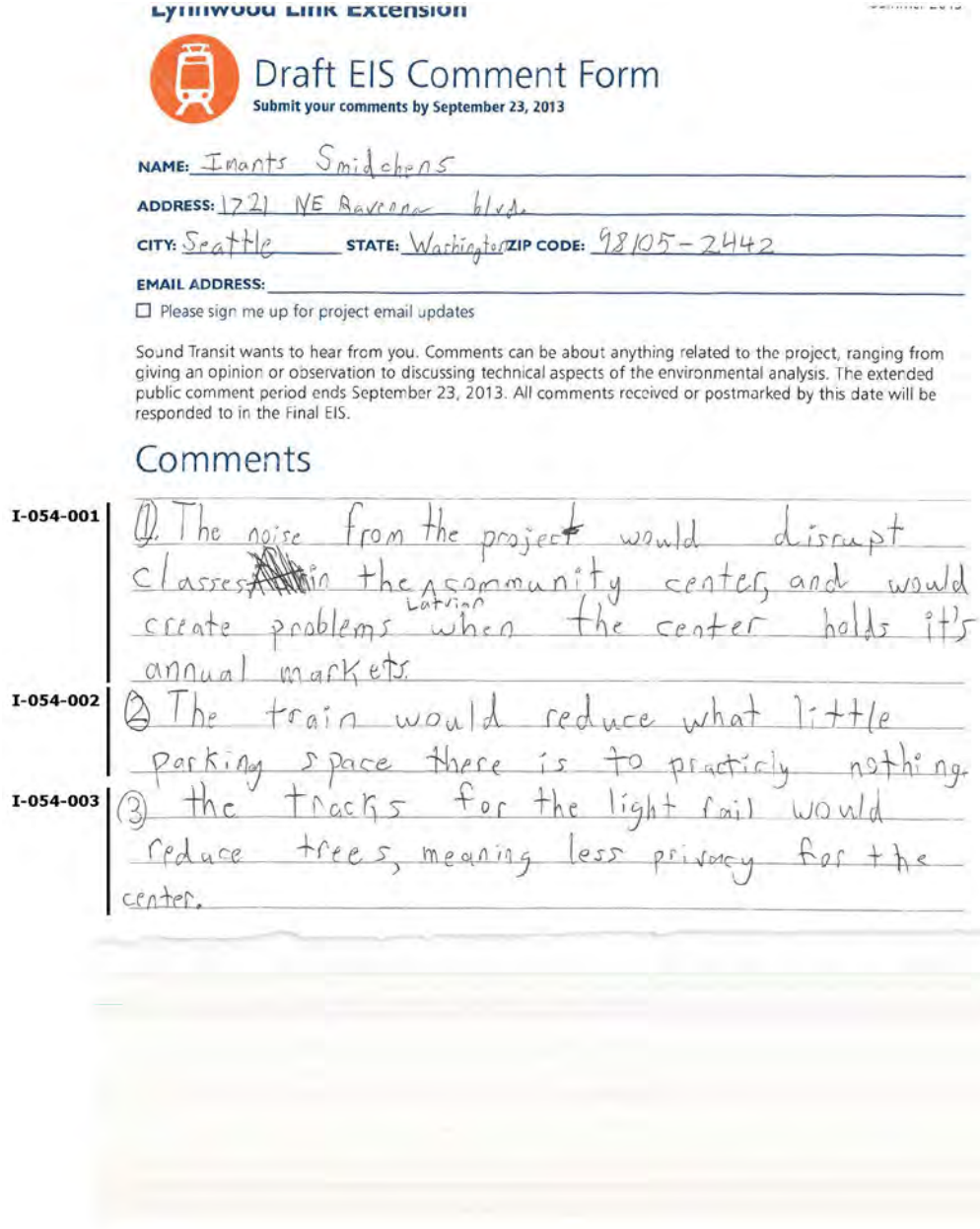
SOUNDTRANSIT RIDE THE WAVE

I-053-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.



Lynnwood Link Extension

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Imants Smidchens

ADDRESS: 1721 NE Ravenna blvd.

CITY: Seattle STATE: Washington ZIP CODE: 98105-2442

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-054-001 (1) The noise from the project would disrupt classes in the Latvian community center, and would create problems when the center holds it's annual markets.

I-054-002 (2) The train would reduce what little parking space there is to practicly nothing.

I-054-003 (3) the tracks for the light rail would reduce trees, meaning less privacy for the center.

I-054-001

The noise analysis for the Lynnwood Link uses the FTA impact criteria, and Sound Transit mitigates noise impacts to levels below these criteria. Sound Transit's policy is to mitigate moderate or severe impacts. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

I-054-002

The Lynnwood Link Extension would modify parking at Seattle Latvian Evangelical Lutheran Church, but its overall parking supply is expected to be maintained.

I-054-003

Removal of trees is addressed in Draft EIS discussion in Section 4.5.3, including Table 4.5-1. The Preferred Alternative would also have noise walls at heights similar to the existing walls, which would limit views of the center from the train. Potential mitigation measures are discussed in Section 4.5.6.

TO WHOM IT MAY CONCERN;

I-055-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU, Lynn Smith

Lynn Smith
12 Ward St. #102
Seattle, Wa. 98109
8/16/13

I-055-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

I-056-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Casey Sommers

I-056-001

Thank you for your comment stating a preference for Alternative C1.

From: Sreibers, Peter M <peter.m.sreibers@boeing.com>
Sent: Friday, August 16, 2013 12:49 PM
To: Lynnwood Link DEIS
Cc: Sreibers, Peter M
Subject: Lynnwood Link Impact to Seattle Latvian Lutheran Church/Center

To whom it may concern,

I-057-001

It has come to the attention of the Latvian-American community that the Seattle Latvian Lutheran Church/Center is slated to be impacted in a very negative manner from the construction of the Sound Transit Lynnwood Link project. The impact to the church/center which is described in the draft environmental impact statement (DEIS) is completely unacceptable, and Sound Transit must come up with a better solution to mitigate the impact to, not only the Seattle Latvian Lutheran Church/Center, but to the Latvian-American community as a whole.

The Latvian-American community within the Seattle is one which is very vibrant. Participant range in age from those displaced from Latvia by World War II up to those who were born after the fall of the Soviet Union and beyond. The community is a multi-generational one with many families participating in similar manners. There is strong participation and membership in many different Latvian-American organizations that all utilize the Seattle Latvian Lutheran Church/Center throughout the year. Some of these organizations are as follows:

- The Seattle Latvian Lutheran Church Congregation
- The Seattle Latvian School
- Latvian Dance Group "Trejdeksnitis"
- West Coast Latvian Education Center
- Latvian Pensioners Group
- University of Washington Baltic Studies Program
- American Latvian Association
- American Latvian Youth Association

The impact to the Seattle Latvian Lutheran Church/Center outlined in the DEIS would not only impact the physical structure of the center, but it would also impact the viability of these groups. The loss of the center would decimate all of these groups, as the central meeting place that has stood for decades (let us not forget that the original Seattle Latvian Lutheran Church/Center was demolished as a result of the I-5 freeway construction) would no longer stand, and what served as a major point of pride for the community would cease to exist.

For many of us, the center is a central rallying point, as many who actively participate in the Latvian-American community live not only in Seattle, but also in the suburbs and throughout the state of Washington. The Seattle Latvian Lutheran Church/Center is also not only significant within the State of Washington, but it is also significant throughout the United States and beyond. The Seattle

1

I-057-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, the larger Baltic community, and those interested in Scandinavian studies.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

I-057-001

Latvian Lutheran Church/Center is one of less than 15 Latvian Centers throughout the United States. Many events held at the Seattle Latvian Lutheran Church/Center attract participants from all over the United States, as well as from Canada, England, Australia, and of course, Latvia. The center serves as a community gathering point for the Latvian-American community. The center routinely holds events, meetings, study groups, affinity groups and political interest groups all organically developed internal to the Latvian-American community. The center has attracted Latvian theater groups, musical groups, authors, poets, politicians as well as past Presidents of Latvia for events held there. The center also serves as a home to The Seattle Latvian School and the Seattle Latvian Lutheran Church. Other groups also use the center. The center is utilized by our brothers and sisters in the other Baltic communities within Seattle; the Lithuanian and Estonian communities (who do not have centers of their own). The loss of the center would greatly impact the viability of these types of events and groups, and would most certainly damage the terrific culture which has been developed through the Latvian-American community within Seattle and beyond.

On a personal note, the loss of the Seattle Latvian Lutheran Church/Center would be one of very personal significance to me. As a child born during the Cold War, to the son of Latvian immigrants forced out of Latvia by the Communists during World War II, the Seattle Latvian Lutheran Church/Center has played a major role in my life. I attended The Seattle Latvian School, attended numerous church services there, participated for over 20+ years with events held at the West Coast Latvian Education Center and have been an active participant in the American Latvian Youth Association. Next summer I will have my wedding held at the Seattle Latvian Lutheran Church/Center, just as my parents held their wedding in the same place so many years ago. I have buried many relatives and friends not far away from the church in the Latvian section of the Evergreen Washelli Cemetery, with the large majority of the services and wakes held at the Seattle Latvian Lutheran Church/Center. The Seattle Latvian Lutheran Church/Center has served as a major landmark throughout my personal life, and I can only hope that I am able to pass along such a special place to my offspring.

I am urging Sound Transit to consider the thoughts not only of myself, but that of the greater Latvian-American community when considering the options for the Lynnwood Link expansion. The Latvian-American community has so much at stake and we hope that Sound Transit has our best interest in mind.

Thank you,

Peter Sreibers
Tool Engineer
Boeing - Auburn Tooling Services
Desk: 253.657.3968
peter.m.sreibers@boeing.com

August 15, 2013

TO WHOM IT MAY CONCERN;

I-058-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Cindy ☆ Starr

Cindy A Starr

I-058-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

I-059-001 PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Cathy Summer
18060 9th Ave NE
Shoreline WA 98155

I-059-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

I-060-001 PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

CUONG C. TRINH
8207 223rd PL SW
Edmonds WA 98026
8/17/13

I-060-001

Thank you for your comment stating a preference for Alternative C1.

From: Justas Vilgalys <justasvilgalys@hotmail.com>
Sent: Thursday, August 15, 2013 9:33 AM
To: Lynnwood Link DEIS
Subject: Please save the Latvian Community Center

I-061-001

Dear Lauren Swift, I am a member of the Lithuanian American community in the Seattle area. My family and I have been attending events such as Lithuanian independence celebrations, Christmas holiday potlucks etc. at the center since 1993, when we moved to the Northwest. I am writing to you to voice my request that any construction on the Lynwood light rail extension minimize its impact to the Latvian Community center.

The Latvian community center is hugely important to the Lithuanian community in Seattle. This is where we meet. This is where new immigrants to the United states come to connect with their heritage, to network and get established in the Seattle area. This is where our children learn about our culture and grand history.

I am afraid that having a rail line go through this property will result in this meeting place no longer being viable. And finding an alternative, suitable location in the Seattle area is not likely to happen. Therefore I urge you to take steps to minimize the light rail's impact to the Latvian community center.

Thanks and regards
Justas Vilgalys
18320 NE 204 ct.
Woodinvlle, WA 98077

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I-061-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

From: Walgamott, Amy <amy.walgamott@sea.procure.com>
Sent: Thursday, July 25, 2013 8:09 AM
To: Lynnwood Link DEIS
Subject: Comments on DEIS - Shoreline

I-062-001 Seems like, from a spacing perspective, there should be three stations – 130th, 155th, and 185th – to maximize ridership without having to drive to a station. Perhaps consider some improvements in the vicinity, such as adding bike lanes or adding footpaths that cut through multi-block residential sections (where currently you have to walk around the long way), especially near a 155th Station (as ridership here has a lower projection). Drawing people from the neighborhood without having them drive would really make the Light Rail valuable as a mass transit/lower emissions option. I don't seem to recall parking garages at every Max station in Portland.

I-062-002 The visual impacts seem very high for all proposed stations and rail, especially considering reduction of light to existing homes and removal of mature trees. You might consider green roofs for parking garages, reduction in the amount of reflective concrete (I'm thinking heat), and plantings that will really make a difference in the visual aesthetics (ie. not just minimal borders). Shoreline is proud of its tree cover and removing a large number of mature trees without adding larger trees back into the mix is going to be detrimental to that.

I-062-003 Is there any possibility of building a smaller garage or of building the garage underground? What about building a park or playground on the roof? It would help integrate this structure into the neighborhood.

I-062-004 If a station at 145th will be built, I vote for Option 2. It seems this would retain more mature trees and improve the aesthetics of residents to the north of the relocated I-5 Northbound onramp and would fit better with the neighborhood. In addition, this is supposedly going to help traffic flow. You may be able to do very appealing visual things to the retention ponds. Mosaics on the walls by a local artist.

I-062-005 I am trying to understand if the only noise mitigation planned is to build or improve noise walls. What sort of insulation in older homes are you considering and who will be eligible? On the maps I see houses marked as being impacted by noise, but a parcel in between two impacted houses supposedly is not. Does that make sense?

Amy Walgamott
Marketing Coordinator
p[206]306.2810
amy.walgamott@sea.procure.com
Seattle Cancer Care Alliance | Proton Therapy

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I-062-001

Thank you for your comment stating a preference for a station at NE 130th, NE 155th, and NE 185th Streets. The project's analysis shows that ridership would be maximized with the NE 145th and NE 185th Street Stations. Sound Transit policy is to assess the need for improved pedestrian and bicycle facilities within 1/4 mile of the station, and Sound Transit will continue to develop the station access program as the project progresses.

Park-and-ride spaces minimize parking impacts to neighborhoods and provide access to light rail for areas transitioning from suburban to urban densities. The number of new park-and-ride spaces in the corridor includes approximately 432 at NE 145th Street, 500 at NE 185th Street, and an additional 530 at the Lynnwood Transit Center.

I-062-002

Visual impacts discussed in the Draft EIS vary greatly by geographic area and are high in areas with more removal of mature vegetation or substantial structures.

The City of Shoreline also has a tree replacement ordinance, as does WSDOT, for its lands. Sound Transit will meet the requirements of both where applicable.

I-062-003

The proposed size of the garage reflects the likelihood that some people will need to drive to access the light rail system, and the size of the garage at various locations reflects current use and future demand. The NE 185th Street Station has a garage option that is underground.

I-062-004

Your preference for the NE 145th Street Station Option 2 is noted. The

potential for mitigating visual impacts of retaining walls and incorporating art on walls is discussed in the Final EIS, Section 4.5.6.

I-062-005

The noise analysis for the Lynnwood Link Extension uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below these criteria. Sound Transit's policy is to mitigate moderate or severe impacts. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

For homes that still have impacts after noise wall mitigation, sound insulation may be considered. This form of mitigation can include improvements, such as new or upgraded windows, improved door seals and other measures to maintain low interior noise levels.

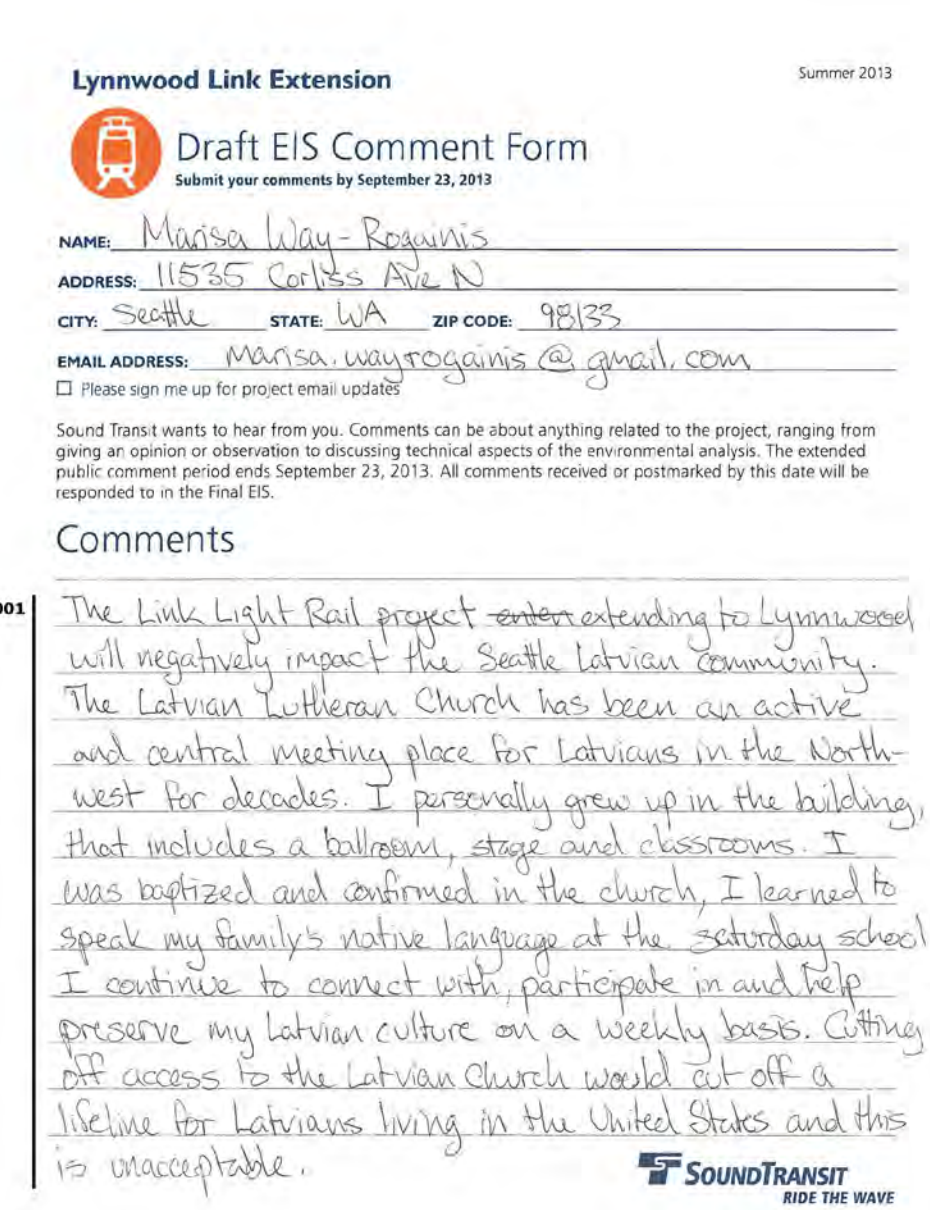
TO WHOM IT MAY CONCERN;

I-063-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

I-063-001

Thank you for your comment stating a preference for Alternative C1.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Marisa Way-Rogainis

ADDRESS: 11535 Corliss Ave N

CITY: Seattle STATE: WA ZIP CODE: 98133

EMAIL ADDRESS: Marisa.wayrogainis@gmail.com

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-064-001

The Link Light Rail project ~~enter~~ extending to Lynnwood will negatively impact the Seattle Latvian community. The Latvian Lutheran Church has been an active and central meeting place for Latvians in the North-west for decades. I personally grew up in the building, that includes a ballroom, stage and classrooms. I was baptized and confirmed in the church, I learned to speak my family's native language at the saturday school, I continue to connect with, participate in and help preserve my Latvian culture on a weekly basis. Cutting off access to the Latvian Church would cut off a lifeline for Latvians living in the United States and this is unacceptable.

SOUNDTRANSIT RIDE THE WAVE

I-064-001

Thank you for your personal comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, the larger Baltic community, and those interested in Scandinavian studies.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

From: chris wells <clwells@hotmail.com>
Sent: Tuesday, August 13, 2013 1:56 PM
To: Lynnwood Link DEIS
Subject: Preference for the Lynnwood Link Light Rail Line

To Whom It May Concern,

I-065-001

My preference for the Lynnwood Link Light Rail line is A5 + B1 + B2A + C1. That would give an at-grade station at 130th, an elevated station at 145th, an at-grade station at 185th, an east side station at Mountlake Terrace, and a north side station at Lynnwood. B2A would add a 220th station better serving more people for not much more of a cost in the big picture. I believe it's important to include the parking at 130th and there is more density near the 155th station than the 145th station which would better serve the people. I believe C1 is best because it gets closest to the center of Lynnwood's business and Alderwood Mall. However, if possible, it may be better to go with C2 and save the $300 million for an additional stop Alderwood Mall.

Thanks,
Chris

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I-065-001

Thank you for providing your alternative preferences for the project, and the reasons you prefer them. In November 2013, the Sound Transit Board identified its Preferred Alternative. The identified Preferred Alternative includes Alternatives A1, B2, and a modified C3. The Board directed the EIS to consider modifications to each of these alternatives for the Preferred Alternative. For instance, the Final EIS considers stations at NE 130th Street in Segment A and 220th Street SW in Segment B, which were not part of Alternative A1 or B2 in the Draft EIS. To understand all the components of the Preferred Alternative, please see the Final EIS for the full description and evaluation of it.

From: Bruce Williams <jbwilliamsmd@gmail.com>
Sent: Monday, July 29, 2013 2:04 PM
To: Lynnwood Link DEIS
Subject: Sounds Great!

I-066-001

Dear Sound Transit,
I am all in favor of the Lynnwood extension being completed as soon as possible! Keep up the great work! Bring it north!

Bruce Williams
23123 83rd Ave W
Edmonds WA
98026

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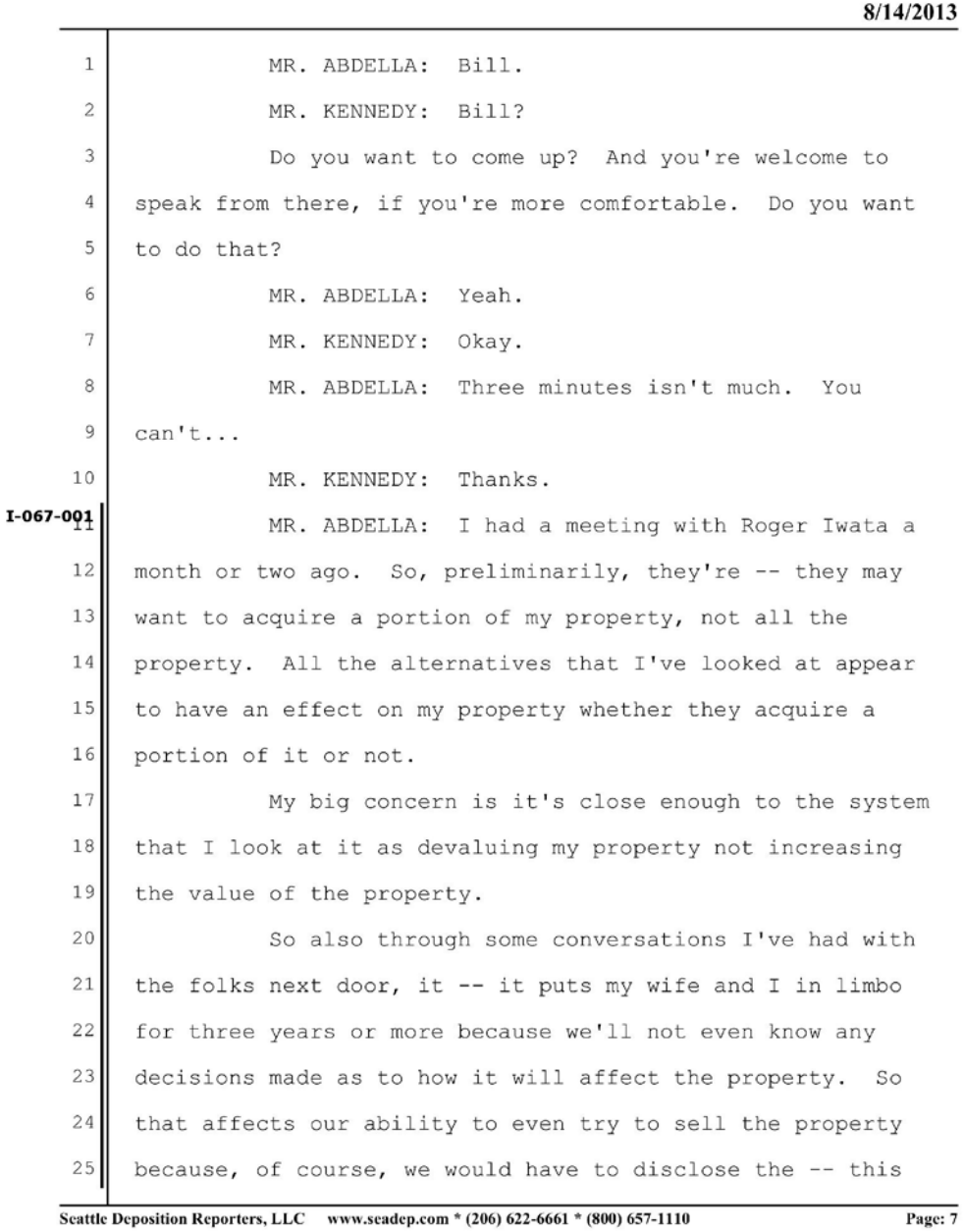
I-066-001

Thank you for your comment in support of the Lynnwood Link Extension Project.



8/14/2013

MR. ABDELLA: Bill.

MR. KENNEDY: Bill?

Do you want to come up? And you're welcome to speak from there, if you're more comfortable. Do you want to do that?

MR. ABDELLA: Yeah.

MR. KENNEDY: Okay.

MR. ABDELLA: Three minutes isn't much. You can't...

MR. KENNEDY: Thanks.

I-067-001

MR. ABDELLA: I had a meeting with Roger Iwata a month or two ago. So, preliminarily, they're -- they may want to acquire a portion of my property, not all the property. All the alternatives that I've looked at appear to have an effect on my property whether they acquire a portion of it or not.

My big concern is it's close enough to the system that I look at it as devaluing my property not increasing the value of the property.

So also through some conversations I've had with the folks next door, it -- it puts my wife and I in limbo for three years or more because we'll not even know any decisions made as to how it will affect the property. So that affects our ability to even try to sell the property because, of course, we would have to disclose the -- this

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I-067-001

Sound Transit recognizes that the acquisition of property for light rail projects is an inconvenience and hardship for those involved and understands your concern about the potential partial acquisition of your property. Sound Transit determines a full or partial acquisition by considering several factors related to the potential impacts to the property. See the Final EIS Section 4.1 for the potential acquisitions related to Preferred Alternative, and updates for some of the other alternatives. The final determination of acquisitions for this project will not occur until final design. Sound Transit will continue to communicate with property owners potentially affected by the project as information develops.

If your property remains on the list for a partial acquisition after final design, Sound Transit's Acquisition and Relocation Policy provides for a fair and equitable means of addressing real property impacts across its projects, as discussed in Section 4.1.7 in the Final EIS. The agency is available to answer questions about how full and partial acquisition determinations are made and to provide information about compensation for partial acquisitions.

I-067-001 whole plan and everything.

You know, we -- we don't mind progress. We don't mind spending our tax dollars to forward progress. But I'm looking at it as taking a whole bunch of money out of my pocket. I mean, this is retirement. The property and the home is retirement. And I'm not getting answers -- any good answers about compensation, especially if only a portion of the property is acquired.

I-067-002 So you know, we're -- we're -- I mean, obviously, we're not going to stop the progress, but we're not looking at this as a good thing. And we won't know for -- again, for a long period of time whether soundproofing would be -- for whether that -- the property is going to be a candidate to have soundproofing and vibration dampening and all these kinds of things done. So it's -- it's really -- it's telling us, as property owners, Hey, just hang in there.

We are not getting any answers, and is this going to benefit us or not? I don't believe so. I don't see how it can based on the proximity to where we're living, in proximity of the light rail and the station that will more than likely be going in a half a block or so away from us.

MR. KENNEDY: Thank you very much.

And I just want to reiterate that we're not responding or answering questions here in this public hearing. And you raise some good points, obviously. I

I-067-002

The noise analysis for the Lynnwood Link Extension uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below these criteria. Sound Transit's policy is to mitigate moderate or severe impacts. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

For homes that still have impacts after noise wall mitigation, sound insulation may be considered. This form of mitigation can include improvements, such as new or upgraded windows, improved door seals and other measures to maintain low interior noise levels.

For vibration, mitigation measures include track isolation systems, which are effective and typically reduce vibration to below the FTA criteria.

would encourage you to talk to folks out here. We've got, in fact, our noise expert, Michael Minor, out here in the noise area that you might want to ask some questions about noise mitigation related to your property. I think you can probably find it on a map out there.

So at any rate our next speaker signed up is Don Beskin. Is that --

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I-068-001 MR. DALE: I'll just echo a little bit of what the last gentleman said about access. My gut is that 145th goes in. I think that's -- if there's people here that don't like that, I'm just thinking that is what the feedback I've gotten, that's a top-priority site.

I-068-002 I'm more concerned with the very likely station at 185th. And part of that is for other stations as well, where you're really dropping a station into a single-family home neighborhood; where at 185th, there are not entrances to I-5, there is not a major arterial that connects, say, Aurora all the way to Lake City Way; and so the impact on the folks that live there, some of the possible zoning that may happen; and Sound Transit's role in both the relationship to the Shoreline Public Schools and the property that's there that are properties of interest for development, but also what the recommendations are as they partner with the City of Shoreline I think are huge and will greatly impact not only the folks in Shoreline but also the partnership communities in Lake Forest Park and even Mountlake Terrace where we are tonight.

So I just wanted to reiterate sort of the neighbor feel for all of these stops and really thinking through both in terms of what gets decided at 185th, 145th, versus 155th and even the possibility of 130th.

And I think a lot of people would echo that

I-068-001

Sound Transit acknowledges your preference for a station at NE 145th Street. The Preferred Alternative evaluated in the Final EIS includes a station at NE 145th Street. Please see the Chapter 2 of the Final EIS for a description of the Preferred Alternative and its potential effects. A decision about which alternative is built for this project will not be made until after the Final EIS and federal Record of Decision are issued.

I-068-002

Your comment identifying concerns for potential impacts of the Lynnwood Link Extension is noted. As you pointed out in your comment, several of the proposed locations for light rail stations are adjacent to single-family residential neighborhoods and the introduction of the station and ancillary facilities and other improvements could be a concern. The transit stations would be located along a freeway and on the edges of existing neighborhoods and would not encroach into the central portion of these older stable residential neighborhoods. Section 4.2, Land Use, of the EIS discusses the project's impact on surrounding land uses during construction and operation. Neighborhood cohesion would not be expected to change, although localized visual character would change. Section 4.5.6 outlines mitigation measures to facilitate station compatibility. They address building design, landscaping, and noise wall texture.

I-068-002 sentiment of, you know, how is this going to effect, not just ten years from now. We get caught up in sort of the vision and the grandeur of what would -- what this would be like in 20 years.

But I'd like to think about what it's going to be like in five years and impacting people with the construction in where people live now. And then, of course, in ten years at least when it hopes to launch. So I think just really thinking through those things of having the neighborhoods, rather than developers, as a first thought is really important.

I-068-003 Just to quickly add, I still wonder why -- when we talk about spacing of stops, why was 205th -- and I know it's not for questions tonight -- but why was 205th removed and pulled off the table? If you think of it as the connection between the ferry from Edmonds all the way to Lake Forest Park, that, to me, would seem the most logical place to try to have a good hub that represents Edmonds, Mountlake Terrace, Shoreline, Lake Forest Park as a huge through point. I guess the downside of that is more congestion.

But if you think about that, some of the things I've heard are, Well, we want spacing of stops, and I get that. But if you look at the fact that 130th and 145th are still on the table as a possible two stops, look at that

I-068-003

Sound Transit explored a variety of station alignment design and siting choices along the I-5 corridor from Northgate to Lynnwood. The alternatives discussed in the Draft EIS reflect public and agency comments and suggestions made during the environmental scoping comment period. The development of alignment, profile, and station siting concepts also included working with local jurisdictions and WSDOT. After the development of alternative concepts, Sound Transit evaluated how well these various concepts addressed the project's purpose and need, or other considerations, such as environmental impacts and costs.

A station at 205th Street was not considered because it would be much less accessible than the nearby Mountlake Terrace Transit Center, which already has parking and transit infrastructure. It would also be very difficult to site a station in a freeway interchange.

The decision to consider the NE 130th Street and NE 145th Street stations as components of the Segment A alternatives was based on the public and agency involvement, and evaluation of their ability to meet to the purpose and need of the project, and other factors. Please see Chapter 2 Alternatives Considered for a better understanding of the alternatives development process.

I-068-003
distance and then compare it to, say, 205th up to just north of the Mountlake Transit Center, it's about equal distance.

I-068-004
So I think the possibility of having a better parking structure that wouldn't impact single-family homes, it's got to be thought about there.

Thank you very much.

MR. KENNEDY: Thank you, sir.

Is there anybody else that would like to speak tonight at this hearing? Please feel free. We have another gentleman.

Would you like to sign --

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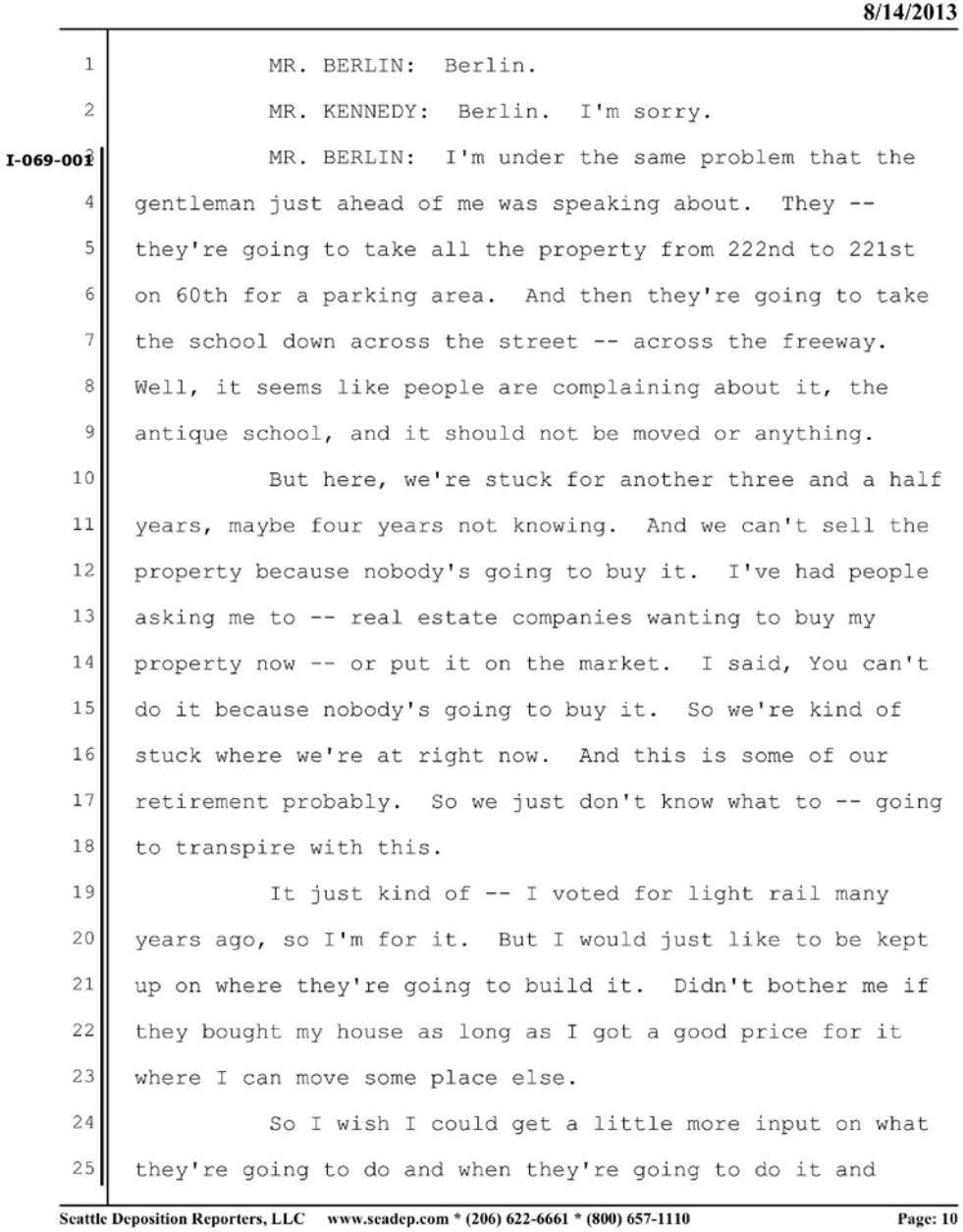
I-068-004

Sound Transit will continue to develop the detailed plans for stations and parking structures during final design.



8/14/2013

MR. BERLIN: Berlin.

MR. KENNEDY: Berlin. I'm sorry.

I-069-001 MR. BERLIN: I'm under the same problem that the gentleman just ahead of me was speaking about. They -- they're going to take all the property from 222nd to 221st on 60th for a parking area. And then they're going to take the school down across the street -- across the freeway. Well, it seems like people are complaining about it, the antique school, and it should not be moved or anything.

But here, we're stuck for another three and a half years, maybe four years not knowing. And we can't sell the property because nobody's going to buy it. I've had people asking me to -- real estate companies wanting to buy my property now -- or put it on the market. I said, You can't do it because nobody's going to buy it. So we're kind of stuck where we're at right now. And this is some of our retirement probably. So we just don't know what to -- going to transpire with this.

It just kind of -- I voted for light rail many years ago, so I'm for it. But I would just like to be kept up on where they're going to build it. Didn't bother me if they bought my house as long as I got a good price for it where I can move some place else.

So I wish I could get a little more input on what they're going to do and when they're going to do it and

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I-069-001

Sound Transit will be avoiding impacts to the Edmonds School District property.

Sound Transit recognizes that the acquisition of property for light rail projects is an inconvenience and hardship for those involved and understands your concern about the potential partial acquisition of your property. Final determinations of the property needs for the project, including acquisitions (partial and full) and displacements, will be based on the project's final design after Sound Transit completes the EIS process, selects the alternative to be built, and develops final engineering and design plans. Minimization of acquisitions, displacements, and relocations is a priority for Sound Transit.
Please see the Final EIS Section 4.1 for the potential acquisitions related to Preferred Alternative, and updates for some of the other alternatives. The final determination of acquisitions for this project will not occur until final design. Sound Transit will continue to communicate with property owners potentially affected by the project as information develops.
If your property remains on the list for a partial acquisition after final design, Sound Transit's Acquisition and Relocation Policy provides for a fair and equitable means of addressing real property impacts across its projects. The agency is available to answer questions how full and partial acquisition determinations are made and to provide information about compensation for partial acquisitions.

I-069-001 start giving us prices, whatever they're going to pay for these houses, because there's five or six houses right there on -- between 222nd and 221st that they were going to tear down and make a parking garage there. But they've changed it since people started hollering about the church and the school, Melody Hill School.

So that's my biggest concern, what we're going to do. And my neighbor next door to me, she just bought the house. And she gets this notice in the mail. She didn't know anything about the light rail. And -- and she was sick for a week because she didn't know what she was going to do after that. But now she -- she's got a lot more information on it, still would like to know what's going to happen.

So I appreciate your time. Thank you very much.

MR. KENNEDY: Thanks for your comment.

One thing that might be helpful just to reiterate is that, as far as schedule goes -- and again, we're not answering questions, but I'm trying to provide a little background -- you know, we're taking comments right now on the draft EIS.

The comments that are being made, that we'll receive in this public hearing tonight or written or any mailed comments, they'll be responded to in the draft -- in a final EIS that will come out probably sometime later in 2014. So your comments tonight will be responded to in

the final EIS.

The Sound Transit board will be making a decision on a preferred alternative, probably this fall. And that preferred alternative will be studied in the final EIS. So there'll be a little more certainty after this fall about what alternatives are really off the table and what's going forward. So it may be that some people will know, you know, their property is not part of the preferred alternative fairly soon, within the next three to six months. So I think that -- that may be helpful to some folks.

Our next speaker signed up is Eric Raisters.

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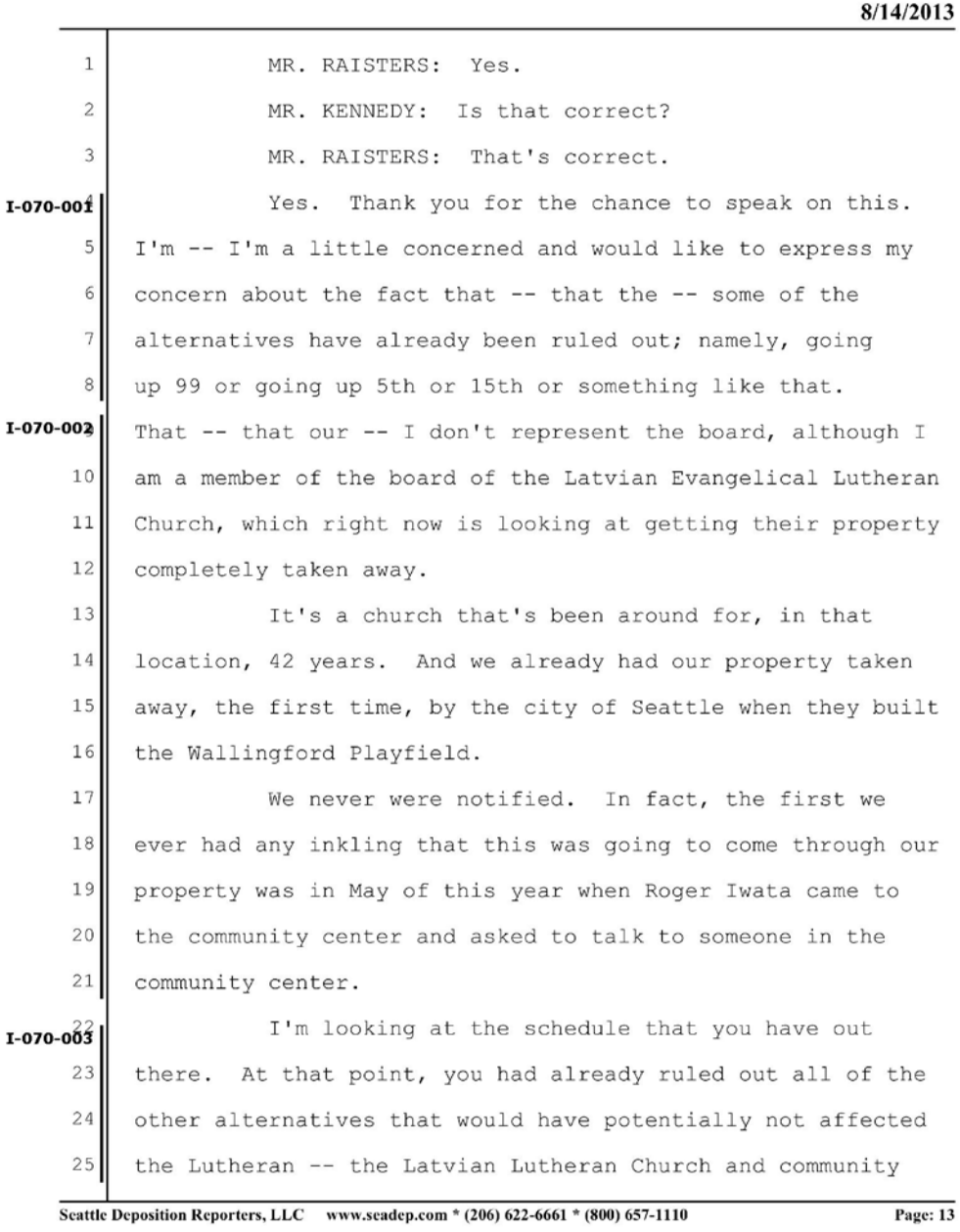

8/14/2013

MR. RAISTERS: Yes.
MR. KENNEDY: Is that correct?
MR. RAISTERS: That's correct.
I-070-001 Yes. Thank you for the chance to speak on this. I'm -- I'm a little concerned and would like to express my concern about the fact that -- that the -- some of the alternatives have already been ruled out; namely, going up 99 or going up 5th or 15th or something like that.
I-070-002 That -- that our -- I don't represent the board, although I am a member of the board of the Latvian Evangelical Lutheran Church, which right now is looking at getting their property completely taken away.
It's a church that's been around for, in that location, 42 years. And we already had our property taken away, the first time, by the city of Seattle when they built the Wallingford Playfield.
We never were notified. In fact, the first we ever had any inkling that this was going to come through our property was in May of this year when Roger Iwata came to the community center and asked to talk to someone in the community center.
I-070-003 I'm looking at the schedule that you have out there. At that point, you had already ruled out all of the other alternatives that would have potentially not affected the Lutheran -- the Latvian Lutheran Church and community

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I-070-001

Prior to the development of the Draft EIS, Sound Transit studied various corridor options for this project. That work is called the Alternative Analysis and the reports are available to the public in Appendix K of the Draft EIS and on the Lynnwood Link Extension website at: http://www.soundtransit.org/Projects-and-Plans/Lynnwood-Link-Extension/Lynnwood-Link-Document-Archive/Lynnwood-Draft-Environmental-Impact-Statement. This analysis showed that high-capacity transit along I-5 would be most beneficial when compared to high-capacity transit on SR 99, NE 5th or NE 15th. Sound Transit spent a great deal of time considering corridor options other than I-5. Please review the Alternatives Analysis Report for this evaluation.

I-070-002

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Sound Transit has been in contact with representatives of the church prior to May 2013; see Appendix L, Public Involvement and Agency Coordination, of the Final EIS for a table that lists Sound Transit's outreach activities to the church.

I-070-003

At the time of the publication of the Draft EIS, alternatives located in

I-070-003

center.

And we had no notice of it. The board apparently made these decisions without consulting with the communities that they were going through. And to me, that does not seem like a very democratic procedure, and it doesn't seem like the right way to do things.

I just want to make a comment on that, and I'll leave it at that. Thank you.

MR. KENNEDY: Okay. Thank you for your comment.

Our next speaker, signed up, is Gunars Sreibers; is that correct? Is Mr. Sreibers here?

He's out in the hall, I think.

While we're waiting, is there anybody else that might want to speak or has -- you're welcome to sign up now or -- it looks like we have Mr. Sreibers.

Mr. Sreibers?

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different corridors (such as SR 99 or NE 15th) had been considered but dismissed; see response to comment I-070-001 above.

See the response to I-070-002 directly above that addresses how the project will not displace the Latvian Evangelical Lutheran Church. Sound Transit has been in communication with the church since 2012; see Appendix L of the Final EIS for a table that lists Sound Transit's outreach activities to the church.

MR. SREIBERS: My name is Gunars Sreibers. And I'm representing the Latvian Lutheran Church and community center located just north of Northgate. I-071-001

And the Baltic community is extremely disappointed in the lack of recognition the DIS [sic] has written into it regarding the social and cultural contributions of our community to the Seattle and Pacific Northwest. The Latvian center is the hub of Baltic community activities in the community and represents thousands of Baltic residents here in the Seattle metropolitan area.

The DIS fails to address any of the impacts, I-071-002 construction as well as operation of the light rail system, will have on our numerous activities that occur at the center on an ongoing basis.

The alternatives include one that also mentions the complete elimination of this center which, in essence, will result in the demise of this center because the relocation of it will be so difficult and the activities -- discontinuation of activities would essentially be eliminated -- or it would not -- no longer be able to occur.

The center is a multigeneration facility. We were really surprised by the fact that in investigating the facility the -- the staff and the people preparing the EIS did not recognize the fact that this is more than just a church. This represents the hub of the Baltic community and

I-071-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Please see Section 2.5.1 of the Final EIS for a description of the refined Segment A alternatives that avoid displacing the church.

I-071-002

Chapter 4 of the Draft EIS discusses the project's impacts during construction and operation. Section 4.4 discusses impacts to social resources, including the church.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

I-071-002

the activities of Baltic community, not only in the Pacific Northwest but all the way up to Alaska, California, and heading towards the east.

Not only is it a place where a lot of Baltic people get together, but it is also a center that involves everybody from toddlers to seniors. It also has active church services in three languages, Latvian, Lithuanian, and Estonian. It has special events and holidays, that are unique to the Latvian and the Baltic cultures, that occur there. A Latvian language school is held there on a routine basis, on a regular weekly basis.

We have dance groups. We have choir groups that travel to Latvia and are invited to go to Latvia. We have fraternal groups and we have senior citizens groups that meet there and multiple groups within those larger groups.

It's visited by the presidents by the Baltic countries. It is also visited by the ambassadors of those Baltic countries.

It is also the focal point for, not only the establishment, but also the continued funding of the Baltic studies programs at the University of Washington.

Any of the alternatives that we're looking at here that cause for the disruption or even the permanent relocation of this facility will essentially be devastating to the Baltic community. And measures must be taken,

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

I-071-002

basically, to find mitigation measures that will allow us to continue our existence in the present location.

Thank you.

MR. KENNEDY: Thank you very much for those comments.

Well, that's everybody that is signed up that we have so far. We do have, it looks like, somebody else who would like to sign up.

Sir, can you -- can I get you to sign up?

Where -- is Erin -- where did Erin go?

Sir, why don't you come up? I'm going to get you signed in here. Thanks.

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MR. SMIDCHEMS: Guntis, G-U-N-T-I-S; last name Smidchems, S-M-I-D-C-H-E-M-S. I live -- my mailing is the University of Washington, Department of Scandinavian Studies, Box 353420, Seattle, Washington, 98195.

I-072-001 I'm here from the Scandinavian Department. We teach Latvian, and that's why -- that's our connection to the Latvian center which is on the planned line.

Our department does community outreach events every year, like concerts or lectures or social events. October 23 is one of our outreach events, the Latvians and the Estonians of the Seattle community.

And I'm here, more, to find out how that community center is affected by this project and to see how that is going. It's definitely -- we have -- at the department, we have two kind of legs in the local community. One is the Nordic museum in Ballard, and this is our other place where we meet people off campus.

So that's about all I wanted to say. I'm just curious about how that's going.

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I-072-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Please see Section 2.5.1 of the Final EIS for a description of the refined Segment A alternatives that avoid displacing the church.

HARVEY: I've already signed in on one of them.
MR. KENNEDY: Did you --
HARVEY: I don't know which one it was.
MR. KENNEDY: Okay. Well, you're not -- you're not on this list. So why don't you sign in, if you would, please. Thank you.
I-073-001 HARVEY: We just moved into this area. And I'm starting to get an impression that you really don't care who lives here, who you have to move, who you have to crush. I don't know what you're thinking in who moves or who has to move. And there's a lot more I could have said, but it would have taken up 20 to 30 minutes.
And that's all I can really say right now.
MR. KENNEDY: Okay. Thanks.
Is there anybody else that would like to comment?
If not, I would encourage people to make comments. We have a comment form out here. You can e-mail comments in, as Mr. Earling was saying. There's a variety of ways to comment other than here.
If you actually want to come back and comment to the court reporter, you can do it. If you feel a little bit like you don't want to comment in this type of a setting, feel free to come back. She will be here until 8 o'clock.
But keep in mind the draft EIS. The reason for doing it is to get your comments. We invite your comments.

I-073-001

Thank you for your comment. Minimizing the number of residents displaced, as well as the number of properties acquired for this project is a priority for Sound Transit. In addition to the information on specific affected properties in the EIS, Sound Transit has contacted potentially affected parties to offer information and assistance.

We want your comments. That's the point of a draft EIS, so we can -- so our board, that Mr. Earling and others are on, can take those into consideration when they make a decision.

So we do take your comments seriously. We invite your comments. We've got many experts out here on -- on every aspect of the project, design, noise, environmental. So please take advantage, ask them questions.

So I thank you for coming tonight.

And we have another person here. Would you like to speak?

PUBLIC MEMBER: I just have a question. I notice that on the comment forms, these are self-mailing with the stamp. Will you have any available to take some with us when we leave, for others in the community?

MR. KENNEDY: Yeah.

MS. TAYLOR: We have plenty. Just come see me.

MR. KENNEDY: Thanks.

Great. Well, thank you for calling [sic]. I will bring this hearing to a close. Thanks for coming.

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MR. FOY: John Foy, from Lake Forest Park. Is anyone else from Lake Forest Park here this evening?

I-074-001 I took the most direct route to come here because -- 205 or I guess 240th, some people call it 205. For Lake Forest Park residents, my concern is the -- the stops are going to be one at Northgate, that's pretty well declared, the Northgate stop. Then there's an idea that 130th is going to be a stop, which is so close to Northgate.

But 145th, which is the most direct route into Lake Forest Park -- the most direct route -- all the other routes, we must go through other traffic, other cities, other traffic. 145th is the only direct entrance into Lake Forest Park, Kenmore, into Bothell Way. And that is doubtful right now. My understanding is that it is not in discussion or it -- they're looking at it, but it's not.

May I inform the -- Sound Transit that the city council of Lake Forest Park has just moved to build about four hundred units of housing on the corner of Bothell Way and 145th.

Given that traffic, which will mean that if there is no stop at Sound Transit at 145th, those people are going to be going through all the other exits and into -- we've objected to the number of -- to the number of housing going in there, but the council, in their wisdom, as many councils often do, do not pay attention to the citizens of the city

I-074-001

A station at NE 145th Street was under consideration for the Draft EIS and is also included in the Preferred Alternative in the Final EIS. Sound Transit has been considering a station at this location since the beginning of the environmental review process. Thank you for the additional information on the City of Lake Forest Park's plans for development on NE 145th Street to the east of the proposed station.

I-074-001 and decide to go ahead and do what they want. And that's -- it's going to devastate the neighborhood. And we have complained about it, but nevertheless, there it is.

I also will appear at the next one in Shoreline because Shoreline has this same concern about there is no direct entrance. 145th is the only direct entrance into Kenmore, Lake Forest Park, Bothell Way. Otherwise we have to go through various cities in a roundabout way.

Thank you.

MR. KENNEDY: Thank you, sir.

It looks like, next up, we have Mr. Dan Dale.

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MR. ANDREJEVS: I'm Markus, M-A-R-K-U-S; Andrejevs A-N-D-R-E-J-E-V, as in Victor, -S, as in Sam.

Address is 3818-228th Place Southwest, Brier, Washington 98036.

I-075-001 And then, my comments, I was going to comment on the fact that it's a sad situation. Sounds like the board members have already made the decision. It doesn't seem like we had a vote, if it was even a vote. We just now have to deal with the decisions that are being made.

This Latvian community center that I'm most concerned with being closed off to the community, not only the Latvian community, but Lithuanians, Estonians, people from Canada come down to visit, dignitaries, politicians. We have -- the University of Washington also performs plays and have -- they have fund-raisers there.

And for the entire amount of time that it's going to take to build this light rail system, will be detrimental to those community members and groups and their functionality.

That's -- about wraps it up.

(Proceedings concluded at 8:00 P.M.)

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I-075-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

MR. REEDY: First name is Robert. Last name, Reedy, R-E-E-D-Y. My address is P.O. Box 61, Mountlake Terrace, 98043.

I-076-001 And I would say, if I was in front of everyone, we have been fighting this issue since the old monorail in 1962, the Seattle World's Fair. And they wanted to bring it all the way up here. So for 50 years we've been fighting the same thing. I say let's go. It's time that we did something. It's time to move and move forward.

That's all I have to say.

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I-076-001

Thank you for your comments.

TO WHOM IT MAY CONCERN;

I-078-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Jean Schumacher Holmes

4800 200th St. SW #E106
Lynnwood, WA 98036

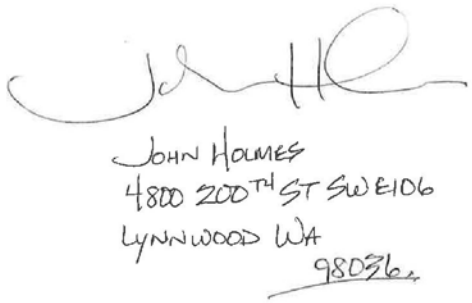
I-078-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

I-079-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

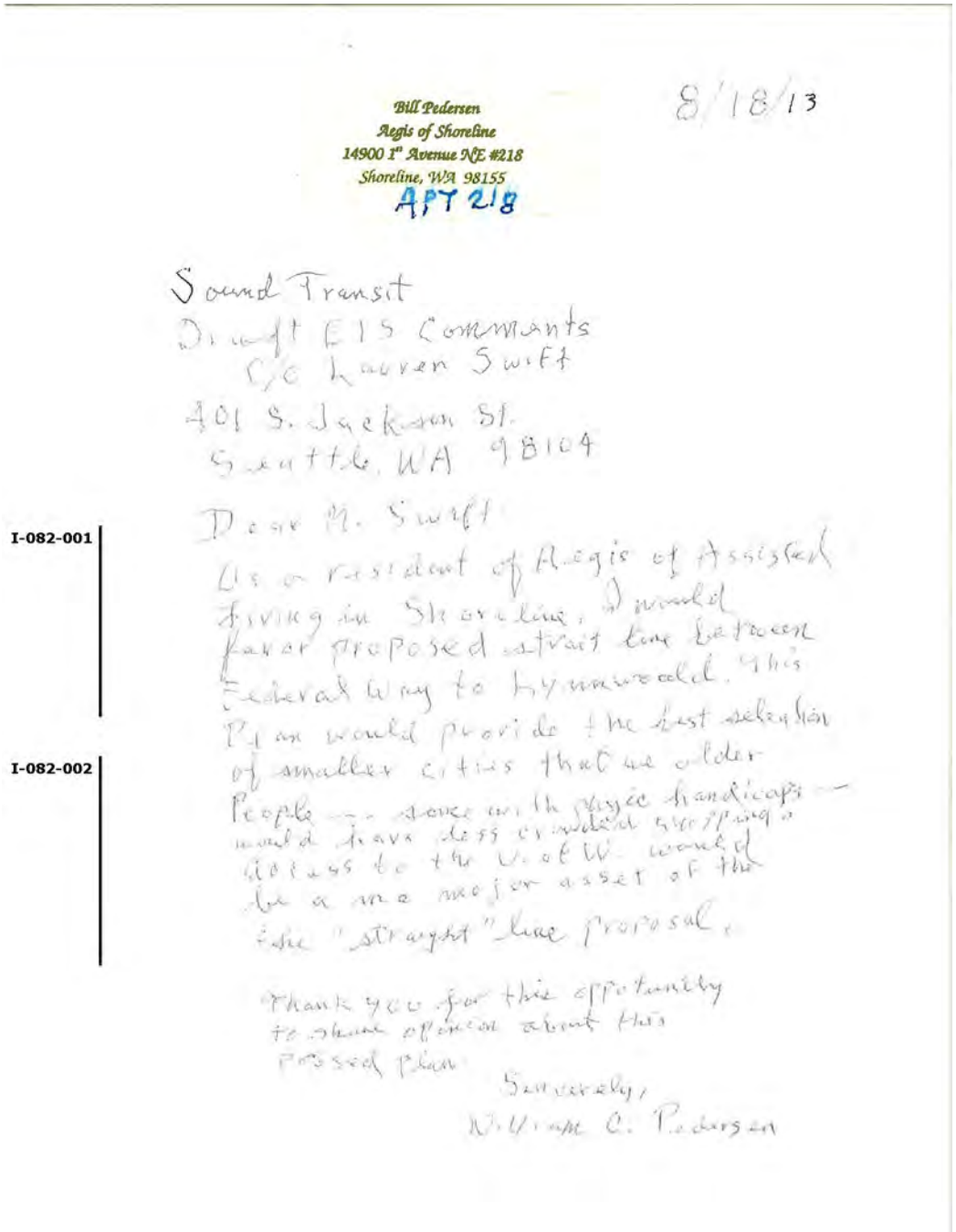
THANK YOU,



JOHN HOLMES
4800 200TH ST SW E106
LYNNWOOD WA
98036

I-079-001

Thank you for your comment stating a preference for Alternative C1.



Bill Pedersen
Aegis of Shoreline
14900 1st Avenue NE #218
Shoreline, WA 98155
APT 218

8/18/13

Sound Transit
Draft EIS Comments
C/o Lauren Swift
401 S. Jackson St.
Seattle, WA 98104

Dear M. Swift

I-082-001 I is a resident of Aegis of Assisted living in Shoreline. I would favor proposed straight line between Federal Way to Lynnwood. This plan would provide the best selection of smaller cities that are older

I-082-002 People -- those with physic handicaps -- would have less crowded shopping options to the W. of W. would be a more major asset of the the "straight" line proposal.

Thank you for this opportunity to share opinion about this proposed plan.

Sincerely,
William C. Pedersen

I-082-001

Thank you for your suggestion for a straight-line alignment of the light rail system between Federal Way and Lynnwood. A full discussion of the overall proposed light rail system can be found in "Sound Transit 2: A Mass Transit Guide - The Regional Transit System Plan for Central Puget Sound"published by Sound Transit in July 2008. However, the scope of the Lynnwood Link Extension EIS is focused on connections between Northgate and Lynnwood.

I-082-002

Thank you for your comment about the importance of serving the small communities along the route of the proposed Lynnwood Link Extension project. As demonstrated by the number of stations and combination of stations represented in the several alternatives evaluated in the EIS, Sound Transit is committed to providing the best service to residents along the entire route of the proposed light rail extension. Also, the construction of all light rail transit facilities (sidewalks, stairs/elevators, and access into the light rail train cars) will comply with all required standards of The Americans with Disabilities Act of 1990 to ensure access by the elderly and persons with physical disabilities. See Section 2.3 of the Final EIS.

From: Capt. Andrew Reay-Ellers <capt_reayellers@yahoo.com>
Sent: Wednesday, August 21, 2013 3:01 PM
To: Lynnwood Link DEIS
Subject: Fw: shoreline LINK meeting(s) follow-up
Attachments: Letter to SOWERS-reTOD-21Aug2013.docx

To Lynnwood Link DEIS Comment-processing staff;

I-083-001

Last December, when the Sound Transit Board voted to adopt Transit-Oriented-Development policies, I was very heartened to see that lessons had been learned; and that Sound Transit now appreciated the value and accepted the necessity of TOD in creating a successful transit system.

With this in mind, you can imagine my dismay in reviewing the recently released DEIS for the Lynnwood LINK portion of the light rail system.

The designers and planners of this proposed section of light rail have disregarded Sound Transit's TOD policies. It appears that nothing has been learned, and the ST staff has ignored the directions of the board, and the criteria you have established. Every proposed station is sited immediately next to the highway, and the potential for TOD at each of these sites --by Sound Transit's own estimates-- is "Limited".

At recent public meetings and presentations by Sound Transit in the Shoreline area I have been asking questions about Transit-Oriented-Development, and trying to point out the shortcomings in the plan as it is currently proposed. I cannot say that the local staff seem to think this is an important issue. They seem to want to discuss nothing at this point other than alternatives of at-grade vs. elevated stations; and where exactly they will build the enormous parking garages they propose.

I am following up some of those discussions with a letter to one of the Sound Transit outreach staff, Nytasha Sowers. A copy of my letter to her is both included below, and attached to this email.

Basically, rather than being a part of an integrated regional transit system, it seems like the cities of Shoreline, Mountlake Terrace, and Lynnwood are simply expected to accommodate the passage of a commuter rail line . . . . This is NOT what the "Link Light Rail" system is supposed to be about -- a series of Park & Ride Garages along

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I-083-001

Thank you for your letter regarding Sound Transit's TOD Policy and for your interest in creating transit-oriented communities in the station areas. Sound Transit's project was designed to respond to the purpose and need described in Chapter 1. The Sound Transit policy on TOD is intended to help guide the development of the project, but it does not override the project's purpose and need, and it is to be considered along with other design and environmental considerations that shaped the development of alternative alignments and stations. Please see Chapter 2, Section 2.6.1 for more details on factors affecting the alternatives.

I-083-001 the highway. Vibrant integrated station-areas --with good opportunities for TOD-- are a 'must' if Sound Transit's Light Rail system is to be a success.

I am working to write an official and complete set of comments regarding the Lynnwood Link DEIS, and will send those to you when they are complete. In the meantime, I am sending you a copy of my correspondence with Ms Sowers for the record.

I hope that the Sound Transit staff, and especially the Lynnwood Link Team will please look into this issue, and consider the flawed planning and missed opportunities of the current Lynnwood LINK design.

thank-you,

andy reay-ellers

----- Forwarded Message -----
From: Capt. Andrew Reay-Ellers <capt_reayellers@yahoo.com>
To: "nytasha.sowers@soundtransit.org" <nytasha.sowers@soundtransit.org>
Cc: Miranda Redinger <mredinger@shorelinewa.gov>; "Suzanne Wynne, 185th Station-Area Citizens Committee" <action@futurewise.org>; 185th Station Citizen Committee <185scc@gmail.com>
Sent: Wednesday, August 21, 2013 12:56 PM
Subject: shoreline LINK meeting(s) follow-up

Dear Ms. Sowers--

I-083-002 I wanted to 'follow-up' with you a bit.....

Two weeks ago, at the 185th station committee meeting, I was one of the people asking you about the [lack of] TOD potential in the proposed design of the Lynnwood LINK. Previous to that, I had been one of the people asking you similar questions at the 145th station-area visioning meeting the week before.

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I-083-002

Since the release of the Draft EIS and the identification of the Preferred Alternative, the City of Shoreline has conducted additional planning that would help create development patterns more oriented to transit at the NE 145th Street and the NE 185th Street stations. The assessments of the potential for TOD reflected a variety of factors, including local regulations, market conditions and availability of land. The City of Lynnwood, the City of Mountlake Terrace and Sound Transit have also been working collaboratively to advance the TOD potential in their station areas. During final design, Sound Transit also will continue to consider TOD development partnerships and related opportunities to design the station and station areas in ways that support TOD. However, the station locations and the decisions to include parking facilities respond to other Sound Transit policy commitments, including for system access (encouraging a balance of modes, and recognizing the need to serve existing as well as future land use patterns in the larger corridor), sustainability, and environmental management. As described in more detail in Chapter 2, other corridors away from the freeway were considered, but the environmental impacts of building light rail through established communities with few other continuous north/south corridors besides SR 99 limited the potential for placing stations other than adjacent to I-5. Please see Chapter 4, Land Use, Section 4.2.5 for a discussion on TOD potential.

While it may seem that I keep asking the same questions, I'm not. (though admittedly my questions are certainly closely related). Likewise, regardless of what you may think, I am very much interested in your answers.

I-083-002

I am trying not to repeat myself, but rather to continuing to research and ask questions in hopes of helping me to refine my DEIS comments, so I am focusing on defining the problems in sound transit's conceptual strategy of designing the Lynnwood Link.

In detail, and review:

At the visioning meeting I asked you about better siting/aligning/designing the shoreline stations to maximize and encourage -- or at the very least, ***allow for*** -- good TOD and adjacent "smart growth" urban planning and integration.

[please note, again, that I am in no way asking for re-consideration of a SR99 or N.E. 15th alignment.]

Your reply to me, in part, was that while LINK will try and locate stations where TOD can best happen, not all stations can have this attribute. Different stations can and will serve different purposes.

I have to say that while I might wish that EVERY station area be developed in a "dense, developed TOD" way, I heard what you had to say and I guess it helped me to realize that this is unrealistic. So I get it -- not all stations can or will be designed, aligned, laid-out, and sited to maximize TOD.

BUT.

With this new (and perhaps more realistic) attitude, I then went back to work looking to Sound Transit's policies and goals, and the Lynnwood LINK planning and design work. I wanted to understand both the current policies, and where along the Shoreline segment good integration of station & community is being considered, fostered, and can be expected.

here's what I found:

---Last December the ST Board approved and published their official TOD Policy.

---in April, Lynnwood LINK issued its report on TOD potential along the proposed route with the currently proposed stations' conceptual design & siting.

I-083-002

---and now the DEIS has been published, which incorporates in its entirety (I believe) the April TOD report.

In doing this research two things really jumped out at me, and that is what I was trying to question you about at the 185th meeting. In short:

#1.
The sound transit TOD policy says (1st page, 3rd paragraph):

> *".....The legislation also guides Sound Transit to work with public and private interests to facilitate TOD. For example, Sound Transit is guided to work with local jurisdictions to set forth conditions for assuring land uses compatible with development of high-capacity transportation systems, such as providing for sufficient land use densities through local actions in high capacity transit corridors and near passenger stations, preserving transit rights-of-way, and protecting the region's environmental quality. Additionally, the legislation guides the agency, in cooperation with pubic and private interests, to promote transit compatible land uses and development, which includes joint development."*

#2.
The assessment in the April report and the DEIS states that the potential for TOD at the 4 proposed station sites in "segment A" of Lynnwood LINK is:
"limited"(130th); "limited"(145th); "limited"(155th); and "limited-moderate"(185th).
-- and even this last site falls to "limited" if accommodation/agreement is not reached with Shoreline Schools for developing adjacent properties in their control.....

OBSERVATIONS:

It appears that the Lynnwood LINK conceptual design, as described in the DEIS, pretty much completely disregarded Sound Transit's own policy. The development of designs are directed to "*facilitate TOD*" (Sound Transit's words) -- NOT to simply study the issue and then report that, "*nope, not much chance of TOD here...*" (my paraphrase) And regardless of your supposition that 'every station site won't allow for TOD' -- which I do tend to believe is true -- the fact is (as established by Sound Transit's own report), that NONE of the 4 proposed "Segment A" stations allow for appreciable TOD. Moreover, depending on which station sites are selected in segment B (Mountlake Terrace) and segment C (Lynnwood), the potential for TOD at those sites is limited as well.....

I-083-002

Again, I get it that this section of LINK is never going to have the TOD potential of some of the station sites in Seattle. Likewise, I understand that it would be too much to expect that Sound Transit would site, design, and build every one of the Lynnwood LINK stations to maximize TOD potential.

But NONE??

Eight months after Sound Transit publicly commits to a policy of designing its transit projects to encourage and facilitate TOD -- **and the very next project design which is released to the public has little to none**. Why has this project choosen to disregard the Sound Transit board's guidance and directions? I hope you can realize how disappointing and frustrating this is..... and why I am asking questions about this obvious oversight and short-coming of the project as proposed.

At some point in design and scoping -- especially after the Sound Transit board adopted an official policy and commitment to TOD -- there should have been a recognition that the current design was not meeting Sound Transit's own criteria.

So we are now at a point in the process where the public is to comment on the alternatives listed in the DEIS -- and yet the list of alternatives is very obviously incomplete, since no alternatives provide even an average amount of TOD potential. In failing to develop a design which meets Sound Transit's own policies and goals, I find that the DEIS is deeply flawed.

It seems like the lessons learned by Sound Transit a mere ten years have already been forgotten. At that time, the preferred alternative of locating a LINK station alongside the highway at NE 65th was realized to be a mistake --both by the community AND the Sound Transit Board-- simply on the basis of the lack of TOD potential.

No transit station which is sited immediately adjacent to a highway will ever encourage --or even allow for-- effective TOD and integration into the surrounding community. By definition and simply geometry, half of the land adjacent to a station located immediately next to a highway can never be developed, because it is taken up by the highway itself. And then the other half of the the land adjacent to the station will never foster good, valuable, and attractive urban development, because all of that property, by definition, is next to a highway. Shifting the alignment even a block or two makes a world of difference, and that is exactly what Sound Transit choose to do at NE 65th -- even though it meant that the costs of developing that segment are going to be higher.

I-083-002

I understand that it must seem the obvious solution to run LINK along the edge of I-5 from Northgate to Lynnwood -- its simpler, and probably cheaper. But by choosing this 'easy' way, Sound Transit has disregarded what it has already learned about station areas. North of Northgate does not suddenly turn into a rural area, which simply needs to accommodate the passage of a train. Rather than serving the city of Shoreline, and helping to foster transit-oriented neighborhoods within the station areas, the current Lynnwood LINK design is little more than a commuter rail line.

The DEIS, as it is currently written, basically only allows a choice of which type of Park-and-Ride station (at-grade or elevated; where to build the huge parking structure) the public wants to accept. This is not a real choice, and doesn't allow for meaningful public input. The currently proposed station locations and siting don't allow for significant Transit-Oriented-Development, or efficient integration -- and that is exactly what is needed if LINK is to have a consequential positive impact throughout our area.

If the Lynnwood LINK is to truly serve the communities north of Seattle --and to meet the criteria, strategies, policies, and goals set by Sound Transit-- then a re-examination of the project's design is necessary.

Sound Transit needs to be part of creating a transit system, NOT just the builder of a railroad.

regards--

andy

Capt. Andrew Reay-Ellers

home: 206 - 362 - 3799
cell: 206 - 552 - 1961

To: Nytasha Sowers, Sound Transit

From: Andrew Reay-Ellers
Email: capt_reayellers@yahoo.com
Phone: 206 - 552 - 1961

Cc: Miranda Redinger, City of Shoreline
Suzanne Wynne, NE 185th Station-Area Citizens Committee

21 August 2013

Dear Ms. Sowers--

I wanted to 'follow-up' with you a bit.....

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While it may seem that I keep asking the same questions, I'm not. (though admittedly my questions are certainly closely related). Likewise, regardless of what you may think, I am very much interested in your answers.

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In detail, and review:

At the visioning meeting I asked you about better siting/aligning/designing the shoreline stations to maximize and encourage -- or at the very least, ***allow for*** -- good TOD and adjacent "smart growth" urban planning and integration.

[please note, again, that I am in no way asking for re-consideration of a SR99 or N.E. 15th alignment.]

Your reply to me, in part, was that while LINK will try and locate stations where TOD can best happen, not all stations can have this attribute. Different stations can and will serve different purposes.

I have to say that while I might wish that EVERY station area be developed in a "dense, developed TOD" way, I heard what you had to say and I guess it helped me to realize that this is unrealistic. So I get it -- not all stations can or will be designed, aligned, laid-out, and sited to maximize TOD.

BUT.

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---and now the DEIS has been published, which incorporates in its entirety (I believe) the April TOD report.

In doing this research two things really jumped out at me, and that is what I was trying to question you about at the 185th meeting. In short:

#1.
The sound transit TOD policy says (1st page, 3rd paragraph):

> *".....The legislation also guides Sound Transit to work with public and private interests to facilitate TOD. For example, Sound Transit is guided to work with local jurisdictions to set forth conditions for assuring land uses compatible with development of high-capacity transportation systems, such as providing for sufficient land use densities through local actions in high capacity transit corridors and near passenger stations, preserving transit rights-of-way, and protecting the region's environmental quality. Additionally, the legislation guides the agency, in cooperation with pubic and private interests, to promote transit compatible land uses and development, which includes joint development."*

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-- and even this last site falls to "limited" if accommodation/agreement is not reached with Shoreline Schools for developing adjacent properties in their control.....

OBSERVATIONS:

It appears that the Lynnwood LINK conceptual design, as described in the DEIS, pretty much completely disregarded Sound Transit's own policy. The development of designs are directed to "*facilitate TOD*" (Sound Transit's words) -- NOT to simply study the issue and then report that, "*nope, not much chance of TOD here...*" (my paraphrase) And regardless of your supposition that 'every station site won't allow for TOD' -- which I do tend to believe is true -- the fact is (as established by Sound Transit's own report), that NONE of

the 4 proposed "Segment A" stations allow for appreciable TOD. Moreover, depending on which station sites are selected in segment B (Mountlake Terrace) and segment C (Lynnwood), the potential for TOD at those sites is limited as well.....

Again, I get it that this section of LINK is never going to have the TOD potential of some of the station sites in Seattle. Likewise, I understand that it would be too much to expect that Sound Transit would site, design, and build every one of the Lynnwood LINK stations to maximize TOD potential.

But NONE??

Eight months after Sound Transit publicly commits to a policy of designing its transit projects to encourage and facilitate TOD -- **and the very next project design which is released to the public has little to none**. Why has this project choosen to disregard the Sound Transit board's guidance and directions? I hope you can realize how disappointing and frustrating this is..... and why I am asking questions about this obvious oversight and short-coming of the project as proposed.

At some point in design and scoping -- especially after the Sound Transit board adopted an official policy and commitment to TOD -- there should have been a recognition that the current design was not meeting Sound Transit's own criteria.

So we are now at a point in the process where the public is to comment on the alternatives listed in the DEIS -- and yet the list of alternatives is very obviously incomplete, since no alternatives provide even an average amount of TOD potential. In failing to develop a design which meets Sound Transit's own policies and goals, I find that the DEIS is deeply flawed.

It seems like the lessons learned by Sound Transit a mere ten years have already been forgotten. At that time, the preferred alternative of locating a LINK station alongside the highway at NE 65th was realized to be a mistake --both by the community AND the Sound Transit Board-- simply on the basis of the lack of TOD potential.

No transit station which is sited immediately adjacent to a highway will ever encourage --or even allow for-- effective TOD and integration into the surrounding community. By definition and simply geometry, half of the land adjacent to a station located immediately next to a highway can never be developed, because it is taken up by the highway itself. And then the other half of the the land adjacent to the station will never foster good, valuable, and attractive urban development, because all of that property, by definition, is next to a highway. Shifting the alignment even a block or two makes a world of difference, and that is exactly what Sound Transit choose to do at NE 65th -- even though it meant that the costs of developing that segment are going to be higher.

I understand that it must seem the obvious solution to run LINK along the edge of I-5 from Northgate to Lynnwood -- its simpler, and probably cheaper. But by choosing this 'easy' way, Sound Transit has disregarded what it has already learned about station areas. North

of Northgate does not suddenly turn into a rural area, which simply needs to accommodate the passage of a train. Rather than serving the city of Shoreline, and helping to foster transit-oriented neighborhoods within the station areas, the current Lynnwood LINK design is little more than a commuter rail line.

The DEIS, as it is currently written, basically only allows a choice of which type of Park-and-Ride station (at-grade or elevated; where to build the huge parking structure) the public wants to accept. This is not a real choice, and doesn't allow for meaningful public input. The currently proposed station locations and siting don't allow for significant Transit-Oriented-Development, or efficient integration -- and that is exactly what is needed if LINK is to have a consequential positive impact throughout our area.

If the Lynnwood LINK is to truly serve the communities north of Seattle --and to meet the criteria, strategies, policies, and goals set by Sound Transit-- then a re-examination of the project's design is necessary.

Sound Transit needs to be part of creating a transit system, NOT just the builder of a railroad.

regards--

andy

Capt. Andrew Reay-Ellers

home: 206 - 362 - 3799
cell: 206 - 552 - 1961

Swift, Lauren

From: Robert Spires <spiresr@live.com>
Sent: Wednesday, August 28, 2013 10:40 AM
To: Lynnwood Link DEIS
Subject: Lynnwood Link Extension

I-084-001 Review of Segment A alternatives eliminated any of my objection by eleminating my personal property loss.
Thanks!!!
Robert and Vimolrat Spires.

1

I-084-001

Thank you for your comment.

TO WHOM IT MAY CONCERN;

I-085-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

8/25/13

2517 171st St SE Bothell WA 98012

I-085-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

I-086-001 PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

RON CARR

I-086-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

I-087-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Nancy Tennison 8-25-2013
2517 171st St SE Bothell WA. 98012

I-087-001

Thank you for your comment stating a preference for Alternative C1.

TO WHOM IT MAY CONCERN;

I-088-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

[illegible] 6/25/13

12606 [illegible] #1-E

Everett, WA 98204

I-088-001

Thank you for your comment stating a preference for Alternative C1.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Eileen Horner

ADDRESS: 1037 NE 187th

CITY: Shoreline STATE: WA ZIP CODE: 98155-2218

EMAIL ADDRESS: RHORNER7@JUNO.COM

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-089-001

185 st Station
Option 1 with garage on west side
is the choice we PREFER.

Jayne & Eileen Horner

SOUNDTRANSIT
RIDE THE WAVE

I-089-001

Thank you for your comment stating a preference for the NE 185th Street Station, Option 1, included in Alternative A1.

Lynnwood Link Extension

Submit your comments by September 23, 2013

Your comments on the Draft EIS will help the Sound Transit Board identify a preferred alternative this fall and will be responded to in the Final EIS (expected in 2014).

BY EMAIL: LynnwoodLinkDEIS@soundtransit.org

BY MAIL: Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

Thank you for your input!

TO SUBMIT YOUR COMMENT BY MAIL:

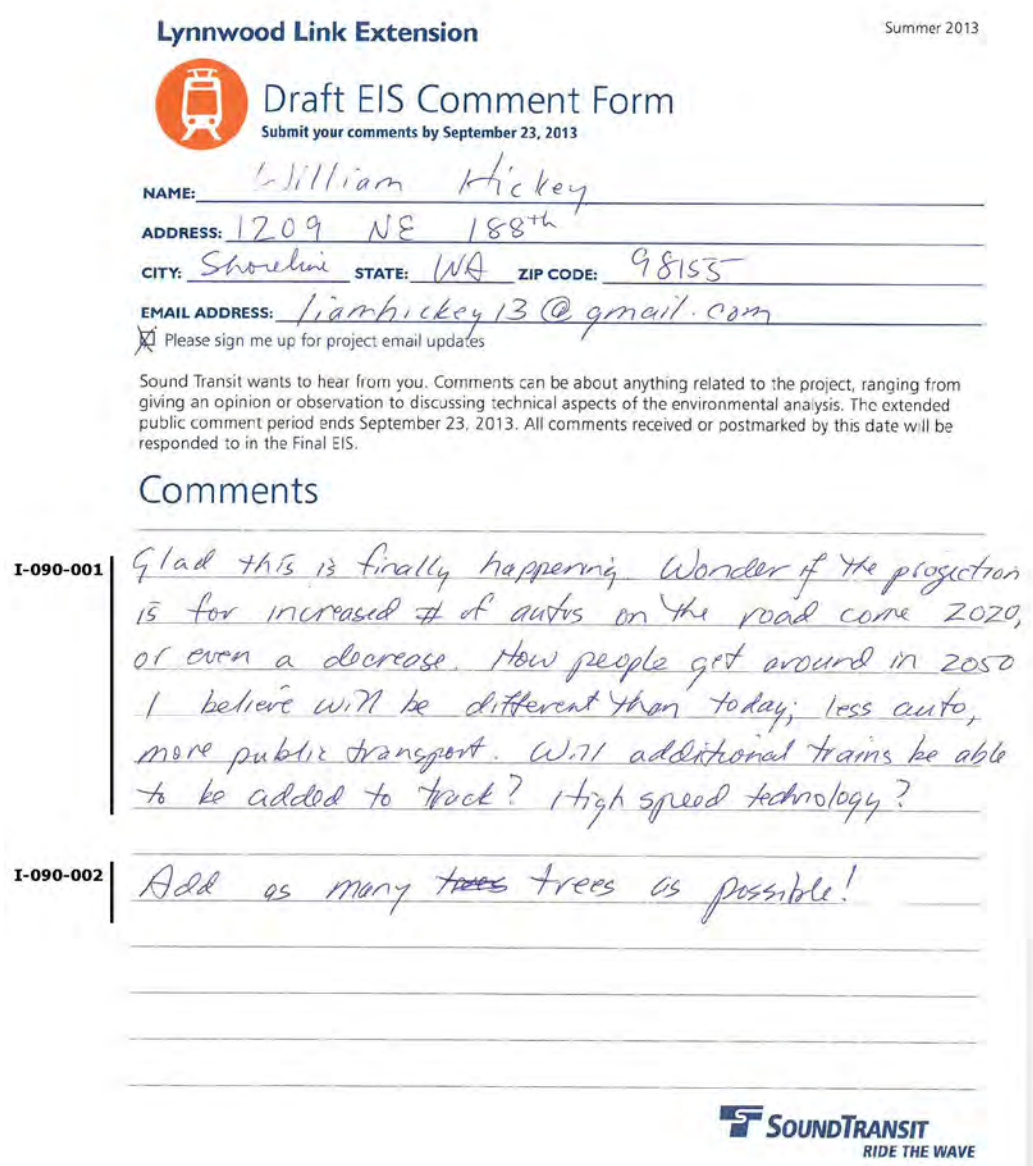
Fold this page and seal with tape, stamp and mail to address provided.

SOUNDTRANSIT
RIDE THE WAVE

U.S. Department of Transportation
Federal Transit Administration

Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

PLACE STAMP HERE



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: William Hickey

ADDRESS: 1209 NE 188th

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: liamhickey13@gmail.com

☒ Please sign me up for project email updates

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Comments

I-090-001 Glad this is finally happening. Wonder if the projection is for increased # of autos on the road come 2020, or even a decrease. How people get around in 2050 I believe will be different than today; less auto, more public transport. Will additional trains be able to be added to track? High speed technology?

I-090-002 Add as many ~~trees~~ trees as possible!

SOUNDTRANSIT RIDE THE WAVE

I-090-001

Thank you for your comment concerning changes in traffic in the future. Analysis of 2020 traffic volumes is not presented in the EIS, however, projected traffic volumes for 2035 with and without the proposed Lynnwood Link Extension project are discussed. See Table 3-7, Screenline Volumes and Volume-to-Capacity Ratios. Comparison of these traffic volumes in this table show a consistent reduction in traffic volumes with the Light Rail Alternative.

Section 2.5.4 Light Rail Operations discusses the planned operation of the light rail service with four-car trains. Train frequency could increase as demand increases.

High-speed technology could not be implemented without complete reconstruction of the rail tracks, station platforms, operating system, as well as the purchase of all new trains. Moreover, operation of a high-speed train system would not be appropriate considering the relatively short distances between the transit stations.

I-090-002

Sound Transit will be meeting the tree replacement requirements of the corridor cities as well as WSDOT.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Carolyn Anderson

ADDRESS: 20164 – 48th Ave W. #16

CITY: Lynnwood STATE: WA ZIP CODE: 98036

EMAIL ADDRESS: camystic7@gmail.com

☑ Please sign me up for project email updates

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Comments

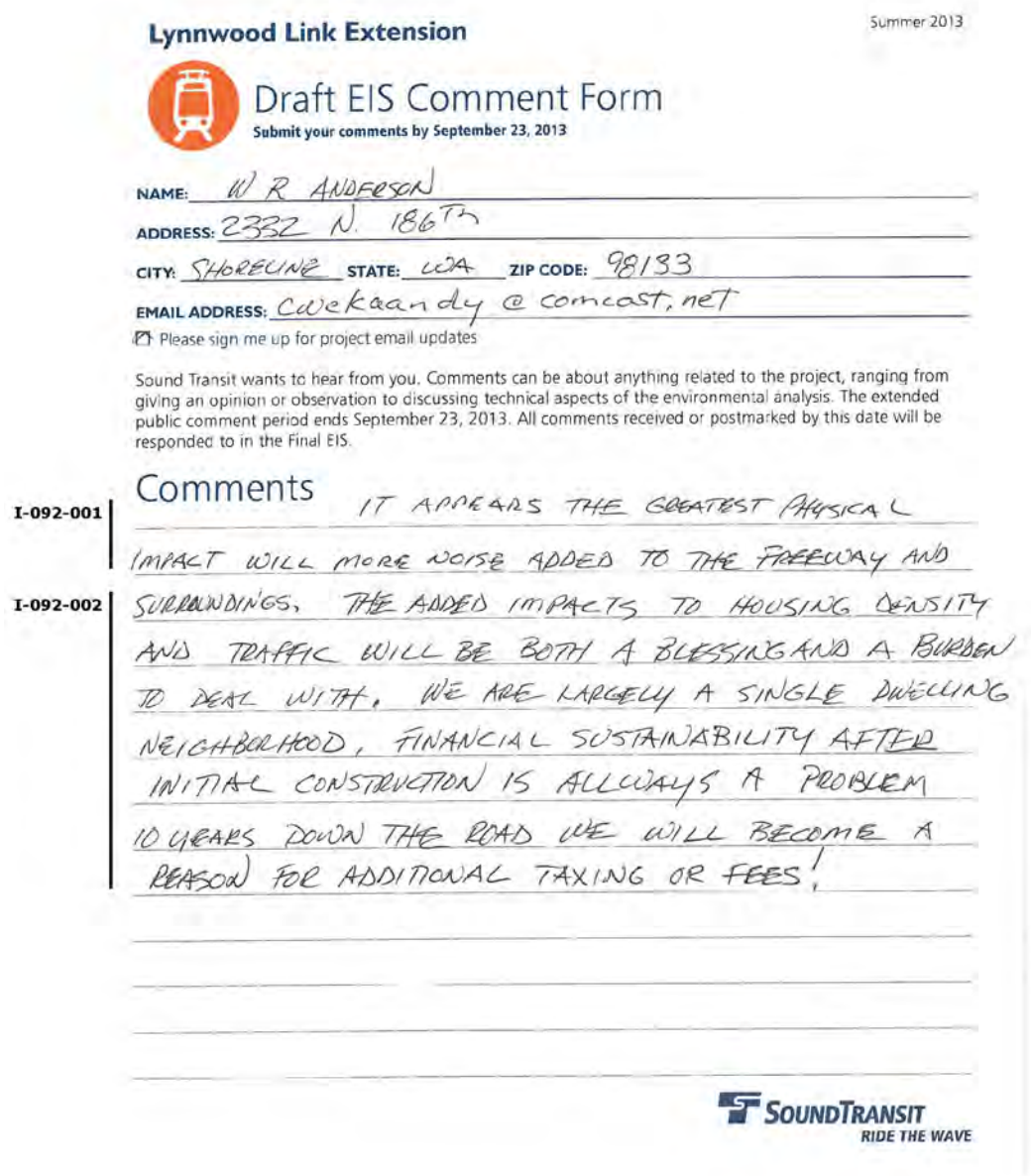
I-091-001

Prefer to see Section C-3 option built instead of C-1 or C-2. Save the creek & wetlands & don't tear down apt./condo Bldgs or single family homes.

SOUNDTRANSIT RIDE THE WAVE

I-091-001

Thank you for your comment stating a preference for Alternative C3, due to reduced impacts on Scriber Creek and wetlands, Scriber Creek Park, and residences. The Sound Transit Board identified a modified C3 as the Preferred Alternative.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: W R ANDERSON

ADDRESS: 2332 N. 186TH

CITY: SHORELINE STATE: WA ZIP CODE: 98133

EMAIL ADDRESS: cwekaandy@comcast.net

☑ Please sign me up for project email updates

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Comments

I-092-001 IT APPEARS THE GREATEST PHYSICAL IMPACT WILL MORE NOISE ADDED TO THE FREEWAY AND

I-092-002 SURROUNDINGS. THE ADDED IMPACTS TO HOUSING DENSITY AND TRAFFIC WILL BE BOTH A BLESSING AND A BURDEN TO DEAL WITH. WE ARE LARGELY A SINGLE DWELLING NEIGHBORHOOD, FINANCIAL SUSTAINABILITY AFTER INITIAL CONSTRUCTION IS ALLWAYS A PROBLEM 10 YEARS DOWN THE ROAD WE WILL BECOME A REASON FOR ADDITIONAL TAXING OR FEES!

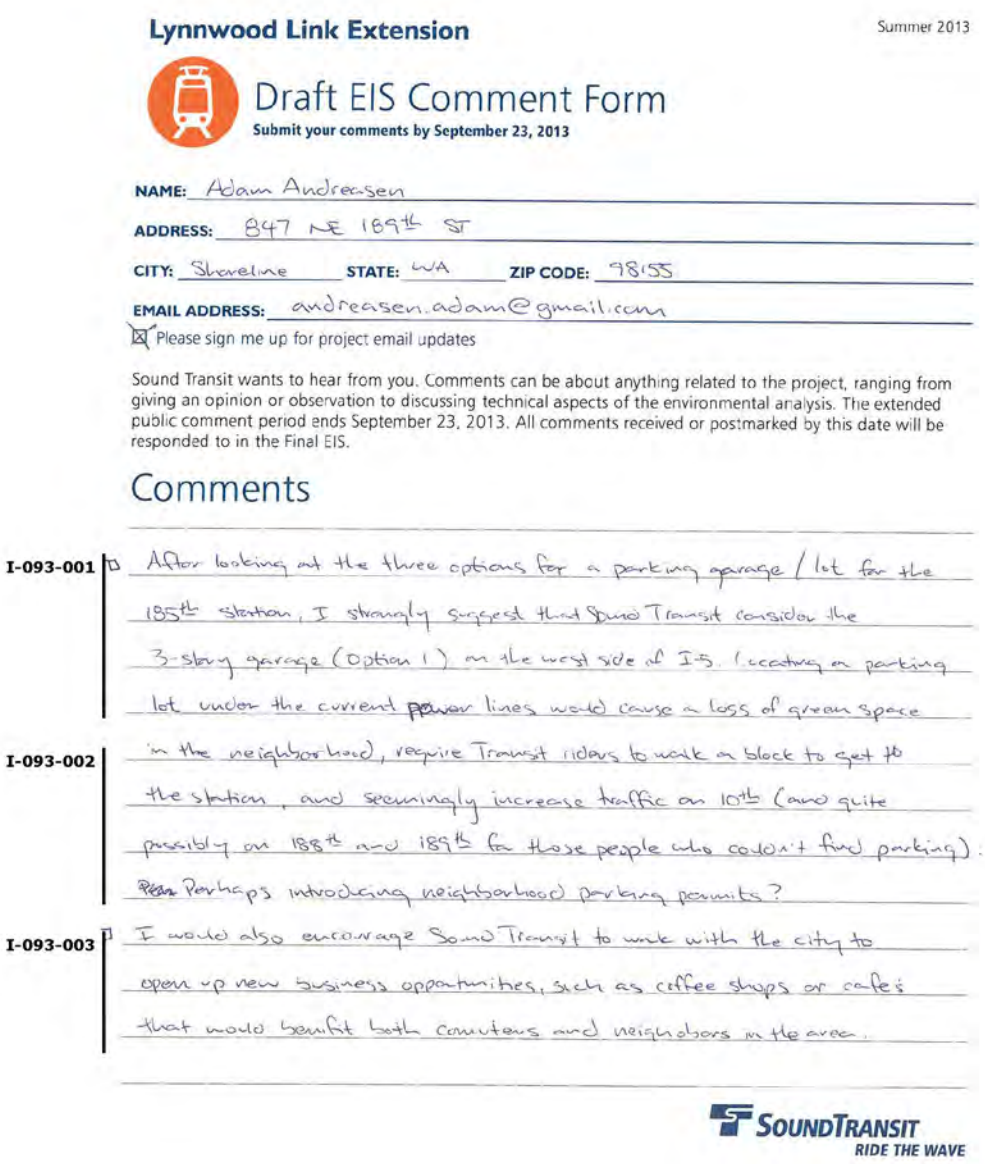
SOUNDTRANSIT RIDE THE WAVE

I-092-001

The noise analysis for the Lynnwood Link Extension uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. Sound Transit's policy is to mitigate moderate or severe impacts. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

I-092-002

The local jurisdictions control zoning and development regulations and policies. Most of the areas along the alignment have relatively limited transit oriented development potential due to the residential character of the neighborhoods surrounding the identified transit stations. The exception would be the area around the Lynnwood Transit Center and the Mountlake Terrace station area both of which would have moderate to strong TOD potential. Sections 4.2.4 and 4.3.4 describe the indirect and secondary impacts for land use and economics, respectively. Section 5.3.1 of the Draft EIS presents the operation and maintenance costs for the Lynnwood Link Extension, which is about $16 million per year.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Adam Andreasen

ADDRESS: 847 NE 189th ST

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: andreasen.adam@gmail.com

☒ Please sign me up for project email updates

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Comments

I-093-001 After looking at the three options for a parking garage / lot for the 185th station, I strongly suggest that Sound Transit consider the 3-story garage (Option 1) on the west side of I-5. Locating a parking lot under the current power lines would cause a loss of green space

I-093-002 in the neighborhood, require Transit riders to walk a block to get to the station, and seemingly increase traffic on 10th (and quite possibly on 188th and 189th for those people who couldn't find parking). Perhaps introducing neighborhood parking permits?

I-093-003 I would also encourage Sound Transit to work with the city to open up new business opportunities, such as coffee shops or cafe's that would benefit both commuters and neighbors in the area.

SOUNDTRANSIT RIDE THE WAVE

I-093-001

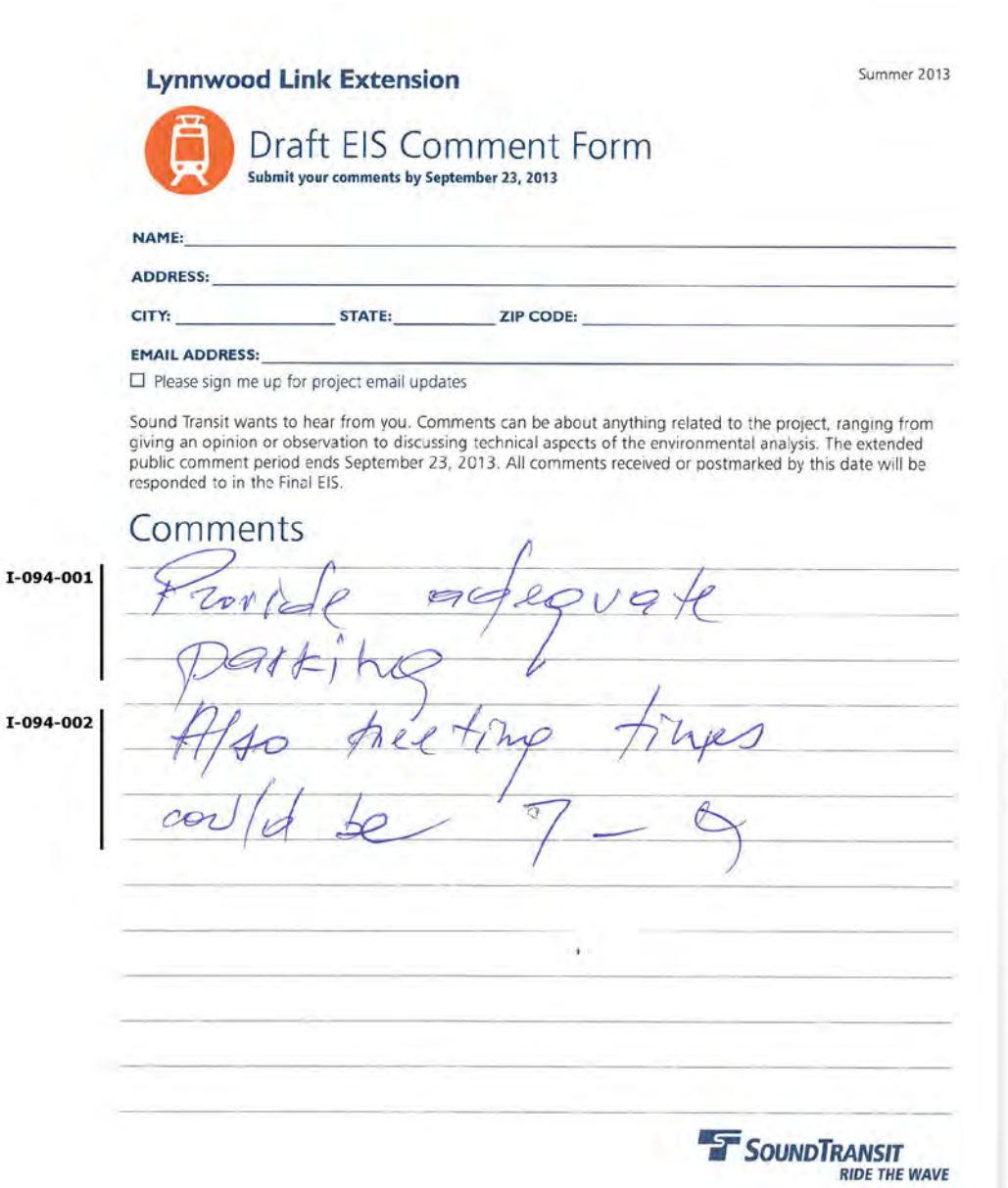
Thank you for stating your preference for Option 1 of the NE 185th Street Station.

I-093-002

The option to introduce neighborhood parking permits to manage the spillover parking is included in mitigation. It would be up to the City of Shoreline to implement a neighborhood parking permit program.

I-093-003

Thank you for your interest in Lynnwood Link Extension and your comment regarding possible commercial development near the 185th Street Station. Commercial uses require allowable zoning and must meet development requirements. The City has developed a subarea plan near the proposed 185th Street Station that may permit some commercial development near the station.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

EMAIL ADDRESS: _____

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Comments

I-094-001

Provide adequate parking

I-094-002

Also meeting times could be 7 – 9

SOUNDTRANSIT RIDE THE WAVE

I-094-001

The park-and-ride lots have generally been sized to accommodate a balance between forecasted parking demand and minimizing potential impacts created by the facility.

I-094-002

Thank you for your suggestion. The public meetings that were held during public comment period for the Draft EIS were held from 5:30 p.m. to 8:00 p.m. and were well attended. In addition to the public open house/public hearing, there were other opportunities to comment including sending written comments and emails directly to Sound Transit.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

EMAIL ADDRESS: _____

☐ Please sign me up for project email updates

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Comments

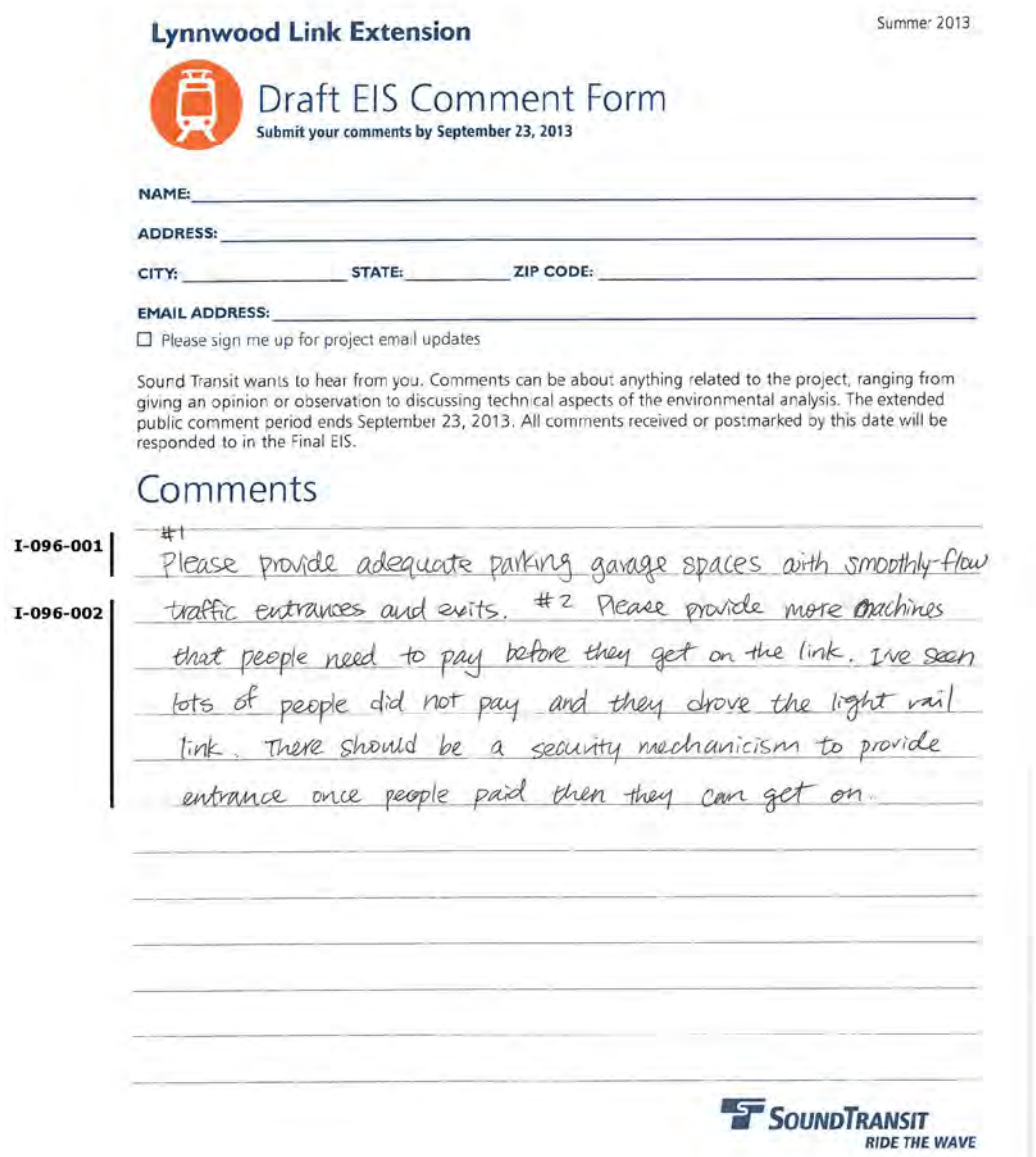
I-095-001

This comment pertains to the Lynnwood Light Rail Link C_1, C_2, and C_3 alternative routes. As a resident of Lynnwood that lives in the residential Single family Neighborhood that is ~~almost~~ directly across from the intended project area. I have determined by looking at the information provided in the DEIS taking special consideration the comparisons of all three routes and the serious impacts to the surrounding residents and wildlife habitat. I find that the C_1 and C_2 alternative routes have a serious and severely negative impact on the neighborhood in and around the light Rail Routes. The C_3 alternative route next to the Freeway I-5 has the least negative impacts on the surrounding neighborhood. I fully support Sound Transit to pursue the C_3 alternative route going into Lynnwood.

SOUNDTRANSIT
RIDE THE WAVE

I-095-001

Thank you for your comment stating your concerns for adverse residential, wildlife habitat, and neighborhood impacts of the Segment C alternatives and your preference for Alternative C3. A modified version of Alternative C3 was identified as the Preferred Alternative.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

EMAIL ADDRESS: _____

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Comments

I-096-001 #1 Please provide adequate parking garage spaces with smoothly-flow traffic entrances and exits.

I-096-002 #2 Please provide more machines that people need to pay before they get on the link. I've seen lots of people did not pay and they drove the light rail link. There should be a security mechanicism to provide entrance once people paid then they can get on.

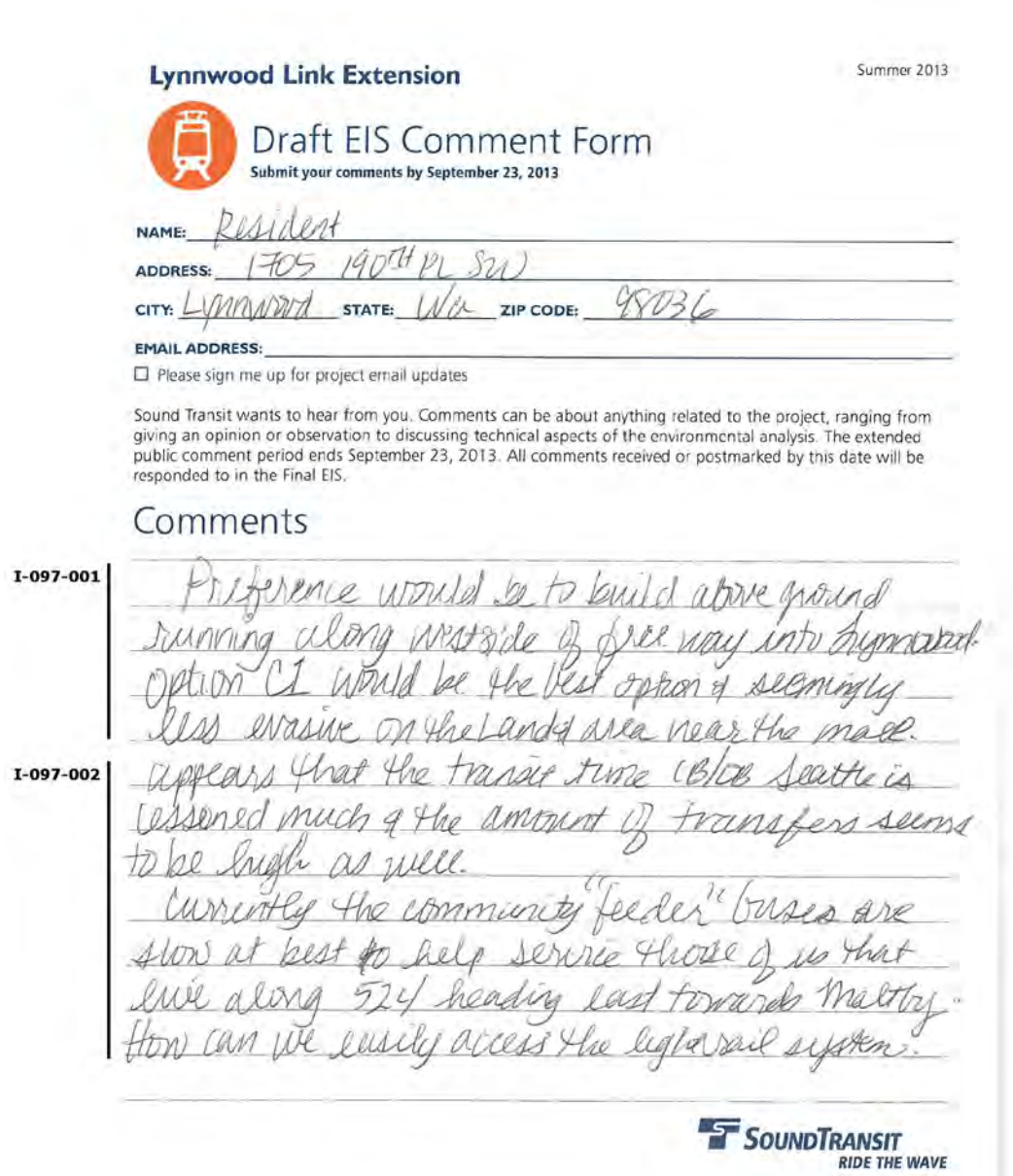
SOUNDTRANSIT RIDE THE WAVE

I-096-001

The park-and-ride lots have generally been sized to accommodate a balance between forecasted parking demand and minimizing potential impacts created by the facility. Station access designs are considering safe and effective access by all modes, and are being coordinated with local jurisdictions.

I-096-002

Thank you for your comment. Sound Transit has a fare enforcement system that includes on-board patrols and penalties for non-payment of fares. Stations will have ticket vending machines as well as card readers.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Resident

ADDRESS: 1705 190TH PL SW

CITY: Lynnwood STATE: WA ZIP CODE: 98036

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-097-001 Preference would be to build above ground running along westside of freeway into Lynnwood. Option C1 would be the best option & seemingly less evasive on the Landed area near the mall.

I-097-002 Appears that the transit time (b/c Seattle is lessened much & the amount of transfers seems to be high as well.

Currently the community "feeder" buses are slow at best to help service those of us that live along 524 heading east towards Mattby. How can we easily access the light rail system.

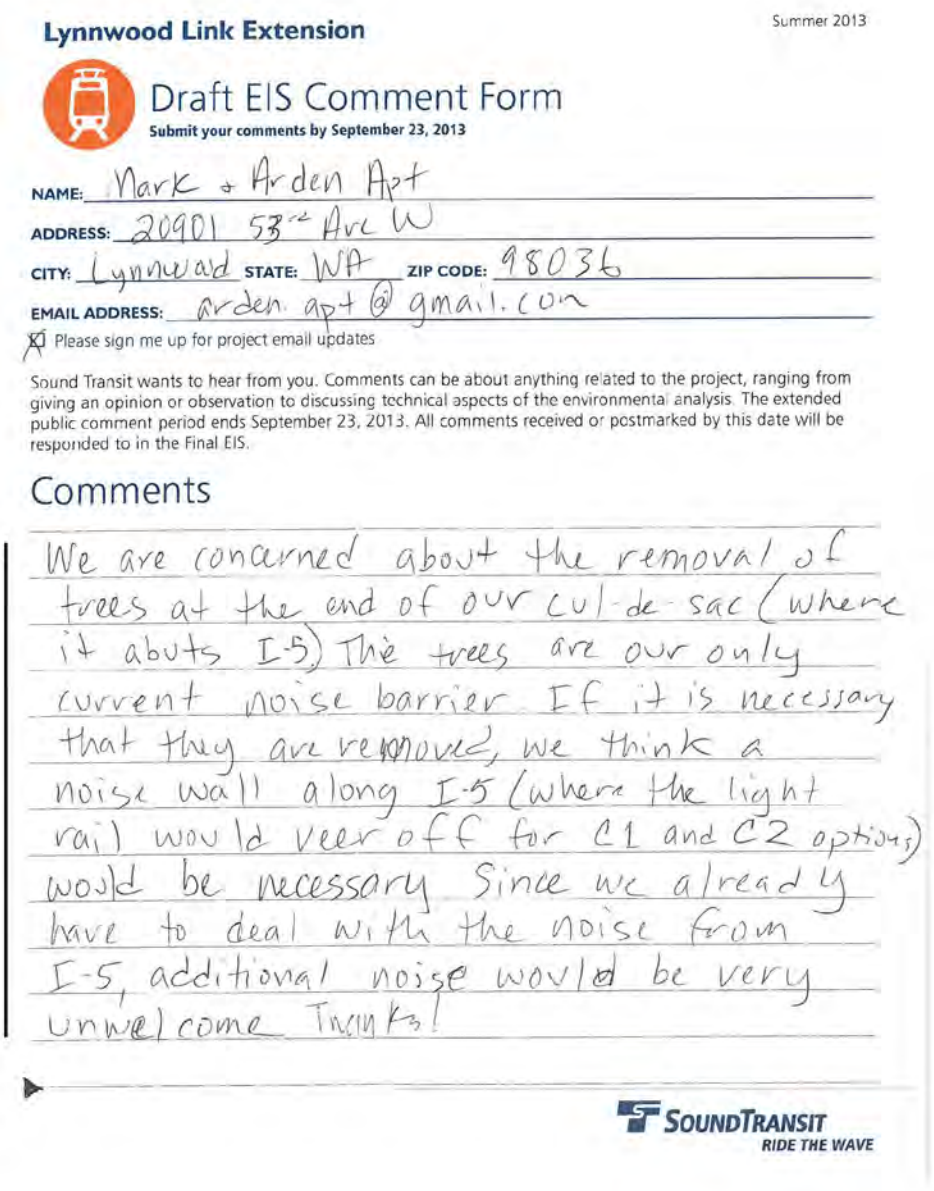
SOUNDTRANSIT RIDE THE WAVE

I-097-001

Thank you for your comment stating your preference for Option 2 of Alternative C1. Please see Chapter 2, Section 2.6.2 for a discussion of why west side alignments are not proposed south of Mountlake Terrace.

I-097-002

Thank you for your input. One of the benefits of the project would be to reduce the need for transfers and to reduce waiting times. Sound Transit will work further with local transit agencies to coordinate transit services to stations as the project approaches operation. However, new routes and services are the jurisdiction of local transit agencies. Each of the stations include pedestrian and bicycle improvements.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Mark + Arden Apt

ADDRESS: 20901 53rd Ave W

CITY: Lynnwood STATE: WA ZIP CODE: 98036

EMAIL ADDRESS: arden.apt@gmail.com

☒ Please sign me up for project email updates

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Comments

I-098-001

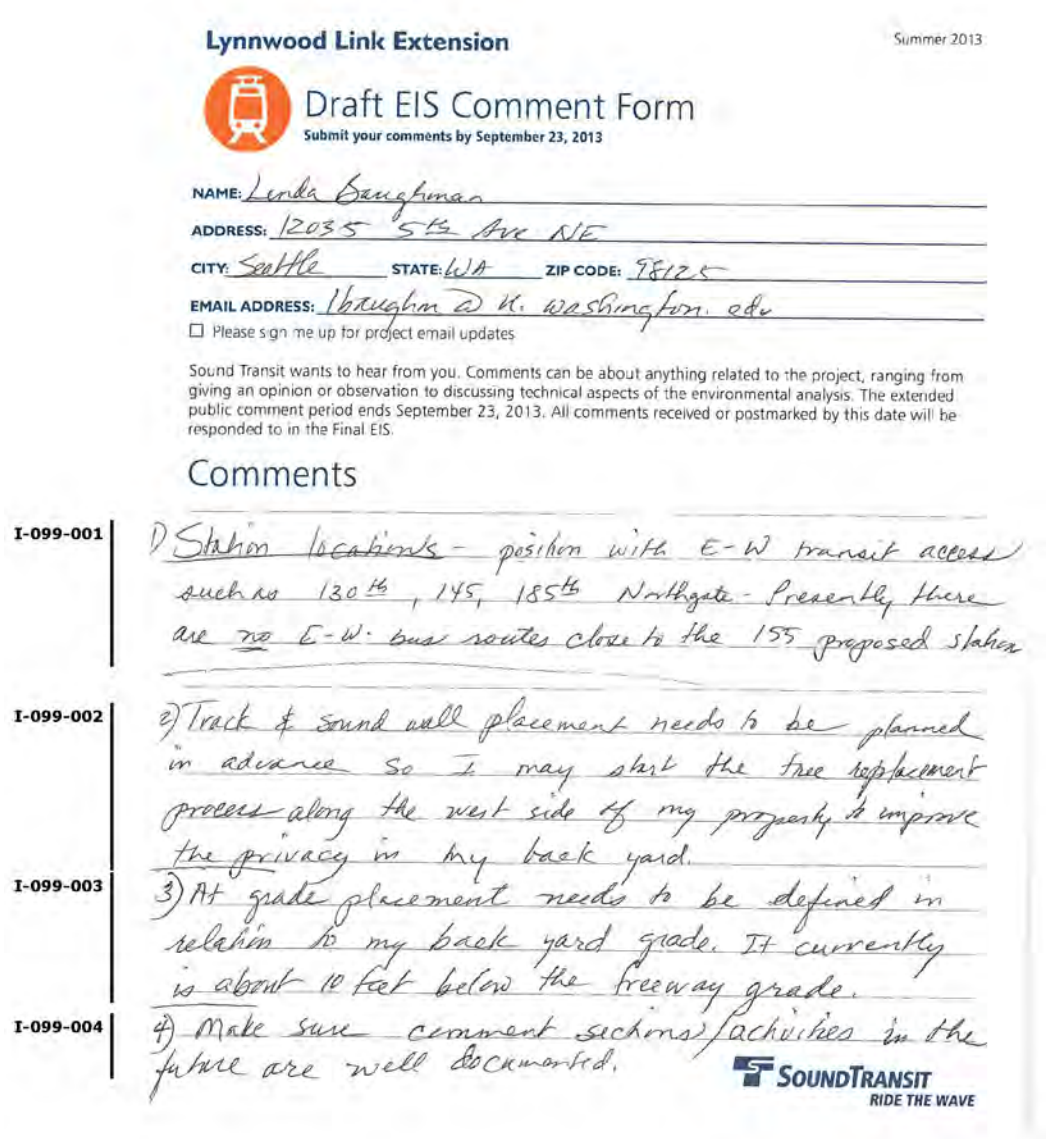
We are concerned about the removal of trees at the end of our cul-de-sac (where it abuts I-5) The trees are our only current noise barrier. If it is necessary that they are removed, we think a noise wall along I-5 (where the light rail would veer off for C1 and C2 options) would be necessary. Since we already have to deal with the noise from I-5, additional noise would be very unwelcome. Thanks!

SOUNDTRANSIT RIDE THE WAVE

I-098-001

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Sound walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, if any existing highway noise walls are removed, they will be replaced.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Linda Baughman

ADDRESS: 12035 5th Ave NE

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS: lbaughm@u.washington.edu

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-099-001 1) Station locations - position with E-W transit access such as 130th, 145, 185th Northgate - Presently there are no E-W bus routes close to the 155 proposed station

I-099-002 2) Track & sound wall placement needs to be planned in advance so I may start the tree replacement process along the west side of my property to improve the privacy in my back yard.

I-099-003 3) At grade placement needs to be defined in relation to my back yard grade. It currently is about 10 feet below the freeway grade.

I-099-004 4) Make sure comment sections/activities in the future are well documented.

SOUNDTRANSIT RIDE THE WAVE

I-099-001

Your preference for stations at 130th Street, 145th Street, and 185th Street due to east-west transit access is noted.

I-099-002

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. Sound Transit's policy is to mitigate moderate or severe impacts. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Sound walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, if any existing highway noise walls are removed, they will be replaced as part of the project. Sound Transit will coordinate with affected property owners as the project continues into final design.

I-099-003

During final design, Sound Transit will coordinate with adjacent property owners where the project would involve construction affecting their parcels.

I-099-004

Documentation of project activities started in 2010 during the alternatives analysis which included a Report and SEPA addendum (Sound Transit, September 2011). The Final EIS includes the public comments to the Draft EIS, and responses to those comments. Chapter 6 describes the opportunities for public input.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Leslie Basel

ADDRESS: 12300 33rd Ave NE #401

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS: basellc@speakeasy.org

☒ Please sign me up for project email updates

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Comments

I-100-001

130th Station is critical to knit together Greenwood, Haller Lake, Bitter Lake, Pinehurst, & Lake City into the light rail system.

If 130th is not going to be built - ~~those~~ commuters from ~~Aurora~~ those neighborhoods will 'swamp' the ~~park~~ Northgate transit P&R.

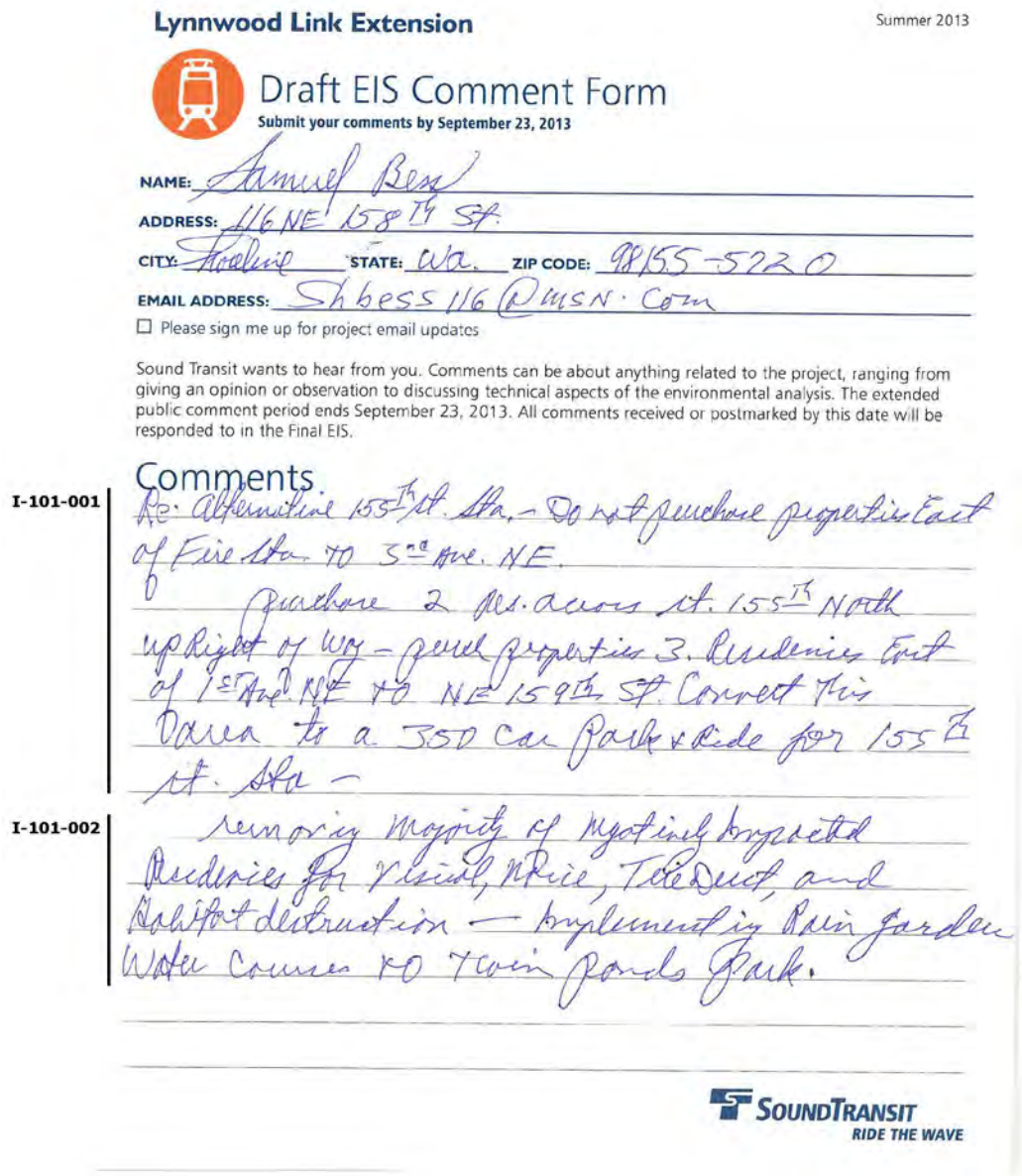
Either Elevated or at grade is fine. Since Northgate is elevated, at 145th will be ~~to~~ elevated (if built), ~~one probably~~ ~~wants~~ we probably don't want an up/down/up effect.

Thank you for having this open house.

SOUNDTRANSIT RIDE THE WAVE

I-100-001

The 130th Station is included as an option being considered in the Final EIS.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Samuel Bess

ADDRESS: 116 NE 158TH St.

CITY: Shoreline STATE: Wa. ZIP CODE: 98155-5220

EMAIL ADDRESS: Shbess116@msn.com

☐ Please sign me up for project email updates

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Comments

I-101-001 Re: Alternative 155th St. Sta. - Do not purchase properties East of Fire Sta. TO 5th Ave. NE.

Purchase 2 Res. acres at 155th North up Right of Way - parcel properties 3. Residencies East of 1st Ave NE TO NE 159th St. Convert this Area to a 350 Car Park & Ride for 155th St. Sta -

I-101-002 removing Majority of Mystical Impacted Residencies for Visual, Noise, Traffic, and Habitat destruction - Implementing Rain Garden Water Courses TO Twin Ponds Park.

SOUNDTRANSIT RIDE THE WAVE

I-101-001

Thank you for your comment, including your suggestion for an alternate 155th Street Station. The 155th Street Station is not part of the Preferred Alternative evaluated in the Final EIS. Final determinations of the property needs for the project, including acquisitions and displacements, will be based on the project's final design after Sound Transit completes the EIS process, selects the alternative to be built, and develops final engineering and design plans. Minimization of acquisitions, displacements, and relocations is a priority for Sound Transit.

I-101-002

Thank you for your comment.

TO WHOM IT MAY CONCERN;

6/22/13

I-102-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

M. BRIERLEY

424 N. 130TH St. Sea
98133-7910

I-102-001

Thank you for your comment stating a preference for Alternative C1.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Erick Bupp

ADDRESS: 18319 2nd AVE NE

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: Bgobupp@Gmail.com

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-103-001

I like the A-3 option for the Shoreline vicinity. Because its not the most expensive option and it will service our neighborhood very well

SOUNDTRANSIT RIDE THE WAVE

I-103-001

Thank you for your comment stating a preference for Alternative A3.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Kathleen Bopp

ADDRESS: 18319 2nd Ave NE

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: Kathebopp@gmail.com

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-104-001 I believe the A3 alternate for the 185th Street station would serve our neighborhood the best.

SOUNDTRANSIT RIDE THE WAVE

I-104-001

Thank you for stating your preference for Alternative A3.

Edvins Circenis
6834 – 40th Avenue NE
Seattle WA 98115-7532
ecircenis@mac.com

August 22, 2013

Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson Street
Seattle WA 98104

Dear members of the Sound Transit Board:

I-105-001

I am a member of the Seattle Latvian Lutheran Church.
I provided, without compensation, Architectural Design, Detail Design Drawings, and Structural Analysis for the construction of this Church and Community Center, which was built mostly by voluntary labor in 1971 and was dedicated to the Latvian Community on February 6, 1972.

The Latvian Lutheran Church has been notified prior to the DEIS publication that the property at 11710 - 3rd Avenue NE has been identified as one that Sound Transit may need to partially or fully acquire in order to construct the project under one or more alternatives.

Recognizing the seriousness of how this project may impact the Latvian Lutheran Church and North Seattle Communities, I am proposing for your consideration an option that, when properly executed, will save a number of properties from acquisition in the vicinity of the NE 117th Street.

Attachment A shows the current location of the I-5 lanes in the vicinity of the NE 117th Street. It is obvious that there is a lot more space on the West side of I-5 than on the East side.

To provide needed space for the proposed Sound Transit, the proposed alternative is to re-route locally the I-5 lanes, as needed, to the West in the existing I-5 right-of-way as shown in Attachment B.

I know, it is easier to condemn private property than it is to deal with federal government, but if you feel in your heart that it is worth saving the Latvian Lutheran Church, which is also a Center for the Baltic communities in the NW, I sincerely hope that the Sound Transit Board will give this alternate proposal its utmost consideration.

Thank you very much!

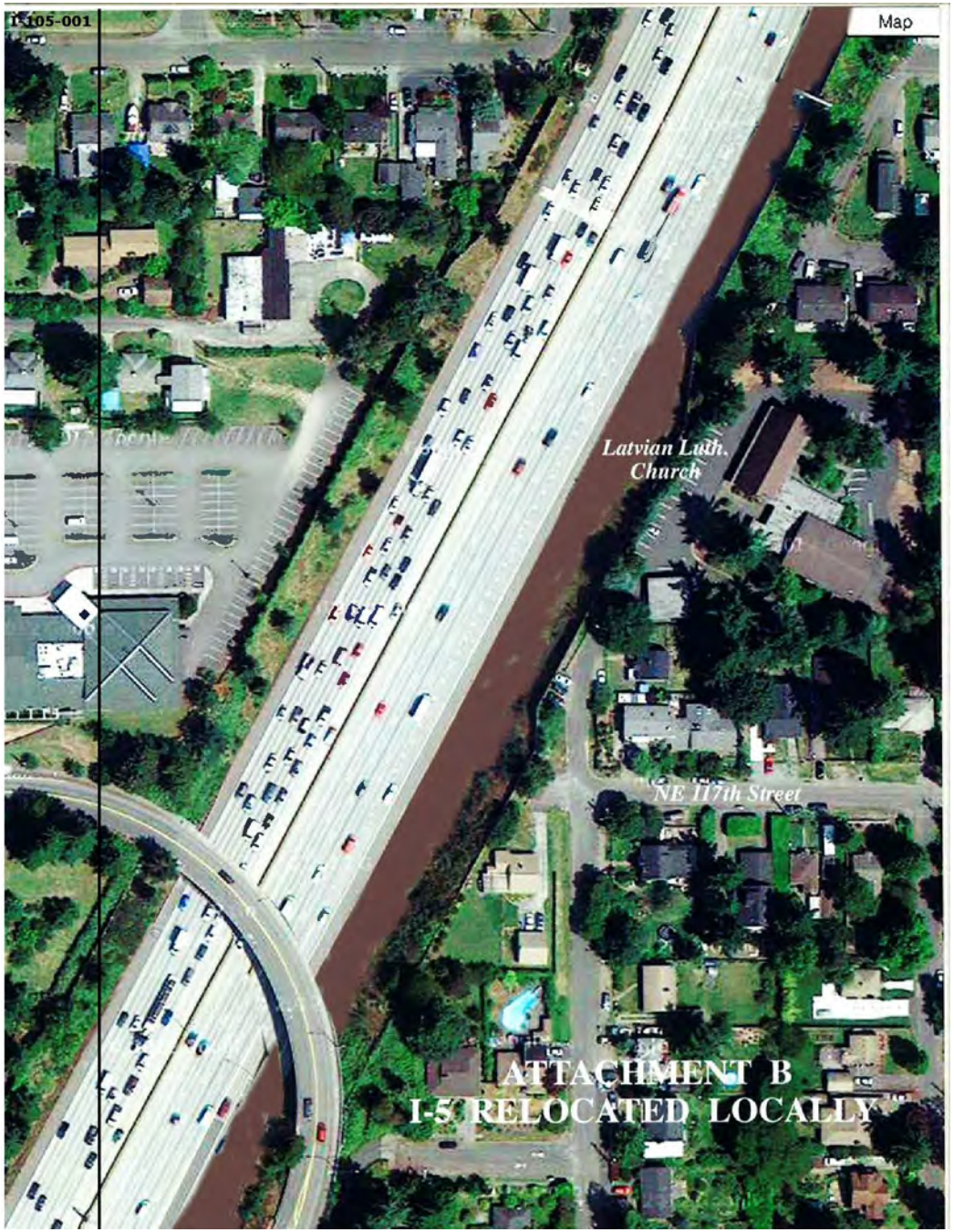
Sincerely,
Edvins Circenis
Property Manager,
Latvian Lutheran Church of Seattle

Edvins Circenis

I-105-001

The Preferred Alternative has been designed to avoid displacing the church. Any major modification to I-5 would be a less effective solution and involves higher levels of construction impacts, property impacts, and higher costs. Refer to Chapter 2 for a description of the Preferred Alternative.

Map
Latvian Luth. Church
NE 117th Street
ATTACHMENT A
I-5 CURRENT LOCATION


I-105-001
Map
Latvian Luth. Church
NE 117th Street
ATTACHMENT B
I-5 RELOCATED LOCALLY

COMMENTS ON LLE BY LYNNWOOD RESIDENT

Linden Clausen
20212 52nd Ave W
Lynnwood, WA
August 21, 2013
Lindenclausen@gmail.com

I-106-001

As a resident home owner, I am concerned that my family's quality of life will be degraded by the LLE, particularly Alternatives C1 and C2. I fear that congestion, noise, and vibration during operation of the link cannot be fully eliminated, only mitigated, and that disruption during the construction phase would be worse.

The EIS shows adverse impacts only near the guideway. Although my house is within that zone, I think it is likely that others will be affected. Chapter 4.7 states that there will be zero impacts after mitigation of noise. The level of disturbance can be lessened, but I feel it is misleading to state that it will be reduced to the point that there are no impacts.

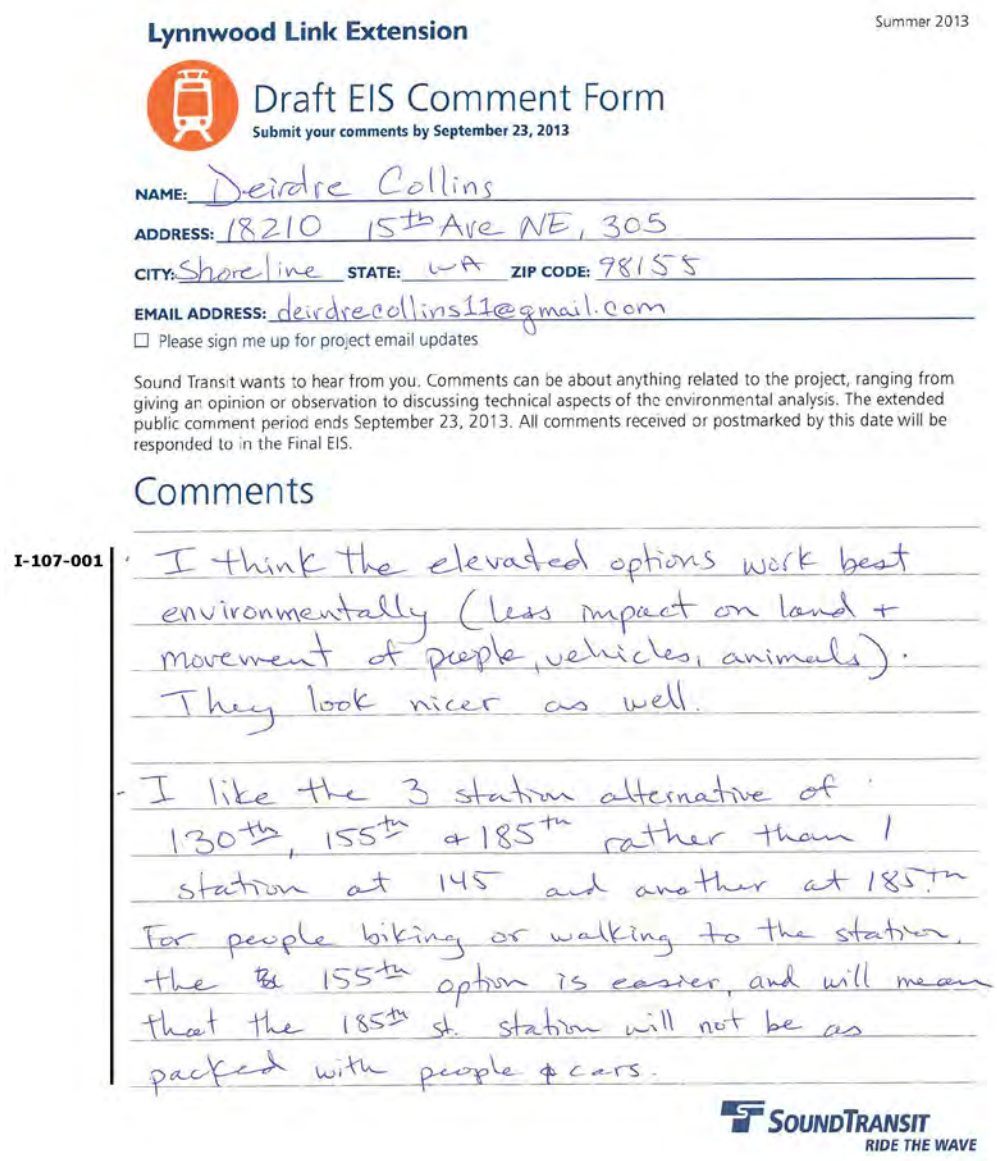
Adding insulation to buildings in the severe noise impact zone is offered as a method of mitigation. As most local homes do not have air conditioning, they need to open their windows for ventilation, especially in warm weather. I think open windows would defeat the purpose of the insulation. Is there consideration of adding air conditioning to insulation as part of noise mitigation?

I-106-001

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. The FTA criteria for noise are based on exterior noise levels and are more stringent than the criteria for traffic. Sound Transit's policy is to mitigate moderate or severe impacts. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS. Sound walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, if any existing highway noise walls are removed, they will be replaced as part of the project. For vibration, mitigation measures include track isolation systems, which are effective and typically reduce vibration to below the FTA criteria. Potential mitigation measures for vibrations are described in Section 4.7.7 of the Final EIS. For homes that still have impacts after mitigation, sound insulation may be considered. This form of mitigation can include improvements, such as new or upgraded windows, improved door seals and other measures to maintain low interior noise levels. This package would also include a fresh air circulation system or some form of fresh air exchange.

In terms of congestion, in areas where light rail creates an impact, the project identifies improvements as mitigation that would return local intersections in the area to the same as they would be without the project or better. Please see section 3.6 for potential mitigation measures for local streets and arterials.

While the EIS describes construction impacts, some of which will be unavoidable, the project also identifies mitigation in each of the environmental topic areas in Chapters 3 and 4 to reduce their severity, and construction is not expected to impair people's ability to live, work and conduct their normal activities in the communities along the project. Alternatives C1 and C2, which would be closest to your home, are not the Preferred Alternative.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Deirdre Collins

ADDRESS: 18210 15th Ave NE, 305

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: deirdrecollins11@gmail.com

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-107-001

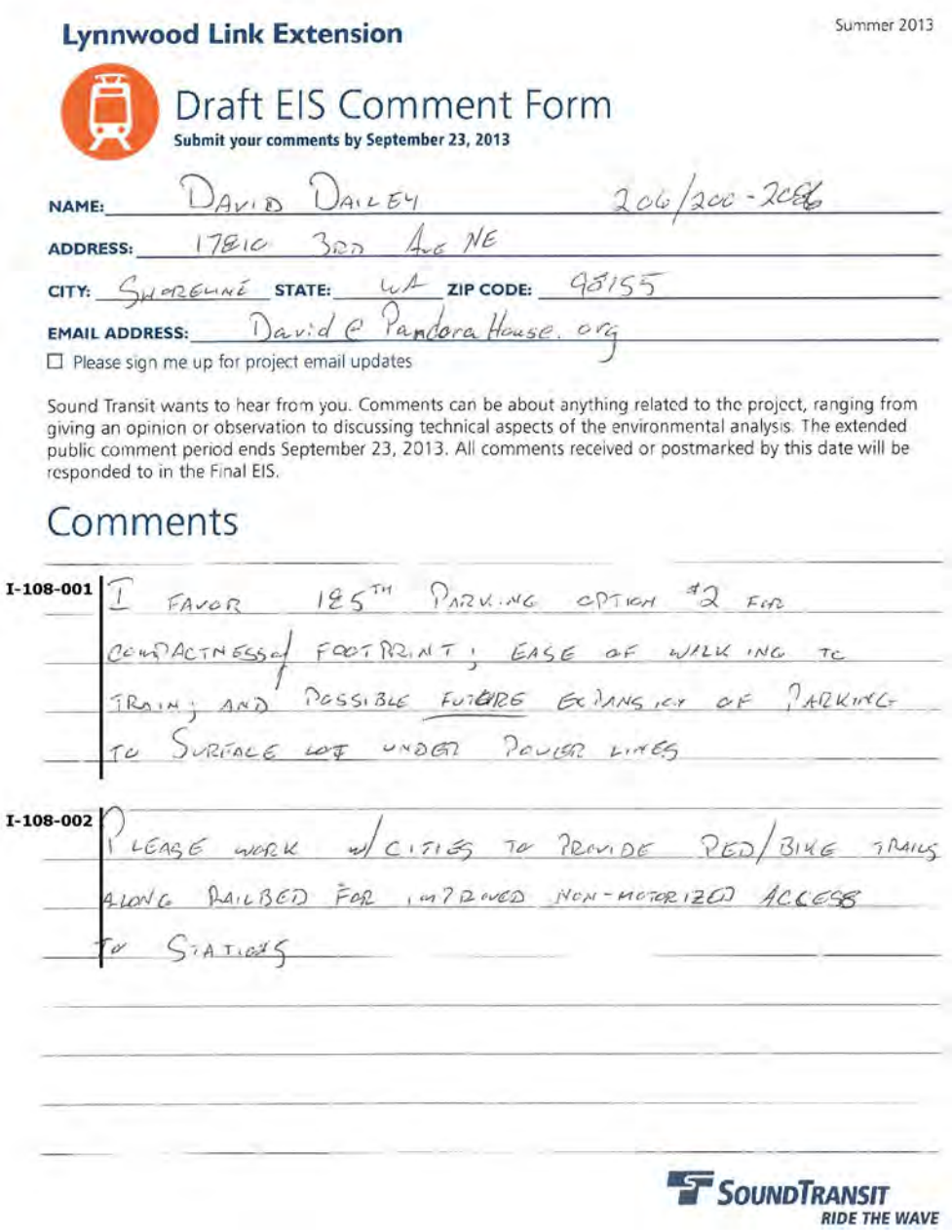
- I think the elevated options work best environmentally (less impact on land + movement of people, vehicles, animals). They look nicer as well.

- I like the 3 station alternative of 130th, 155th & 185th rather than 1 station at 145 and another at 185th. For people biking or walking to the station, the 155th option is easier, and will mean that the 185th st. station will not be as packed with people & cars.

SOUNDTRANSIT RIDE THE WAVE

I-107-001

Thank you for your comment stating a preference for the Segment A elevated alternatives with stations at 130th, 155th, and 185th. All of the project alternatives that were in the Draft EIS are included in the Final EIS. However, Sound Transit selected Alternative A1, with some modifications, as part of the Preferred Alternative. This alternative would include stations at 145th Street NE and 185 Street NE. Please see the Chapter 2 of the Final EIS for a description of the Preferred Alternative.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: DAVID DAILEY 206/200-2686

ADDRESS: 17816 3RD AVE NE

CITY: SHORELINE STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: David@PandoraHouse.org

☐ Please sign me up for project email updates

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Comments

I-108-001 I FAVOR 185TH PARKING OPTION #2 FOR COMPACTNESS/ FOOTPRINT; EASE OF WALKING TO TRAIN; AND POSSIBLE FUTURE EXPANSION OF PARKING TO SURFACE LOT UNDER POWER LINES

I-108-002 PLEASE WORK W/CITIES TO PROVIDE PED/BIKE TRAILS ALONG RAILBED FOR IMPROVED NON-MOTORIZED ACCESS TO STATIONS

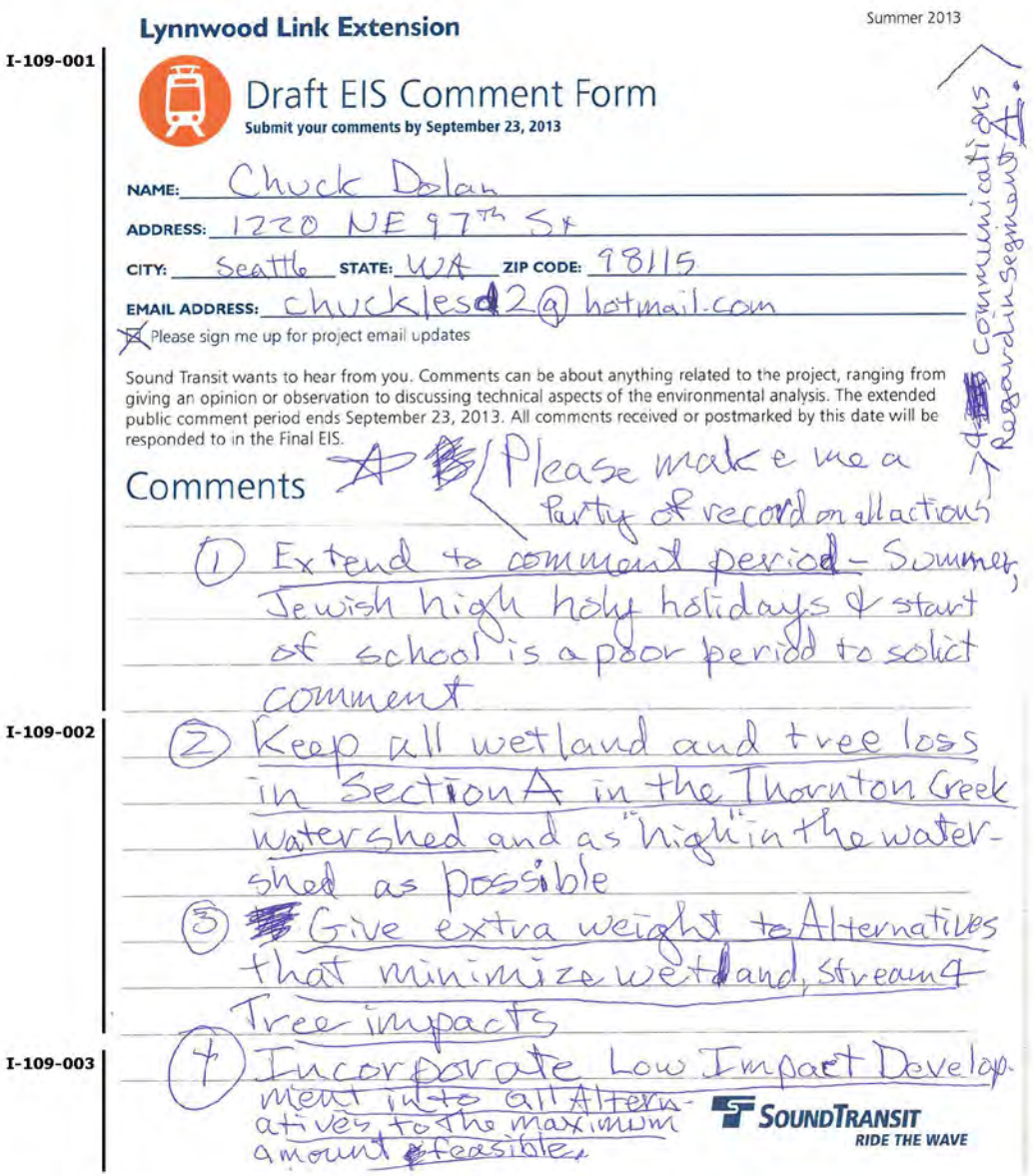
SOUNDTRANSIT RIDE THE WAVE

I-108-001

Your comment is acknowledged. All of the project alternatives that were in the Draft EIS are included in the Final EIS. However, Sound Transit has identified its Preferred Alternative for Segment A, which includes a station as described as Option 1 under Alternative A1 in the Draft EIS. After publication of the Final EIS, the Sound Transit Board will select the alternative to be built.

I-108-002

Thank you for the suggestions. Sound Transit has been coordinating with the local agencies to develop pedestrian and bicycle improvements in station areas and along rebuilt streets. A continuous trail along the rail line is not currently included as part of the project, largely due to the constrained right-of-way and the increases costs and impacts that would result.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Chuck Dolan

ADDRESS: 1220 NE 97th St

CITY: Seattle STATE: WA ZIP CODE: 98115

EMAIL ADDRESS: chucklesd2@hotmail.com

☒ Please sign me up for project email updates

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Comments

Please make me a party of record on all actions

(1) Extend to comment period – Summer, Jewish high holy holidays & start of school is a poor period to solicit comment

(2) Keep all wetland and tree loss in Section A in the Thornton Creek watershed and as "high" in the watershed as possible

(3) Give extra weight to Alternatives that minimize wetland, stream & Tree impacts

(4) Incorporate Low Impact Development into all Alternatives to the maximum amount feasible.

4 communications Regarding Segment A

SOUNDTRANSIT RIDE THE WAVE

I-109-001

I-109-002

I-109-003

I-109-001

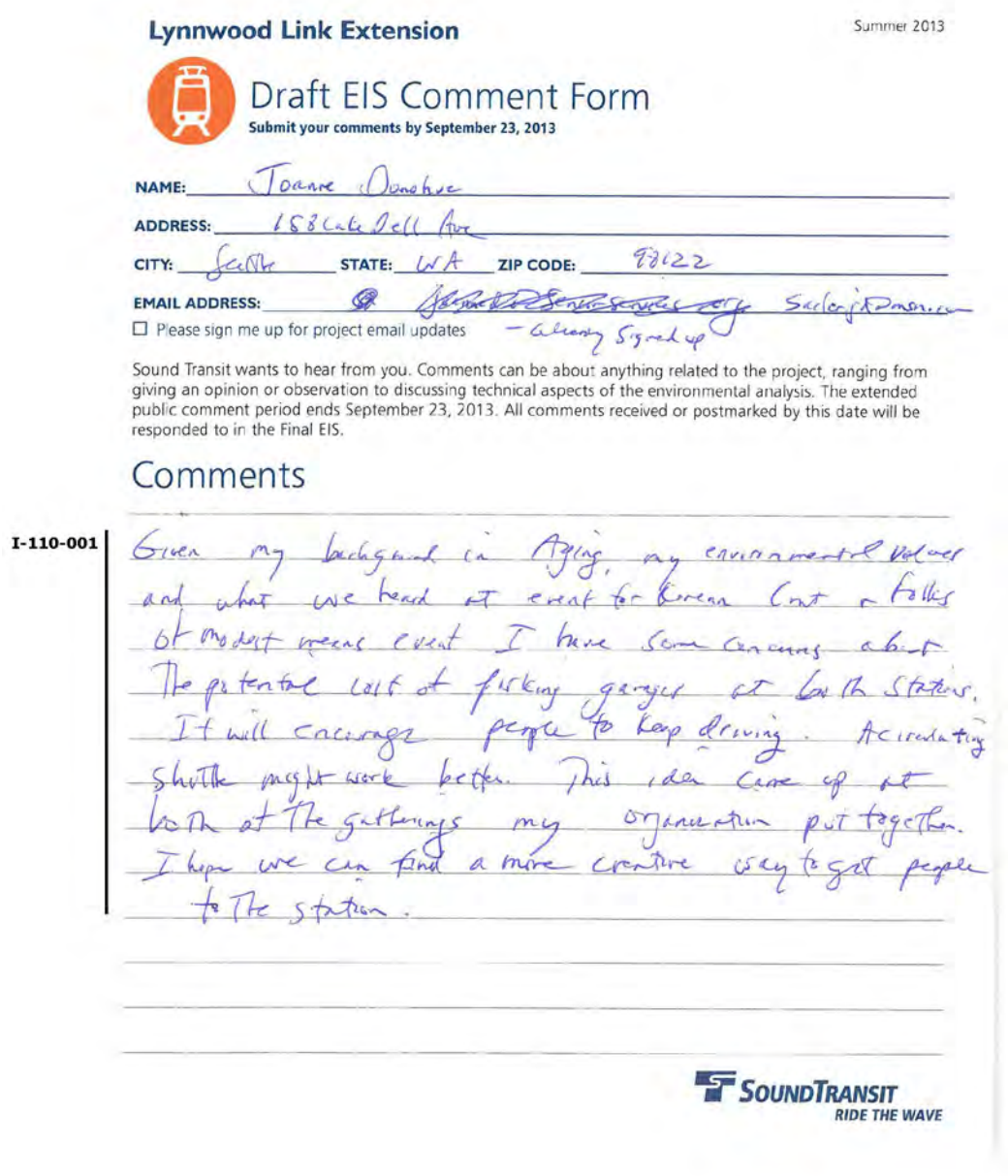
Sound Transit does not have a party of record designation for those interested in the project. However, your email address, as given in this comment, has been added to the project's email update list, per this written request. The public comment period for the Draft EIS was for an extended period of 60 days (45 days are required) from July 26, 2013 to September 23, 2013 to allow greater opportunity for public comment.

I-109-002

Thank you. Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts to environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure there is no net loss of ecosystem function and acreage as a result of agency projects. The Lynnwood Link Extension would mitigate impacts on ecosystem resources in accordance with the mitigation sequencing requirements established by the Clean Water Act and local Critical Areas Ordinances. If project-specific mitigation is developed for this project, site selection would emphasize a watershed approach. Plans would be developed in cooperation with resource agencies. See section 4.8.6 of the Final EIS for details.

I-109-003

Thank you for your comment. In identifying a Preferred Alternative, the Sound Transit Board considered the information in the Draft EIS, which detailed ecosystem, visual, and other impacts. Sound Transit requires all projects to consider low-impact development (LID) methods as a first choice for stormwater treatment (Design Criteria Manual, July 2012). Section 4.11.9 of the Final EIS describes potential LID approaches the project would consider.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Joanne Donohue

ADDRESS: 158 Lake Dell Ave

CITY: Seattle STATE: WA ZIP CODE: 98122

EMAIL ADDRESS: [redacted] Sadie@Donohue

☐ Please sign me up for project email updates – already signed up

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Comments

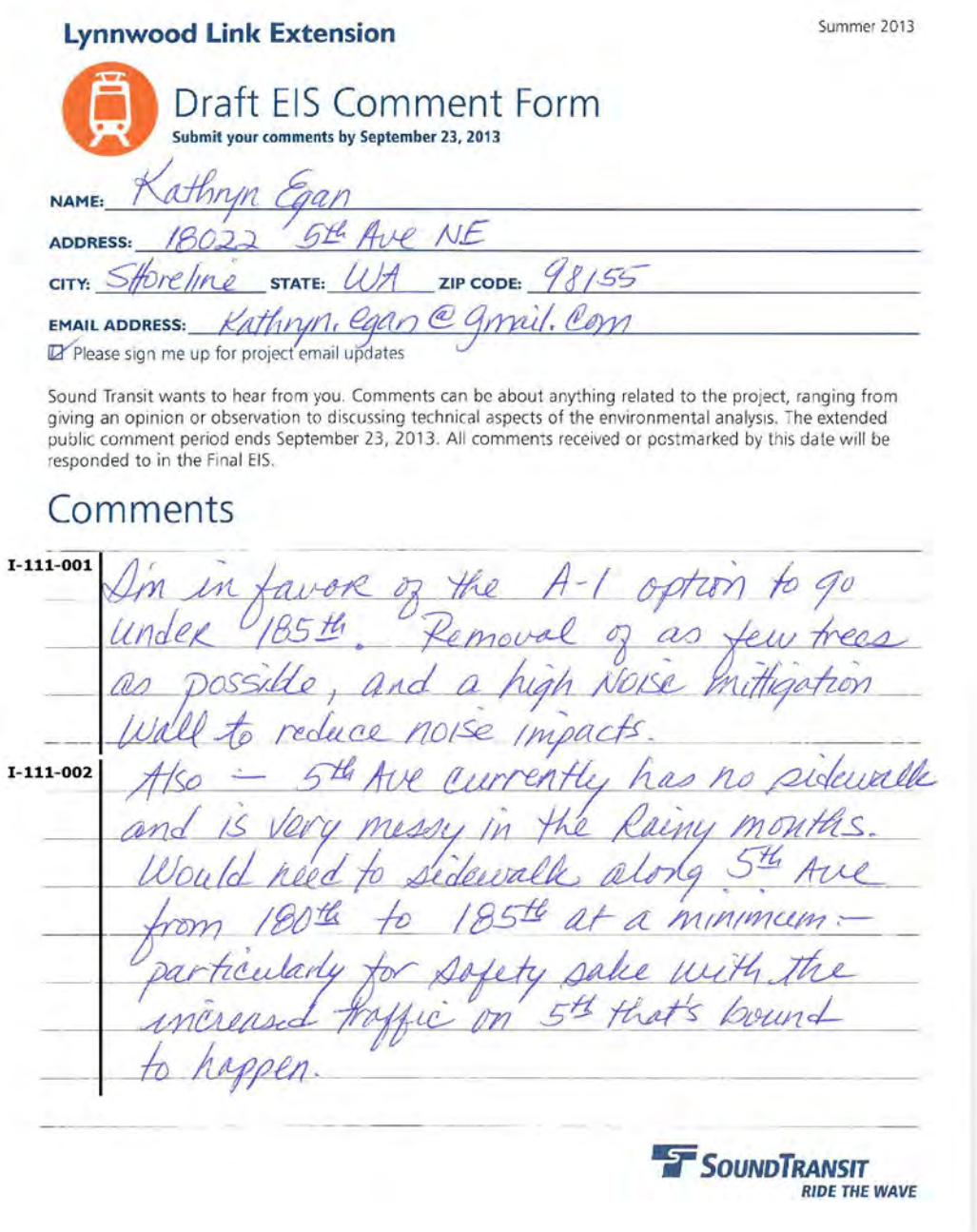
I-110-001

Given my background in Aging, my environmental values and what we heard at event for Korean Cmty + folks of modest means event I have some concerns about the potential lack of parking garages at both stations. It will encourage people to keep driving. Accelerating shuttle might work better. This idea came up at both of the gatherings my organization put together. I hope we can find a more creative way to get people to the station.

SOUNDTRANSIT RIDE THE WAVE

I-110-001

Multimodal connections to stations will be refined in coordination with partner transit agencies and local jurisdictions in the final design phase of the project. However, the station concepts already in place emphasize a balanced multimodal access plan that includes parking.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Kathryn Egan

ADDRESS: 18022 5th Ave NE

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: Kathryn.egan@gmail.com

☑ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-111-001 I'm in favor of the A-1 option to go under 185th. Removal of as few trees as possible, and a high noise mitigation wall to reduce noise impacts.

I-111-002 Also — 5th Ave currently has no sidewalk and is very messy in the Rainy months. Would need to sidewalk along 5th Ave from 180th to 185th at a minimum — particularly for safety sake with the increased traffic on 5th that's bound to happen.

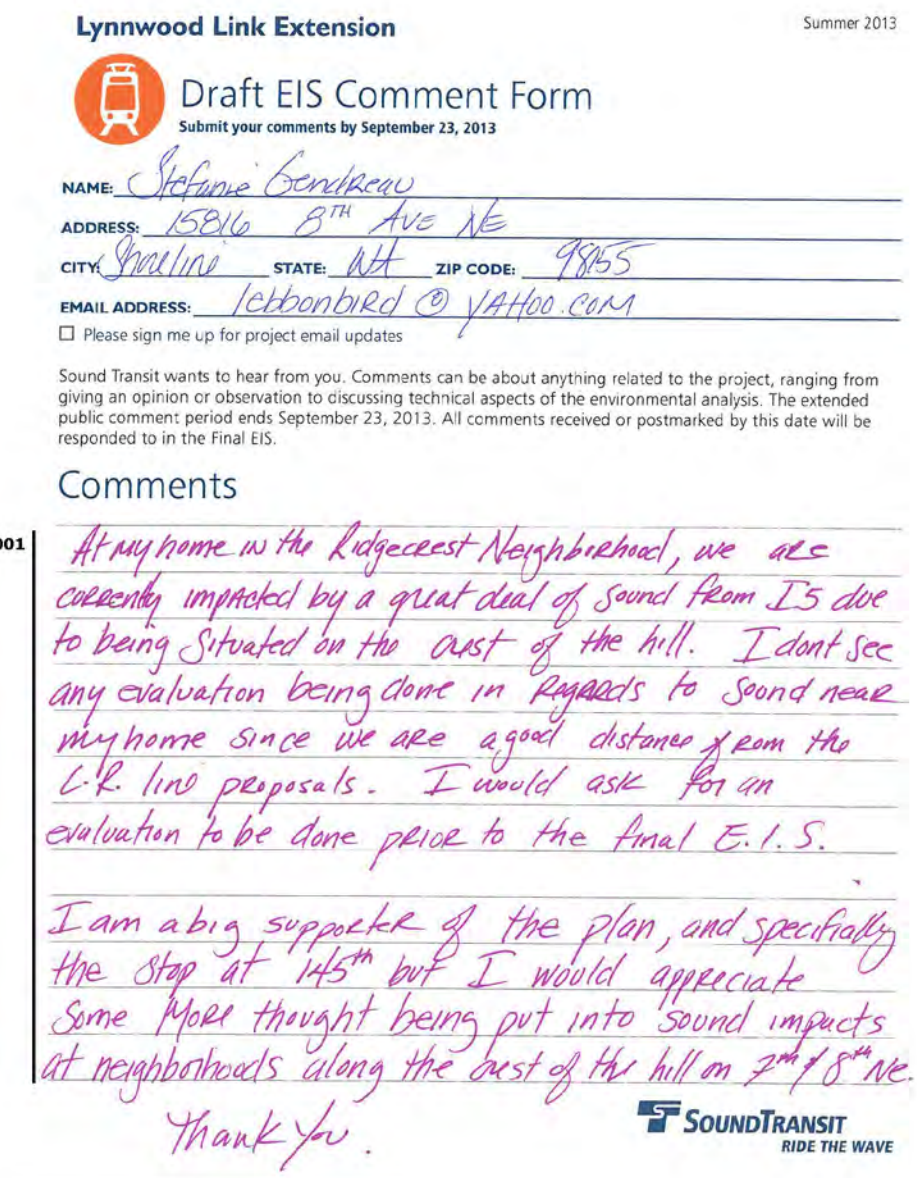
SOUNDTRANSIT RIDE THE WAVE

I-111-001

Thank you for your comment. Sound walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, any existing highway noise walls that are removed will be replaced as part of the project.

I-111-002

The current design of the Preferred Alternative includes reconstruction of 5th Avenue NE from NE 185th Street to approximately NE 183rd Court. This would bring the street up to current standards as well, with pedestrian and bicycle facilities, and improved stormwater management.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Stefanie Gendreau

ADDRESS: 15816 8TH AVE NE

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: lebbonbird@YAHOO.COM

☐ Please sign me up for project email updates

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Comments

I-112-001

At my home in the Ridgecrest Neighborhood, we are currently impacted by a great deal of sound from I5 due to being situated on the east of the hill. I dont see any evaluation being done in regards to sound near my home since we are a good distance from the L.R. line proposals. I would ask for an evaluation to be done prior to the final E.I.S.

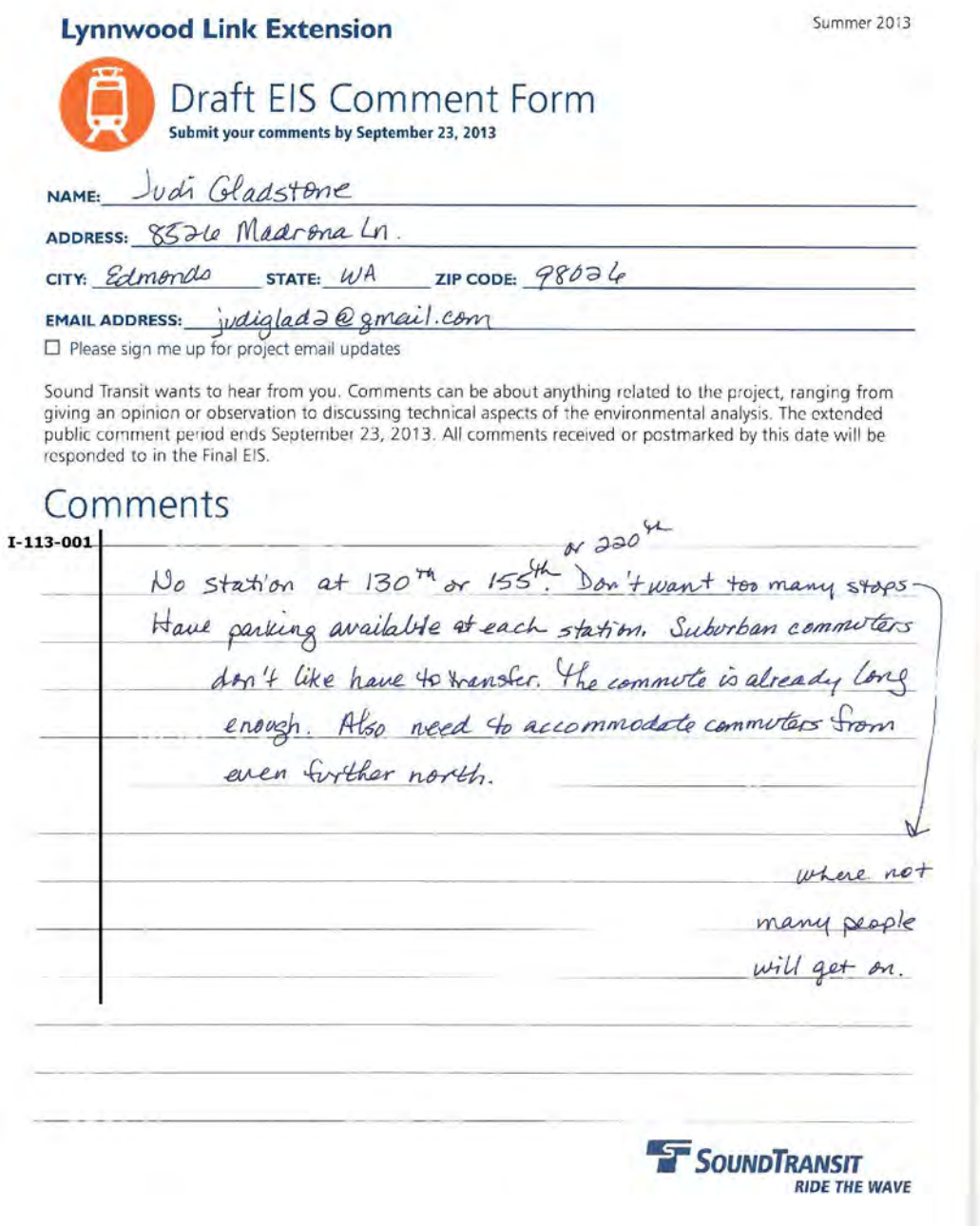
I am a big supporter of the plan, and specifically the stop at 145th but I would appreciate some more thought being put into sound impacts at neighborhoods along the east of the hill on 7th & 8th NE.

Thank you.

SOUNDTRANSIT RIDE THE WAVE

I-112-001

Thank your for your comment. Based on the address you supplied, your house is approximately 2100 feet from the light rail alignment. At this distance, it is unlikely that you would hear the light rail system operations, and you are outside the typical analysis range 400 to 600 feet from the corridor. However, sound walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, any existing highway noise walls removed will be replaced.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Judi Gladstone

ADDRESS: 8526 Madrona Ln.

CITY: Edmonds STATE: WA ZIP CODE: 98026

EMAIL ADDRESS: judiglad2@gmail.com

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-113-001

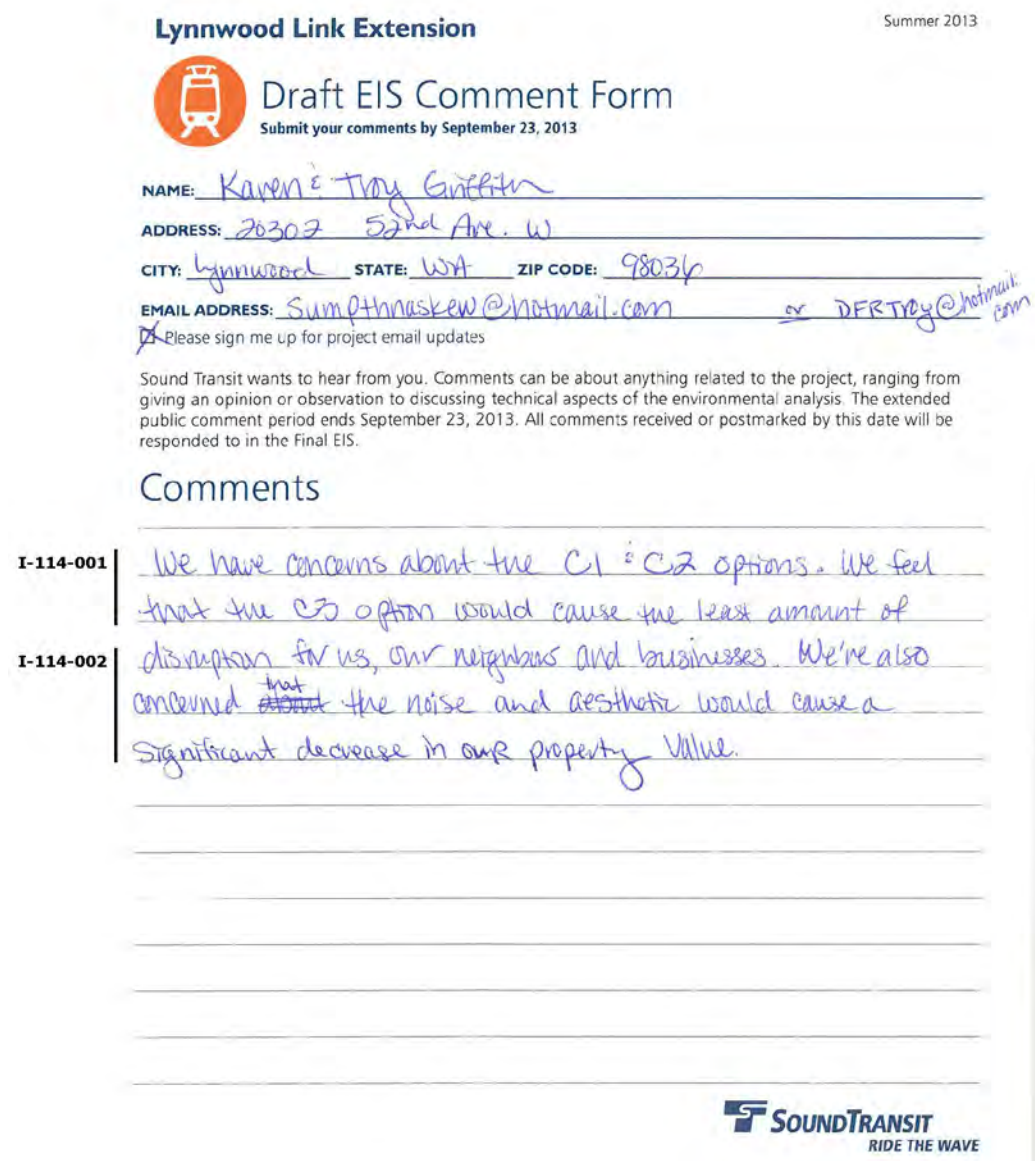
No station at 130th or 155th or 220th. Don't want too many stops. Have parking available at each station. Suburban commuters don't like have to transfer. The commute is already long enough. Also need to accommodate commuters from even further north.

where not many people will get on.

SOUNDTRANSIT RIDE THE WAVE

I-113-001

Sound Transit acknowledges your comment opposing stations at NE 130th Street, NE 155th Street, and N 220th Street. All of the stations would have park and ride facilities.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Karen & Troy Griffith

ADDRESS: 20307 52nd Ave. W

CITY: Lynnwood STATE: WA ZIP CODE: 98036

EMAIL ADDRESS: Sumpthnaskew@hotmail.com or DFRTroy@hotmail.com

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-114-001 We have concerns about the C1 & C2 options. We feel that the C3 option would cause the least amount of

I-114-002 disruption for us, our neighbors and businesses. We're also concerned ~~about~~ that the noise and aesthetic would cause a significant decrease in our property value.

SOUNDTRANSIT RIDE THE WAVE

I-114-001

Sound Transit developed a modified Alternative C3 for the Preferred Alternative. Please see Chapter 2 of the Final EIS for a description of the Preferred Alternative and its potential effects. A decision about which alternative is built for this project will not be made until after the Final EIS is issued.

I-114-002

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. Sound Transit's policy is to mitigate moderate or severe impacts. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Section 4.5 analyzes visual impacts, and the areas along 52nd Avenue W were identified as high impact with Alternatives C1 and C2; they are not the Preferred Alternative. Section 4.3.4 also considers the potential for economic impacts to properties along the various alternatives.

TO WHOM IT MAY CONCERN;

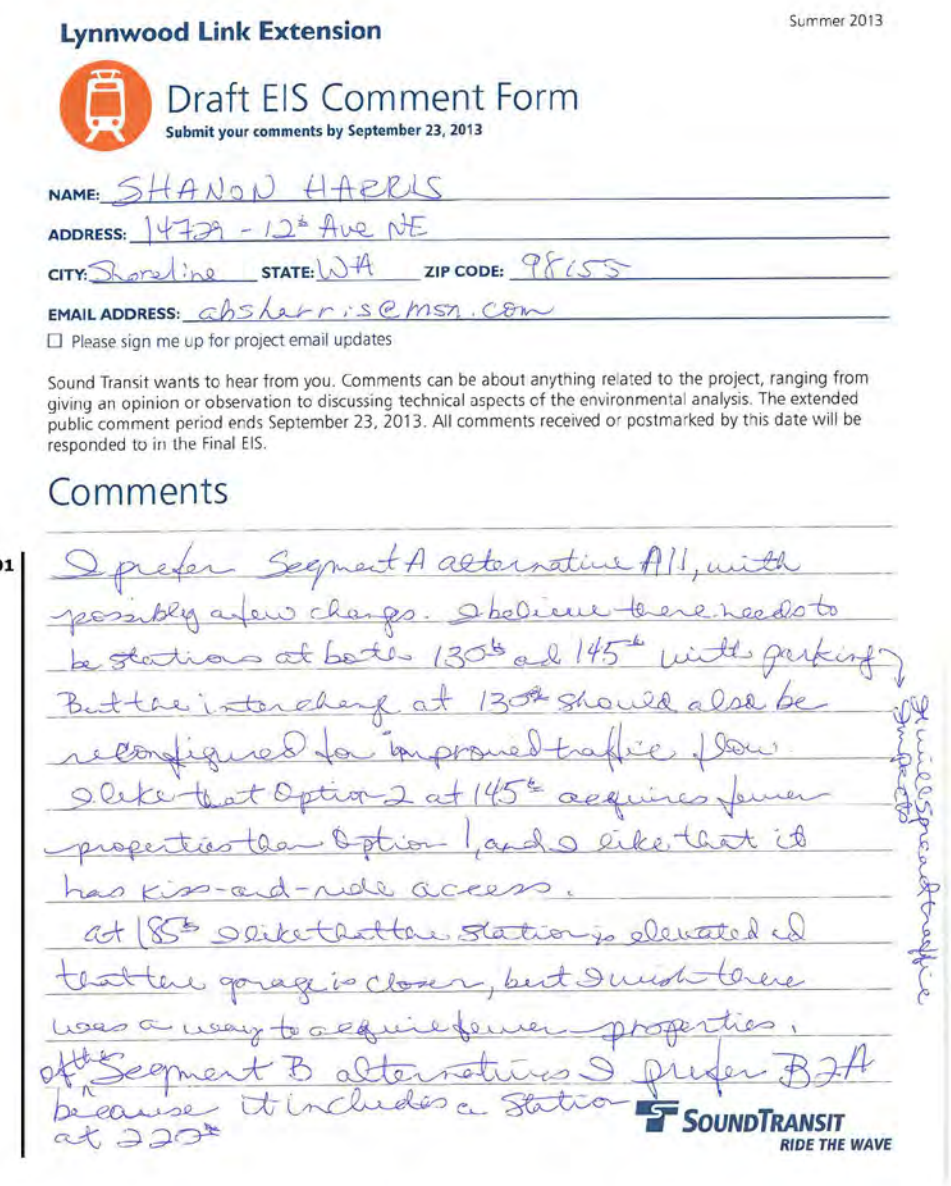
I-115-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Ann Gutschewski

I-115-001

Thank you for your comment stating a preference for Alternative C1.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: SHANON HARRIS

ADDRESS: 1479 - 12th Ave NE

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: shsharris@msn.com

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-116-001

I prefer Segment A alternative A11, with possibly a few changes. I believe there needs to be stations at both 130th and 145th with parking. But the interchange at 130th should also be reconfigured for improved traffic flow. I like that Option 2 at 145th acquires fewer properties than Option 1, and I like that it has kiss-and-ride access.

at 185th I like that the station is elevated & that the garage is closer, but I wish there was a way to acquire fewer properties.

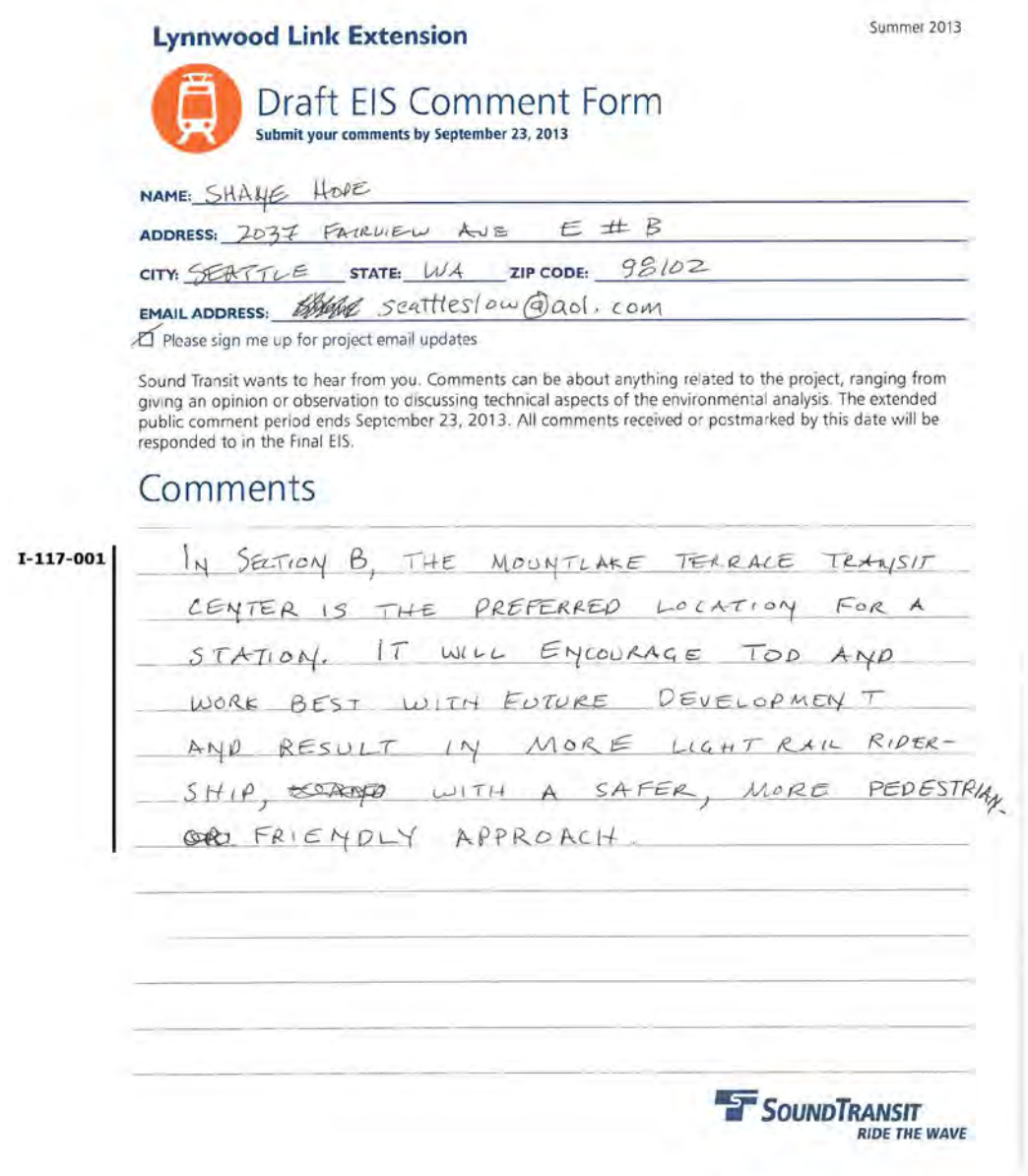
Of the Segment B alternatives I prefer B2A because it includes a station at 220th

will disperse traffic

SOUNDTRANSIT RIDE THE WAVE

I-116-001

Thank you for your comments stating a preference for Alternatives A11 (with changes) and B2A.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: SHANE HOPE

ADDRESS: 2037 FAIRVIEW AVE E # B

CITY: SEATTLE STATE: WA ZIP CODE: 98102

EMAIL ADDRESS: seattleslow@aol.com

☑ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

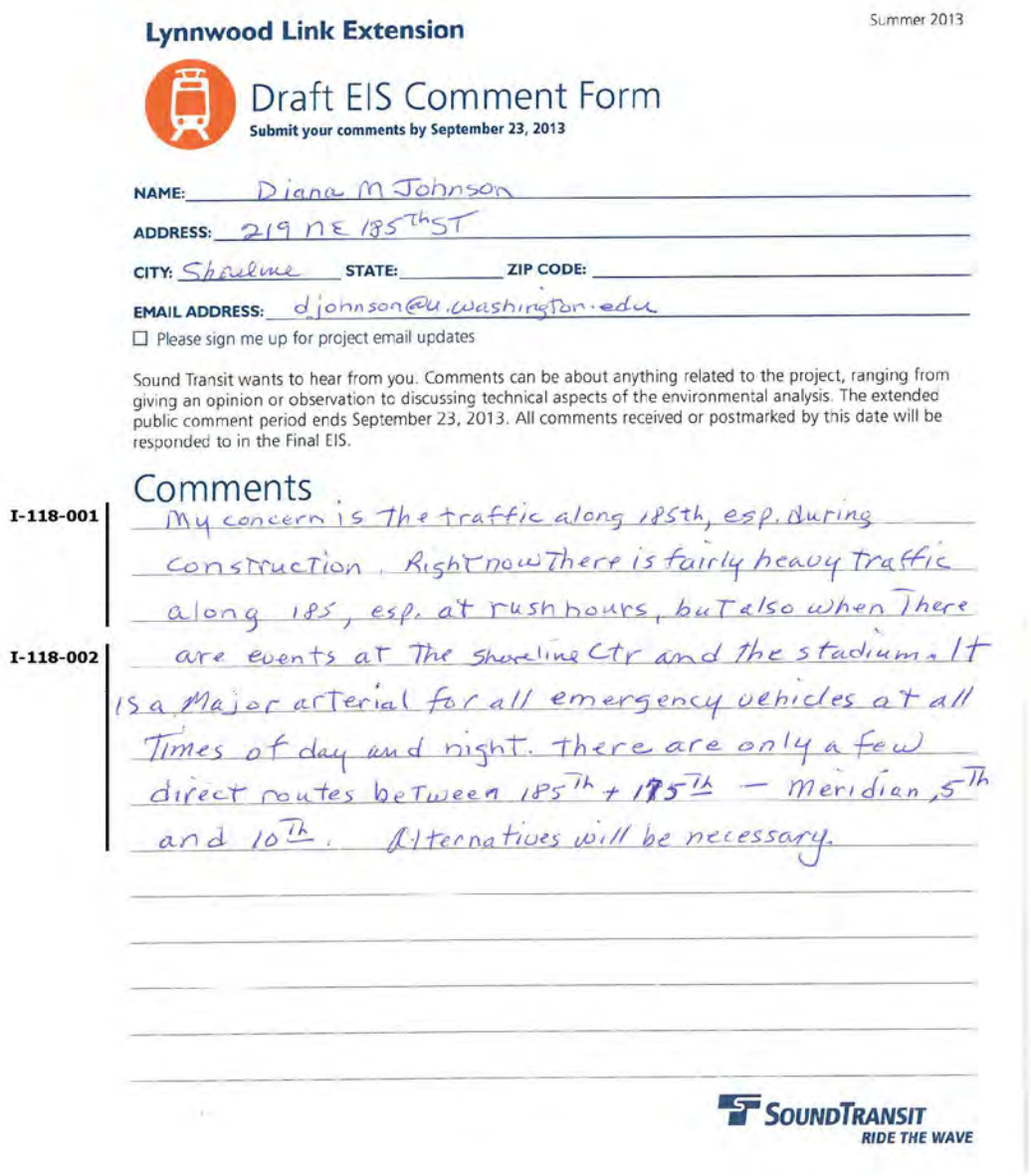
I-117-001

IN SECTION B, THE MOUNTLAKE TERRACE TRANSIT CENTER IS THE PREFERRED LOCATION FOR A STATION. IT WILL ENCOURAGE TOD AND WORK BEST WITH FUTURE DEVELOPMENT AND RESULT IN MORE LIGHT RAIL RIDERSHIP, ~~STAND~~ WITH A SAFER, MORE PEDESTRIAN ~~OR~~ FRIENDLY APPROACH.

SOUNDTRANSIT RIDE THE WAVE

I-117-001

The Sound Transit Board has identified Alternative B2, which includes a station at the Mountlake Terrace Transit Center, as the Preferred Alternative for discussion in the Final EIS. Please see the Chapter 2 of the Final EIS for a description of the Preferred Alternative. A decision about which alternative is built for this project will not be made until after the Final EIS is issued.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Diana M Johnson

ADDRESS: 219 NE 185TH ST

CITY: Shoreline STATE: ZIP CODE:

EMAIL ADDRESS: djohnson@u.washington.edu

☐ Please sign me up for project email updates

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Comments

I-118-001 My concern is the traffic along 185th, esp. during construction. Right now there is fairly heavy traffic along 185, esp. at rush hours, but also when there

I-118-002 are events at the Shoreline Ctr and the stadium. It is a Major arterial for all emergency vehicles at all times of day and night. there are only a few direct routes between 185th + 175th – Meridian, 5th and 10th. Alternatives will be necessary.

SOUNDTRANSIT RIDE THE WAVE

I-118-001

Mitigation measures for increased traffic congestion as a result of the station construction and operation will be included as part of the project. Refer to Chapter 3, Transportation.

I-118-002

Sound Transit will work with local jurisdictions during detailed construction planning to ensure that emergency vehicle access is maintained. Sound Transit will also coordinate with the City of Shoreline to minimize disruption to traffic flow and multimodal access along NE 175th Street and NE 185 Streets.

From: kristina.aija@gmail.com on behalf of Kristina Johnson <kristina.johnson@alumni.duke.edu>
Sent: Monday, August 26, 2013 3:09 PM
To: Lynnwood Link DEIS
Subject: Latvian Community Center

Dear Sound Transit Staff,

I-119-001 I am writing regarding the proposed project affecting the survival of the Latvian Community Center in North Seattle, Washington.

As a Washington State voter, a lawyer, and a concerned Latvian-American, I would like to share a few points to please consider in the assessment of the project.

First, on a personal note, the Latvian Community Center has truly been a fundamental piece of home and an essential component of my years growing up in Seattle. The Latvian Center is as important in my family's history and in my personal experience as any state park, school, or other special memory. For my elderly mother, to this day it is her primary social place of engagement, its importance cannot be overstated for an elderly immigrant community, to have a place to come together in peace to share common language, art shows, music, food, folk dancing, church, and dialogue. Christmas would simply not be complete without the traditional events at the Latvian Center which I have always attended since a young age, including both the Christmas bazaar and also closer to the holiday the traditional candlelight church service, followed by Latvian dinner with the whole community, most of whom dress in traditional Latvian dress. This is a dying culture, and any efforts to preserve this piece of history must be treasured.

As more specific points, please consider the following:

I-119-002 1) A senior representative from the Latvian Community Center should be appointed to serve on the Community Advisory Committee and/or the Business Advisory Committee for the project, to ensure meaningful engagement with the affected community;

2) The project should be a design-bid-build project, rather than a design-build project, to allow for greater public engagement;

I-119-003 3) An engineering assessment must be completed to ensure that the historic/aged structure of the Latvian Community Center can withstand the new proposed route, if it will proceed at close proximity to the center multiple times per day.

All efforts must be made to ensure that this historic structure is preserved, and along with it a beautiful and fragile ethnic community.

Thank you for your time.
Kristina Johnson
8168 Cultus Bay Road
Clinton WA 98236

1

I-119-001

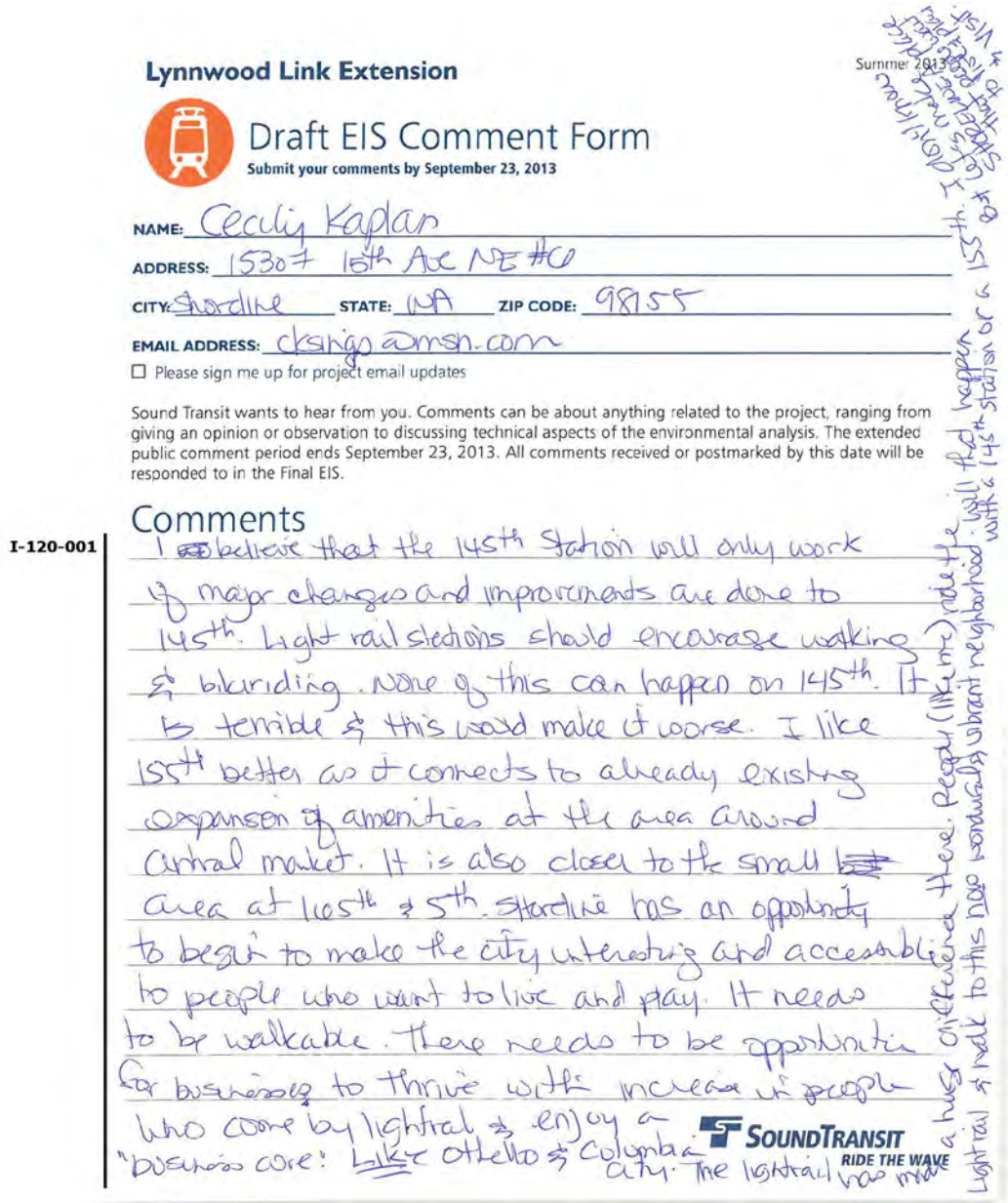
Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. The Sound Transit Board directed Sound Transit to explore a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). Access to the property and its functions have been maintained, although a small portion of land on the property's edge would be acquired for the Preferred Alternative and other at-grade alternatives. Please see the Final EIS Section 2.5.1 for a description of the refined Segment A alternatives, which all result in reduced impacts on the Church.

I-119-002

Thank you for the suggestions. Sound Transit is committed to working collaboratively with the church and its representatives throughout the project's development. Sound Transit has not established citizen advisory groups or business advisory groups for the project. Sound Transit's contracting approach to the project would not alter the ability of the agency to continue public engagement in the project.

I-119-003

The Final EIS includes an assessment of vibration levels (Section 4.7.3) resulting from the project, and determined that the vibration would be well below thresholds that could result in damage to adjacent structures. The assessment also considered the church as well as nearby residences as vibration-sensitive facilities where occupants could be disturbed by vibration, and identified mitigation measures to avoid vibration levels exceeding FTA criteria.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Cecily Kaplan

ADDRESS: 15307 16th Ave NE #C

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: cksingo@msn.com

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Comments

I-120-001

I believe that the 145th Station will only work if major changes and improvements are done to 145th. Light rail stations should encourage walking & bikeriding. None of this can happen on 145th. It is terrible & this would make it worse. I like 155th better as it connects to already existing expansion of amenities at the area around Central market. It is also closer to the small area at 160th & 5th. Shoreline has an opportunity to begin to make the city interesting and accessible to people who want to live and play. It needs to be walkable. There needs to be opportunity for businesses to thrive with increase in people who come by lightrail & enjoy a "business core" like Othello & Columbia City. The lightrail

SOUNDTRANSIT RIDE THE WAVE

I like 155th. I don't like 145th. Will the Lynnwood Link Light rail & walk to this new community a huge difference there. People (like me) ride the with a 145th station or a vibrant neighborhood.

I-120-001

Thank you for your interest in Lynnwood Link Extension and your comment regarding improvements needed on NE 145th Street and the need for business opportunities near stations. The Preferred Alternative includes biking, walking, and other access improvements in the NE 145th Street Station area. The City of Shoreline developed a subarea plan for the 145th Street Station area, similar to the recently adopted 185th Subarea Plan.

TO WHOM IT MAY CONCERN;

I-121-001 PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Chris Kelly
4100-200 St
#E-305
Lynnwood WA 98036-6363

I-121-001

Thank you for your comment stating a preference for Alternative C1.

From: sskmk@comcast.net
Sent: Sunday, August 25, 2013 3:55 PM
To: Lynnwood Link DEIS
Subject: eis

I-122-001

Of the 3 segment alternatives, c3 is obviously the best choice....it has the least impact on existing neighborhoods and businesses. The people that live in the impacted neighborhoods should not have to see their property devalued or lose their homes when there is a perfectly viable alternative that would avoid these consequences.

-Michael Kelly, Lynnwood

1

I-122-001

Your preference for Alternative C3 due to fewer impacts is noted. The Preferred Alternative in the Final EIS includes a modified Alternative C3. The decision about which project will be built will be made after publication of the Final EIS.

From: Teresa Kelly <terrytoo2@msn.com>
Sent: Wednesday, August 28, 2013 11:09 AM
To: Lynnwood Link DEIS
Subject: Latvian culture center

I-123-001

To Lauren Swift:

We are so very upset about the Link running past the Latvian Church and Culture Center. Please do not become like the USSR destroying all Lithuanian and Latvian culture. Think about what you are doing.

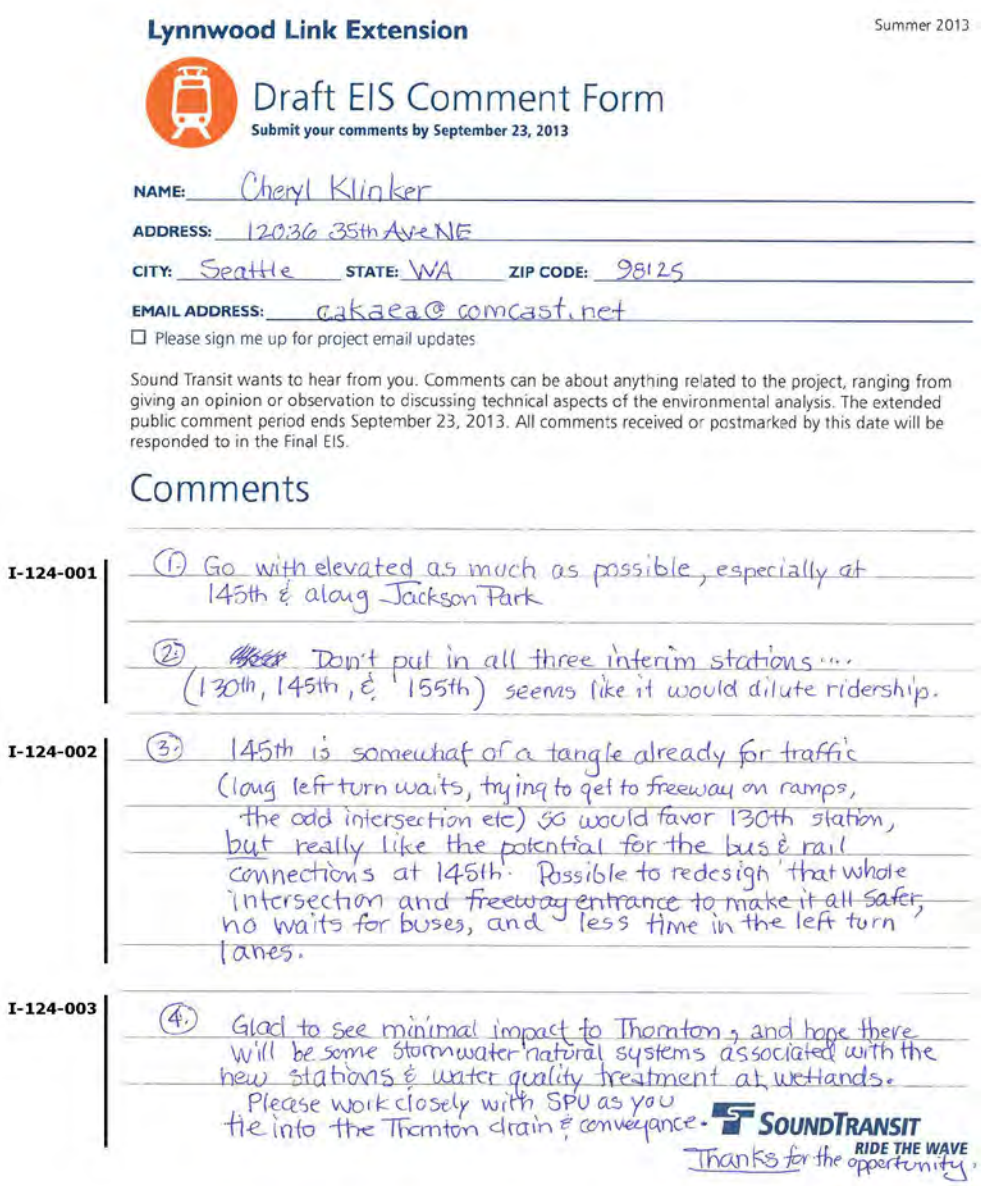
Teresa Kelly

Sent from Windows Mail

1

I-123-001

The Final EIS describes the results of additional engineering Sound Transit undertook to avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). Access to the property and its functions have been maintained, although a small portion of land on the property's edge would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Cheryl Klinker

ADDRESS: 12036 35th Ave NE

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS: cakaea@comcast.net

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Comments

I-124-001 (1) Go with elevated as much as possible, especially at 145th & along Jackson Park

(2) ~~Agree~~ Don't put in all three interim stations .... (130th, 145th, & 155th) seems like it would dilute ridership.

I-124-002 (3) 145th is somewhat of a tangle already for traffic (long left turn waits, trying to get to freeway on ramps, the odd intersection etc) so would favor 130th station, but really like the potential for the bus & rail connections at 145th. Possible to redesign that whole intersection and freeway entrance to make it all safer, no waits for buses, and less time in the left turn lanes.

I-124-003 (4) Glad to see minimal impact to Thornton, and hope there will be some stormwater natural systems associated with the new stations & water quality treatment at wetlands. Please work closely with SPU as you tie into the Thornton drain & conveyance.

SOUNDTRANSIT RIDE THE WAVE

Thanks for the opportunity.

I-124-001

Sound Transit identified a modified Alternative A1 for the Preferred Alternative. The preferred alternative as described in the Final EIS includes a partially elevated guideway in the vicinity of Jackson Park and stations at NE 145th Street and NE 185th Street. The Final EIS also includes an option for a station at NE 130th Street. Please see Chapter 2 of the Final EIS for a description of the Preferred Alternative. The Sound Transit Board will select the alternative to be built after publication of the Final EIS.

I-124-002

Thank you for your comment about traffic concerns on 145th Street. Chapter 3 includes updated information on improvements included in the Preferred Alternative that help reduce traffic impacts in the NE 145th Street Station area.

I-124-003

Thank you for your comment. Sound Transit requires all projects to consider low-impact development (LID) methods as a first choice for stormwater treatment (Design Criteria Manual, July 2012). As summarized in Section 4.11.9 of the Draft EIS, the most common soil group in the project area is Type C, which is predominantly till-type soil that has a low infiltration and high runoff potential, generally not compatible with many LID approaches that require soil to infiltrate. However, some other locations in the project area contain soil Types A and B, which have high to moderate infiltration potential, respectively, and are generally compatible with many types of LID stormwater facilities. Sound Transit will evaluate the feasibility of LID throughout the project area.

From: Mark Knoke <sotosoroto@yahoo.com>
Sent: Monday, August 26, 2013 12:41 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Extension DEIS comments

I-125-001 In the description of a 145th Street Station, I-5 access is mentioned as if this is a positive item for this location. I would think this would be a negative for this location, instead. If anyone uses I-5 to this station, they'd be entering the freeway closer to a different station, so I doubt many people would use I-5 as access. A 155th Street Station, on the other hand, would provide an access point to light rail that is free of freeway congestion. This would set up a freeway/rail separation pairing like we have planned for 175th Street and 185th Street. If it works for northern Shoreline, it should be good for southern Shoreline.

I-125-002 For the potential 130th Street Station, it looks simple enough to flip the station plan to the south side of 130th Street. Doing this, coupled with a station entrance and crosswalk at 127th Street, would greatly increase the walkshed in the Pinehurst neighborhood. In the elevated scheme, the planned parking could then slide south, nearer to the intersection.

I-125-003 At the 117th Street bridge, to me it seems the best solution would be for the tracks to be elevated directly above 1st Avenue, on a structure straddling the street. This way, the existing bridge would not need to be replaced and houses alongside 1st Avenue would not need to be destroyed. Due to the grade change northward, there would be ample space to transition to an at-grade configuration for 130th Street after a high point near the Latvian Church.

Thank you,
Mark Knoke

1

I-125-001

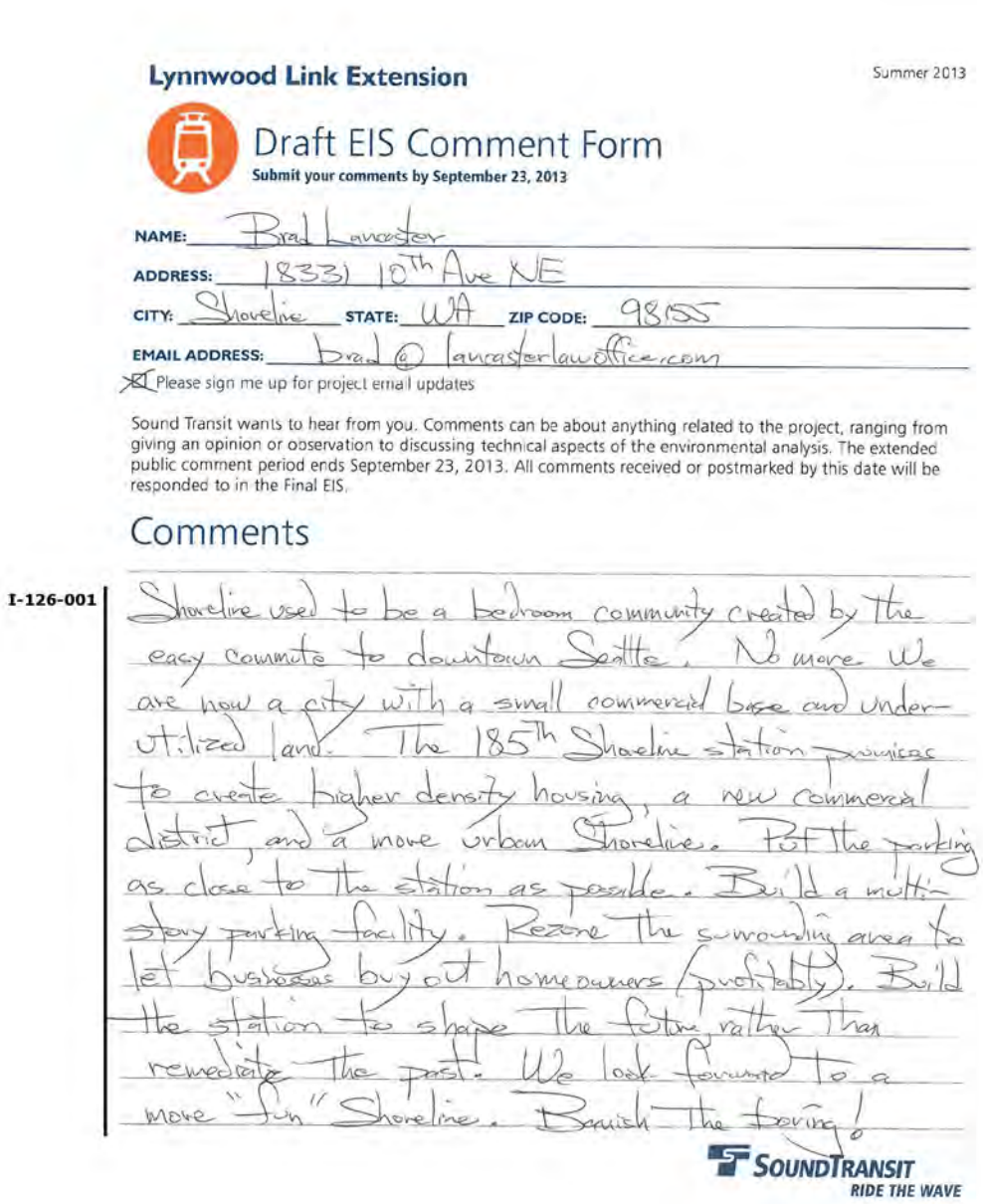
The Chapter 2 descriptions of the NE 145th Street Station does not characterize the access as good because of the I-5 ramps, but rather because NE 145th Street and 5th Avenue are major arterials, and it would serve the communities east and west of I-5. The continued congested conditions on I-5 is expected to discourage patrons from the north from taking longer trips on the freeway when there would be accessible stations closer to their origin or destination.

I-125-002

The option to locate the 130th Street Station to the south side of NE 130th Street was explored by project designers. The freeway ramp configurations and design challenges involved with reconfiguring the ramps resulted in a decision to not move this option forward. The Preferred Alternative includes the option for a future NE 130th Street Station on the north side.

I-125-003

The Draft EIS and Final EIS include a range of alternatives that do or do not involve replacing the 117th Street bridge. The preferred alignment for the guideway would not require reconstruction or modification of the NE 117th Street crossing.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Brad Lancaster

ADDRESS: 18331 10th Ave NE

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: brad@lancasterlawoffice.com

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Comments

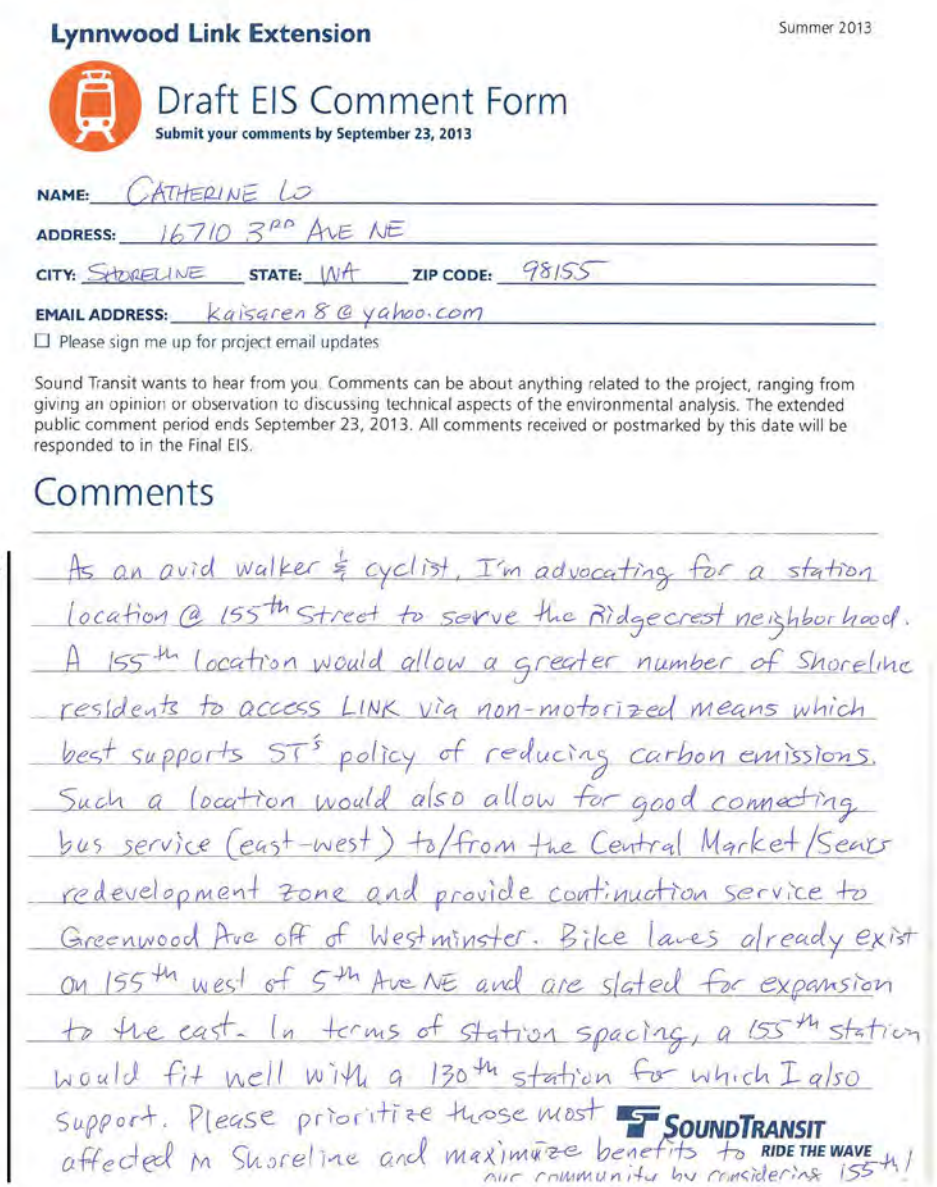
I-126-001

Shoreline used to be a bedroom community created by the easy commute to downtown Seattle. No more. We are now a city with a small commercial base and under-utilized land. The 185th Shoreline station promises to create higher density housing, a new commercial district, and a more urban Shoreline. Put the parking as close to the station as possible. Build a multi-story parking facility. Rezone the surrounding area to let businesses buy out homeowners (profitably). Build the station to shape the future, rather than remediate the past. We look forward to a more "fun" Shoreline. Banish the boring!

SOUNDTRANSIT
RIDE THE WAVE

I-126-001

Thank you for comment regarding the 185th Street Station. The preferred alternative includes a multi-story parking garage on the west side of I-5 with improved pedestrian access along NE 185th Street across I-5. The City has developed a subarea plan near the proposed 185th Street Station that envisions higher density development near the station. Rezoning is the responsibility of the City of Shoreline and not part of the Lynnwood Link Extension project.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: CATHERINE LO

ADDRESS: 16710 3RD AVE NE

CITY: SHORELINE STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: kaisaren8@yahoo.com

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Comments

I-127-001

As an avid walker & cyclist, I'm advocating for a station location @ 155th Street to serve the Ridgecrest neighborhood. A 155th location would allow a greater number of Shoreline residents to access LINK via non-motorized means which best supports ST's policy of reducing carbon emissions. Such a location would also allow for good connecting bus service (east-west) to/from the Central Market/Sears redevelopment zone and provide continuation service to Greenwood Ave off of Westminster. Bike lanes already exist on 155th west of 5th Ave NE and are slated for expansion to the east. In terms of station spacing, a 155th station would fit well with a 130th station for which I also support. Please prioritize those most affected in Shoreline and maximize benefits to our community by considering 155th!

SOUNDTRANSIT RIDE THE WAVE

I-127-001

Your preference for a NE 155th Street Station is noted. Although the station is not part of the Preferred Alternative, all of the stations would feature multimodal access improvements in the station areas. Sound Transit is also coordinating with the City of Shoreline on opportunities to enhance station accessibility.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Doug Martin-Vegue

ADDRESS: 18525 10th Ave. NE

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: drearwig@hotmail.com

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Comments

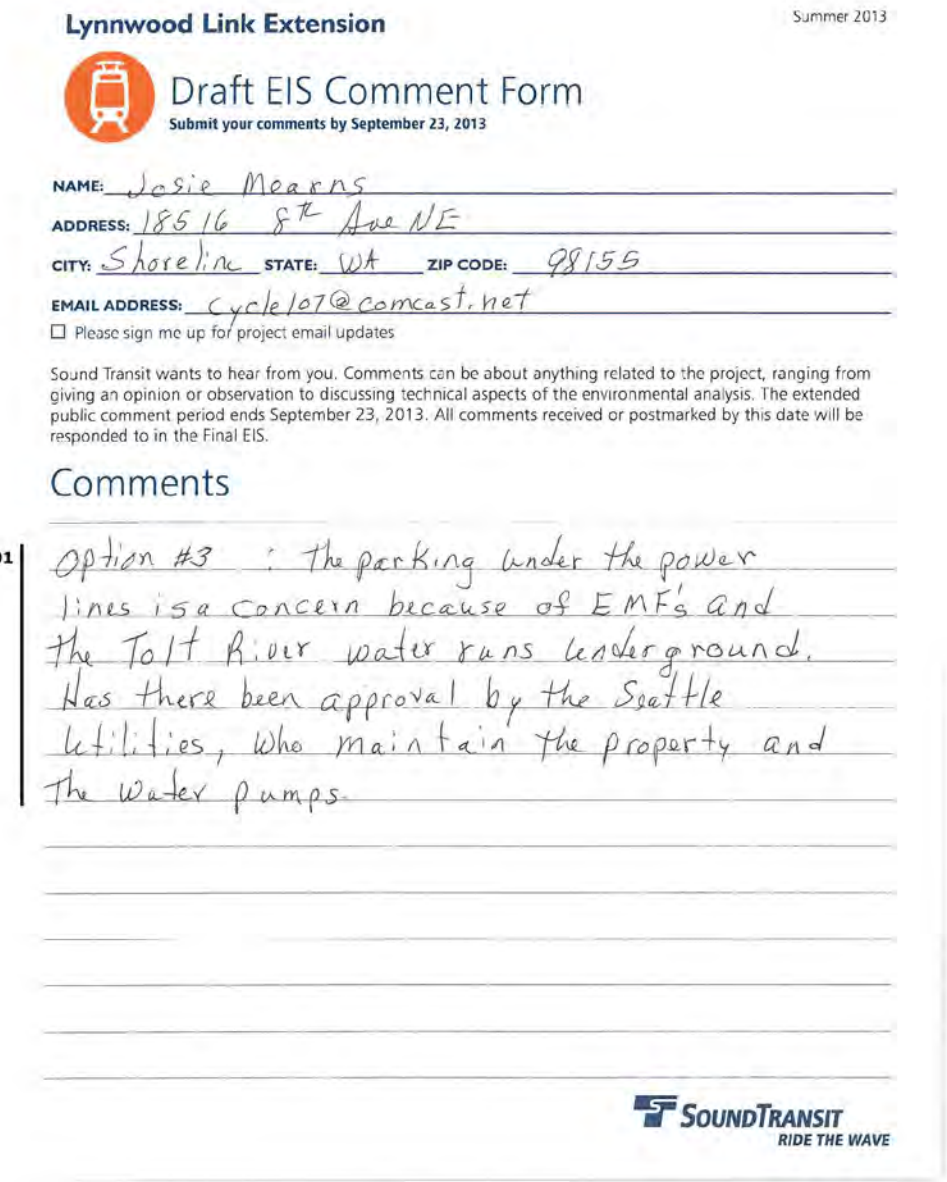
I-128-001

I am in the area closest to Segment A on 185th. I like option 1 the most because it preserves the most number of houses and seems to impact less residence. Option 2 is acceptable but offers less opertunity for development around and in the Shoreline center. Option 3 destroys the open space used for hiking, dog walking, and many other activities. It will directy effect my property and will increse air polution. I like the foot bridge over I5. I also prefer the elevated option for the rail because it looks better and displaces less people and will require less property to be purchased.

SOUNDTRANSIT RIDE THE WAVE

I-128-001

Thank you for your comment stating a preference for the 185th Option 1 Station (Alternative A1). Alternative A1 with modifications, was been identified as the Preferred Alternative. The Sound Transit Board will select the project to be built after publication of the Final EIS.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Josie Mearns

ADDRESS: 18516 8th Ave NE

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: cycle107@comcast.net

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Comments

I-129-001

Option #3 : The parking under the power lines is a concern because of EMF's and the Tolt River water runs underground. Has there been approval by the Seattle Utilities, who maintain the property and the water pumps.

SOUNDTRANSIT RIDE THE WAVE

I-129-001

Parking lots, streets, and recreational trails are constructed regularly under these types of transmission power lines and over water mains. As noted in Section 4.13 there would be no impacts due to electromagnetic fields. If Option 3 were selected in the project to be built, improvements within the limits of the Tolt River water supply easement area would be required to meet Seattle Public Utilities (SPU) design standards, and any such improvements must undergo an SPU design review prior to construction.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: RYAN MIFFLIN

ADDRESS: 1023 NE 187TH St.

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: riverhead19@hotmail.com

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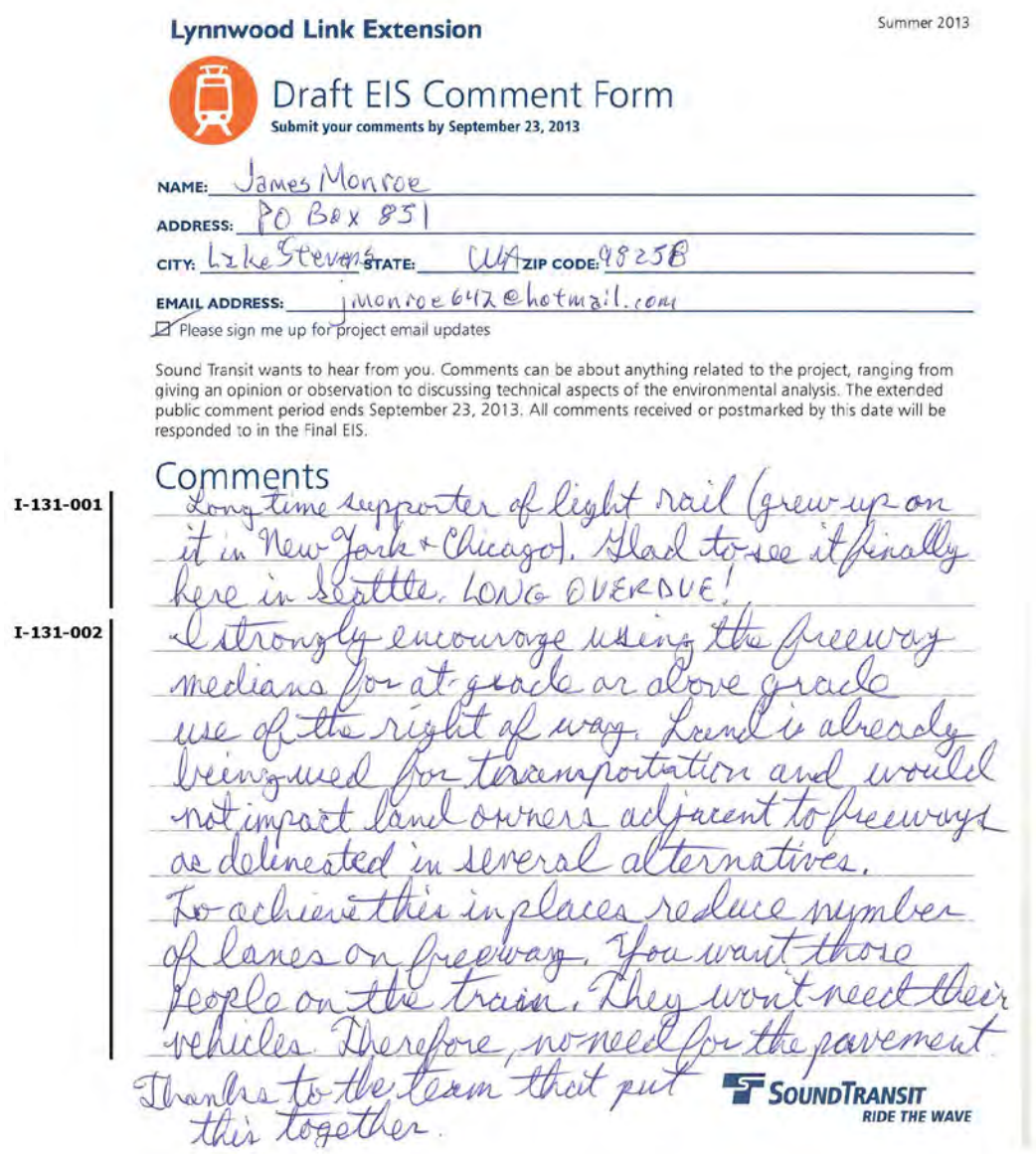
Comments

I-130-001 I vote for option 3 for the 185TH st. location, but please consider making additional parking all contained in the same block and not under the phone lines. The homes on that block are dumps built nearly 50 years ago and are not worth saving!

SOUNDTRANSIT RIDE THE WAVE

I-130-001

Your preference for Option 3 for 185th Street Station is noted.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: James Monroe

ADDRESS: PO Box 851

CITY: Lake Stevens STATE: WA ZIP CODE: 98258

EMAIL ADDRESS: jmonroe642@hotmail.com

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Comments

I-131-001 Long time supporter of light rail (grew up on it in New York + Chicago). Glad to see it finally here in Seattle. LONG OVERDUE!

I-131-002 I strongly encourage using the freeway medians for at grade or above grade use of the right of way. Land is already being used for transportation and would not impact land owners adjacent to freeways as delineated in several alternatives. To achieve this in places reduce number of lanes on freeway. You want those people on the train. They won't need their vehicles. Therefore, no need for the pavement. Thanks to the team that put this together.

SOUNDTRANSIT RIDE THE WAVE

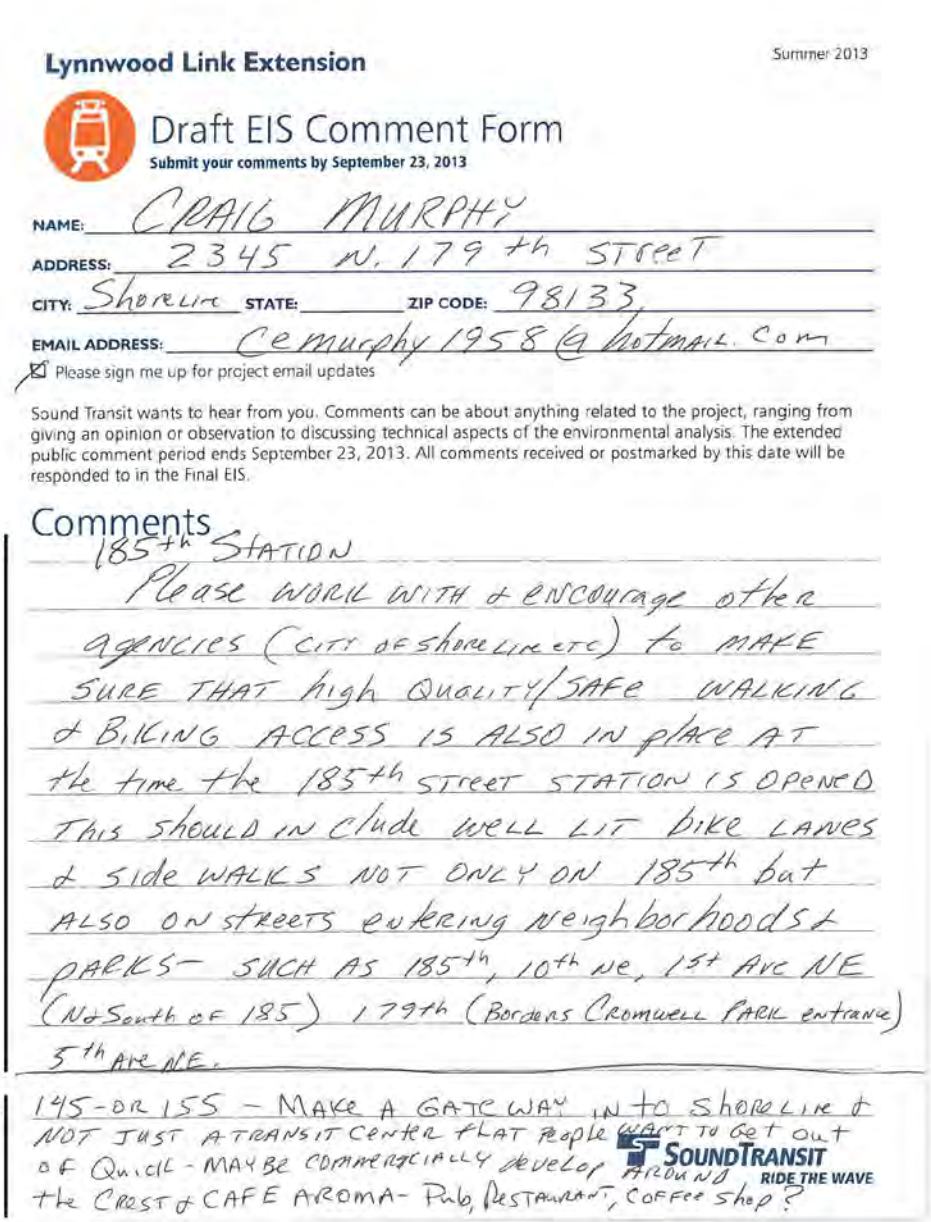
I-131-001

Thank you for your comment. Sound Transit appreciates your support.

I-131-002

The proposed rail alignment is primarily sited in existing right of way outside of traffic (i.e. I-5) to avoid operating and safety conflicts. Removing capacity on the freeway in order to construct light rail would greatly worsen congestion and degrade overall transportation system function. Construction impacts would also be much higher. An above-grade alignment would also need to have more space in the median than is available from Northgate to nearly Mountlake Terrace, would conflict with multiple existing bridges/overcrossings, and would lack room for stations.

Section 2.5 of the Final EIS explains the factors affecting the range of alternatives. The factors reflect the constraints posed by I-5 and its limited available right-of-way, as well as other community and environmental conditions along the project corridor. In addition, refer to the I-5 Light Rail Compatibility Report (Sound Transit 2012, included as Appendix Q of the Final EIS) which is the basis for the conceptual engineering of the Draft EIS alternatives and their assumptions about the use of WSDOT right-of-way.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: CRAIG MURPHY

ADDRESS: 2345 N. 179th STREET

CITY: Shoreline STATE: _____ ZIP CODE: 98133

EMAIL ADDRESS: cemurphy1958@hotmail.com

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Comments

I-132-001

185th STATION

Please WORK WITH & ENCOURAGE other AGENCIES (CITY OF SHORELINE ETC) to MAKE SURE THAT high QUALITY/SAFE WALKING & BIKING ACCESS IS ALSO IN place AT the time the 185th STREET STATION IS OPENED THIS SHOULD INCLUDE WELL LIT BIKE LANES & SIDE WALKS NOT ONLY ON 185th but ALSO ON STREETS entering NEIGHBORHOODS & PARKS - SUCH AS 185th, 10th NE, 1st AVE NE (N & South of 185) 179th (Borders CROMWELL PARK entrance) 5th AVE NE.

I-132-002

145-OR 155 - MAKE A GATEWAY IN to SHORELINE & NOT JUST A TRANSIT CENTER FLAT People WANT TO GET OUT OF QUICK - MAYBE COMMERCIALLY DEVELOP AROUND the CREST & CAFE AROMA - Pub, RESTAURANT, COFFEE shop?

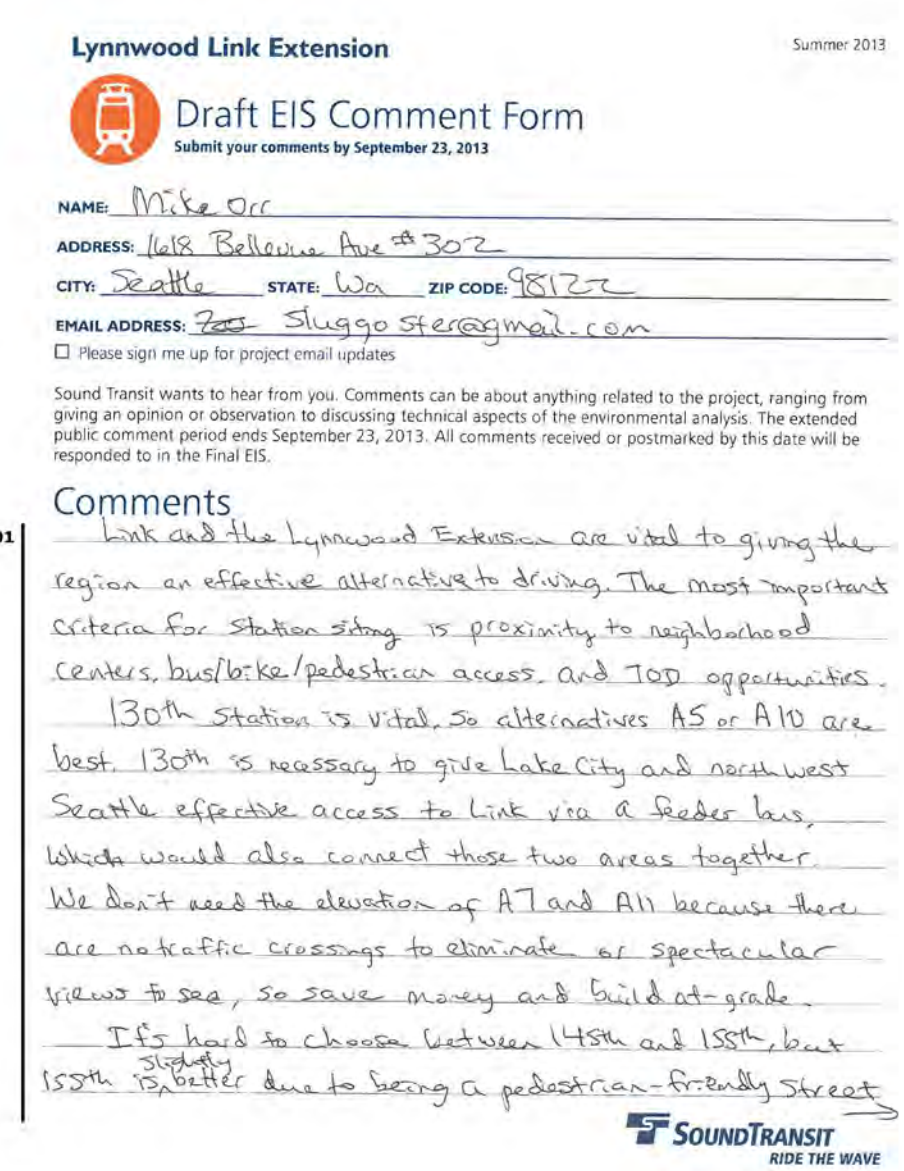
SOUNDTRANSIT RIDE THE WAVE

I-132-001

Thank you for your comment regarding pedestrian and bicycle access to the 185th Street Station. Non-motorized access to light rail stations is an important component of Sound Transit systems as reflected in the Transit Oriented Development, Sustainability, and System Access Policies. The Preferred Alternative identifies improvements in the station area (see Chapter 2 as well as Appendix F for details). Sound Transit will continue to work with partner agencies, including the City of Shoreline, on complimentary access improvements.

I-132-002

Sound Transit and the City of Shoreline have been coordinating in station planning, and Shoreline has been conducting its own subarea planning process for potential comprehensive plan amendments. Please see Section 4.2.2.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Mike Orr

ADDRESS: 1618 Bellevue Ave #302

CITY: Seattle STATE: Wa ZIP CODE: 98122

EMAIL ADDRESS: ~~Zoo~~ Sluggo ster@gmail.com

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Comments

I-133-001

Link and the Lynnwood Extension are vital to giving the region an effective alternative to driving. The most important criteria for station siting is proximity to neighborhood centers, bus/bike/pedestrian access, and TOD opportunities.

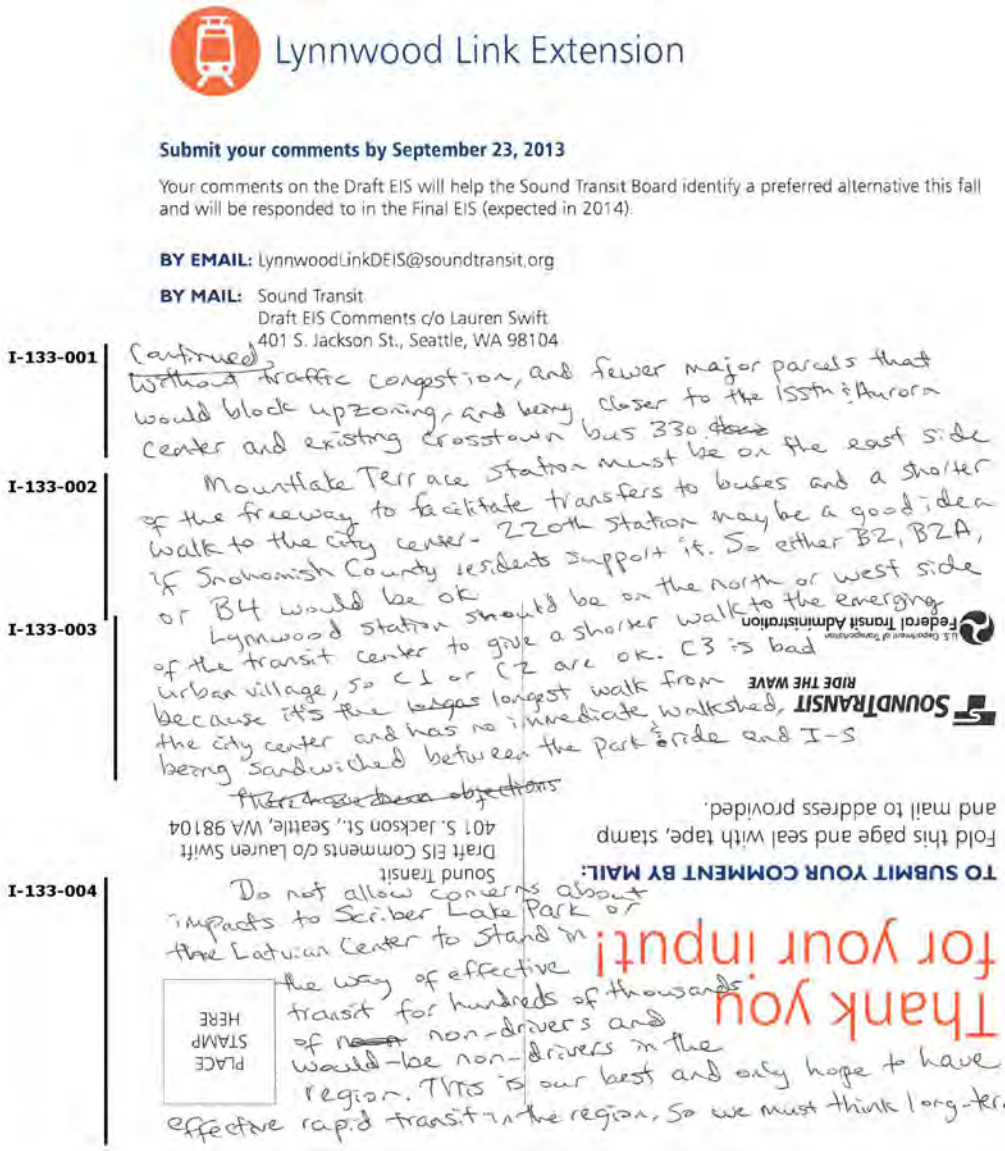
130th station is vital, so alternatives A5 or A10 are best. 130th is necessary to give Lake City and northwest Seattle effective access to Link via a feeder bus, which would also connect those two areas together. We don't need the elevation of A7 and A11 because there are no traffic crossings to eliminate or spectacular views to see, so save money and build at-grade.

It's hard to choose between 145th and 155th, but 155th is slightly better due to being a pedestrian-friendly street

SOUNDTRANSIT RIDE THE WAVE

I-133-001

Your comment regarding the benefits of stations at NE 130th and 155th Streets is noted. Consistent with the Sound Transit Board's direction for a Preferred Alternative, the Final EIS includes an option for a station at the NE 130th Street.



Lynnwood Link Extension

Submit your comments by September 23, 2013

Your comments on the Draft EIS will help the Sound Transit Board identify a preferred alternative this fall and will be responded to in the Final EIS (expected in 2014).

BY EMAIL: LynnwoodLinkDEIS@soundtransit.org

BY MAIL: Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

I-133-001 (continued) Without traffic congestion, and fewer major parcels that would block upzoning, and being closer to the 185th & Aurora Center and existing crosstown bus 330 there.

I-133-002 Mountlake Terrace station must be on the east side of the freeway to facilitate transfers to buses and a shorter walk to the city center. 220th station may be a good idea if Snohomish County residents support it. So either B2, B2A, or B4 would be OK.

I-133-003 Lynnwood station should be on the north or west side of the transit center to give a shorter walk to the emerging urban village, so C1 or C2 are OK. C3 is bad because it's the longest walk from the park & ride and I-5 being sandwiched between the park & ride and the city center and has no immediate walkshed.

~~There are those who have objections~~

I-133-004 Do not allow concerns about impacts to Scriber Lake Park or the Latvian Center to stand in the way of effective transit for hundreds of thousands of non-drivers and would-be non-drivers in the region. This is our best and only hope to have effective rapid transit in the region. So we must think long-term.

Thank you for your input!

TO SUBMIT YOUR COMMENT BY MAIL:
Fold this page and seal with tape, stamp and mail to address provided.

Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

PLACE STAMP HERE

Federal Transit Administration

SOUNDTRANSIT RIDE THE WAVE

I-133-002

Your preference for Alternative B2, B2A, or B4 is noted. The Sound Transit Board has identified Alternative B2 as the Preferred Alternative. The Preferred Alternative as discussed in the Final EIS includes a station on the east side of I-5 at the Mountlake Terrace Transit Center and further considers an option for a station at 220 Street SW. Please see Chapter 2 of the Final EIS for a description of the Preferred Alternative.

I-133-003

Thank you for describing your concerns about walkability with Alternative C3, which led to your preference for Alternatives C1 and C2. The Sound Transit Board has identified a modified Alternative C3 as the Preferred Alternative. Please see Chapter 2 of the Final EIS for a description of the Preferred Alternative.

I-133-004

Thank you for your comments. Sound Transit appreciates your support for the project.

Search for separate comment

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Mike Orr

ADDRESS: 1618 Bellevue Ave #302

CITY: Seattle STATE: Wa ZIP CODE: 98122

EMAIL ADDRESS: Sluggoster@gmail.com

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Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-134-001

Link and the Lynnwood Extension are vital to achieve an effective non-automobile

SOUNDTRANSIT RIDE THE WAVE

I-134-001

Thank you for your comments. Sound Transit appreciates your support.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: CHRISTOPHER PALMS

ADDRESS: 1519 NE PERKINS WAY

CITY: SHORELINE STATE: WA ZIP CODE: 98155

EMAIL ADDRESS:

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Comments

I-135-001 FOR THE 185TH ST STATION I THINK OPTION 2 OFFERS THE BEST COMBINATION OF DIRECT ACCESS FROM PARKING & REDUCED IMPACT TO NEIGHBORING HOUSES.

SOUNDTRANSIT RIDE THE WAVE

I-135-001

Your preference for the 185th Street Station, Option 2, is noted. Please see Chapter 2 of the Final EIS for a description of the Preferred Alternative. A decision about which alternative is built for this project will not be made until after the Final EIS is issued.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Diana Petersons

ADDRESS: 12015 E. Gibson Rd

CITY: Everett STATE: WA ZIP CODE: 98204

EMAIL ADDRESS: dlunik@hotmail.com

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Comments

I-136-001

My family moved to the Seattle area in 1987 and our family became the Caretakers of the Latvian Lutheran Church. We grew up attending Latvian School, going to Latvian folk dancing, helping w/ senior citizen lunches, going to Latvian Bazaars and other numerous activities. This is the life of a Latvian-American child and continues into adulthood. By building this light rail system, you affect the senior community that built this center by hand w/ ~~donations~~ donations collected over 40 yrs ago. You affect my age group who is now bringing their children to school and continuing the culture — you are affecting the future Latvian children, as well as our fellow Estonian and Lithuanian members who also share our center. We have had to move before due to imminent domain — please do not make us move again — we will not find a "home" that carries the significance of this center. Sincerely, Diana Petersons

SOUNDTRANSIT RIDE THE WAVE

I-136-001

The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property. Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Modris Petersons

ADDRESS: 11716 3rd Ave NE.

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS:

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Comments

I-137-001 We are the caretakers at the Latvian Lutheran Church. We are originally from Milwaukee WI. Every major city in America has a Latvian community center. Most of the centers were built by the "greatest generation". We noticed that when we took over the center, unlike other centers, there is the whole west coast Latvian community that uses the church and center. Not just the city of Seattle.

I-137-002 To resolve the issue with no major hassles and a devastated Baltic community, shorten the 130th street exit. It's silly to have such a long exit lane. Go see for yourself, just move the rail over 50' and shorten the lane. It would work, if we use a "common sense" solution.

Thank you.

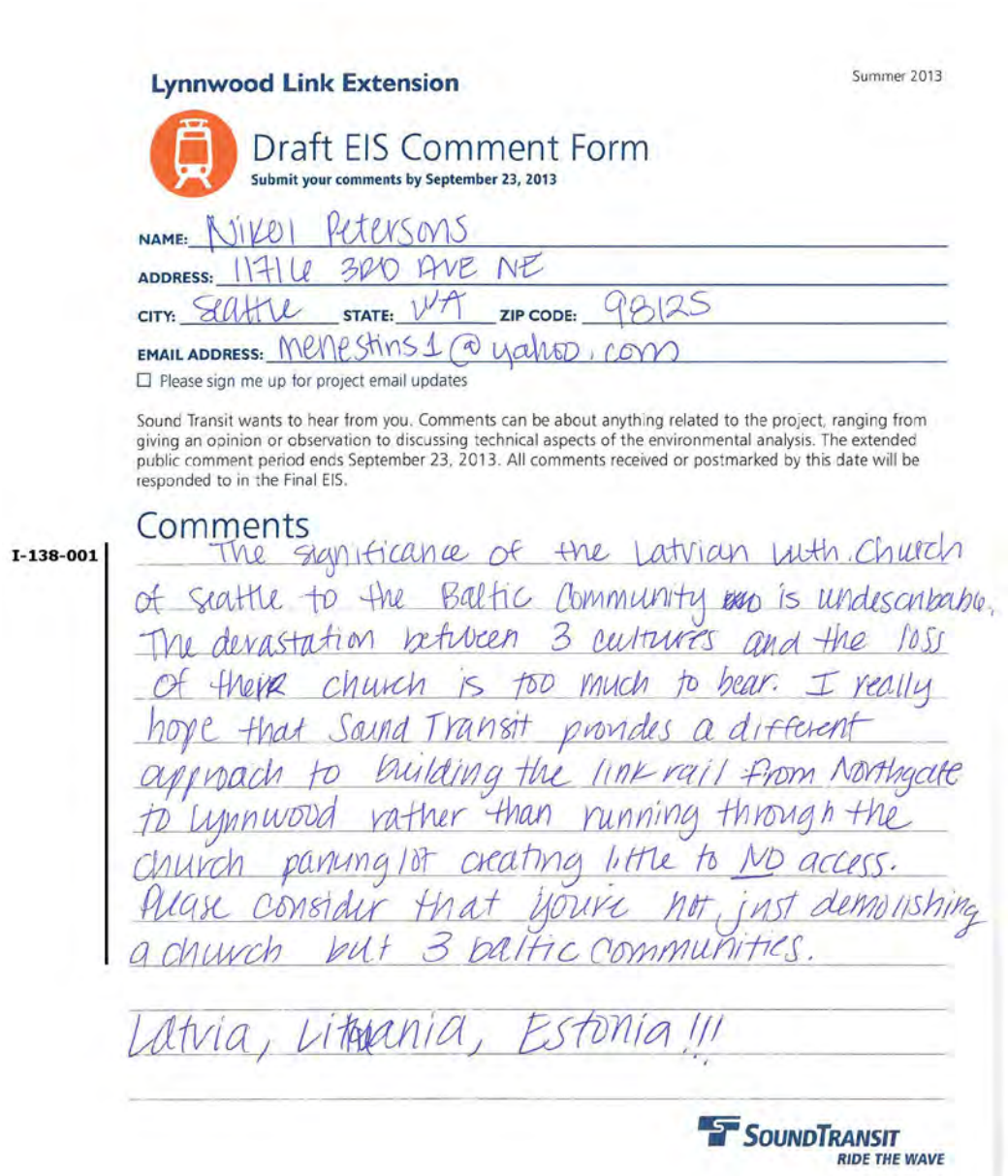
SOUNDTRANSIT RIDE THE WAVE

I-137-001

The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property. Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A.

I-137-002

Your suggestion regarding the NE 130th ramp is noted. See the conceptual design developed for the Preferred Alternative in Appendix F.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Nikol Petersons

ADDRESS: 11716 3RD AVE NE

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS: menestins1@yahoo.com

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Comments

I-138-001

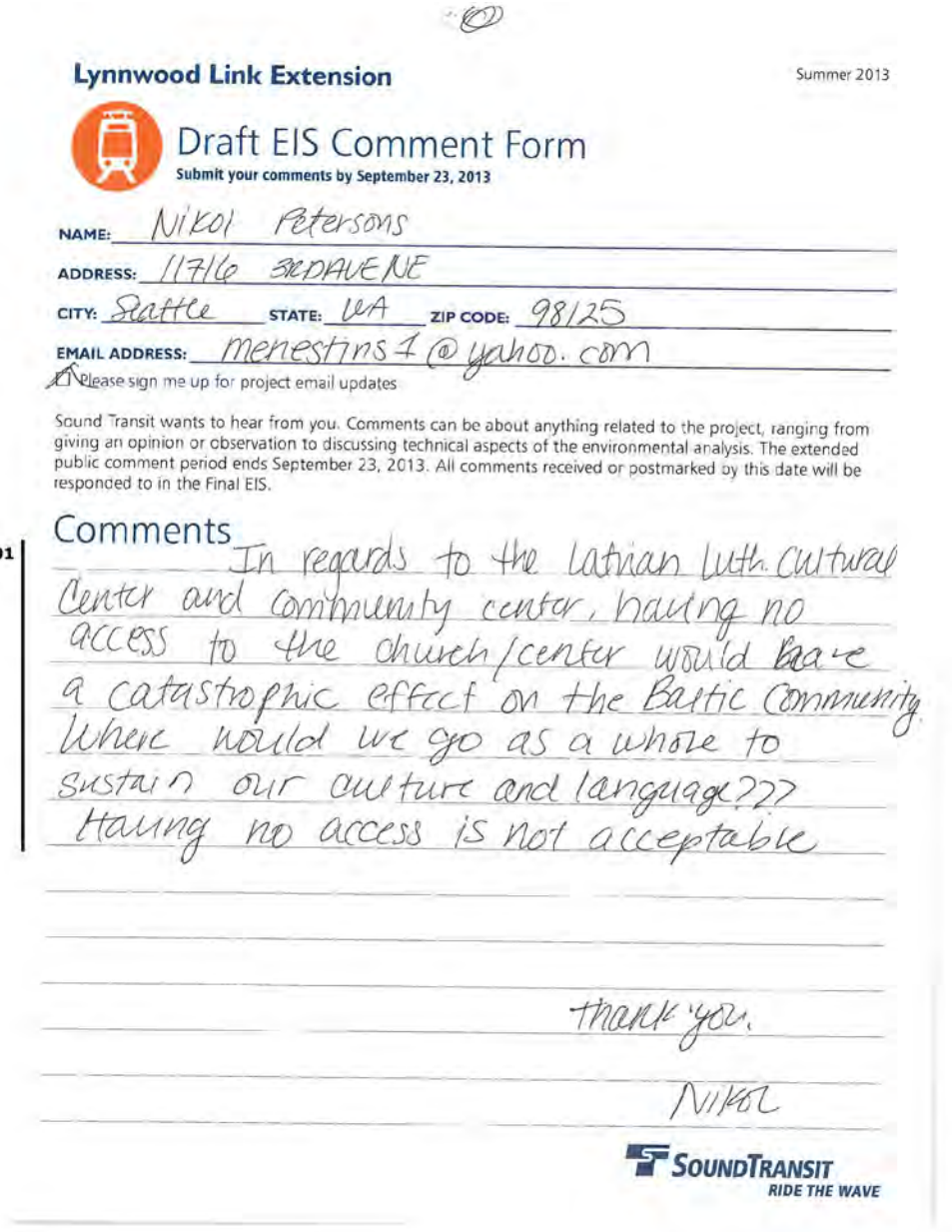
The significance of the Latvian Luth. Church of Seattle to the Baltic Community ~~xxx~~ is undescribable. The devastation between 3 cultures and the loss of their church is too much to bear. I really hope that Sound Transit provides a different approach to building the link rail from Northgate to Lynnwood rather than running through the church parking lot creating little to NO access. Please consider that you're not just demolishing a church but 3 Baltic communities.

Latvia, Lithuania, Estonia !!!

SOUNDTRANSIT RIDE THE WAVE

I-138-001

The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property. Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Nikol Petersons

ADDRESS: 11716 3RD AVE NE

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS: menestins1@yahoo.com

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Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

I-139-001

Comments

In regards to the Latvian Luth. Cultural Center and community center, having no access to the church/center would have a catastrophic effect on the Baltic Community. Where would we go as a whole to sustain our culture and language??? Having no access is not acceptable

thank you.

Nikol

SOUNDTRANSIT RIDE THE WAVE

I-139-001

The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property. Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Ravin Pierre + Polina Yurova

ADDRESS:

CITY: Lynnwood STATE: WA ZIP CODE:

EMAIL ADDRESS:

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Comments

I-140-001 For Segment C alternative, I prefer C3.

SOUNDTRANSIT RIDE THE WAVE

I-140-001

Thank you for your comment stating your preference for Alternative C3.

Aldis Raisters
3936 NW 17th Ave
Camas, WA 98607

Roger Iwata
North Community Outreach Lead
Sound Transit

August 24, 2013

Dear Mr. Iwata:

Re: Sound Transit Link Light Rail system impacting the Seattle Latvian Church and Center at 11710 3rd Ave N.E, Seattle, WA 98125

The purpose of this letter is to voice concerns over the plans for the Lynnwood Link Extension of the Sound Transit Link Light Rail system, which includes alignment along the east side of I-5, impacting private property owners and community groups.

I-141-001

The primary concern is the proposed extension and alignment onto the property of the Seattle Latvian Center, which could potentially limit or completely eliminate street access to the Center's parking lot, cutting off access by Center users and rendering it unusable. The church and center is a custom built and planned facility for the Seattle Latvian community which includes a church, full service kitchen, school rooms, library, and the main hall area which includes a stage. This structure is utilized by the Seattle Latvian, Estonian, and Lithuanian communities for religious functions, community events, family gatherings, birthdays, baptisms, confirmations, end of life ceremonies, and extended to the Seattle community through rental opportunities. Weekly usage of the center includes but is not limited to, church services, folk dance practices, choir rehearsals, Latvian school classes as well as other special interest groups.

The Seattle Latvian community is not only active within the city of Seattle, but also on a national and international level, most recently having taken part in the Latvian Song and Dance Festival in Riga, Latvia. Collectively, they have contributed to the culture of the city on a continuous basis at such events as the Folklife festival and the Baltic Rights of Spring performance at the Seattle Public Library. The American Latvian Association recently held their annual Congress meeting in Kent.

Having spent many years of my childhood at this center it is considered a second home and the growth place of my Latvian heritage. Many Saturdays were spent at the Latvian school learning about culture and language while my other friends watched Saturday cartoons. Sundays were the day for attending church and folk dance rehearsal, both which were and still are located at the center. I was baptized and confirmed at the center as were other Latvian community youth.

Loss of this center would be an irreparable setback for all involved communities. The current center was built after the first Seattle Latvian Center in Tacoma was claimed by Eminent Domain for an I-5 expansion project in the 1970s. The Latvian community would be hard pressed to repeat this relocation effort in the current economic, real estate climate.

The Link Light Rail system is a much needed improvement in the Seattle area and should be celebrated for connecting communities and improving Seattle's access to the areas many cultural, recreational, and business uses. This project should enhance, not threaten the existence of this sort of community center.

Please take the Seattle Latvian Center and Lutheran Church in to consideration as Sound Transit continues plans for its Lynnwood Link Extension and work with them to come to a solution that works for both parties.

Thank you,

Aldis Raisters

I-141-001

The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property. Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: ERIC RAISTERS

ADDRESS: 10507 64TH PL. W

CITY: MUKILTEO STATE: WA ZIP CODE: 98275

EMAIL ADDRESS: raisters@comcast.net

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Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-142-001

This comment is in regards to the Latvian Lutheran Church property. I am concerned that the headlights of the trains, if the elevated option is chosen, will shine in the north & east facing windows during evening services. Since the trains will come every 4-10 minutes this means services will be disrupted 3-7 times. What are options to mitigate light "pollution" from the trains?

SOUNDTRANSIT RIDE THE WAVE

I-142-001

Additional discussion of headlight impacts of light rail trains has been added to the Final EIS, Section 4.5. For the Latvian Evangelical Lutheran Church, the orientation of the route is roughly parallel to and approximately 50 feet from the nearest building and the focus of headlights on the rails will limit the potential for headlights to shine directly into church windows. In addition, noise walls are currently planned between the light rail line and the church; see Appendix G Figure G-17 for a photosimulation of the Preferred Alternative, looking from the church grounds.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: (Mrs) Vija Rauda

ADDRESS: 1741 NE 105th St

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS:

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Comments

I-143-001

It is not acceptable to me that any part of Latvian Lutheran Church property is taken by Sound Transit. The church and community center was built in 1970-71 by volunteers and donated money (no tax payer funds!) My father, Alfreds Rozenis, was one of the volunteers - workers with 400+ hours. My sons were christened, went to Latvian School and danced in Trejdeksmitas (Treydance at Folklife Festival, Seattle Library, Nordic Museum) for many years. Now their children are attending Latvian School and my niece is still dancing in Trejdeksmitas. I have been active in church but especially in Embroidery group for last 20 years. We meet on Monday and Saturday every other week. Our hand work support the Latvian Center. I go to the Latvian Church/ Community every week for some activity.

SOUNDTRANSIT RIDE THE WAVE

I-143-001

The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property. Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A.

From: wyvonne ray <greenflowergoddess@comcast.net>
Sent: Sunday, August 25, 2013 4:35 PM
To: Iwata, Roger; Lynnwood Link DEIS
Cc: Tami Johnson; sonia glenn
Subject: Comments regarding August 20,2013 Northgate Community Meeting

Hello Mr. Roger Iwata,

My name is Wyvonne Ray. I live in the Northgate area and spoke with you at the Northgate Community Center August 20, 2013 to discuss the LLE project.
My address is 12045 5th Avenue NE, Seattle Wa. 98125. During the discussion you mentioned that my home would be considered a "partial acquisition" versus a full acquisition.

I-144-001 I have the following concerns and would like your feed back addressing my concerns at your earliest convenience:
1. A partial acquisition will not be an option due to the retaining wall being pushed-moved to close to my home, needing to remove my current garage structure and trees.

I-144-002 2. Increase noise and vibrations leading to Insomnia due to having the new LLE in place 24/7 in the Northgate area.

I-144-003 3. Devaluation of my current home and property. No one would be interested in buying a home this close to a light rail system. I would not be interested if I was a potential buyer.

I-144-004 If you are interested in obtaining my home and property to complete the LLE, I would be open to discussing a "full acquisition" proposal.

Best Regards,

Wyvonne Ray
12045 5th Ave NE
Seattle WA 98125
206-679-9138

1

I-144-001

Thank you for your comment. Final determinations of the property needs for the project, including acquisitions (full or partial) and displacements, will be based on the project's final design after Sound Transit completes the EIS process, selects the alternative to be built, and develops final engineering and design plans. Sound Transit policy provides for a fair and equitable means of addressing real property impacts across its projects. Sound Transit is available to answer questions and provide additional information about the acquisition and relocation process, so please feel free to contact the Lynnwood Link Extension project outreach staff member, Roger Iwata at: roger.iwata@soundtransit.org.

I-144-002

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. Sound Transit's policy is to mitigate moderate or severe impacts. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS. Sound walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. Mitigation is also proposed to address vibration for your property, as discussed in the Noise and Vibration Technical Report, Chapter 5.

I-144-003

Section 4.3.4 of the Draft EIS acknowledges that some studies have documented decreased property values, particularly along a light rail route rather than in the vicinity of a station. Other studies have shown increases in the value of some properties on or near rail alignments. Negative impacts on property values would most likely occur when the light rail project results in noise and visual impacts noticeably greater than what currently exists. At your property, the alignment would be in a retained cut, which would lessen the potential for visual impacts. Noise impacts would be mitigated as described above.

I-144-004

Your preference for a full acquisition proposal has been noted. Please see the Final EIS for the current proposed list of potentially affected properties. However, Sound Transit will not finalize which properties will be full or partial acquisitions until final design, which is after the environmental review process is complete and after Sound Transit has selected the alternative to be built. Please contact Sound Transit for further discussion of your property.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Mike Reres

ADDRESS: 11755 12th Ave NE

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS: mikereres@mail.com

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Comments

I-145-001

I wish only to express my support for a station at 130th as defined by ~~alternatives~~ the segment A alternatives A5, A7 A10, and A11. I believe that increasing access to the link light rail will make it more richer and neighborhood friendly. Thanks for bringing this kind of mass transit to Seattle!

SOUNDTRANSIT RIDE THE WAVE

I-145-001

Thank you for your comment stating your preference to have a light rail transit station at NE 130th Street, as represented in Alternatives A5, A7, A10, and A11.

From: Sonja Olson Feuerborn <sonjafire@gmail.com>
Sent: Friday, August 23, 2013 9:58 PM
To: Lynnwood Link DEIS
Subject: Support to save the Latvian Community Center

Hello,

I-146-001

I wanted to add my voice to urge you to consider alternate routes for the Sound Transit light rail Lynwood extension that would preserve the Latvian Lutheran Church and community center. This building has been a part of my and my family's lives for decades, and has served as a link for Latvian Americans in Seattle and the entire West Coast. I went to church, Latvian saturday school, and had my wedding reception in that building. My children now go to Latvian school in that building to preserve our family language and traditions and we often attend the church services. This building is so meaningful to so many people, and it continues to thrive and provide a space where a cultural group is able to keep family & cultural traditions alive. It is also a church, place or worship, and school. It also serves as an essential location that brings together Estonian and Lithuanian families who live in this area. My grandmother's generation, who came to this country in exile, worked SO HARD to build this building and community in order to preserve their traditions and language, and it is working. It would absolutely not be right to take that away.

I also absolutely love the fact that more public transportation is being built and certainly do not think this project should not happen, just that it needs to be done so that important cultural sites that have such meaning to such a large community are not impacted.

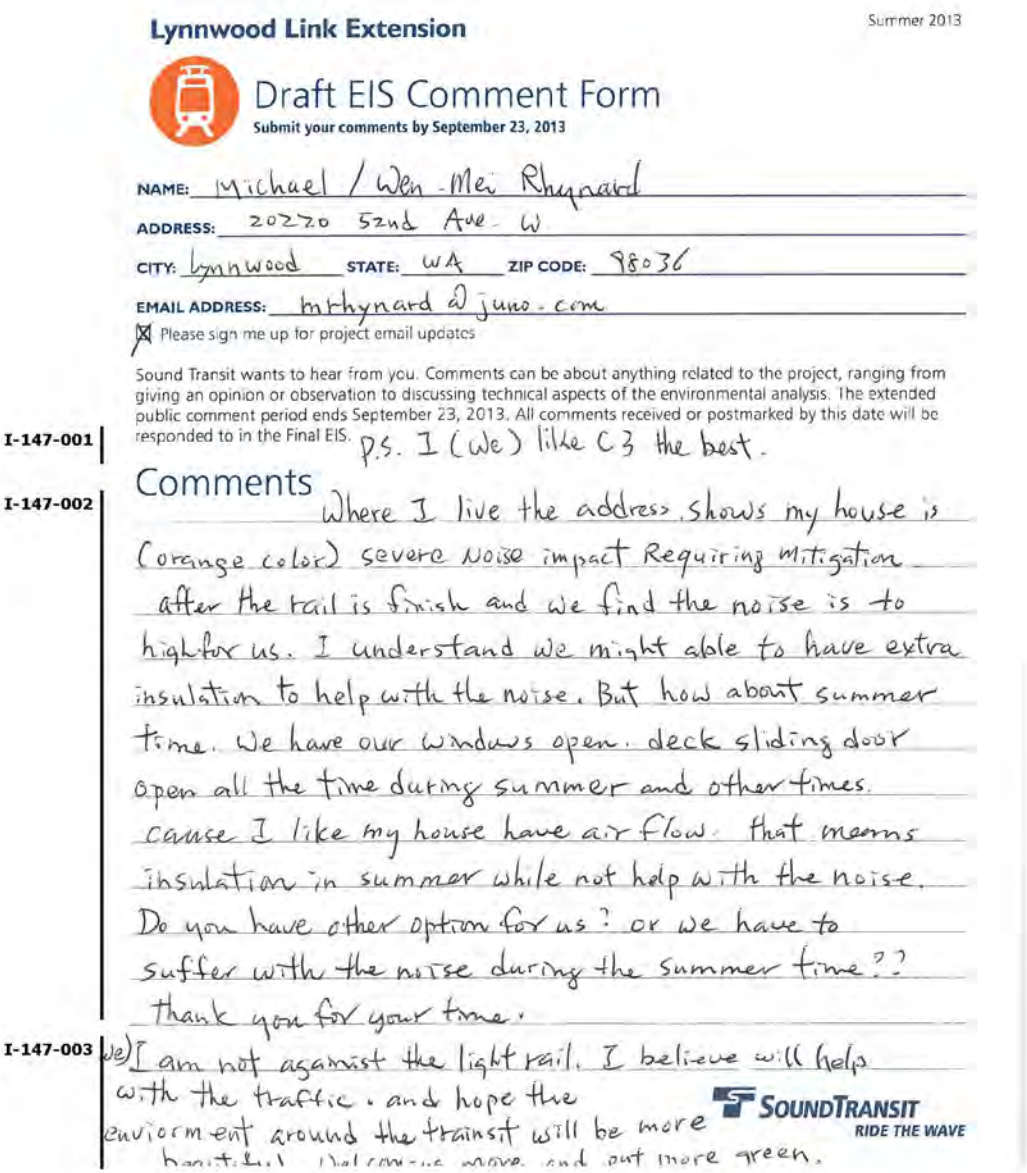
Thank you!

Sonja Olson
Seattle, WA

1

I-146-001

The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property. Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Michael / Wen-Mei Rhynard

ADDRESS: 20220 52nd Ave W

CITY: Lynnwood STATE: WA ZIP CODE: 98036

EMAIL ADDRESS: mrhynard@juno.com

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I-147-001

Comments

I-147-002

Where I live the address shows my house is (orange color) severe noise impact Requiring mitigation after the rail is finish and we find the noise is to high for us. I understand we might able to have extra insulation to help with the noise. But how about summer time. We have our windows open. deck sliding door open all the time during summer and other times. cause I like my house have air flow. that means insulation in summer while not help with the noise. Do you have other option for us? or we have to suffer with the noise during the summer time?? thank you for your time.

I-147-003

(We) I am not against the light rail. I believe will help with the traffic. and hope the enviorment around the trainsit will be more beautiful. Welcome more and out more green.

SOUNDTRANSIT RIDE THE WAVE

I-147-001

Thank you for your comment stating your preference for Alternative C3.

I-147-002

The Preferred Alternative evaluated in the Final EIS is a modified version of Alternative C3, which would not be located near your residence. If Alternative C1 or C2 were constructed, there would be a noise wall along the entire elevated structure from I-5 to the Lynnwood Transit Center Station, so your residence would be protected from noise by noise walls.

I-147-003

Thank you for the support. Sound Transit appreciates your comments.

From: Valdis Riekstins <valdis_riekstins@bd.com>
Sent: Friday, August 23, 2013 2:41 PM
To: Lynnwood Link DEIS
Subject: PLEASE SAVE THE LATVIAN CENTER!
Attachments: ST_Expansion.pdf

August 23, 2013

From:
Valdis J. Riekstins
14513 NE 178th PL
Woodinville, WA 98072
(206) 313-4874
valdisr@gmail.com

To:
Sound Transit
Draft EIS Comments
c/o Lauren Swift
401 S. Jackson St.
Seattle, WA 98104
LynnwoodLinkDEIS@soundtransit.org

Re:
PLEASE SAVE THE LATVIAN CENTER!!

Dear Sir or Madam:

I-148-001

I am writing today to express my concerns over the planned light rail extension to Lynnwood... specifically how this project is going to impact our community's church and cultural center next to I-5 near 117th and 3rd. This building is a HUB to our community – a landmark and monument to an immigrant community who designed, financed, and built it themselves, and it is imperative that it be allowed to continue its function as it is, where it is.

I am a member of the local Latvian-American community. I was born in Edmonds, WA. I represent the second generation of my family to be born outside of Latvia.

My grandparents were forced to flee Latvia during the Second World War when Soviet Russia invaded the Baltics for the second and final time of that conflict. Like so many in their generation, they fled to Germany to await paperwork to immigrate to a new land to seek a better life for their families.

1

I-148-001

The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property. Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A.

With little-to-nothing to their names they finally arrived in America and began to start a new life, from scratch. Through hard, honest work and an incredible community of other Latvians joining together, they not only survived but thrived, and in the 1950's the community purchased a church. Not 10 years later the city claimed this church as eminent domain, and our community again came together to start from scratch.

On a new piece of land the Latvian community together designed, financed, and constructed the Latvian Lutheran Evangelical Church and Community Center as we know it today. This building may be listed as a "church" in Sound Transit documentation… but it is so incredibly much more to the communities it serves.

This building is the HUB of not only the Latvian, but also the local Estonian and Lithuanian communities with reach as far away as Alaska, California, and well into central US and Canada. This building has been the home of the Seattle Latvian School for over 50 years… a school I myself attended as a child and where my children will be returning in September to continue their studies. This building has been the rehearsal and performance space for the local Latvian folkdance group "Trejdeksnitis" for just as long… a folkdance group where my parents met and fell in love, and also where my wife and I danced when we were younger. The Latvian Center acts as the official polling place for Latvian, Lithuanian, and Estonian elections to serve citizens of those countries who reside in our region. The Center also hosts countless academic society functions, weekly choir rehearsals, community weddings and celebrations, art exhibits, musical performances, plays… the list goes on and on. The presence of this center has also been instrumental in the establishment and perseverance of the Baltic Studies program at the University of Washington, and is a meeting place and home to many Baltic organizations with charitable missions both domestic and abroad.

And yes, it is also a church which offers services regularly in the native languages of Latvia, Lithuania, and Estonia. A church where my father and I both were confirmed, the church where I was christened, the church where I have seen countless friends and family wed, and the church where I've bid a final farewell to several others.

It is imperative that this building face minimal impact from the Sound Transit expansion to Lynnwood… both during construction and after completion. Elimination of the Latvian Center for Sound Transit expansion CAN NOT be considered in your construction plans. The loss to our communities would be completely devastating.

This building is priceless to our communities, and it just CAN NOT be replaced or substituted or adequately compensated for!

I implore the decision-makers at Sound Transit…

PLEASE PRESERVE THE LATVIAN CENTER!

Thank you for your time and consideration.

Sincerely,

Valdis J. Riekstins
(206) 313-4874
valdisr@gmail.com

Valdis J. Riekstins
Staff Electrical & Firmware Engineer

BD

BD Cytopeia: Advanced Cytometry Group
12730 28th Ave NE; Seattle, WA 98125 USA

Office: (206) 364-3400 x27; Fax: (206) 364-3460
Mobile: (206) 313-4874 (emergency use only please)

Email: Valdis_Riekstins@bd.com
Website: www.BD.com

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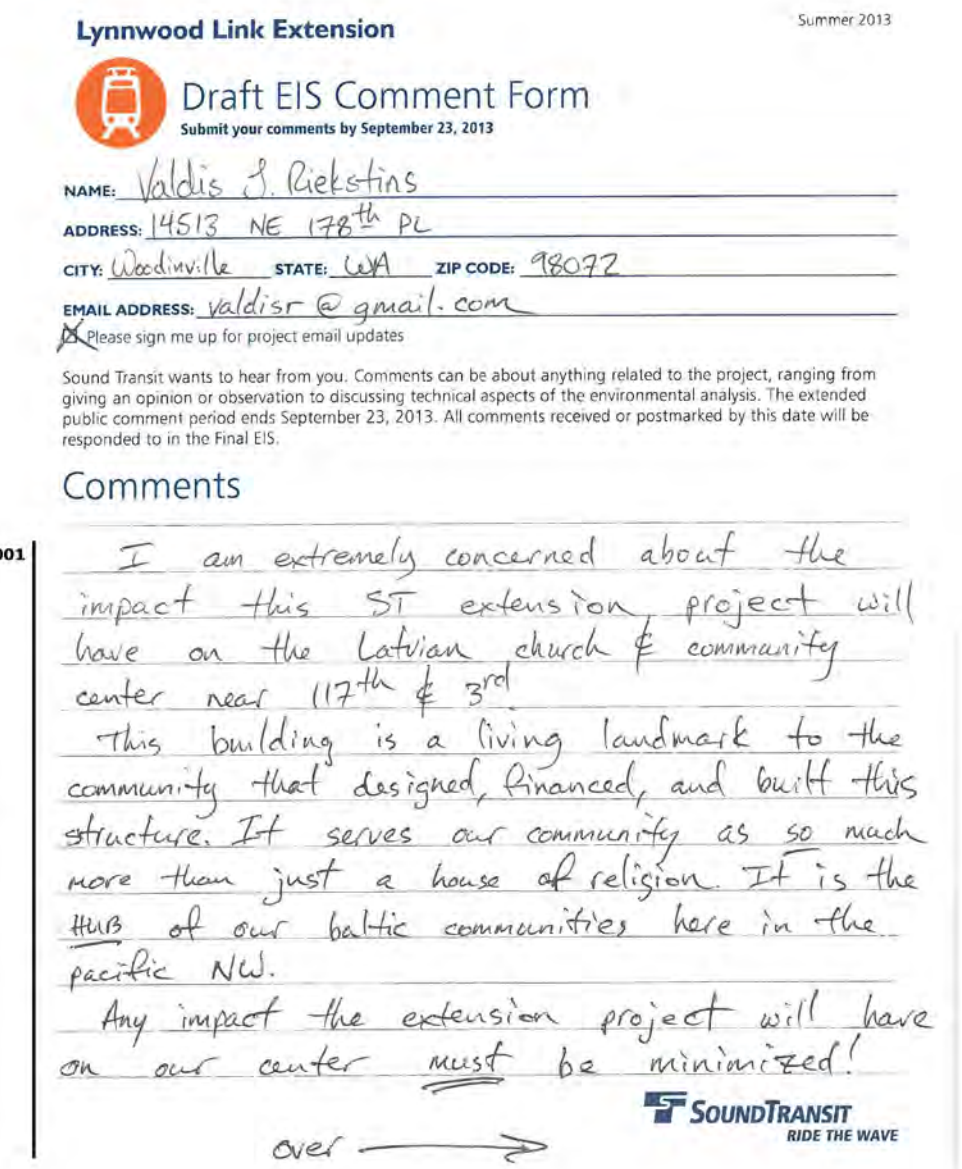


Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Valdis J. Riekstins

ADDRESS: 14513 NE 178th PL

CITY: Woodinville STATE: WA ZIP CODE: 98072

EMAIL ADDRESS: valdisr@gmail.com

X Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-149-001

I am extremely concerned about the impact this ST extension project will have on the Latvian church & community center near 117th & 3rd.

This building is a living landmark to the community that designed, financed, and built this structure. It serves our community as so much more than just a house of religion. It is the HUB of our baltic communities here in the pacific NW.

Any impact the extension project will have on our center must be minimized!

SOUNDTRANSIT RIDE THE WAVE

over →

I-149-001

The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property. Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods.

Lynnwood Link Extension

Submit your comments by September 23, 2013

Your comments on the Draft EIS will help the Sound Transit Board identify a preferred alternative this fall and will be responded to in the Final EIS (expected in 2014).

BY EMAIL: LynnwoodLinkDEIS@soundtransit.org

BY MAIL: Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

I-149-001

PRESERVE OUR LATVIAN CENTER! IT IS PRICELESS TO OUR COMMUNITY — ITS ELIMINATION CAN NOT BE A CONSIDERATION IN YOUR EXPANSION PLANS!!

Federal Transit Administration
U.S. Department of Transportation

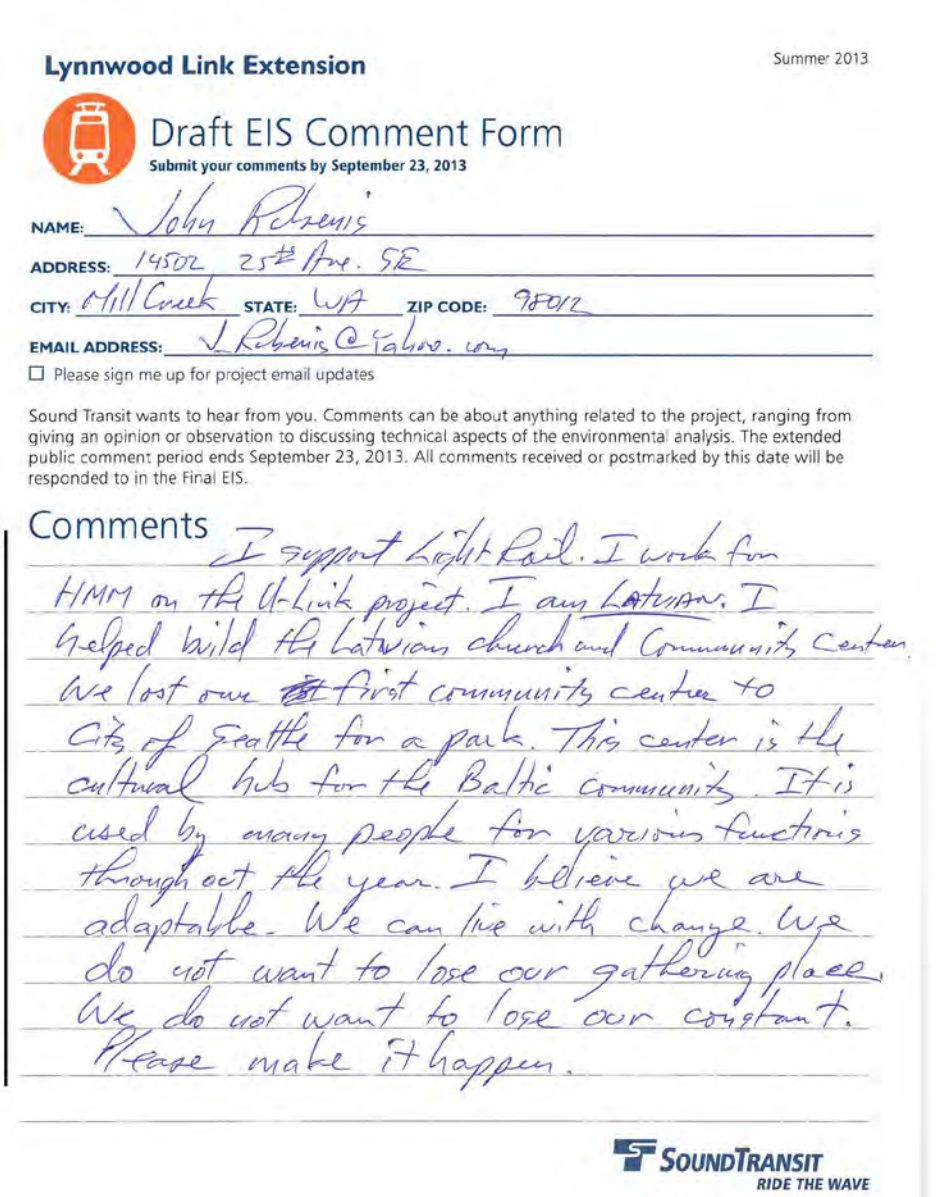
SOUNDTRANSIT
RIDE THE WAVE

TO SUBMIT YOUR COMMENT BY MAIL:
Fold this page and seal with tape, stamp and mail to address provided.

Thank you for your input!

Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

PLACE STAMP HERE



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: John Rebenis

ADDRESS: 14502 25th Ave. SE

CITY: Mill Creek STATE: WA ZIP CODE: 98012

EMAIL ADDRESS: J_Rebenis@Yahoo.com

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I-150-001

Comments

I support Light Rail. I work for HMM on the U-Link project. I am Latvian. I helped build the Latvian church and Community Center. We lost our ~~1st~~ first community center to City of Seattle for a park. This center is the cultural hub for the Baltic community. It is used by many people for various functions through out the year. I believe we are adaptable. We can live with change. We do not want to lose our gathering place. We do not want to lose our constant. Please make it happen.

SOUNDTRANSIT RIDE THE WAVE

I-150-001

The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property. Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A.

TO WHOM IT MAY CONCERN;

I-151-001 PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU, Cg L Roberts

I-151-001

Thank you for your comment stating your preference for Alternative C1.

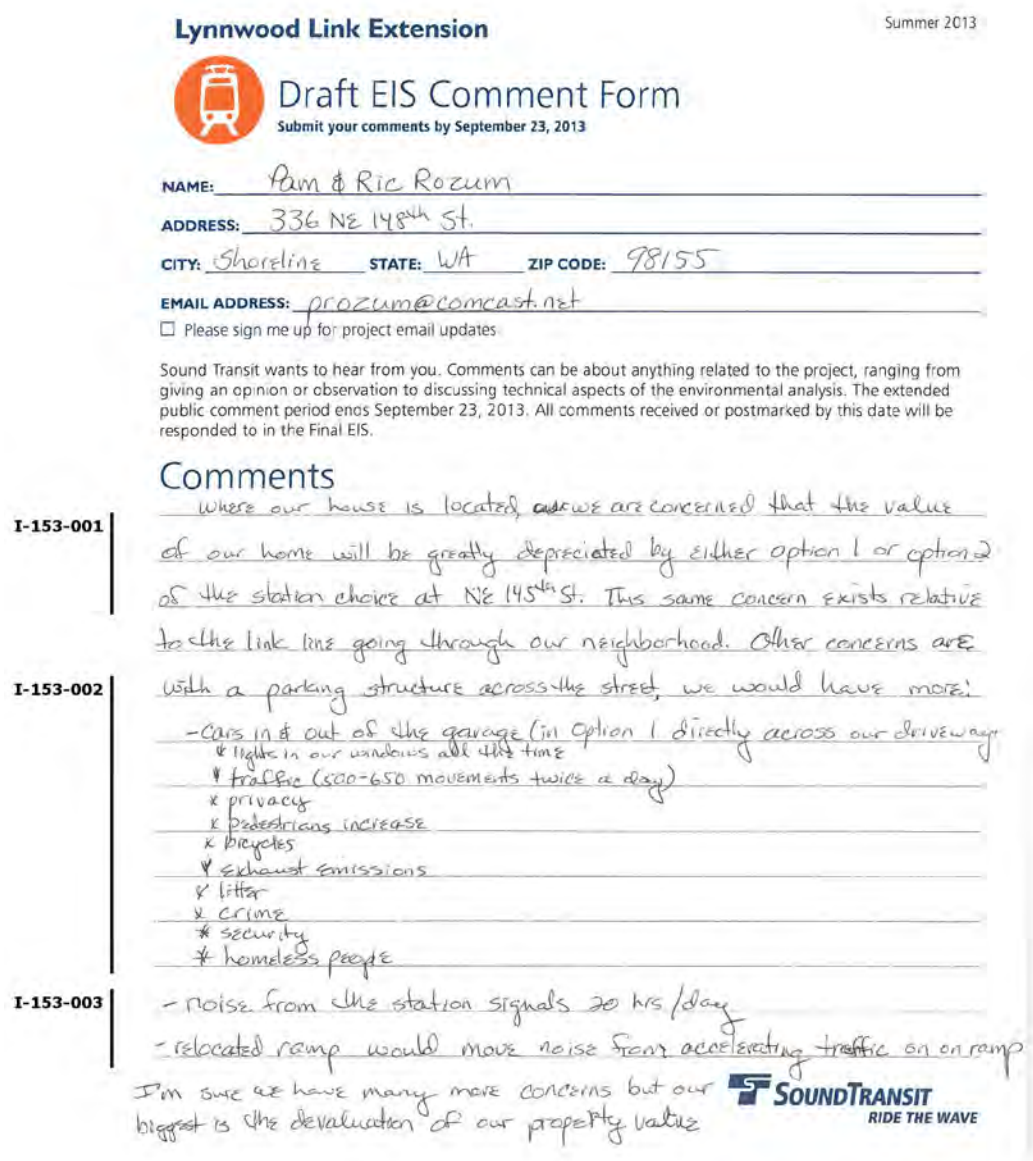
TO WHOM IT MAY CONCERN;

I-152-001 PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

I-152-001

Thank you for your comment stating a preference for Alternative C1.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Pam & Ric Rozum

ADDRESS: 336 NE 148th St.

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: prozum@comcast.net

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Comments

I-153-001

Where our house is located, ~~and~~ we are concerned that the value of our home will be greatly depreciated by either option 1 or option 2 of the station choice at NE 145th St. This same concern exists relative to the link line going through our neighborhood. Other concerns are

I-153-002

with a parking structure across the street, we would have more:

- cars in & out of the garage (in option 1 directly across our driveway
  - * lights in our windows all the time
  - * traffic (500-650 movements twice a day)
  - x privacy
  - x pedestrians increase
  - x bicycles
  - * exhaust emissions
  - x litter
  - x crime
  - * security
  - * homeless people

I-153-003

- noise from the station signals 20 hrs/day
- relocated ramp would move noise from accelerating traffic on on ramp

I'm sure we have many more concerns but our biggest is the devaluation of our property value

SOUNDTRANSIT RIDE THE WAVE

I-153-001

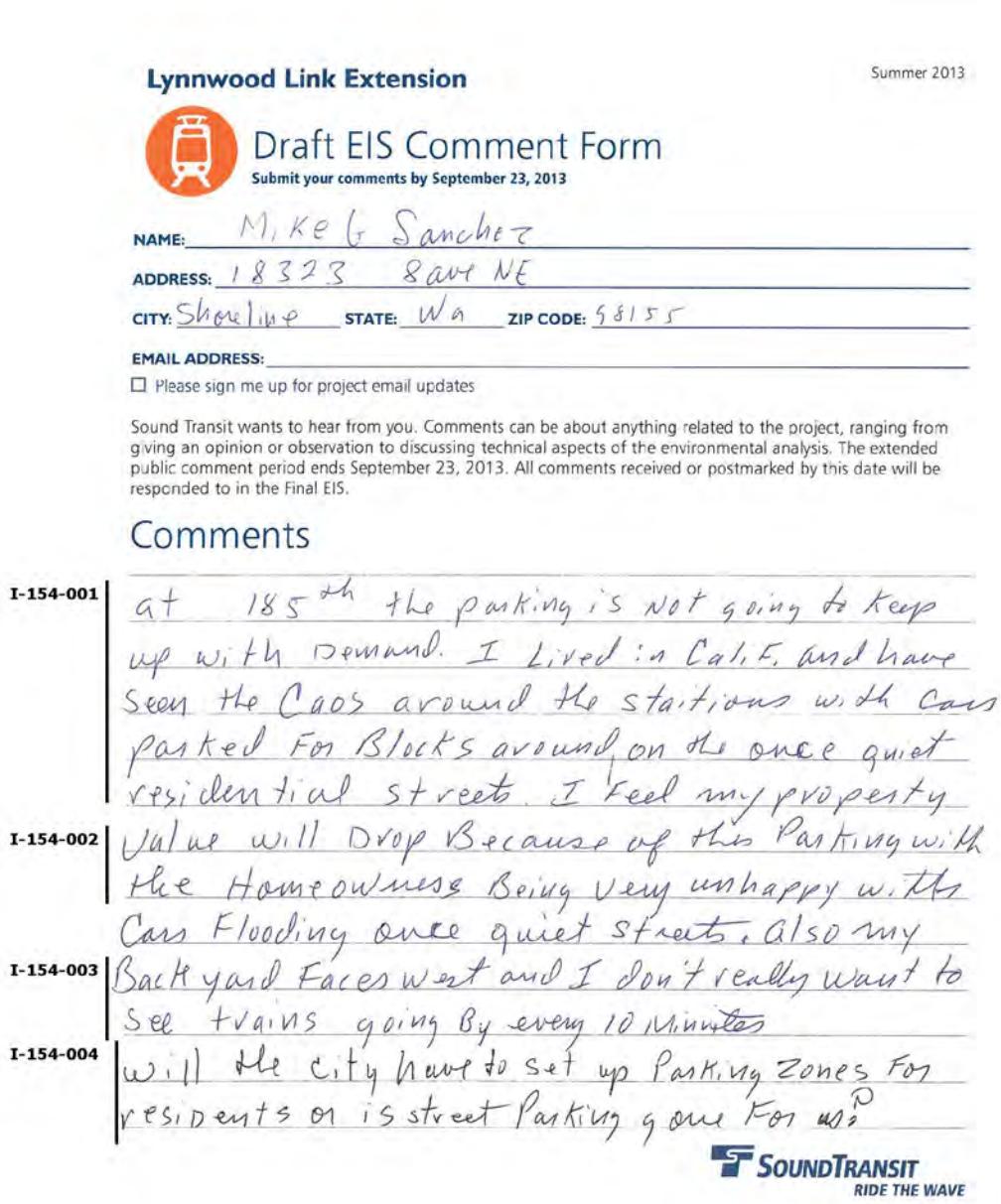
As discussed in Section 4.3.4 of the Draft EIS, improved transit access along with other amenities such as street improvements, including sidewalks and landscaping can positively affect the convenience, visibility, and desirability of surrounding residential properties. Sounds walls needed for the light rail project also have the potential to lower traffic noise from I-5 in the area. The discussion cites research showing that station areas can see increases in property values, but it also notes other factors such as general neighborhood conditions, overall market forces, and local government planning policies as also being important determiners of value. However, the Preferred Alternative features Alternative 3 Option 2 for the NE 145th Street Station parking garage, which would place the parking garage one block south of NE 148th Street.

I-153-002

Sound Transit works with local jurisdictions during final design of stations and park-and-ride garages to integrate them into the surrounding neighborhood and alleviate/minimize their adverse impacts. As noted above, the project would include street and sidewalk improvements, landscaping, lighting, and other amenities. Visual effects are discussed in Section 4.5, with mitigation described in Section 4.5.6. The project features intersection and street improvements to help alleviate congestion, as discussed in Chapter 3, Section 3.2.4. The potential for safety and security impacts is addressed in Section 4.14 and emissions are addressed in Section 4.6, but no adverse impacts are anticipated. There would be increased activity in the station area, including pedestrians and bicyclists, but increased levels of activity can have a positive effect on safety and security. Sound Transit also would maintain the stations to be clean and sanitary, with active surveillance systems that include security personnel and coordination with local police, fire, and other emergency service providers.

I-153-003

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. Sound Transit's policy is to mitigate moderate or severe impacts. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Mike & Sanchez

ADDRESS: 18323 8ave NE

CITY: Shoreline STATE: Wa ZIP CODE: 98155

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-154-001 at 185th the parking is Not going to keep up with Demand. I Lived in Cal. F. and have Seen the Caos around the stations with Cars parked For Blocks around on the once quiet residential streets. I Feel my propesty

I-154-002 Value will Drop Because of this Parking with the Homeowness Being very unhappy with Cars Flooding once quiet streets. also my

I-154-003 Back yard Faces west and I don't really want to See trains going By every 10 Minutes

I-154-004 will the City have to set up Parking Zones For residents on is street Parking gone For us?

SOUNDTRANSIT RIDE THE WAVE

I-154-001

See Section 3.6.7 for mitigation measures to address the potential for spillover parking in neighborhoods.

I-154-002

Section 4.3.4 describes the potential effects of the project on property values. The discussion cites research showing that station areas can see increases in property values, but it also notes other factors such as general neighborhood conditions, overall market forces, and local government planning policies as also being important determiners of value. Improved transit access at the station, along with other amenities, such as street improvements, including sidewalks and landscaping, can positively affect the convenience, visibility, and desirability of surrounding residential properties. Noise walls needed for the light rail project also have the potential to lower traffic noise from I-5 in the area.

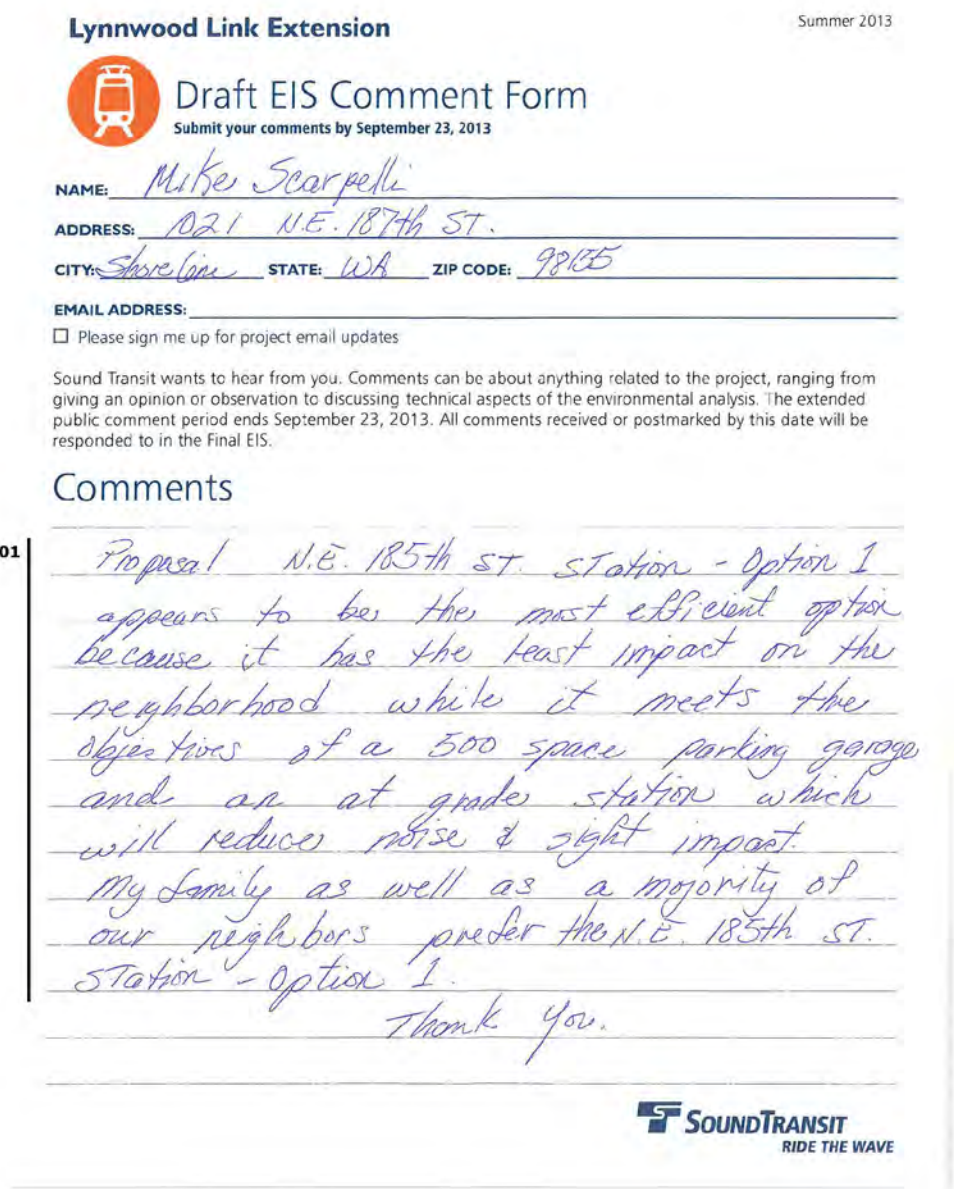
I-154-003

Sound Transit acknowledges your concern about seeing trains pass by your backyard. In this location, the alignment of the light rail is just east of I-5 some distance from your home. Also, there would be noise walls along this section of the alignment, which would shield the passing train from residences on the east side of the alignment.

Text has been added to Section 4.5 in the Final EIS describing the visual effects of trains passing periodically.

I-154-004

The City could consider parking zones or other measures as described in Section 3.6.7 of the Final EIS.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Mike Scarpelli

ADDRESS: 021 N.E. 187th ST.

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS:

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Comments

I-155-001

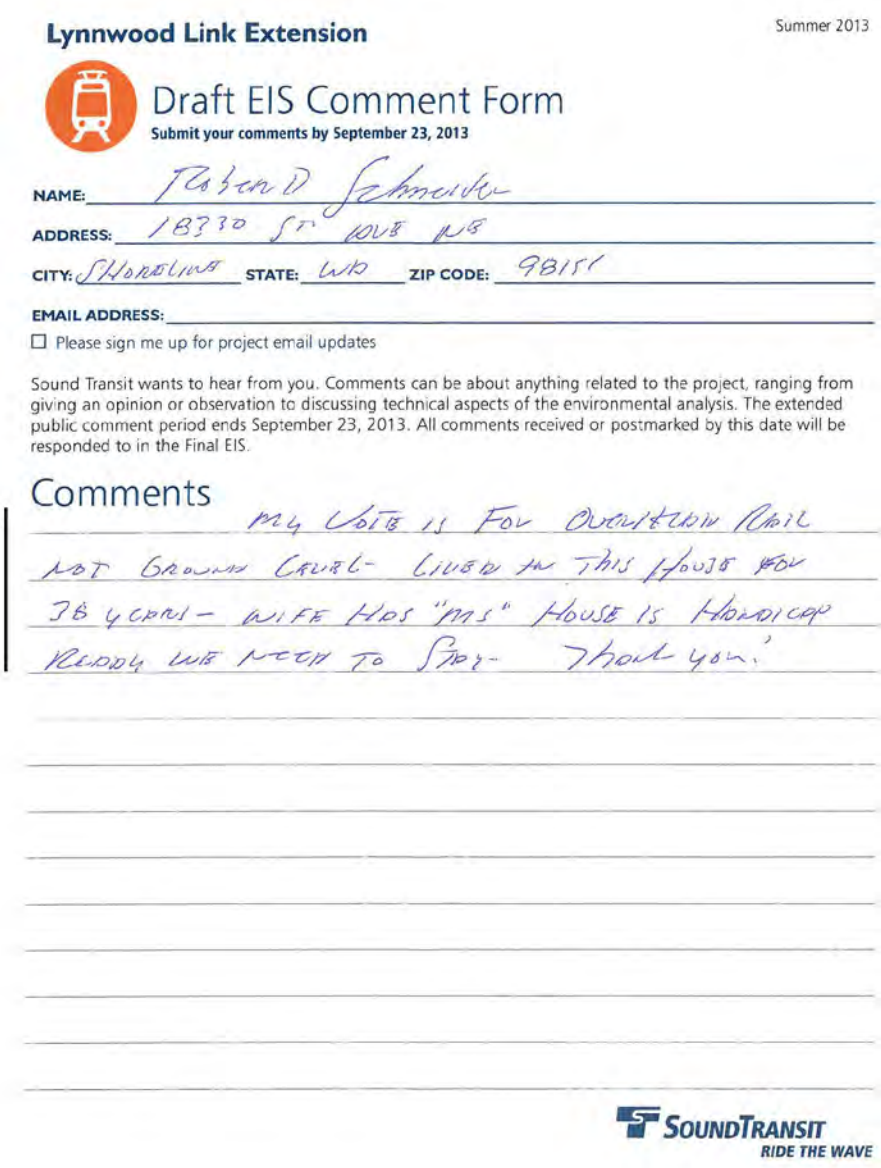
Proposal N.E. 185th ST. station - Option 1 appears to be the most efficient option because it has the least impact on the neighborhood while it meets the objectives of a 500 space parking garage and an at grade station which will reduce noise & sight impact. My family as well as a majority of our neighbors prefer the N.E. 185th ST. station - Option 1.

Thank You.

SOUNDTRANSIT RIDE THE WAVE

I-155-001

Thank you for your comment stating your preference for the Option 1 layout for the proposed light rail transit station at NE 185th Street.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Robert D Johnson

ADDRESS: 18330 5th Ave NE

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS:

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Comments

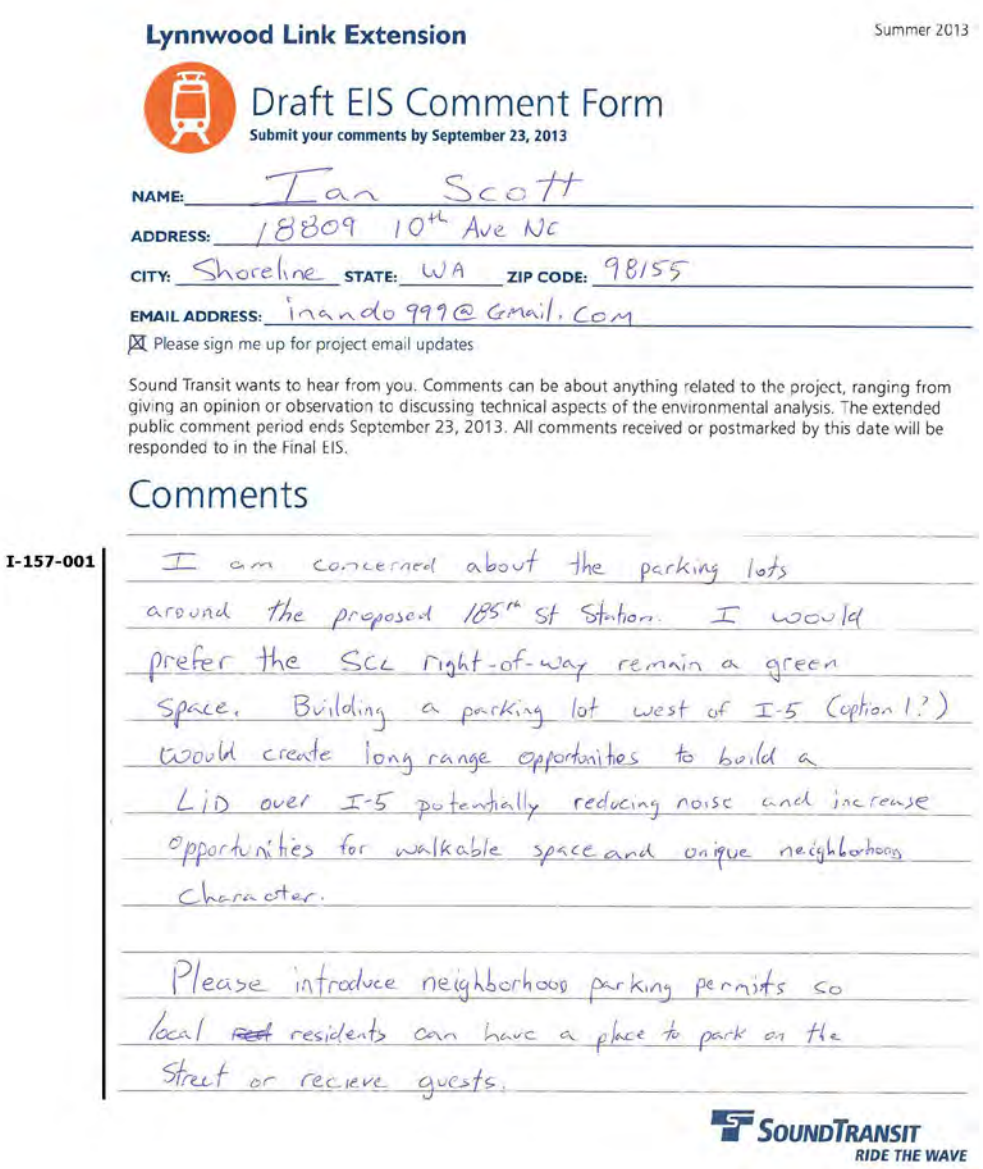
I-156-001

My vote is for overhead rail not ground level - lived in this house for 38 years - wife has "MS" House is handicap ready we need to stay - Thank you.

SOUNDTRANSIT RIDE THE WAVE

I-156-001

Thank you for your comment stating a preference for elevated rail as opposed to ground-level. Sound Transit recognizes your concern for maintaining your current residential location, with its specific handicap renovations. The Final EIS identifies properties affected by potential acquisitions in Appendix I-4.1. Sound Transit policy provides for a fair and equitable means of addressing real property impacts across its projects, and this includes a commitment to provide replacement structures in a manner consistent with state and federal law. This policy has been successfully implemented on several of the Link lines already. While Sound Transit will endeavor to relocate displaced parties in the same neighborhood or area, the work is done in consultation with the displaced parties, who may or may not choose to stay in the same area. They will, however, be placed in structures that remain affordable to and compatible with them; this effort includes interviews with the affected parties to help determine affordability and compatibility, as well as compensation and assistance programs that meet individualized needs and ensures safe and sanitary structures.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Ian Scott

ADDRESS: 18809 10th Ave NE

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: inando999@Gmail.com

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Comments

I-157-001

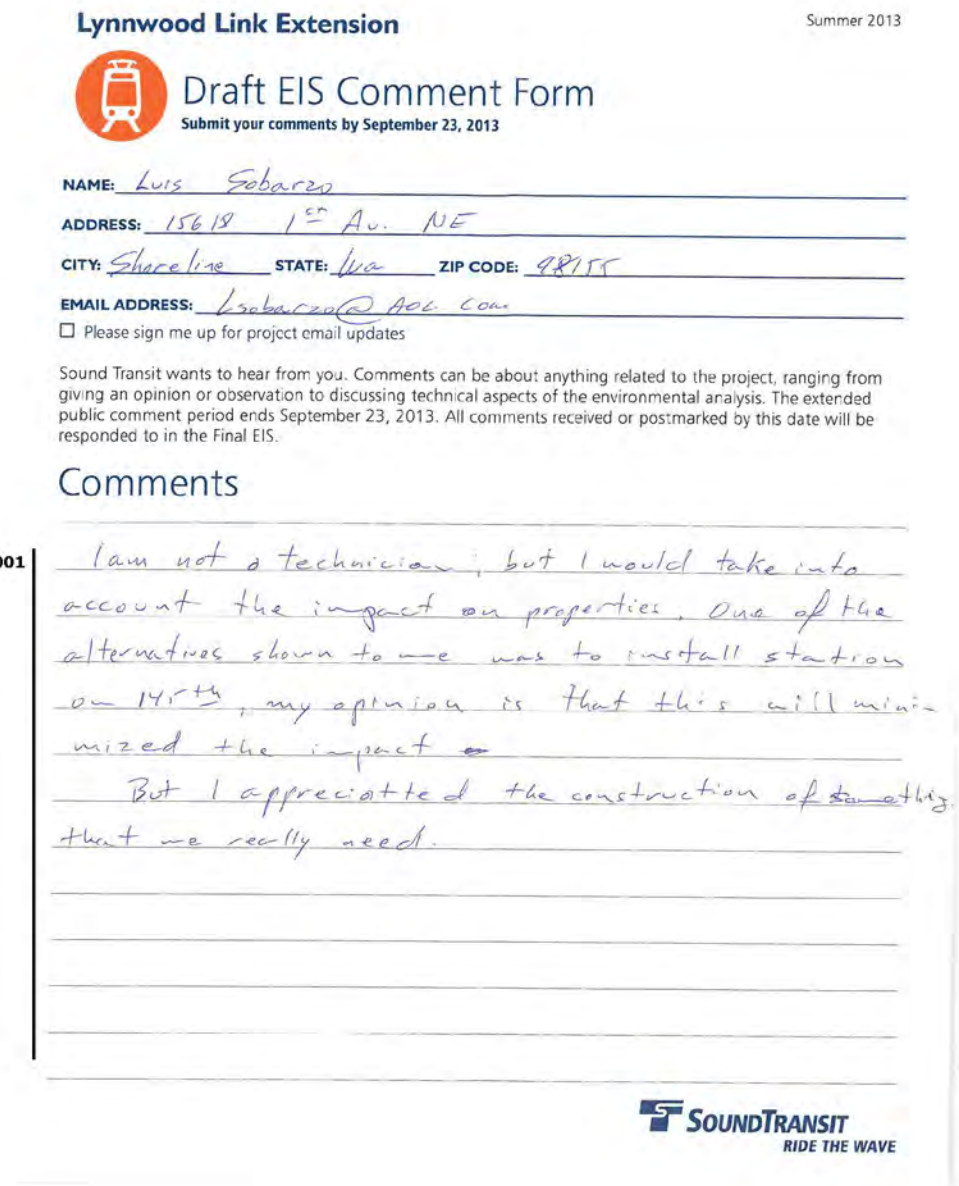
I am concerned about the parking lots around the proposed 185th St Station. I would prefer the SCL right-of-way remain a green space. Building a parking lot west of I-5 (option 1?) would create long range opportunities to build a LID over I-5 potentially reducing noise and increase opportunities for walkable space and unique neighborhood character.

Please introduce neighborhood parking permits so local ~~rest~~ residents can have a place to park on the street or recieve guests.

SOUNDTRANSIT RIDE THE WAVE

I-157-001

Thank you for stating your preference for the garage site in 185th Street Station Option 1. The Preferred Alternative features a parking garage west of the station at NE 185th Street. See Section 3.6.7 for Sound Transit's proposed mitigation approach to address potential parking impacts on neighborhood streets.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Luis Sobarzo

ADDRESS: 15618 1st Av. NE

CITY: Shoreline STATE: Wa ZIP CODE: 98155

EMAIL ADDRESS: Lsobarzo@AOL.com

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Comments

I-158-001

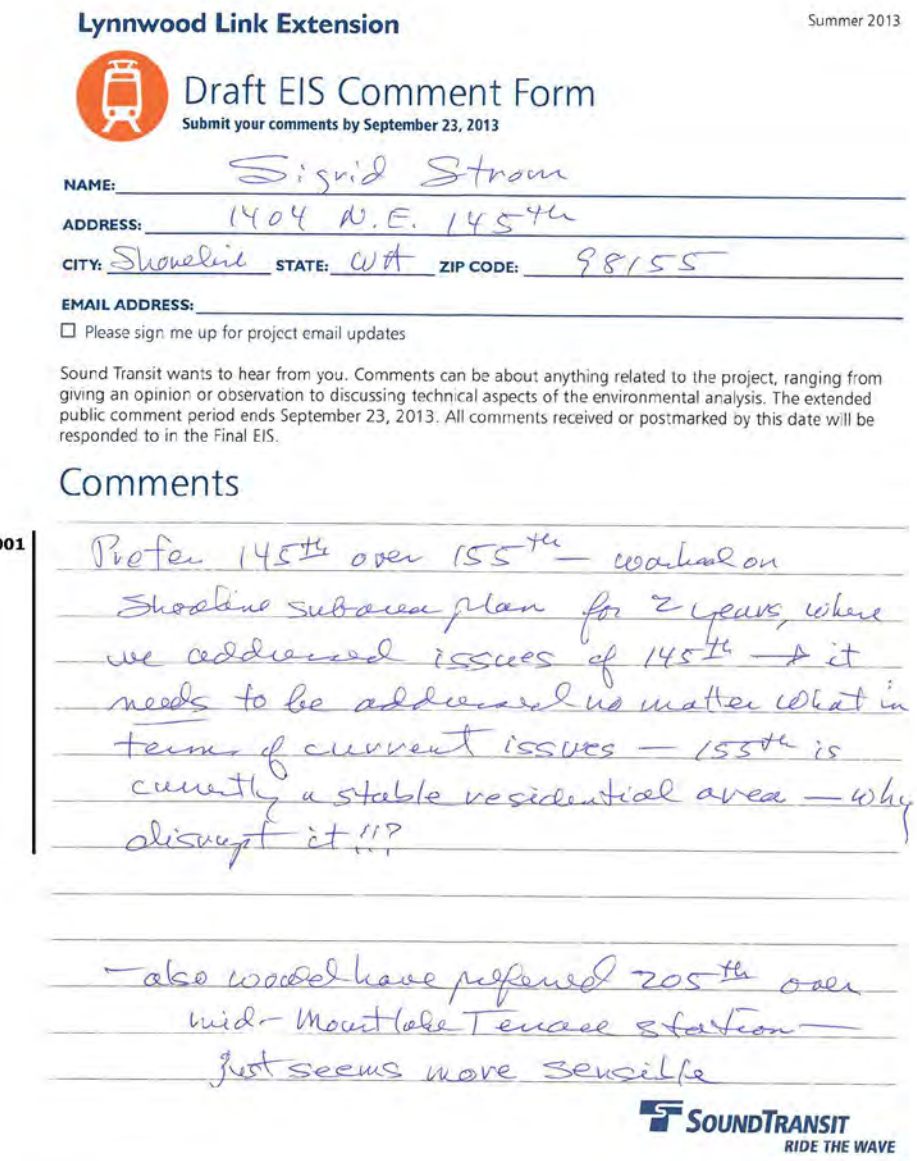
I am not a technician, but I would take into account the impact on properties. One of the alternatives shown to me was to install station on 147th, my opinion is that this will minimized the impact

But I appreciated the construction of something that we really need.

SOUNDTRANSIT RIDE THE WAVE

I-158-001

Thank you for your comment about the 145th Street Station, and for indicating your support for the project. Final determinations of the property needs for the project, including acquisitions and displacements, will be based on the project's final design after Sound Transit completes the EIS process, selects the alternative to be built, and develops final engineering and design plans. Minimization of acquisitions, displacements, and relocations is a priority for Sound Transit.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Sigrid Strom

ADDRESS: 1404 N.E. 145th

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS:

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Comments

I-159-001

Prefer 145th over 155th — worked on Shoreline subarea plan for 2 years, where we addressed issues of 145th → it needs to be addressed no matter what in terms of current issues — 155th is currently a stable residential area — why disrupt it !!?

— also would have preferred 205th over mid-Mountlake Terrace station — just seems more sensible

SOUNDTRANSIT RIDE THE WAVE

I-159-001

Thank you for your comment stating your preference in Segment A for a light rail transit station at NE 145th Street and not at NE 155th Street. The Mountlake Terrace Transit Center Station maximizes previous infrastructure investments that anticipated light rail serving the area.

Lynnwood Link Extension

Submit your comments by September 23, 2013

Your comments on the Draft EIS will help the Sound Transit Board identify a preferred alternative this fall and will be responded to in the Final EIS (expected in 2014).

BY EMAIL: LynnwoodLinkDEIS@soundtransit.org

BY MAIL: Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

PLACE
STAMP
HERE

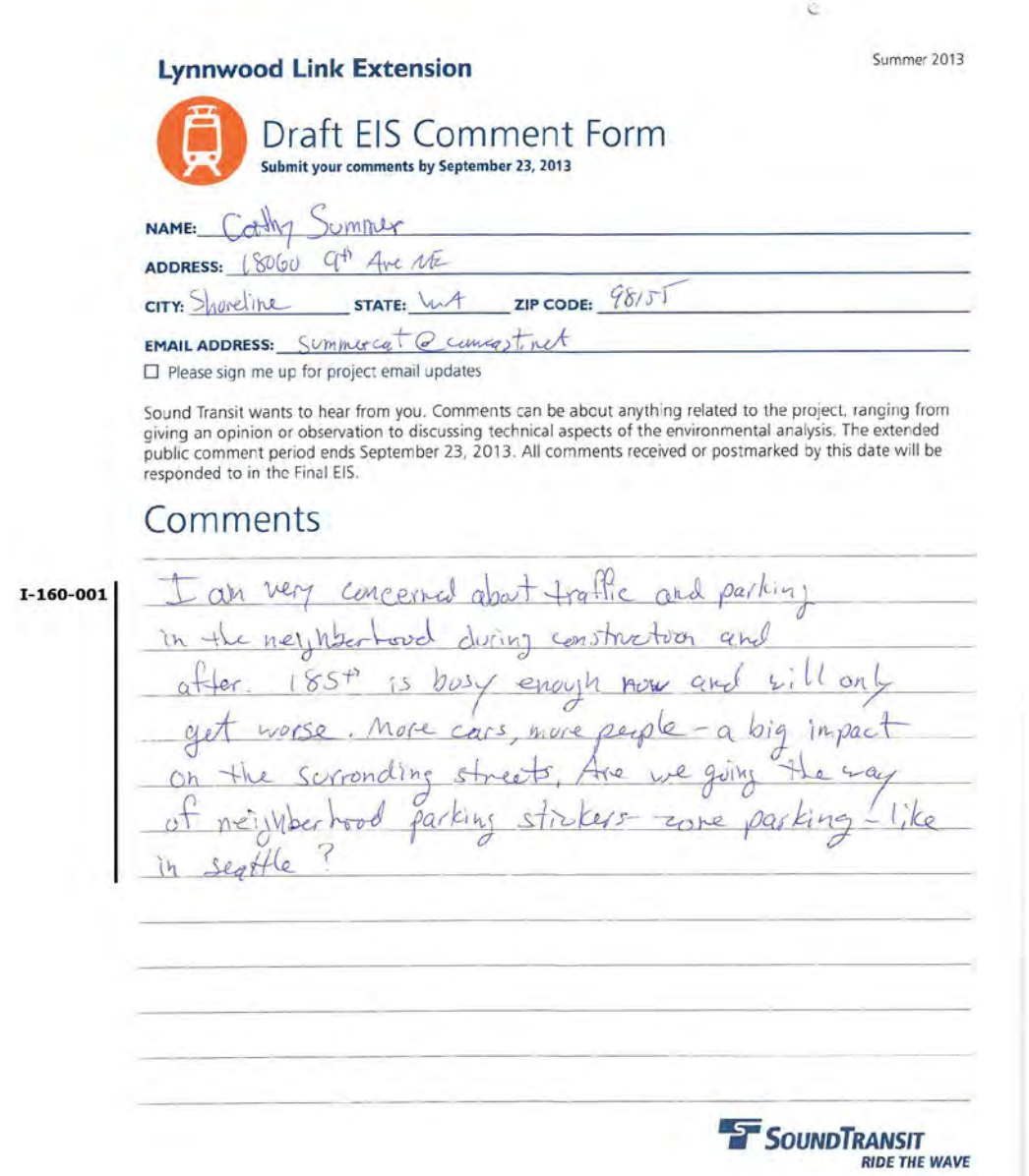
Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

TO SUBMIT YOUR COMMENT BY MAIL:
Fold this page and seal with tape, stamp and mail to address provided.

Thank you for your input!

SOUNDTRANSIT
RIDE THE WAVE

U.S. Department of Transportation
Federal Transit Administration



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Cathy Summer

ADDRESS: 18060 9th Ave NE

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: Summercat@comcast.net

☐ Please sign me up for project email updates

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Comments

I-160-001

I am very concerned about traffic and parking in the neighborhood during construction and after. 185th is busy enough now and will only get worse. More cars, more people - a big impact on the surrounding streets. Are we going the way of neighborhood parking stickers - zone parking - like in Seattle?

SOUNDTRANSIT RIDE THE WAVE

I-160-001

Your comment regarding traffic and parking impact concerns is noted. Although special parking management strategies will be selected by local jurisdictions, Sound Transit identifies potential measures to mitigate potential parking impacts in neighborhoods in Section 3.6.7; measures could include neighborhood parking restrictions but would ultimately be decided through a city-managed process. For an updated assessment of operational traffic impacts and associated improvements, please see Section 3.2.4. See Section 3.3 for construction impacts, and 3.6.9 for construction period mitigation.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: WILL THOMSEN

ADDRESS:

CITY: SNOHOMISH STATE: WA ZIP CODE: 98290

EMAIL ADDRESS: WILL.THOMSEN@GMAIL.COM

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Comments

RECENT GRADUATE FROM UofO IN EUGENE.
EUGENE HAS WONDERFUL PUBLIC TRANSIT.
I-161-001 I MISS PUBLIC TRANSIT IN SNOHOMISH/EVERETT/SEATTLE.
KEEP PUSHING NORTH WE NEED THE LIGHT RAIL.
I WILL ALWAYS USE PUBLIC TRANSIT IF IT IS
AN ALTERNATIVE TO DRIVING OR WALKING.

SOUNDTRANSIT
RIDE THE WAVE

I-161-001

Thank you for your comments. Sound Transit appreciates your support.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Kara Iversen

ADDRESS: 1603 NW 198th St

CITY: Shoreline STATE: WA ZIP CODE: 98177

EMAIL ADDRESS: karaiversen@gmail.com

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Comments

I-162-001 Provide seperated bicycle lanes + cycle tracks! better options for bike storage at transit centers and roads leading to the transit centers.

SOUNDTRANSIT RIDE THE WAVE

I-162-001

The Preferred Alternative has been developed with further details on bicycle lanes and related facilities; please see Chapter 2, Section 2.4 for more detail on these features for the Preferred Alternative and other alternatives.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: JANELLE TURNER

ADDRESS:

CITY: SHORELINE STATE: ZIP CODE:

EMAIL ADDRESS: turnerj1900@hotmail.com

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-163-001

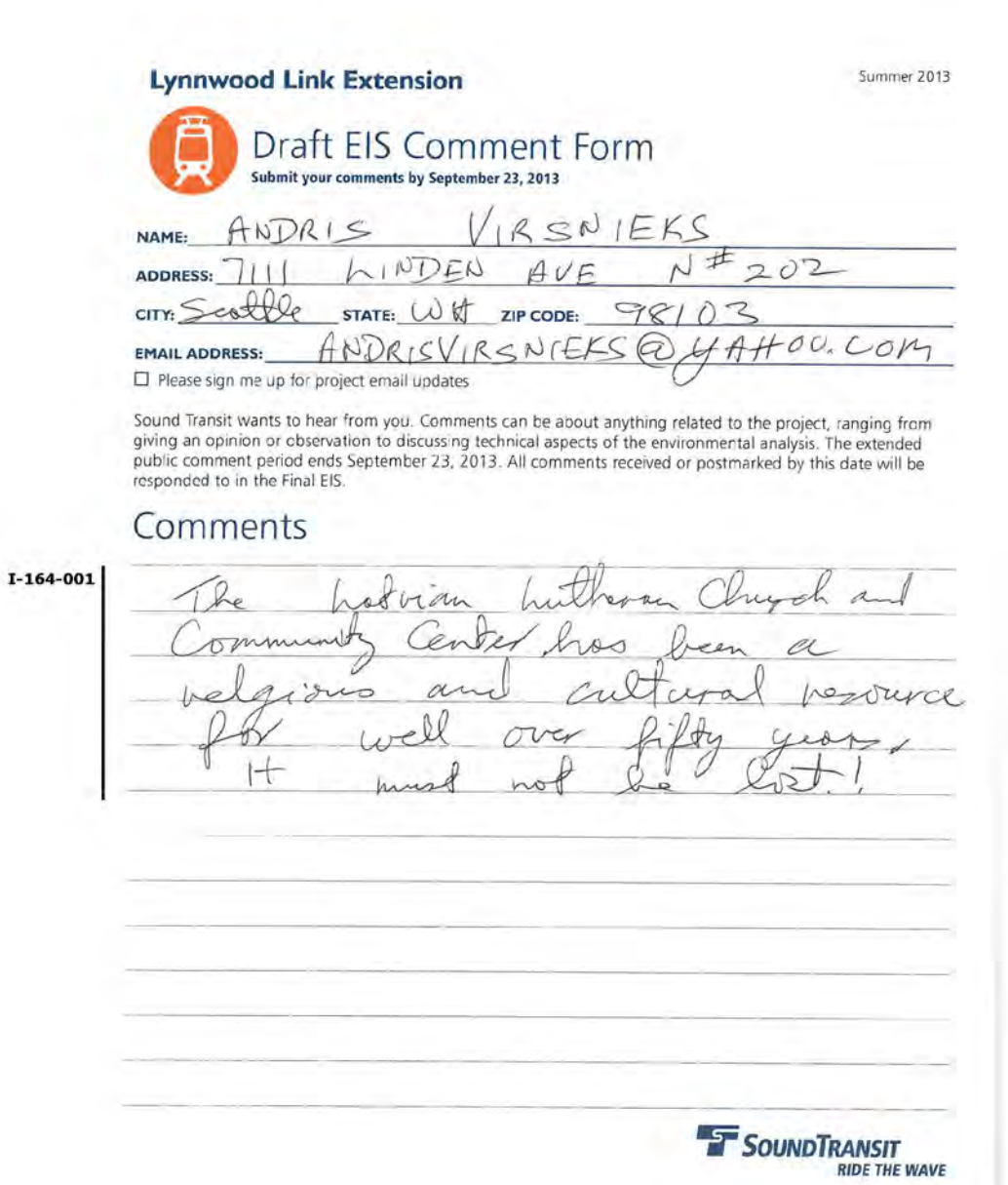
MORE PARKING NEEDS TO BE AVAILABLE AT AT PARK-N-RIDES - PRESENT & FUTURE MOUNTLAKE TERRACE, LYNNWOOD, ASHWAY

MOST LOTS ARE FULL BY 8 30 AM

SOUNDTRANSIT RIDE THE WAVE

I-163-001

Thank you for your input. The alternatives under consideration provide additional parking for transit users compared to today. They were sized based on estimates of demand, which also account for an increased demand for travel using other modes to reach stations, including connecting transit. This also reflects Sound Transit Board direction, consistent with their adopted System Access Policy.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: ANDRIS VIRSNIEKS

ADDRESS: 7111 LINDEN AVE N #202

CITY: Seattle STATE: WA ZIP CODE: 98103

EMAIL ADDRESS: ANDRISVIRSNIEKS@YAHOO.COM

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

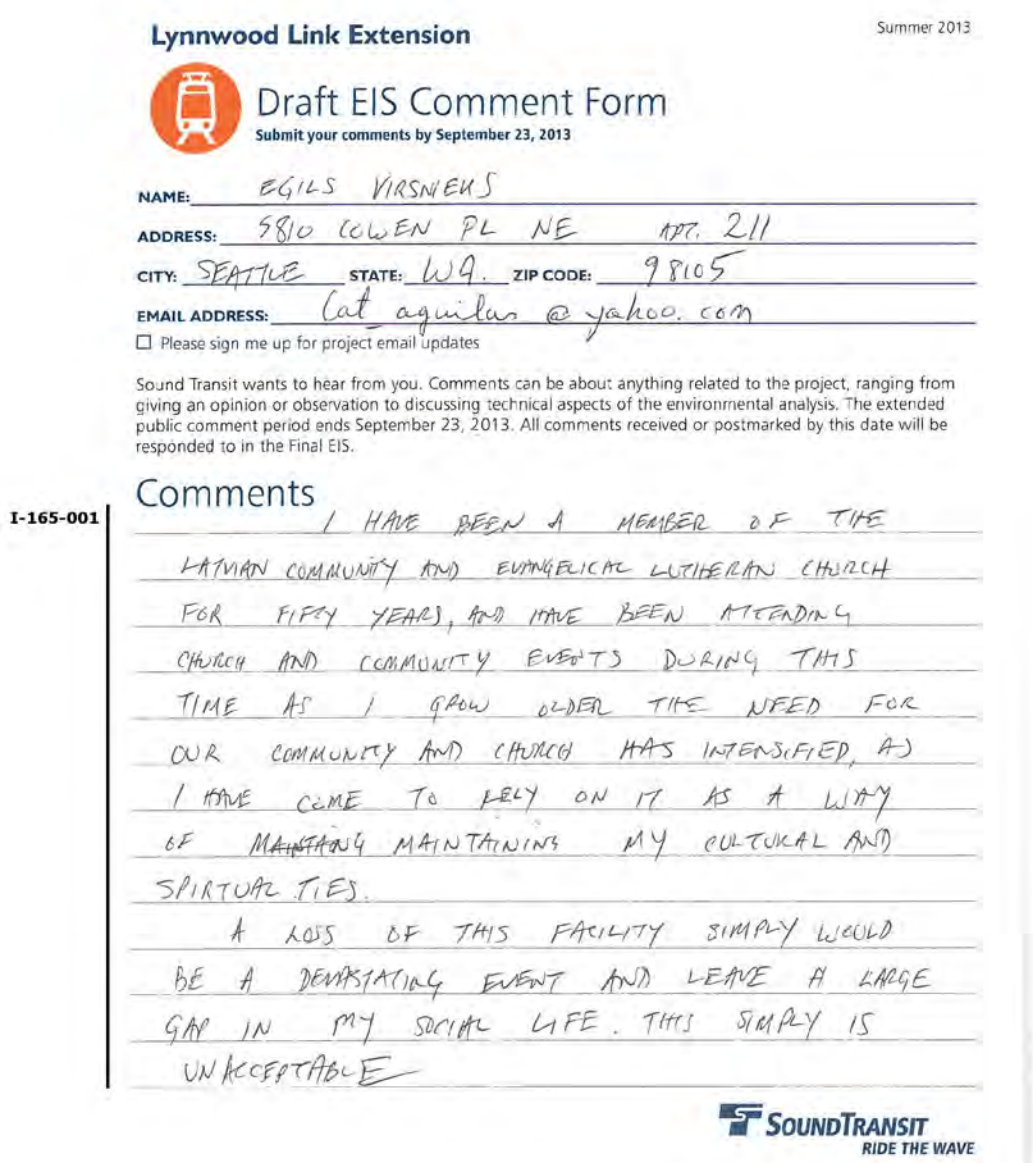
I-164-001

The Latvian Lutheran Church and Community Center has been a religious and cultural resource for well over fifty years. It must not be lost!

SOUNDTRANSIT RIDE THE WAVE

I-164-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: EGILS VIRSNIEKS

ADDRESS: 5810 COWEN PL NE APT. 211

CITY: SEATTLE STATE: WA. ZIP CODE: 98105

EMAIL ADDRESS: Cat_aquilus@yahoo.com

☐ Please sign me up for project email updates

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Comments

I-165-001

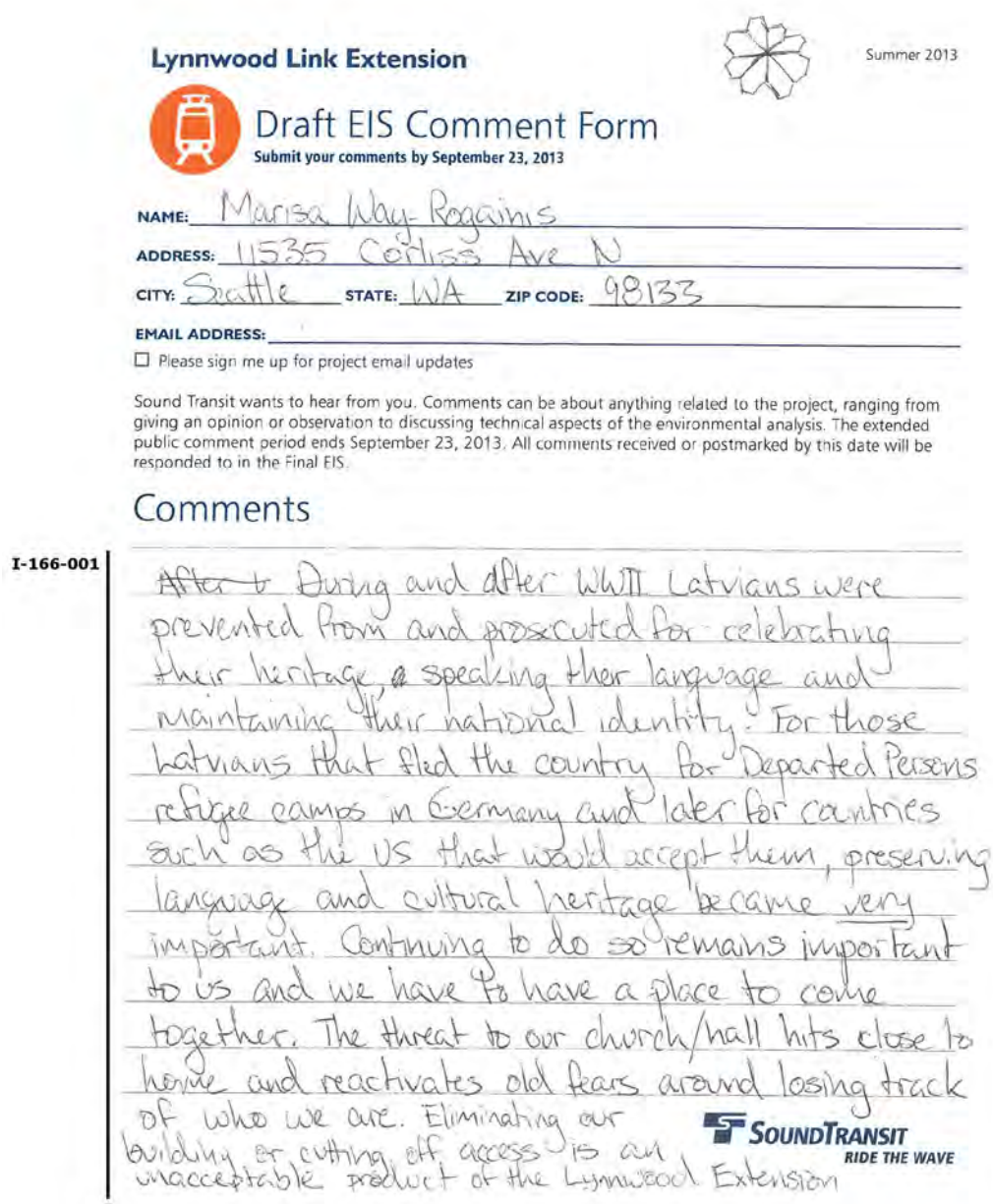
I HAVE BEEN A MEMBER OF THE LATVIAN COMMUNITY AND EVANGELICAL LUTHERAN CHURCH FOR FIFTY YEARS, AND HAVE BEEN ATTENDING CHURCH AND COMMUNITY EVENTS DURING THIS TIME AS I GROW OLDER THE NEED FOR OUR COMMUNITY AND CHURCH HAS INTENSIFIED, AS I HAVE COME TO RELY ON IT AS A WAY OF ~~MAINTAING~~ MAINTAINING MY CULTURAL AND SPIRTUAL TIES.

A LOSS OF THIS FACILITY SIMPLY WOULD BE A DEVASTATING EVENT AND LEAVE A LARGE GAP IN MY SOCIAL LIFE. THIS SIMPLY IS UNACCEPTABLE

SOUNDTRANSIT RIDE THE WAVE

I-165-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Marisa Way Regains

ADDRESS: 11535 Corliss Ave N

CITY: Seattle STATE: WA ZIP CODE: 98133

EMAIL ADDRESS:

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

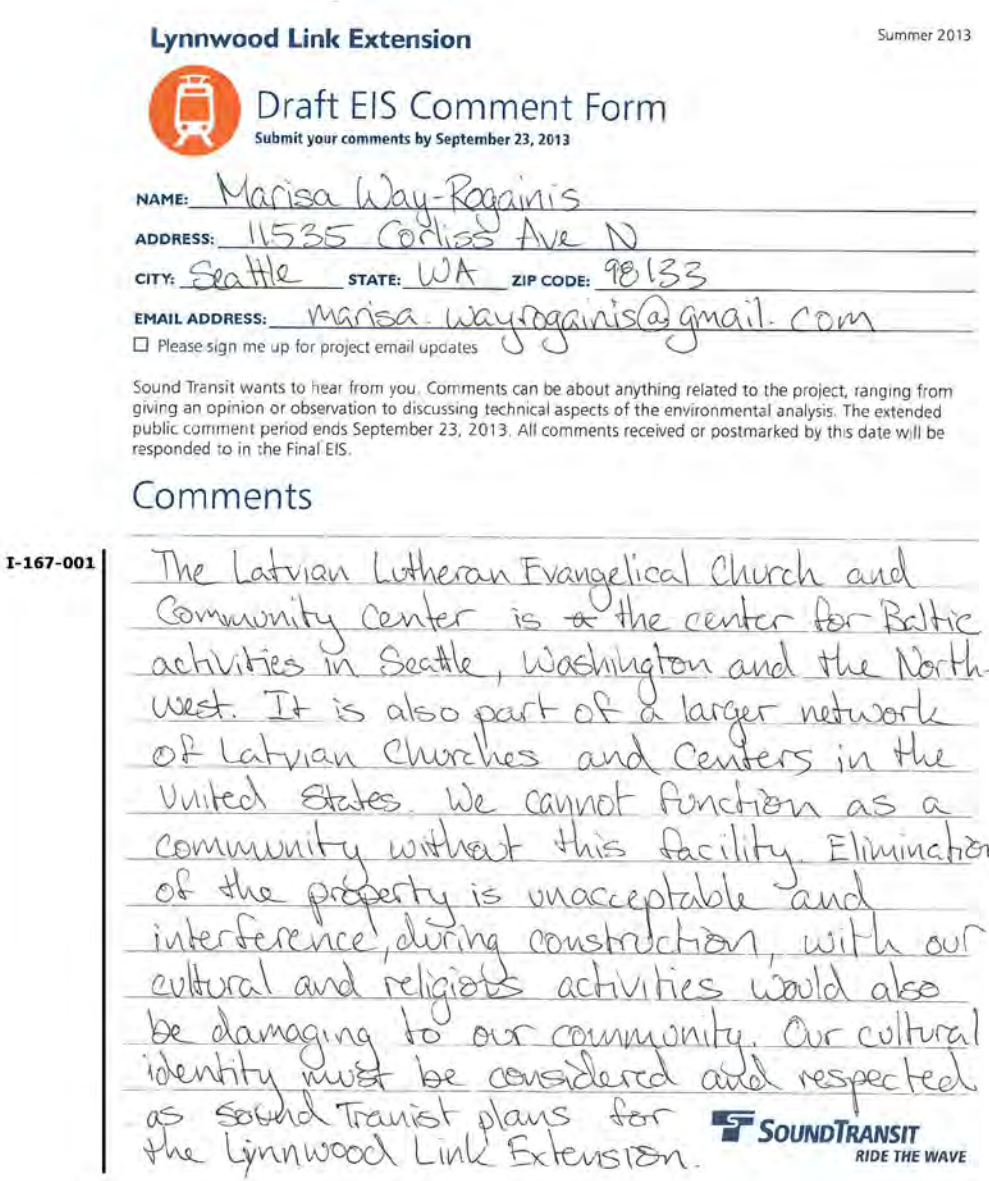
I-166-001

~~After~~ During and after WWII Latvians were prevented from and prosecuted for celebrating their heritage & speaking their language and maintaining their national identity. For those Latvians that fled the country for Departed Persons refugee camps in Germany and later for countries such as the US that would accept them, preserving language and cultural heritage became very important. Continuing to do so remains important to us and we have to have a place to come together. The threat to our church/hall hits close to home and reactivates old fears around losing track of who we are. Eliminating our building or cutting off access is an unacceptable product of the Lynnwood Extension

SOUNDTRANSIT RIDE THE WAVE

I-166-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Marisa Way-Raginis

ADDRESS: 11535 Corliss Ave N

CITY: Seattle STATE: WA ZIP CODE: 98133

EMAIL ADDRESS: marisa.wayraginis@gmail.com

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Comments

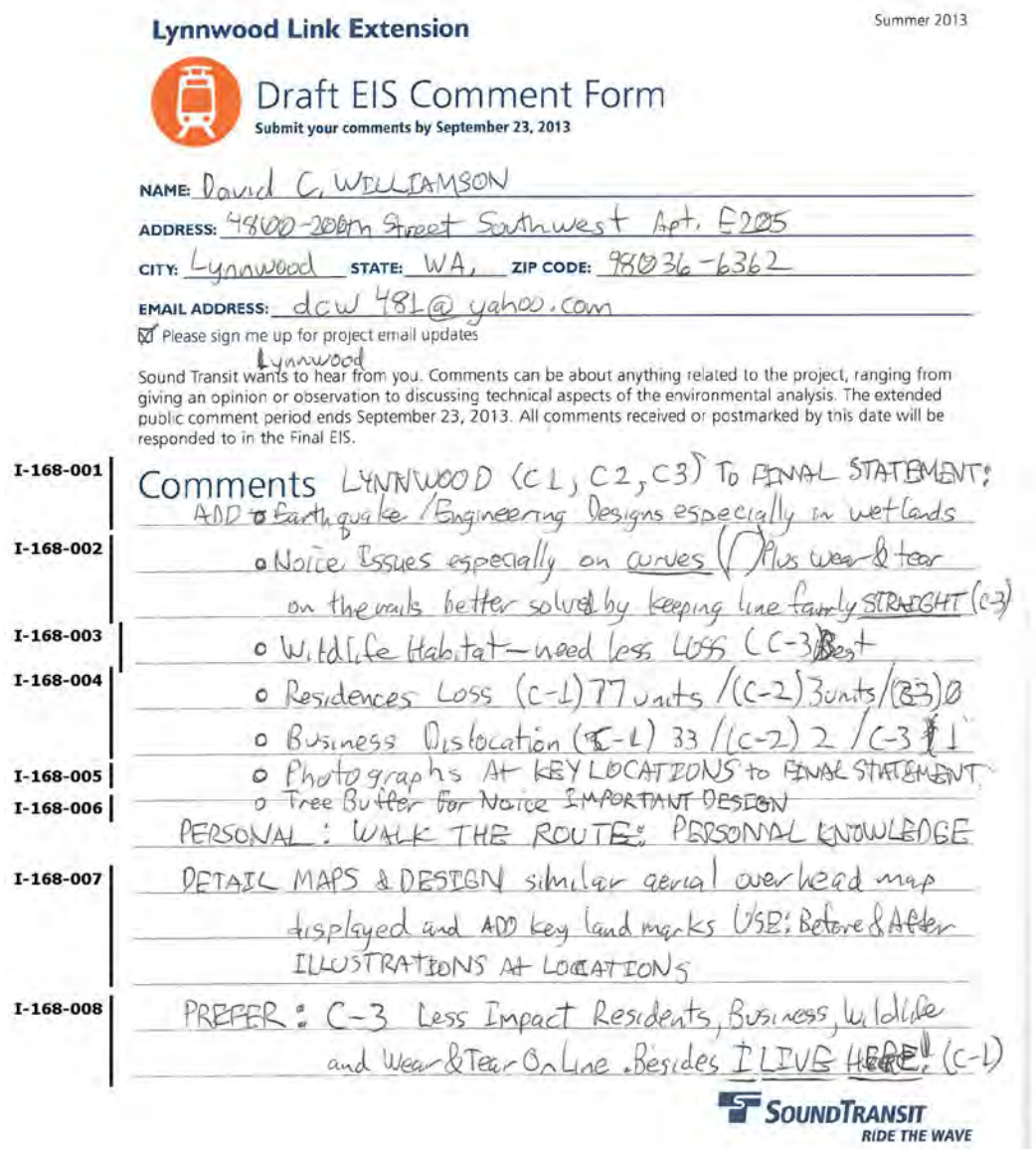
I-167-001

The Latvian Lutheran Evangelical Church and Community Center is ~~a~~ the center for Baltic activities in Seattle, Washington and the North-west. It is also part of a larger network of Latvian Churches and Centers in the United States. We cannot function as a community without this facility. Elimination of the property is unacceptable and interference, during construction, with our cultural and religious activities would also be damaging to our community. Our cultural identity must be considered and respected as Sound Transit plans for the Lynnwood Link Extension.

SOUNDTRANSIT RIDE THE WAVE

I-167-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: David C. WILLIAMSON

ADDRESS: 19600-20Bth Street Southwest Apt. E205

CITY: Lynnwood STATE: WA, ZIP CODE: 98036-6362

EMAIL ADDRESS: dcw481@yahoo.com

☒ Please sign me up for project email updates

Lynnwood

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

I-168-001 Comments LYNNWOOD (C1, C2, C3) TO FINAL STATEMENT:
ADD to Earthquake / Engineering Designs especially in wetlands

I-168-002 o Noice Issues especially on curves ( ) Plus wear & tear on the rails better solved by keeping line fairly STRAIGHT (C-3)

I-168-003 o Wildlife Habitat — need less Loss (C-3) Best

I-168-004 o Residences Loss (C-1) 77 units / (C-2) 3 units / (C-3) 0

o Business Dislocation (C-1) 33 / (C-2) 2 / C-3 1

I-168-005 o Photographs AT KEY LOCATIONS to FINAL STATEMENT

I-168-006 o Tree Buffer for Noice IMPORTANT DESIGN

PERSONAL: WALK THE ROUTE: PERSONAL KNOWLEDGE

I-168-007 DETAIL MAPS & DESIGN similar aerial overhead map displayed and ADD key land marks USE: Before & After ILLUSTRATIONS AT LOCATIONS

I-168-008 PREFER: C-3 Less Impact Residents, Business, Wildlife and Wear & Tear On Line. Besides I LIVE HERE!! (C-1)

SOUNDTRANSIT RIDE THE WAVE

I-168-001

The Draft EIS and Final EIS include a summary of the geologic hazards that have been identified in the project areas. The project design will address identified geologic hazards (including hazards from wetland soils at Scriber Creek), and will include earthquake engineering in accordance with applicable building codes. The earthquake engineering includes evaluations of and design for ground shaking, liquefaction, lateral spread, liquefaction-induced settlement, and seismically-induced slope instability. See Section 4.11 of the Final EIS, and Appendix I-4.11 for further details.

I-168-002

The noise analysis for the Lynnwood Link Extension uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. Wheel squeal only occurs on tight radius curves, not on a tangent track, like the ones along this segment of the corridor. For areas with tight radius curves, trackside lubrication will be used to mitigate wheel squeal. See Section 4.8 of the Final EIS for further details.

I-168-003

This project will abide by all applicable federal, state, and local environmental laws and regulations. Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts on environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure no net loss of ecosystem function and acreage as a result of agency projects.

I-168-004

Sound Transit notes your comments regarding potential acquisitions related to the alternatives in Segment C. Since the publication of the Draft EIS, Sound Transit has modified some of the alternatives and has

identified a Preferred Alternative, which has no residential displacements in Lynnwood but still displaces several businesses.

I-168-005

Photographs at key locations together with visual simulations of alternatives have been provided in Appendix G to the Draft EIS. These include 45 locations chosen to illustrate typical design features and impacts as well as specific features where potential visual impacts are high.

I-168-006

Foliage, if dense, can provide slight reductions in noise levels. The FTA and FHWA provides for up to a 3 dBA reduction in transportation noise for locations with at least 100 feet of dense foliage that contains leaves year around. Because of the varying foliage in the project area, no reduction for foliage will be used in the analysis. Also, a 3 dB reduction in noise level is barely perceptible to most people, so foliage in virtually all areas of this project corridor will have little overall effect on light rail nor traffic noise.

I-168-007

Appendix F provides conceptual designs with more detail/scale. The EIS maps are designed to assist readers in identifying areas with potential impacts; depending on the topic (i.e., neighborhoods or parks), more detail is shown.

I-168-008

Thank you for your comment stating your preference for Alternative C3.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Ken Winnick

ADDRESS: 15307 - 15th Ave NE #6

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: kbwinnick@gmail.com

☑ Please sign me up for project email updates

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Comments

I-169-001

Strongly favor (130th + 155th) vs 145th Station locations for the following reasons:

Benefits of 155th

(1) Excellent tie-in with City of Shoreline development on 99 & 155th - especially bike access from 99 to 155

(2) A slower paced area, but still close enough. Feeder By bus would work very well - and the younger generation will be looking for feeder buses - not a parking space.

Negatives of 145th

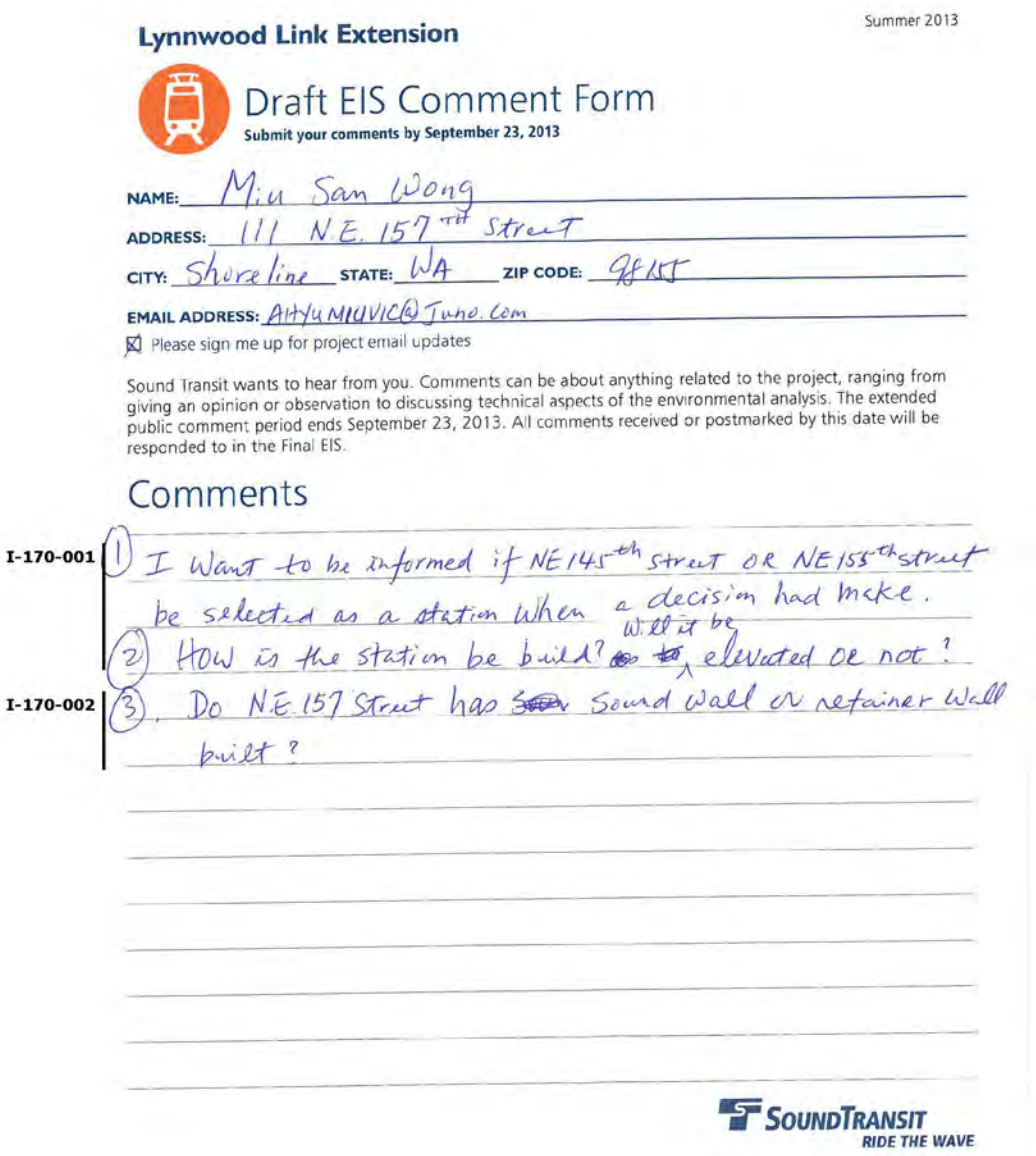
(1) 145th is an extremely busy throughway. No-one will ever walk or ride a bike on 145th. Too much noise and pollution. Very ugly

(2) Gigantic traffic jams every single day at 145th & I-5. Would kill feeder bus access.

SOUNDTRANSIT RIDE THE WAVE

I-169-001

Thank you for your comment stating your strong preference for a light rail transit station at NE 130th Street and NE 155th Street and the reasons why you support these stations over one at NE 145th Street.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Miu San Wong

ADDRESS: 111 N.E. 157th Street

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: AIHYUMIUVIC@Juno.com

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Comments

I-170-001 (1) I Want to be informed if NE 145th street OR NE 155th street be selected as a station when a decision had make.

(2) How is the station be build? Will it be elevated or not?

I-170-002 (3) Do N.E. 157 Street has ~~Sound~~ Sound Wall or retainer Wall built?

SOUNDTRANSIT RIDE THE WAVE

I-170-001

Thank you for your comment stating your interest in the construction of light rail transit stations at either NE 145th Street or NE 155th Street. Stations at both of these locations, including two layout options at NE 145th Street, would be elevated to go over either the northbound I-5 on-ramp or NE 155th Street. A final decision by the Sound Transit Board will be made following the publication of the Final EIS. Chapter 2 provides an overview of construction, but details of construction methods will depend on the final design and the contractor's approach.

I-170-002

Sound walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, any existing WSDOT noise walls removed as part of the project will be replaced.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Beth Woolley

ADDRESS: 4228 - 188th Pl. SW

CITY: Lynnwood STATE: WA ZIP CODE: 98036

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-171-001

I am looking forward to light rail extending from Lynnwood to Seattle - and north to Everett.

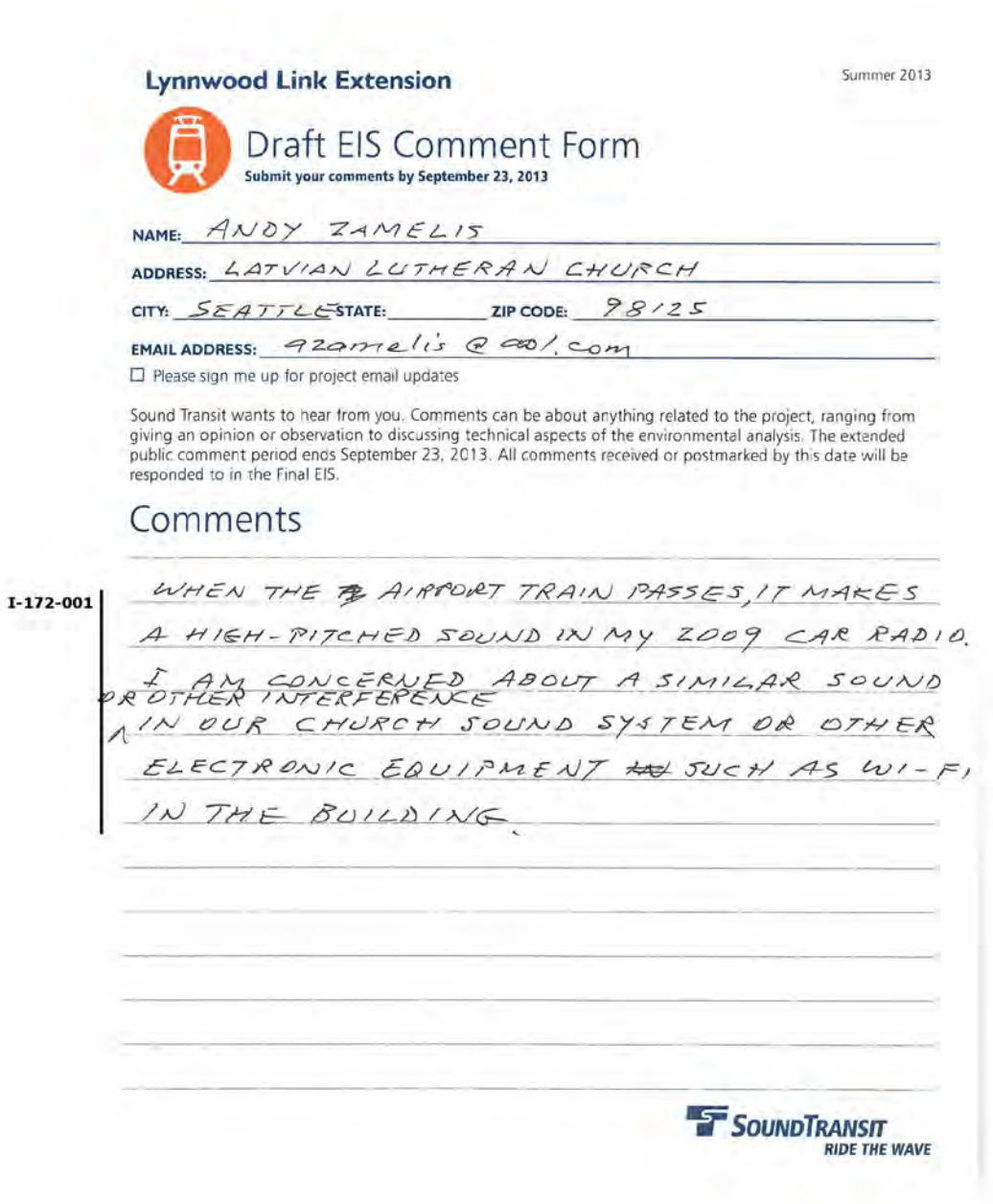
Understanding that some property owners will be impacted no matter which alternative is selected, C3 - the station closest to I-5 and with the least impact on the community resources; homes crossed by C1 & C2 - is my preference. Keeping the route as streamlined as possible makes the most sense to me.

Thank you for moving this forward, whatever the solution.

SOUNDTRANSIT RIDE THE WAVE

I-171-001

Thank you for your comment stating your overall support of the Lynnwood Link Extension project and the proposal to ultimately extend the light rail system to Everett. Sound Transit also thanks you for stating your prefrence for Alternative C3.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: ANDY ZAMELIS

ADDRESS: LATVIAN LUTHERAN CHURCH

CITY: SEATTLE STATE: ZIP CODE: 98125

EMAIL ADDRESS: azamelis@aol.com

☐ Please sign me up for project email updates

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Comments

I-172-001

WHEN THE ~~A~~ AIRPORT TRAIN PASSES, IT MAKES A HIGH-PITCHED SOUND IN MY 2009 CAR RADIO. I AM CONCERNED ABOUT A SIMILAR SOUND OR OTHER INTERFERENCE IN OUR CHURCH SOUND SYSTEM OR OTHER ELECTRONIC EQUIPMENT ~~AS~~ SUCH AS WI-FI IN THE BUILDING.

SOUNDTRANSIT
RIDE THE WAVE

I-172-001

Some people have reported brief interference with their car radios as the light rail train passes, but this is not a common occurrence for light rail systems. WiFi interference would not be a problem because the frequencies are different.

August 23, 2013

TO: SOUND TRANSIT
DRAFT EIS COMMENTS c/o LAUREN SWIFT
401 SOUTH JACKSON STREET
SEATTLE WA 98104

I-173-001

I attended the open house at Northgate Community Center August 21 and spoke on the Lynnwood Link Extension EIS.

I received a copy of the Summary DEIS which had some cost information in it after I spoke. The eight page handout at the sign-in desk had none.

I-173-002

Basically, my comments were that rail transit should not require a car to use and that stations should be at transit hubs and major destinations with minimum walking required- unlike the airport station which is as far away as possible from the terminal(on the far side of the parking garage).

Parking garages should be minimized, allocated to the highway budget not the rail budget. It looks like the garages cut the rail by 50%. Handicapped, young, elderly and poor need public transit. Tax dollars and debt should be used to make the system usable without a car.

I-173-003

See the CCC process that regional government was supposed to use coordinate all transportation and utility spending. The Bogue Plan of Seattle (1911) did that and the History of the Port of Seattle by Burke and Seattle Citizens Against Freeways by Tunks told how it was done since then. Excerpts from the two books are attached.

Hopefully the oil/asphalt/war conspiracy (HARPERS FEB. 1981) will be defeated so that we do not continue to use 4x our share of the planet's resources wasting 1/2 just commuting to work in major urban areas (that is why Senator Magnuson put Withdrawal and Substitution in DOT law-used by Oregon to get 18 miles of rail for 1/10 of what WA taxpayers will pay because our elected officials refused to allow a vote on it.

Barbara Zepeda
308E Republican #708
Seattle WA 98102
206-324-8571

I-173-001

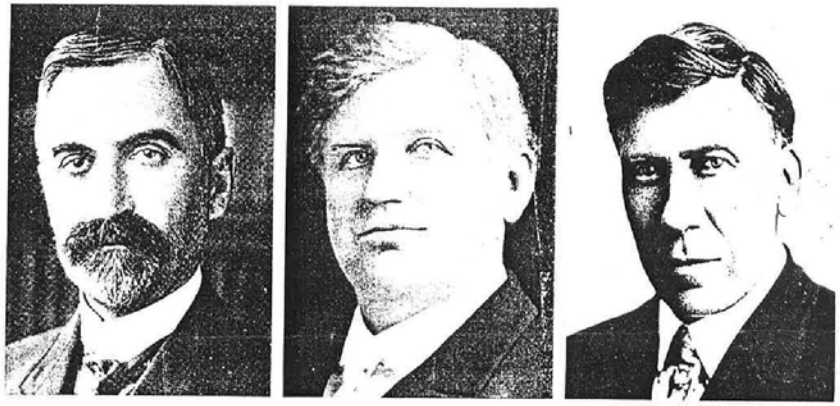
The public meeting handouts were intended as an overview of the project as were the displays. Sound Transit thanks you for taking the time to comment to the Draft EIS based on your receipt of the Summary Draft EIS.

I-173-002

The stations are planned to serve patrons using a variety of modes, with the majority of passengers expected to arrive by modes other than driving. However, the parking supplies considered reflect estimated demand and help park-and-ride spaces provide access to light rail for areas transitioning from suburban to urban densities. Sound Transit's System Access Policy is targeted to balance auto access needs, transit, and pedestrian and bicycles.

I-173-003

Your opinions are noted. Sound Transit remains committed to an open public process for project decisionmaking, and funding for the Lynnwood Link project was approved by voters in 2008.



The Port of Seattle's first Commissioners. From left, H.M. Chittenden, C.E. Remsberg and Robert Bridges.

Port Commissioners of 1976 pictured at a regular Commission meeting. From left, Jack Block, Henry L. Kotkins, Merle D. Adlum, Henry T. Simonson and Paul S. Friedlander.

HISTORY OF THE PORT OF SEATTLE BY PADRIC BURKE
1976 PUBLISHED BY THE PORT OF SEATTLE, POBOX 1209, 98111

28

of King County would decide to create themselves into the Port of Seattle.[30]

Prior to this election there was an important matter that had to be decided—who would run for positions of commissioners. The Seattle Harbor Commission and the Seattle Commercial Club, as well as other parties that were sympathetic to the public port movement, realized that the utmost care had to be exercised in the selection of those men who would run as the Port's first commissioners.* The special committee that Scott Calhoun was chairing for the Seattle Commercial Club, that had circulated petitions to put the Port of Seattle issue on the September ballot, acted as a screening committee for the selection of nominees to the Commission. As might be expected, those very groups that had worked so hard to defeat the public port legislation, i.e., the railroad and wharf interests, tried to place their own representatives on the ballot. Their strategy was apparent to almost everyone—they wanted to be certain that no port commission would carry out the mandate that the legislature had granted it, and put public interests ahead of private interest.[31]

Fortunately for the Port of Seattle, they failed, and generally the men that were nominated by the special committee of the Commercial Club and subsequently elected by the people of King County proved to be men of talent with a strong commitment to public service. The first man selected, and almost unanimously at that, was General Chittenden—the designer of the Lake Washington Canal. Chittenden, although paralyzed from the waist down proved to be almost tireless in his work for the Port in the brief years that were left to him. Chittenden was not only a brilliant engineer and an exceptionally learned man, but he also possessed a reputation throughout King County and most of the state for integrity and judgment—a reputation that was put to good advantage when the Port had to stand almost alone against occasionally hysterical critics throughout its first few years.

The second nominee that the Commercial Club put forward for one of the positions of Port Commissioner was by far the most controversial one, the former Populist Robert Bridges. Bridges had come to the U.S. from Ayershire, Scotland. It was in Scotland that he first experienced the inhuman working conditions that he was to campaign against the rest of his life. At the age of nine, according to Bridges' boast, he led his first strike when he headed a group of coal miners in a strike for better working conditions. When he arrived in King County in 1887, he went to work in the coal mines of south King County and became a union organizer. After working in the coal mines during the day, he taught himself how to read and write in the evenings and soon became an active force in various reform movements throughout the state.

Well-schooled in what the *Seattle Star* would call "The University of Hard Knocks," Bridges entered politics in 1896. In that year, after refusing a railroad pass and walking from Seattle to Ellensburg, he became the Fusion candidate for State Land Commissioner and was easily elected as the Populists swept the state. One of his first acts as Land Commissioner was to severely attack the Second Harbor Lines Commission for their giveaway of much of Seattle's valuable tidelands to the private dock and wharf owners.[32]

Looking more like a longshoreman than a port commissioner, Bridges stood six feet tall, with a great bony, broad face that seemed to wear a perpetual snarl, as it looked out from under a closely cropped head of hair that appeared to have been trimmed by an unsteady barber wielding a pair of hedge trimmers. The belligerent appearance of his looks was matched by an equally antagonistic personality and he never hesitated to attack what he termed simply "the interests" or the "kept press." He remained a controversial figure all his life. But even Bridges' enemies, who were numerous, gave him a certain grudging respect. Soon after Bridges was nominated by the screening committee, the *Town Crier*, the unofficial

*Section Two of the Port District Act provided that any qualified voter could run for one of the three positions available after he had secured the signatures of 100 qualified voters on a nominating petition.

organ of the Chamber of Commerce, anticipating Bridges' domination of the Port Commission, warned its readers that his election would undoubtedly destroy the "usefulness" of the Port Commission—a fateful prediction that was, to the *Town Crier's* horror, soon realized.[33]

The third nominee, C.E. Remsberg, was something of a mystery and a bit of a "wheeler-dealer." Nominally a Republican and chosen to balance the ticket between the supposedly neutral Chittenden and the Populist Bridges, Remsberg had come to Seattle shortly after the fire of 1889. Intending to only visit the city before returning to Virginia, he sensed that there were greater business opportunities in Seattle, and he decided to stay on. After investing two years' work in writing *The Revised Statutes and Codes of the State of Washington* and finding little demand for the book, he turned to real estate speculation in the northern part of the city. He had been a Justice of the Peace briefly from 1890-95, and was the manager of a small bank in the Fremont section of Seattle. He was, despite these ties, philosophically committed to the idea of municipal ownership and in some ways would prove himself as politically radical as Bridges.[34]

The actual decision by the voters of King County on September 5, 1911, to create a municipal corporation to be known as the Port of Seattle, was a fairly easy affair. The future Port had the support, in varying degrees of intensity, of every major newspaper in the city. The only groups that opposed it were the private dock and wharf owners. Even Colonel Blethen's *Seattle Times*, which tended to look on any mention of municipal ownership as something akin to a radical Wobblie plot, gave the proposal a limited degree of support. With such support the election proved to be a rather one-sided event and the Port of Seattle was created by a margin of more than three to one (13,771 to 4,538). The race for the three commissioner positions was equally one-sided, with Bridges, Chittenden and Remsberg easily defeating their opponents. But before the Port Commission could even begin to draw up a comprehensive plan the opponents of municipal ownership were actively engaged in trying to reduce the Port to little more than a welfare agency for the private dock owners. Behind the Port were the long years of bitter struggle, while ahead of it lay, not a respite, but almost ceaseless controversy to maintain the very fabric of a public port.[35]

NOTES

[1]Norman H. Clark, *Mill Town: A Social History of Everett, Washington: Its Earliest Beginnings on the Shore of Puget Sound to the Tragic and Infamous Event Known as the Everett Massacre* (Seattle, 1970), pp. 28-29.

Edwin T. Coman, Jr. and Helen M. Gibbs, *Time, Tide and Timber: A Century of Pope and Talbot* (New York, 1949), pp. 77-79 and pp. 220-224.

[2]Clark, pp. 28-42.

[3]Morgan, pp. 166-170.

Clark, pp. 101-102.

[4]Nesbit, 247-48.

[5]Robert Donald Saltvig, *The Progressive Movement in Washington*, (unpublished Ph.D. Dissertation, University of Washingtin, 1966), p. 37.

[6]*Seattle Star*, Nov. 5, 1905.

[7]Biographical sketch drawn from *Cotterill Papers*, University of Washington Archives.

[8]Saltvig, p. 92.

[9]*Ibid.*, p. 93.

[10]*Ibid.*, p. 95.

[11]Saltvig, pp. 105-105.

[12]*Seattle Post-Intelligencer*, Jan. 1, 1895.

Hynding, p. 286.

[13]Hamilton Higday, "Notes Towards a History of the Port of Seattle," (unpublished and unnumbered Ms. c. 1920, primarily a collection of letters, in Northwest Collection of the University of Washington Library.

[14]Higday, *Notes*.

Robert Bridges *Scrapbooks*, Volume 4 (These scrapbooks, a collection of four volumes of unnumbered pages contain primarily newspaper articles covering the years 1890-1928. Unfortunately a number of the dates and origin of the articles are obscurred in the collection.

[15]O'Connor and Gibbs, pp. 221-31.

[16]Bagley, p. 384.

Hynding, pp. 240-44.

History and Advantages of the Canal and Harbor Improvement Project Now Being Executed by the Seattle and Lake Washington Waterway (Seattle, 1902).

Nesbit, p. 404.

[18]Biographic sketch drawn in part from *The Hiram Chittenden Papers*, Washington Historical Library, Tacoma, Washington.

Hidgay, *Notes*.

[19]*Ibid.*

1999
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DRAWINGS BY DAVID LEFEBVRE
ISBN 1-57502-387-3

vituperative spokesperson for the highway lobby, swallowing their orders without any attention to facts. The bill she signed merely changed the Department of Highways name to the Department of Transportation—the obsolete and useless department of transportation we still have. Her DOT law perpetuated the old, completely closed machinations in the Highway Department. It enlarged the highway commission from five to seven members, and the highway commission members were still figureheads, who merely nodded from time to time to acquiesce to the decisions that had already been made. The secretary was to be appointed by the governor from a list of three persons submitted by the commission, and the secretary was to have no term of office—unless forced out of the job by proof of wrongdoing.

The DOT perpetuated all of the old practices controlling spending. The department still would be funded with state highway trust funds that the State Constitution amendment limited to being used for ferry and road purposes only—so the transportation planning

ME FIRST-ME, ME, ME-- ME!!
CAN'T YOU SEE- I'M STARVING TO DEATH?

WASHINGTON COALITION FOR SENSIBLE TRANSPORTATION

processes could not be comprehensive and multimodal. The highway budget would continue to be used to coerce legislators to vote for bad bills at the threat of losing their highway projects; the highway budget bill would still be kept undercover until the end of the legislative session to prevent any worthwhile legislative review.

Now, in 1999, the highway lobby has a complete victory:

- The state of Washington still has no Department of Transportation—the electorate has no control over the spending of billions of dollars.
- The gas tax has been raised and raised.
- Referendum #49 was passed by 58% of the voters in the Washington State November 1998 election. It was a very clever move—all of the people who paid for state motor vehicle licenses were to get a $30 cut in their motor vehicle taxes. The campaigners were able to conceal the fact that Referendum #49 made the state lose $1.9 billion general funds (school funds, etc.) that were transferred to the state highway trust!

Seattle Saves Seattle?

Seattle will be saved only if the elected officials and the people of the city decide to save themselves—to pass this ordinance:

The city of Seattle hereby prohibits any additional capacity for motor vehicles in the city, except for a bus/rail transit ramp from I-90 at I-5 to the stadiums.

To quote Doug Kelbaugh: "Seattle must control the motor vehicles—the motor vehicles cannot control Seattle".

Can Seattle be saved? The saving of Seattle starts late, maybe too late. Seattle has suffered irreparable damage from the construction and use of the big freeways into and through the city: Interstate 5 was supposed to be build east of Lake Washington, but political decisions were made for it to go through downtown Seattle—and the I-5 corridor bisected the two narrow peninsulas of the city, forced thousands of people out of their homes, created a noisy, polluted environment for those residents left within six blocks of the right-of-way and ramps, and made east/west travel difficult anywhere in the city. The construction of and traffic on the SR 520 bridge and highway have devastated the lovely fragile waterfront from Laurelhurst and the University on the north and the Arboretum, Montlake, Portage Bay and Roanoke on the south. I-90

Karlis Zommers
2847 13th Avenue W
Seattle, WA 98119
(206) 283-2974

August 22, 2013

To Whom It May Concern at Sound Transit:

I-174-001

The Seattle Latvian Center and Church have been a part of my life, literally, as long as I can remember. I am very concerned about the impact that light rail will have on the Center.

Starting as a very young child I attended Latvian School every Saturday. I started early because my Mom volunteered as a teacher at the school. My two brothers and cousins also went to Latvian School. Now, my older brother's kids have already gone through Latvian School. And, my younger brother's kids are currently enrolled. Seattle Latvian School is still thriving!

The Church has served as the foundation of many of my life's most important events. I happened to be born just before the church was built so I was christened at an interim church (after the City of Seattle forced the Latvian Community out of their original location in Wallingford). Over the years I have attended many christenings and wedding and, unfortunately, funerals. My brothers and I were all confirmed at the Church. This past May, in front of all of our friends and family, my wife and I were married at the Latvian Church.

May 5, 2013

The Latvian fraternities use Latvian Center for meetings and events. The center provides plenty of space and a central location where members from throughout the Pacific Northwest can gather. As a member of a Latvian fraternity I am occasionally called upon to serve in an honor guard when another member passes away. That is one of the traditions we use to show respect.

I-174-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Since the publication of the Draft EIS, Sound Transit has revisited the alternatives in Segment A and modified them so that none of them would result in the displacement of the Seattle Latvian Center and Church. Please see the Final EIS for a description of the updated Segment A alternatives in Chapter 2 and revised text on the potential impacts to the Seattle Latvian Center and Church in Chapter 4.

I-174-001

Latvians honor their dead. You can see that if you stop by the Latvian Cemetery at Evergreen Washelli. Like many of my friends and family, we regularly stop by the cemetery to tend to the graves. It's in our DNA. It doesn't matter what time I stop by, weekday or weekend, more often than not I will see another Latvian at the cemetery there doing the same thing. Even if we're not leaving flowers, we're there to clean the headstones, pull weeds, or whatever needs to be done. I would think we have the best-kept part of the cemetery! I need to point out the close proximity of the Latvian Center to the Latvian Cemetery at Evergreen Washelli. All four of my grandparents are buried there.

We have less serious fun at the Latvian Center, too. Coming up on September 7 will be the annual golf tournament. After taking over the Jackson golf course for a day, we head back to the Center for steaks and tall stories about golf. People fly in from out of town for this event. The evening ends with the crowd gathering to sing songs. That may sound corny if you haven't been raised that way.

The Latvian Center is a crucial cultural hub for many families like mine in Washington State. I hope that Sound Transit can figure out a way to proceed with their expansion to Lynwood without destroying such an amazing place.

Thank you.

Karlis Zommers

From: J Altman <jaltman8@comcast.net>
Sent: Thursday, August 29, 2013 8:19 PM
To: Lynnwood Link DEIS
Cc: altman jeff
Subject: east-west traffic near stations

I-175-001

Hi -- If stations are built at either N. 155th St. or at N. 185th St. in Shoreline, the construction process and ultimate layout of the station areas must take into account the important function of these two east-west corridors. As is well known, east-west traffic flow is more difficult because of the lack of corridors vs. north-south traffic flow. Currently, for the cities of Shoreline and Lake Forest Park, the most expeditious traffic flow is on N. 155th St. and N. 185th St. This is because flow on N. 145th St. and SR 104 is hampered by traffic density and numerous traffic signals at their I-5 interchanges.

So, if stations are built at either N. 155th St. and/or N. 185th St., make sure that east-west traffic flow for pedestrians, bicyclists and vehicles is as little impeded as possible during both construction and subsequent light rail operation. Such mitigation measures as double-left turn lanes and sequentially timed traffic signals should be included.

Thanks for listening!

jeff altman
18474 40th Pl. NE
Lake Forest Park, WA 98155
206/364-2180

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I-175-001

The EIS includes an evaluation of how station sites and their construction activites would affect east-west alternatives. The project's detailed construction management plans will maintain effective east-west access and accommodate bicycle and pedestrian traffic as well. See Chapter 3 for more detail on traffic impacts and Section 3.6 for potential mitigation. Appendix H also shows conceptual plans for the Preferred Alternative, which includes further detail on some of the street improvements featured in the Preferred Alternative to maintain effective traffic operations.

From: Gavin Howell <oregavin@yahoo.com>
Sent: Tuesday, September 03, 2013 10:47 AM
To: Lynnwood Link DEIS
Subject: Lynnwood link comment

Name: Gavin Howell
Address: 23811 45th Pl W, Mountlake Terrace, WA 98043

I-176-001

Of the B segment alternatives that I've looked at, my wife and I both prefer the B2A alternative. It would be optimal to have the rail station be in the parking lot of the transit center rather than the freeway median. Ridership would be higher, and it would also leave the current freeway bus station open during a lengthy construction period.

We like the idea of having 2 Mountlake Terrace stations in place. The parking at the current MLT Park and Ride can be a nightmare during the middle of the week, especially during fall and winter months while UW is in session. Sometimes the lot is full by 9am and doesn't have vacant spots until early afternoon. Having an additional station at 220th would relieve pressure on an already overstressed Mountlake Terrace Transit Center.

Our second preferred option is B1, which has a lower environmental impact than B2A and is more affordable.

Lastly, if alternative B4 is NOT chosen, I'd love to know what would happen to the current freeway station. After all that time and money putting that quality station in place, it would be a shame to scrap it entirely. Hopefully it could be put to some valuable use.

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I-176-001

Thank you for your comment stating your preference for Alternative B2A with the second Mountlake Terrace light rail transit station at 220th Street SW and your second choice support for Alternative B1. The continued use of the Mountlake Terrace freeway station is not a Sound Transit decision. The agency will coordinate with the bus transit agencies to realign bus services to serve the new light rail transit station. Sound Transit is also participating with others in planning for potential options for the existing freeway station, although this depends on the decisions about the light rail project to be built.

From: haleiwa311 . <haleiwa311@gmail.com>
Sent: Thursday, September 05, 2013 11:40 AM
To: Lynnwood Link DEIS
Subject: Latvian Center Sound Transit EIS

Comments;

I-177-001 1. The Latvian Lutheran Church and Latvian Center are linked as a cultural resource for Latvians and other Baltic Countries sharing a cultural heritage marked historically by repression and oppression felt by the older members who fled in 1944 and then spent years in displaced person camps in Germany prior to immigration to the USA and other countries. This center and church is their only meeting place and has been for nearly 40 years. The Church and Center are inseparable and the Sound Transit link proposed will destroy this resource regardless of which alternative is chosen. Insufficient discussion of this issue in the EIS.

I-177-002 2. This project should be a design-bid-build project which will allow more time and more public input as time goes on.

I-177-003 3. This project impact should require a Full EIS to adequately address alternatives that will not impact the Latvian Church and Center.

I-177-004 4. An engineering assessment should be included in EIS to assure that the project will not affect the Church or Center with excessive noise and vibration from the proposed route and and trains.

I-177-005 5. It may not be possible to provide adequate financial or other mitigation due to the necessary encroachment on the property by this project. To relocate the Center from the Church is the equivalent of separating a child and its parents.

I-177-006 6. Reconsideration of an alternate route or project bypassing entirely the Latvian Church and Center is the only proper way to save this cultural heritage gathering place from destruction.

Thank you,

David C. Johnson, J.D.
8168 Cultus Bay Rd.
Clinton, WA 98236

I-177-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church.

I-177-002

Sound Transit acknowledges your comment stating your preference for design-bid-build procurement method for construction of the Lynnwood Link Extension project. A final decision on this issue may be expected soon after Sound Transit makes a final decision on the selected alternative following the publication of the Final EIS. Irrespective of the method of procurement, Sound Transit will continue to conduct community outreach activities.

I-177-003

Since the publication of the Lynnwood Link Extension Draft EIS in June 2013, additional engineering was undertaken to reduce adverse effects on the Latvian Evangelical Lutheran Church property and facilities. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). Access to the property and its functions will be maintained, but involve a street realignment.

I-177-004

A detailed Noise and Vibration Technical Report was prepared in support of the EIS to assess potential noise and vibration impacts on the Church and other projects. Since publication of the Draft EIS in June 2013, additional engineering has been undertaken to refine the Segment A alternatives and avoid or further minimize adverse effects on the Church. With the engineering design refinements to the Segment A alternatives, additional updated noise and vibration analysis was conducted to re-assess potential noise and vibration impacts on the Church. See Section 4.7 in the Final EIS and the technical report

included with the Final EIS. If noise and/or vibration impacts are predicted, Sound Transit has identified mitigation.

I-177-005

The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describing the acquisition impacts; Section 4.4 describing impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including portions of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

I-177-006

Thank you for your comment stating your preference that an alternate Segment A route for the proposed Lynnwood Link Extension project that would entirely bypass the Latvian Evangelical Lutheran Church. As noted above, a design modification to maintain access avoids the potential for displacing the church.

From: Garry Kampen <kampen@comcast.net>
Sent: Tuesday, September 03, 2013 3:43 PM
To: Lynnwood Link DEIS
Subject: Rail routes C1-C3

I-178-001 After reviewing the DEIS, I'm convinced that route C3 is the best. It connects directly to the Park-and-Ride & adjoins the Transit Center. **Most important:** It does not destroy valuable and irreplaceable park space and green space. Light rail should serve the cities it connects, and not destroy their livability.
Dr. Garry Kampen

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I-178-001

Thank you for your comment stating your preference of Alternative C3 because of reduced impacts to parklands.

From: llockeman@yahoo.com
Sent: Thursday, September 05, 2013 2:31 PM
To: Lynnwood Link DEIS
Subject: Comment c/o Lauren Swift

I-179-001

I strongly favor alternative C-3 which is the only alternative that doesn't unbelievably take a wetland set-aside bought with conservation futures based on its resource value to the region of a perpetual nature.

One would think such a flaunting of condemnation procedures would be challenged up to the Supreme Court for affecting an in-perpetuity easement for the public good.

Public set-asides particularly close to urban centers are of high value to the population in addition to their importance for the good of the planet.

If option C-3 is the one passing close to hotels, a station stop should be designed to accomodate hotel customers to use transit to arrive and conduct business or travel to recreational opportunities.

I would like to be added to the mailing list for information pertaining to this decision.

George Lockeman, 2430 81st Pl SE, Everett, WA 98203 Sent from my Verizon Wireless BlackBerry

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I-179-001

Thank you for your comment stating your strong preference for Alternative C3 due to reduced impacts to the nearby wetlands and avoidance of direct impacts to Scriber Creek Park. Thank you for your suggestion that easy access to the light rail transit station should be provided to nearby hotels. The Preferred Alternative includes pathways as well as street and sidewalk improvements to improve connectivity in the area.

From: Michael Manderscheid <mbmander@gmail.com>
Sent: Monday, September 02, 2013 7:30 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Light Rail DEIS

I-180-001 I support a light rail station at NE 130th Street. It will be useful for trips from Lynnwood to Lake City and also to parts of SR99, assuming reasonably good bus connections. I actually would occasionally use a light rail stop at 130th to get to Krispy Kreme on SR99 before work, and to Lake City Gyros after work; these are just two examples of the many new connections that would open up.

Options A7 and A11 seem too expensive, so I would support A5 or A10.

I-180-002 Extending light rail to an Alderwood Mall station as soon as possible is very important, although I realize this is beyond the scope of Options C1/C2/C3.

Mike Manderscheid
Lynnwood

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I-180-001

Thank you for your comment stating your support for a light rail transit station at NE 130th Street and Alternatives A5 and A10. Regarding bus service at the new light rail transit stations, changes to bus services will be considered by Sound Transit, King County Metro, and Community Transit as the project approaches operation. Initial plans used in the EIS analysis anticipate improved east-west connections to the station areas with connections to other north-south corridors.

I-180-002

Thank you for your support of Sound Transit's light rail extension program and your particular interest in a future light rail station at the Alderwood Mall to the north along the I-5 corridor.

From: Dave Ness <dave@prayingforamerica.org>
Sent: Monday, September 02, 2013 10:02 AM
To: Lynnwood Link DEIS
Subject: Comments on Lynnwood Link Extension

Hello,

I attended one of the public hearing meetings, considered the different proposals for the A segment of the extension, and would like to give you my preferences for this project.

I-181-001

My first choices would be either A1 or A3---both are fine with me.
If the decision is made to put a station at 130th, my preference would be Option A7.

Thank you. I thought you did an excellent job of presenting all the possible information needed, and did a gracious and professional job of dealing with all the questions and comments.

Pastor Dave Ness
North Seattle Church of the Nazarene
13130 5th Ave. NE
Seattle, WA 98125

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I-181-001

Thank you for your comment stating your Segment A Alternative preferences.

From: Allison Ostrer <aostrer@hotmail.com>
Sent: Tuesday, September 03, 2013 10:10 AM
To: Lynnwood Link DEIS
Cc: savescribercreekpark@yahoo.com
Subject: Don't destroy the creek!

I-182-001 I oppose destroying Scriber Creek for the light rail. I DO support light rail and want to see it extended, but it should go through already developed properties, not a preserved wetland.

Sincerely,
Allison Ostrer
Seattle, WA

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I-182-001

Thank you for your comment. This project will abide by all applicable federal, state, and local environmental laws and regulations protecting wetlands. Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts to environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure there is no net loss of ecosystem function and acreage as a result of agency projects.

From: Kyle Phillips <kylejphillips@gmail.com>
Sent: Friday, September 06, 2013 8:58 AM
To: Lynnwood Link DEIS
Subject: Lynnwood Link Extension DEIS Comments

September 6, 2013

To whom it may concern:

I am a resident of the Ridgecrest neighborhood in Shoreline, Washington and live near the intersection of NE 148th and 6th Ave NE. As such, I will focus my comments on the light rail impacts to that immediate area.

I look forward to having Sound Transit Link Light Rail service extended to the area and hope the future station will be thoughtfully designed to complement the existing character of the quiet residential neighborhoods nearby.

Below are a few of my observations on information provided in the Draft Environmental Impact Statement:

1. Preferred Alternative Segment A:

I-183-001 a). A1: At-grade/elevated to NE 145th and NE 185th east side stations.

b). Referencing the DEIS Appendices Figure G-34 and G-35 Viewpoint 10: Less elevated tracks along Jackson Park golf course indicated in Figure G-34 are more consistent with scale of surroundings, especially when compared to figure G-35. Same is true when comparing DEIS Appendix Figures G-31 and G-32 Viewpoint 9.

I-183-002 c). Minimize disruption to current tree canopy/ forested character/ Thornton Creek wetland zone at east side of I-5 as experienced when driving north past 130th towards Shoreline. Currently appears as a transition from the less forested areas south of 130th to much more densely forested zone- this character should be maintained as much as possible.

I-183-003 d). Current Northbound 145th street off-ramp/ 5th Ave NE interchange creates a dangerous weaving traffic pattern. Elevated light rail and parking garage at 145th will only increase the congestion at this interchange. Any solution will require major improvement to the traffic flow through the intersection. 5th Ave NE is also the only reasonable access from the Ridgecrest neighborhood to Northgate, so maintaining this local access route is critical.

I-183-004 e). Major improvements needed to pedestrian and bicycle infrastructure in the area to improve safety of station users traveling to and from the station, especially along 145th and along 5th Ave NE (South of 145th).

2. NE 145th Station Layout comments:

I-183-005 a). Station Layout Option 1 (Preferred)

-Seems to maintain existing traffic flow at 145th while filtering new congestion created by Park and Ride Garage users.

-Maintain existing 20' +/- swath of mature trees along 5th Avenue NE at current Park and Ride entrance!! Consider a more compact parking structure with additional level (similar to Option 2) to accommodate this. Would preserve tree canopy character entering into Ridgecrest neighborhood and provide a

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I-183-001
Thank you for your comment noting that the lower elevation alternatives are more visually consistent with the surrounding area.

I-183-002
This project will abide by all applicable federal, state, and local environmental laws and regulations. Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts to environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure there is no net loss of ecosystem function and acreage as a result of agency projects.

Sound Transit will also abide by the tree replacement policies of WSDOT and local ordinances.

I-183-003
Mitigation measures for increased traffic congestion as a result of the station at 145th will be included as part of the project. 5th Avenue NE access will be maintained similar to today. Please see potential mitigation included in Chapter 3 and Mitigation Plan.

I-183-004
The Preferred Alternative's NE 145th Street Station includes improved sidewalks and bike lanes along 5th Avenue NE and portions of NE 145th Street; please see Section 2.4 for other standard elements of the stations.

I-183-005
Your comments stating your preferences for the two layout options for the NE 145th Street Station are noted. The Preferred Alternative has updated the design based on Option 2.

I-183-005

natural visual/acoustic buffer to the parking garage. There is an especially nice grove of mature trees in and around the current park and ride at the east and north edges.

-Plaza landscaping at corner of NE145th should reflect character of entering a residential neighborhood. Natural vegetation, rain gardens, pedestrian scale all important. Appreciate possibility of detention pond indicated in Option 2 working as a rain garden/place marker/white noise buffer to the freeway noise. Work with City of Shoreline on goals for this plaza.

-Existing northbound on-ramp location creates hazard for pedestrians heading to/from the Park and Ride from cars turning onto the ramp. This hazard will only increase with increased pedestrian and vehicle activity in the area. Crosswalk should be well marked and signed. Consider eliminating Bus flyer off ramp to reduce width that pedestrians must cross and to reduce undue traffic complexity.

-Scale of retaining walls at plaza seems excessive- consider gradually transitioning landscape to mimic flowing landscape that currently exists.

-Provide acoustical separation at platform level so that noise from freeway is not overwhelming while waiting for train. Current freeway bus flyer stops are extremely unpleasant to stand at- would hope to avoid the same downfall with the light rail stations.

b). Station Layout Option 2-

-Seems to create a more compact/clearly defined Station Area with the northbound onramp at the north edge of the station zone. Concern is that it may only exacerbate the current congestion at the intersection. Park and Ride exit location would appear to cause additional congestion at peak hours.

-I like how this layout has more presence along NE 145th as a beacon- it may help reduce perceived distance for residential commuters living across 145th west of I-5.

-Like how it pulls the station to the edge of the Ridgecrest neighborhood for fewer potential noise/visual conflicts. Maintains residential buffer at NE 148th street- trees should be preserved in this zone if possible.

c) General Comments about 145th station-

I-183-006

- Hope that Sound Transit station design team would work closely with the adjacent neighborhoods (especially Ridgecrest and Parkwood) during the design phase to create a welcoming, appropriately scaled, thoughtfully designed station and parking garage that fits with the neighborhood character.

Thank you for your time in considering my comments.
I am looking forward to a consistently reliable form of public transit for the region!

Sincerely,

Kyle Phillips

206-282-2488
kyleiphillips@gmail.com

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I-183-006

The Sound Transit Design Team is committed to working with local jurisdictions and neighborhoods in designing functional and attractive facilities that are as consistent as possible with neighborhood scale and character. The Section 4.5.6 of the Final EIS includes additional discussion of potential mitigation measures for station and parking garage visual impacts.

From: karen summers <klsumm@hotmail.com>
Sent: Friday, August 30, 2013 7:52 AM
To: Lynnwood Link DEIS
Subject: Lynnwood Link Extension in Shoreline

Hello,
I was unable to attend the recent meeting you had at the Shoreline Center due to working. My husband attended and brought home materials which I've read through.

I-184-001

I have one question/comment. We live on 188th St. between 10th Avenue and 15th Avenue NE. I see this street as one of the routes people will use to get to the parking area/garage for the light rail. Our street has no side walks. It has a hill and a curve on it. It is posted currently with a 25 mph speed limit which is way too fast to be going around a blind curve in a residential area. We already have difficulty getting out of our garage and drive during the "rush hour"
times. We have children who use the street, and elderly people crossing to get their mail. Some people drive irresponsibly through this hill and curve area.
If we are to have increased traffic, then we need speed bumps - not humps but actual bumps. Posting signs won't do anything to change behavior.
My husband told me that the person he talked to at the meeting said that Perkins Way will be the main route to the light rail. How will this be enforced? Our street would be the quicker cut through from Lake Forest park areas and areas north of 15th.
As a driver I know that I don't always follow "arterial" signs, or signs saying "To _____" if I know a quicker way to get there or a way that has less traffic on it. I would suspect I'm not the only one to do this.
I would appreciate more details in future meetings about who is determining this traffic pattern, EXACTLY how it will be marked and enforced. And I want to talk about major deterents to using other routes.
Thank you for your work on this. I hope to be at the next meeting - work permitting.
Karen Summers

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I-184-001

Sound Transit has identified potential cut-through traffic as a potential impact for station area neighborhoods, and identifies mitigation in Section 3.65, which describes measures that could be developed in coordination with the local jurisdiction.

From: Sharla Unruh <sunruh76@comcast.net>
Sent: Wednesday, September 04, 2013 3:54 PM
To: Lynnwood Link DEIS
Subject: Scriber creek park

I-185-001

My husband, Ryan, and I believe that the citizens of Lynnwood would be better served if the third alternative (C-3) were to be chosen which affects six to twenty properties, eliminates one business and runs along I5 at the cost of $340 million.

Fewer people would be displaced and the park which was funded by a group (Conservation Futures) who designated it for conservation would be retained for thousands of people. People from outside the city of Lynnwood use the park as well. We have enjoyed the park a few times a year for over twenty years and would really miss it.

We think those two reasons alone make the C-3 decision the only correct one.

Thanks,
Ryan & Sharla Unruh
14525 81st Ave NE
Kenmore, Wa 98028

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I-185-001

Thank you for your comment stating your preference for Alternative C3 due to fewer displacements and impacts to Scriber Creek Park. Alternative modified C3 is the Preferred Alternative, which avoids the park property.

From: Shelley Weyer <sweyer1@gmail.com>
Sent: Thursday, September 05, 2013 9:34 PM
To: Lynnwood Link DEIS
Subject: Comment

I-186-001

Please consider the C-3 plan for the new light rail to Lynnwood. This is the most honorable choice since you will not be destroying a conservation park.

Sound Transit has made some very foolish choices with their planning in recent years. If you want the voters to continue to fund ST then it is highly suggested you pay attention to the voting public. They could underfund ST by voting against any new money's that are requested.

Please take the high road and leave the conservation park option alone.

Thank you,

Shelley Weyer
Everett, WA

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I-186-001

Your preference for Alternative C3 due to its avoidance of Scriber Creek Park is noted. Modified C3 is the Preferred Alternative, which avoids Scriber Creek Park.

From: Wirta, Mari
Sent: Tuesday, September 03, 2013 9:43 AM
To: lindaatsea@yahoo.com
Cc: Lynnwood Link DEIS
Subject: RE: Lynnwood Link
Attachments: 130807MariWirtaFollowupToLindaWillemarck-LynnwoodLinkInput.pdf; 130715MariWirtaResponseToLindaWillemarck-LynnwoodLinkAlternativePreferen....pdf

Good morning Ms. Willemarck,

Just a quick note to let you know that I have forwarded your most recent comments to lynnwoodlinkdeis@soundtransit.org to ensure they are included in the official record of DEIS comments. Your message will be taken into consideration as the Board identifies a preferred alternative later this year.

Regards,

Mari Wirta | Correspondence Management Coordinator
Sound Transit | Union Station | 401 S Jackson Street | Seattle, WA 98104
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From: Linda At Sea [mailto:lindaatsea@yahoo.com]
Sent: Monday, September 02, 2013 2:05 PM
Subject: Lynnwood Link

My name is Linda Willemarck. I live at 4900 200th St SW in Lynnwood. Since learning about the Sound Transit's Alternatives for the Lynnwood Link, a mere 3 months ago, I have spent a great deal of time trying to understand what properties are involved and what impacts it will have.

I-187-001

As you know, both the C1 and C2 Alternatives would be going down 52nd Ave West/Cedar Valley Road. In my research I found a very compelling document that really puts into perspective the importance of this area. The document reads, quote "...an established single family neighborhood containing hundreds of affordable homes and is in close proximity to several affordable housing apartments and condominium complexes, all of which would be adversely impacted by light, noise, property values, and other impacts ..."
"directly impacts hundreds of affordable homes when there are other sites available, raises social justice issues..."
"...located adjacent to significant city recreational resources of Scriber Creek and associated wetlands, and the city's Scriber Creek Park, that provide places to experience nature in close proximity to Lynnwood's City Center and regional Interurban Trail, both of which would be negatively impacted..."

I-187-001

Thank you for your comment expressing concerns about the adverse effects of Alternatives C1 and C2, including citations from the City of Lynnwood Resolution #2012-07 requesting elimination of routes along 52nd Avenue W and Cedar Valley Road from further consideration.

While the alternatives are evaluated in the Final EIS, they are not the Preferred Alternative. Section 4.4 of the Final EIS includes a detailed analysis of potential impacts to the 52nd Avenue West area, and it also summarizes the Environmental Justice analysis contained in Appendix C. The analysis does not identify impacts at the levels the City's resolution describes.

In November 2013, the Sound Transit Board identified a Preferred Alternative based on Alternative C3 with some modifications to its alignment as it enters the Lynnwood Transit Center. Please see the Final EIS for the description of the Preferred Alternative, which was developed in collaboration with the City of Lynnwood, and which avoids direct impacts to Scriber Creek Park and avoids running along 52nd Avenue W.

I-187-001

"...Therefore, the City Council of the City of Lynnwood does hereby resolve and request the Sound Transit Board to remove from its potential sites and evaluations list the Lynnwood 52nd Avenue West/Cedar Valley Road site..."
....that such site not be included in any environmental analysis, due to its many significant and unresolvable and irreparable impacts upon the City of Lynnwood, its residents and businesses and upon the Edmonds School District."
These quotes were taken from Resolution No. 2012-07 of the City of Lynnwood, Washington, regarding issues concerning the potential siting by Sound Transit. It was signed by Mayor Gough of Lynnwood on 10/22/2012.

From: LindaZopfi@aol.com
Sent: Tuesday, September 03, 2013 4:06 PM
To: Lynnwood Link DEIS
Subject: Option C-3, please!

I have not been able to attend the past Lynnwood Sound Transit meetings because of work conflicts, however, in reading the Seattle Times article today, I felt I MUST voice my opinion on the proposals, after having been a homeowner in the effected neighborhood for 24 yrs.

I-188-001

Both of the C-1 and C-2 routes would *severely* impact the tranquil, peaceful nature of my home and home-based business, which is completely unacceptable to me. PLEASE only consider option C-3 when deciding where to place the Sound Transit route through Lynnwood. I'm all for mass transit, however, not at the expense of our wetlands, parks and neighborhoods!

Melinda Zopfi
20026 53rd Place West
Lynnwood, WA 98036

Best,
Linda

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I-188-001

Thank you for your comment stating your preference for Alternative C3.

MR. CAMERON: Hello. My name is Michael Cameron, M-I-C-H-A-E-L, C-A-M-E-R-O-N. I live at 20035-12th Avenue Northeast, Shoreline.

That property butts right up against the Exit 177 offramp going north.

Conceptually, I'm a big supporter of the project. I think it's a good thing for the region. I think it's probably what the region needs, overall. But that enthusiasm's tempered a little bit by reaction to some of the current designs of the plan. And I'm hoping that some of those can be addressed in the final EIS. Those are going to be recommendations today.

Specifically, the design issues that I have are how they directly impact me, as a private property owner, and our house, specifically, with regards to noise and the visual impacts.

I-189-001

I'm encouraged by the numbers that I read in the draft EIS with regards to noise and the impacts that the mitigation plans in place will have. Sounds like -- no pun intended -- that the mitigation plans will be able to deal with much of the sound in the area.

I'm a little bit skeptical of them, however, because the microphone locations that they used were quite a distance from my house and the neighborhood, so it's -- theres's a lot of topography changes, hills, valleys, trees

I-189-001

Thank you for your comment. We have added noise monitoring sites in your area, including one near your home at 20039 12th Ave or 20041 12th Ave for use in the Final EIS analysis. The analysis considers topography, vegetation, and noise barriers; more specific details are given in the Noise and Vibration Technical Report for the Final EIS, which identifies mitigation by address. During final design, mitigation definitions will be further evaluated to ensure they achieve the noise reduction required to be below the impact threshold.

I-189-001

and things, some of the trees that will be removed, that I think need to be taken into account with those. So my hope is that the study would be repeated, a least with a couple additional microphones, sort of in my neighborhood, to make sure that the estimate of sound impact on the final EIS is appropriate for the location.

I-189-002

All of -- the next issue is that the current draft EIS identifies the visual impact of -- on my house, on my property, as low. I take issue with that. All the designs for the light rail have the track less than a hundred feet from my property. They are elevated 25 feet above the I-5 offramp. Adding another 12 feet for the train, 5 to 10 feet of superstructure indicates a structure three to four stories high a hundred feet from my house. That's not a low impact.

So I'd like to see a reevaluation of the visual impact on my property. I'd like to get a good idea of how many trees will remain as this will mitigate some of my visual concerns. Currently, when I look out the window, I just see filtered light through a bunch, you know, of evergreens that definitely won't be there.

I'd like to see an artist's rendering on how the track is expected to look from the neighborhoods, specifically my neighborhood, as opposed to I-5, which doesn't really impact people when they're driving by it at

I-189-002

The Final EIS includes an updated assessment of impacts of the elevated structure in your area, but the Draft EIS was not intended to define visual impacts parcel by parcel, but rather for larger areas or viewsheds. It is accurate that some locations, particularly those immediately near the facility, could have higher localized impacts. Mitigation measures could include replacement plantings, but clearing and visual impacts are likely unavoidable in some locations. Sound Transit's tree clearing policies for elevated light rail provide for clearing within 30 feet of the centerline of the structure, or about 15 feet from the edge of the structure. The Final EIS, Section 4.5.6, identifies visual impact mitigation measures for the project, but the detailed definition of plantings in specific locations would be accomplished during final design. Replacement trees would be considered where space was available, but likely would take time to mature to replace the screening.

I-189-002 60 miles an hour. Knowing the visual impact with an artist rendering from property is much more useful.

I-189-003 And finally, I'd like to see a consideration of keeping the train at ground level at that location. I think that would go a long way. And perhaps placing the track between the offramp where it splits from the main I-5, that is, moving it west about 20 feet, such that the track would cross the offramp 500 feet further south than is currently planned.

That's it. Thank you.

MR. ROBERTS: Thank you.

I don't have anyone else signed up to speak. But if there is someone who would like to address us, this would be a perfectly appropriate time. So is there anyone else who would like to speak tonight to us?

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I-189-003

Sound Transit has reviewed your suggestions to consider whether they have the potential to avoid potential impacts near your property.
As the light rail profile approaches the property from the south, it is coming out of a cut into the hillside adjacent to I-5. To lower the profile through this area would require cutting even further into the hillside. At about 800 feet south of the property, the existing ground drops about 40 feet. Traveling north, the ground continues to drop further as it becomes adjacent to wetlands and State Route 104. Heading north from there, the next major connection point is the elevated Montlake Terrace Transit Station at 236th St. SW. To maintain a light rail profile meeting established design criteria based on safety and efficiency and to minimize the most negative impacts through this area, an elevated structure maintaining a minimum height over the southern-most State Road 104 exit ramp is needed. The elevation has been refined for the Final EIS, and the visual impact information in this area was updated. Also, there are a number of design constraints that require maintaining the light rail alignment in the approximate location as shown in the Draft EIS and now in the Final EIS. Based on design guidelines for the use of the I-5 right-of-way between Sound Transit and WSDOT, the light rail project footprint is outside of an approximately 94 foot section reserved for the freeway and potential future improvements. The horizontal alignment is also constrained by a more narrow width of existing right-of-way between NE 185th St. to north of NE 195th St. To provide a horizontal design as shown in your Figure 2a-b, while still meeting the project's light rail design standards, would require further encroachment beyond the right-of-way and upon more properties and homes in this area. Therefore, Sound Transit is continuing to propose the Preferred Alternative design rather than your suggested alternative.

MR. CIRCENIS: My name is Edvins Circenis. That's spelled, first name, E-D-V-I-N-S; last name, C-I-R-C-E-N-I-S. I live at 6834-40th Avenue Northeast in Seattle, ZIP code 98115.

I-190-001 I'm also a member of the Seattle Latvian Lutheran church. The church was built primarily by a volunteer workforce. And I provided, without compensation, the conceptual and detailed design drawings for the construction of this church. The Latvian Lutheran church has been notified, prior to the DEIS publication, that our property at 11710 Third Avenue Northeast has been identified as one that Sound Transit may need to partially or fully acquire in order to construct the project under one or more alternatives.

Recognizing the seriousness of how this project may impact the Latvian Lutheran church and North Seattle communities, I am proposing, for your consideration, an option that, when properly executed, will save a number of properties from acquisition in the vicinity of Northeast 117th Street.

Looking at the satellite map, you will notice that the Latvian Lutheran church is right here and the freeway runs real close to our property. However, on the west side, there is a lot of room. So what I am proposing, to provide space for the needed Sound Transit, I'm proposing that

I-190-001

The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE, which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Please see Chapter 2, sections 2.6.1 and 2.6.2 for a description of the factors that led Sound Transit to place light rail east of I-5 rather than west of the freeway in this area.

I-190-001 the -- that the I-5 be relocated as needed, to the west, and the existing right-of-way as shown in my revised -- revised map in there. I revised it a little bit and moved the lanes to the west, and there still seems like maybe some room left on the west side as well. So depends on how much space we need. I don't think we need too much to do this.

I know that it's easier to condemn private property than it is to deal with federal government. But if you feel in your heart that it is worth saving Latvian Lutheran church, which is also a center for the Baltic communities in the Northwest, I sincerely hope that the Sound Transit board will give the alternative proposal its utmost consideration.

Thank you.

MR. ROBERTS: Next person is Inte Wiest.

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MS. FAULDS: I would.

MR. ROBERTS: Please.

MS. FAULDS: Good evening. My name is Phoebe Faulds. My last name is F-A-U-L-D-S. And my family's house is at 1008-190th Northeast in Shoreline, Washington.

I-191-001 And I see that the project is affecting not just my house, but the community around it. I see that it affects the community center here. It's just over at the station but -- at the stadium, but it will affect a lot more than just the ball field. It will affect the communities that are having programs here, from dance lessens to swim lessons. And this is one of the only places that you can get a scholarship to get those service in Shoreline. Many, many low-income families use these services because they would not get these services any other way.

If you change this up, they won't get these services. You say that you're doing this for low-income housing around the area. But if you add low-income housing without services to low-income people, then you lose community and you make it less safe.

Once you lose community, it's really hard to get it back. So I hope that you'll reconsider the area, make sure that you keep these services in place, and reconsider anything that you might be taking away from the community.

Thank you.

I-191-001

Thank you for your comment on community impacts associated with the proposed NE 185th Street light rail station. Throughout project planning, Sound Transit has worked to minimize impacts on adjacent residential neighborhoods. Sound Transit recognizes the importance of maintaining the many community activities and services currently housed at the Shoreline School District property adjacent to the proposed transit station site. Property acquisition has been minimized to partial parcel acquisitions to preserve these community amenities. The impacts of Alternative A1 and the Preferred Alternative involves an edge of the stadium parking area and an auxiliary track. All of the existing programs and services would be able to continue operation at the stadium and the school district site. See Section 3.4.17 for more details.

MR. ROBERTS: Thank you.

Is there anyone else that would like to address us tonight?

Yes, please.

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MR. JACOBY: Good evening. My name is Dan Jacoby, J-A-C-O-B-Y. I'm at 1243 North 160th Street.

I want to talk about, kind of, the future. And as you continue to plan, this is going to become more and more important. And that is, I straddle two generations, the baby boom, Gen X. I notice big differences between the two. And you look at the next generations, and you see even more big differences that impact, directly, what we're doing here.

The younger generations, it -- to me, the car was a status symbol. When I was in high school, getting a car was a big deal. Nowadays, kids don't really care so much. They'll ride mass transit. And the reason that that's more important is they got a lot of more of these gadgets, iPhones, smart phones, tablets, you name it.

To them, driving a car to work, to go home, to go out, they become disconnected. And they don't like that very much. If they ride the bus, if they ride the train, they can stay connected. And to them, even if it's a longer trip, it's still a better move.

I-192-001

When you're planning this, I think you can look at -- and especially, this will become important when Metro gets involved in terms of their bus lines -- making sure that there is plenty of connection via mass transit. I don't think you're going to need as many parking spaces as

I-192-001

While parking is an element of the access plans for the stations, Sound Transit anticipates that most patrons will arrive by connecting transit, walking, and biking. The alternatives under consideration provide additional parking for transit users compared to today. They were sized based on estimates of demand, which also account for an increased demand for travel using other modes to reach stations, including connecting transit. This also reflects Sound Transit Board direction, consistent with their adopted System Access Policy.

I-192-001 you might think because I think you're going to find a lot of people, especially the younger people, are not going to take the car to the train; they're going to take the bus to the train, if only there's a bus available.

This will help a lot. You know, he was talking about footprint. This could reduce footprint if you don't need as many parking spaces. But I think, also, it looks at not just the light rail, but what's next after that.

I-192-002 I'll tell you, if I wanted to make a gazillion dollars and I were an engineer, right now, I'd design buses and I'd design train cars where there's some way for a person getting into the bus or getting into the train to have a table top or something they can put their tablet on and continue to work. Because people are going to be showing up to work at ten o'clock, and they're going to be leaving at four. But they're going to be at work from nine to five because they're going to be on your train, and they're going to be on the buses.

So it's just something to think about as you go on and -- and, you know, start to solidify your plan, that you're going to see a greater demand for mass transit and a lower demand for cars as this goes on.

Thank you very much.

MR. ROBERTS: Thank you.

Next, Michael Cameron.

I-192-002

Thank you for your comment. Sound Transit will be working with local transit operators to develop refined transit service plans as the project nears operation.

MR. PETERSONS: Thanks, Paul. I've got to make this quick because I've got to go to birthing classes with my wife.

Hello. My name is Lukas Petersons. I am a member of the Seattle -- oh, should I start with my name and stuff? Sorry.

Lukas Petersons, L-U-K-A-S, P-E-T-E-R-S-O-N-S. I reside at 3009 North 130th Street, Unit 1201. And I represent the Latvian Lutheran church and center located at 117th and Third Avenue Northeast.

All right. So I'm a member of the Seattle Latvian community. And my parents are the caretakers of the Latvian church and community center, and they have been for the past 20-plus years.

I-193-001

Sound Transit's DEIS is proposing to run the North Link extension through our church's property, and a couple other alternatives are calling to eliminate our center altogether.

I wanted to speak on record to explain how much this church and community center means to myself and our greater Latvian community.

First, our church and community center serves as a living family tree. Our Seattle Latvian community's family tree is not only something replicated on a piece of paper. It is a living, breathing part of this community.

I-193-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. The Preferred Alternative in the Final EIS and all other alternatives now avoid displacing the church or church hall. The Final EIS describes the primary modifications for these alternatives in Chapter 2, Alternatives Considered.

I-193-001 The center provides a gathering place for Latvian children, teens, adults, and seniors alike. It is a place that is so important to our community and Latvian families. It is a family tree that cannot and, please, will not be uprooted.

Second, the DEIS understates the significance and importance of our church and community center. The service serves -- the center serves our Latvian community as a church, a gathering place, a school, and a facility to many Latvian community groups that exist in our state and also along the West Coast. In addition, it also serves as a gathering place for other Seattle Baltic communities, including the Lithuanians and the Estonians.

Now I'd like to speak on a couple items that are important to me in the church. I moved here when I was 8 years old, from Alaska, and my parents were asked to caretake the church. And one of the alternatives in the DEIS is basically going to tear down my childhood home along with the entrance to our church, so we would have no way to get in or out of our church.

Second, I also attended the Latvian school. I graduated there. And I really feel that preserving our cultural being is very important to us and the future generations. As I said, my wife's pregnant, and I would really love for my baby girl to be able to go to Latvian school and be able to folk dance and sing. And without the

I-193-001 center there, that won't be possible.

I graduated from the Latvian school. I taught the 4- and 5-year-olds there for four years. I folk danced in the Latvian troupe for over seven years and all our practices are held there at the center.

I have participated in many things there, volunteering at our annual Latvian rummage sale -- which is a huge success, and a lot of Seattle residents like that -- and along with our annual Christmas bazaar.

So in conclusion, I'd like to say that the Seattle Latvian Lutheran church and community center is and has been an important part of my life. It is a place that was designed, built, maintained, and loved by Latvians. It has helped shape my life and serves as a symbol of strength to all of us. Our community strongly stands together to protect the heart of our community.

Thank you, and I appreciate your time.

MR. ROBERTS: Thank you. Thank you. Lucas, if you have to get up and leave, we won't take it personally.

MR. PETERSONS: Thank you.

MR. ROBERTS: Next, we have Gunars Sreibers.

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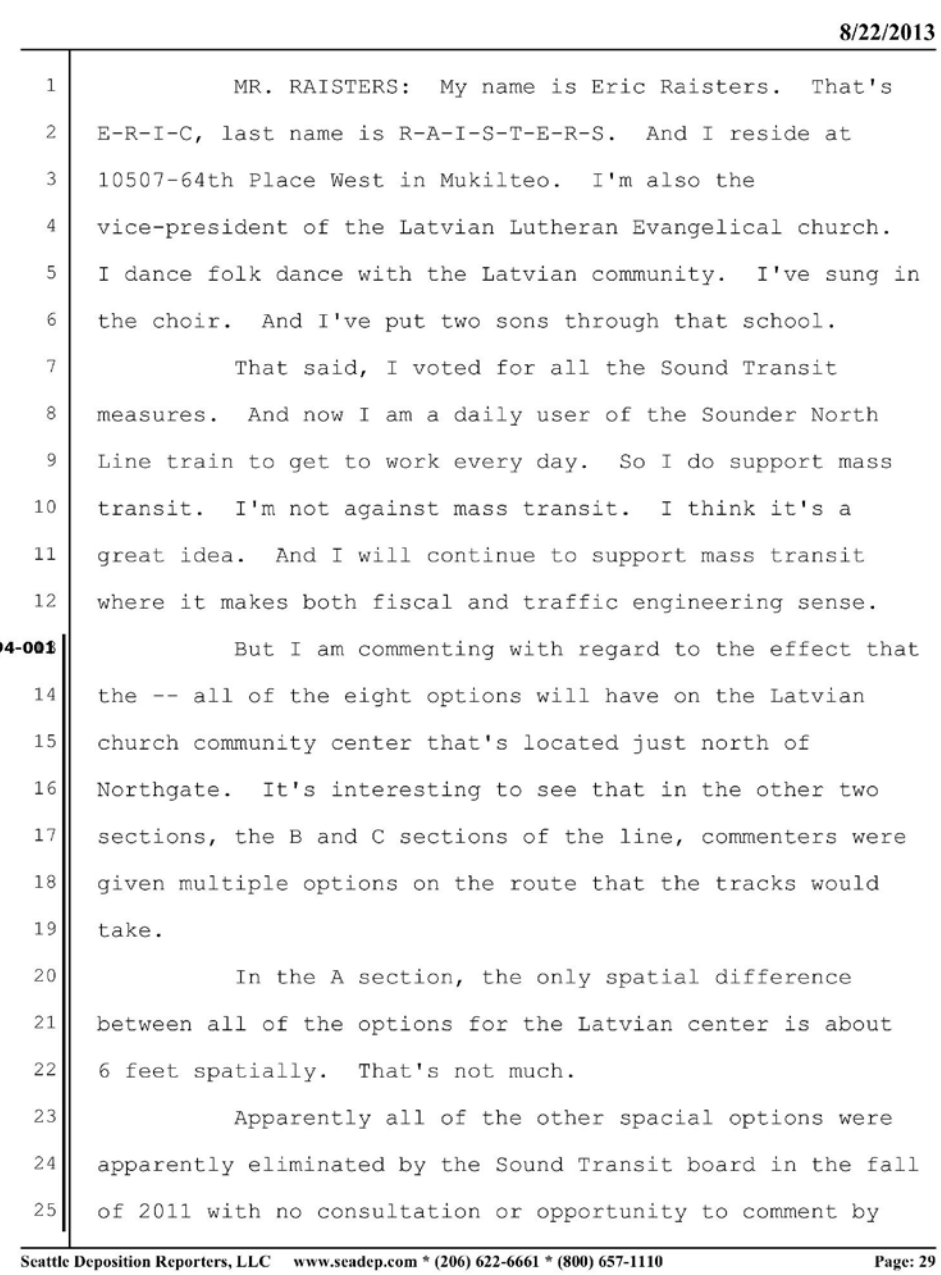

8/22/2013

MR. RAISTERS: My name is Eric Raisters. That's E-R-I-C, last name is R-A-I-S-T-E-R-S. And I reside at 10507-64th Place West in Mukilteo. I'm also the vice-president of the Latvian Lutheran Evangelical church. I dance folk dance with the Latvian community. I've sung in the choir. And I've put two sons through that school.

That said, I voted for all the Sound Transit measures. And now I am a daily user of the Sounder North Line train to get to work every day. So I do support mass transit. I'm not against mass transit. I think it's a great idea. And I will continue to support mass transit where it makes both fiscal and traffic engineering sense.

I-194-001

But I am commenting with regard to the effect that the -- all of the eight options will have on the Latvian church community center that's located just north of Northgate. It's interesting to see that in the other two sections, the B and C sections of the line, commenters were given multiple options on the route that the tracks would take.

In the A section, the only spatial difference between all of the options for the Latvian center is about 6 feet spatially. That's not much.

Apparently all of the other spacial options were apparently eliminated by the Sound Transit board in the fall of 2011 with no consultation or opportunity to comment by

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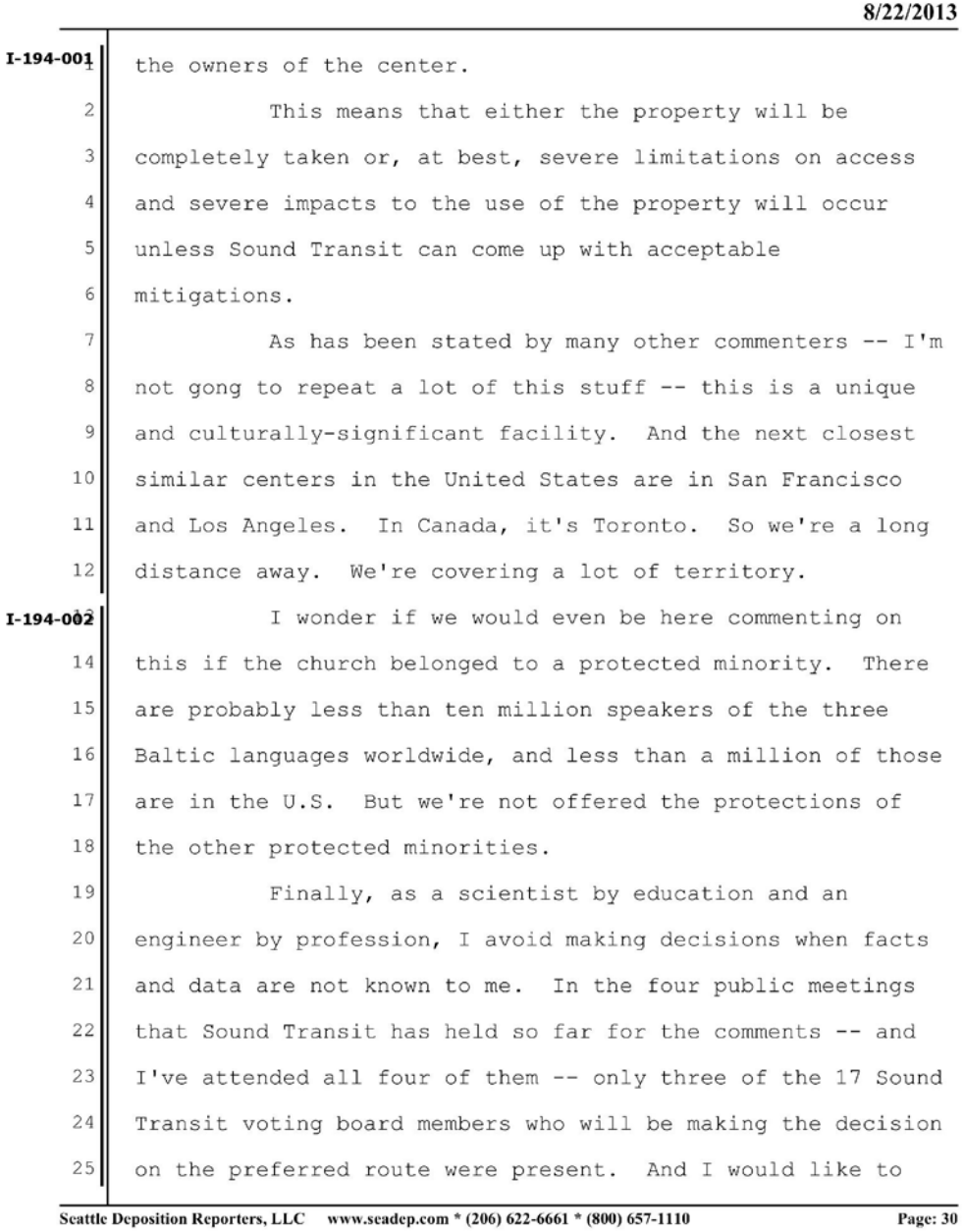
I-194-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.



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I-194-001

the owners of the center.

This means that either the property will be completely taken or, at best, severe limitations on access and severe impacts to the use of the property will occur unless Sound Transit can come up with acceptable mitigations.

As has been stated by many other commenters -- I'm not gong to repeat a lot of this stuff -- this is a unique and culturally-significant facility. And the next closest similar centers in the United States are in San Francisco and Los Angeles. In Canada, it's Toronto. So we're a long distance away. We're covering a lot of territory.

I-194-002

I wonder if we would even be here commenting on this if the church belonged to a protected minority. There are probably less than ten million speakers of the three Baltic languages worldwide, and less than a million of those are in the U.S. But we're not offered the protections of the other protected minorities.

Finally, as a scientist by education and an engineer by profession, I avoid making decisions when facts and data are not known to me. In the four public meetings that Sound Transit has held so far for the comments -- and I've attended all four of them -- only three of the 17 Sound Transit voting board members who will be making the decision on the preferred route were present. And I would like to

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I-194-002

The Sound Transit public outreach activities leading up to the publication of the Draft EIS did alert members of the Latvian and Baltic populations of the proposed alternatives for the Lynnwood Link Extension project and community members did become involved. Chapter 6 describes the public outreach for the project.

Although many of the Sound Transit Board did not attend the public meetings, the Sound Transit staff who did attend regularly, and who are the ones who interact most closely with concerned citizens, update the Board on the pertinent issues that should be considered on a regular basis. The Board was given the Draft EIS comments before they identified the Preferred Alternative and gave direction to modify all the Segment A alternatives so that none would require the displacement of the facility. Please find the updated description of the Segment A alternatives in the Final EIS Chapter 2, Alternatives Considered.

I-194-002 thank Councilman Roberts, Mayor Earling, and Snohomish County Executive Lovick for attending those sessions. Nobody from King County was there, nobody from the City of Seattle who represents our center.

This is less than a quarter of the board who have gathered the facts and the data required to make an intelligent decision. I hope, but have serious reservations, that the remaining members of the board will spend the necessary time to familiarize themselves with the probably hundreds of pages of comments and testimony so that they can also make an informed and intelligent decision. Sadly, the track record for this point for Sound Transit probably doesn't indicate that.

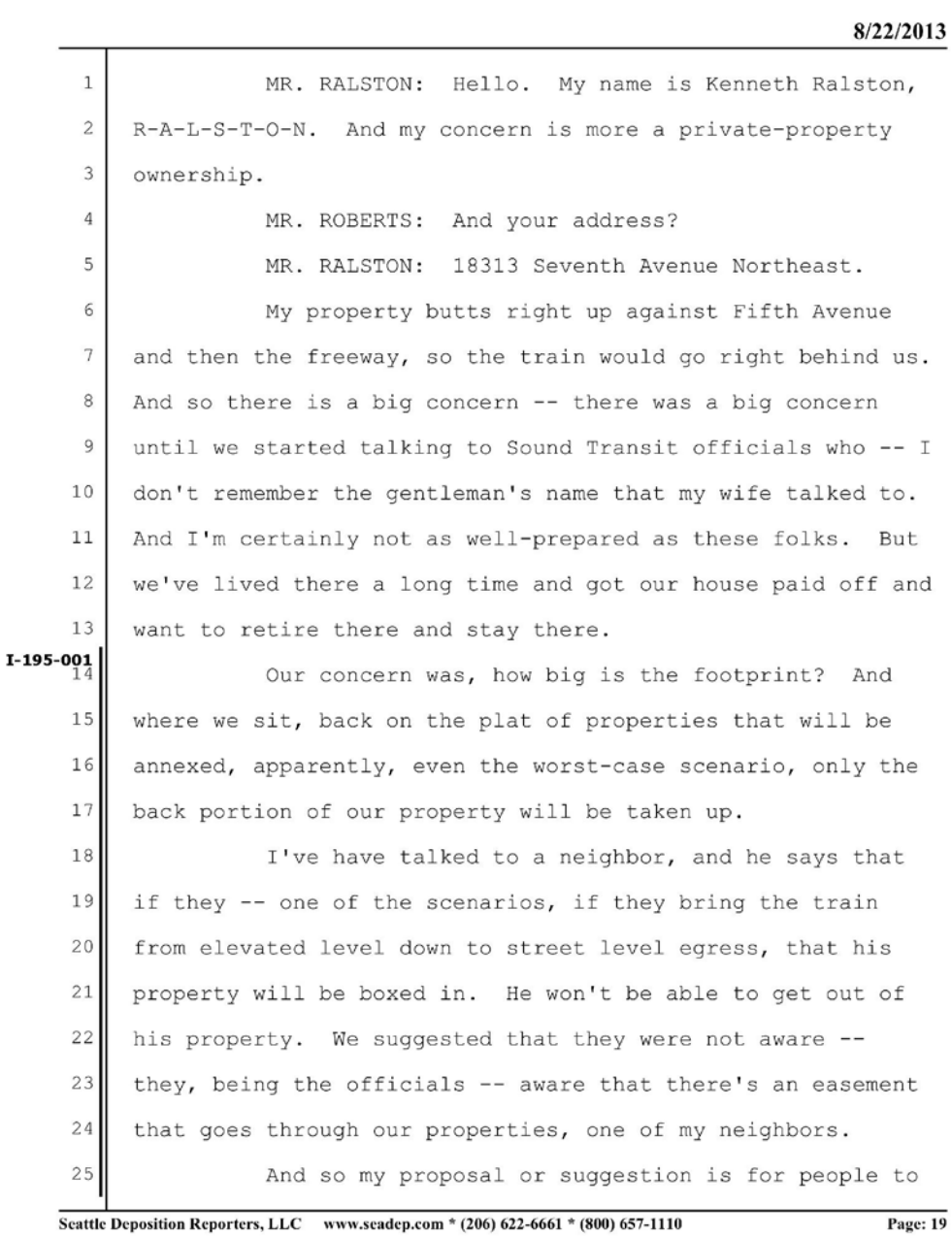
Finally, if the taking of the Latvian church should come to pass, the Sound Transit board will have the dubious distinction of matching what the Soviet Union did to the Baltic people, taking our land away twice, this time by the government of the land of the free and the home of brave.

Thank you.

MR. ROBERTS: Thank you.

Is there anyone who else wishes to address us tonight for the hearing? Anyone else?

Well, then I want to thank all of you for your comments. I want to let you know -- find my little notes



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MR. RALSTON: Hello. My name is Kenneth Ralston, R-A-L-S-T-O-N. And my concern is more a private-property ownership.

MR. ROBERTS: And your address?

MR. RALSTON: 18313 Seventh Avenue Northeast.

My property butts right up against Fifth Avenue and then the freeway, so the train would go right behind us. And so there is a big concern -- there was a big concern until we started talking to Sound Transit officials who -- I don't remember the gentleman's name that my wife talked to. And I'm certainly not as well-prepared as these folks. But we've lived there a long time and got our house paid off and want to retire there and stay there.

I-195-001

Our concern was, how big is the footprint? And where we sit, back on the plat of properties that will be annexed, apparently, even the worst-case scenario, only the back portion of our property will be taken up.

I've have talked to a neighbor, and he says that if they -- one of the scenarios, if they bring the train from elevated level down to street level egress, that his property will be boxed in. He won't be able to get out of his property. We suggested that they were not aware -- they, being the officials -- aware that there's an easement that goes through our properties, one of my neighbors.

And so my proposal or suggestion is for people to

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I-195-001

At this stage in project planning, the property impacts are estimates and use map-based parcel information. Detailed land surveys and property assessments would be conducted during final design and subsequent real estate transactions. However, the project staff have conducted multiple field visits and surveys as part of the design and environmental process.

If access to a property is lost due to the project, that property becomes a full acquisition because Sound Transit cannot leave a property owner with no access to their property. That is one factor considered when the agency determines what type of acquisition (full or partial) is needed.

I-195-001 come out there and take a physical look at the properties a lot -- a lot stronger than they have. When you're doing an environmental study, you really need to come out and look at the property a little bit better.

Our property, for instance, we're -- we've got it registered as a wildlife sanctuary and planting, you know, natural flora, like it was a hundred years ago. We're moving back and back and trying to get rid of all the blackberries that we haven't taken out.

I-195-002 So the worst-case scenario that we were cited with was ground-level parking would -- and then I also heard about bringing the train to street level would force construction in such a fact -- manner that they would have to reconfigure Fifth Avenue that goes behind our property. And I don't support that configuration. That would be on ground-level parking that was spread out and take a lot of real estate.

So also, I am a supporter of the project. I am a supporter of light rail. It's been a long time coming, needs to happen. But again, like the gentleman said, reevaluation of how the land is configured and what you need to take as a footprint should have a lot of physical, you know, study. Come out and look at those properties.

This is all relative to the 185th Street station, by the way. I don't think I mentioned that.

I-195-002

Thank you for your comment stating your overall support for the Lynnwood Link Extension project and your concerns about potential adverse effects of station parking and reconfiguration of Fifth Avenue NE. Please see the updated conceptual design drawings in Appendix F. The Preferred Alternative would realign Fifth Avenue, but it does not feature ground level parking.

So anyway, that's pretty much all I have to say.
Thank you for your time.
MR. ROBERTS: Thank you.
I think this is a good opportunity to remind and repeat that staff will be here until eight o'clock. I think the -- for instance, the concerns that Mr. Ralston raised would be good concerns to make sure -- and I suspect you already have -- to be talking with the staff about those.
So I invite, at any point following our testimony, you to please raise these concerns with the staff and have dialogue there as well. Next is Dan Jacoby.
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MR. SREIBERS: My name is Gunars Sreibers. That's G-U-N-A-R-S, S-R-E-I-B-E-R-S. And I'm representing the Latvian Lutheran church and community center at 11710 Third Avenue Northeast.

I-196-001 Well, here we are at Workshop 4 here -- Workshop 4, Hearing 4 for this project. I've attended every one of those workshops, every one of these hearings and made comments at every one of these. I think it's noteworthy that if you look at the attendance sheets for these last four open houses and workshops that it has had a large participation by members of the Baltic community, if you look at the names on that list.

Many have already commented on this project as part of this process, but many more are going to comment before the end of this period -- comment period. This project is -- really cuts at the heart of the Baltic community and Latvian community here the Seattle -- Pacific Northwest.

I think it's also important to note that if you look at the attention at the open houses, it was primarily Baltic people. But also we had an informational meeting, before these open houses even happened, at the Baltic -- at the Latvian center. Over 200 people attended that information session, and that was on short notice in the middle of summertime when people were on vacation. In fact,

I-196-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

a large part of the community was in Latvia celebrating a national celebration there. So there is a big deal and has gotten the attention of all of us.

The church and the center are extremely important the us both culturally and socially. We think that it should also be important to sound transit.

We're extremely disappointed, obviously, that the draft EIS failed to acknowledge the social and cultural aspects of our church and our center and its role here in the Pacific Northwest. I-196-001

I think there's one other thing I'd like to make clear, we do not oppose this project. We -- if you talk to members of our community, we're very supportive of the light rail project and really feel that it's a project that needs to be built. We just strongly believe that any option selected can be modified in such a manner that the Latvian center can continue to function during construction and continue to function in its current location after construction. We truly believe that's the case if people are willing to look at options creatively.

I also want to remind folks -- and this is very ingrained in our community -- the fact that we have been subjected to eminent domain, the taking of our property, once before. We had to rebuild this center once before. We do not feel that it is fair to be subjected to that one more

I-196-001 time again. We just want to exist at our current location and continue to do what we're doing right now, support the light rail project. Anything else short of allowing us to exist at our current location, continue to exist as a cultural hub and a social hub for the Baltic communities here in the Northwest would just be unacceptable to us.

Thank you.

MR. ROBERTS: Thank you, Gunars.

Next, I have Edvins Circenis. And if I -- I'm sure that name will sound better when you say it and spell it than what I just did to it.

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MS. WIEST: Inte.

MR. ROBERTS: Inte.

MS. WIEST: And actually, it's Wiest.

My name is Inte Wiest, I-N-T-E, W-I-E-S-T. I live at 2030-151st Place Southwest, Lynnwood, Washington. I also am a member of the Latvian Lutheran church and Latvian community. I'm the vice president of the Latvian Association of the State of Washington and the secretary of the Ladies League of the Latvian Lutheran church and the assistant librarian at the library at our center.

Along with Edvins and many other Latvians, my father and brother, who, by the way, lived in Shoreline, worked many, many hours to help build this church on evenings, after work, on weekends.

I-197-001 I cannot begin to tell you how important this center is to me personally and to the whole Latvian community and to many, many members of the Estonian and Lithuanian communities as well.

People of all ages from prekindergarten children who study at the Saturday school to pensioners who attend services at the church and meet regularly at the center for lunch and cultural programs, the young people who practice folk dancing and give performances there, and people of all ages singing in the choir, this is a vital place. Much of our time away from our work and duties at home is spent at

I-197-001

Thank you for your concerns about the potential displacement or relocation of the Latvian Evangelical Lutheran Church and for highlighting its significance to the region's Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained.

I-197-001 center. It is a vital part of our existence and defines who we are as Latvian Americans.

If we lose our church and community center a second time, we lose part of ourselves. We need to find a solution that lets us keep our church and community center and allows Sound Transit to build the rail line to Lynnwood.

Thank you.

MR. ROBERTS: Dave Earling is going to pick up the map so that we can provide them.

The next person listed to speak is Kenneth Ralston.

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MR. DOLAN: My name is Chuck Dolan, D-O-L-A-N. I live at 1220 Northeast 97th Street, Seattle, Washington, 98115. I'm here as the membership vice president of Horton Creek Alliance, and I'd like Horton Creek Alliance to become a party of record for any further communications on Section A and alternative thereof.

I-198-001

A couple things I'd like to say is basically I'd like to have the comment period extended. I think it's a little bit brief for the massiveness of the document considering I didn't really even know it had been released until I saw notice of this meeting late last week.

So I think extending the comment period for the DEIS would be appropriate. And at this time, I think that's all I'd like to say at this point. Thank you.

MR. LOVICK: Thank you.

I-198-001

Sound Transit does not have a party of record designation for those interested in the project. Your address has been added to the project's mailing list, per this request. The public comment period for the Draft EIS was for an extended period of 60 days (45 days are required) from July 26, 2013 to September 23, 2013 to allow greater opportunity for public comment.

MR. LOVICK: The next person is Imants Holmquist. Come forward, please.

MR. HOLMQUIST: My name is Imants Holmquist. That's I-M-A-N-T-S, H-O-L-M-Q-U-I-S-T. I live at 1712 44th Avenue Southwest, Seattle, Washington, 98116.

I'm a member of the Latvian community. I attended the Latvian School there for about 10 years in the '80s.

My grandmother is here. She left Latvian in 1941. I was a member on the National Latvian Youth Association's Board. We met regularly at the Latvian Center here at the Lutheran Church.

I-199-001 I just want to express that the regional and cultural significance of the church is something that is invaluable, not just to Seattle, but also regionally and nationally.

I-199-002 Many of the people tonight that will express comments will start to talk about some of the impacts it's had on the West Coast affiliations with the Latvians, and some of the impacts that the track would bring would be noise, of course.

It's a church. It's also a school. I have a 2- and 4-year-old, two daughters who attend the Latvian School every Saturday, and I'd like for them to be able to hear their classroom instruction. It'd be great if when they join the choir or join the dance group, they could

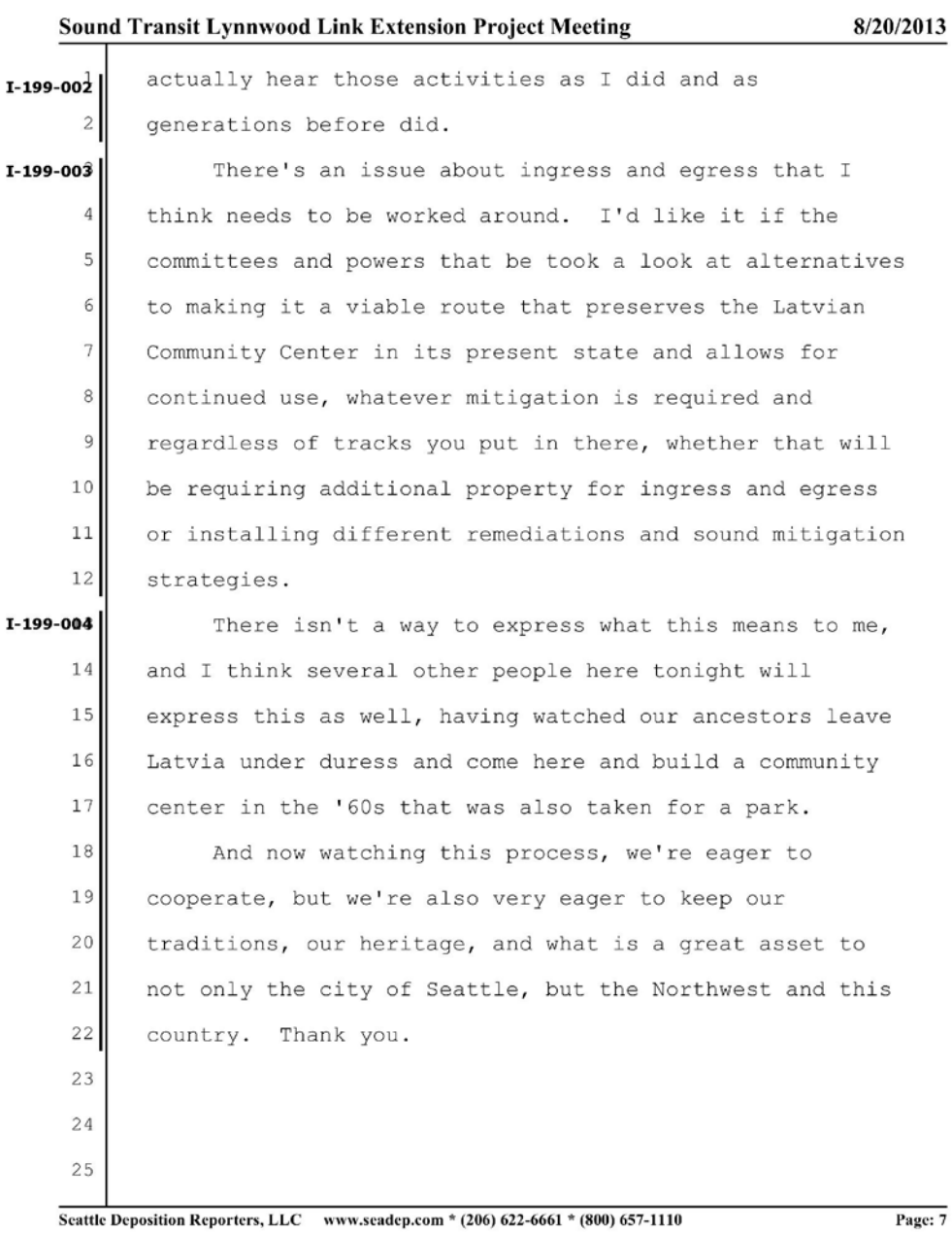
I-199-001

Thank you for your personal comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, the larger Baltic community, and those interested in Scandinavian studies.

I-199-002

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below these criteria. Sound Transit's policy is to mitigate moderate or severe impacts as per FTA criteria. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

The church was considered a noise-sensitive property, and the residences around the church are also noise-sensitive. For this reason, sound walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, any existing WSDOT noise walls removed as part of the project will be replaced.



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I-199-002 actually hear those activities as I did and as generations before did.

I-199-003 There's an issue about ingress and egress that I think needs to be worked around. I'd like it if the committees and powers that be took a look at alternatives to making it a viable route that preserves the Latvian Community Center in its present state and allows for continued use, whatever mitigation is required and regardless of tracks you put in there, whether that will be requiring additional property for ingress and egress or installing different remediations and sound mitigation strategies.

I-199-004 There isn't a way to express what this means to me, and I think several other people here tonight will express this as well, having watched our ancestors leave Latvia under duress and come here and build a community center in the '60s that was also taken for a park.

And now watching this process, we're eager to cooperate, but we're also very eager to keep our traditions, our heritage, and what is a great asset to not only the city of Seattle, but the Northwest and this country. Thank you.

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I-199-003

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

I-199-004

Thank you for your personal comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, and the larger Baltic community.

MR. LOVICK: Charlene.

MS. JAUNDALDERIS: My name is Charlene Jaundalderis, C-H-A-R-L-E-N-E, J-A-U-N-D-A-L-D-E-R-I-S. I reside at 11510 Fourth Avenue Northeast, Seattle, 98125.

I-200-001 I'm an American, but I've become an adopted Latvian because I've been married to a Latvian for 50 plus years. And being raised in a small community in Yakima Valley, when I first came to the Latvian Association, I felt like I was back home because it's one community within a large city.

Since that time, they've included me in so many things, and now I am involved in our annual rummage sale that includes people from all over the Puget Sound.

People wait for it. We have increased attendance every year. The neighbors are kind enough to take our overflow of parking during that weekend, and it brings in our revenue that helps us maintain the Latvian Center for the year.

The other very vital function that we have during the year is in November we have our Christmas bazaar where the Latvian artists can bring in their things that they've made and sell it to the community as well as the parents love to come to that too because we have food and entertainment, Latvian ethnic food and entertainment, so

I-200-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church.

I-200-001

this is an indication that it's not just the Latvians that would be involved. It's also the American spouses that are involved.

I also publish the Latvian telephone directory for the State of Washington, which includes 700 plus families, which gives you an indication of how many are there. That's all. Thank you very much.

MR. LOVICK: Let's start with the first person signed up, Lori Kirsis. You have three minutes to comment, and we'll let you know when you reach the one-minute mark.

Would you spell your name?

MS. KIRSIS: Sure. Lori, L-O-R-I, Kirsis, K-I-R-S-I-S.

MR. KENNEDY: And if you could give your address, too, please, for the court reporter, that would be great.

MR. LOVICK: Yes. We will need full names, spell the name and the address for the court reporter.

MS. KIRSIS: It's 5377 44th Avenue Southwest.

I just wanted to add a personal note to the comments that you're receiving. I'm a member of the Latvian community, and I have been a member of the Latvian community my entire life.

The Latvian Church and Community Center has always been a part of my life. I've been involved with many events through my life there. I was married there. I'm a member of the Latvian choir. We practice and perform there.

I-201-001 I'm involved with fundraising for the community center and the church. I just want you to know it's a very vibrant community center, and it really will be

I-201-001

Thank you for your personal comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you and the Latvian community Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-201-001 severely affected by the current proposal, and making the Latvian Church and Community Center inaccessible is just not acceptable. Thank you.

MR. LOVICK: Does anyone else wish to comment? Step to the microphone, please.

MR. ORR: My name is Michael Orr, 1618 Bellevue Avenue, No. 302, Seattle, Washington, 98122.

I've got some notes here, but I don't really have a prepared speech. I think link in general and the Lynnwood extension is vital.

I don't have a car. I don't have a driver's license. It's difficult to get around on the buses. You really feel like a second-class citizen, and it limits the places that you can live and the jobs that you can go to.

I-202-001 Link is the biggest step forward we've ever had in this city. I think we need to do it. I think 138th Station is vital because it gives the opportunity for us to get to Lake City and northwest Seattle, two places which are kind of isolated from the rest of the city.

Regarding 145th and 155th Stations, there's good arguments both ways on those. I'm not really sure which is better. 145th is probably a little bit easier to zone with DOT, but 155th is more pedestrian friendly.

It doesn't have a lot of traffic congestion, and it's closer to 155th and Aurora. So geographically, that would be a better place if Shoreline is willing to do that.

I-202-001

Sound Transit notes your general support for the Lynnwood Link Extension project and your comments on the advantages and disadvantages of the proposed locations for light rail stations in Segment A.

I-202-002 The Mountlake Terrace Station I think needs to be on the east side of the freeway for better walking distance to the Mountlake Terrace City Center, which is a five-minute walk through the park. But if the station is on the freeway, it makes it a seven-minute walk, which is going to dampen the ridership.

The 220th station I don't know that much about, but it may be a good idea if Snohomish County residents want it.

I-202-003 For Lynnwood station, I support either the north or the west sides of the transit center because, again, those are better walking distance to the city center.

I don't support the park and ride location because it's a further walk from the city center, and there's no median walk shed. The park and ride is on one side and I-5 is on the other.

I-202-004 And finally, please don't give too much weight to the comments about Scriber Lake impacts or what you heard about the Latvian Center because we have to look at the impacts of a million people and their need for rapid transit and their need to be able to walk and bus to the rapid transit. That needs to trump any existing locations that serve a smaller number of people. That's all I have to say.

I-202-002

Your comments stating your preference for the Segment B alternatives that place the transit station east of the highway and not in the middle of the highway median are noted.

I-202-003

Sound Transit acknowledges your preference for either Alternatives C1 and C2 over Alternative C3 due to proximity to the Lynnwood city center.

I-202-004

Sound Transit appreciates your support. Sound Transit has modified the project design to minimize impacts as much as possible on Scriber Creek Park and wetlands, and the Seattle Latvian Evangelical Lutheran Church.

MR. LOVICK: And the next person is Lukas.

MR. PETERSONS: My name is Lukas Petersons, L-U-K-A-S, P-E-T-E-R-S-O-N-S. I reside at 300 North 130th Street, Unit 1201 in Seattle, Washington, 98133.

I'm a member of the Seattle Latvian community, and my parents are the caretakers of the Latvian Church and Community Center and have been for the past 20 plus years.

I-203-001

Sound transit's EIS is proposing to run the North Link Extension through our church's property and one of the alternatives is calling to eliminate our center all together.

I wanted to speak on record so we could explain how much this church and community center means to myself and our greater Latvian community.

First, our church and community center serves as a living family tree. Our Seattle Latvian family tree is not only something replicated on a piece of paper. It is a living, breathing part of this community.

The center is a gathering place for Latvian children, teens, adults and seniors alike. It is a place so important to our community and Latvian families, that it is a family tree that cannot and will not be uprooted.

Second, the DEIS understates the significance and important of our church and community center. The center

I-203-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Please see Section 2.5.1 of the Final EIS for a description of the refined Segment A alternatives that avoid displacing the church.

serves our Latvian community as a church, a gathering place, a school and a facility to many Latvian community groups that exist in our state.

In addition, it also serves as a gathering place for other Baltic Seattle communities, including the Lithuanians and Estonians.

Now I'd like to speak on why it is important to me. First, I moved here when I was eight years old and my

I-203-001

parents were asked by the church to care take the center. Their home sits on the church property.

With the proposed EIS alternative, it will not only affect my church, but it will also affect my childhood home. In addition, many Seattle Latvians live near the church in order to be close to the center, which serves as our home base to our very strong community.

Second, I attended and graduated the Seattle Latvian School along with many young Latvian children in our community. The school helps to strengthen our community and provides cultural preservation.

Third, there are many different ways that I have myself taken part in our Latvian community, all activities of which were held at our center and church.

I graduated from the Seattle Latvian School as well as taught the 4- to 5-year-old class at the Latvian School for four year.

I-203-001

I folk danced with the Seattle Latvian Folk Dance Group for seven years, and all of the practices were held and continue to be held at the center. I play Santa Claus in the Seattle Latvian School's Christmas program, and I have witnessed young Latvian children's excitement about how much they love the center and school.

I have participated in many events there as part of the catering team, which hosts celebrations on occasion for many local Seattle Latvians, including weddings, funerals, graduation and all the like.

I volunteer at many different community events, including our annual Latvian rummage sale and annual Christmas bazaar, both of which are well liked by the Seattle community at large.

In conclusion, the Seattle Latvian Lutheran Church and Community Center is and has been an important part of my life. It was a place that was built, maintained and loved by Latvians.

It has helped to shape my life and served as a symbol of strength for all of us. Our community strongly bands together to protect the heart of our community. Thank you. Also, check out our Facebook page at Save Seattle Latvian Church Center. Thank you.

MR. LOVICK: Is there anyone else who wishes to comment?

MS. PETERSONS: Good evening. I am Nikol Petersons, N-I-K-O-L, P-E-T-E-R-S-O-N-S.

I just wanted to say I am part of the Latvian community, which most of us here in this room are if you haven't noticed yet.

I-204-001 I just wanted to say that with the plan of the link rail and its running from Northgate to Lynnwood, I feel like it's a great idea.

However, taking away from our cultural environments, our church and things of that nature, I just don't feel like you guys may have taken a better look at exactly how the cultural significance of our center represents this community.

I was born in Milwaukee, Wisconsin. I moved when I was nine months to Alaska where there is another Latvian community up there.

My grandfather built a bunch of houses out there, and in turn my parents were offered the job as the caretaking -- they were offered the job to care take for the Latvian Community Center. I moved here when I was four years old.

The first language I knew how to speak was Latvian language. It was very instilled in our family. My

I-204-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church.

I-204-001 grandparents, that's all they spoke to me growing up. I actually didn't realize that my grandfather knew how to speak English. I only thought he could speak Latvian.

Anyway, I just wanted to say that I really think that the significance and importance of our center is not only for the Latvian community, but the city of Northgate, this whole neighborhood. We do a lot for them and have our rummage sales and stuff like that. Anyway, that's all I wanted to say.

MR. LOVICK: Eric.

MR. RAISTERS: Thank you. My name is Eric Raisters, E-R-I-C, last name is R-A-I-S-T-E-R-S, address is 10507 64th Place West in Mukilteo.

I-205-001 I am one of many of the Latvian community who are from all the counties of Washington. I also participate in the Folk Dance Group. We've had people that have come as far away as Bellingham and as far away as Aberdeen to participate in that group, so it brings together the community from all over.

I think you hear it from the emotions that are here exactly what the meaning of this center is and the lack of that is being brought out in the DEIS.

What I would like to comment on more than anything else is thank you to both of you gentlemen, and also in the first case of the comments period to the mayor who saw fit to come and find out about this.

I'm a little sad that in Sound Transit, the DEIS requirements, only one of the board members needs to be present at each one of the four comment periods, which means very few of them will actually get the emotion and get the information you need to base this decision.

I'm sorry that the requirement isn't that all the board should attend every single one of these at some point, and so I thank you two gentlemen for that.

I-205-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you and the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained.

I-205-001

I hope you hear what is being said by the people here, and that's all I have to comment on. Thank you.

MR. LOVICK: And the next person is Inese Raisters.

MS. RAISTERS: Good evening. Hopefully, you can hear me. My name is Inese Raisters, I-N-E-S-E, R-A-I-S-T-E-R-S, address is 10507 64th Place West in Mukilteo, Washington. Please don't hold that against my three minutes.

I-206-001 I wish to make some comments to the Sound Transit Board tonight from a Seattle Latvian folk dancer's perspective. I am a proud American of Latvian heritage, who happens to have a passion for dance.

I'm also a member of the Seattle Latvian Church as well as a community member, and I do also sing, but tonight my story will be about dance.

I started dancing in Seattle Latvian folk dance ensemble Trejdeksnitis, which was founded in 1962. I directed the group for 15 years from 1992 to 2008, and I'm still a dancer in the group.

Trejdeksnitis just returned from participating in the fifteenth Latvian Dance Festival held in Riga, Latvia at the beginning of July. There were 25 of us there, but the group usually has around 30 people in it in any given year.

Trejdeksnitis has performed at Northwest Folklife on numerous occasions as well as at downtown Seattle Public

I-206-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church.

I-206-001 Library and at Skandia Midsommarfest, both in Poulsbo and at the newer St. Edwards State Park location.

Our group depends on having the Seattle Latvian Center as our rehearsal stage as well as for our annual performances, which serve as fundraisers to travel to many of the festivals we dance at.

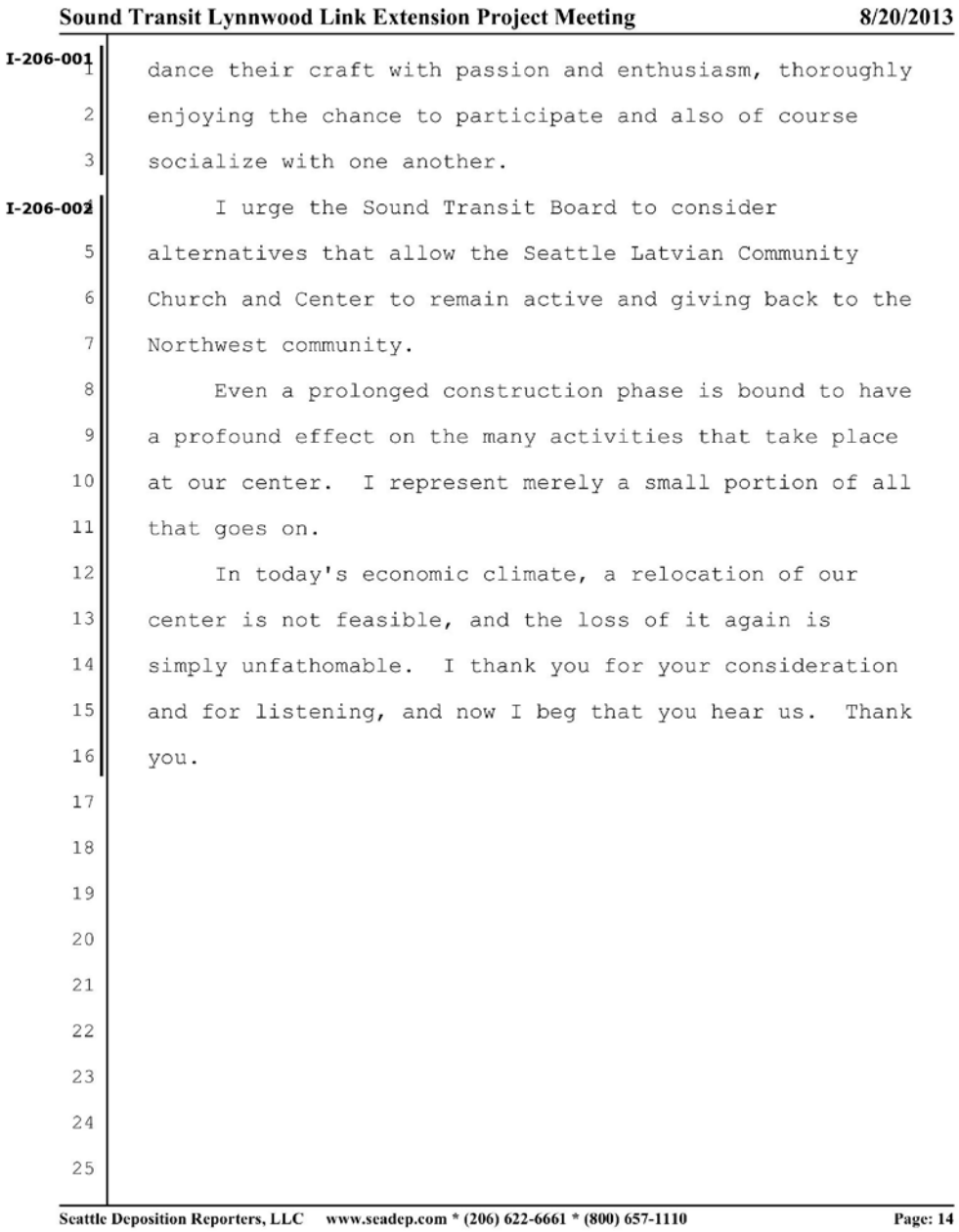
I can't even imagine, nor would I want to what would happen to the weekly activities of this wonderful group if the Seattle Latvian Center is no longer accessible to Trejdeksnitis.

We have persevered for 51 years so that we may continue to demonstrate and engage in our rich Latvian cultural heritage.

At least four of our members have created numerous award-winning dances at festivals across the U.S. and Canada. Some of our former dancers have moved to other American cities and in turn led the Latvian dance groups there.

Our members range in age from teenagers to what you see standing in front of you. Our young dancers are spending their time learning dances, often with intricate steps, learning about the multifaceted choreographies of Latvian dances.

They are keeping physically fit, not playing video games or channel surfing on the couch at home, and they



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I-206-001 dance their craft with passion and enthusiasm, thoroughly enjoying the chance to participate and also of course socialize with one another.

I-206-002 I urge the Sound Transit Board to consider alternatives that allow the Seattle Latvian Community Church and Center to remain active and giving back to the Northwest community.

Even a prolonged construction phase is bound to have a profound effect on the many activities that take place at our center. I represent merely a small portion of all that goes on.

In today's economic climate, a relocation of our center is not feasible, and the loss of it again is simply unfathomable. I thank you for your consideration and for listening, and now I beg that you hear us. Thank you.

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I-206-002

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other alternatives.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations. Construction period mitigation is also defined for each environmental topic, and Sound Transit anticipates that the center's activities would be able to continue during construction.

MR. LOVICK: Gunars Sreibers. Please give your name and your full address.

MR. SREIBERS: Thank you. My name is Gunars Sreibers, that's G-U-N-A-R-S, last name, Sreibers, S-R-E-I-B-E-R-S, and I'm representing the Latvian Lutheran Church and Community Center located at 11710 Third Avenue Northeast in Seattle.

I-207-001 The Baltic community as a whole is extremely disappointed with the Draft EIS's lack of recognition for the social and cultural contributions of our community and that this facility provided to Seattle and the Pacific Northwest.

The center is the hub for all activities Baltic throughout the region. It is used by and truly represents thousands of individuals of the Baltic heritage and their friends.

The Draft EIS fails to address any of the construction impacts or long-term operating impacts that the light rail project will have on the numerous ongoing events and activities that take place at the center.

The center serves the Latvian, the Lithuanian and Estonian communities, providing multiple programs ranging from toddlers to seniors. It is a focal point for a multitude of religious, cultural, educational and political activities which are Baltic.

I-207-001

Thank you for you comments describing the importance of the Latvian Church and community center to you and the Baltic community, as well as providing some historical context. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained.

During project construction, the Latvian Evangelical Lutheran Church and its uses would have temporary impacts, but church and community center functions would be maintained. See Section 4.4 in the EIS, which discusses construction and operation impacts on social resources within the project study area.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations. Construction period mitigation is also defined for each environmental topic, and Sound Transit anticipates that the center's activities would be able to continue during construction.

I-207-001

Just to give you a glimpse of the activities that occur at this center, the church services are conducted in three separate languages. The church services are each conducted independently in Latvian, Lithuanian and Estonian languages.

Special social events and unique cultural holidays are celebrated at this facility. The Children's Latvian Language School meets regularly here and has been in existence for over 60 years now.

The facility is used by national and internationally-recognized drama groups, choir groups and is also a center where actors come and give plays from Latvia.

It is a meeting place for fraternal groups representing the university students and sororities and fraternities from the University of Latvian. It is also an activity center for numerous senior groups.

The facility is used for Latvian sewing and cooking classes, and then it's used as a polling place for Baltic elections and for greeting ambassadors and presidents coming to this country and visiting Seattle.

The center serves as an organizing hub for the establishment of the Baltic Studies Program at the University of Washington and continues to be an ongoing funding source for that program.

I-207-001

Any actions that temporarily or permanently disrupt activities at the center is unacceptable to the Baltic community. Any options to close or move the center will be devastating, and in all likelihood lead to the demise of many, if not all the current activities.

In reality, it will end the Baltic community presence in the Northwest and the cultural richness it brings to the Northwest and to Seattle. The center must, and I emphasize must continue to function at its current location.

One last note, the Latvian Center and in fact the entire Baltic community has already suffered through one eminent domain taking.

In 1969 the original Latvian Center purchased in 1955 was taken from the Baltic community when the city of Seattle elected to construct the Wallingford playfield on that property.

MR. LOVICK: Sir, you need to summarize your comments.

MR. HOLMQUIST: I'm just about done.

Through an outpouring of generous donations and volunteer labor by the Baltic community members, the current facility arose to replace what was taken from us. We cannot fathom being subject to another taking. Thank you.

MR. LOVICK: Next is Dzidra.

MS. UPATTS: My name is Dzidra Upatts. I'm a member of the Latvian Lutheran Church and also the Latvian Center.

I-208-001

I will speak very emotionally because I don't know how much you know about history. We are a small group of small Baltic countries. The Second World War ended very badly for us when our countries were taken over by the Soviet Union and many of us were running for our life.

When I left Latvia, I had two pairs of stockings and my rain coat, and I had a safety pin so I don't lose them. I had a backpack, and I had -- I don't know how you call it.

I will be 89 this year. In this church, I met my husband, and I got married in this church. This is the church that my daughter went to school, and she was confirmed later.

I want to say whatever happens, don't destroy this church because we can't repeat that because many people who work there, it's like a refuge for us. Whatever you will do, don't destroy it, please.

I-208-001

Thank you for your comments describing the cultural importance of the church to you and the community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

MR. LOVICK: Is there anyone else who wishes to comment? Please step up to the microphone and state your name and give your address.

MS. VETTER: My name is Sandra Vetter, S-A-N-D-R-A, V-E-T-T-E-R. I'm a proud U.S. citizen, and I'm also proud of my Latvian heritage.

I-209-001 I moved to Seattle in 1978 when I was 21 years old, and I discovered the Seattle Latvian Center and Church in the early 1980s when I started attending the annual Christmas bazaar, which is held each year in early November.

It satisfied my hunger for the taste of the food and the sound of the Latvian language. I joined the Seattle Latvian Folk Dance Group, Trejdeksnitis, in 2002 and have been a member ever since.

We rehearsed at the wonderful hall at the center each week for three hours from September through June or July. We're able to learn and share the richness of Latvian music and dance by performing at key events in the Seattle Latvian community as well as for local community events, such as the Northwest Folklife Festival.

We also perform at the North American Latvian Song and Dance Festival, and of course the epic Latvian National Song and Dance Festival in Riga.

I-209-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church.

I-209-001

This last summer we had the thrill of participating in the Song and Dance Festival, enjoying the largest group of participants in the history of the festival. Over 40,000 singers, dancers, musicians and artisans.

Our ability to travel was due in large part from the support and guidance of the Seattle Latvian Community Center and its numerous organizations.

Being able to be a part of something so culturally significant is something the younger generation should be able to look forward to. There would be a huge void if this Latvian Center home no longer existed.

Because I see the importance of learning and sharing cultural heritage, over the years my involvement in the Latvian community has deepened.

I've studied Latvian language at the UW Baltic Studies Program, which has strong ties to the center. My daughter attended the Latvian Seattle School for two years and also joined me in the dance group for four years.

I've been seen singing with the Latvian Vocal Ensemble for the two years. This wonderful collection of singers and our dedicated director rehearse at the center weekly and perform for church holidays and important cultural gatherings.

I volunteer for events and fundraisers as I can to

I-209-001

support the hard-working, dedicated and resilient people that are the roots that keep the American Latvian community alive.

The center is a beacon for Latvian Americans in the Pacific Northwest and needs to continue to act as a cultural hub and needs to be a hub for social and cultural gathering to provide people with the opportunities to network with one another, allowing experiences and information to be passed around.

The sharing of ideas is arguably one of the most important facets of a progressive society as it promotes collaboration amongst people and helps define what is commonly called --

MR. LOVICK: Sandra, you need to conclude your comments.

MS. VETTER: I have one sentence -- which is commonly called community. The unity of the Latvian community has played a huge role with preserving its culture over time.

It needs to remain as a beacon of culture, especially as younger generations may find a need to become educated about their heritage. Thank you.

MR. LOVICK: And next is Barbara.

MS. ZEPEDA: I'm Barbara Zepeda, Z-E-P-E-D-A, and I live in the middle of Seattle. I've spent all my life fighting freeways in this city.

A lot of my friends are dead. They lived out here. All the people from the north end in Lake City all the way down into Seattle have done what none of our elected officials have done, and that is try to get withdrawal and substitution and build transportation and not asphalt.

I-210-001 The legal announcement of this meeting said it was on 15th Northeast, and to me this is very typical of the way we do our politics in the city.

I-210-002 There's no numbers here about the cost. There's not even any mention of what I just heard because I was late driving over here. I figured out it was here instead of over on 15th.

We use four times our allotted amount of energy. Europe uses twice as much as the world environmentalists' assessment of energy use per capita.

We use four times what most people in the world use, and half of our energy use is to get back and forth to work in urban areas of a million people.

These are figures we had when those of us were fighting for rail in the '60s and '70s. We in the

I-210-001

Sound Transit used several methods to advertise the Draft EIS public open houses and hearings that included the accurate address, including project website, postcard notice, print and web ads, email to the project listserv, posters, community calendars and blog advertisements. The name of the facility at which the meetings were held was also included so that people have all the information they need to find it. The legal ads placed in the newspaper used the correct address.

I-210-002

Project costs are discussed in both the Draft EIS and Final EIS in Section 2.7 of the Alternatives Considered chapter and in Section 5.3 of the Evaluation of Alternatives chapter.

Democratic Party got withdrawal and substitution into the law through Magnuson, but all the elected officials except for Royer refused to allow us to be on the ballot to build rails like Portland did.

They got their 18 miles of rail for less than a billion dollars. We're so stupid that we're building an internal combustion tunnel that's four times in diameter and 10 times the cost of a subway system tunnel.

We still do not have rail transportation as an alternative. In fact, we have to have a car because we design parking lots to use our transportation system, our public transportation system.

This is so insane, but it is the obvious result because the only time any of our national media actually printed the facts about the conspiracy was in February of '81 in Harper's magazine.

This was a lawsuit because all of the rail was built by the municipal ownership and populace that took over urban areas and built inner city rails at the beginning of the last century.

They did it because they wanted to have jobs and small business that made communities, and now what we have is a system where this is no people who run the transportation system, who design it --

MR. LOVICK: Barbara, we're going to have to

ask you to wrap up your comments, please.

MS. ZEPEDA: We have to have subways. We have to have real rail systems. We can't be building parking lots and paving over all of our land and making everybody use a gallon of gas every day just to get back and forth to work.

LYNNWOOD, WASHINGTON; WEDNESDAY, AUGUST 21, 2013

5:50 P.M.

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MR. BARTHOLET: My name is David Bartholet, B-A-R-T-H-O-L-E-T. I live at 20316-52nd Avenue West, Lynnwood, Washington 98036.

I-211-001 My concerns with the C1 and C2 route is that it will directly affect many houses, families, and the properties that we've worked so hard to buy and own and I-211-002 maintain. I feel the C1 and C2 route would affect the wetlands that are nearby, the public access that our families use to walk -- to walk our pets and to just enjoy the wetlands that are there.

Years ago there was a lot of money put into maintaining and enhancing the wetlands. And we'd kind of like to keep it that way. So in short, I propose the C3 route be the best alternative for everybody involved.

That's it.

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I-211-001

Sound Transit noted your concerns about the neighborhood impacts of Alternatives C1 and C2.

I-211-002

Thank you for stating your concerns about the C1 and C2 alternatives' impacts on the Scriber Creek park and wetland area and your support for Alternative C3. The Preferred Alternative in the Final EIS is a modified version of Alternative C3. See Chapter 2 for further details.

MS. ESCAMILLA: Escamilla.

MR. ROBERTS: Thank you.

MS. ESCAMILLA: Hello. So --

MR. ROBERTS: Can we just -- could you go ahead and spell your name.

MS. ESCAMILLA: I will. I will. Okay.

MR. ROBERTS: Okay, good. And your address.

MS. ESCAMILLA: So it's D-E-R-I-C-A; last name, Escamilla, E-S-C-A-M-I-L-L-A. My address is 20806-52nd Avenue West. So I'm right on the corner of 52nd and 208th Street.

And just for some context, can I get a show of hands of everyone that lives on 52nd Avenue West?

I-212-001 Okay. I would like to ask Sound Transit how you would feel sitting in your living room looking out your window at an elevated structure right across the street from your house? I have measured it, and it is approximately 70 feet from the corner of my fence line where the elevated structure would go in. I measured it with your figures, and it's -- it's within, like, five feet.

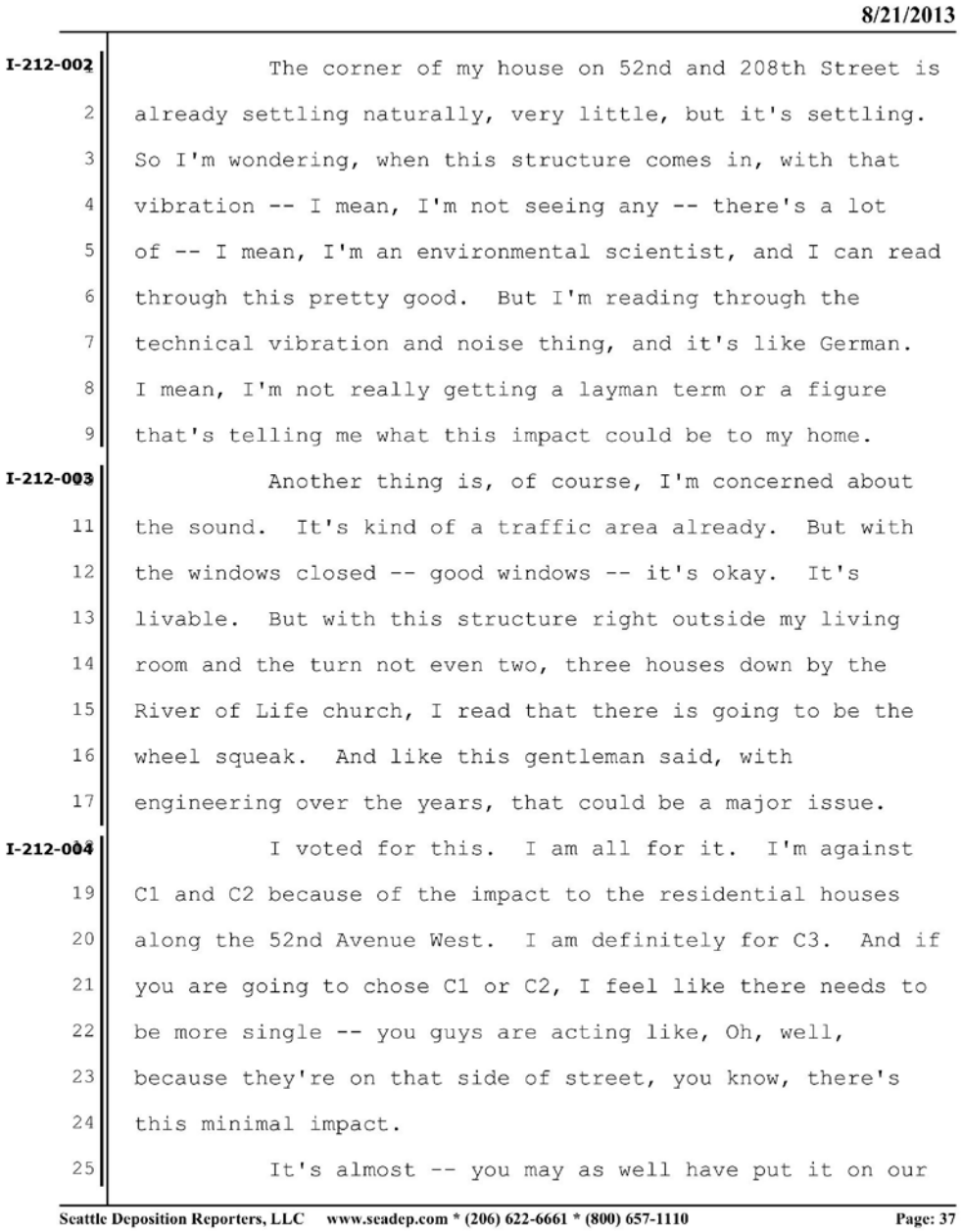
I-212-002 And so my big concern, I read through the whole draft EIS, and I just feel like there's not enough -- I'd like to see a figure that talks about, in distance to the footings of this elevated structure, what are the vibration impacts going to be, since I am so close.

I-212-001

This concern is consistent with the Draft EIS discussion of impacts on page 4-81, which concludes that the elevated guideway at this location would visually intrude upon the integrity and unity of this residential area and result in high level of change in visual quality. The Draft EIS discussed potential mitigation measures for visual quality impacts in Section 4.5.6. Proposed mitigation measures for visual quality impacts are refined in the Final EIS Section 4.5.6. The Preferred Alternative does not follow 52nd Avenue W.

I-212-002

There were few locations with vibration impacts in the corridor, and all impacts above FTA criteria will be mitigated. Attachment D, Vibration Impacts by Build Alternative, of the Noise and Vibration Technical Report lists the projected vibration levels, the distance to the nearest track and the FTA threshold for vibration impact (i.e., criteria) for each vibration sensitive receiver by alternative. Vibration impacts are expected when the projected vibration levels are equal to or greater than the FTA criteria. The table in Attachment D identifies the projected vibration levels in bold face font (in red) wherever vibration impacts are expected.



8/21/2013

I-212-002 The corner of my house on 52nd and 208th Street is already settling naturally, very little, but it's settling. So I'm wondering, when this structure comes in, with that vibration -- I mean, I'm not seeing any -- there's a lot of -- I mean, I'm an environmental scientist, and I can read through this pretty good. But I'm reading through the technical vibration and noise thing, and it's like German. I mean, I'm not really getting a layman term or a figure that's telling me what this impact could be to my home.

I-212-003 Another thing is, of course, I'm concerned about the sound. It's kind of a traffic area already. But with the windows closed -- good windows -- it's okay. It's livable. But with this structure right outside my living room and the turn not even two, three houses down by the River of Life church, I read that there is going to be the wheel squeak. And like this gentleman said, with engineering over the years, that could be a major issue.

I-212-004 I voted for this. I am all for it. I'm against C1 and C2 because of the impact to the residential houses along the 52nd Avenue West. I am definitely for C3. And if you are going to chose C1 or C2, I feel like there needs to be more single -- you guys are acting like, Oh, well, because they're on that side of street, you know, there's this minimal impact.

It's almost -- you may as well have put it on our

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I-212-003

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below these criteria. Sound Transit's policy is to mitigate moderate or severe impacts as per FTA criteria. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Sound walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, any existing WSDOT noise walls removed as part of the project will be replaced.

Wheel squeal only occurs on tight radius curves, not on a straight track, like the ones along this segment of the corridor. For areas with tight radius curves, trackside lubrication will be used to mitigate wheel squeal.

I-212-004

Thank you for your comments stating your overall support for the Lynnwood Link Extension project and your opposition to Alternatives C1 and C2 and reasons why.

I-212-004 side of street. It's the same thing. It's still going to be there. We're still going to see it. We're still going to feel the effects environmentally, physically, and aesthetically. And I really feel like there needs to be more focus on us single-family residential homeowners that live along 52nd Avenue West.

That's all I have to say. Thank you.

MR. ROBERTS: Thank you.

So those are all of the persons who have signed up for comment. Is there anyone who would like to make a comment? Please come to the mic.

Or if not, I just want to make sure you know that there are all sorts of ways to comment. We're going to be here tonight until eight o'clock to answer questions or if you want to look at a little more of the detail or talk about some of the concerns that you have. So those are all available to you.

Is there anyone else who would like to address us tonight?

Please come forward and give us your name and address please. And if you wouldn't mind, spell it.

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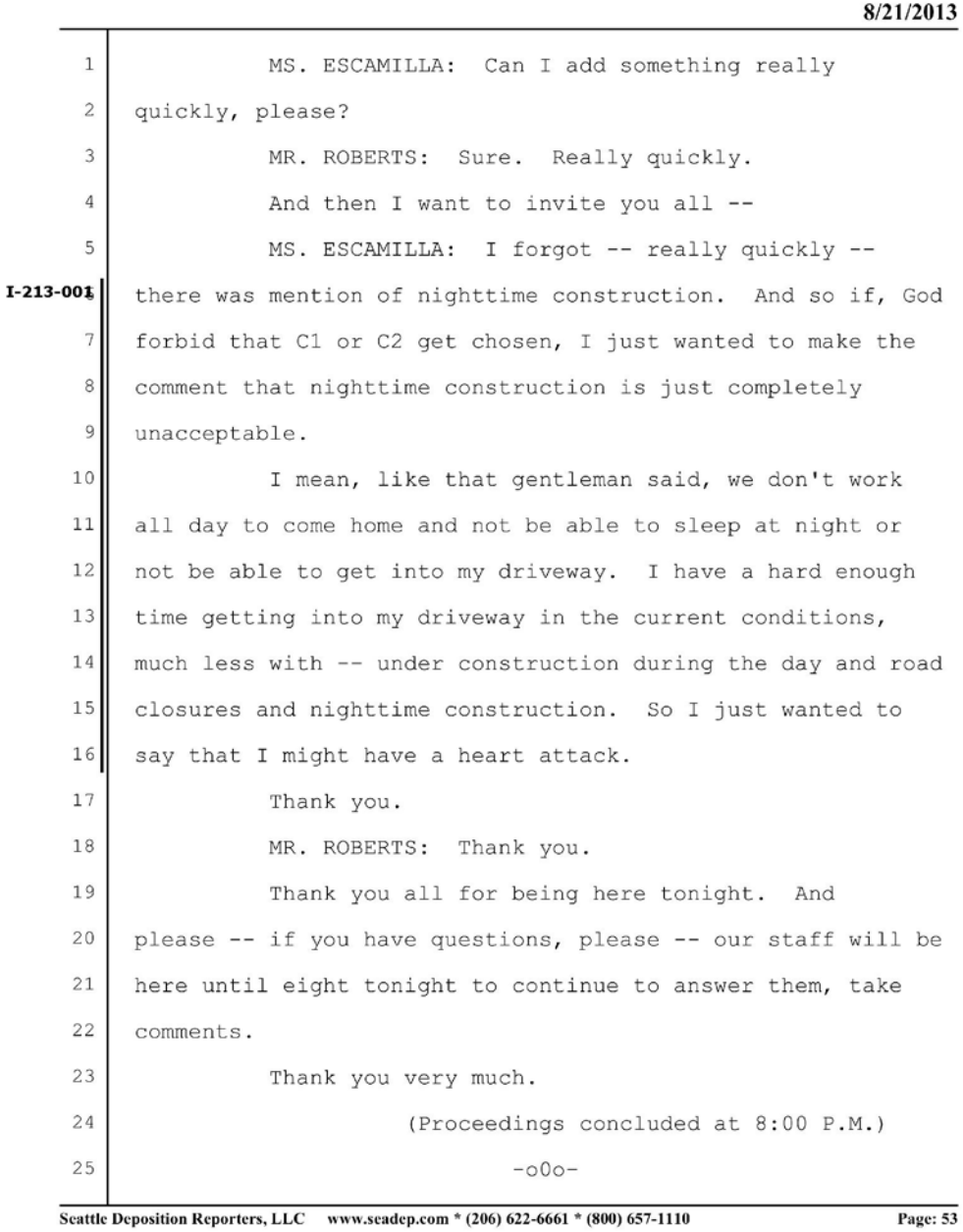

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MS. ESCAMILLA: Can I add something really quickly, please?

MR. ROBERTS: Sure. Really quickly.

And then I want to invite you all --

MS. ESCAMILLA: I forgot -- really quickly -- there was mention of nighttime construction. And so if, God forbid that C1 or C2 get chosen, I just wanted to make the comment that nighttime construction is just completely unacceptable.

I mean, like that gentleman said, we don't work all day to come home and not be able to sleep at night or not be able to get into my driveway. I have a hard enough time getting into my driveway in the current conditions, much less with -- under construction during the day and road closures and nighttime construction. So I just wanted to say that I might have a heart attack.

Thank you.

MR. ROBERTS: Thank you.

Thank you all for being here tonight. And please -- if you have questions, please -- our staff will be here until eight tonight to continue to answer them, take comments.

Thank you very much.

(Proceedings concluded at 8:00 P.M.)

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I-213-001

For construction, the local construction noise ordinance would be applicable, and Sound Transit is committed to maintaining construction noise levels within the criteria. Further, construction noise for this project is similar to construction noise for a paving project, building construction or any other construction project and Sound Transit works with local residences and business to minimize construction impacts.

For nighttime construction, which may occur during some periods due to the heavy volumes of traffic on I-5 and other arterial roads, a noise variance would be required from each of the cities where construction would be performed. During that time, Sound Transit will work with the local jurisdiction to arrive at construction specifications that minimize construction impacts to nearby communities. Whether construction occurs during the day or at night, Sound Transit would maintain access to adjacent properties.

MR. GOODMAN: Hi. My name is Eric Goodman. I live at 8010-181st Place in Edmonds. I'd like to speak today --

MR. ROBERTS: Would you mind spelling your name?

MR. GOODMAN: Eric, E-R-I-C; Goodman, G-O-O-D-M-A-N. I'm a strong supporter of this project. I look forward to having light rail come to Lynnwood. I do use the light rail, sometimes, that exists now.

I-214-001

I agree with many of the other commenters that C3 is probably the best alternative through Lynnwood because it has the least impact. I also believe that C3 is good for pedestrians. Especially if you could link it to the pedestrian bridge that currently crosses 44th Avenue. I think it will have a better linkage for pedestrians into the core of what Lynnwood foresees as their downtown.

I-214-002

And the other topic I wanted to speak about is the 220th Street station. I think it's important to have a station there at some point in the future to serve the dense employment in that area. I don't know that the alignment as it's projected right now is -- is the best. I'd like to see something lower, closer to grade, maybe under the street rather than over it.

And I understand that the ridership and the cost may make it so that that station doesn't pencil out at this point in time. But a lot of employees in that area actually

I-214-001

Your comments stating your overall support of Sound Transit's light rail expansion program and your support of Alternative C3 are noted.

I-214-002

Thank you for your comment stating your support for the construction of a light rail transit station at 220th Street SW under Alternative B2A. Alternative B2A would be at-grade until south of the station. The guideway would be elevated to go over both the southbound on-ramp to I-5 as well as 220th Street SW and then continue with at-grade and cut-and-fill sections depending on topography as the route continues to the north. The Final EIS also evaluates an option for a potential station on the south side of 220th Street SW with the Preferred Alternative, as described in Chapter 2.

I-214-002

come from the north, so I would like you to study what happens in the future as light rail is extended up to Ash Way and eventually, maybe to Everett. If that station becomes more viable, possibly we don't build it now, but we allow for it to be built at a point in the future when it draws more ridership.

So thank you all for your work in being here, and please choose less impact.

MR. ROBERTS: Thank you.

Next, we have Jeff Shannon.

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MS. KINMAN: Karen Kinman. And it's 5308-202nd Place Southwest.

And I just wanted to -- I was really -- I'm really happy to hear the comments tonight because I wasn't really clear on all the different alternatives. And now it's crystal clear.

I mean, when -- I guess what I want to talk a little bit about is just living in Lynnwood. And it's not the kind of place you really think about, I'm going buy a house and live in Lynnwood. You just end up living here sometimes. We raised our kids here. We raised our kids and we -- it's just like the best place to live. And this neighborhood that we ended up in is where everybody is making comments on. It has such a character and has such as culture to it.

We -- you know, my kids when they went to college and come home with their friends, they'll take them to Talay Thai and Kalia or JD's Market. And there's just a friendly diversity and trees and all of the wildlife that everybody talks about. It's not -- the feel is not big trains overhead, Bellevue sky rises and stuff. The feel is quaint and hometown.

I-215-001 And you know, it's fine if they want to make a city center, but I think there's other ways we can get people from the city center to the bus or the train station

I-215-001

Thank you for expressing your concerns for potential impacts to residences, businesses, and landscaping as a result of constructing one of the Segment C alternatives for the Lynnwood Link Extension project. The Draft and Final EIS analyze the potential impacts of project alternatives in Section 4.1, (acquisitions), 4.3 (economics), and 4.5 (visual impacts. The Final EIS includes mitigation measures refined since the Draft EIS.

I-215-001 without tearing out businesses and people's homes and ruining the scenery and the trees.

I guess that's about all. Thank you.

MR. ROBERTS: Thank you. Thank you.

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MR. LOVITT: My name is Douglas Lovitt. My address is 5321-202nd Place Southwest in Lynnwood.

MR. ROBERTS: Would you mind spelling that?

MR. LOVITT: Yeah. It's L-O-V-I-T-T.

I am about four -- about four blocks from the most heavily-impacted area. Many of these people here tonight are my neighbors. And I want to say that I did have -- I did have an absolutely wonderful meeting with people in the Cedar Creek Condominiums the other night. And I have to tell you, I'm really surprised at their openness and willingness to want to see Sound Transit in Lynnwood. It -- throughout the entire community, I am hearing things that people want transit here.

I-216-001 But what I am hearing is that the one route, the C1 route -- and C2, which cuts through the middle of the park, those are such high-impact routes and so high-cost routes. I don't hear anything about impact -- impacts to property values. I hear a lot about environmental impacts. All of those are legitimate. And all of that stuff can be minimized simply by going with C3.

C3 keeps the corridor -- the transit corridor to -- located in an area where we already have transit. We already have I-5. It minimizes the noise impacts; it minimizes the environmental impacts; it minimizes the property values; it minimizes the litter, the graffiti, all

I-216-001

Your preference for Alternative C3 is noted. Section 4.3 of the Draft and Final EIS address potential property value impacts.

I-216-001

of the -- all of the impacts that we would have with C1 or C2.

So I applaud my neighbors for coming up here tonight and being here tonight. I -- it takes a -- it takes a great deal of fortitude and courage to get up here and speak. And I appreciate the comments. I hope Sound Transit is listening.

Thank you.

MR. ROBERTS: Thank you.

Is there anyone else who wishes to address us tonight?

Yes, sir. If you'll give us your name, and spell it, and your address. Thank you.

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MR. MAYES: My name is Mike Mayes, M-A-Y-E-S. I own a company called Mayes Testing Engineers, and unfortunately, C2 goes right through my building. So obviously, I don't like that one.

I think the gentleman before me was pretty eloquent. I also support the light rail. I see no reason for C1, C2. That's a really nice residential street. It -- C1 takes my parking away. It -- it really screws up all those businesses right there. And I would hate to have a house there. I can't imagine what people who live on that street would think about this, to have this 40-foot massive structure come there through there.

C3 seems to be mostly undeveloped land. It seems to be a straight shot. I've heard that, you know, people might have to walk a little farther, but it seems like that could be easily mitigated by rearranging the bus line.

So I'd say build C3, seems to be way to go. It's the right -- the right approach. And it would be great to have the line come to Lynnwood, but not through our businesses and homes.

Thanks.

MR. ROBERTS: Thank you. Would you mind giving either your business or --

MR. MAYES: Oh, okay. The address is 20225 Cedar Valley Road.

I-217-001

Your overall support for the Lynnwood Link Extension project and your opposition to both Alternatives C1 and C2 is noted.

I-217-002

Your comment stating your preference for Alternative C3 is noted.

MR. ROBERTS: Thank you.

Next, I have signed up Gunars Sreibers.

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MR. MCDONALD: Thank you. My name is Kevin McDonald, and my address is 20111-46th Avenue West.

MR. ROBERTS: McDonald, as in, M-C, capital D?

MR. MCDONALD: Yeah. M-C, capital D-O-N-A-L-D, yeah.

MR. ROBERTS: Thank you.

MR. MCDONALD: And I just wanted to expand a little bit about the -- the amount of spaces that you may have. I share a property line with that -- with your existing park-and-ride right there. And I have park-and-ride customers parking on my property all the time, which I'm fine with because I realize that it's over capacity and everybody is just trying to get to work and make a living and, you know, get through the day. So I don't go and tow those cars off the parking lot.

But if you guys are going to funnel all the -- or funnel as much as you can from up north until you get funds to, maybe, further extend line, I don't know whether 500 spaces is going to be -- only adding 500 spaces is going to be enough. Because as that gentleman expanded on and said that it's -- was over capacity from day one and continues to be, quite a bit.

So I don't know whether there's -- as you guys continue to look at it, if there's any way -- as you build a parking structure, that you could add more than the 500

I-218-001

I-218-001

The Final EIS considered options for additional parking for both Lynnwood and Mountlake Terrace stations, beyond the added spaces considered in the Draft EIS. In both locations, the additional parking beyond the added spaces assumed for the Preferred Alternative tended to worsen traffic impacts and did not markedly change ridership. The transit improvement with light rail also frees service hours for local transit operators, who could then increase service to the station, reducing parking demand. Mitigation measures to address spillover parking are described in Section 3.6.7.

I-218-001 spaces, whether it's economically feasible or environmentally feasible, but maybe that's something further to look at.

So that's all I wanted to say.

MR. ROBERTS: Thank you.

Thank you. Is there anyone else who wishes to address us here? Anyone else?

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MS. MONAHAN: Hi. Mary Monahan, 5214-201st Place Southwest, Lynnwood. And I am addressing the Lynnwood Link extension.

I-219-001 Okay. First of all, I think we need light rail to Lynnwood, and I voted for it. But we have three alternatives, and it is a quite obvious one to me that C3 is the less intrusive and has less impacts to our neighborhood and community and wetlands.

I-219-002 I am deeply concerned about all the impacts the whole project will have to our wetlands and the visual impacts to our neighborhood. This project seems so intrusive and massive and dangerous to our way of life. We, on 201st Place Southwest, down by Sprague's Pond and Mini Park, will also be impacted visually by the skyline and loss of old-growth vegetation and trees in the Scriber Lake Park and along 52nd Avenue and 200th. There is no way Sound Transit can give all of this back after construction. These trees are old growth and a buffer to freeway noise.

I-219-003 How can you expect us to embrace a cold and cruel cement jungle over old-growth vegetation and trees and wetlands with turtles; cutthroat trout; salmon spawning; dragonflies; butterflies; birds of all kinds, including eagles, blue herons, wood ducks, Canadian geese; also raccoons, possum, beaver, river otter, frogs, and crickets, and the serene sound of birds which have a calming effect

I-219-001

Your comment stating your overall support of the Lynnwood Link Extension project and your reasons that Alternative C3 is your preferred route for Segment C is noted.

I-219-002

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below these criteria. Sound Transit's policy is to mitigate moderate or severe impacts as per FTA criteria. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Visual impacts and mitigation are addressed in Section 4.5 which notes that the project would remove mature vegetation, which takes years to grow to restore screening.

I-219-003

The Preferred Alternative features modifications that help minimize wetland impacts and vegetation loss in several locations. It avoids an alignment along 52nd Avenue or 200th or adjacent to Scriber Creek Park. Even if other alternatives move forward, this project will abide by all applicable federal, state, and local environmental laws and regulations, including tree replacement requirements. Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts on environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure there is no net loss of ecosystem function and acreage as a result of agency projects. Please also see Section 4.5.6 for usual impact mitigation measures.

I-219-003 rather than the stressful sounds of light rail.

Also the frogs have come back. Just a week ago, we had six turtles come up our street and try to lay eggs in the rocks right on our street.

I-219-004 This a protected wetland area labeled 4(f). And as Linda said, right on the sign it says -- Scriber Creek Park sign, says -- excuse me -- Funded by -- in part, by Conservation Futures grant.

I-219-005 According to Page 481, C1 and C2 have high visual impacts. Elevated guideways on east side of 52nd Avenue West would visually intrude upon the integrity and the unity of the residential area.

According to Page 4 -- or Section 4, Page 59 and 60, by the DEIS, both C1 and C2 would feature design measures to avoid noise impact, but the elevated guideways would change views. And alternatively, C3 would have the least effect on the neighborhood because it is largely adjacent or parallel to I-5.

I-219-006 We live in very special area that many people don't realize what we have here in Lynnwood. It's our little paradise of wetlands all in walking distance. It's our little -- don't think -- okay -- I just don't think the City of Lynnwood appreciates what we have.

Please choose C3 of the Lynnwood Link extension.

Thank you.

I-219-004

The Section 4.18 4(f)/6(f) analysis has been updated to note that Alternative C1 would not be implementable under its current configuration. Section 4.17 was updated to note the funding source for the park.

I-219-005

Your comment opposing the elevated alignments C1 and C2 near the neighborhood is noted.

I-219-006

Thank you for your comment stating your preference for Alternative C3.

MR. ROBERTS: Thank you.

Next, I have Derica Escamilla -- Escamilla.

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MR. RIEKSTINS: It's Valdis Riekstins. Last name is R-I-E-K-S-T-I-N-S. My address is Woodinville, but I'm here -- I'm here to actually speak about the Latvian Lutheran church that's actually more -- closer to the Northgate area.

I'm a member of the Seattle Latvian community. I was born into it. And this structure stands as a living landmark to our community. This is a facility that was designed, financed, and built by my grandparent's generation. A generation that was driven by their homeland by war. They were forced from their homelands with little to nothing to their name and fought their way to this country to start a new, better life for their families.

And together with like-minded individuals, they decided to create a center to teach the language and the customs to their children and their children's children to preserve their customs here in this land until their country was free again.

I-220-001 I noticed on -- I noticed on your boards that this facility is listed as a church. And I need this board to understand that this facility is so much more than just a house of religion. It is a hub for our Baltic-American communities in the Pacific Northwest that houses a Latvian Saturday school that I myself attended, that my children will be returning to next month. It is home to so many

I-220-001

Thank you for your comments on the cultural importance of the church and center. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church and community center. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement. None of the Segment A alternatives evaluated in the Final EIS would displace the church or hall.

I-220-001

Baltic arts and performances, folk dance rehearsals that my parents met and fell in love at, that my wife and I rehearsed at before we were married.

This facility is crucial to our communities, and we cannot see it demolished or any way diminished. It serves as a monument to those in our community who are no longer with us who built it so we could have it for our children and their children.

I -- I implore this -- this committee -- I -- I -- you must preserve this center. It cannot be replaced; it cannot be substituted; it can -- we cannot be compensated for it. It is priceless to our communities. And any consideration of elimination of this facility cannot -- cannot be considered. Thank you.

MR. ROBERTS: Thank you. Gleb Shein.

Can you give us your name and address and spell it for us? I probably didn't do it justice.

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MR. SHANNON: Yes. I'm back here. I'm going to have to stay where I am. I'll speak loudly if I -- as much as -- as loudly as I can. It's J-E-F-F, S-H-A-N-N-O-N.

Thanks, very much.

So that's J-E-F-F, S-H-A-N-N-O-N.

I am in a very serious impact zone with my home which rests on the corner of 204th and 52nd Avenue West here, right across the street from the WorkSource building.

I-221-001

One thing I'd like to make -- a comment I'd like to make, which is probably already a moot point, is that while it's really gratifying to see the attendance here tonight, I hardly think 5:30 is an optimum time for maximum attendance for meetings like this. So you might want to modify that in the future.

I-221-002

And I don't wish to sound cynical or paranoid about this, but I've already noticed that several of the viewpoint visualizations that are shown on the slides out there are showing lots of trees around these tracks when the tracks are supposed to be -- trees are not supposed to be anywhere within 30 feet of the tracks. So a lot of these pictures are already misleading. So we need to make sure that we have honesty and integrity in visualizing these future photos.

I-221-003

And my third comment would be that -- and I'm sorry if this sounds very cynical, but it seems to me that

I-221-001

The public meetings that were held during the public comment period for the Draft EIS occurred between 5:30 p.m. and 8:00 p.m. The proposed time was selected to generate the greatest attendance because it coincides with a large population of commuters on their way home from work. Having the meeting held through 8:00 p.m. allows for attendance from individuals outside the targeted commuter group. In addition to the public open house/public hearing, there were other opportunities to comment including sending written comments and emails directly to Sound Transit. The Draft EIS was made available to review on Sound Transit's website, at multiple public libraries and Sound Transit offices, and were available for purchase. Chapter 6 of the Final EIS includes additional details about the project's public involvement and agency coordination plan.

I-221-002

Photo simulations of the alternatives are consistent with the tree clearance policies of Sound Transit for operation of the light rail system. In general, vegetation is cleared 30 feet from the centerline of elevated structures, which is about 15 feet from the edge of the structure. For at-grade sections, branches and drip line are maintained to be at least 10 feet from the overhead catenary system (the wires that provide power).

I-221-003

Thank you for your comments.

I-221-003

somebody being on the board of Sound Transit and a city council member, strikes me as something of a potential conflict of interest.

Thank you.

My address is 20406-52nd Avenue West, which is ground zero for C2.

MR. ROBERTS: Thank you.

Okay. Next, we have Linda Willemarck or Willemarck. I'm sure I'm not doing that quite right, but, Linda, you can correct me.

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MR. SHEIN: Good evening. I'm Gleb Shein, S-H-E-I-N. I am from Lynnwood, 4820-200th Street Southwest. And I would like to welcome everyone here, including Sound Transit.

First and foremost, I'm glad that Sound Transit is finally going to build a viable alternative to daily stop-and-go commuting in the form of light rail. Okay? It should have been built yesterday. However, this incredibly sophisticated project unnecessarily intrudes into our public parks, churches, neighborhoods, businesses, and high-density residential communities.

I-222-001

There are different alternatives proposed within Lynnwood, the C1, C2, and C3 alternatives. Please consider these statements and choose to build on the route described as the C3 alternative. Okay?

According to the DEIS, the draft environmental impact statement, the C3 alternative is the least expensive of the three, the least intrusive, the one that affects the least amount of public parks and private businesses, and the only one that does not displace any families.

On Page 27 of your environmental impacts and mitigation, or EIM document, the C3 alternative would end up in the Lynnwood city center core zone, an area envisioned to include a dense mix of commercial, residential, office, and retail space.

I-222-001

Thank you for your comment stating your preference for Alternative C3 and the reasons why.

I-222-002

The C1 alternative accomplishes the complete opposite. It destroys high-density commercial, residential, and retail space. Why do you need to unnecessarily demolish something that you envisioned just to rebuild it many years later and at who knows what higher costs? Okay?

Both the C1 and the C2 alternatives also unnecessarily run in the middle of our neighborhoods, in the middle of a residential street, in the middle of a protected park -- okay? -- the Scriber Creek Park. This park includes wildlife habitat, protected forest wetlands. The C1 and C2 alternatives would take out a large portion of this park. Yet on Page 28 of the EIM, you write that the conversion of this land to transportation use would not alter the overall pattern of land use or character in this area.

How so? I ask. 40- to 60-foot pillars in the middle of wetlands, in my opinion, dramatically alter the overall pattern of land use, and not just any -- of any park, but anywhere. Okay?

Finally -- I have ten seconds?

I-222-003

In the entire project, the entire length of light rail from Seattle to Lynnwood, only the C1 would go through what's called the Level 5 hazardous materials site. If you're right, you would need long-term monitoring. C3 does not go through a Level 5 hazardous materials site.

Thank you very much for your time and

I-222-002

Your comments stating your opposition to Alternatives C1 and C2, based on your concerns for the negative impacts of these alternatives on residential and commercial land uses, neighborhood cohesion, parklands, wildlife habitat, and wetlands are noted. The EIS analysis of land use is based on the overall effect of the project on land use plans and land use patterns in the city. More localized concerns about changes to neighborhoods are covered in Section 4.4. The assessment of the visual impacts of the elevated rail guideway through the park is discussed in Section 4.5, as well as in Sections 4.17 and 4.18. Table 4.5-1 identifies visual impacts at various viewpoints along the project corridor by alternative. In this table, the assessment of visual impacts is designated as "High" (not "Low" or "Medium") for Alternatives C1 and C2 as they travel through Scriber Creek Park. The analysis of visual impacts presented in the EIS is in agreement with your own assessment of these impacts.

I-222-003

Your preference for Alternative C3 is noted. You are correct that Alternative C1 would pass through a hazardous materials site that Sound Transit has ranked as high priority, and which is currently undergoing long-term monitoring. You are also correct that Alternative C3 does not pass through a hazardous materials site that has been ranked as high priority. See Section 4.1.2 of the Final EIS for further details.

everyone who attended.

MR. ROBERTS: Thank you.

Next, we have Mike Mayes.

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MR. SREIBERS: Hello. My name is Gunars Sreibers. That's G-U-N-A-R-S, S-R-E-I-B-E-R-S. And I'm representing the Latvian Lutheran church and community center located just north of Northgate.

I-223-001 And I realize that we're a long ways at the other end of the line here, but just as your community here in Lynnwood's expressing your concerns about this project, we also want to get our information out in terms of the impacts on our community center and make the community and everybody involved in this project aware of just exactly what impacts are going to occur to the Baltic community as a result of this.

We were extremely disappointed in the draft EIS's lack of recognition for the social and cultural contributions of our Baltic community that our center provides both Seattle and the Pacific Northwest. As was mentioned before, we are the hub of the Baltic community here in the Pacific Northwest. The draft EIS really failed to address, you know, the long-term impacts -- short-term construction impacts and long-term impacts on the facility.

Our facility represents thousands of people that come to use this facility. There are numerous activities, as was mentioned before. This is not just a church. This is really a community center for the entire Pacific Northwest extending to Alaska and all the way down to

I-223-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. The impacts to the church were identified in several sections of the Draft EIS, and this information has been updated in the Final EIS to reflect the design measures taken to avoid displacing the church. Sections 4.1 and 4.4 in the Draft EIS mentioned the church specifically, with 4.4 including both long-term and construction impacts discussions, and this information has been updated and further detailed in the Final EIS. All other sections describe construction impacts and long-term impacts occurring along the corridor.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations. Construction period mitigation is also defined for each environmental topic, and Sound Transit anticipates that the center's activities would be able to continue during construction.

California.

The activities that go on there are church services in three different languages, Latvian, Lithuanian, and Estonian; special events and holidays that are unique to the Baltic countries. There's a Latvian language school that's been in existence at this facility for over 60 years. This is used -- this facility used for national and international dance and choir groups that practice there. It's a center for fraternities from the universities of Latvia, Lithuania, and Estonia -- and sororities -- that meet regularly there. There are numerous senior activities that are also ongoing at this facility.

It also is the election center for the Baltic elections for the elections that happen in Latvia, Lithuania, and Estonia and allows their citizens to vote in the election of their countries.

And the -- and the center really has been a hub for establishing the Baltic Studies Program at the University of Washington and continues to fund that program.

I-223-002 If the center is disrupted, it is unacceptable to the Baltic community. Any option that comes close or moves the center will be devastating and, in all likelihood, lead to the demise of the many of the activities that currently happen there. In reality, it will end the Baltic community's presence in the Northwest and the cultural

I-223-002

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-223-002

richness it really brings to this community. The center must -- and I emphasize -- must continue to function at its current location.

One last note that I think is particularly noteworthy, we have been through this process once before. Our center was actually located in -- further to the west and in -- was actually -- we purchased it in 1955. In 1969 the center was actually taken by eminent domain, a process very similar to this. We were forced to move. And through the outpouring -- the generosity of donors and volunteer labor, we were able to transform that center into its present location right now.

It is really inconceivable to us that we would be placed in this situation for the second time, that we would have to move by eminent domain.

Thank you.

MR. ROBERTS: Thank you.

Next, we have Eric Goodman.

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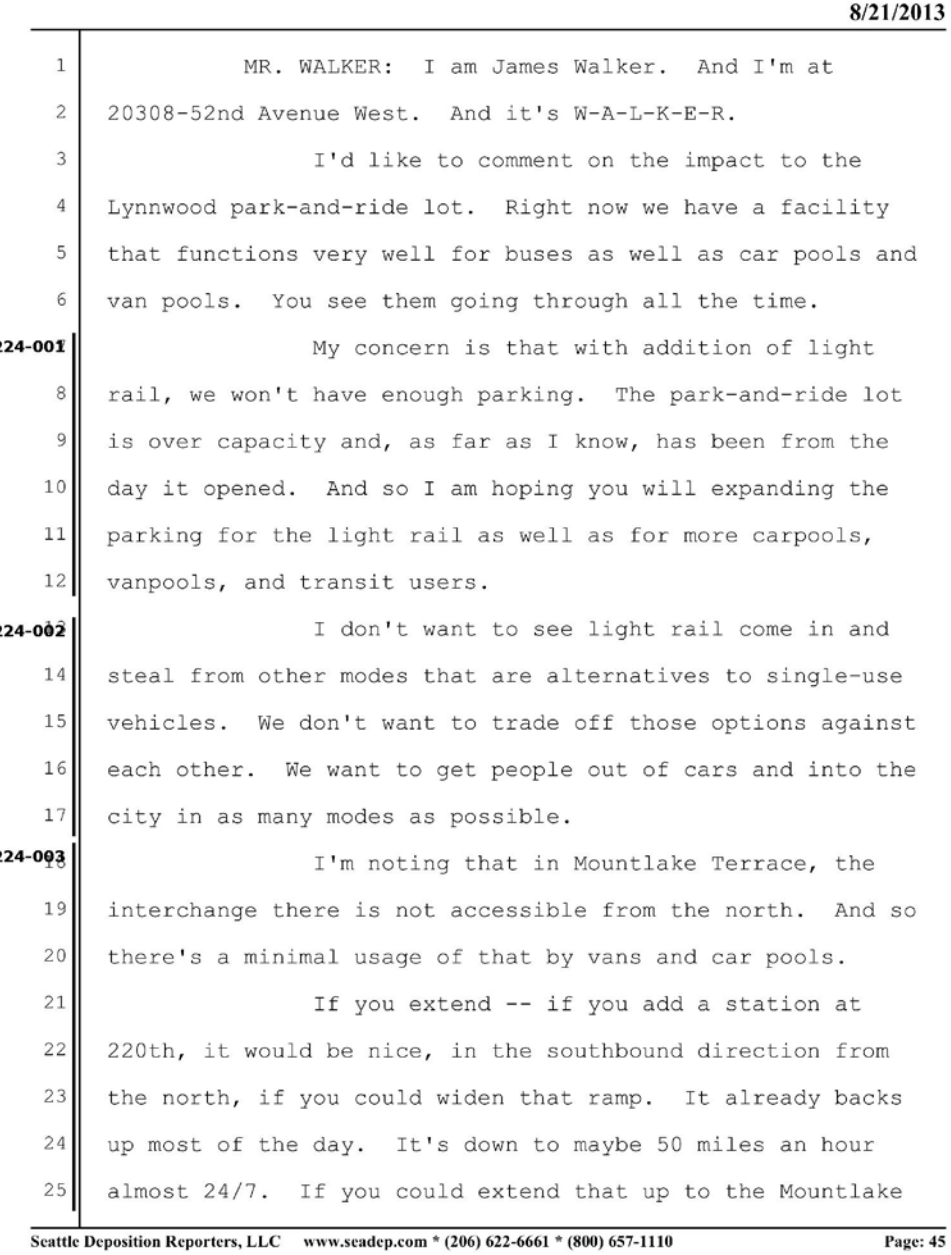

8/21/2013

MR. WALKER: I am James Walker. And I'm at 20308-52nd Avenue West. And it's W-A-L-K-E-R.

I'd like to comment on the impact to the Lynnwood park-and-ride lot. Right now we have a facility that functions very well for buses as well as car pools and van pools. You see them going through all the time.

I-224-001

My concern is that with addition of light rail, we won't have enough parking. The park-and-ride lot is over capacity and, as far as I know, has been from the day it opened. And so I am hoping you will expanding the parking for the light rail as well as for more carpools, vanpools, and transit users.

I-224-002

I don't want to see light rail come in and steal from other modes that are alternatives to single-use vehicles. We don't want to trade off those options against each other. We want to get people out of cars and into the city in as many modes as possible.

I-224-003

I'm noting that in Mountlake Terrace, the interchange there is not accessible from the north. And so there's a minimal usage of that by vans and car pools.

If you extend -- if you add a station at 220th, it would be nice, in the southbound direction from the north, if you could widen that ramp. It already backs up most of the day. It's down to maybe 50 miles an hour almost 24/7. If you could extend that up to the Mountlake

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I-224-001

The park-and-ride lots have generally been sized to accommodate a balance between forecasted parking demand and minimizing potential impacts created by the facility. The Final EIS includes additional analysis of more parking at Lynnwood and Mountlake Terrace.

I-224-002

Thank you for your comment on concerns that the proposed light rail service between Northgate and Lynnwood could reduce bus ridership in the area. See Section 3.2.2 for a discussion of transit impacts. Overall, transit ridership, both buses and light rail, would increase through 2035. The light rail service would be faster, more frequent, and operate for longer periods each day than bus service. Following the construction of the Lynnwood Link Extension project, it is expected that the bus transit agencies serving the Northgate to Lynnwood corridor would revise their service plans to both revise routes to serve the new light rail station as well as expand services elsewhere (see Section 3.4 Indirect and Secondary Impacts).

I-224-003

Adding access to and from the north between 236th and I-5 is outside of the scope of this project. Traffic to and from the north would either have to use the Lynnwood Station or 220th Street Station (if built) or use the local street system to access the Mountlake Terrace Station.

I-224-003

Terrace exit, which is 236th, if you could extend it to the north so that people from the north could have access to the Mountlake Terrace station, I think that would help a lot, the big structure right there.

And that's my comment, really.

MR. ROBERTS: Thank you.

Sir?

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MS. WALKER: I'm Janice Walker, J-A-N-I-C-E, W-A-L-K-E-R. My address is 26308-52nd Avenue West in Lynnwood 98036.

I-225-001 My house is located -- if the elevated train goes down C1 or C2, we would be looking at footings out our front window. And I would like to see Sound Transit and the City of Lynnwood adhere to the C3 plan that keeps it along I-5.

I-225-002 The reason for that is two-fold. My first reason is because I love my home. I don't want the noise. I worked very hard on this property since 1997 when we purchased it. And I now have a nice home where I can relax and was hoping that I would be able to not have an increased noise level which will be brought by the train and the increased scheduling.

The train would run longer than the bus lines run, and we would have noise in the middle of the night, which I find disruptive. It would be disruptive. And I really don't want to have the peace of my home destroyed. It means a lot to me.

I-225-003 And as a resident of Lynnwood, I feel that the City has not done a very good job at integrating that particular neighborhood into the rest of the city. It's pretty much a portion of the city that has been ignored. And running a train down our street is like a slap in our faces saying that we're not important to the city other than

I-225-001

Your comment stating your preference for the Alternative C3 is noted.

I-225-002

The noise analysis for the Lynnwood Link Extension uses the FTA impact criteria, and Sound Transit would mitigate noise impacts to levels below these criteria. Sound Transit's policy is to mitigate moderate or severe impacts. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Sound walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts.

I-225-003

Thank you for your concerns about the impacts to neighborhood character and cohesion from Alternatives C1 and C2 in Lynnwood.

I-225-003 to use us as disposable residents for our property.

I-225-004 My second reason is because, since 1997, I have watched the development, ecologically, of Scriber Creek Park. And in that time, in the time that we have lived there, we've done fish watch. And we went from, 10 or 15 years ago, having no fish in Scriber Creek Park in the overflow in the lake and also in that trail area, wetland between 52nd and the park-and-ride, there were no fish there. There was not a lot of wildlife.

And in that time, there are now fish. There are at least two varieties that I saw listed in this public meeting. We have also seen an increase in heron population. We have seen an increase in the types of ducks and birds that live in our -- in our ecosystem there. I've seen wood ducks. I have seen bald eagles flying over my house. And I have also seen shoveler ducks.

And I don't want to see that destroyed by having Sound Transit and the City see fit to have a train go right through the wetland or the edge of the wetlands where it's a sensitive area. I feel that by keeping the train along I-5 that the transit system could be better served and the ecosystem could be better served.

I do understand that there is a certain area of sensitivity along I-5, but I feel that by using -- by using this, they would be able to mitigate some of the impact in

I-225-004

Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts to environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure there is no net loss of ecosystem function and acreage as a result of agency projects. Section 4.8 discusses impacts, including mitigation in Section 4.8.6.

I-225-004 other areas by keeping it along I-5 and not down 52nd.

That's all.

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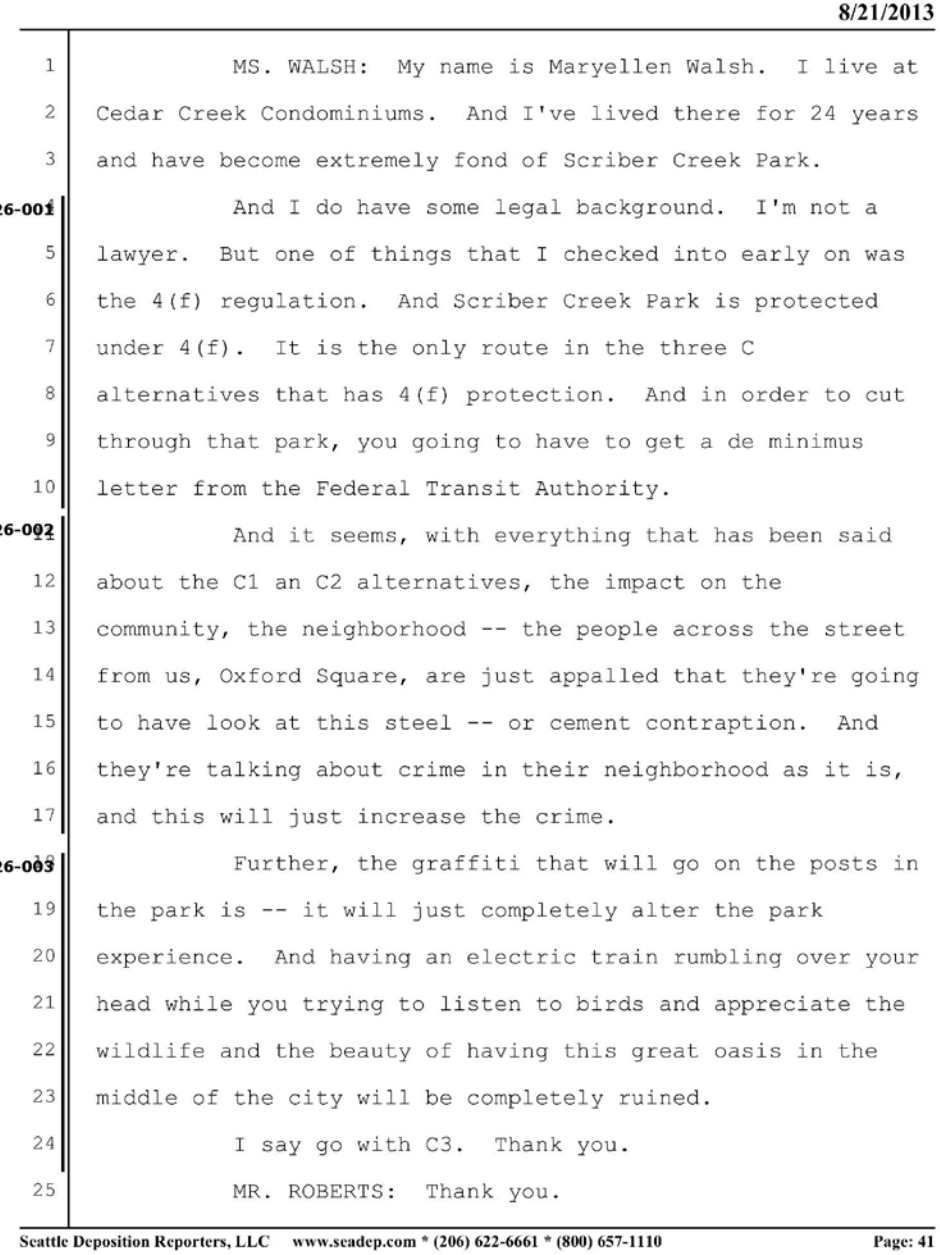

8/21/2013

MS. WALSH: My name is Maryellen Walsh. I live at Cedar Creek Condominiums. And I've lived there for 24 years and have become extremely fond of Scriber Creek Park.

I-226-001 And I do have some legal background. I'm not a lawyer. But one of things that I checked into early on was the 4(f) regulation. And Scriber Creek Park is protected under 4(f). It is the only route in the three C alternatives that has 4(f) protection. And in order to cut through that park, you going to have to get a de minimus letter from the Federal Transit Authority.

I-226-002 And it seems, with everything that has been said about the C1 an C2 alternatives, the impact on the community, the neighborhood -- the people across the street from us, Oxford Square, are just appalled that they're going to have look at this steel -- or cement contraption. And they're talking about crime in their neighborhood as it is, and this will just increase the crime.

I-226-003 Further, the graffiti that will go on the posts in the park is -- it will just completely alter the park experience. And having an electric train rumbling over your head while you trying to listen to birds and appreciate the wildlife and the beauty of having this great oasis in the middle of the city will be completely ruined.

I say go with C3. Thank you.

MR. ROBERTS: Thank you.

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I-226-001

You are correct that Alternative C1 would be subject to a Section 4(f) use determination. The Final EIS Section 4.18 notes that FTA has determined a Section 4(f) use would occur, as a de minimis determination was not available because the City of Lynnwood was not able to concur.

I-226-002

Thank you for your concerns about the impacts to neighborhood character and cohesion from Alternatives C1 and C2 in Lynnwood. Section 4.5.4 compares the visual impacts of the three alternatives, and Section 4.14.2 discusses changes in neighborhood crime rates associated with the guideway and transit station areas.

I-226-003

Thank you for your comment stating your preference for the C3 alternative and the reasons why.

MR. WHITTALL: Corey Whittall, C-O-R-E-Y, W-H-I-T-T-A-L-L. I live at 20505-53rd Avenue West.

I-227-001 My one concern here is the tree line that we have. And one thing -- yeah, we all voted for this to come into Lynnwood. Appreciate that, but we've also voted for and paid for the school district to put their administration building on that lot where the school was taken down, Cedar Valley Elementary. And no one's been able to answer the impact that the structure would have on -- C1 and C2 -- to the entrance of administration building.

I-227-002 They already did speak about the noise level being, you know, pushed back and everything if it stays with the C3. Which I appreciate that. But in the pictures that you guys show on your Web sites here, you're all -- most of them are no trees on 52nd. That tree line right there, on 52nd that was the buffer from the school, would all be downed. And I'd be standing in my backyard looking at this train. The train would be over my house, basically. Because I live right by -- right behind the grange hall. So my backyard would be staring right at it.

I-227-003 So going to work every day in construction, dealing with traffic and everything, and then coming home to sit peacefully in my backyard, except for, now, I have a train over my head. It's not going to work for me.

Anyway, I just wanted -- I just wanted people not

I-227-001

Thank you for your comment stating your overall support of the Lynnwood Link Extension project, but your concerns about the anticipated adverse impacts of Alternatives C1 and C2 particularly along 52nd Avenue W. The Preferred Alternative in the Final EIS is a modified version of Alternative C3. Some of the tall trees would be removed on the east side of this street for the elevated guideway. As shown in Figure 4.5-6, the visual impacts from residences on the west side of the street is shown as "High" impact. The visual impacts on the east side of the street are designated as "Low" as the area is zoned light industrial and not residential.

The entrance to the Edmond's school district property would be maintained.

I-227-002

The analysis on Draft EIS page 4-81 concludes that the elevated guideway would visually intrude upon the integrity and unity of this residential area. Figure G-118 shows the typical vegetation that would be retained adjacent to the guideway. The largest grouping of mature trees along 52nd Avenue West is adjacent to the former school site north of Dolores Avenue and these trees would likely be removed to accommodate the elevated guideway.

I-227-003

Thank you for your comments stating your concerns about the potential traffic, noise, and visual impacts of the project along 52nd Avenue W. during project construction and future operation.

to forget about the administration building for school district as well, which we all paid for.

MR. ROBERTS: Thank you.

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MS. WILLEMARCK: Yes. Linda, L-I-N-D-A; last name is Willemarck, W-I-L-L-E-M-A-R-C-K. And I live in the Lynnwood area. I'm also one of the 77 acquired and removed properties if they choose C1. I-228-001

We did bring photos tonight -- we put them out in the lobby -- of both the home, the condo area that we live in. We're 90 percent occupied there. People have lived there for decades. The condos were built 35 years ago. So the huge pictures of trees are real in those photographs out there and for the park.

I wanted to refer to -- in your reader's guide to the DEIS, on Page 2, it says, And EIS proposes action that will help mitigate unavoidable impacts.

I don't see any mitigation needed for C1 because there aren't any unavoidable impacts. They can all be avoided if you simply go down to C3.

The other thing I wanted to say is that we're a thriving community right now. There are 31 businesses up and running right now, employing people from physical therapy, Oriental medicine clinic, community clinics, and others who will lose their place of business. And I believe, as Gleb said earlier, tearing down now what you want to build later seems like a whole lot of work when we already have it and it already exists. I-228-002

C1 is the most expensive. It does affect the most I-228-003

I-228-001

Your preference for Alternative C3 is noted.

I-228-002

Thank you for your comments about the stability and strength of the Lynnwood community. Following the publication of the Draft EIS, Sound Transit received a substantial number of comments in support of Alternative C3 due the community impacts of Alternatives C1 and C2.

I-228-003

Sound Transit identified a modified Alternative C3, as the Preferred Alternative. Please see the Chapter 2 of the Final EIS for a description of the Preferred Alternative.

I-228-003

people in business by a huge margin compared to C2 and C3. It's not minor differences. It's 77 properties of homeowners to one and nothing. It is 31 businesses compared to three and one. It's a huge difference. I think C3 is the obvious choice.

I-228-004

The other thing I want to bring up is, I saw the other day that Lynnwood is asking Snohomish County for monies from the Conservation Futures grant, which they receive. They're asking for $7 million in order to purchase land to conserve for the future, which I think is a great idea. What confuses me is that the Scriber Creek Park sign -- if you go to the park and read the sign, it says, Funded, in part, by the Conservation Futures grant.

So here we are asking for $7 million to buy property on this hand; and on this hand, we are considering giving up property purchased by those same funds in 1991 to give to Sound Transit to build on. And I have a real problem trying to digest that.

That's -- oh, my address I'm 4900-200th Street.

MR. ROBERTS: Thank you.

Next is Mary Monahan.

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I-228-004

Your comment is correct that Conservation Futures Funds were used as part of the funding to acquire property for the park. If the alternative selected for the project requires use of Scriber Creek Park property, Conservation Futures funding requires approval of the transfer by the original funding jurisdiction, as well as mitigation for impacts. The Preferred Alternative avoids this concern.

I-229-001

MR. WILLIAMSON: I may wonder about one thing. On the C3, is that station going to be between 44th and 46th Street because -- well, I mean, 44th and 46th Street? Because 46th raises up and is a car pool set of lanes.

MR. ROBERTS: You know, and I'm going to ask, if you don't mind -- because that's good question. I don't have the answer to that. And we're not going to have a -- we don't have a dialogue in this process. But we certainly do have people to answer those questions. So if you wouldn't mind, I think we'll have staff try to give you an answer to that. And that's a great segue to --

MR. WILLIAMSON: Because that's what this fellow's going to --

MR. ROBERTS: No, no. And I get that. But I want to be clear. What we're doing here in this part of our program tonight is, I'm not going to enter into a dialogue. I would tell you, I would be the last person to be able to talk in good detail about this, though I have gone through the sites, all of them.

But the staff is here to answer those questions and can do that.

Let me first say thank you for all of you coming tonight, taking your time out of your evening to be here with us and share comments. That is important, and we are in the process of gathering these comments. This is what

I-229-001

Thank you for your comment stating your concerns over siting of the Alternative C3 station and potential traffic impacts on adjacent roadways. For this alternative, the station would be elevated and the track guideway approaching the station would be elevated above 46th Avenue W. Option 1 assumes the existing transit center would remain at its current location. Under Option 2, the bus transit center would be relocated adjacent to the light rail station with a conversion to transit-only vehicular traffic on 46th Avenue W. The Preferred Alternative has a station closer to the transit center and includes street improvements on 200th Street SW and along 44th and 46th Streets (see Appendix F). Chapter 3 describes the operational effects of all of the alternatives.

MR. WILLIAMSON: Well, okay. I could have -- I could have given you a full earful. I'm going to try to write this down later on, on my draft comment form.

I-230-001 But I have concerns about things such as, well, noise issues, particularly on the curve. Of course, that's always a wear-and-tear issue, when it gets down to engineering, better solved by keeping the line straight.

I-230-002 There's wildlife involved were I live. Frogs come into the condo units where I live, kind of in between the place. It's pretty well landscaped and things like that.

I-230-003 And -- and hey, I also live there. It's Cedar Creek Condominiums. And I would be one of the 77-odd people that would be displaced if the C1 alternative were taken. And I think there are at least 33 businesses I've counted along the basic route.

I-230-004 And then there's earthquake damage. I mean, everything is going to have to be dug down and designed to -- to keep the earthquake from causing problems due to liquefaction. I remember the Nisqually earthquake back in 2001, February 28th, comes back, you might say like the old rock-and-roll song, with a shake, rattle, and roll. And the big thing, of course, is not -- the big concern is not the first two, but the third.

And as Kobe, Japan in 1995 proved, you can build your buildings straight up, and it will be well-structurally

I-230-001

It is Sound Transit's Policy to mitigate all noise and vibration impacts, per FTA criteria. Noise and vibration mitigation measures will be included in the project for identified impacts.

Wheel squeal only occurs on tight radius curves, not on a tangent track, like the ones along most segments of the corridor. For areas with tight radius curves, like the curve to 52nd Ave, trackside lubrication will be used to mitigate wheel squeal.

I-230-002

Your concerns about wildlife impacts are noted.

I-230-003

Thank you for your comment stating a preference against Alternative C1. Sound Transit recognizes your concern for the residents and businesses that would be displaced with Alternative C1.

Sound Transit policy provides for a fair and equitable means of addressing real property impacts across its projects, and this includes relocation assistance a manner consistent with state and federal law.

I-230-004

The Draft EIS and Final EIS include a summary of the geologic hazards that have been identified in the project areas. The project design will address identified geologic hazards, and will include earthquake engineering in accordance with applicable building codes addressing factors such as ground shaking, liquefaction, lateral spread, liquefaction-induced settlement, and seismically-induced slope instability. The earthquake engineering building codes incorporate research on hazards from identified faults in the Puget Sound area.

I-230-004

engineered. But if you've got it on muddy ground, you've a problem, liquefaction. And some of these buildings keeled over fell over against one another and shattered the whole ground. There were people that were killed. So that's simply something, as you're building up.

I may have some little things about making sure that this gets into the final draft because I did -- final form because I did not see some of those things addressed in the draft EIS, particularly engineering problems.

I-230-005

And of course, I would probably urge everyone, walk the route and ask the people in the areas on all three routes, how is it going to effect them if one, another, or the third alternative is taken. And of course, when you get down to end of it all, you're still going to have some other businesses beyond 44th that will still be impacted until you get back to the Interurban buffer -- buffer strip.

And generally from that point going, I would say keep the route, if you're facing north, to the left side of the freeway pretty much all the way up as far as you go, Everett, Marysville, et cetera. That would probably do it. And if you keep the curves at a minimum, you'll have far less wear and tear and less noise.

I've been a engineer and I've looked at some of the logging roads that I worked on years ago. Some of them are now washed out because people forgot deferred

I-230-005

Thank you for your comments.

I-230-005 maintenance is the most expensive of all. And when they're not kept up, the damage and the loss could be great.

And I also remember Jesus had two parables. One was about a man who did not count the cost. And when he ran out of money, his pyramid, his project, was only half complete. And everyone came around to ridicule him on the results.

Another one was about the man who built his barn and decided he's going to add more to include his increased harvest. But God came at the night that he was patting himself on the head saying, I'm going live life with ease now.

And God came and said, You fool, don't you know that tonight your life be taken from you, and who will enjoy our acquisitions then?

I-230-006 So I say, count the costs, look ahead, but also look behind you. Because I also remember a boondoggle in Ballard, back in the turn of century. And people got set up on than to too.

MR. ROBERTS: Thanks, Mr. Williamson.

Let me just say, I forgot to mention that the comment -- the extended comment period ends September 23. So there is certainly time to add comments until September 23.

MR. WILLIAMSON: Thank you. Walk the routes so

I-230-006

Thank you for your comment. Costs will be among the factors the Sound Transit Board will consider in selecting the project to be built.

you know what you've got.

MR. ROBERTS: Thank you.

The next person I have signed up is Valdis Riekstins.

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From: SAMUEL H BESS <shbess116@msn.com>
Sent: Sunday, September 08, 2013 11:13 PM
To: Lynnwood Link DEIS
Subject: Station selection between 145th and 155th ST

TO: Lauren Swift

I-231-001

We prefer/chose the 145th Station location for the following reasons:
1. The location is more open, will require small habitat removal, and is already at grade for a ground level station platform.
2, 145th St East and West is a major arterial well developed with the potential for major upgrades with an eye to future residential and business development in support of the new station location.
3. WDOT should be able to give right-of-way in larger portions at this location allowing for the addition
of a 650+ vehicle parking facility with transit access by both CT and Metro.
4. The city of Shoreline has already agreed to accept responsibility for both sides of 145th St.
5 145th St has the best development potential for high density residential housing with collateral business development.
6 Perhaps with some vision, a restaurant (glass house concept) over the freeway on the bridge like the
one in Chicago (MacDonalds) would be a corporate contribution to the upscale of that venue.

Samuel Bess
Gwen Bess
116 NE 158th St.
Shoreline, WA 98155

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I-231-001

Thank you for your comment stating your preference for a station at NE 145th Street.

From: Michael Cameron <michaelfcameron@gmail.com>
Sent: Tuesday, September 10, 2013 10:57 AM
To: Lynnwood Link DEIS
Cc: Swift, Lauren; Michael Cameron
Subject: Comments on Draft EIS - Lynnwood Link
Attachments: 2013-Sep-09_SoundTransit_DEIS.pdf; ATT00001.htm

Ms. Swift,

The attached letter contains my comments and suggested edits on the Draft Environmental Impact Statement for Sound Transit's proposed Lynnwood Light Rail Link. I hope that you will give this letter and its suggestions your full attention and consideration. I welcome the opportunity to talk with the Board about them in further detail.

Michael Cameron, Ph. D.
20035 12th Ave NE
Shoreline WA, 98155
(206) 321-7740
michaelfcameron@gmail.com

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September 9, 2013

Sound Transit DEIS Comments
c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

Ms. Swift,

This letter contains my comments on the Draft Environmental Impact Statement (Draft EIS) for Sound Transit's proposed Lynnwood Light Rail Link.

I am a supporter of Sound Transit Light Rail and conceptually I think that the Lynnwood link extension will benefit the region. All of the current designs however, will have significant and negative impacts on my property values, my families' quality of life, and potentially our safety. I have read relevant parts of the Draft EIS and I do not think that the noise, and particularly visual, and safety impacts of the designs have been properly accounted for, especially in my case. I suggest five ways that the Final EIS should be modified and present two minor modifications to the route, either of which should mitigate all of my concerns at little additional cost.

I live in Shoreline's Ballinger neighborhood at **20035 12th Ave NE**. My property borders, and is directly east of, the I-5 northbound off ramp for Exit #177.

I-232-001

Noise Impacts
The Draft EIS suggests that the additional noise from the train will be minimal. I am skeptical about the noise estimates for two reasons:

- The model for estimating noise uses data from microphones that were not placed very close to my property. My house is situated on top of the only hill in the neighborhood; as such, it seems unlikely that the model output accurately represents conditions at my house.
- There are many trees, shrubs and other vegetation that will have to be removed to install the elevated tracks. It is unclear if this reduction of sound-absorbing vegetation was considered when modeling the increase in noise.

1) In the Final EIS, I would like to see the estimates for noise impacts at my property revised to account for and address these concerns.

I-232-002

Visual Impacts
The Draft EIS identifies the visual impact for my address as "Low". By any definition, this is clearly incorrect.

- All current designs have the track, less than 90 feet from my property and elevated 25 feet from the ground (or approximately 15 feet above the I-5 off ramp). Adding the train height of 12 feet and additional superstructure suggests a combined sight impact nearly 40 feet tall.
- My current view towards the off ramp is of 125 feet of light-filtering (and noise dampening) evergreens. Replacing this natural view (a primary reason we bought the property and the defining characteristic of the neighborhood) with a three story tall structure not a "low" visual impact.
- I have attached my artists renderings (Figures. 1a-c) of what our backyard will look like after the elevated track is built as designed in the Draft EIS. Again, clearly not a "low" visual impact.

2) In the Final EIS, I would like to see a re-evaluation of the visual impact on my property revised to account for and address these concerns.

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I-232-001

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. Sound Transit's policy is to mitigate moderate or severe impacts under FTA criteria. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Foliage, if dense, can provide slight reductions in noise levels. The FTA and FHWA provides for up to a 3 dBA reduction in transportation noise for locations with at least 100 feet of dense foliage that contains leaves year around. Because of the varying foliage in the project area, the estimates of noise used for the EIS assessment did not assume foliage would reduce the noise from the train, and the resulting projections of noise and the mitigation measures are conservative. A 3 dB reduction in noise level is barely perceptible to most people, so foliage in virtually all areas of this project corridor will have little overall effect on light rail nor traffic noise.

Topographical conditions are included in the noise analysis, which used models to project noise based on the location of the train and the location of sensitive receptors. The Noise and Vibration Technical Report has further details on the existing and project future noise levels for specific homes in the study area, including your property.

I-232-002

The Final EIS includes an updated assessment of impacts of the elevated structure at this location, however the Draft EIS was not intended to define visual impacts parcel by parcel, but rather for larger areas of viewsheds. It is accurate that some locations, particularly those adjacent to the facility could have higher localized impacts. Sound Transit's tree clearing policies for elevated light rail provide for clearing within 30 feet of the centerline of the structure, or about 15 feet from the edge of the structure. At this location, there is about 115 feet of

I-232-003

Potential hazards and safety concerns

- Three professional arborists have visited my property and all have indicated that removing trees would increase the chance of any remaining trees being felled by wind. In the past 10 years, two very large trees have already come within 20 feet of hitting our house so the removal of any additional trees is a potential hazard and significant safety concern.
- In addition, we have learned that the very steep land just west of my property, upon which the elevated track will be built, is simply landfill deposited while building I-5. As such, risks from landslides are a safety concern given the prospect of significant tree removal.

3) I would like to know how many, and which, trees will remain after construction. I have asked this question of multiple Sound Transit representatives, but no one seems to be able to provide this or any information on what is generally removed in similar situations; yet it is critical to knowing how much our view and potential safety will be impacted.

4) Similarly, I would like to know what assurances Sound Transit can provide that your development plans will not increase the risks (from falling trees, landslides or any other modifications) to my family and property.

I-232-004

My Proposal

I have lived in the Puget Sound area for nearly 20 years and my family has lived at our house for 10 years. We have always had the intention of raising our family and retiring there. However, if the visual and noise impacts and safety concerns are not appropriately mitigated in a way other than what is described in the Draft EIS my family will be forced, very soon, to move in order to retain the equity earned in the house and our quality of life. For perspective, I'd ask if any members of the commission would consider buying a house with these issues, I expect they wouldn't.

I have two proposals for slightly modifying the planned route; either will allow my family to stay in our home:

Proposal 1: Keep the train at ground level where it borders our property and leave all trees intact.

Proposal 2: Have the elevated track cross over the Exit #177 off ramp approximately 300 feet further south, thereby moving it west approximately 40 feet further than currently planned (see attached Figures 2a-b).

5) In the Final EIS, I would like to see an evaluation and due consideration of these two proposals.

Though my comments are written as a response to the Draft EIS I would like to see them addressed in a more formal way perhaps with a direct reply or the opportunity to discuss them directly with the board.

Thank you for your attention to these concerns.

Michael Cameron, Ph. D.
20035 12th Ave NE
Shoreline WA, 98155
(206) 321-7740
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vegetation between the paved area of the shoulder of the off-ramp and the edge of the right of way. There is about 90 feet of heavy evergreen vegetation between the edge of the current vegetation management area for the highway and the edge of the right-of-way. Location of the elevated structure at this location would remove the large evergreen trees closest to the roadway which have the most dense foliage. In most cases, there would be one or two rows of mature evergreen trees retained between the elevated structure and the edge of the right-of-way, however because these trees have grown in shade, the lower branch vegetation is less dense and will provide less of a visual screen. The Final EIS identifies mitigation measures for the project, but the detailed definition of plantings in specific locations would be accomplished during final design. Replacement trees would be considered where space is available. As indicated in Section 4.5.6 of the Draft EIS, new evergreen trees adjacent to the elevated structure would provide screening after a 15 to 20 year period, depending on the size of trees at the time of planting.

I-232-003

During preliminary engineering for the Preferred Alternative and to support further estimates on tree removal, Sound Transit performed initial assessments of corridor trees, reviewed potential tree removal needs, and considered potential tree hazards. While this document was to support continued design and is not part of the EIS, it has been used to update the consideration of visual impacts and to calculate tree replacement and mitigation needs. It is also available on request from Sound Transit. However, definitions of the specific trees to be removed requires a higher level of detailed design and construction planning than is necessary for an EIS to describe impacts and identify mitigation. It is also important to recognize that the alignment remains entirely within the WSDOT right-of-way, and must balance visual impacts against other safety, transportation and environmental management needs. Sound Transit is committed to building a safe system that does present safety

I-232-004

Figure 1a. View (actual and artists' rendering) of NW corner of property looking west.

or hazard risks to adjacent properties. For example, additional geotechnical studies have been performed as part of continued engineering for the project, and structural and other related engineering design assessments reflect the needs for retaining walls, deep foundations or pilings, and other design measures to address areas of geological concern. The Final EIS include a summary of the geologic hazards that have been identified in the project areas. During final design, the project will confirm the design approach to address specific geologic hazards, areas with slope stability concerns along the project alignment.

I-232-004

Sound Transit has reviewed your proposals to consider whether they have the potential to avoid potential impacts near your property.
In reviewing Proposal 1, as the light rail profile approaches the property from the south, it is coming out of a cut into the hillside adjacent to I-5. To lower the profile through this area would require cutting even further into the hillside. At about 800 feet south of the property, the existing ground drops about 40 feet. Traveling north the ground continues to drop further as it becomes adjacent to wetlands and State Route 104. Heading north from there, the next major connection point is the elevated Montlake Terrace Transit Station at 236th St. SW. To maintain a light rail profile meeting established design criteria based on safety and efficiency and to minimize negative impacts through this area, an elevated structure maintaining a minimum height over the southern- most State Route 104 exit ramp is needed. The elevation has been refined for the Final EIS, and the visual impact information in this area was updated.
In reviewing Proposal 2, there are a number of design constraints that require maintaining the light rail alignment in the approximate location as shown in the Draft EIS and now in the Final EIS. Based on design guidelines for the use of the I-5 right-of-way between Sound Transit and WSDOT, the light rail project footprint is outside of an approximately 94 foot section reserved for the freeway and potential future improvements.

I-232-004

Figure 1b. View (actual and artists' rendering) from SW corner of property looking west.

The horizontal alignment is also constrained by a more narrow width of existing right-of-way between NE 185th St. to north of NE 195th St. To provide a horizontal design as shown in your Figure 2a-b, while still meeting the project's light rail design standards, would require further encroachment beyond the right-of-way and upon more properties and homes in this area. Therefore, Sound Transit is continuing to propose the Preferred Alternative design rather than your suggested alternative.

I-232-004

Figure 1c. View (actual and artists' rendering) of SW corner of property looking northwest.

I-232-004

Figures 2a-b. Detailed and simplified map view of currently planned route (yellow) and the alteration outlined in Proposition 2 (red). My property boundary is outlined in pink.

6

From: Swift, Lauren
Sent: Monday, September 09, 2013 10:25 AM
To: Lynnwood Link DEIS
Subject: FW: Comment on Lynnwood DEIS sent to web_feedback

COMMENT

Email: t.g.christopher@ieee.org
Name: Terence Christopher
Date sent: Sept 6, 2013 @ 8:05pm

I attended a meeting held at the Latvian Church at Northgate concerning the proposed extension to Lynnwood Transit Centre. The presentation basically said that the design was determined by cost factors, and the placement of the rail line had been decided and the only discussion therefore was mitigating the nuisance.
I felt that this preemption of public opinion was misguided as the important information that you need the utility of the proposed rail line clearly depends on its use by the community.
You seem to be ignoring the needs of community in order to get the line installed.
My reason for this comment is based on the response to my questioning why the line should be on the East side of I5.

I-233-001

The response was that a bridge across I5 would be too expensive. However at Northgate there is in fact a little used bridge starting at to the East of the entrance to I5 Northbound which has no ongoing highway connections on the West side and merely serves the local community that exists between Northwest Hospital and I5. As a road bridge its structure is more than adequate to carry rail traffic. It is obvious that I5 must be crossed by the rail line if it is to go to the Lynnwood Transit Centre which is on the West side. It might well be that modifying the existing bridge at Northgate might be a lot less expensive than any other crossing point. Clearly a cost comparison would be needed.
Thus the real issue is whether it would be better for the community to have the rail line on the West or the East side of I5.
There are real issues with the difficulties of building on the East side of the expressway as most of the big flyover and road approaches to I5 are located on the East side of the Highway. The land to the West side is elevated above the expressway and the likelihood of need for noise abatement would be much less.
However from my viewpoint as a rider on express buses on I5, there are several big questions and opportunities on the West side of I5.
1) The bus stop at 145th is completely undeveloped. There is a big ramp up to nothing. No parking lot, no connections. I don't see people getting on or off. Yet this is a cross street that goes all the way across the city providing connections from Highway 99 (and the express buses on it?) to Lake city way and that network. It is totally unexploited.
2) Just north of 145 on the west side is a sports field which is used heavily for soccer coaching. It has no public access and parents have to park on the side of the road. It is a stones throw from I5 There is a similar bigger field on the East side
that is too far away to be connected to the train. It would make a great deal of sense to work out a way to combine all of these features into a service that would connect this whole area of North Seattle to the Airport.
2) Just North of 145h on the West side is the Bus Barn.That is used presumably for parking and repairing buses. However it is in residential real estate not commercial real estate. Why not develop that into a North Seattle bus hub connected to the transit? I realise that you have developed Northgate for this purpose , however the traffic at Northgate is really heavy and the mixture with the buses ends up in a quagmire. If you are interested

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I-233-001

The west side alignments like the one being suggested are not being further considered, as was stated in the Draft EIS in Chapter 2, Section 2.5. West side alignments would have greater impacts without mobility benefits and do not coincide with optimal station locations that the east side alignments through Mountlake Terrace would offer.

I-233-001

I-233-002

in rapidly moving people some connections away from a shopping centre might be a lot faster cheaper and easier. Lynnwood does quite well in that regard as it is out of the traffic patterns.
3) One big point made by your spokesperson was the importance of connecting the rail line to the transit center at Mountlake Terrace. He implied that it was an important centre. However the reality of this is that it is located in a knot of roads and serves only the local area population. The garage and parking area fills up by 8.30 in the morning much as does the transit centre in Lynnwood. Thus the new garage that was completed only a few years ago needs to be increased in size. The whole thing is perched on the side of a hill and I5 closely adjoins it. I am afraid that putting a train track and station there would make further expansion difficult and expensive. However a point that you seem to have neglected is the fact that there is a newly constructed island between the northbound and southbound express ways which is connected by a bridge to the Parking garage. It would only be necessary to build a similar light pedestrian bridge across the southbound expressway to reach a rail station on the west side of the highway which would give access to all of the bus connections without interfering with any future development of the Mountlake Terrace park and ride. With some clever development work it might also be possible to build a parking lot that would connect with 220th which crosses the expressway and would extend the parking for both the rail and bus lines without much expense it would also permit an effective connection to Edmonds avoiding the traffic congestion of Lynnwood.
Clearly I am not a civil engineer, and the cost of building on the west side of I5 needs to be assessed. However I think the opportunities for community service are much higher and the possibility of community damage are much less if you are serious about your your statements that you want to serve the communities that adjoin the proposed rail line.
sincerely
Terence Christopher

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I-233-002

Your suggestion for an expanded station area with a potential crossing to the west has been considered, as has a potential increase in parking supply. An additional option for a new structure for parking is now considered as part of Alternative B1. Other configurations involving station development in the residential areas west of I-5 have not been advanced because they would be less accessible than the existing transit center, they would be less compatible with City of Mountlake Terrace plans, and they would have higher levels of impacts to the residential areas without increasing mobility benefits.

From: Becky Farrand <becky_farrand@yahoo.com>
Sent: Monday, September 09, 2013 3:56 PM
To: Lynnwood Link DEIS
Subject: Route Alignments

I-234-001

As a neighbor and user of Lynnwood transit Center, I feel option C3 would be most efficient.

People using the LTC commute to other communities. The shortest, most direct route is a straight line.

I-234-002

Please keep the route as far away from our homes as possible to keep noise down. We need noise reduction walls along the freeway as other areas have.

Thank You

Rebecca Farrand
20029 54th Ave W
Lynnwood 98036

1

I-234-001

Thank you for your comment stating your preference for Alternative C3.

I-234-002

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Sound walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, any existing WSDOT noise walls removed as part of the project, will be replaced.

Swift, Lauren

From: Greg and Lauri King <gnlking@comcast.net>
Sent: Sunday, September 08, 2013 1:38 PM
To: Lynnwood Link DEIS
Subject: DES Route Feedback

I-235-001

The Plan that is the *least disruptive* to the residents and businesses in the area is plan C3: Along I-e to Lynnwood Park and Ride Station.
All other plans are intrusive on the area and region around it. Traffic in Lynnwood is bad enough.
Please keep to the simple and direct plan:
Plan C3. We support Plan C3
Thank you,
Greg and Lauri King

1

I-235-001

Thank you for you comment stating your preference for Alternative C3.

From: Judy Lehman <jd.lehman@frontier.com>
Sent: Monday, September 09, 2013 4:51 PM
To: Lynnwood Link DEIS
Subject: Sound Transit Lynnwood Link

To whom it may concern;

I-236-001

I am very disappointed with your C1 & C2 proposals for the Sound Transit line coming to Lynnwood. C3 would be the least disruptive for residents, business, traffic & the wetlands. My question is why do you want to hurt so many people? Do you feel we are not as worthy as people in other parts of the region? And no Bus Barn in the neighborhood. We don't need the noise during the quite hours of the day. I have lived in my house for over 36 years & the things that has happened to us in this area is very sad. At one of your meeting one of your representatives said if you go with plan C3, people will have to walk farther. Well look at the set up now in the park & ride lot. People have a long ways to walk to the bus stations when they park at the south end of the parking lot. The government keeps telling us we are obese & need more exercise, so why don't you abide with them & do the C3 plan? People can get an umbrella & leave 5 minutes earlier. I know how something like this truly hurts people that are uprooted. When I was a kid my parents had a house & property in Shoreline they loved but it was in the path of I-5. It took a long time for people to get over this bully effect. Think of the people side; how would you like it if you were in the path of Sound Transit & had to relocate your family or business? The City of Lynnwood needs to be on the side of their residents.

Sincerely,
Judy Lehman

1

I-236-001

Your opposition to Alternatives C1 and C2 is noted, and Sound Transit recognizes your Preference for Alternative C3. The Sound Transit Board identified a modified Alternative C3 for the Preferred Alternative.

From: Dennis Sismaet <dennissismaet@gmail.com>
Sent: Saturday, September 07, 2013 5:23 PM
To: Lynnwood Link DEIS
Subject: Submitting Comments on Draft EIS on Light Rail Alternatives

To Whom This May Concern:

I-237-001

Thank you for allowing me to submit comments on the draft EIS of the proposed Lynnwood Light Rail station and alternatives. After reviewing the three alternatives, C1, C2, and C3, I vote and support alternative C3, I-5 to Lynnwod Park and Ride Station.

This alternative, C3, has the least impact to the environment, and allows for future light rail extension north to the Alderwood Mall, Everett, Marysville, and the Tulalip Casino, by staying close to the I-5 corridor to provide minimal impact to surrounding commercial, residential, and industrial neighborhoods.

Any new mass transit corridor should take advantage of existing freeways to allow for interaction with existing bus stations, park and rides, and vehicle access. It should also consider future light rail extensions north. All three alternative impact existing property owners, but C3 has the least impact, especially to existing wetlands and parks.

I've been parking at the Lynnwood Transit Center Mon-Fri to take the bus downtown and back for the last 15 years. I have 15 more years before I retire and would like to take advantage of Light Rail to avoid delays due to traffic jams on the freeways.

Please start building the Lynnwood Light Rail Extension soon!

--
Thank you,

Dennis Sismaet
17413 34th PL. W
Lynnwood, WA. 98037
dennissismaet@gmail.com

I-237-001

Thank you for your comment stating your preference for Alternative C3 and the reasons why you support this alternative. All three of the Segment C alternatives allow for future light rail extensions north. See Section 2.5 Alternatives Development.

From: Martin H. Spani <spani06@comcast.net>
Sent: Sunday, September 08, 2013 8:48 AM
To: Lynnwood Link DEIS
Subject: feedback

I-238-001

#1 - Why is it taking until 2023 to get to Lynnwood? It will be OUT OF DATE by then.
#2 - Why can the canadians build a sky train in 2 years and you are taking forever?
#3 - Why do we have so many different transit systems in the Puget Sound area when one would be more beneficial to the commuters and cheaper than paying multiple ceo's and upper management?
#4 - When I was a child I recall when the big surge was "Rails to Rubber" meaning goodbye to street cars and hello to buses now you are taking BACKWARD to rails again.....Stupid idea.

1

I-238-001

The project is planned to serve the region's long-term needs through 2035 and beyond. As shown in Figure 2-12, there are many steps required to take a project from initial development of alternatives through the begining of operation. The alternatives analysis was conducted in 2010 through the middle of 2011. Please see Section 2.9.1 Next Steps.

The proposed Lynnwood Link Extension project and the Vancouver, British Columbia SkyTrain are not similar projects. The SkyTrain is a fully automated, fully elevated, intermediate rail system - not a light rail system.

The structure of the region's transit systems reflects legislatively-determined authorities, and is not the subject of this EIS.

From: Iwata, Roger
Sent: Tuesday, September 10, 2013 9:35 AM
To: Lynnwood Link DEIS
Subject: FW: Lynnwood Link Light Rail

Public comments on the DEIS.

From: davidlovesjesus7@comcast.net [mailto:davidlovesjesus7@comcast.net]
Sent: Tuesday, September 10, 2013 12:14 AM
To: Iwata, Roger
Subject: Lynnwood Link Light Rail

I-239-001

I appreciate that the three alternatives for the Link Light Rail Station and tracks at Lynnwood are south of 200th St. SW, and in and around the Lynnwood Transit Center (LTC). I live in Cambridge Apartments, on the north side of 200th St. SW. I do not want to lose my home at Cambridge Apartments, along with 1,000 or so other people who live here, because of eminent domain. Please keep the station and tracks SOUTH of 200th St. SW, even if the station is directly across the street from Cambridge Apartments. I anticipate I will still live in Cambridge Apartments, a good chance, anyway, in 2023. There is an excellent chance I will still be working for the same employer in 2023, and I will still take the bus and/or light rail to from LTC to get to downtown Seattle.

Thank you and God bless! David

1

I-239-001

Thank you for your comment concerning the routes of the Segment C alternatives as they approach the Lynnwood Transit Center. All of the Segment C alternative alignments that are evaluated in the Final EIS remain south of 200th Street SW.

TO WHOM IT MAY CONCERN;

I-240-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Steven E. Bates

4001 KROMER AVE
EVERETT, WA 98201

I-240-001

Thank you for your comment stating a preference for Alternative C1.

Lynnwood Link 연장선

년 여름 2013

EIS 의견서 초안

의견서를 **2013**년 **9**월 **23**일까지 제출해 주십시오

이름: CHO, TAE TUK

주소: 19912 Scriber Lake Road. #204

시: Lynnwood 주: WA 우편번호: 98036

이메일 주소: No

☐ 프로젝트 이메일 업데이트에 내 이메일 주소를 포함시켜 주십시오

Sound Transit은 여러분의 의견을 기다립니다. 의견이나 관찰 내용을 제공하는 것부터 환경 분석의 기술적 사항에 대한 논의에 이르기까지 프로젝트와 관련된 전반적 사항에 대해 의견을 제시하실 수 있습니다. 연장된 의견 제출 기한은 2013년 9월 23일 까지입니다. 이 날짜까지 수령하거나 소인이 찍힌 모든 의견서는 최종 EIS를 통해 답변을 드릴 것입니다.

의견

Seattle 부터 Everett 는 버스 BUS가 Sunday에
운영이 되고 있읍니다.
only Lynnwood 와 Edmonds 에만 주말이 없읍니다.
Please 간곡히 원하오니 주말이 여기 지역 this area 에도
운영이 되었으면 감사 하겠읍니다.

SOUNDTRANSIT
RIDE THE WAVE

Lynnwood Link 연장선

년 여름 2013

EIS 의견서 초안

의견서를 **2013**년 **9**월 **23**일까지 제출해 주십시오

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이메일 주소: No

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I-241-001 Opinions: The buses have been operating in Seattle & Everet (sic) on Sundays. There are no buses running in only Lynnwood and Edmonds on weekends. I'd really appreciate it if there would be buses running in these areas on weekends as well, please.

SOUNDTRANSIT
RIDE THE WAVE

I-241-001

Thank you for your comment regarding your interest in a Sunday bus schedule. Sound Transit appreciates your feedback. Community Transit operates bus routes within Snohomish County.

TO WHOM IT MAY CONCERN;

I-242-001 PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

[redacted]
D L BLOOMFIELD JR
20209 45TH AVE NE
ARLINGTON WA 98223

I-242-001

Thank you for your comment stating a preference for Alternative C1.

From: John Dougall <john.dougall@frontier.com>
Sent: Wednesday, September 11, 2013 4:53 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Link Light Rail

Thank you for the opportunity to comment.

I'm excited about the plan to extend Light Rail through Mountlake Terrace and Lynnwood. I live in Mountlake Terrace just behind the Edmonds School District property in Melody Hill.

I-243-001

I admit that I'm conflicted about having a Station at this location. My primary concern is with the families that live in this neighborhood and the potential increase to traffic as it relates to the 220th St SW Station. On the other hand, I would really like having the ability to walk to a Light Rail Station and the commuter opportunities I would get.

As I haven't found this information I have to assume that traffic to the 220th St SW Station would egress by way of 64th Ave W. The drive South on 64th Ave W from the 220th St SW intersection is terribly congested and can be quite dangerous. There are a few Edmonds School District buses that use this intersection as well.

In my opinion significant work would need to be completed at this intersection (especially in a Southerly direction into Melody Hill) to improve conditions. In addition, since I travel North on I5 on my commute back home I turn South off of 220th St SW. I would anticipate that traffic from the East approaching the 64th Ave W intersection has the potential to create significant difficulties.

I would have to say that unless these concerns are addressed (and solved) I would prefer there not to be a 220th St SW Station. I can take Community Transit to the Lynnwood Transit Center to catch Light Rail.

John Dougall
22402 64th Ave W
Mountlake Terrace, WA 98043
425-775-8867

I-243-001

Thank you for your comment about traffic concerns on 220th Street. Traffic to the station would egress at a new signalized intersection on 220th St SW between 64th Avenue and I-5. The new intersection would be designed to accommodate additional station traffic.

TO WHOM IT MAY CONCERN;

I-244-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Dianna Engdahl
15802 SR 9 SE
Snohomish Wa 98296-8758
425 316 1991

I-244-001

Thank you for your comment stating a preference for Alternative C1.

From: MAX FISCHBACH <sig516ar@comcast.net>
Sent: Thursday, September 12, 2013 12:59 PM
To: MAX FISCHBACH
Subject: SOUND TRANSIT LYNNWOOD LINK

Importance: High

Sound Transit Lynnwood Link:

I-245-001

Based on the Draft EIS Round & Station Alternatives C1, C2, C3-OPT1 & C3-OPT2, what is the impact for each alternative relative to the following questions:

1. What impact would there be relative to north & south automobile traffic from 44th Ave W & 188th ST SW to 20610 44th Ave W (Embassy Suites Lynnwood North)?

2. What impact would there be relative to east / west traffic from 188th ST SW, 196th ST SW, 194th ST SW & 200th ST SW from 40th Ave W to 52nd Ave W?

3. What impact would there be for access to south bound I-5 from 44th Ave W & 36th Ave W?

4. What impact would there be for access to north bound I-5 from Popular Way?

Please provide responses for questions 1 – 4 addressing their impact relative to C1, C2, C3-OPT1 & C3-OPT2

Thank you

MAX FISCHBACH
18704 41ST PLACE W
LYNNWOOD, WA. 98037-3715
MEMBER:
GERMAN SHEPHERD DOG CLUB of AMERICA
GERMAN SHEPHERD DOG CLUB of AMERICA - WORKING DOG ASSOICATION
GERMAN SHEPHERD DOG CLUB of WASHINGTON STATE

I-245-001

Chapter 3 of the Final EIS details the performance of more than 20 intersections that Sound Transit and the City of Lynnwood identified for detailed analysis. The assessments were based on predictions of future traffic with and without the project, particularly in the areas where existing or future conditions already created traffic problems in the No Build condition, and where station area traffic would result in an increase. For the Preferred Alternative, Sound Transit identified improvements to mitigate congestion on 200th Street SW, including 44th Ave W. Traffic along 52nd or 188th Street SW is not expected to markedly change due to the project.

From: Marita Graube <mgraube@me.com>
Sent: Thursday, September 12, 2013 12:28 PM
To: Lynnwood Link DEIS
Subject: Lynwood Link feedback

From:
Marita Graube
2336 N 58th St
Seattle WA 98103

To Whom It May Concern:

I am writing to express my objection to the light rail extension, as it directly affects the Latvian's community church and cultural center on 117th and 3rd.

I am a first generation Latvian. My father was born in Latvia, but as a young child he fled with his family to escape the horrors of World War II. After five years in a displaced persons camp in Germany, they had the opportunity to come to the United States and rebuild their lives. They always thought that they could go back once Latvia was "free," but freedom from the USSR didn't happen until 1991. As such, Latvians established roots in many regions around the world.

As a local member of the Seattle Latvian community, I enjoy all of the cultural activities for Latvians and our Baltic neighbors. The center is the only local gathering spot for many of the activities I enjoy, such as the annual Baltic Studies Harvest festival, the Community Rummage Sale, and Holiday Bazaar. I also plan to bring my daughter to the Saturday Latvian School when she is old enough to attend.

I-246-001 When I heard that the light rail could entirely displace the Center, I was shocked. The Center has already been moved once for eminent domain. If the plan is to move the Center again, I find this to be entirely unacceptable. We need to find a solution to keep the Center accessible in its current location so it can continue to be a valuable asset to the Latvian community.

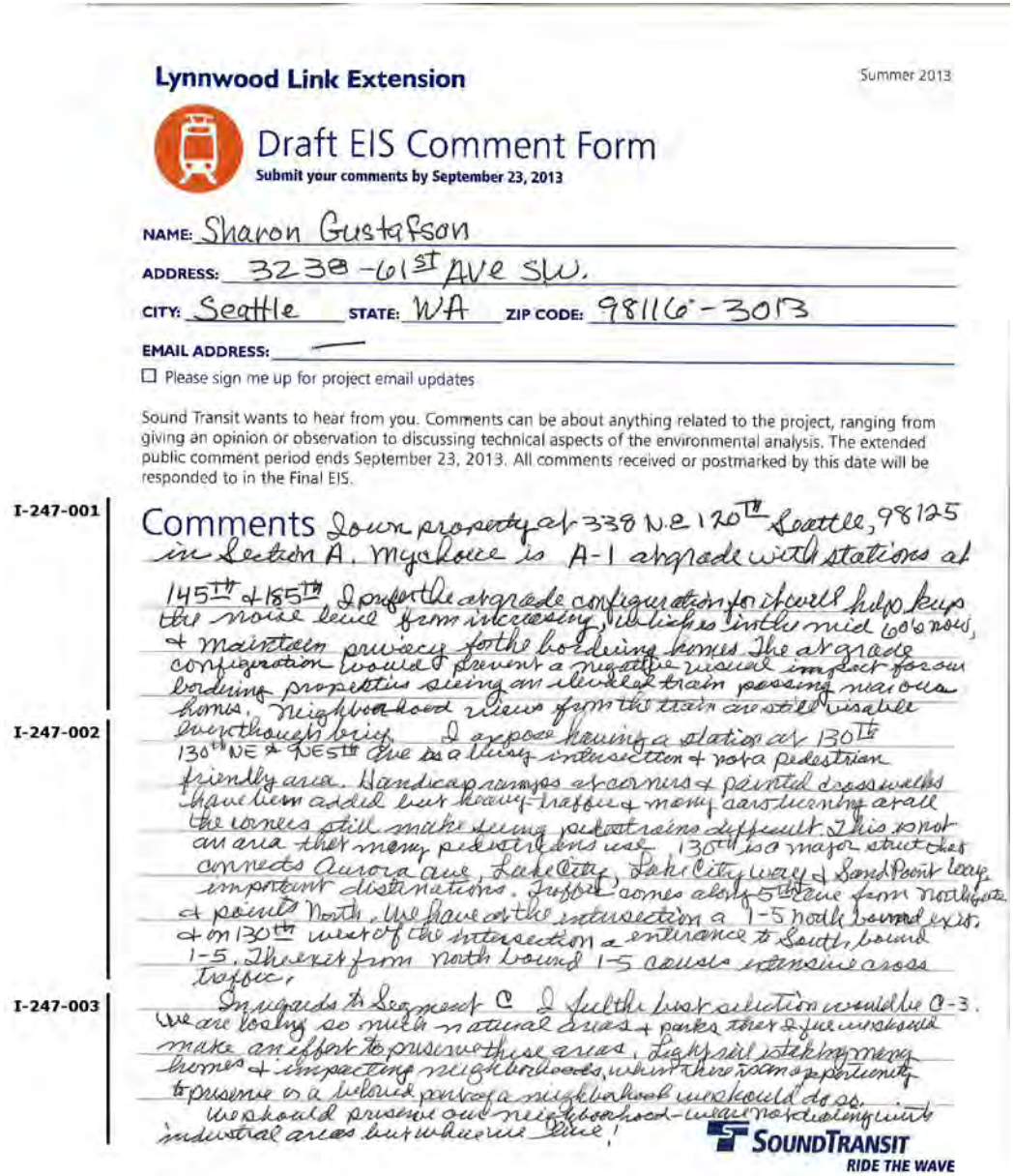
Please confirm receipt of this email.

Best Regards,
Marita Graube

1

I-246-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Sharon Gustafson

ADDRESS: 3238 -61st AVE SW.

CITY: Seattle STATE: WA ZIP CODE: 98116-3013

EMAIL ADDRESS: —

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

I-247-001

Comments I own property at 338 N.E 120th Seattle, 98125 in Section A. my choice is A-1 at grade with stations at 145th & 185th I prefer the at grade configuration for it will help keep the noise level from increasing, it lies in the mid 60's now, & maintain privacy for the bordering homes. The at grade configuration would prevent a negative visual impact for our bordering properties seeing an elevated train passing various homes. Neighborhood views from the train are still visable even though being I oppose having a station at 130th 130th NE & 9ES Due to a busy intersection & not a pedestrian friendly area. Handicap ramps at corners & painted crosswalks have been added but heavy traffic & many cars turning at all the corners still make seeing pedestrians difficult. This is not an area that many pedestrians use. 130th is a major street that connects Aurora ave, Lake City, Lake City way & Sand Point loop important distinations. Traffic comes along 5th ave from northgate & points North. We have at the intersection a I-5 north bound exit & on 130th west of the intersection a entrance to South bound I-5. The exit from north bound I-5 causes extensive cross traffic.

I-247-002

I-247-003

In regards to Segment C I feel the best selection would be C-3. We are losing so much natural areas & parks trees & fauna we should make an effort to preserve these areas. Light rail is taking many homes & impacting neighborhoods, what a rare opportunity to preserve or a beloved part of a neighborhood we should do so. We should preserve our neighborhood - what not to the confines industrial areas but where we live!

SOUNDTRANSIT RIDE THE WAVE

I-247-001

Thank you for your comment stating your preference for the Alternative A1 due to minimal impacts to your nearby property.

I-247-002

Thank you for your comment stating your reasons why you do not support a light rail station at NE 130th Street. Sound Transit recognizes that traffic is busy in the neighborhood and it is not pedestrian-friendly. Improvements at each of the proposed light rail stations would include connections with local streets, bicycle paths, and pedestrian sidewalks. Existing handicapped ramps on nearby sidewalks would be reconstructed if impacted by station construction activities. Please see Section 3.2 for a detailed discussion of long-term impacts and Section 3.6 for an outline of potential mitigation measures for all modes of transportation.

I-247-003

Thank you for your comment stating your preference for Alternative C3 and the reasons why.

Liga Jefferds
524 Fort Ebey Rd
Coupeville, WA 98239-9760

From: liga Jefferds <liga@whidbey.net>
Subject:
Date: September 9, 2013 2:10:20 PM PDT
To: SOUND TRANSIT

NO! NO! NO! We do not want this to be the end of the line for the Latvian Community Center.

This Lutheran Church and Community Center is the heart of Latvians in Seattle and its surrounding areas including Canada. The Lithuanian and Estonia communities also use this complex and have no other place to gather.

My husband and I travel two hours from Whidbey Island to attend many of the events held there and would feel a great loss if it were closed or moved. The center is a spiritual, social, and educational stronghold.

The Baltic culture is fragile due to the 50 year Soviet occupation that included massacres and displacements of Baltic people. The center has been and continues to be an essential factor in healing these families.

I-248-001 Please, please do not let this Latvian Community Center be displaced!

Liga Jefferds

9.9.2013

I-248-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Mở Rộng Link Tới Lynnwood

Mùa Hè 2013

Mẫu Nhận Xét Bản Thảo EIS

Xin nộp nhận xét của quý vị trước ngày 23 tháng Chín, 2013

TÊN: _____

ĐỊA CHỈ: _____

THÀNH PHỐ:_____ **TIỂU BANG:**_____ **MÃ BƯU CHÍNH:**_____

ĐỊA CHỈ ĐIỆN THƯ: _____

☐ Xin ghi danh để tôi nhận tin tức cập nhật của dự án qua điện thư

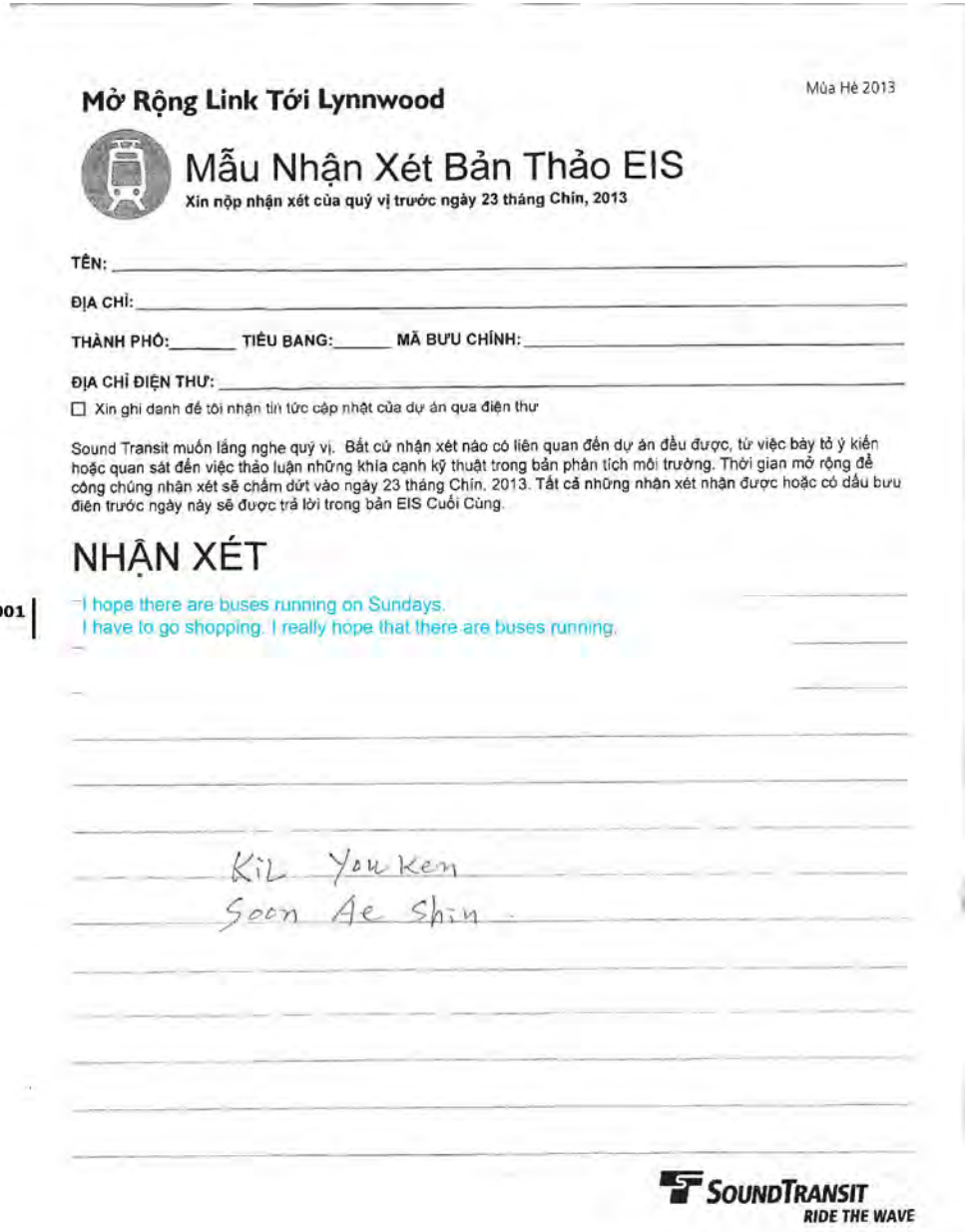
Sound Transit muốn lắng nghe quý vị. Bất cứ nhận xét nào có liên quan đến dự án đều được, từ việc bày tỏ ý kiến hoặc quan sát đến việc thảo luận những khía cạnh kỹ thuật trong bản phân tích môi trường. Thời gian mở rộng để công chúng nhận xét sẽ chấm dứt vào ngày 23 tháng Chín, 2013. Tất cả những nhận xét nhận được hoặc có dấu bưu điện trước ngày này sẽ được trả lời trong bản EIS Cuối Cùng.

NHẬN XÉT

일요일 날에 버스 다니길 원합니다.
쇼핑도 가야 합니다 꼭 버스 다니길 원합니다

Kil You Ken
Soon Ae Shin.

SOUNDTRANSIT
RIDE THE WAVE



Mở Rộng Link Tới Lynnwood

Mùa Hè 2013

Mẫu Nhận Xét Bản Thảo EIS

Xin nộp nhận xét của quý vị trước ngày 23 tháng Chín, 2013

TÊN: _____

ĐỊA CHỈ: _____

THÀNH PHỐ: _____ TIỂU BANG: _____ MÃ BƯU CHÍNH: _____

ĐỊA CHỈ ĐIỆN THƯ: _____

☐ Xin ghi danh để tôi nhận tin tức cập nhật của dự án qua điện thư

Sound Transit muốn lắng nghe quý vị. Bất cứ nhận xét nào có liên quan đến dự án đều được, từ việc bày tỏ ý kiến hoặc quan sát đến việc thảo luận những khía cạnh kỹ thuật trong bản phân tích môi trường. Thời gian mở rộng để công chúng nhận xét sẽ chấm dứt vào ngày 23 tháng Chín, 2013. Tất cả những nhận xét nhận được hoặc có dấu bưu điện trước ngày này sẽ được trả lời trong bản EIS Cuối Cùng.

NHẬN XÉT

I-249-001

I hope there are buses running on Sundays.
I have to go shopping. I really hope that there are buses running.

Kil You Kem
Soon Ae Shin

SOUNDTRANSIT
RIDE THE WAVE

I-249-001

Thank you for your comment regarding your interest in a Sunday bus schedule.

Community Transit is the transit agency that operates local bus service within Snohomish County, Sound Transit's Regional Express service will continue to operate daily from Lynnwood until the light rail project opens. Before the project would begin operation, Sound Transit would work with the other transit providers in the project area to revise service plans to avoid duplicating service and provide improved or new connections to the Lynnwood Link Extension. For more information, please refer to the Draft EIS, Chapter 3 Transportation, Section 3.2.2 Transit.

Dugtong ng Link sa Lynnwood

Tag-init 2013

Draft EIS Pormularyo sa Komentaryo

Ibigay ang inyong mga komentaryo hanggang sa Septiyembre 23, 2013

PANGALAN: _____

TIRAHAN: _____

SIYUDAD: _____ **ESTADO:** _____ **KODIGO POSTAL:** _____

PAGPAPADALHANG EMAIL: _____

☐ Ipalista niyo po ako para sa email sa mga nasa naipanahong mga nangyayari sa proyekto

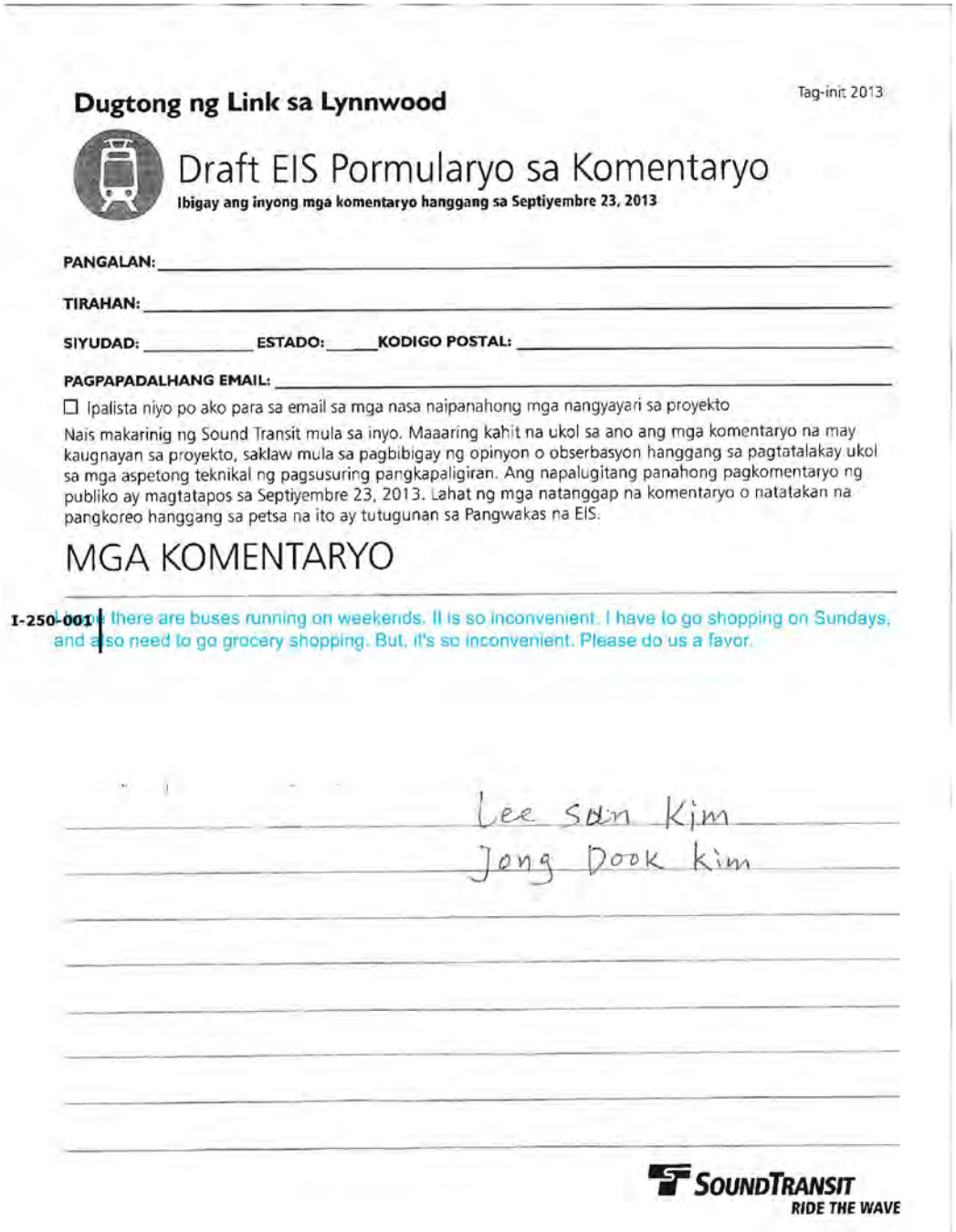
Nais makarinig ng Sound Transit mula sa inyo. Maaaring kahit na ukol sa ano ang mga komentaryo na may kaugnayan sa proyekto, saklaw mula sa pagbibigay ng opinyon o obserbasyon hanggang sa pagtatalakay ukol sa mga aspetong teknikal ng pagsusuring pangkapaligiran. Ang napalugitang panahong pagkomentaryo ng publiko ay magtatapos sa Septiyembre 23, 2013. Lahat ng mga natanggap na komentaryo o natatakan na pangkoreo hanggang sa petsa na ito ay tutugunan sa Pangwakas na EIS.

MGA KOMENTARYO

주와 버스 다니길 바랍니다
너무불편 합니다 주일날에 성당을 해야 하고
아겔로 가야 하는데 너무불편 합니다.
부탁 합니다.

Lee Sun Kim
Jong Dook Kim

SOUNDTRANSIT
RIDE THE WAVE



Dugtong ng Link sa Lynnwood

Tag-init 2013

Draft EIS Pormularyo sa Komentaryo

Ibigay ang inyong mga komentaryo hanggang sa Septiyembre 23, 2013

PANGALAN: _____

TIRAHAN: _____

SIYUDAD: _____ **ESTADO:** _____ **KODIGO POSTAL:** _____

PAGPAPADALHANG EMAIL: _____

☐ Ipalista niyo po ako para sa email sa mga nasa naipanahong mga nangyayari sa proyekto

Nais makarinig ng Sound Transit mula sa inyo. Maaaring kahit na ukol sa ano ang mga komentaryo na may kaugnayan sa proyekto, saklaw mula sa pagbibigay ng opinyon o obserbasyon hanggang sa pagtatalakay ukol sa mga aspetong teknikal ng pagsusuring pangkapaligiran. Ang napalugitang panahong pagkomentaryo ng publiko ay magtatapos sa Septiyembre 23, 2013. Lahat ng mga natanggap na komentaryo o natatakan na pangkoreo hanggang sa petsa na ito ay tutugunan sa Pangwakas na EIS.

MGA KOMENTARYO

I-250-001 I know there are buses running on weekends. It is so inconvenient. I have to go shopping on Sundays, and also need to go grocery shopping. But, it's so inconvenient. Please do us a favor.

Lee San Kim
Jong Dook kim

SOUNDTRANSIT
RIDE THE WAVE

I-250-001

Thank you for your comment regarding your interest in a Sunday bus schedule.

Community Transit is the transit agency that operates local bus service within Snohomish County, Sound Transit's Regional Express service will continue to operate daily from Lynnwood until the light rail project opens. Before the project would begin operation, Sound Transit would work with the other transit providers in the project area to revise service plans to avoid duplicating service and provide improved or new connections to the Lynnwood Link Extension. For more information, please refer to the Draft EIS, Chapter 3 Transportation, Section 3.2.2 Transit.

TO WHOM IT MAY CONCERN;

I-251-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Eugene Lentz
6515 202nd ST ~~NE~~
Arlington, wa 98223

I-251-001

Thank you for your comment stating a preference for Alternative C1.

From: Otis Lull <otisndot@frontier.com>
Sent: Wednesday, September 11, 2013 11:06 AM
To: Lynnwood Link DEIS
Subject: Lite Rail Links to Lynnwood

To Whom it May Concern,

I-252-001 Where we think extending light rail to Lynnwood is a good thing, we are totally against running the light rail through Scriber Lake Park. The integrity of parks should be maintained, protecting wildlife and beauty. Thank you.

Otis Lull
18501 52 Ave. W. #45
Lynnwood, Wa.
425-778-9486

1

I-252-001

Thank you for sharing your concerns regarding Alternative C1's potential impacts to Scriber Lake Park. A modified Alternative C3, which avoids the park, is the Preferred Alternative included in the Final EIS.

From: Andra <heyandra1@mac.com>
Sent: Thursday, September 12, 2013 8:49 AM
To: Lynnwood Link DEIS
Subject: Please don't tear down the Latvian hall in Seattle

I-253-001

I live in LA but grew up near SF and the Latvian halls in both cities were foundational in my life and learning the culture that my parents were moved from. These centers are an integral part of restoring and maintaining cultural understanding for all of the Latvian Americans that use them for church services, school, cultural events, the list goes on and on. To take down something so vital to our sustenance as a culture is a travesty and is taking away from a culture that strives to exist in the country that promised it freedom and opportunity. Please reconsider your plans and design to maintain this building and surrounding park.
Thank you,
Andra Maculans

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I-253-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

From: Kevin McClain <mcclaik@gmail.com>
Sent: Wednesday, September 11, 2013 2:33 PM
To: Lynnwood Link DEIS
Subject: DEIS Comments

Hello,

I-254-001 I wanted to comment on the Lynnwood Link Extension DEIS. Several of the options include a station at NE 130th St. This station would be a vital transfer point for East/West bus service. Please include this station in the preferred alternative.

I-254-002 The Mountlake Terrace Freeway station should be eliminated from consideration. This station is awful. The walking distance to access this station is completely unreasonable.

I-254-003 At Lynnwood station, many of the designs prioritize auto access over a good transfer experience or pedestrian access. Given that the majority of riders will be arriving at this station by bus, it is important that the transfer environment be of high quality. Also, given that Lynnwood is attempting to foster development of a downtown area that is more friendly to transit, the station should be located to maximize the impact on the new downtown and to encourage transit oriented development.

I-254-004 Finally, the line seems to have 500 stall parking garages at every station. This is regardless of context and demand. Please conduct further analysis of what parking is actually needed and look at what trade offs are available. Are there areas where improved pedestrian, bicycling or bus amenities would provide greater patronage than a parking garage? If so, then these alternatives should be considered. Furthermore, are there areas where the parking could be provided further out and customers could use a bus from a parking lot to a train? If it allowed the construction of several surface lots instead of a garage, it could provide an equivalent amount of parking for less money.

Thank you,

Kevin McClain

1

I-254-001
The 130th Station is included as an option to the Preferred Alternative considered in the Final EIS.

I-254-002
Your opposition to a freeway station is noted. The Preferred Alternative in the Final EIS has a transit center station.

I-254-003
Thank you for your comment on the Lynnwood Station design. As you note, this is a major transit facility that includes many transfers from bus to rail as well as car to transit (bus or rail). The Final EIS includes a revised station plan for the Preferred Alternative that balances access for all modes, including improvements for pedestrians and bicyclists.

I-254-004
Station parking, facility sizing, and design is balanced between the demand for parking and the need for good multi-modal connections in order to serve the needs of the region as well as local communities.

From: Molnar, Lauren AP-Staff <MolnarL@issaquah.wednet.edu>
Sent: Wednesday, September 11, 2013 5:02 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Link Impact to Seattle Latvian Lutheran Church/Center

To whom it may concern,

I am writing this letter to express my concern and discontent regarding the planned light rail extension to Lynnwood, and specifically its impact to the Latvian Center and Church. As a person of non-Latvian heritage my connection to the Latvian community is something I truly value and the community has taken me in as one of their own. This community is one which is very special to me and one which must be protected from any impact by the Sound Transit construction any way possible.

I learned about the Latvian community growing up in the Bellevue, Washington area. One of my best friends who I swam with and played water polo with was Latvian-American. I can recall every August, right when swimming championships were taking place, she would head off to Latvian school to learn another language, dance and to celebrate and embrace her heritage. I always thought that this was fantastic that she had such a wonderful connection to her cultural heritage. In this day and age, a connection to one's past is something that is oftentimes lost amongst all of the other day to day activities, so maintaining that connection is something that I find to be very amazing and inspiring.

Fast forward 20 years. At the same Latvian-American friends 23rd birthday, with a combined group of friends, I meet my fiancé, who coincidentally is Latvian-American as well. As our courtship and eventual engagement progressed, I was introduced to many different Latvian-Americans as well as participated in many different events held at the Latvian Center and Church. These events ranged from attending church services, to attending wedding receptions held at the hall, to attending dance performances and even to meeting the President of Latvia when he came to the center. The Latvian-American community has always accepted me and welcomed me into their community and center and I consider myself as much a part of this community now as anyone else in the community. Our wedding reception will be held at the Latvian Center in June 2014 and we are greatly looking forward to being able to share this amazing facility with our family and friends. I am so lucky to be part of a community with strong values like a hard work ethic, the value of an education, and respecting their cultural heritage. I am a strong supporter of the Latvian-American community and will continue to be one in the future. I have seen firsthand exactly how important the center is to the community, and any negative impacts to the center from the construction of the light rail will not be tolerated.

Finally, I am employed as an elementary school teacher and teach in a school with moderate poverty. This past school year, 10% of the children in my 3rd grade classroom spoke English as a second language. There has been a state standard implemented in Washington State to teach and foster cultural heritage in the classroom. When our principal offered us the opportunity to attend and present our cultural heritage (as educators) at our schools multicultural night, it was with the intention of helping to close the achievement gap within our school. For my cultural heritage, I was really scrambling for what to present on, since I am not that connected with my cultural heritage. I chose to present on my fiancé's Latvian-American heritage. I presented on how his grandparents were forced to flee their native land of Latvian when the Communists invaded their land, and how they were forced to flee to Germany and eventually were taken in as refugees in America. The personal schema and engagement my students showed towards this story was amazing. They could relate to their

teacher and that engagement carried into more difficult subjects such as math, and it also translated into a successful year where my students could relate to me.

I-255-001 I am asking that Sound Transit re-visit their plans for the Lynnwood Light Rail Extension and consider the impacts to the Latvian Church and Center. The impact to the community by the loss of the center would be catastrophic and one with the community would not be able to endure.

Thanks,
Lauren Molnar

I-255-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Gerry Pade <fraidycat@mail.com>
Sent: Wednesday, September 11, 2013 7:05 PM
To: Lynnwood Link DEIS
Subject: Comments on Lynnwood Link DEIS

Sound Transit -

I offer the following comments on the Segment A alternatives in the Lynnwood Link DEIS from the perspective of someone who has lived a few blocks east the potential NE 130th station for decades and has ridden Metro route 41 (and the former route 307) to and from downtown over 10,000 times.

I-256-001 I prefer either A5 or A10 because they provide the best light rail access for my neighborhood while having the least impacts of any alternative with a station at 130th St. A10 might have less traffic impacts here than A5 because it includes a station at 145th instead of 155th. However, A10 is likely to cause local parking conflicts because it offers no parking and none is available on the nearby arterials. Leasing of at least some parking from the Nazarene church (similar to A5) should be included if A10 is selected.

I-256-002 All three at-grade alternatives (A5, A10 & A1) would fix an already problematic interchange at the I-5 off-ramp just south of NE 130th, which is particularly difficult for eastbound motorists during peak hours. (It's disappointing that your DEIS provided no simulation of this vista for the at-grade alternatives.) A1 would have the least impact on my neighborhood of any alternative considered but it would also have us either walk or drive a mile to the 145th St station. It's similar in this regard to A3, which would have the least impact of any above-grade alternative.

I-256-003 The construction of a permanent path connecting the north end of 8th NE to the Jackson Park trail would definitely help if A1 or A3 is selected. This blackberry-infested corridor situated above Thornton Creek might also be a suitable site for mitigation of the wildlife impacts that will occur along 5th Av between 130th and 145th under any proposed alternative.

I-256-004 A7 & A11 would be an horrific blight on this residential neighborhood, something akin to an Alaskan Way Viaduct from a visual, aesthetic and noise standpoint. Just take a good look at Figures G-24 and G-29. Please don't select A7 or A11 under any circumstance! This area, which was formerly part of the Haller Lake neighborhood, suffered enough when I-5 was constructed.

Thank you for the opportunity to comment.

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I-256-001

The preference for a station at 130th Street NE is noted. The Preferred Alternative includes a station at NE 145th Street and has an option for a station at NE 130th Street.

I-256-002

Sound Transit recognizes your preference for the at-grade alternative, because they would improve the interchange; they also would include pedestrian and bicycle improvements along 5th Avenue NE. See Appendix G for Visual Simulations.

I-256-003

The riparian and wetland area associated with North Branch Thornton Creek is a potential site under consideration for compensatory mitigation to offset unavoidable permanent impacts.

I-256-004

Your opposition to Alternative A7 and A11 is noted. The Draft EIS and Final EIS address visual impacts and mitigation in Section 4.5.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: DACE PEDECIS

ADDRESS: 6910 South 18th St., Apt. 1607

CITY: TACOMA STATE: WA ZIP CODE: 98465

EMAIL ADDRESS: Pdecisdace@hotmail.com

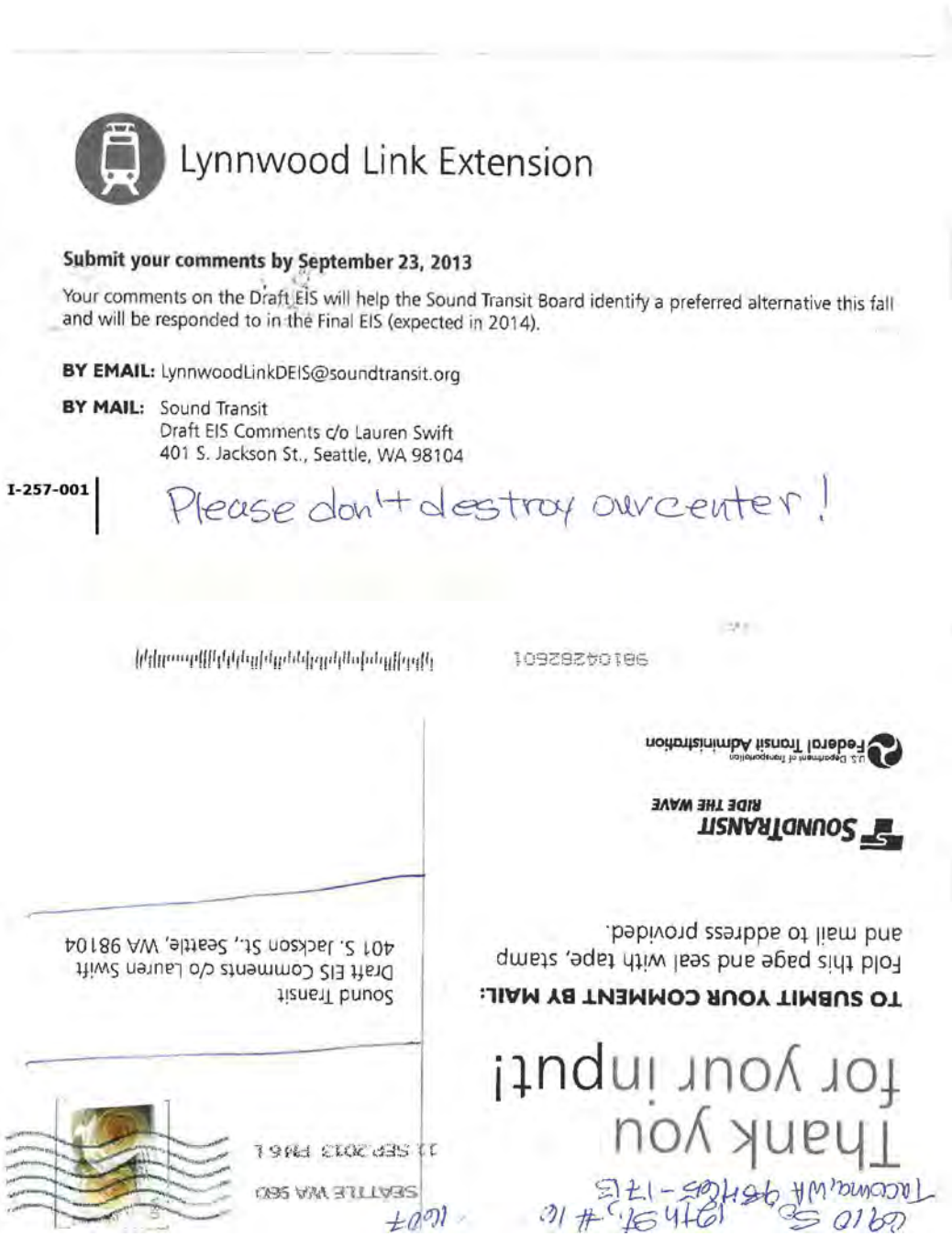
☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

Destroying the Latvian Center would be like cutting the heart out of a living organism. And a living organism is what the Latvian Community is. Certainly the organism can survive with an artificial heart, but it's not like having your own natural heart that grew with your body. The Latvian Center was created by the Latvian Community with their own hands, their own thoughts and creativity, their own funds, their deep need to have a place of their own - OUR OWN - to come together - to celebrate, to mourn, to remember our homeland and all that was lost when we had to leave it, to pass our beautiful culture on to our culture, to support each other when we were strangers in a strange land and to support and sustain those who were left behind, but always in our hearts.

SOUNDTRANSIT RIDE THE WAVE



I-257-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Maris Plavins <drmaris@hotmail.com>
Sent: Wednesday, September 11, 2013 11:09 AM
To: Lynnwood Link DEIS
Cc: Erik Luks
Subject: The Latvian Center:

Dear Sound Transit:

I-258-001

Running the train through the Latvian Center is a bad idea. The Center is not simply a one family dwelling. It is a spiritual and cultural center that serves hundreds of families in Seattle and the Pacific North West region. For those of us who live outside of Seattle it is our connection to the Latvian/Baltic community. Here is how I see it:

1. Yes, the voters approved the Northgate to Lynnwood light rail link.
2. No, the voters did not approve the devastation of the Latvian Center.

The devastation of the Latvian Center is a choice made by Sound Transit. There are many options besides the two proposed by Sound Transit. The choice has to be justified and not simply made by fiat. The time honored method to do this is a cost benefit analysis. Did Sound Transit do any type of analysis when you decided to run the train through the Latvian Center?

It is easy to see the benefit to Sound Transit in the way of convenience and perhaps saving a bit of money to be spent elsewhere, but what about the cost to our community?

Sincerely, Maris Plavins

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I-258-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Inese Raisters <ineser@comcast.net>
Sent: Thursday, September 12, 2013 2:33 PM
To: Lynnwood Link DEIS
Subject: Comments and response to the DEIS of July 26
Attachments: ST DEIS comments & response.docx

Dear Lauren Swift-
I have attached a word document with my response to the released DEIS for the Lynnwood link light rail project.
I would appreciate it if you could send a reply email that this has indeed been received.
Thank you very much,
Inese Raisters

September 12, 2013

Sound Transit
Draft EIS comments
c/o Lauren Swift

I-259-001

I am commenting on the Lynnwood Link DEIS issued July 26, 2013. I am an active member of the Seattle Latvian Community, whose Center at 11710 3rd Ave NE in the Northgate area of Seattle, is slated to have tremendous impacts with any of the alternatives presented to date. The property would either be acquired in total or lose ingress/egress, as well as the caretaker's house and a significant section of parking and entrance areas.

Although it is inconceivable to me that somehow the importance of the Latvian Community Center & Church had not been noted prior to any of the options currently being presented in the DEIS, it also must be conceded that a light rail transit link to the north of Seattle has some merits. That none of the aforementioned options have managed to avoid dire consequences to the Latvian Community Center is something that the EIS must address and plan to improve.

I have lived in the Seattle area since 1965 and hence have been an active participant on many levels. The first Latvian Center in the Wallingford area of Seattle was acquired by eminent domain in 1969 for the construction of a park. In the interim years of 1969 until 1972 when the presently used Center was opened, I was a teenager and attended Latvian school, danced in the folk dance group 'Trejdeksnitis' and sang in the choir in various rental spaces. Even though that was some years ago, I can

I-259-002

attest to the disruptiveness of not having our routine spaces for use. Any construction phase that would not allow the Latvian community to use their hall and church would again have a similar disruptive effect.

I am currently a congregation and association member, a folk dance ensemble member and a singer in the ensemble 'Sigulda'. I also direct a newly founded dance group scheduled to begin this October, planned for the middle aged dancers who still want to maintain theur culture and physical activity.

I-259-003

I urge the Sound Transit board members, engineers and planning committees to find a solution that allows the Latvian Community to retain is present property and location in a way that maintains its viability. If our community should be forced to relocate yet again, I feel it would be an insurmountable challenge at this point in time.

Thank you for your consideration. I truly hope a reasonable solution can be attained.

Sincerely,

Inese Raisters
10507 64th Pl W
Mukilteo WA 98275
ineser@comcast.net

I-259-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-259-002

Thank you for your concerns about the potential disruption of the Latvian Evangelical Lutheran Church during construction. To better understand the effects and proposed mitigation associated with construction, please see Chapter 3 Transportation Impacts and Mitigation; Sections 4.2, Land Use; 4.4, Social Impacts, Community Facilities, and Neighborhoods; and 4.7, Noise and Vibration. The church will also retain access during construction.

I-259-003

Thank you for your personal comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, the larger Baltic community, and those interested in Scandinavian studies. Please see Section 2.5.1 for a description of the refined Segment A alternatives that avoid displacing the church.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Andris Rogainis

ADDRESS: 11738-9th Ave NW

CITY: Seattle STATE: WA ZIP CODE: 98177

EMAIL ADDRESS: andris.rog@comcast.net

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-260-001

Looking at the various options, all have an impact on the Latvian Community Center at 11710-3rd Ave NE. The community center is the center for Latvian, Estonian and Lithuanian functions on daily, weekly, monthly basis.

The EIS does not address how these community functions can continue without interruptions and how the access to the center is provided at all times, including during the construction phase.

As a member of the Latvian community and a regular user of the center, I find the EIS lacking in planning and the approaches proposed not acceptable.

Andris Rogainis 9/9/13

SOUNDTRANSIT
RIDE THE WAVE

I-260-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describing the acquisition impacts; Section 4.4 describing impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including portions of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

From: jill russel <jillrussel@hotmail.com>
Sent: Wednesday, September 11, 2013 2:39 PM
To: Lynnwood Link DEIS
Subject: Lynnwood link

I-261-001 Am very concerned about the destruction of all the wet lands involved and people. The choice of c-4 a new choice seems like the best one and the least amount of destruction . It is also the closest to the park and ride making it easy to catch a bus to any where in Lynnwood. The cost would be less also. We will be at the meeting Saturday and have several people to speak for us.

I-261-001

Thank you for your comment regarding your concerns about impacts to both wetlands and displacement of residents. See Chapter 2 for a description of the Preferred Alternative, which is a modification of Alternative C3.

From: Marshall Schott <marshallschott@gmail.com>
Sent: Thursday, September 12, 2013 10:02 AM
To: Lynnwood Link DEIS
Subject: Re: Latvian Center

I-262-001

Since 1997, the Latvian Center has played an important role in my life, particularly as the husband of a Latvian woman who is very engaged in activities at and with the Center. Losing such a valuable resource would be a tragic hit to the Seattle area Latvian community, eliminating a very integral component of their culture and lives in general.

I humbly request that you reconsider any plans to remove the Latvian Center and allow those who utilize this fantastic cultural resource to continue doing so. I would also appreciate confirmation that this email was received.

Respectfully,

Marshall L. Schott, Ph.D.

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I-262-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Steve Senter <steve.shoreline@gmail.com>
Sent: Wednesday, September 11, 2013 4:41 PM
To: Lynnwood Link DEIS
Subject: Re: LLE Segment A Comments

Hello,

I sent in these comments in early August, but never received a reply. I'm resending the email but will recap my key concern here, in regards to building a station and parking at 155th:

I-263-001

- Would the rail station require the loss of the fire station? The fire department provides coverage over a wide section of this part of town, and frequently responds to calls from the retirement center on 1st and 149th across from Twin Ponds park.

I would appreciate a response, and look forward to the final decision. Thank you,

Steve Senter

On Fri, Aug 2, 2013 at 11:13 AM, Steve Senter <steve.shoreline@gmail.com> wrote:
Hello,

Thank you for preparing and providing the DEIS materials on your website. I found them to be comprehensive and detailed without devolving into 'legal-ese' and becoming completely incomprehensible.

I live near the proposed station and changes at 155th, so naturally these options are my focus of interest. I value the intention of extending light rail northward and look forward to using the services (when ready in a decade or so); I currently take buses to and from the Northgate center - downtown during the week.

My primary concern with the proposed station at 155th and I-5 is the potential loss of the Shoreline Fire Department Station 65 on the East side of I-5. I didn't find in the materials (though confess I didn't read every document) whether or not the station would be impacted, but I can only assume so given its proximity to the light rail route. Would the rail station require the loss of the fire station? The fire department provides coverage over a wide section of this part of town, and frequently responds to calls from the retirement center on 1st and 149th across from Twin Ponds park.

I-263-002

My other key concern relates to impacts on local traffic. The section covering this in the materials (section 3.1.4) clearly points out that 155th from Aurora to 15th is already at risk for poorer LOS with or without the proposed rail station, and I wonder what the City of Shoreline plans for the future. I already experience the stated peak AM and PM LOS along Meridian and can only anticipate how this and neighboring roads will be impacted - 1st Ave NE from 155th south in both direction could

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I-263-001

The NE 155th Street station would not displace the fire station. Sound Transit is aware of concerns about the possible impacts of a station at NE 155th Street on the operations of the Fire Station. In the design and development of a station at that location, and the management of traffic serving the station, Sound Transit would work closely with the Fire Department to resolve any potential conflicts with bus and vehicle traffic to ensure that emergency response times would be maintained both during the construction period and operation of light rail.

I-263-002

If a station at NE 155th Street were part of the project to be built, Sound Transit would mitigate traffic impacts from the station as described in Chapter 3. A modified Alternative A1 is the Preferred Alternative, which does not include a station at the NE 155th Street area.

I-263-002 become impassible given its narrow roadway and no paved shoulders, with car and foot traffic to the park, wildlife crossing and the fire station responses in addition to the projected increase in light rail user congestion.

The task of determining the best location for the rail stations is daunting and I appreciate the care and concern put into the DEIS materials preparation and presentation. Please respond to my concerns, or direct me to the appropriate sections in the online materials.

Thank you,

Steve Senter
15314 Corliss Pl N
Shoreline, 98133

TO WHOM IT MAY CONCERN;

I-264-001 | PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU,

Jon R. Thompson
Po Box 4267
Everett, WA 98204
425-876-4566

I-264-001

Thank you for your comment stating a preference for Alternative C1.

From: Robert Victor <rvictor@ci.lynnwood.wa.us>
Sent: Wednesday, September 11, 2013 4:20 PM
To: Lynnwood Link DEIS
Subject: Link Light Rail - Potential Conflict with future plans for Lift Station #10, Option C3

Follow Up Flag: Follow up
Flag Status: Flagged

I-265-001

To whom it may concern,
I am a project manager at the City of Lynnwood and have concerns with route C3 as it pertains to our Lift Station that is located in the Lynnwood Transit Center Park and Ride Lot. In the future we may need to upsize the lift station to service the planned City Center. The lift station is currently located next to (and partially under) the Park and Ride "Texas T" offramp. Our concern would be that adding additional infrastructure in the area may preclude us from reconstructing the Lift Station in the future, which will be necessary to support our planned City Center. Routes C1 and C2 (the routes on 52nd/Cedar Valley Road) would probably not have an impact on the station.

Just wanted to make sure that this potential impact is communicated to Sound Transit.

Thanks,

Robert S. Victor, P.E.
Project Manager
City of Lynnwood
425-670-5216
rvictor@ci.lynnwood.wa.us

I-265-001

Thank you for your comment with concerns that Alternative C3 could conflict with the City of Lynnwood's plans for a Lift Station. Sound Transit coordinated with the City to obtain further details on the expansion, which is not likely to physically expand the current site. Alternative C3 would not affect the plans for the Lift Station, nor would the Preferred Alternative.

I-266-001

From: maryellen walsh <tambosassy@gmail.com>
Sent: Tuesday, September 10, 2013 2:03 PM
To: Lynnwood Link DEIS
Cc: maryellen walsh; Linda At Sea; Gleb S; michael raskin; mmayes@mayestesting.com
Subject: Fwd: Comments on DEIS from Linda Willemarck, Maryellen Walsh and Letters from Business Owners. Link to New C-4 Proposed by City of Lynnwood
Attachments: Maryellen Walsh's comments on DEIS.pdf; Linda Willemarck's comments on DEIS-4.pdf

Attached are my DEIS comments, Linda WIllemarck's comments that I am sending on her behalf and at her instructions as she is out of town, as well as letters from Mike Mayes and Mike Raskin, business owners on Cedar Valley Road. We have peititions with over 1600 signatures and are gathering more signatures. We will finalize and send these petitions to you on or before September 23.

Please acknowledge receipt of this email with my comments, Linda Willemarck's comments and the two letters from Raskin and Mayes.

Thank you for your consideration of our comments.

Maryellen Walsh
(425) 776-5374

---------- Forwarded message ----------
From: **maryellen walsh** <tambosassy@gmail.com>
Date: Tue, Sep 10, 2013 at 1:02 AM
Subject: Fwd: Comments from Linda Willemarck, Maryellen Walsh and Letters from Business Owners. Link to New C-4 Proposed by City of Lynnwood
To: daniel.drais@dot.com
Cc: maryellen walsh <tambosassy@gmail.com>, LInda Willemarck <savescribercreekpark@yahoo.com>, Gleb S <tallgleb@hotmail.com>

Dear Mr. Drais,

Attached are the following:

- Comments from Linda Willemarck regarding the DEIS;
- Comments from Maryellen Walsh regarding the DEIS;

I-266-001

Your opposition to Alternatives C1 and C2 has been noted, along with your support for a modified alternative to the south. The Preferred Alternative is based on Alternative C3, and was developed in coordination with the City of Lynnwood. See Chapter 2 for a detailed description. Thank you for providing attachments of other parties' comments, including materials directed to the City of Lynnwood during the City's councils consideration of EIS alternatives. Linda Willemark's comments are recorded separately in comments I-530 and I-228. Comments by Mike Mayes, which included his public testimony at one of the EIS public meetings, are responded to under B-001 and I-217. The other attachments you provided were reviewed by Sound Transit, but they are directed to other parties such as the Environmental Protection Agency.

However, to address one of your primary concerns in the letter to EPA about Alternative C1 and its impacts to Scriber Creek Park and its associated wetlands, the Draft EIS included detailed discussions of the impacts to the park and its wetlands, including in the Summary, in Chapter 5 Evaluation of the Alternatives, and in sections 4.17 and 4.18, the latter section dealing specifically with the Section 4(f) requirements that would need to be met if Alternative C1 were to receive approval by FTA. The Final EIS notes that Alternative C1 has not yet met those conditions. Although the Draft EIS did not mention the source of funding for the park, under Section 4(f), any significant public park is treated as a protected resource, and most parks bond measures have similar conditions requiring in-kind replacement.

- Letters from Mike Mayes and Mike Raskin regarding the impact of C1and C2 on their businesses and the neighborhood; and

- A link to proposed alternative C-4 by the City of Lynnwood.

http://lynnwoodtoday.com/city-council-consider-sound-transits-draft-eis/

In addition, we have a petition with over 1600 signatures and are gathering more as people realize what may happen to the neighborhood. Time is of the essence as Elaine tells me the Field Visit will happen soon so I am sending you what we have put together so far with the exception of the petitions which we will present to transit some time before the September 23 deadline. We are in the process of gathering more letters from business owners.

C-4 was recently proposed by the City and after attending the Council Meeting this evening I am more confused than ever about the City's position.

Thank you for your consideration and I apologize for the format of this submission (new computer) but I'd rather get it to you so you can get a feeling for what we are experiencing.

Maryellen Walsh
(425) 776-5374

Begin forwarded message:

Subject: Letters from Mike Raskin and Mike Mayes - Business Owners on Cedar Valley Road

September 7, 2013

Re: Sound Transit – Lynnwood Link Extension

2

Dear Mayor Gough, City Council Members, City Staff and Candidates

I would like to join my neighbor Mike Mayes in expressing my hope that the City of Lynnwood will support Option C-3 or the newly proposed Option C-4 as opposed to Options C-1 or C-2.

I am the owner of a three story office building located on 52nd just south of the Mayes Testing and Engineering Building. My building is leased to the State of Washington and houses a number of agencies that provide valuable services to the Lynnwood and South Snohomish County communities. Many of the roughly 250 people that work in the building live in the Lynnwood area and they, and the many visitors to the building, shop at local Lynnwood businesses during their work week. If Route C-1 or C-2 is chosen it will negatively impact valuable community services both during and after construction as well as have a negative effect on local Lynnwood businesses. These people and their many clients in the community will suffer.

If C-1 or C-2 is selected homes and businesses will be destroyed, parks and pristine wetlands will be damaged, companies and residents will be displaced. The construction alone will take years in which time the entire area will be effected. How can that make sense when other options closer to Interstate Five with lower impacts on residents and business are available. Do the studies provided to the City by Sound Transit include the possible economic loss to Lynnwood's business if tenants move away and businesses are forced to close from options C-1 and C-2. I would hope that you as City leaders consider these ramifications before making your choice.

It appears that the Council has in the past favored option C-1 as opposed to option C-3. Staff reports present that the C-1 alignment "might be" more favorable for the proposed City Center project than the C-3 alignment. If the City Center project happens it will likely be many, many years from now. Locating the Lynnwood Link at locations C-1 or C-2 will cause real harm to the City now. It seems shocking that responsible City leaders could choose to impact a significant number of residents, citizens and businesses now for some potential uncertain gain that "might" occur many years from now. I would hope you would carefully question the planners on the disadvantages of C-3. A case could be made that C-3 will make the City Center buildings more valuable since the elevated rail would provide visibility to the buildings in the City Center blocks effected in the same way as the Monorail does in downtown Seattle. Any potential future harm from C-3 is at

best speculative, C-1 and C-2 on the other hand will cause real harm to the City now.

I am encouraged that you are considering a new option C-4. This option does not damage existing businesses and residences in the way that C-1 and C-2 does and it appears that the alignment might not affect the City Center Block in question. Selecting C-1 or C-2 will hurt Lynwood. A choice of C-3 or C-4 makes sense and is good for the community.

Thank you for the opportunity to provide thoughts on this important decision.

Michael Raskin
President MJR Development

From: Mike Mayes [mailto:MMayes@MAYESTESTING.com]
Sent: Friday, September 06, 2013 3:03 PM
To: TheDG1@aol.com; mark@markforlynnwood.org; nicolaformayor@gmail.com; Simmonds4Mayor@aol.com; chris@boyer4lynnwood.com; electmichaelmoore@hotmail.com;james@jamesdeal.com; JimSmithCFI@msn.com; shirley@voteshirleysutton.com; councilmancotton@cotton4council.com; commissioner.maria.ambalada@gmail.com;lovitt4citycouncil@gmail.com; ruth@ruthross.net; dwm270@yahoo.com; jmoore@ci.lynnwood.wa.us; pkrauss@ci.lynnwood.wa.us; jlambert@ci.lynnwood.wa.us; roger.iwata@soundtransit.org
Cc: tallgleb@hotmail.com S; Linda At Sea; Mike Raskin; maryellen walsh; jamesrwalsh@outgun.com; Mike Dolder; Tim Beckerle
Subject: RE: Significant Events Have Occurred for Citizens Against C1 and C2

September 6, 2013

Re: Sound Transit - Lynnwood Link Extension

Dear Mayor Gough, City Council Members, City Staff and Candidates,

As you know there are three options for the Lynnwood Link Extension. We are pleased to see that the City of Lynnwood is proposing a fourth "C-4" option. It is our hope that the City of Lynnwood will support the C-3 (or C-4) option.

Mayes Testing Engineers is a professional services company which opened for opened for business in 1984 in a leased space located in Lynnwood. We provide inspection, testing and consulting for construction projects. We have provided these services on projects such as the Lynnwood Convention Center and the recently expanded Lynnwood Recreation Center. We have grown to a company with over 100 employees. We think that we are a company that most cities would love to have within their borders.

When we decided to build our own building several years ago, we looked at several locations. We were happy to find our current location on Cedar Valley Road. We liked the access to the Park and Ride, access to freeways, the close proximity to Scriber Creek Park, the quiet residential adjacent neighborhoods, the Interurban Trail and all the greenbelt around us. During our building process we spent thousands of dollars on native growth area restoration and wet land buffers on the edges of our property. We gladly did this as it was clear that this would only enhance the natural park like environment of this neighborhood.

Now we find out that Lynnwood Link Extension Options C-1 and C-2 will mean an elevated concrete structure coming right down the side of 52nd Ave W and Cedar Valley Road. How can this even make sense? These two options destroy homes and businesses. Even if your home or business is not destroyed by this project, what results is an ugly towering concrete structure right through the neighborhood. The proposed Light Rail from Northgate to Lynnwood closely follows the I-5 alignment except for Options C-1 and C-2. Why would the line deviate from I-5 in Lynnwood? Option C-3 (and C-4) would follow the I-5 alignment on mostly vacant land, with the least impact to homes and businesses. These options would also preserve Scriber Creek Park.

Who would want to have this concrete monster in front of their home or business? The noise will be unbearable, especially on the proposed curved track. These concrete structures will eventually be covered with graffiti and this

neighborhood will become a low rent industrial wasteland. Property values will be diminished and the city of Lynnwood will lose a very nice part of this town. This a critical decision for the future of our community.

The only sensible solutions are the C-3 or C-4 options.

Respectfully Submitted,

Michael J. Mayes, P.E. | President
mmayes@mayestesting.com
Tel: 425.742.9360 | Cell: 206.354.1060 | FAX: 425.745.1737

MAYES TESTING ENGINEERS, INC.
www.mayestesting.com
Main: 20225 Cedar Valley Rd, Ste 110 | Lynnwood, WA 98036 |
425.742.9360
Tacoma: 10029 S Tacoma Way, Ste E-2 | Tacoma, WA 98499 |
253.584.3720
Celebrating 10 years in Portland: 7911 NE 33rd Dr, Ste 190 | Portland, OR 97211 | 503.281.7515

<image004.jpg><image005.jpg> Connect with us
This transmittal is intended for the individual/agency so named and may contain proprietary or other information confidential in nature. If you received this transmittal in error, or if the delivery of this document to the individual/agency so named is in error, please destroy this document in its entirety and notify the sender immediately.

Gmail by Google

maryellen walsh <tambosassy@gmail.com>

Lynnwood Link and Disproportionate Impact of Alternative Routes C1 and C2

Sat, Sep 7, 2013 at 10:59 PM

[Quoted text hidden]

Begin forwarded message:

From: maryellen walsh <tambosassy@gmail.com>
Date: September 6, 2013 12:20:00 AM PDT
To: somers.elaine@epa.gov
Cc: maryellen walsh <tambosassy@gmail.com>
Subject: Lynnwood Link and Disproportionate Impact of Alternative Routes C1 and C2

Dear Ms. Somers:

A 60 day comment period is simply not enough time for most members of the pubic to review, understand and then comment on the DEIS which, with its supporting technical reports, is more than 2000 pages in length. Further, the DEIS was published at the end of July and the comment period ends on September 23. Many people are on vacation. Lynnwood's City Council has been on hiatus, and many government agencies have shortened schedules and have not been available to answer our questions.

PERPLEXING PUBLIC COMMENT PERIOD

In addition to being too short, the DEIS public comment process is confusing by its references to two alternative C1 routes and two alternative C3 routes. It is impossible to tell where each route begins and ends. This review is made even more difficult because the Technical Reports almost never specifically cite to the sources or studies that supposedly support the analysis and conclusions, and even then the Technical Reports contradict each other.

INADEQUATE CHOICES

The number of alternatives are insufficient and limited to a false choice among routes that cross protected wetlands and in one or possibly two alternatives under C1, a (4f) protected property, Scriber Creek Park, that was purchased with Conservation Futures funding. The City of Lynnwood and Sound Transit did not even know the source of the park's funding until the last week in August. Further, it has yet to be determined whether the wetlands in alternatives C2 and C3 were also purchased with Conservation Futures funding because the maps provided in the DEIS, the City's maps of the same areas, and the naming conventions used in these maps differ depending on who created them.

NEPA requires that an EIS offer a wide-range of reasonable alternatives so that the decision-makers and the public can see and evaluate the various environmental trade-offs involved before deciding on a particular course of action. Neither alternatives C1 nor C2 are reasonable. C3 seems like the most

reasonable alternative because it may (it's hard to tell from the DEIS) impinge the least on the wetlands. However, those wetlands may have been bought with Conservation Futures funding. Again, the maps are inconclusive.

The DEIS's authors did not even attempt to find alternatives that addressed transportation demand in ways other than tearing apart a neighborhood, a park and wetlands.

MISSING AND INCOMPLETE PARTS

The DEIS chose to put off or ignore the legally required analysis regarding several key aspects of this project's environmental impacts. As for the analysis the DEIS does include, it is often misleading, contradictory and so perfunctory that it doesn't make any sense as follows:

The DEIS fails to provide any real useful information regarding impacts to ecosystems, and its Technical Report also offers almost no specific analysis or citations to scientific research or sources. The DEIS's legally required 4(f) analysis of impacts to public lands is incomplete and fails to justify that such impacts are unavoidable or de minimis. It contains absolutely no detailed or final analysis regarding impacts on the endangered salmon species and trout that use Scriber Creek and fails to even mention the several Native Growth Protection Area signs scattered throughout the properties impacted by C1 and C2.

Finally, The DEIS contains an insufficient analysis of the disproportionate impacts of the project on Environmental Justice populations (routes C1 and C2 consist of diverse communities), including adverse effects from noise and air pollution, not to mention the psychological impact of having half the neighborhood bulldozed to the ground and replaced with a concrete jungle that will be begging for Graffiti.

Thank you so much for any help you can provide as our neighborhood is severely distressed and mystified as to why these are the only routes under consideration.

Maryellen Walsh
(425) 776-5374

Linda Willemarck's comments on DEIS.pdf
143K

TO WHOM IT MAY CONCERN;

I-267-001 PLEASE SELECT OPTION C-1 FOR THE LINK LIGHT RAIL. I BELIEVE THIS WOULD BE THE BEST SELECTION FOR LYNNWOOD.

THANK YOU, Joel Williams 9/5/13

I-267-001

Thank you for your comment stating a preference for Alternative C1.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: IEVA WEMA

ADDRESS: 11919 79TH PLACE #703,

CITY: KIRKLAND STATE: WA ZIP CODE: 98033

EMAIL ADDRESS: IEGITE@HOTMAIL.COM

☑ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-268-001

The Latvian Center has been an important part of not only my life, but my parents and every Latvian that I know. It would greatly saddden me & my community if for some reason we couldn't attend the church or the Latvian centers services anymore. I would like to see changes made in the plan of the project, so that it doesn't impact the Latvian center = Latvian community. Without the center I don't know where I would go to "my own" church & services as well as help out & volunteer w/ the center.

Sincerely,

Ieva Wema

SOUNDTRANSIT RIDE THE WAVE

I-268-001

Thank you for describing the importance of the church and center to your family and community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Buco4u@aol.com
Sent: Thursday, September 12, 2013 6:35 PM
To: Lynnwood Link DEIS; lianadberzins@gmail.com
Subject: Latvian Hall (Nams) in Seattle

Being blessed with a few friends that are Latvian I just have to say that everyone of them I have ever spoken to at any length has talked about the Latvian Hall (Nams) in Seattle without fail. They all speak of this place as if it is like their own home but with many more wonderful memories, experiences and time spent there then could ever be had at one's own home.

I-269-001 It would just be a shame to see any of this historical property with so many peoples wonderful memories lost!

Sincerely,
David Anderson

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I-269-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Andrew R. Abolins, M.D.

ADDRESS: 9405- 17th Ave. N.E.

CITY: Seattle **STATE:** WA **ZIP CODE:** 98115

EMAIL ADDRESS:

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

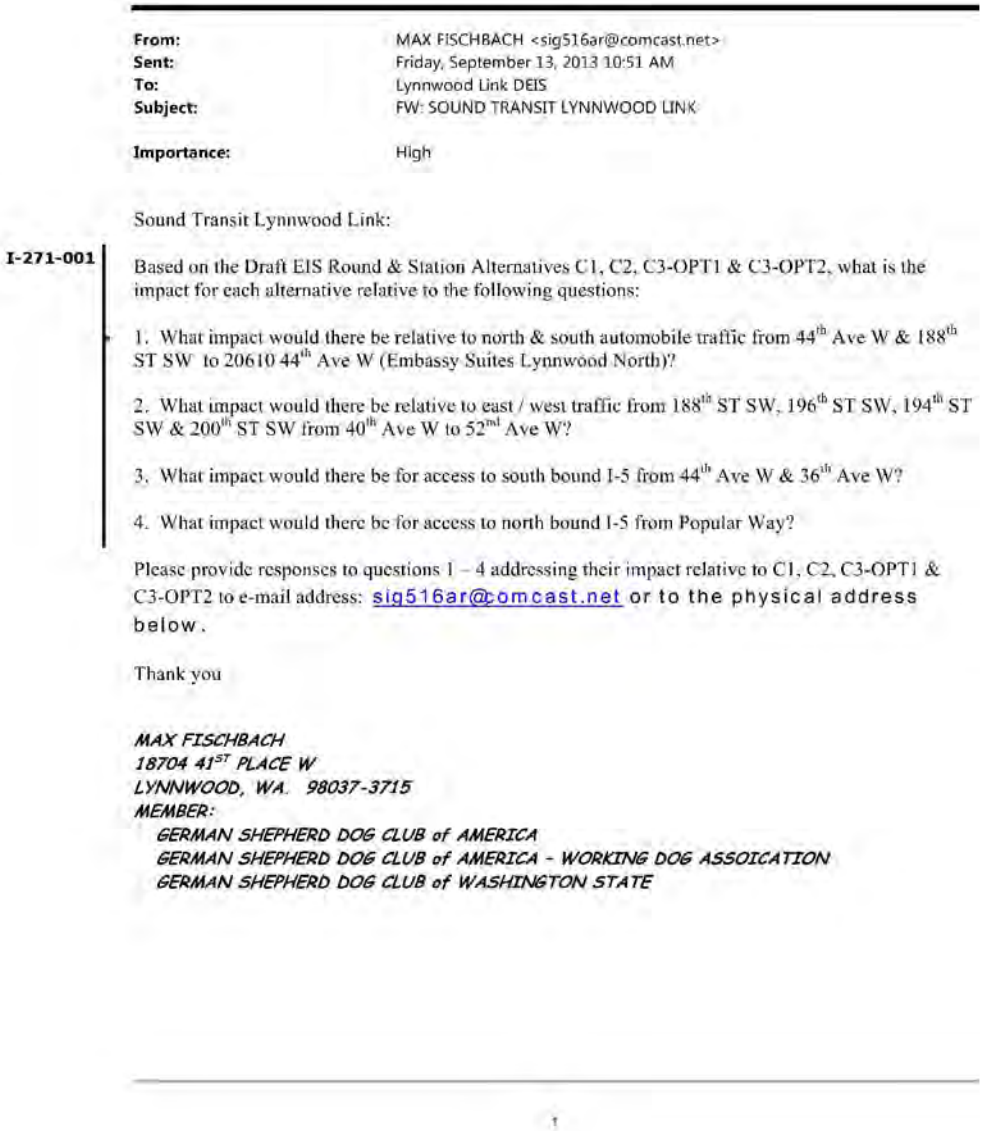
Comments

I-270-001 Your proposal to displace our Seattle Latvian Lutheran Church is unacceptable. This is not the first time we have been forced to move. But this site we built up ourselves and has grown to support the entire local Baltic community. You may consider this an ethnic church with some members residing some distance away. I believe the majority factored in proximity and access to church when deciding upon their place of residence. It is an extension of our homes. If you take away this one building, you will also be asking hundreds of people to consider moving. Again. You may have that legal right, but you would be wrong to do so.

SOUNDTRANSIT RIDE THE WAVE

I-270-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.



From: MAX FISCHBACH <sig516ar@comcast.net>
Sent: Friday, September 13, 2013 10:51 AM
To: Lynnwood Link DEIS
Subject: FW: SOUND TRANSIT LYNNWOOD LINK

Importance: High

Sound Transit Lynnwood Link:

I-271-001

Based on the Draft EIS Round & Station Alternatives C1, C2, C3-OPT1 & C3-OPT2, what is the impact for each alternative relative to the following questions:

1. What impact would there be relative to north & south automobile traffic from 44th Ave W & 188th ST SW to 20610 44th Ave W (Embassy Suites Lynnwood North)?

2. What impact would there be relative to east / west traffic from 188th ST SW, 196th ST SW, 194th ST SW & 200th ST SW from 40th Ave W to 52nd Ave W?

3. What impact would there be for access to south bound I-5 from 44th Ave W & 36th Ave W?

4. What impact would there be for access to north bound I-5 from Popular Way?

Please provide responses to questions 1 – 4 addressing their impact relative to C1, C2, C3-OPT1 & C3-OPT2 to e-mail address: sig516ar@comcast.net or to the physical address below.

Thank you

MAX FISCHBACH
18704 41ST PLACE W
LYNNWOOD, WA. 98037-3715
MEMBER:
GERMAN SHEPHERD DOG CLUB of AMERICA
GERMAN SHEPHERD DOG CLUB of AMERICA - WORKING DOG ASSOICATION
GERMAN SHEPHERD DOG CLUB of WASHINGTON STATE

I-271-001

Chapter 3 of the Final EIS details the performance of more than 20 intersections that Sound Transit and the City of Lynnwood identified for detailed analysis, as well as potential mitigation for impacts for each of the alternatives. The assessments were based on predictions of future traffic with and without the project, particularly in the areas where existing or future conditions already created traffic problems in the No Build condition, and where station area traffic would result in an increase. For the Preferred Alternative, Sound Transit identified improvements to mitigate congestion on 200th Street SW, including 44th Ave W. Traffic along 52nd or 188th Street SW is not expected to markedly change due to the project.

Impeach Obama

GO AHEAD, JUST TRY & TAKE IT, ***OR***

"UBERLEBEN ZU KÄMPFEN AN EINEM ANDEREN TAG" [LIVE TO FIGHT ANOTHER DAY]

"YOU EITHER HAVE A GERMAN SHEPHERD DOG, OR YOU HAVE SOMETHING FAR LESS!"

From: Dan Kirkpatrick <danielrodgerskirkpatrick@gmail.com>
Sent: Friday, September 13, 2013 10:25 AM
To: Lynnwood Link DEIS
Subject: Please put a light rail station at 145th

I-272-001 I live near there and look forward to being able to walk to the freeway and catch the light rail.

Thank you,

Dan Kirkpatrick
14303 Corliss Ave N

206 861 9543

1

I-272-001

Thank you for your comment supporting a light rail station at NE 145th Street under the following alternatives: A1, A3, A10, and A11.

From: Janis Klavins <jklavins@hotmail.com>
Sent: Friday, September 13, 2013 12:39 AM
To: Lynnwood Link DEIS
Subject: Latvian Church/Center

Greetings Seattle Sound Transit Organization,

My name is Janis Klavins, and my Latvian heritage is of great importance to me. The Seattle Latvian Lutheran Church/Center has been and continues to be an integral part of my life. It is a place of worship and education that has fostered Latvian Seattle residents to become pillars of the Latvian as well as the local American community.

I-273-001 Please reconsider placing the light rail in the parking lot, as it will make the church and center unusable for its members.

Regards,

Janis Klavins

1

I-273-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Parking supply would also be maintained but would be modified by the realigned street entrances.

From: Roberts Kukainis <roberts@kukainis.com>
Sent: Friday, September 13, 2013 9:18 AM
To: Lynnwood Link DEIS
Subject: Latvian Lutheran Church and Community Center - Light Rail proposal

Re: Latvian Lutheran Church and Community Center - Light Rail proposal

Good afternoon -

I have visited the Latvian Lutheran Community center about 5 times in the last 10 years. Each of these times I have seen an increasing amount of activity, and higher participation level, than at previous events at the Center.

I-274-001 Although I live far from Seattle - 10 states away - it is apparent that the light rail plans and their effect on the Seattle Latvian Church and Center have caused a lot of concern among the Latvian Center members/participants. I am writing to request that you fully consider their opinions during the evaluation process about the effect of these plans on the Center's operations.

Thank you for your consideration, even of this e-mail from an out-of-area out-of-stater!

Roberts Kukainis

Roberts Kukainis
roberts@kukainis.com
Tel # (864) 434-1656

I-274-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Mara Lazdins <mlazdins@gmail.com>
Sent: Friday, September 13, 2013 5:32 AM
To: Lynnwood Link DEIS
Subject: Sound Transit Board - Lynwood Link Extension

To Whom It May Concern:

I am writing in response to the proposed Lynwood Link Extension project. It is my understanding that this rail extension, would impact the Seattle Latvian Evangelical Lutheran Church & Center.

My husband was born and raised in Seattle. I met him for the first time at the Seattle Latvian Evangelical Lutheran Center. The American Latvian Youth Association held one of our board meetings at the center, which was followed by a social evening for Latvian youth and their friends.

This place holds deep meaning for my husband's family, friends - and now us, as a couple. It holds deep meaning to the Latvian community both in Seattle and throughout the United States. Every major city in the US has a Latvian Center like the one that the Lynwood Link Extension is putting at risk. These centers are where we all (including myself growing up in Michigan), went to Latvian school as children, where we were baptised, confirmed, and married.

Although I am not a resident of Seattle, every time we visit my husband's family, there is some kind of function at the Center. We look forward to spending time at the Center, watching Latvian folk dancing, talking with family and friends and celebrating our culture and history.

I-275-001 Please consider and alternate route for this rail extension project. The impact this would have on the local Latvian community would be devastating. I cannot imagine if this happened to the Latvian center where I grew up.

The Latvian culture is a strong one. For Latvians who fled during the Soviet occupation and created new lives for themselves in the United States, this center is their home. It is not just brick and mortar. It holds deep cultural, spiritual meaning and I urge the Sound Transit Board to reconsider its extension plan.

Thank you for your time and consideration.

Regards,

Mara Lidacis

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I-275-001

Thank you for your personal comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, the larger Baltic community, and those interested in Scandinavian studies. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Danute Musteikis <danutemusteikis@gmail.com>
Sent: Friday, September 13, 2013 9:40 AM
To: Lynnwood Link DEIS
Subject: Latvian Center, Seattle , WA

I am writing you in response to your proposed transit changes which would impact the Latvian Center. Because we presently live in Olympia, it is difficult to attend meetings in Seattle regarding the proposed transit plans.

We(a Latvian/Lithuanian heritage family) have been regularly attending cherished functions at the Latvian Center since 1985. We have participated in weddings, funerals, yearly Independence Day commemorations and other joyful festivities such as St. Martin's Eve with the 3 Baltic communities and extended friends. One of our children was married at the Latvian Center's church. Our children have grown up with a strong connection to this place, and our hope is that our grandchildren will, too. There is a particularly unique motif at the Latvian Center which unites our distinct cultures. If you just step into the welcoming entry way, you may feel it too; the echoes of generations simply and powerfully sharing life.

I-276-001 It would be a great shame to eviscerate this strong cultural bond, especially if other avenues for transit are available. Like the old song says, are you going to "pave paradise and put up a parking lot?"

Thank you for reading this.

Sincerely,

Danute Musteikis-Rankis & extended family

1

I-276-001

Thank you for describing the personal and cultural significance of the church and Latvian center to you and your family. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Corine Schmidt <mlw39.cks40@gmail.com>
Sent: Thursday, September 12, 2013 4:09 PM
To: Lynnwood Link DEIS
Subject: Scriber Park

I-277-001 To destroy this wonderful natural environment that is a real gem and used by so many people and is the home to wildlife would be unforgivable. This option must be off the table NOW. Corine Schmidt

1

I-277-001

Thank you for your comment regarding Scriber Creek Park and the potential impacts of Alternative C1. The Sound Transit Board has identified a modified Alternative C3 as the Preferred Alternative, avoiding the impacts to the park.

September 11, 2013

Laura Swift
401 S. Jackson Street

Seattle, WA 98104

I-278-001

My name is Rolands Juris Abermanis. I am a member of The Seattle Latvian Evangelical Lutheran Church/Center. By now I'm sure your knowledge of the history of displaced Latvians is broadened significantly and I would like to share my concerns for the proposed plans for our church and community center. My parents fled their homeland of Latvia in the midst of WW II. They were very fortunate to be able to come to the United States of America to restart their lives. They settled in Detroit, Michigan and with other members of the Latvian community organized and established their church and community center, as displaced Latvians did all over the country. I was born in Detroit and for the first 4 -5 years of my life knew only one language, Latvian. I graduated from our local Latvian school, participated in our local folk dancing group and made lifelong friends. After finishing college in Louisiana, my wife and I started our family. Our children Andris and Helena were born in New Orleans. The total Latvian population in New Orleans, including our family of four, was six. Our Latvian heritage and culture would have probably come to an end if we had remained in Louisiana. My wife Jennifer and I wanted to give our children the memorable experience of learning the Latvian language along with traditions and cultural rituals that can only be experienced in a Latvian cultural center. That chance came when my wife's work offered us a move to Seattle. We immediately became members of the Latvian community in 1997. I gave up a career of 16 years in the petroleum industry so that my children would have the same opportunity that I had. Our family has now been a member of The Seattle Latvian Evangelical Lutheran Church/Center for more than 16 years. My children have graduated our Latvian school, know the language, and have made lifelong friends in "THEIR" Latvian community. Latvians have been displaced from our country of origin by the Soviet regime and now by their adopted homeland, specifically Seattle Washington. is planning on displacing us once more. Losing or altering our place of worship and cultural center will be to some elderly the last straw. For many of our elderly, this is a repeat performance of what happened to our original cultural center in 1969, to build of all things "a playfield". You know our stories and many of them sound very familiar. We "Latvians" are a very proud and hardworking people we will survive. Thank You. Awaiting your reply.

Respectfully,

Rolands Juris Abermanis

17428 93rd Ave NE

Bothell, WA 98011

I-278-001

Thank you for describing the importance of the church and community center to your family. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: MARKUS ALOIS ANDREJEVS

ADDRESS: 3818 - 228TH PL. SW

CITY: BRIER STATE: WA ZIP CODE: 98036

EMAIL ADDRESS: MARKUSAAA@HOTMAIL.COM

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I HAVE BEEN A MEMBER OF THE LATVIAN COMMUNITY AND LUTHERAN CHURCH ALL MY LIFE. IN FACT, MY GRANDPARENTS HELPED BUILD THE COMMUNITY CENTER / CHURCH AND MY PARENTS MET HERE WHILE THEY WERE BOTH MEMBERS OF THE FOLK DANCE GROUP "TREJDEKSNITIS". I HAVE ATTENDED SCHOOL HERE, GONE TO CHURCH SERVICES, DANCED IN THE FOLK DANCE GROUP, SANG, PERFORMED IN TWO PLAYS, GONE TO CHRISTMAS BAZZARS, ATTENDED BOARD MEETINGS FOR THE WEST COAST LATVIAN EDUCATION CENTER, WEDDINGS, CHRISTENINGS, FUNERAL SERVICES, MOVIE NIGHTS, HEARD GUEST SPEAKERS, CONFRENCES, PARTIES, RUMMAGE SALES, ATTENDED POLITICAL EVENTS, AND EVEN ATTENDED OTHER BALTIC STATES EVENTS.

I-279-001 THIS CENTER SERVES AS A CULTURAL AND RELIGIOUS HUB FOR MANY PEOPLE UP AND DOWN THE WEST COAST. PLEASE DON'T TAKE AWAY OUR COMMUNITY CENTER!! THERE MUST BE AN ALTERNATIVE TO SATISFY ALL GROUPS INVOLVED.

SINCERELY, MARKUS ANDREJEVS

SOUNDTRANSIT RIDE THE WAVE

I-279-001

Thank you for describing the importance of the church and community center to your family. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Osha Andrejevs

ADDRESS: 3818 228th Place SW.

CITY: Brier STATE: WA ZIP CODE: 98036

EMAIL ADDRESS: osha.andrejevs@gmail.com

☐ Please sign me up for project email updates

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Comments

I was not born into the Latvian community, but rather adopted by it. When my husband and I met 15 years ago our first date was a New Year's Ball at the Latvian Community Center. My first hint that this community was a very close knit family was when my date turned to me at midnight and excused himself so he could go to the next table and wish his grandparents (and all of the other members of the older generation) a happy new year. From that night on I knew that the Seattle Latvian community was the most supportive, connected, intergenerational community I had ever seen or heard of. I was quickly adopted into this family of over 700 core members despite my lack of knowledge of their culture or language. Since my adoption I have been patiently taught about culture, dance (I have been an active member of Trediksnis folk dance group for over a decade), the importance of human connection, and even a few latvian phrases:). None of these things would have been possible and I would be a cultural orphan in this city without the Latvian church and community center. This place is where I learned about family, heart, and the Latvian culture, and continues to be one of the only places I feel truely at home and accepted as I am. At the Latvian Community Center I have a purpose greater than myself.

I-280-001

SOUNDTRANSIT RIDE THE WAVE

I-280-001

Thank you for describing the cultural importance of the Latvian Evangelical Lutheran Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Kathy Annas <kathyxst@comcast.net>
Sent: Thursday, September 19, 2013 11:00 AM
To: Lynnwood Link DEIS
Subject: Lynnwood Light-rail Links

I-281-001 Please register our preference for option C-3 as the location for the Lynnwood Light-rail link. This is the clear choice for me and the 3 registered voters who live at my house (husband and 2 adult children).

Thank you, Kathleen Annas

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I-281-001

Thank you for your comment stating your preference for Alternative C3.

Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Mara Apsitis

ADDRESS: 14030 69th Ave SE

CITY: Snohomish STATE: WA ZIP CODE: 98296

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-282-001

The Latvian Center has been a part of my life since before I can remember. It is hard to separate my life from the Latvian community. My dad grew up here and my mom joined him when she moved here from Latvia. My grandfather also helped build the Center. I feel like I have a community that I belong to, which is facilitated by this Center. Here we have a place to gather which accomodates a range of activities from Latvian card game night to a New Year's Eve dance party. Here we have a place to come together. I attended Latvian school here and remember the plays we put on, the Latvian poems that we memorized and delivered. My friends from school have come and gone now that I am in college, but my Latvian friends have lasted. I feel like they will be there for me, always, no matter what. It would be exceedingly difficult to meet with all of them if the Latvian Center no longer existed in the capacity that it does now.

SOUNDTRANSIT
RIDE THE WAVE

I-282-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Banionis, Arunas D.O. <abanionis@thedoctorsclinic.com>
Sent: Tuesday, September 17, 2013 1:32 PM
To: Lynnwood Link DEIS
Subject: Seattle Latvian Center

Dear Sound Transit Staff:

I am a member of the Lithuanian-American community of Seattle. Our country has been built by immigrants from many countries to include those from the Baltic States of Lithuania, Latvia and Estonia. Immigrants from these nations have made many significant contributions to our country over the last several centuries. My parents were forced to leave their homeland of Lithuania due to the ravages of WWII and were welcomed warmly in their newly adopted country of America. My own mother who is Lithuanian was first welcomed to freedom in a Latvian Displaced Person camp in post WWII Germany and attended a Latvian school. Such gathering places such as the Seattle Latvian Center have maintained that same tradition and welcome new immigrants. These centers have been integral in integrating new immigrants into the American mainstream.

Upon arrival to the United States, my parents were welcomed warmly in a facility that is almost identical to the Seattle Latvian Center. In almost every major American city there are community centers and churches that were founded by Baltic immigrants. They have served as a welcoming place to individuals who wished to preserve their cultural heritage. Such community centers played an integral part in facilitating the independence movement in these countries in the late 80s and early 90s that led to independent democratic states of Lithuania, Latvia and Estonia. Schools, folk dance groups and other organizations flourish around these types of centers. Existence of this center was key for establishment of the Baltic Studies program at the nearby University of Washington. The City of Seattle takes pride in the accomplishments of all of its immigrants, yet now a major construction project threatens the very existence of the Seattle Latvian Center.

I-283-001

It has come to my attention that the Seattle Latvian Center could be closed for an extended period of time due to construction of a light rail line or even outright closed. This center plays a vital role for the Baltic community here in the greater Seattle area. In these difficult economic times it is not feasible to just to "pull up the stakes and set up camp elsewhere". I kindly request that integrity of the Seattle Latvian Center be maintained and that adequate parking and access be allowed during these difficult times. A forced relocation or closure of this facility would be a terrible blow to the Seattle Baltic community. I strongly urge you to keep the Latvian Center open as it plays a significant role in our community.

With kindest regards,

Arunas T. Banionis, D.O.

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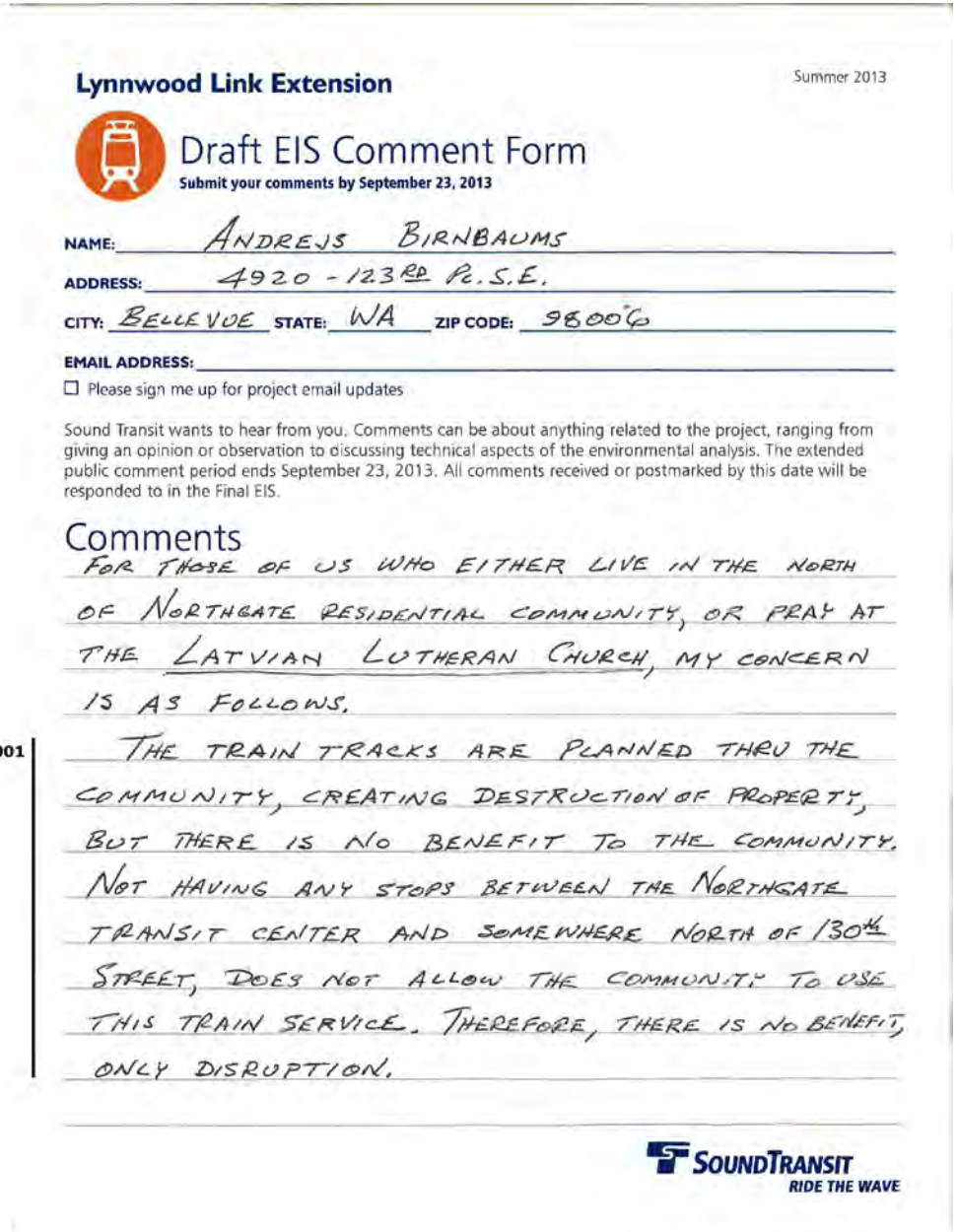
I-283-001

Thank you for describing the cultural and personal importance of the church and community center. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: ANDREJS BIRNBAUMS

ADDRESS: 4920 - 123RD Pl. S.E.

CITY: BELLEVUE STATE: WA ZIP CODE: 98006

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

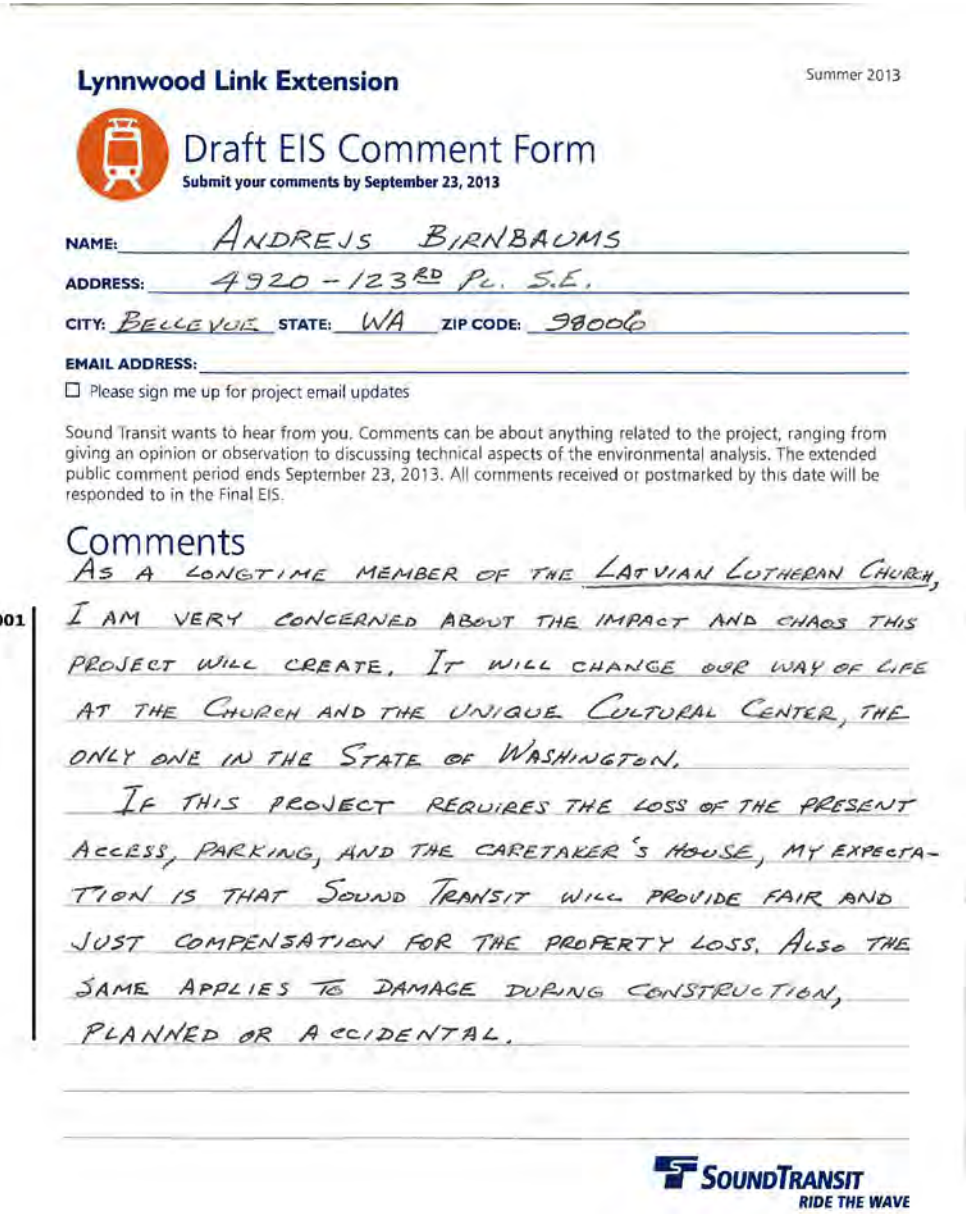
FOR THOSE OF US WHO EITHER LIVE IN THE NORTH OF NORTHGATE RESIDENTIAL COMMUNITY, OR PRAY AT THE LATVIAN LUTHERAN CHURCH, MY CONCERN IS AS FOLLOWS,

I-284-001 THE TRAIN TRACKS ARE PLANNED THRU THE COMMUNITY, CREATING DESTRUCTION OF PROPERTY, BUT THERE IS NO BENEFIT TO THE COMMUNITY. NOT HAVING ANY STOPS BETWEEN THE NORTHGATE TRANSIT CENTER AND SOMEWHERE NORTH OF 130TH STREET, DOES NOT ALLOW THE COMMUNITY TO USE THIS TRAIN SERVICE. THEREFORE, THERE IS NO BENEFIT, ONLY DISRUPTION.

SOUNDTRANSIT RIDE THE WAVE

I-284-001

Thank you for your comment. The Lynnwood Link Extension light rail project is designed to be a benefit to all who travel the corridor between Northgate and Lynnwood. The potential station at NE 130th Street is approximately 0.7-0.8 miles north of the Latvian Evangelical Lutheran Church, while the Northgate Station is approximately 1.5 miles south of the church, but with bus service, or by bike, walking, or by car, the station would be accessible to church or center users. Bus services may also be realigned to better serve the rail station, which may help improve transit access; however, any bus realignment would be determined by King County Metro.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: ANDREJS BIRNBAUMS

ADDRESS: 4920 - 123RD PL. S.E.

CITY: BELLEVUE STATE: WA ZIP CODE: 98006

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-285-001

AS A LONGTIME MEMBER OF THE LATVIAN LUTHERAN CHURCH, I AM VERY CONCERNED ABOUT THE IMPACT AND CHAOS THIS PROJECT WILL CREATE. IT WILL CHANGE OUR WAY OF LIFE AT THE CHURCH AND THE UNIQUE CULTURAL CENTER, THE ONLY ONE IN THE STATE OF WASHINGTON.

IF THIS PROJECT REQUIRES THE LOSS OF THE PRESENT ACCESS, PARKING, AND THE CARETAKER'S HOUSE, MY EXPECTATION IS THAT SOUND TRANSIT WILL PROVIDE FAIR AND JUST COMPENSATION FOR THE PROPERTY LOSS. ALSO THE SAME APPLIES TO DAMAGE DURING CONSTRUCTION, PLANNED OR ACCIDENTAL.

SOUNDTRANSIT RIDE THE WAVE

I-285-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describing the acquisition impacts; Section 4.4 describing impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including portions of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

From: Jonathan Blubaugh <aracfi@msn.com>
Sent: Friday, September 13, 2013 12:32 PM
To: Lynnwood Link; Lynnwood Link DEIS
Cc: Kathleen Snyder; Terry Nightingale; Susie Schaefer; suemiller1@gmail.com; Qinglin Ma
Subject: Friday webcast

Gentlepeople,

I-286-001

I just learned about the three Lynnwood alternatives during a nature walk I gave at Scriber Lake Park on Sunday in conjunction with Edmond's Puget Sound Bird Festival. We quickly collected 28 signatures supporting Alternative C3 because of its minimal impact on Scriber Creek Park. Of the 28 signatories eleven separate municipalities are represented in Snohomish and King Counties. So like the light rail itself, the park is not just a town asset, but a regional asset.

The Environmental Project Engineer stated during today's webcast that C3 has little or no impact in Scriber Lake Park.

I am requesting the Pilchuck Audubon Society Board of Directors to take a position supporting C3.

I will mail in the petitions this afternoon.

Jonathan Blubaugh
425-244-7366

Sent from Windows Mail

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I-286-001

Thank your for your comment stating your preference for Alternative C3.

Petition to Save Scriber Creek Park and the Wetlands
Say NO to Alternatives C1 and C2

The signers of this petition are opposed to Alternatives C1 and C2 routes for the Sound Transit Link Light Rail Lynnwood Extension because these alternatives would have the most significant negative environmental impacts to Scriber Creek Park and its associated forested wetlands and wildlife habitat and quality of life of the residents in the area.

Signature	Printed Name	Address	Phone	Email
Douglas Resnick	Douglas Resnick	7802-185th Pl. SW, Edmonds	425-776-4811	dresnick1@comcast.net
Lisa Bourgon	Lisa Bourgon	621 NW 178th Pl Shoreline	206 546 0411	labourgon@yahoo.com
Robert Bourgon	Robert Bourgon	621 NW 178th PL Shoreline	206 546 0411	Robert.bourgon@sbcglobal.net
Sharon Sneddon	Sharon Sneddon	510 Forsyth Lane	425.776.4478	
Judy Borer	Judy Borer	Auburn WA 12725 SE 312th	206.433.7349	grannyjude326.yahoo
Michele M. Riordan	Michele M. Riordan	507 NE Northgate Way #348 Seattle, WA 98125	206-351-1929	
Patrice VanDuine	Patrice VanDuine	105 232nd Pl SW Bothell WA 98021	2066692479	pvanduine@comcast.net
Charlene Sellhast	Charlene Sellhast	4306 179th PlSW Lynnwood WA 98037	425-787-1667	csellhast@gmail.com
Barbara Hamer	Barbara Hamer	10725 244th St SW Edmonds 98070	206-542-4666	barbhamer@gmail.com
Lynne Graber	Lynne Graber	7950 SE 63rd Pl. Mercer Island 98040	206-232-9074	
	Robert Berah	4305 256th St SW Mountlake Terrace, WA 98043	607-468-7469	

Petition to Save Scriber Creek Park and the Wetlands
Say NO to Alternatives C1 and C2

The signers of this petition are opposed to Alternatives C1 and C2 routes for the Sound Transit Link Light Rail Lynnwood Extension because these alternatives would have the most significant negative environmental impacts to Scriber Creek Park and its associated forested wetlands and wildlife habitat and quality of life of the residents in the area.

Signature	Printed Name	Address	Phone	Email
Jay Lloyd Sissin	Gaylloyd Sissin	Kent WA 98031 26436 118th Ave SE	206 353 7793	jgaylloyd@gmail.com
Mona Fairbanks	Mona Fairbanks	8622 202 St SW Edmonds 98026	425-771-5370	
Alyssa Fairbanks	Alyssa Fairbanks	8622 202 St SW Edmonds WA 98026	425-876-1844	
Lisa Aikens	Lisa Aikens	19230 84th Ave W. Edmonds WA 98026	425-775-4778	
Daren Anderson	Daren Anderson	20208 84 Pl West Edmonds WA	425-778-2948	
Bill Anderson	Bill Anderson	" "	" "	billanderson1@yahoo.com
Jonathan Blubaugh	Jonathan Blubaugh	10025 - 9th Av. W, Ste. D101 Everett, WA 98204	425-244-7633	gracefi@msn.com
Jasmin V Schaefer	Jasmin V Schaefer	1055 Edmonds St Edmonds WA 98020	425-771-8165	
Lynette Petrie	Lynette Petrie	430-3rd Ave So	425-712-1574	
Laura Dahlem	Laura Dahlem	21315 80th Ave W Apt 126 Edmonds 98026	314-651-2421	laura.dahlem@bartyrd
Eileen Weintraub	Eileen Lucy	11815 37th Ave NE	LFP WA 98	

Petition to Save Scriber Creek Park and the Wetlands
Say NO to Alternatives C1 and C2

The signers of this petition are opposed to Alternatives C1 and C2 routes for the Sound Transit Link Light Rail Lynnwood Extension because these alternatives would have the most significant negative environmental impacts to Scriber Creek Park and its associated forested wetlands and wildlife habitat and quality of life of the residents in the area.

Signature	Printed Name	Address	Phone	Email
	Clark Cooper	Edmonds 17404 -71st Ave W	425-327-8977	regl cooper@comcast.net
	Jamie Kirk	19725 48th AVE W Apt I1	425-876-9918	Jamiedkirk@yahoo
	Pamela Rentz	10025 9TH Ave W. Everett WA 98204	425 244 3585	Pamrentz@comcast.Net

Petition to Save Scriber Creek Park and the Wetlands
Say NO to Alternatives C1 and C2

The signers of this petition are opposed to Alternatives C1 and C2 routes for the Sound Transit Link Light Rail Lynnwood Extension because these alternatives would have the most significant negative environmental impacts to Scriber Creek Park and its associated forested wetlands and wildlife habitat and quality of life of the residents in the area.

Signature	Printed Name	Address	Phone	Email
Priscilla K Krueger	Priscilla K Krueger	21306 95th Ave W Edmonds 98020	425-640-5464	pkkrueger@comcast.net

Petition to Save Scriber Creek Park and the Wetlands
Say NO to Alternatives C1 and C2

The signers of this petition are opposed to Alternatives C1 and C2 routes for the Sound Transit Link Light Rail Lynnwood Extension because these alternatives would have the most significant negative environmental impacts to Scriber Creek Park and its associated forested wetlands and wildlife habitat and quality of life of the residents in the area.

Signature	Printed Name	Address	Phone	Email
	Qinglin Ma	12920 NE 76th st Kirkland, WA 98033	4253736466	qinglinEric@gmail.com

Petition to Save Scriber Creek Park and the Wetlands
Say NO to Alternatives C1 and C2

The signers of this petition are opposed to Alternatives C1 and C2 routes for the Sound Transit Link Light Rail Lynnwood Extension because these alternatives would have the most significant negative environmental impacts to Scriber Creek Park and its associated forested wetlands and wildlife habitat and quality of life of the residents in the area.

Signature	Printed Name	Address	Phone	Email
[signature]	Terry Nightingale	13724 34th Ave NW Marysville	206-619-2383	tnightepobox.com

Swift, Lauren

From: Jonas Buck <jonasdeltuva@gmail.com>
Sent: Thursday, September 19, 2013 10:46 AM
To: Lynnwood Link DEIS
Subject: Proposed Light Rail Project and the Latvian Center

To Whom It May Concern,

I-287-001 I am a member of the Seattle Lithuanian-American Community and a supporter of mass transit. That said, I would like to express my concerns for the current proposals to build a light rail station adjacent to the Latvian Center in Northgate. First, I do not believe Sound Transit has acknowledged the cultural significance of this site in its planning process. Second, the physical interruption of construction and operation of an overhead light rail line would imperil the ability of community members to celebrate our cultures and traditions.

For all 22 years of my life, the Latvian Community has been gracious to open the Latvian Center to the Lithuanian-American Community for large and small events. Every Sunday, my Lithuanian folk dance group practiced in the basement of Latvian Center for Vasario Sesiuolikta (February 16th), our annual Lithuanian Independence Day Celebration, which is still held at the Latvian Center. As a former member of the Soviet bloc, we take this celebration very seriously. These events turned into memories are formative to my parallel identities as a Lithuanian and a Seattleite, and I would be disappointed to see the latter cross the former.

I-287-002 Seeing that many cultural groups routinely use the Latvian Center for preparation and celebration, Sound Transit should strive to interrupt these activities as little as possible in the construction and placement of the new light rail line. Please take whatever steps necessary to mitigate noise and destruction both during construction and once the train is running. We would prefer the grade-level

I-287-003 option for this. It is also important that the Latvian Center remain accessible through the maintenance of the caretaker's house and the abundance of parking, so as not to disrupt the neighborhood during events attended by hundreds of people. A seizure of the property by eminent domain - or the disregard of the physical conditions created by construction of a light rail line - would show disrespect for the history and culture of the Baltic States and our diaspora's presence in the United States of America and the Pacific Northwest.

Please consider our community's well-being as we expand connectivity across the region.

Thank you,
Jonas Deltuva Buck

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I-287-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

I-287-002

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below these criteria. Sound Transit's policy is to mitigate moderate or severe impacts as per FTA criteria. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

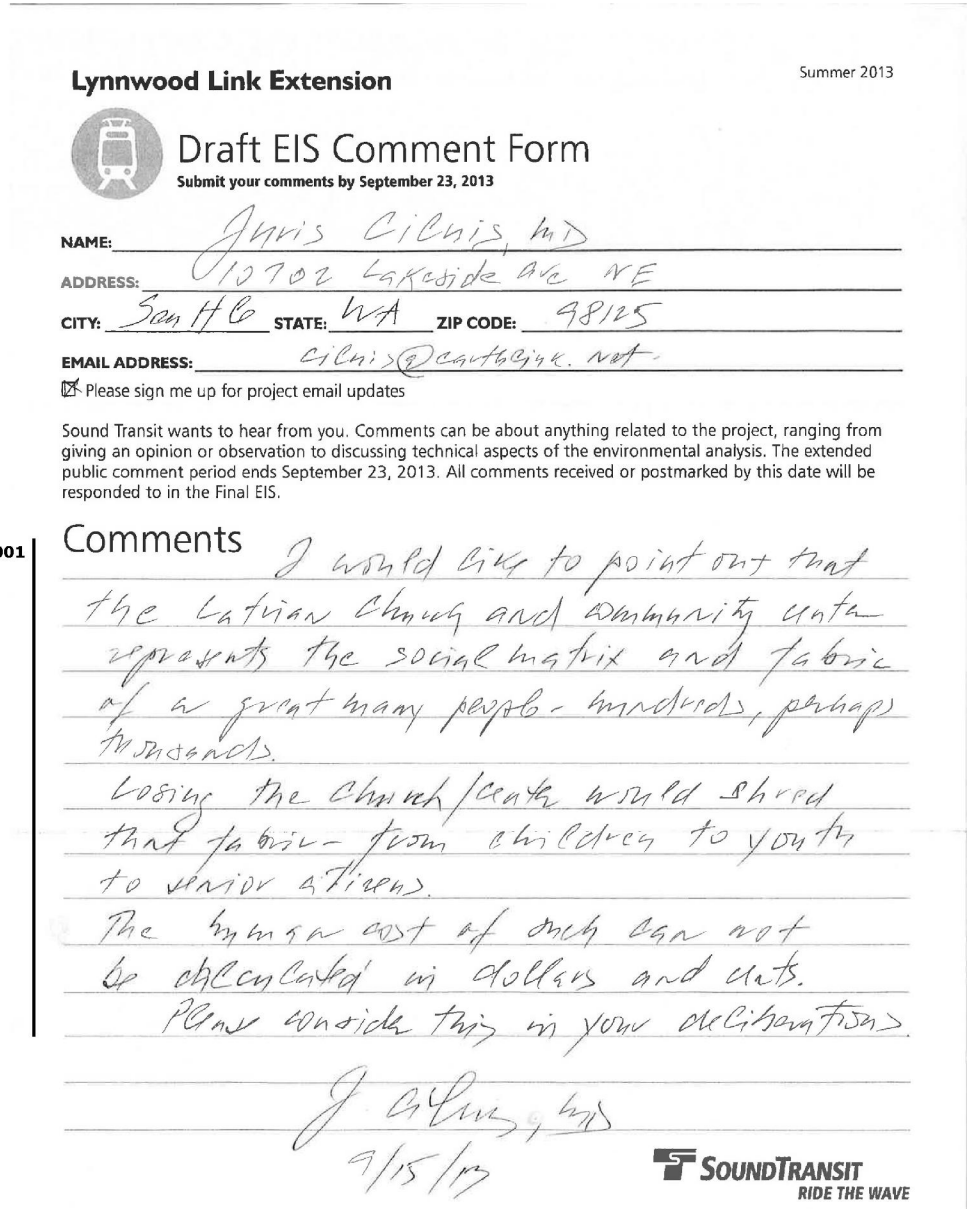
Noise walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. For construction, the local construction noise ordinance would be applicable, and Sound Transit is committed to maintaining construction noise levels within the criteria. Further, construction noise for this project is similar to construction noise for a paving project, building construction, or any other construction projects, and Sound Transit would work with local residences and businesses to minimize construction impacts.

For nighttime construction, which will likely be required due to the heavy volumes of traffic on I-5 and other arterial roads, a noise variance would be required from each of the cities where construction would be performed. During that time, Sound Transit will work with the local

jurisdiction to arrive at construction specifications that minimize construction-related impacts to nearby communities.

I-287-003

Thank you for your comments expressing concern about the potential impacts to the Seattle Latvian Evangelical Lutheran Church property. As mentioned in the response to comment I-287-001 above, Sound Transit has redesigned the Segment A alternatives so that none of them would displace the church or center. The caretaker's residence would need to be relocated due to the realigned roadway, but Sound Transit would provide for the relocation. Parking supply would also be maintained for the church and center.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Juris Cilnis, MD

ADDRESS: 10702 Lakeside Ave NE

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS: cilnis@earthlink.net

☒ Please sign me up for project email updates

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I-288-001

Comments

I would like to point out that the Latvian Church and community center represents the social matrix and fabric of a great many people - hundreds, perhaps thousands.

Losing the church/center would shred that fabric - from children to youth to senior citizens.

The human cost of such can not be calculated in dollars and cents.

Please consider this in your deliberations.

J Cilnis, MD

9/15/13

SOUNDTRANSIT RIDE THE WAVE

I-288-001

Thank you for describing the cultural and social importance of the church and center. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Latviešu Biedrība Vašingtona Štatā

INFORMĀCIJA

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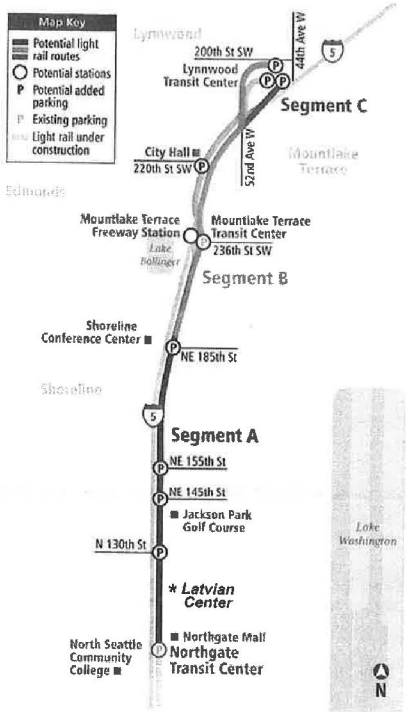


Is this the end of the line for the Latvian Community in Seattle? Will the Latvian Community once again lose its Church and Center?

Reporting begins on page 3

Latvian Society Newsletter
Sept., 2013

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: DOUGLAS & SILVIJA COPELAND

ADDRESS: 20725 121st. Ave S.E.

CITY: SNOHOMISH STATE: WA ZIP CODE: 98296

EMAIL ADDRESS: doug.copelande@hotmail.com

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-289-001

CONTINUED ACCESS TO THE LATVIAN CENTER IN SEATTLE AT 11710 3rd Ave NE IS CRITICAL TO THE FINANCIAL SUSTENANCE OF OUR FACILITY. WE HOST AN ANNUAL RUMMAGE SALE WHICH OFFERS A WIDE RANGE OF HIGH QUALITY GOODS DONATED LARGELY BY MEMBERS. THIS BENEFITS US AND THE GENERAL PUBLIC, AS WELL AS OTHER CHARITIES WHO RECEIVE OUR LEFT-OVER MERCHANDISE. WE HAVE SOLD OVER $200,000 OF GOODS OVER THE PAST 15 YEARS, WITH A STEADY, IMPROVING TREND. THIS WEEK-LONG EVENT TAKES PLACE IN APRIL, AND OUR MANY REPEAT CUSTOMERS EAGERLY ANTICIPATE RETURNING EVERY YEAR.

THUS, AS CHAIRMEN OF THIS SALE FOR THE PAST SEVEN YEARS, WE STRONGLY FAVOR A DESIGN WHICH PRESERVES ACCESS DURING CONSTRUCTION AND MINIMIZES LOSS OF ANY PART OF THE PROPERTY.

Douglas P Copeland Silvija Copeland

SOUNDTRANSIT RIDE THE WAVE

I-289-001

Thank you for describing the importance of the church and center to the community including its financial contributions. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE which avoids the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Memorandum

To: Sound Transit Board, c/o Lauren Swift

From: Ian D. Cotton, PE, LEED AP

Date: 9/19/2013

Re: Lynnwood Link DEIS Comments

I am writing to propose an alternate route to the C1, C2, C3 routes as proposed by Sound Transit in the Draft Environmental Impact Statement.

I-290-001

The routes as proposed by Sound Transit have the following negative impacts:

- C1: Noise, displacement, aesthetics to large Single Family zone community. Wetland and park impacts. Displacement of businesses. Impact to School District property.
- C2: Same as C1.
- C3: Wetland and park impacts. Future impact to multiple businesses as future extension takes route directly into existing hotel. Negatively impacts future development efforts in the Lynnwood City Center.

I-290-002

Please see attached the mark-ups to the Draft EIS drawings C1M-PP03, C2M-PP03 and C3M-PP02. This propose routing has been laid out using the minimum track curvatures as taken from Sound Transit Draft EIS drawings.

This proposed routing is far from Single Family zoned communities, avoids businesses and School District property, minimizes the crossing of the wetlands, and aligns the future extension of the track with a major roadway should voters approve ST3 light rail extensions. In addition this alignment places the station near the bus terminals at the SE corner of the existing bus station preserving existing investment in infrastructure.

Please add this memo and attachments to the record of comments and input for the DEIS comment period ending on September 23, 2013.

Regards,

Ian D. Cotton, PE, LEED AP

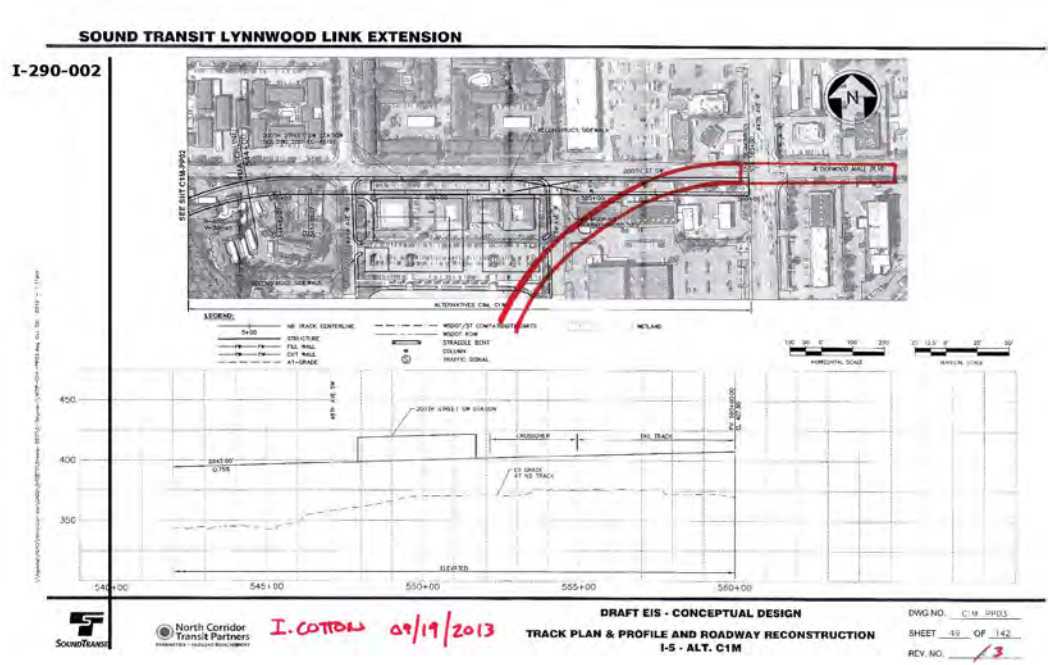
Attachments: Mark-ups to drawings C1M-PP03, C2M-PP03 and C3M-PP02

I-290-001

Thank you for your comment describing your impacts of concern with the three Segement C alternatives evaluated in the Draft EIS.

I-290-002

The proposed alignments for C1 and C2 were not further modified; C3 modifications were considered in developing the Preferred Alternative. See Chapter 2 for a description.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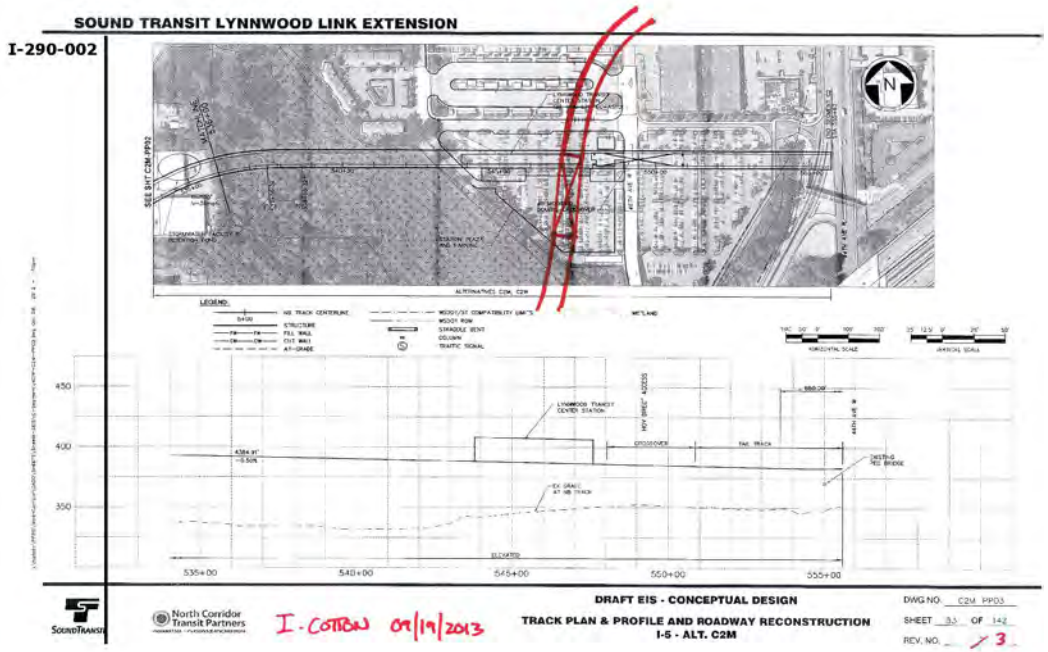
North Corridor Transit Partners
I. COTTON 09/19/2013
DRAFT EIS - CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. C1M
DWG NO. C1M PP03
SHEET 49 OF 142
REV. NO. 3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I-COTTON 09/19/2013
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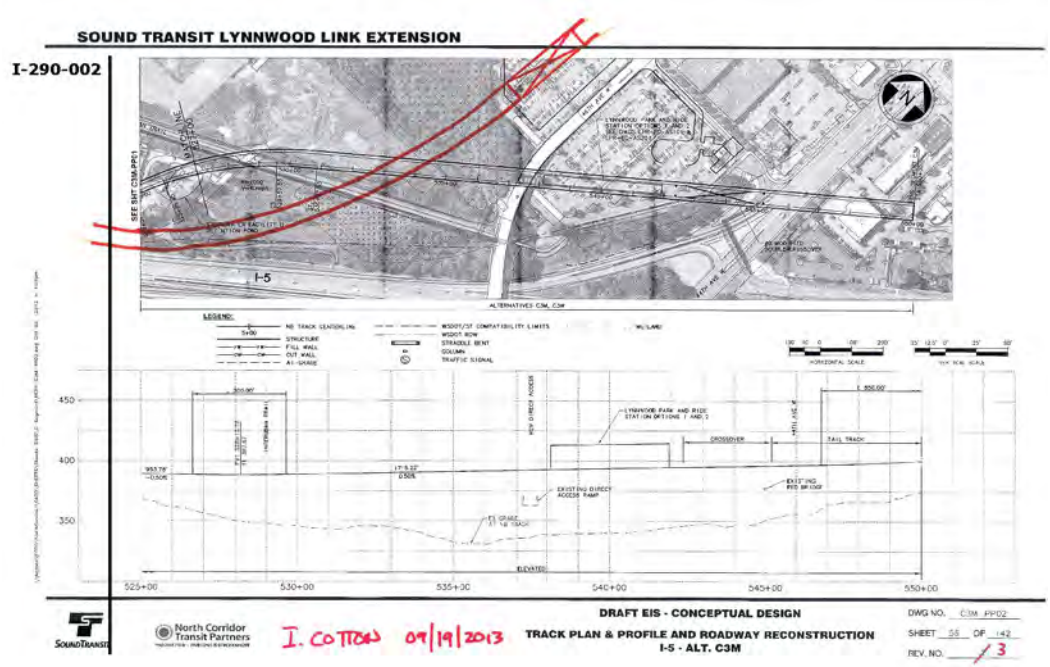
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. C2M
DWG NO. C2M PP03
SHEET 33 OF 142
REV. NO. 3


SOUND TRANSIT LYNNWOOD LINK EXTENSION
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ELEVATED
EXISTING DIRECT ACCESS RAMP
LYNNWOOD PARK AND RIDE STATION OPTIONS 7 AND 8
CROSSOVER
TAIL TRACK
North Corridor Transit Partners
I. COTTON 09/19/2013
DRAFT EIS - CONCEPTUAL DESIGN
TRACK PLAN & PROFILE AND ROADWAY RECONSTRUCTION
I-5 - ALT. C3M
DWG NO. C3M PP02
SHEET 55 OF 142
REV. NO. 3

From: Paul Dermanis <pdermanis@comcast.net>
Sent: Wednesday, December 31, 1969 6:44 PM
To: Lynnwood Link DEIS
Cc: Sarma Davidson
Subject: Light Rail Extension

Gentlemen:

I have been a member of the Latvian Church and Association for many years. I have also practiced architecture in Seattle for more than
40 years and am currently retired. My former firm, Streeter/Dermanis & Associates, did a number of projects for the Department of Transportation.

I-291-001

Concerning the extension of light rail from Northgate to Lynnwood and the impact on the Latvian Community Center, several alternatives are being considered - grade level, elevated, other location.

There is an alternative that to me seems realistic and has not been given sufficient consideration - locating the rails in a depressed ditch covered by a concrete lid - similar to Battery Street tunnel in Belltown. This would eliminate almost all noise and visibility of the trains. The layout of the Latvian Center could remain as it is now with the entrance in the present location.

I think the cost of the depressed alternative will be higher than the
others. It may not be much higher than the elevated alternative.
The way to find out is to do a study with a layout and a cost estimate. Than the additional cost would be known in fairly exact numbers. It is not just the Latvian Center that would benefit from the depressed version. There are many other buildings, residential and commercial, that would also benefit.

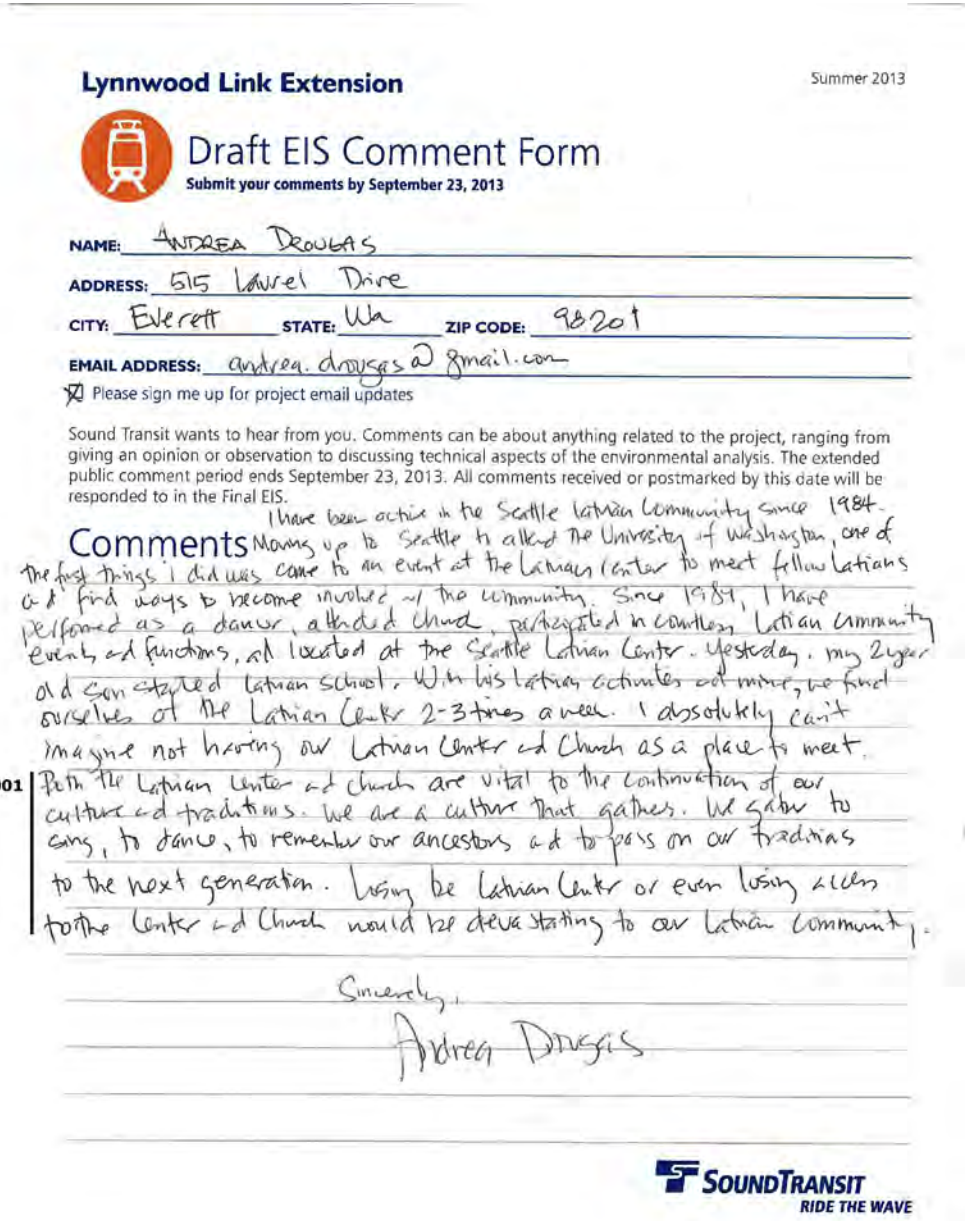
To me the depressed version is the only one that does not have a major negative impact on the Latvian Center. I think Sound Transit should at least do a preliminary study to establish the additional cost of the depressed version.

Very truly yours,
Paul Dermanis AIA
116 NW 55th Street
Seattle, WA 98107
206-783-3873

1

I-291-001

Thank you for your suggestion; Sound Transit has developed a different approach to avoid displacing the church and center. A retained cut alignment would still require displacement of the church because it would have an extended closure of the access road. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Andrea Douglas

ADDRESS: 515 Laurel Drive

CITY: Everett STATE: Wa ZIP CODE: 98201

EMAIL ADDRESS: andrea.douglas@gmail.com

☒ Please sign me up for project email updates

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Comments

I have been active in the Seattle Latinan Community since 1984. Moving up to Seattle to attend the University of Washington, one of the first things I did was come to an event at the Latinan Center to meet fellow Latinans and find ways to become involved w/ the community. Since 1984, I have performed as a dancer, attended church, participated in countless Latinan community events and functions, all located at the Seattle Latinan Center. Yesterday, my 2 year old son started Latinan school. With his Latinan activities and mine, we find ourselves at the Latinan Center 2-3 times a week. I absolutely can't imagine not having our Latinan Center and Church as a place to meet.

I-292-001 Both the Latinan Center and church are vital to the continuation of our culture and traditions. We are a culture that gathers. We gather to sing, to dance, to remember our ancestors and to pass on our traditions to the next generation. Losing the Latinan Center or even losing access to the Center and Church would be devastating to our Latinan community.

Sincerely,

Andrea Douglas

SOUNDTRANSIT RIDE THE WAVE

I-292-001

Thank you for describing the importance of the church and center to you and your family. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Gaigalaite, Ausra <agaigalaite@Riddellwilliams.com>
Sent: Tuesday, September 17, 2013 12:22 PM
To: Lynnwood Link DEIS
Subject: Comments for Lynnwood Link Extension - DEIS

Lauren,

I am writing regarding the potential impact of Sound Transit Link to Lynnwood for the following property:
Latvian Center
11710 3rd Ave N.E.
Seattle, WA 98125

This property is the gathering place for Latvian, Lithuanian and Estonian communities in the area. The communities celebrate national holidays and have special events in this building/church. Having the construction so close to the building might make the building unusable for such events. These events are important to keep our traditions alive and to communicate with other community members.

I-293-001 As an active member of Lithuanian community, I would like to ask you to please ensure that there is plenty of room to access this building during and after the construction. It would be great if we could have adequate parking as well. The center should not be closed during construction since that would cause the suspension of all community events and that would be unduly burdensome for our small community. I would prefer the at-grade option, not the elevated option.

I-293-002 Moreover, please mitigate as much as possible the construction and post-construction impacts (dust, noise, vibration, light) to this property.

If the relocation of the center were to be required, the relocation property needs to be the same size or bigger and it needs to be located in the same general location, since any dramatic change in the location or size of the Center would impact my use of the center greatly.

I-293-003 Another request I have is to consider extending the link north to Ash Way Park and Ride. The Ash Way Park and Ride is heavily used. The parking lot is very full by 7 am and it could use some extensions/upgrades.

Thank you for your consideration.

Very truly yours,
Ausra Gaigalaite
D 206.389.1704
agaigalaite@riddellwilliams.com

CONFIDENTIALITY AND CIRCULAR 230 NOTICE: This communication is intended for the sole use of the individual and entity to whom it is addressed, and may contain information that is privileged, confidential and

I-293-001

Your preference for an at-grade alignment that avoids the church is noted, and thank you for describing the importance of the church and center to you and your family. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-293-002

Although construction activities will be adjacent to the church, Sound Transit will work closely with the church to maintain access, minimize parking loss, and reduce other potential construction disruptions to ongoing church and center activities. The primary construction in the area would be ongoing for about 1-2 years in the area, but major construction activities would be shorter duration. For temporary impacts such as truck traffic, detours, noise, dust, light and glare, Sound Transit proposes best management practices to avoid and minimize impacts in Sections 3.6, 4.5.7, 4.6.7, and 4.7.7. The construction area would also be fenced to protect public safety.

I-293-003

Thank you for your suggestion to extend the light rail line north of the Lynnwood Transit Center to the Ash Way Park-and-Ride. The project evaluated in the Final EIS is limited to the extension of the light rail system between Northgate and the Lynnwood Transit Center. The Sound Transit Long-Range Plan, however, calls for the eventual extension of the light rail line further north to the city of Everett.

exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this communication by someone other than the intended addressee or its designated agent is strictly prohibited. As required by the Internal Revenue Service, anything contained in this communication pertaining to any U.S. federal tax matter is not to be used for the purpose of avoiding federal tax penalties under the Internal Revenue Code or for promoting, marketing or recommending to any third party the tax implications of any partnership or other entity, investment plan or arrangement discussed in this communication. If you have received this communication in error, please notify this firm immediately by collect call (206)-624-3600, or by reply to this communication.

From: Peteris A. Galins <pylgalins@aol.com>
Sent: Friday, September 20, 2013 11:28 AM
To: Lynnwood Link DEIS
Subject: Latvian Church and Community Center

I and my family have used the subject property since it was built by the Latvian community with their own hands and their own financial support(I personally and my family were among the contributors).. We have been members of the Latvian Lutheran Church and the Latvian Association since 1960. We attend the church services regulary and use the community hall for many reasons such as sunday school, choir rehearsals, social functions, weddings,funerals, baptisms, confirmations, musical events, theater and many more. I was the conductor and music director of the Latvian Choir for 30 years with its top membership of 70 singers. The Latvian center was our home and totally essential for our existence then, and still is today after I retired. We organized West Coast Latvian Song Festivals, three of which were held in Seattle using Latvian community center for some of its functions.

I-294-001 The Latvian Lutheran Church and Community Center is the mainstay of the Latvian people who desire the liberty,freedom and the right to exercise their religious beliefs in their own church, further their ethnic culture through songs, plays, folkdancing and schooling of next generations in the facility that their own people built with their own hands, sweat and strain.

I hope, you can understand the immense importance for our community to retain The Latvian Lutheran Church and The Community Center in its current excellent operational status, availability to our people for reasons that are strong,will never change and, for people who have been oppressed by dictators and communism for most of their country's existence, can only be accomplished in our current home The United States of America!

Where there is will, there is a way!

Peteris A Galins
Retired choir director of the Latvian Community
16623 116th PL SE
Renton, WA 98058
pylgalins@aol.com

I-294-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. The Preferred Alternative and other alternatives now avoid displacing the church and center. See Chapter 2 for a description.

From: Mona Gilkerson <monagilkerson@gmail.com>
Sent: Wednesday, September 18, 2013 11:24 AM
To: Lynnwood Link DEIS
Cc: Loren Simmonds; Sid Roberts; Van AuBuchon; Christopher Boyer; Kerri Lonergan-Dreke; Benjamin Goodwin; Mark Smith
Subject: Sound Transit Lynnwood Link of the Light Rail Project

To Whom It May Concern:

As a long-time resident (of more than 20 years) of Lynnwood, and as a resident/ homeowner at Cedar Creek Condominiums for that entire 20 years, I would like to voice my opinion on the route to be chosen for the Sound Transit Lynnwood Link.

I-295-001 I would strongly recommend the C1 Route as proposed by Sound Transit. It seems that this route has the least impact on wetlands and, as I hope most are aware of, wetlands are vital to our environment and general quality of life. There are reasons that federal guidelines have been put in place to protect these areas. To override or ask for exceptions to this extent would be short-sighted and a disservice to future generations. In addition, C1 appears to be the most convenient route for the existing park and ride - even the "proposed" C4 would be inconvenient and would disrupt traffic flow on I-5 for commuters so significantly that it could have far reaching consequences.

I-295-002 On a more personal note, I realize that C1 would displace Cedar Creek Condominiums, but I even find that to be a positive. These condominiums were built in 1977/ 1978. This makes them 35 years old. These condominiums were not built well and the upkeep is expensive. The Association has an annual operating budget in excess of $330,000.00, with the current cost of homeowner dues being in excess of $350 a month. The expectation is that this dollar amount will only increase over the years, and we are already experiencing a high rate of delinquencies and foreclosures. This can only mean that the upkeep of these condominiums will diminish over time. The value of these condominiums have already decreased significantly over the past years - to less than half of what they were valued at five years ago.

Again, as a homeowner at Cedar Creek Condominiums, I would personally like to recommend the utilization of Route C1. Thank you for taking the time to count my voice!

Mona Gilkerson
--
****
Mona J Gilkerson
4820 200th St SW, Unit #B-102
Lynnwood, WA 98036
Cell: 206-915-8259
Fax: 425-776-9270

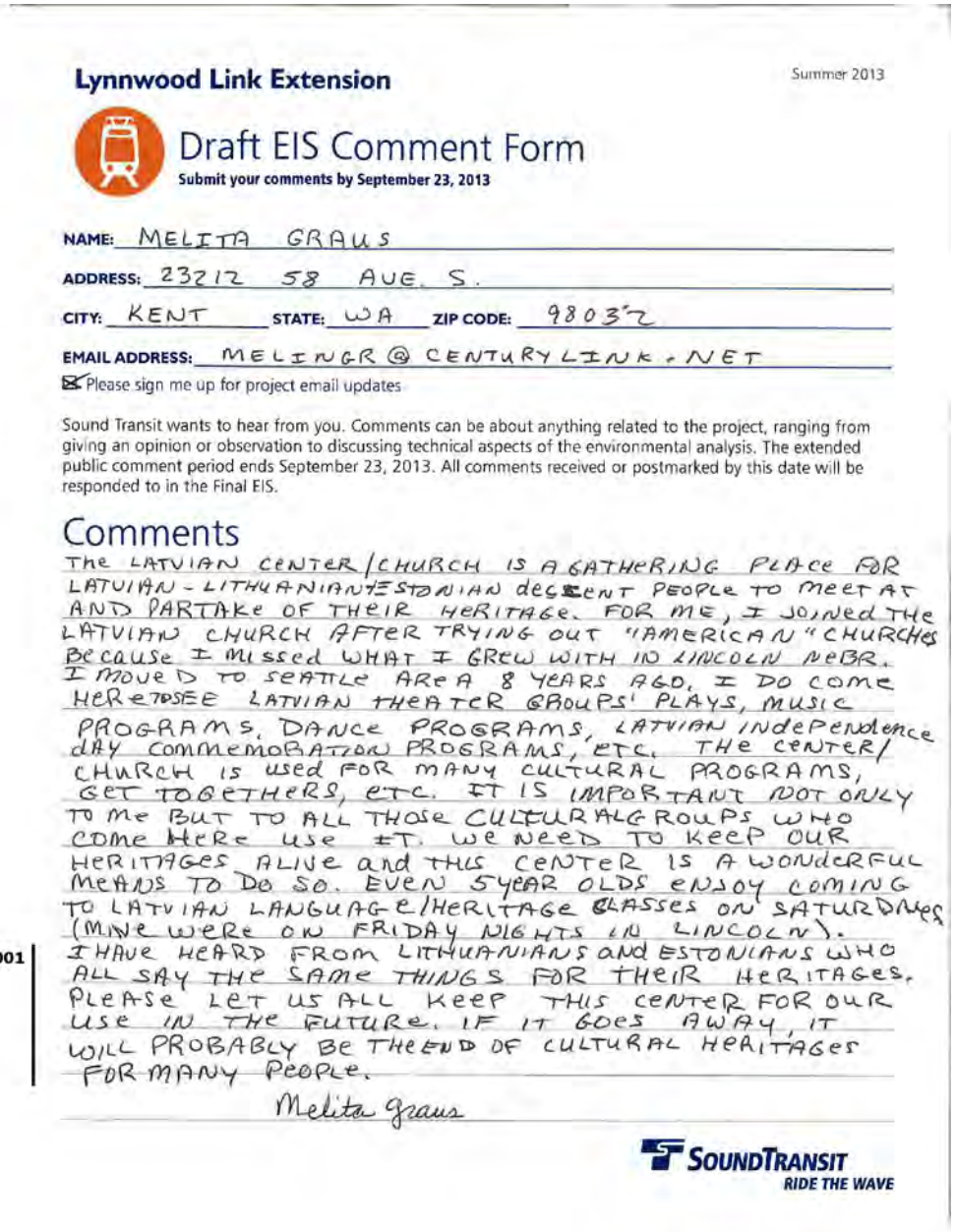
I-295-001

Thank you for your comment stating your preference for Alternative C1 and the reasons why you support this alternative.

I-295-002

Sound Transit notes your comments regarding the Cedar Creek Condominiums.

email: monagilkerson@gmail.com



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: MELITA GRAUS

ADDRESS: 23212 58 AVE. S.

CITY: KENT STATE: WA ZIP CODE: 98032

EMAIL ADDRESS: MELINGR@CENTURYLINK.NET

☒ Please sign me up for project email updates

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Comments

THE LATVIAN CENTER/CHURCH IS A GATHERING PLACE FOR LATVIAN-LITHUANIAN/ESTONIAN DECENT PEOPLE TO MEET AT AND PARTAKE OF THEIR HERITAGE. FOR ME, I JOINED THE LATVIAN CHURCH AFTER TRYING OUT "AMERICAN" CHURCHES BECAUSE I MISSED WHAT I GREW WITH IN LINCOLN NEBR. I MOVED TO SEATTLE AREA 8 YEARS AGO, I DO COME HERE TO SEE LATVIAN THEATER GROUPS' PLAYS, MUSIC PROGRAMS, DANCE PROGRAMS, LATVIAN INDEPENDENCE DAY COMMEMORATION PROGRAMS, ETC. THE CENTER/CHURCH IS USED FOR MANY CULTURAL PROGRAMS, GET TOGETHERS, ETC. IT IS IMPORTANT NOT ONLY TO ME BUT TO ALL THOSE CULTURAL GROUPS WHO COME HERE USE IT. WE NEED TO KEEP OUR HERITAGES ALIVE and THIS CENTER IS A WONDERFUL MEANS TO DO SO. EVEN 5 YEAR OLDS ENJOY COMING TO LATVIAN LANGUAGE/HERITAGE CLASSES ON SATURDAYS (MINE WERE ON FRIDAY NIGHTS IN LINCOLN).

I-296-001

I HAVE HEARD FROM LITHUANIANS AND ESTONIANS WHO ALL SAY THE SAME THINGS FOR THEIR HERITAGES. PLEASE LET US ALL KEEP THIS CENTER FOR OUR USE IN THE FUTURE. IF IT GOES AWAY, IT WILL PROBABLY BE THE END OF CULTURAL HERITAGES FOR MANY PEOPLE.

Melita Graus

SOUNDTRANSIT RIDE THE WAVE

I-296-001

Thank you for describing the cultural importance of the church to you and the Latvian-Lithuanian-Estonian community in the Seattle area. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Draft EIS Comment
c/o Laura Swift
401 S. Jackeson St,
Seattle, WA 98104

September 17, 2013

Dear Sound Transit Board

My name is Karl "Karlis" Grendze and I am an active member of the Latvian Community in Seattle Washington. I am a council member of the Seattle Latvian Lutheran Church and Vice Chairman/Facilities Director of the West Coast Latvian Education Center in Shelton, WA.

I arrived in Seattle, on September 6th 2004, when I showed up Labor Day that year in truck towing my boat, hope and a few other things. I just came off a 2003 year where my entire life collapsed in front of my face, my father passed away, my wife left me and I lost my job, while I was living in Orlando, FL. After a tough year I decided that restarting in a new community would be the healthiest way for me to recover.

In my past I have able to travel throughout most of the continental United States. When I came to Seattle in 2002 to visit one of my best friends, who had moved here seven years prior, I fell in love with the Pacific Northwest and I promised to myself that if opportunity ever presented itself that I would move to Seattle.

One of the most compelling reasons I came to town was vibrancy and involvement of the local Latvian Community. During my twelve years in Orlando a big part of me was missing as it does not have a Latvian Community. The Latvian Community was the tipping point in my decision to move here and is a key reason I am still here and active.

I-297-001 The Seattle Latvian Church and Community Center is the epicenter of the Baltic Community in the Pacific Northwest and arguably the entire West Coast. Without this facility I would not have had a community to come to and most likely would not be here. Any disruption to this vital cultural hub would be detrimental and would diminish the rich and diverse essence that makes the Puget Sound Area unique and world class.

As a registered voter, community volunteer and contributing member of this community I ask that you consider the cultural significance of our facility when finalizing the plans for the Lynnwood Link Extension. Most Latvian agree and support light rail, our hope is that Sound Transit Board recognizes us and is willing to work with us to mitigate the potential negative impact of this project.

Karl Grendze
1024 Central Ave N, H-5
Kent, WA 98032
kgrendze@gmail.com
206-930-9411

I-297-001

Thank you for describing the importance of the church and hall to you and the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Monica Haynes <monica@apmmanage.com>
Sent: Tuesday, September 17, 2013 4:24 PM
To: Lynnwood Link DEIS
Cc: Dan Dale; Kirsten Bellar; maddiebellar@comcast.net
Subject: FW: Comments

Please see below.

From: Monica Haynes
Sent: Tuesday, September 17, 2013 4:11 PM
To: 'LinnwoodLinkDEIS@soundtransit.org'
Cc: 'Dan Dale'; 'Kirsten Bellar'
Subject: Comments

To Whom it May Concern:

As an 18-year long owner of a single family residence at 18733 12th Ave. N.E., Shoreline, WA 98155, I have great concerns regarding the impact of the future transit station. I have reviewed the alternatives for the parking lot locations and given thought to the increased traffic on various streets.

I-298-001 I STRONGLY support the A1 parking alternative for the following reasons:

1. The location (west side of I-5) would spread the impact between both sides of I-5, with the new station on the east side of I-5.

2. There is a far greater percentage of the Shoreline population on the west side of I-5.

3. The location allows the parking lot to be tucked into the hillside without encroaching on the stadium, causing less of a negative visual impact.

4. The A1 alternative is less costly and less noisy, being at grade level and not elevated.

5. The A-1 alternative does not require people to lose their homes.

I-298-002 5. Perkins Lane and N.E. 188th St. are links between 15th Ave. N.E. and 10th Ave. N.E. These are narrow roads without sidewalks and visibility is poor as one travels up and down the windy roads. As it is, people in and outside the neighborhood drive in the middle of the road and too fast. There are many children and pets in these areas. One elderly lady on N.E. 188th walks to North City to shop and go to church practically every day. These streets CANNOT handle any increased traffic that would certainly occur if the parking lot were in the vicinity.

Thank you for your consideration,

Monica Haynes
18733 12th Ave. N.E.
Shoreline, WA 98155
(206) 300-9802

I-298-001

Thank you for your comment stating your preference for Alternative A1 and the specific advantages you see with placement of the parking garage for the NE 185th Street Station on the west side of I-5.

I-298-002

Thank you for describing your concerns over additional traffic on neighborhood streets. It is anticipated that less than 10% of station related traffic will originate east of 10th Avenue, which lowers the potential that cut-through traffic would be a problem on neighborhood streets. However, section 3.6.5 describes the mitigation measures Sound Transit proposes to minimize potential impacts.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Roger & Eileen Horner

ADDRESS: 1037 NE 187th St

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: RHORNER7@Juno.com - (Roger's)

☒ Please sign me up for project email updates

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Comments

I-299-001

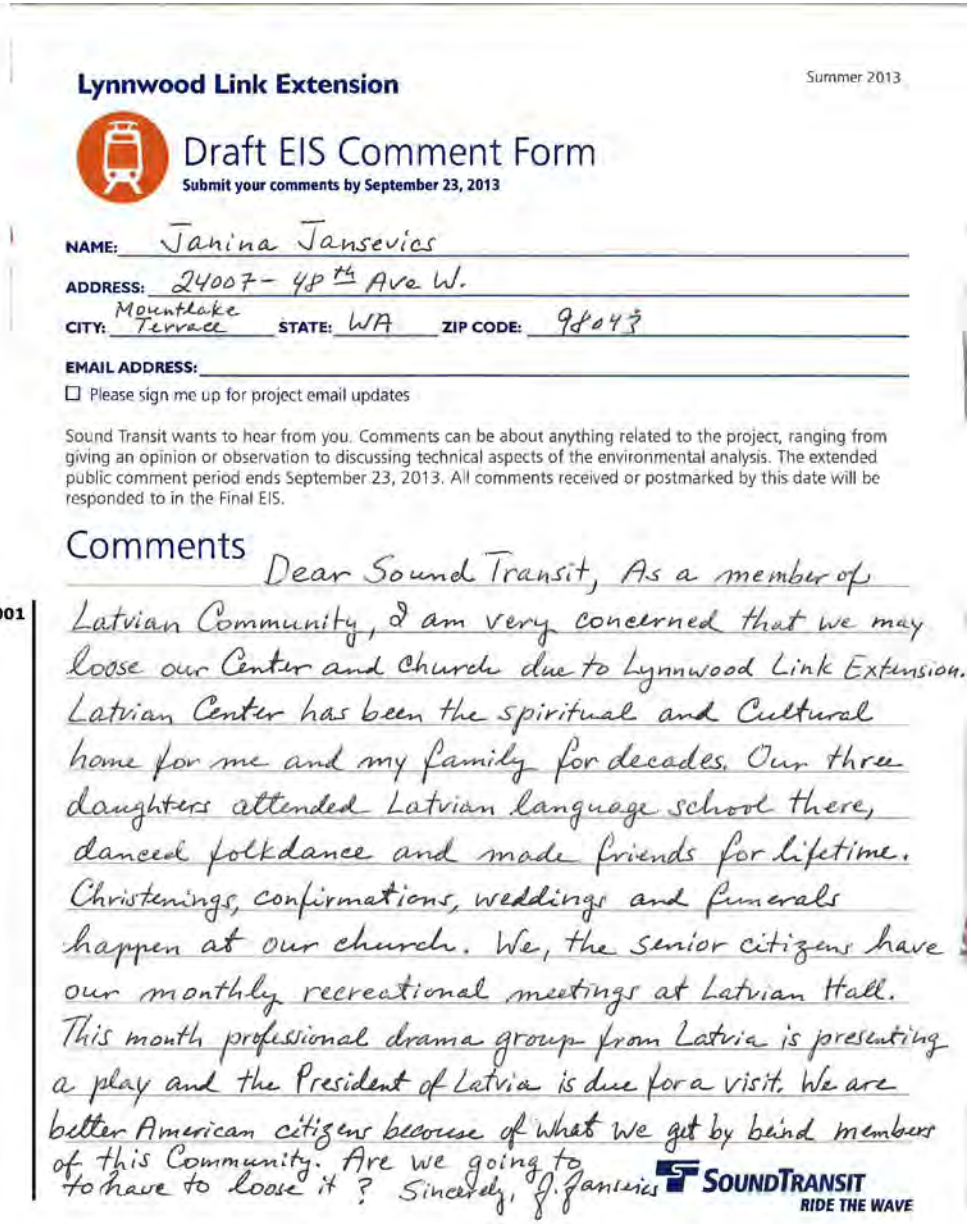
We prefer the option of A-1. No houses would be displaced, and the parking area on the West side would serve The Stadium as well as Sound Transit.

Option A-1 is the best service that has been presented.

SOUNDTRANSIT RIDE THE WAVE

I-299-001

Thank you for your comment stating your preference for Alternative A1 and the advantages to having the parking garage on the west side of I-5.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Janina Jansevics

ADDRESS: 24007 – 48th Ave W.

CITY: Mountlake Terrace STATE: WA ZIP CODE: 98043

EMAIL ADDRESS:

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-300-001

Dear Sound Transit, As a member of Latvian Community, I am very concerned that we may loose our Center and church due to Lynnwood Link Extension. Latvian Center has been the spiritual and Cultural home for me and my family for decades. Our three daughters attended Latvian language school there, danced folkdance and made friends for lifetime. Christenings, confirmations, weddings and funerals happen at our church. We, the senior citizens have our monthly recreational meetings at Latvian Hall. This month professional drama group from Latvia is presenting a play and the President of Latvia is due for a visit. We are better American citizens because of what we get by being members of this Community. Are we going to to have to loose it ? Sincerely, J. Jansevics

SOUNDTRANSIT RIDE THE WAVE

I-300-001

Thank you for describing the importance of the church and center to you and your family. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: liga Jefferds <liga@whidbey.net>
Sent: Tuesday, September 17, 2013 7:06 AM
To: Lynnwood Link DEIS
Subject: Latvian Lutheran Church and Community Center

I-301-001

NO! NO! NO! We do not want this to be the end of the line for the Latvian Community Center.

This Lutheran Church and Community Center is the HEART OF LATVIANS in Seattle and its surrounding areas including Canada. The Lithuanian and Estonian communities also use this complex and have no other place to gather.

My husband and I travel two hours from Whidbey Island to attend many of the events held there and would feel a great loss if it were closed or moved. THE CENTER IS A SPIRITUAL, SOCIAL, and EDUCATIONAL STRONGHOLD.

The Baltic culture is fragile due to the 50 year Soviet occupation that included massacres and displacements of Baltic people. The center has been and continues to be an ESSENTIAL FACTOR IN HEALING THE PEOPLE.

PLEASE, PLEASE DO NOT LET THIS COMMUNITY CENTER BE DISPLACED!

Peter and Liga Jefferds

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I-301-001

Thank you for describing the importance of the church and center to the Baltic community in Seattle. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Amy Johnson <amy3treep@comcast.net>
Sent: Tuesday, September 17, 2013 9:45 AM
To: Lynnwood Link DEIS
Subject: Lynnwood park & Rail route

I-302-001 Please save the park. Lynnwood has had deficit in parks as old city councils chose not to fund/create them. I still remember sitting in a meeting where Lynnwood City Council Chose to take out a park & put in a housing development even though we, the people, had been promised that would stay a park.

Amy Johnson
17210 43rd Place West
Lynnwood, WA 98037

Sent from my iPad

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I-302-001

Thank you for sharing your concerns over impacts to Scriber Creek Park and for describing the value of the park to the community. The Preferred Alternative crosses south of the park, and avoids the park impacts the Draft EIS identified for Alternative C1.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: STEVEN JOHNSON

ADDRESS: 1103 NE 187th St

CITY: SHORELINE STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: SJOHNSONS

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Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-303-001

I VOTE FOR OPTION A, LEAVING ENGLES TO HAIRDROP AREA, ADA PARKING FOR EAST SIDE. SO WEST SIDE PARKING AND FOR ALL VEHICALS, WEST OF I-5. EAST SIDE BUS UNLOAD & ADA PARKING.

SOUNDTRANSIT RIDE THE WAVE

I-303-001

Your preference for Option 1 for the NE 185th Street Station is noted.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: SYLVIA KAPA-MAUERMAN

ADDRESS: 6518 115TH PL. SE

CITY: BELLEVUE STATE: WA ZIP CODE: 98006

EMAIL ADDRESS: Sylvia.mauermane@gmail.com

☒ Please sign me up for project email updates

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Comments

I have lived in this area since 1957 but was born in Riga, Latvia in 1943. Briefly lived in Ontario, Canada from 1948-APR. 1957. My parents (both Latvian) never let me forget my heritage. I speak Latvian and my daughters have kept up with the Latvian culture. They were both born here in Bellevue, Wa., but have had the opportunity to go to Latvia along with their children. How can you possibly even think of taking away the Latvian Communities place of worship & cultural experiences. I want my children and Grandchildren to NEVER give up their history. You really need to pursue other options. We may be a small group, but be assured that we are extremely Incited.

I-304-001

SOUNDTRANSIT RIDE THE WAVE

I-304-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Zinta Kulits <kzinta@comcast.net>
Sent: Tuesday, September 17, 2013 6:48 PM
To: Lynnwood Link DEIS
Subject: Save the Latvian Church and Center in Seattle

I-305-001

To Whom it may concern:
My name is Zinta Kulits, nee Mekss , a refugee from Latvia during World War II. At that time I was less than 7 years old. My parents, father ,a Lutheran minister and mother professional musician ,did all they could to instill in us the love for our native language.We were sent to a Latvian grade school in a DP camp in Germany, our home language was Latvian, we also learned German and later learned English.There was and is respect for the language of our host countries.The same love for our language is instilled at the Latvian Center in Seattle, we attend church services there , sing our folk songs, young people practice folk dances.Children attend Saturday school where the third generation of Latvians in America are learning the language of their grandparents.
I can not express the dread I feel if we should loose this precious place.
Latvians are not the only ones who use the Latvian Center in Seattle, other Baltic people use it as a gathering place.
PLEASE do not make us close the doors to so many people.There must be another way ,another route for the transit train without destroying this treasure.
Sincerely, Zinta Kulits

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I-305-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: DAINA KUSINS

ADDRESS: 30725 NE 178th Pl. P.O. BOX 1676

CITY: DUVALL STATE: WA ZIP CODE: 98019

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-306-001

I WOULD LIKE TO EXPRESS MY DISMAY AT THE POSSIBLE ELIMINATION OR AT THE VERY LEAST DRASTIC INTERRUPTION OF ACTIVITIES AT OUR BELOVED LATVIAN CENTER. I AM ACTIVE IN THE LATVIAN LUTHERAN CONGREGATION, BELONG TO THE LADIES COMMITTEE, AND REGULARLY ATTEND CHURCH SERVICES. I ALSO PARTICIPATE IN THE SEWING GROUP, LEARNING AND TEACHING THE MAKING OF LATVIAN FOLK COSTUMES AND MANY OTHER ETHNIC ITEMS. EVEN MORE IMPORTANT, I ALSO SERVE ON THE BOARD of DIRECTORS of the LATVIAN ASSOCIATION of the STATE of WASHINGTON. WE ARE ACTIVE IN BRINGING MUSICIANS, THEATER GROUPS, LECTURERS, AND EVEN THE PRESIDENT of LATVIA himself to our CENTER. The CENTER hosts MANY and VARIED functions; EVEN AN INTERRUPTION for CONSTRUCTION would SEVERELY IMPACT OUR ACTIVITIES. THE NOISE and VIBRATION of TRAINS going by would HAVE A CONSIDERABLE NEGATIVE EFFECT ON THESE ACTIVITIES.

I GREW UP IN THE LATVIAN COMMUNITY IN CLEVELAND, OHIO WHERE I WAS BORN. LATER THERE WAS SCHOOL, MARRIAGE, THE DEATHS of MY PARENTS AND PHYSICAL INACCESSIBILITY to A LATVIAN COMMUNITY. WHEN I MOVED HERE IN 1992 AND FOUND THE LATVIAN CENTER IN SEATTLE, IT WAS LIKE COMING HOME AGAIN.

PLEASE REVIEW YOUR PLANS AND SAVE OUR CENTER AND OUR ACTIVITIES. THE FUTURE of THE LATVIAN CULTURE IN SEATTLE, OUR CHILDREN'S INVOLVEMENT IN THEIR HERITAGE, AND THE ACTIVITIES of UNTOLD NUMBERS of PEOPLE of BALTIC HERITAGE depend ON IT.

THANK YOU. Daina Kusins

DAINA KUSINS

SOUNDTRANSIT RIDE THE WAVE

I-306-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, and the larger Baltic community.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Krista Leesment <kleesment@hotmail.com>
Sent: Thursday, September 19, 2013 9:44 PM
To: Lynnwood Link DEIS
Subject: Latvian Church and Community Center

Dear Sound Transit,

I-307-001 I am writing as a member of the Estonian community and in general the Seattle Baltic community to request that the Latvian Church and Community Center remain open during the planned Lynwood Link Extension DEIS construction and to remain in it's present location longer term. The community center serves as a focal point for key community gatherings, fund raisers and church services, so special to have a place for people from Estonia (Latvia and Lithuania) and with Estonian heritage to meet at when we are so far away from our tiny country overseas. The funds of our community are limited, thus trying to fund the relocation of a community gathering place would simply not be possible. We fear it would be a catalyst to our continued ability to gather and celebrate our cultures and religious services. We request that the construction planning take into consideration the long-term sustainability and maintenance of the property and the building.

Thank you – Krista Leesment

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I-307-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Although construction activities will be adjacent to the church, Sound Transit will work closely with the church to maintain access, minimize parking loss, and reduce other potential construction disruptions to ongoing church and center activities. The primary construction in the area would be ongoing for about 1-2 years in the area, but major construction activities would be shorter duration. For temporary impacts such as truck traffic, detours, noise, dust, light and glare, Sound Transit proposes best management practices to avoid and minimize impacts in Sections 3.6, 4.5.7, 4.6.7, and 4.7.7. The construction area would also be fenced to protect public safety.

From: Danielle Loeding <loedings@gmail.com>
Sent: Wednesday, September 18, 2013 4:10 PM
To: Lynnwood Link DEIS
Subject: Comment on the Draft Environmental Impact Statement Segment A

As a resident of North Seattle, I wish to comment on the Segment A alternatives.

I-308-001 One of the perks of living in the Northwest is the overall beauty of our environment almost anywhere you travel in our region. This includes our section of the I-5 corridor winding past the 145th St. crossing, which captures a majestic view of Mt. Rainier while traveling southbound from 175th. As one example, I believe that any extended elevated system would be an unnecessary eyesore to the region. Besides the visual distraction as a driver, an elevated system needlessly adds clutter to the scenery we so enjoy on a daily basis.

I-308-002 Regarding station locations, the already heavily used overpasses of 130th and 145th would be better suited. It appears unnecessary to push traffic into a residential area for a 155th station when the others are clear choices with a predefined neighborhood identity for heavy traffic.

I-308-003 Further it seems more cost effective to limit the amount of elevated train as well as the construction of stops/stations. Since 130th and 145th will likely need to have changes made anyway, it makes sense to use those locations as stations instead of 155th.

I-308-004 Given these considerations, I urge you to choose A10 as your alternative. Maximizing the use of at-grade tracks and construction at 130th & 145th streets for new stations.

Thank you,
Danielle Loeding
13726 23rd Pl. NE
Seattle, WA 98125

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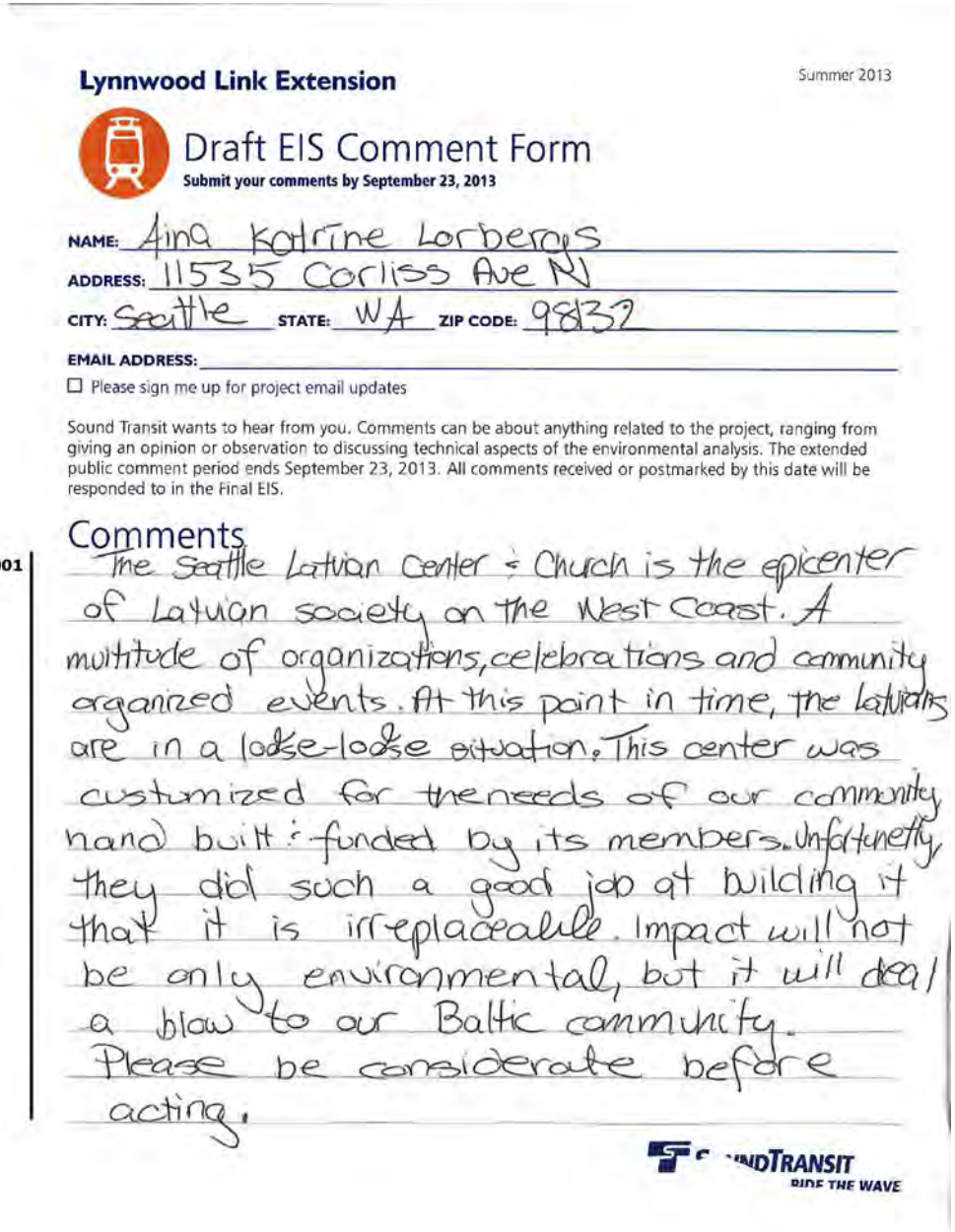
I-308-001
Your comment about the potential visual quality impacts of the project is noted. The visual quality analysis is found in Section 4.5 of the Final EIS.

The Final EIS analysis concluded that an elevated guideway, NE 145th Street Station, and parking garage would not block views of Mount Rainier from I-5 southbound; see Table 4.5-1, Viewpoint 3.

I-308-002
Your preference for a light rail transit station at either NE 130th Street or NE 145th Street, and not one at NE 155th Street is noted. Construction and operation of the light rail transit stations would alter vehicular travel patterns on surrounding local arterial streets in all station areas. Chapter 3 of the Final EIS discuss impacts on the transportation network, and Section 3.6 lists potential mitigation measures to mitigate impacts that result from a new transit station.

I-308-003
Sound Transit selected Alternative A1, with some modifications, as part of the Preferred Alternative, which includes a station at NE 145th Street.

I-308-004
Thank you for your comment stating your preference for Alternative A10.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Aina Katrine Lorbergs

ADDRESS: 11535 Corliss Ave N

CITY: Seattle STATE: WA ZIP CODE: 98133

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-309-001

The Seattle Latvian Center & Church is the epicenter of Latvian society on the West Coast. A multitude of organizations, celebrations and community organized events. At this point in time, the Latvians are in a loose-loose situation. This center was customized for the needs of our community hand built & funded by its members. Unfortunetly, they did such a good job at building it that it is irreplaceable. Impact will not be only environmental, but it will deal a blow to our Baltic community. Please be considerate before acting.

SOUNDTRANSIT RIDE THE WAVE

I-309-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

19 Sep 2013

Sound Transit

I-310-001

This commentary is in response to the Draft EIS for the Lynwood Link Extension. The development of this extension as currently planned may cause loss of access or a complete loss of the Latvian Lutheran Church located at 11710 – 3rd Avenue NE on Seattle. Simply put, loss of access or otherwise negative impacts on the church will do great harm to the Baltic community across the Pacific Northwest.

I was married in the church in 1991, and moved around continuously for the next 10 years due to my military career. I returned to the Pacific Northwest in 2000. While deployed overseas in support of combat operations in 2001 -2002 , I often thought of the rich social , cultural and spiritual life of the Seattle Baltic Community, and how it helped me stay positive and kept my faith strong.

Since my return , I have continued to be active in the Baltic community, attending church and being part of the rich multi-cultural group that uses the facility for spiritual and social events and the arts. I come from Northern Kitsap county to attend events at the Latvian center, as do many others. Individuals and families come from as far away as Vancouver British Columbia and Portland, Oregon to do the same. It is absolutely worth it to us to be part of this community. My children attended (and completed) Latvian Language School as part of their upbringing, and it has added tremendously to their bilingual skills and understanding of the world. They know attend events there on their own and consider their heritage and membership in the community a source of pride. I hope that they will have a place to offer their children the same opportunities. I'm sure many parents of Lithuanian and Estonian heritage wish the same for their children as well.

Importantly , this is not the first time this community has been asked to leave their premises, having been forced out before to make room for development in Wallingford in 1969. It took years to rebuild the facility, and generations to rebuild the connections across several communities. ANY loss of access, excessive noise or otherwise negative impacts due to construction or sound transit operations would have a very negative effect on this complex and rich fabric of people's lives. We can't rebuild this all again.

In closing, I am NOT against sound transit and light rail. However, a sustainable and acceptable development solution must be identified , and it must accommodate the Latvian Center and the Baltic Community.

Sincerely,

Arnie Lusis CDR USN (ret)

24665 Hillbend Lane NE Kingston, WA 98346 mob :360.621.0326 alusmuca@centurytel.net

I-310-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describing the acquisition impacts; Section 4.4 describing impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including portions of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

From: Saul Matas <Saul.Matas@openet.us>
Sent: Tuesday, September 17, 2013 12:06 PM
To: Lynnwood Link DEIS
Subject: Concern over impact on Latvian Center

I-311-001

I support the Sound Transit Light Rail Line project. However, I have serious concerned as to the impact this project may have on the Latvian Center in Northgate. The cultural and social significance of this hall to the Baltic-American people in the Northwest is clear. However, I wish to point out the historical significance the center had in the struggle for Baltic independence during 1990-91. I was Treasurer of the Seattle Chapter of the Lithuanian-American Community at that time, and the Latvian Center served as our command center for communications and political action in support of Lithuania's declaration of independence from the Soviet Union. The Soviets did their utmost to shut off communication, but a grass-roots network sprang up world-wide, and the Latvian Center served as Lithuania's bull horn in this part of the US.

The incredible events that took place in 1991 directly impacted many Northwest residents, including the families of some twenty exchange students who were studying in Lithuania's Capitol when the "Singing Revolution" was fought – and won. For these families, the Latvian Center was much more than a meeting hall. It was their candle in the darkness where they could find out about the unfolding events and, most importantly, the status of their children.

For those who may not be aware, here is a short synopsis of these events (from Wikipedia):

> On March 15, the Soviet Union demanded revocation of the independence and began employing political and economic sanctions against Lithuania. Soviet military was used to seize a few public buildings, but violence was largely contained until January 1991. During the January Events, the Soviet authorities attempted to overthrow the elected government by sponsoring the so-called National Salvation Committee. The Soviets forcibly took over the Vilnius TV Tower, killing 14 unarmed civilians and injuring 700. During this assault the only means of contact to the outside world available was an amateur radio station set up in the Lithuanian Parliament building by Tadas Vyšniauskas whose call sign was LY2BAW. Their initial cries for help were received by an American amateur radio operator with the call sign N9RD in Indiana, USA. N9RD and later other radio operators from around the world were able to relay situational updates to relevant authorities until official State Department personnel were able to go on-air. Moscow failed to act further to crush the Lithuanian independence movement and the Lithuanian government continued to work.
>
> During the national referendum on February 9, 1991, more than 90% of those who took part in the voting (76% of all eligible voters) voted in favor of an independent, democratic Lithuania. During the August Coup in Moscow, Soviet military troops took over several communications and other government facilities in Vilnius and other cities, but returned to their barracks when the coup failed. The Lithuanian government banned the Communist Party and ordered confiscation of its property. Following the failed coup, Lithuania received widespread international recognition and was ***Admitted to the United Nations on September 17, 1991!!***

Those of us who lived through these times, who did what we could to get the word out to the world, will always remember the many meetings and press conferences we held at the Latvian Center, and all the Senators, Congressmen, the President of Lithuania, and numerous other dignateries who spoke there. We had a place, our place, a safe place made possible by a country that embraced us as refugees and which never recognized the illegal occupation of the Baltics. I ask – I beg of you – to allow our place to remain.

I-311-001

Thank you for describing the cultural importance of the Latvian Evangelical Lutheran Church.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Saul Matas

+1-206-618-7591 (M)

saul.matas@openet.us
skype: Saulius matas

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From: dmiksys@comcast.net
Sent: Wednesday, September 18, 2013 1:47 PM
To: Lynnwood Link DEIS
Cc: dmiksys@comcast.net
Subject: Light rail and the Latvian Center

I-312-001

I'm an active member of the Lithuanian community. Our organization, the Lithuanian-American Community, uses the Latvian Center many times during the year. Members and visitors come from the Seattle area, from other regions of America and even from Lithuania. The possible loss of the Center due to the coming rail line would make a huge cultural impact beyond words.

The Center is the focal point of the activities of Latvians, Lithuanians and Estonians. It hums with weddings, baptisms, memorial services, concerts, fundraisers, dance groups, choirs, rummage sales, bazaars, Saturday school, parties and a host of other events. It functions to keep our cultures alive and vibrant.

We all consider it "home." Closing "our home" for construction and perhaps rendering it unusable after construction is complete would break our hearts.

I trust you will find ways to mitigate the impact of the rail line and keep the Center open during construction. Most importantly, leave us with a Center that has approximately the same amount of parking, a caretaker's house, and new access if necessary.

Respectfully,
Donna Miksys

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I-312-001

Thank you for describing the importance of the Latvian Center. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, during construction and operation of the project.

Parking supply would be maintained. The caretaker's residence would need to be relocated, but Sound Transit will provide for the relocation.

From: Lelde Muehlenbachs <lelde@shaw.ca>
Sent: Thursday, September 19, 2013 10:07 PM
To: Lynnwood Link DEIS
Subject: Latvian. Center- Seattle

I-313-001

I am shocked at the possible loss of the Seattle Latvian Center. It is a gorgeous establishment built by immigrants and children of immigrants who have suffered deeply if not physically then emotionally from the upheavals of Soviet oppresion. A center like this has been a boon to cultural cohesion and solidarity.

The Center has bolstered religious, cultural needs as well as research in science and the humanities in conjunction with UW gem of a dept. in Baltic studies.

As a frequent visitors from Edmonton, Alberta, Canada, I truly hope this meaningful piece of real estate survives urban development.

Thank you, Lelde and Karlis Muehlenbachs
11523 - 73 Ave., Edmonton, Alberta T6G 0E2 -Lelde

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I-313-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Ieva Ohaks <ieva.ohaks@gmail.com>
Sent: Tuesday, September 17, 2013 12:18 AM
To: Lynnwood Link DEIS
Subject: The Latvian Center

September, 2013

I-314-001

I'm writing with reference to the Latvian Cultural Center at NE 117th Street and 3rd Ave NE in the Northgate area.

My name is Ieva Ohaks. I am a second-generation Latvian-American who also has Estonian heritage. Although I was not raised within the Latvian community, I have become interested and involved over the last seven years or so.

In that short period, this is how the Latvian Center has been a part of my own cultural life:

Folk Dance:

I dance with the Latvian Folk Dance troupe *Trejdeksnītis*. This past summer, *Trejdeksnītis* traveled to Latvia to participate in the Latvian National Song and Dance festival. It was an honor to represent Latvian-Americans in this powerful expression of cultural identity. Of course, we perform at events within our own Latvian community as well, and our troupe enriches the cultural life of the greater Seattle area by performing at venues such as the Nordic Heritage Museum, the Seattle Public Library, and Folklife Festival.

We rehearse every week in the Hall/Ballroom at the Latvian center. This is an exceptional space for dance: spacious and with a wonderful floor. On the handful of yearly occasions when the hall is not available, and we have to scrounge other locations, it is always a challenge to work with smaller spaces and problematic floors. I am always grateful to return to our own space.

Ethnic Costume Study:

In addition to dancing, I am a student of folk costume. Several members of the community get together at the Latvian Center to practice traditional and more contemporary embroidery techniques, and I have been privileged to draw on them as a resource in constructing my own folk costumes.

Collaboration with the University of Washington:

The Latvian Center is also integrally connected to the The University of Washington's Baltic Studies program. Students come from all over to study the history, culture, and unique politics of the Baltic nations. The University's graduate library hosts a unique collection of Baltic literature.

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I-314-001

Thank you for describing the cultural importance of the Latvian Evangelical Lutheran Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

I-314-001

This program is closely linked with the Latvian community, which, along with the other Baltic-American communities (Lithuanian and Estonian) have advocated, raised funds, and provided community support. Visiting scholars and professors frequently present the fruits of their labors at the Latvian Center. The Latvian Center hosts an annual fund raising event, created by the combined Baltic communities, to benefit the Baltic Studies program. The participation and support of our ethnic communities draws scholars to the program and connects the program to the broader culture of the region.

Not only does the Baltic Studies program draw typically college-age students to the Seattle Area, but also older adult community members attend classes as continuing education students. I myself attended Latvian language classes at the University, and I hope to study Estonian as well in the near future.

Pan-Baltic Communities:

The Latvian Center is the only dedicated cultural center in Washington State for any of the three Baltic communities. I have been a singer in the Estonian Choral group, performing for Estonian events such as the celebration of Estonia's independence every February. All three communities have been joining forces for commemorations and celebrations with increasing frequency in the past few years—for example an annual commemoration of mass deportations from all three nations during the most oppressive times of Soviet occupation.

What happens next?

I see that I have painted a picture of a vibrant, active ethnic community. But this is not the whole picture. We are also a community in a fragile point of transition. Our First generation and the older members of our Second generation are aging and are perhaps ready to pass the baton of community duties to the next generations. The young adult generation are just beginning to take on some of the projects that keep the center and the community going. The youngest children are just beginning Latvian School, where they will learn Latvian language and culture and form friendships that will sustain the community into their adulthood.

Also, the growing spirit of collaboration among Baltic-American communities is bringing an essential boost in energy and ideas.

However, if the use of the Latvian Center were disrupted, these positive shifts could easily lose momentum. All of us, with so many other demands on our time, may form other habits, take up other

I-314-001 hobbies, and all the dynamic potential of these developments could simply dissipate. Once cultural heritage fades, it is very difficult to revive.

In summation:

The Latvian Center is a precious resource in the cultural life of our region. Its facilities and its accessibility to the interconnected communities it serves are a vital part of our cultural life. We add regional and international prestige to the City of Seattle, to King County and to the State of Washington. So far, I have been pleased that Sound Transit has taken our concerns seriously and expressed respect and support. Please continue that trend, turn the words into action, and help us keep our center functioning during and beyond the disruptions which the Light Rail project will impose.

Sincerely,

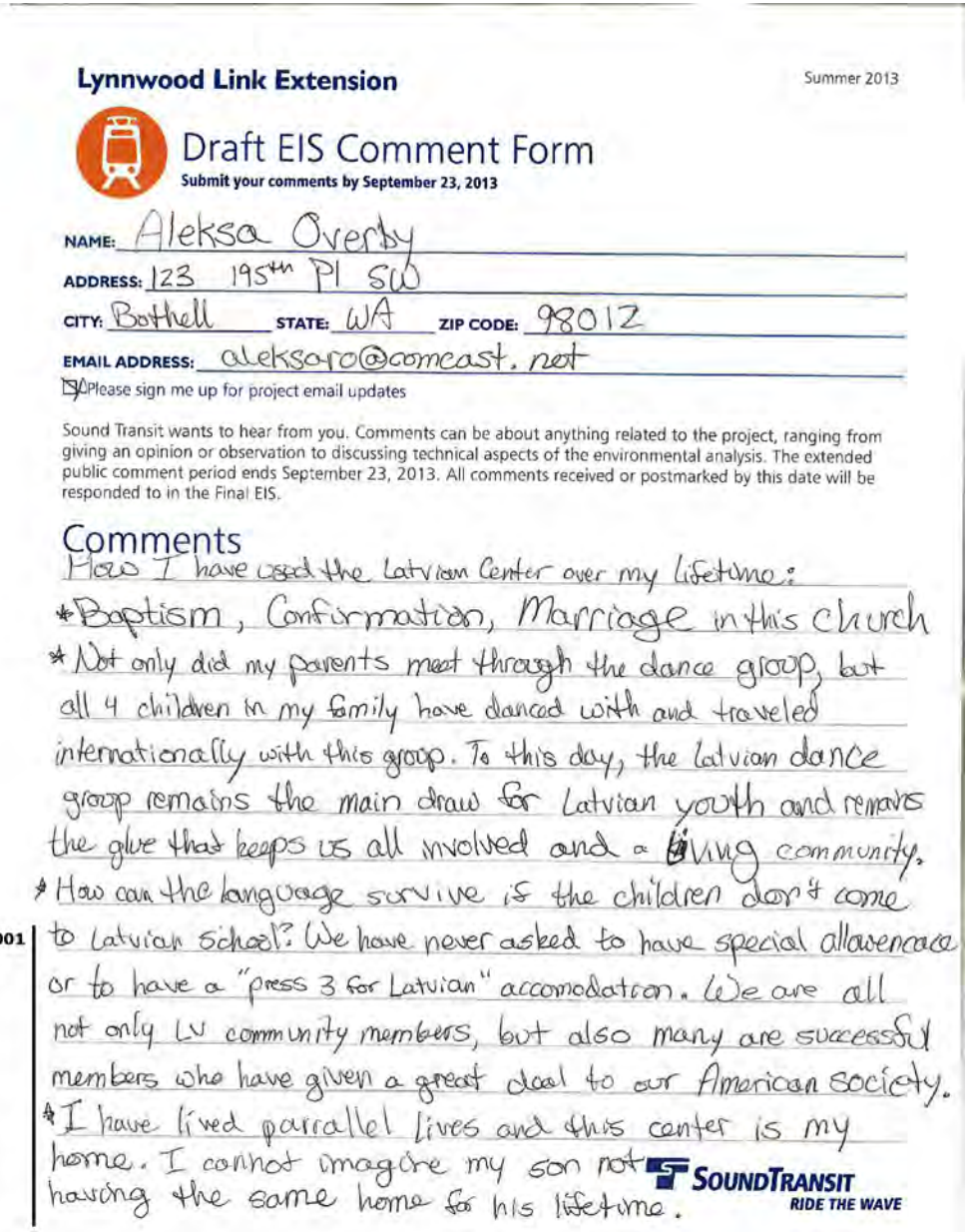
Ieva Ohaks

17810 3rd Ave NE

Shoreline, WA. 98155

206-362-9252

ieva.ohaks@gmail.com



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Aleksa Overby

ADDRESS: 123 195th Pl SW

CITY: Bothell STATE: WA ZIP CODE: 98012

EMAIL ADDRESS: aleksaro@comcast.net

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

How I have used the Latvian Center over my lifetime:

* Baptism, Confirmation, Marriage in this church
* Not only did my parents meet through the dance group, but all 4 children in my family have danced with and traveled internationally with this group. To this day, the Latvian dance group remains the main draw for Latvian youth and remains the glue that keeps us all involved and a living community.
* How can the language survive if the children don't come to Latvian school? We have never asked to have special allowances or to have a "press 3 for Latvian" accomodation. We are all not only LV community members, but also many are successful members who have given a great deal to our American society.
* I have lived parrallel lives and this center is my home. I cannot imagine my son not having the same home for his lifetime.

I-315-001

SOUNDTRANSIT RIDE THE WAVE

I-315-001

Thank you for describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, and the larger Baltic community.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Nathan Overby

ADDRESS: 123 195th Pl SW

CITY: Bothell STATE: WA ZIP CODE: 98012

EMAIL ADDRESS: supernate5000@hotmail.com

☐ Please sign me up for project email updates

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Comments

I-316-001

Growing up with no feeling of belonging, community, or culture, then having married a Latvian American I feel fortunate to have become involved in this one-of-a-kind of community. There is no other place like it in all of the Northwest and to displace this huge, vital hub of not only Latvian Americans, but Estonian Americans, and Lithuanian Americans would endager our culture which we have not assurance would survive. We need our home, we have worked for it, maintained it, and deserve to pass it onto our children.

SOUNDTRANSIT
RIDE THE WAVE

I-316-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you and your family.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Dear Sound Transit Board members,

Hello. I am very excited for the light rail system and the ability to walk to a light rail station from my house. I do have legitimate concerns over the Shoreline City Council's recommendation for the light rail station and parking structure to be placed at 145th St. (SR-523) and I-5. The Shoreline City Council is not discussing the reality of the conditions of traffic on 145th Street, or the 130th/155th St. options with WSDOT, Sound Transit, or the community.

I-317-001

The intersection where it would be placed (145th St. NE and I-5) is already a highly congested area. According to WSDOT, the intersection and the stretch of NE 145th St. surrounding it is already, in their words, over-capacity. Adding another destination focal point can only cause more congestion.

There are a couple of contributing factors to this, including, but not limited to: * It is the only complete set of I-5 on and off-ramps between Northgate and 175th St. NE. * There is minimal queuing area for the cars to enter the I-5 on-ramps. Which creates backups on 145th St. east and west of the intersection and in-between on the overpass bridge. This, in turn, creates backups on the I-5 off-ramps. * It is a main arterial to I-5, that receives the bulk auto traffic not only from Shoreline neighborhoods, but also from Haller Lake, Greenwood, Aurora, Lake City,Bothell, Woodinville, Pinehurst, Lake Forest Park, Kenmore, and east-side traffic. * According to WSDOT, traffic increased 11-15% on NE 145th St./SR-523 after the 520 bridge was tolled and people started using it as the connector around the north-side of the lake to I-5.

Currently, 145th St. east and west of the I-5 intersection during morning and evening rush-hour has two-lane 1/4 to 1/2 mile backups of cars waiting to go northbound and southbound onto I-5. One of the major problems is there is no good way to mitigate the issues of a light rail station on 145th. Some of the ideas floated are: * Add complete sets of off and on-ramps at 130th and 155th St, to reduce the influx of vehicles that use 145th. St solely for the purpose of I-5 access. (which WSDOT says it will not do) * Acquire hundreds of folks properties to widen the 145th arterial, in some instances this would place a state highway within feet of Seattle and Shoreline folks' front doors, or directly in the path of current homes. There is also current infrastructure and or protected spaces in the immediate vicinity, such as a pumping station, Thornton Creek, and the Jackson Park Golf Course. * Add direct on and off-ramps to the station and parking structures from I-5.

When I asked the Shoreline City Council how they plan to address this, or if they have worked with WSDOT to address these concerns, I receive blank stares and replies along the lines of "WSDOT will mitigate any issues". When I asked WSDOT if they had an official position, they said they had not released one but would be more than happy to talk to Sound Transit about the facts. I encourage you to speak to the WSDOT planners and employees who control this area.

I-317-002

I have been to multiple Ridgecrest community meetings, and to the majority of the folks in the effected neighborhoods it makes much more sense to have the proposed two stations at 130th St. and 155th St. Some contributing factors supporting this are: * The already over-capacity and congested NE 145th St. arterial. * 130th is an arterial from Greenwood/99 to Lake City, but currently does not have the congested traffic that 145th St. does. *155th is an arterial from Greenwood (via turning into Westminster Way, which turns into Greenwood), Aurora/99, to 15th Ave. NE * The more stations a mass-transit system has, the more people will have access to it, and more people will use it. The two stations, 130th and 155th St. would server a greater amount of citizens and provide access to more light-rail riders. * Two stations will split the traffic, and if applicable, the parking between two stations. * It will allow people to access the stations from 130th (125th&Roosevelt&130th), 145th, and 155th (All of which are East/West arterials). * 155th St. and 130th St. both have designated bike lines. 145th Street does not have a bike line, and is not safe for bicycle traffic. * 155th St. and 130th St. both have newer accessible sidewalks. The 145th St. and I-5 intersection is not very walkable, nor accessible. The sidewalks, where they exist, are not accessible. * It creates easy light-rail access not only for the Ridgecrest and Parkwood neighborhoods, but also for Lake City, Pinehurst, Bitter Lake, Haller

I-317-001

Your concerns about traffic congestion at NE 145th Street and I-5 are noted. In the Final EIS, Sound Transit proposes mitigation to address impacts from the light rail project along NE 145th Street, see Table 3-27 in Chapter 3, Transportation.

I-317-002

Your preference for stations at NE 130th and NE 155th Streets is noted.

The Preferred Alternative evaluated in the Final EIS includes stations at NE 145th and NE 185th Streets. Ridership analysis shows that there would not be large differences in ridership among the alternatives, despite the different station locations; see Section 3.2.2 in the Final EIS for this discussion.

Chapter 3 has further detail for bike/pedestrian ridership and traffic in general. Chapter 2 describes the sidewalk, bike, and other access improvements associated with the Preferred Alternative.

I-317-002

Lake, Olympic Hills,and Broadview. * This will free up the East/West arterials for the crosstown bus routes to feed the stations. * Less, if any at all property and homes would need to be acquired. The property around the proposed 130th St. and 155th. St. stations are owned by the municipalities.

If you can, please visit and observe the congested NE 145th St. and I-5 intersection during morning or even rush hour. You will see how wanting to place a light rail station at 145th St. is very troubling.

Thank you for your time.

Ryan Basile
Shoreline, WA 98155

From: Angela Petersons <ange.petersons@gmail.com>
Sent: Thursday, September 19, 2013 3:49 PM
To: Lynnwood Link DEIS
Subject: Draft DEIS Comments

To Whom it May Concern:

I-318-001

I am writing today to express my thoughts, comments and concerns over the planned light rail extension to Lynnwood. Specifically in regards to how the project is going to impact the Latvian Lutheran Evangelical Church and Community Center located at 11710 3rd Avenue NE, Seattle 98125.

The proposed plans for the rail extension to Lynnwood call to highly impact the Latvian Community Center - and in one plan, to completely get rid of the center.

I am not of Latvian descent, but my husband is Latvian and I married in to this wonderful community. My husband is the second generation of his family to be born in the United States. His grandparents fled Latvia during World War Two when the Soviet Russia invaded Latvia. His grandparents, after years of moving from place to place in search of a new home, ended up Seattle. They found a new home in Seattle and were also able to find a community of Latvians that ended up there as well. In this new home, they created a community that was strong and proud of their displaced heritage.

They created a community center that was taken away by imminent domain in Wallingford and ended up in their current location. They built this Center from the ground up and it is a hub of Latvian and Baltic activity that thrives on their Latvian culture and community.

The Draft DEIS mentions that this facility is merely a church, but I want to raise attention that it is so much more than that. Over the years that I have known and been married to my Latvian husband, I have been to numerous events at the Center - not only Church events - and am aware of the many activities that this facility serves. As you are now aware from the outcry of the Latvian community, the Center serves as a Latvian Language school, as the facility that holds practices and performance space for the Latvian Folkdance Group and Latvian choirs, a hall for Latvian events and parties, a polling place for Latvian (and Baltic) elections, a Church serving all Baltic communities, as well as a center for the cultural preservation of this strong community.

I am Hawaiian. And one of the things that drew my husband and I together from the start was a love and respect for our cultures. We are both strongly involved in our communities and have gained a strong respect for each other's cultures. I am due to have a girl in October and would love more than anything for her to learn both of her parent's cultures. This Center is vital in allowing that to happen. Just as my husband did, I would expect my daughter and other future children to attend the Latvian School to learn about her ancestors and gain a deeper understanding of her culture.

1

I-318-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-318-001

Being a City of Seattle employee in the Cultural Programs office at Seattle Center, I understand how important it is to this great City of Seattle to preserve and promote all of the cultures and heritage that this City represents. We are lucky as residents of Seattle that our Mayor strongly promotes cultural preservation and cultural pride. Taking this facility away would not prove that this is true for the Latvian Community and it would be a sore disappointment to this City.

This Latvian Center is an important part of the Latvian Community and to the City of Seattle as a whole. There is no value that you can put on the Center except to say that it is a priceless piece of Latvian and Seattle history.

Please reconsider your plans and I am hoping that any impact made to the Center will have little effect on this community and all of the activities that take place there. This Center is the heart of this community - let's not take away their hearts.

Thank you for your consideration.

Sincerely,
Angela Petersons

From: linda beinikis <lbeinikis@gmail.com>
Sent: Friday, September 20, 2013 1:07 PM
To: Lynnwood Link DEIS
Subject: Draft EIS comments

September 20, 2013

Sound Transit
Draft EIS comments

Fifteen years ago my husband and I moved to Seattle and became active members of the Latvian community. The Latvian Center at 11710 3rd Ave NE, Seattle, WA 98125 is known across the country and the world as a gathering point for Latvians in the greater Seattle area. We knew that we would be welcomed into the community as soon as we stepped foot through those doors.

In those early days, we joined the Seattle Latvian Church, but we quickly began supporting many more activities in the Center. The Latvian School, housed in the Center, taught my daughters about their Latvian heritage and, by extension, the heritage of their Baltic neighbors. My oldest graduated from the school earlier this year, while the younger one joyfully spends Saturdays at the Center with her peers. Trejdeksnitis folk dance performances are particular draws and our daughters are waiting for the days they are old enough to dance with the group. The candlelight service and following Christmas pageant every December is one of the biggest draws for the cross-generational community. Children perform songs during the church service and again in the pageant. The wonder and joy in the eyes of the children when Santa comes ho-ho-ho-ing into the main hall is something that lights up everyone's spirit.

I-319-001 The proposed extension and alignment onto the Center property of the Sound Transit Link Light Rail and the physical disruption to the property will cause irreparable damage to the communities and organizations using the property and unfortunately, will discourage new members from joining the communities due to the uncertain future that this situation presents. The Baltic communities that call this property home are fragile communities that can not afford this sort of disruption.

Link Light Rail is a project that should support the communities of Seattle, not threaten their existence.

Sincerely,
Linda Beinikis

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I-319-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

From: olga G <atvasara@gmail.com>
Sent: Friday, September 20, 2013 2:42 PM
To: Lynnwood Link DEIS
Subject: Light Rail

Draft EIS Comments
Lauren Swift

I-320-001

We are members of the Latvian community recently relocated to Seattle and are extremely concerned that the Lynnwood Link Extension will destroy the long established Latvian Cultural Center and Church in Seattle. While living elsewhere, over a time period of at least 40 years, we often drove to the Latvian Cultural Center to enjoy and take part in the various activities it had to offer. The location near I-5 is ideal for anybody driving from a different city,
therefore, in our opinion, relocation is out of the question.

Please consider the interests of a large Latvian community and save the existing Latvian Cultural Center and Church by:

1. Ensuring uninterrupted access
2. Building the Light Rail on ground level with a wall seperating the Latvian Cultural Center from the Light Rail trains (or better still - put it underground
3. Making permanent access and parking possible (maybe at the end of 20th St. - would mean purchasing the last house on the street for a driveway)
4. Rebuilding the Latvian Cultural Center's caretaker's house

Yoiurs truly,
Juris Beitlers & Olga Grikis

1

I-320-001

The Preferred Alternative evaluated in the Final EIS includes several of your design suggestions, except for the underground option. Such an option would not avoid the displacement, and would not connect effectively to the guideway sections to the south where an elevated alignment is the least impacting choice. The Preferred Alternative redesigns the church access street to the south, replaces a city street, which allows for replacement of lost parking, and includes land that could accommodate a relocated caretaker residence. Chapter 2 of the Final EIS describes the Preferred Alternative.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form Page 1 of 2

Submit your comments by September 23, 2013

NAME: Velta and Andris Benson

ADDRESS: 3246 - 72nd Place S.E.

CITY: Mercer Island STATE: WA ZIP CODE: 98040-3338

EMAIL ADDRESS: veltab@comcast.net

☒ Please sign me up for project email updates

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Comments

I-321-001

The Seattle Latvian Community Center and Church have been a source of cultural promotion of the Baltic countries and Latvia and its traditions and community specifically over the last sixty and more years since the arrival of their displaced persons in the fifties. Sharing with the greater Seattle community, the West Coast and USA in general as well as visitations from other countries, based out of this facility, we have participated and shared our culture at the Goodwill Games, with Latvian West Coast Song Festivals which took place at the Seattle Opera House, The Sheraton and other local hotels for thousands of attendees; participation in Folklife for over 20 years now with the folk dance Group Trejdeksnitis, and young women's singing ensemble Sigulda, as well as Bumpershoot with Latvian artists participating, not to mention parades and supporting the University of Washington's Scandinavian Department, Baltic Studies Program with annual traditional "kekatas" evenings and other fund raising efforts in form of auction and donations, dance song and other contributions; and many art and cultural exhibits at the Nordic Heritage Museum, and Tacoma's art exhibitions of local culture with sewing, weaving crafts and art presentations. Governor Gary Lock acknowledged these contributions to an exceptional person of the local Latvian community, Mrs. Skaidrite Abolins with special award for her contributions to our state; several other local Latvians were invited and participated with Latvian weaving and other traditional demonstrations in Washington DC during the 200 year bicentennial activities there.

For several years now, the Latvian dance group Trejdeksnitis also participates in the annual culture awareness events at the Seattle Art Museum, as did our younger generation in years past at the Seattle Museum of History and Industry during their annual Christmas holiday cultural exhibitions; and local young athletics oriented latvians participated in Olympic trials in Shoreline. Having settled near the previous Latvian Community Center which at that time was near Lincoln High School, the Latvian students at Lincoln shared their culture through the then active International Club.

SOUNDTRANSIT
RIDE THE WAVE

I-321-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, and the larger Baltic community.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form Page 2 of 2

Submit your comments by September 23, 2013

NAME: Velta and Andris Benson

ADDRESS: 3246 - 72nd Place S.E.

CITY: Mercer Island STATE: WA ZIP CODE: 98040-3338

EMAIL ADDRESS: veltab@comcast.net

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Comments

I-321-001

Currently the Seattle Latvian Community Center and Church is the center for visits from Latvian presidents. The current President Andris Berzins is visiting September 22, 2013 and past President Valdis Zatlers who also was guest speaker at the Seattle World Affairs Council. Art exhibits at the Latvian Community Center have been open to the public, as well as visitations from Latvia by actors, musical artists with voice and instruments and other exchange programs between the USA and Latvia. The national American Latvian Association meetings have been held in Seattle representing issues pertaining to Latvians in Latvia as well as outside Latvia, giving both opportunities to learn about their respective cultures and share the best of each, providing the displaced persons outside of Latvia and as well as Lithuania and Estonia and their families a closeness to their heritage and roots so they can be more fulfilled citizens of this country.

I-321-002

The community of Seattle will lose a lot of these contributions for the mere reason that such exciting activities need a central known source and place to practice, gather for inspiration, and learning and coordination of same. Currently, the Latvian Holiday Bazaar each November as well as the Rummage Sale in the spring have been an expected and well anticipated and received activity for the local Seattle community in general. A very sad result of displacement of this community will be the loss of its offerings to the elder population and the families who have bought homes and made their lives to enable their connection and participation to this part of their heritage. The most loyal and now oldest member lives in her home two blocks away from the center which she and her husband purchased when the Center was built in 1972. She would rarely be able to partake of this cherished part of her life to which she has given so much if the current facility would have to be removed or displaced.

Thank you for providing us the opportunities to state our concerns and describe the contributions and sacrifices this community has made to enable this facility to be built and develop in such a fruitful part of this City and State.

SOUNDTRANSIT
RIDE THE WAVE

I-321-002

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

From: Sasha P <epsasha@gmail.com>
Sent: Monday, September 16, 2013 10:47 PM
To: Lynnwood Link DEIS
Subject: Public Comment - Lynwood Link Extension & Latvian Church & Center

Dear Sound Transit:

I would like to this opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Lynwood Link Extension.

I-322-001

As the DEIS points out, the extension may adversely affect the Latvian Church and Center (LCC). I encourage you to do everything possible to minimize the impact on the LCC.

I am Latvian and part of much larger Latvian diaspora. After World War II, my parents along with 40,000 other Latvians immigrated to the United States with the help of the U.S. government and various social service and religious organizations.

Many of those Latvians settled in Seattle and banded together to built the Latvian Church and Community Center. Since then, the LCC has been the nexus for Latvian social events, school, choirs, dance groups, theater troupes, veterans' groups, and political organizations.

I am now parent with two children, 4 and 6, who has enrolled them in the Seattle Latvian School. Without the LCC, my children and I will loose a valuable resource to learn the Latvian language; culture, traditions and most importantly build enduring ties with other Latvians.

The Lynwood Link will not only affect the Latvian School but it will also adversely affect other local and regional groups that rely on the LCC which include:

- LATVIAN ASSOCIATION OF THE STATE OF WASHINGTON
- LATVIAN ARCHIVES & LIBRARY
- WEST COAST LATVIAN EDUCATIONAL CENTER
- UNIVERSITY OF WASHINGTON BALTIC STUDIES PROGRAM
- TREJDEKSNĪTIS, LATVIAN FOLK DANCING GROUP
- SEATTLE LATVIAN EV. LUTHERAN CHURCH
- LATVIAN EDUCATIONAL CENTER
- LOCAL ESTONIAN AND LITHUANIAN COMMUNITIES

1

I-322-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

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As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

I-322-001 As you draft the final environmental impact statement, I encourage you to consider the impact of the Lynwood Link on an important local and regional cultural center. It is unacceptable to close the LCC for any length of time. Doing so would negatively adversely impact the local, regional and even the global Latvian community.

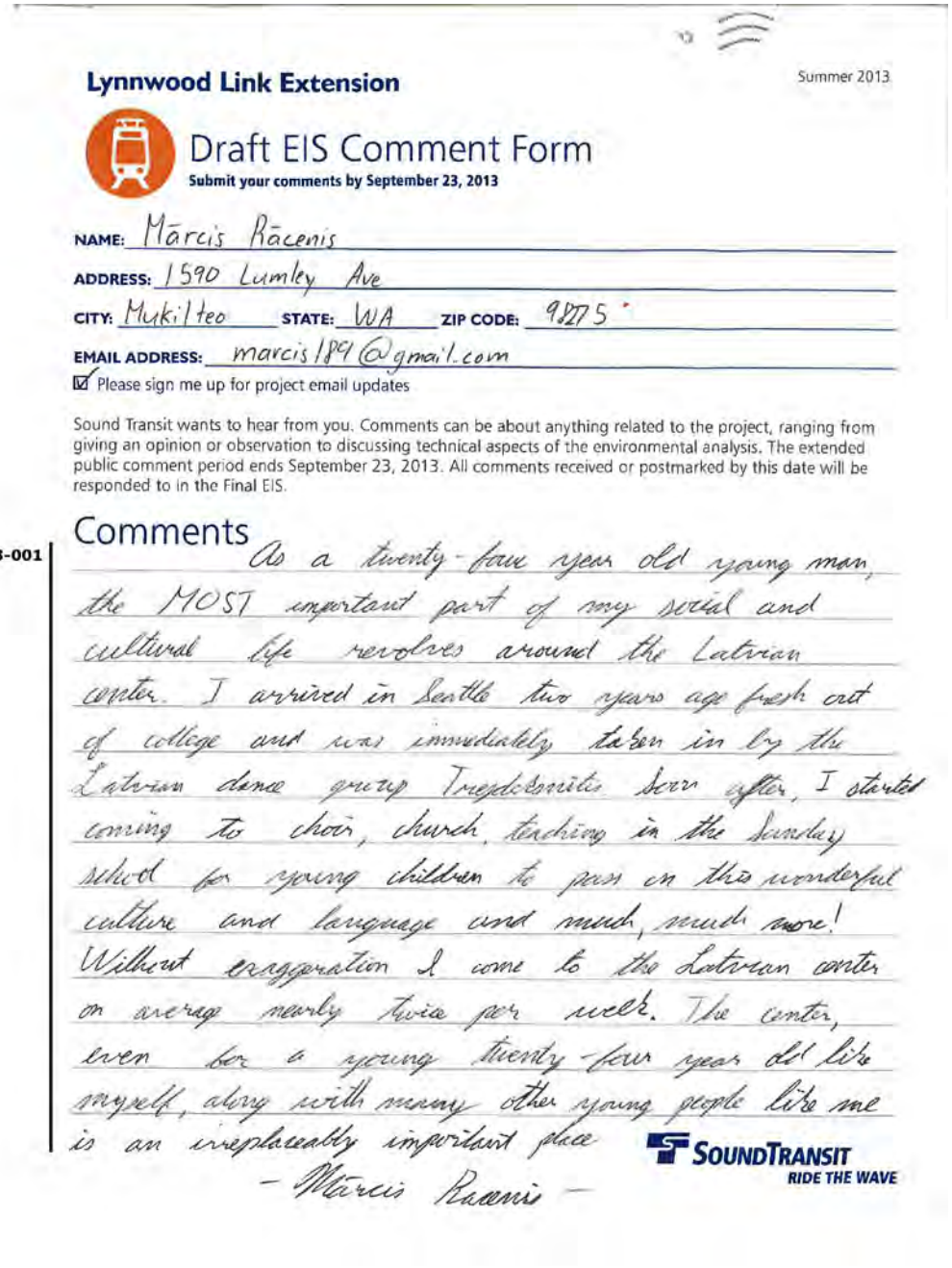
Sincerely,

Eriks Sasha Paegle

8748 25th PL NE

Seattle, WA 98115

M: +1 206 390 5513



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Mārcis Rācenis

ADDRESS: 1590 Lumley Ave

CITY: Mukilteo STATE: WA ZIP CODE: 98275

EMAIL ADDRESS: marcis189@gmail.com

☑ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-323-001

As a twenty-four year old young man, the MOST important part of my social and cultural life revolves around the Latvian center. I arrived in Seattle two years ago fresh out of college and was immediately taken in by the Latvian dance group Trejdeksnis. Soon after, I started coming to choir, church, teaching in the Sunday school for young children to pass on this wonderful culture and language and much, much more! Without exaggeration I come to the Latvian center on average nearly twice per week. The center, even for a young twenty-four year old like myself, along with many other young people like me is an irreplaceably important place

– Mārcis Rācenis –

SOUNDTRANSIT RIDE THE WAVE

I-323-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: ANDREJS RAIZE

ADDRESS: 2715 159TH ST CT E

CITY: TACOMA STATE: WA ZIP CODE: 98445

EMAIL ADDRESS:

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-324-001

Latvian Cultural Center is very important for us. Please, keep it undamaged.

Sincerely
Andrejs Raize
September 18/2013

SOUNDTRANSIT
RIDE THE WAVE

I-324-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: LAIMA A. RAIZE

ADDRESS: 2715 159TH ST CT E

CITY: TACOMA STATE: WA ZIP CODE: 98445

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-325-001

Latvian Cultural Center is very important for us.
Please, keep it undamaged.

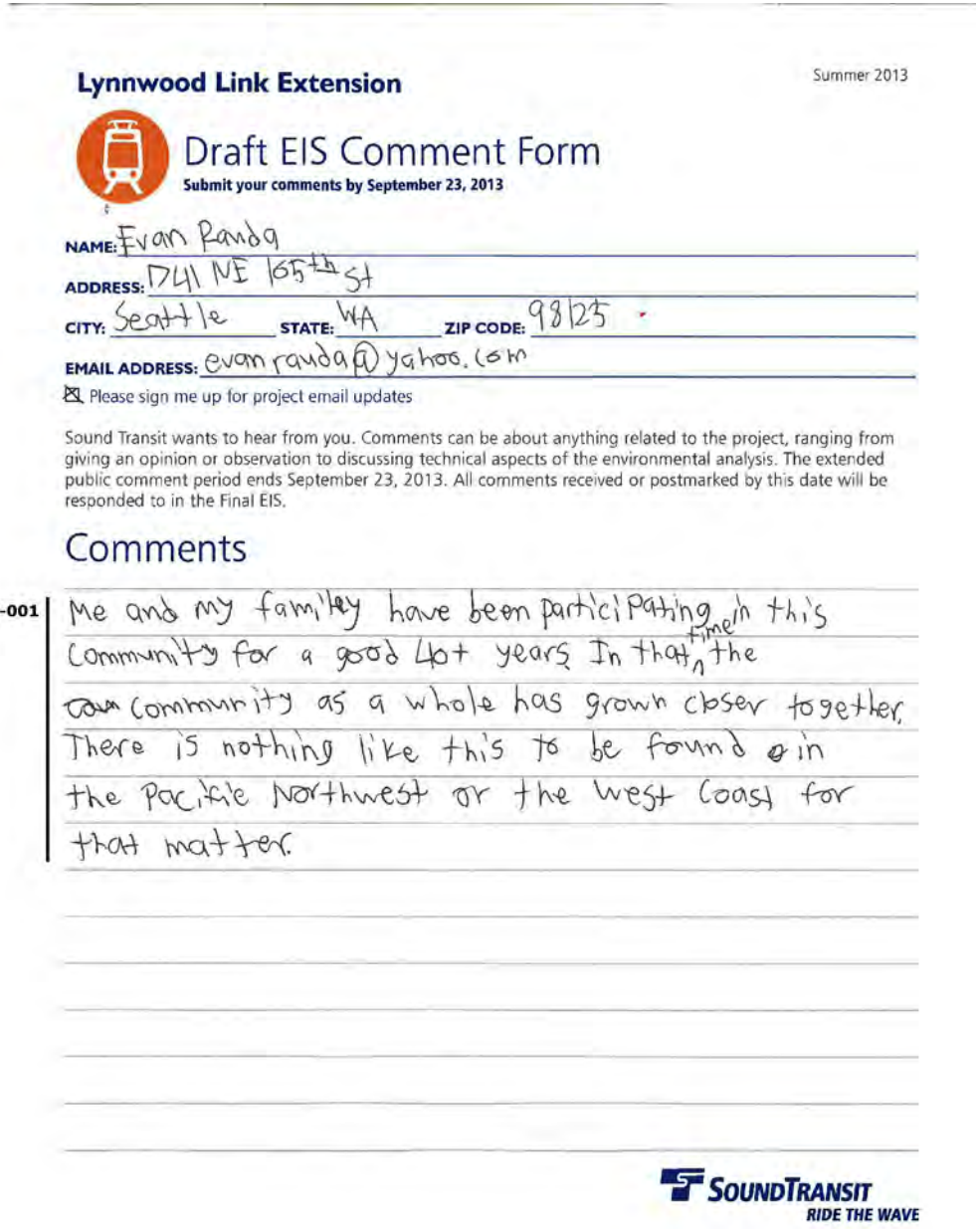
Sincerely, Laima A. Raize
09-18-2013

SOUNDTRANSIT
RIDE THE WAVE

I-325-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Evan Randa

ADDRESS: 1241 NE 165th St

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS: evanranda@yahoo.com

☒ Please sign me up for project email updates

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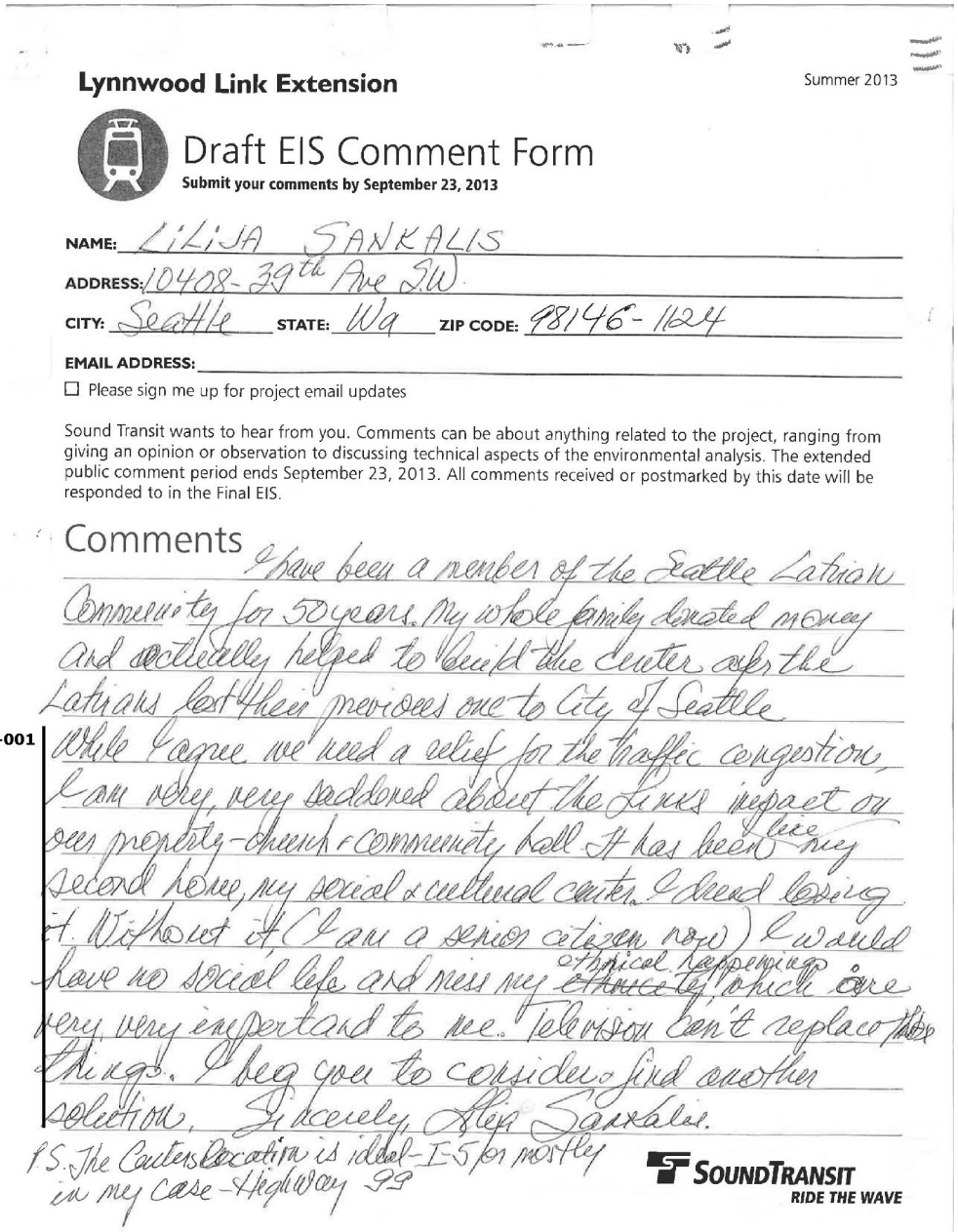
Comments

I-326-001 Me and my family have been participating in this Community for a good 40+ years. In that time, the community as a whole has grown closer together. There is nothing like this to be found in the Pacific Northwest or the West Coast for that matter.

SOUNDTRANSIT RIDE THE WAVE

I-326-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you and the region's Latvian community.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: LILIJA SANKALIS

ADDRESS: 10408-39th Ave SW

CITY: Seattle STATE: Wa ZIP CODE: 98146-1124

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I have been a member of the Seattle Latvian Community for 50 years. My whole family donated money and actually helped to build the center after the Latvians lost their previous one to City of Seattle

I-327-001

While I agree we need a relief for the traffic congestion, I am very, very saddened about the Links impact on our property - church - community hall. It has been like my second home, my social & cultural center. I dread losing it. Without it (I am a senior citizen now) I would have no social life and miss my ethnic activity which are very very important to me. Television can't replace these things. I beg you to consider & find another solution. Sincerely, Lilija Sankalis.

P.S. The Canterbury location is ideal - I-5 for mostly in my case - Highway 99

SOUNDTRANSIT RIDE THE WAVE

I-327-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Laura Schott

ADDRESS: 2343 E Richmond Avenue

CITY: Fresno STATE: CA ZIP CODE: 93720

EMAIL ADDRESS: Laurakschott@yahoo.com

☒ Please sign me up for project email updates

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Comments

I-328-001

I am writing to state that eliminating the Seattle Latvian Church and Center is completely unacceptable. This center has played a critical role in my family's history and is an important component of our future and heritage as well. My grandpa helped build the center, my parents and other relatives were married there, my 3 siblings and I went to school there, were confirmed in the church and attended over a hundred functions and gatherings throughout my childhood and college years. While I may no longer live in WA, the times I do return I will still find myself at the center and have looked forward to bringing my kids there as they get older. Eliminating this critical and historic gathering place would be a true tragedy

Sincerely, Laura Schott

SOUNDTRANSIT RIDE THE WAVE

I-328-001

Thank you for your comments describing the importance of the Latvian Evangelical Lutheran Church to you.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: James & Barbara Sinclair

ADDRESS: 17628 Talbot Road

CITY: Edmonds STATE: WA ZIP CODE: 98026

EMAIL ADDRESS: bsinclair39@comcast.net

☐ Please sign me up for project email updates

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Comments

I-329-001

We are hopeful the extended Sound Transit will not affect the Latvian Church. Besides being a place to renew ones spirit they host many Baltic functions - both local and international. Weddings, baptisms and family events are enjoyed. A wide variety of ages are active in the church. Please consider a raised track. Keep the Church as is-please.

SOUNDTRANSIT
RIDE THE WAVE

I-329-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

TO: Sound Transit DEIS
401 S. Jackson St.
Seattle, WA 98104
ATTN/c/o Lauren Swift

FROM: Elaine Smith
5630-200TH ST. SW #B305
Lynnwood, WA
98036-6262

September 13, 2013

Re: Draft EIS

Dear Sound Transit Planners
c/o Lauren Swift,

I-330-001

Having weighed all the options C1, C2, and C3 very very carefully, I want you to know that I evaluate that Option C3 for siting is the only option that makes sense for our community and for the South Snohomish region.

To try to site the route and stations along 52nd Ave W. (options C1 and C2) would have the effect of destabilizing and brutally "big city industrializing" of our fragile-enough neighborhoods which are trying so hard to build up our sense of neighborhood closeness and cohesion here in Lynnwood. We don't need trains, running through the delicate eco-system and nearby streets of what we all enjoy as Scriber Lake's legally protected wetlands park, either!

Option C3 is different in a positive way. It makes sense for consolidating and preserving a transit corridor we are already used to for Lynnwood. I believe it would indeed also be the best revenue-producing alternative for Lynnwood businesses, as many riders would jump at the chance to find the safe harbor of hotels, restaurants, and retail options so close to their train journey's end.

Please choose Option C3 as the sole alternative that is best thought-out as benefitting riders, business, and residents of South Snohomish County. Thank you.

Sincerely,
Elaine Smith
Elaine Smith

I-330-001

Your preference for Alternative C3 is noted. The Preferred Alternative evaluated in the Final EIS includes a modified Alternative C3. Chapter 2 in the Final EIS describes the Preferred Alternative.

From: Ken Gorshkow <kengorshkow@comcast.net>
Sent: Wednesday, September 18, 2013 6:36 PM
To: Lynnwood Link DEIS
Subject: Latvian Church and Hall

Dear Sound Transit Officials:

I-331-001 We have heard that the Latvian Church/Hall is in jeopardy of being demolished in favor of rapid transit using this corridor to pass from Seattle to Lynnwood.

This beautiful structure serves not only the Latvian community but also the Estonian community, which is quite small in Seattle, not large enough to support a church and hall of its own.

Estonians of Seattle are dependent upon the church and hall for their religious services, civic programs and festive events. It would be a very sad day if the church/hall is demolished to allow Sound transit to travel along I-5.

With today's prices it would be impossible for the Latvian community to replace this outstanding and most useful building. Both Latvians and Estonians would be robbed of the many events that are held there throughout the year.

Please find an alternate route for Sound transit rather than destroying the possibility of Latvians and Estonians coming together for church services, civic and social events.

Sincerely,

Ruth A. St.Hilaire
(of the Estonian Community)
Seattle WA
206-282-2812

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I-331-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Caitlin Tierney <ctierney480@gmail.com>
Sent: Tuesday, September 17, 2013 11:43 AM
To: Lynnwood Link DEIS
Subject: Save the Latvian Lutheran Church

Hello,

I-332-001

I am writing as an alumnus of University of Washington's Scandinavian Studies department. I graduated cum laude in 2011 and my senior thesis was a way to test Latvian language acquisition. UW has close ties to Latvia and its culture; the UW Chorale has even traveled there twice: once to perform for the president of Latvia and then to participate in the Song and Dance Festival in Riga (an *inexplicably* powerful cultural event that brings non-Latvians like me and my fellow students to tears).

To complete my program, I had to learn Latvian language, culture, and history. The Latvian Lutheran Church was tantamount to my successful completion of the degree.

I have taken part in events at the Church since 2007: events including the St. Martin's Day festival, the dance group (which recently traveled to Latvia's Song and Dance Festival in Riga), and other local events at the Latvian Lutheran Church.

Seattle would not be the same without this Church. It is the only one of its kind and people travel from all over Western Washington to connect with their culture there. This is a way for people who are far away from their family's country to connect and strengthen their social bonds.

I believe that you can find a way to complete the necessary business for Sound Transit without harming this pocket of Latvian culture.

Thank you for your consideration.

--
Caitlin Tierney
UW Class of '11

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I-332-001

Thank you for your comments describing the importance of the Latvian Evangelical Lutheran Church to you.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Anne T. Totoraitis <annetoto@uw.edu>
Sent: Tuesday, September 17, 2013 8:01 PM
To: Lynnwood Link DEIS
Cc: Constantine, Dow
Subject: Sound Transit's impact on the Latvian Center

Dear Sound Transit,

I-333-001 I am a member of the Seattle Lithuanian-American Community. The Latvian Center is the venue for most of our events from Lithuanian Independence Day on Feb. 16, to the Commemoration of the Day of Deportation in June, to the one of the most important celebrations for Lithuanians, **Kūčios** (Christmas Eve), and I am concerned that the proposed light rail line may have very severe impact on the Center.

We have held many benefits at the Latvian Center as well. In fact, you should attend the St. Martin's Day festival on Oct. 26 at the Latvian Center to witness one of our events in person! It's a fundraiser for the Baltic Studies Program at the University of Washington - $25 per person and includes dinner. There's a silent auction too. It starts at 6 p.m.

I am asking that you please keep at-grade access (not the elevated option) to the Latvian Center open during construction and to minimize the impacts during construction and after (dust, noise, vibration, light, etc.) so they don't hamper our events.

After construction is complete, please do not take the property and relocate the Latvian Center. Instead, find ways to keep it in its current location, and offer adequate parking and access.

thank you,
Anne Totoraitis

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I-333-001

Thank you for your comments about the events held at the Latvian Center. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: EGILS VARSBERGS

ADDRESS: 5810 COWEN PL NE APT. 211

CITY: SEATTLE STATE: WA ZIP CODE: 98105

EMAIL ADDRESS: lat_aguilas@yahoo.com

☐ Please sign me up for project email updates

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Comments

I-334-001

IF OUR LATVIAN LUTHERAN CHURCH IS LOST TO THE LYNNWOOD LINK EXTENSION IT WOULD BE A SEVERE HARDSHIP FOR ME AS I WOULD BE UNABLE TO GET AROUND AS MUCH AS I GET OLDER.

ALSO RELOCATING AND/OR REBUILDING A NEW COMMUNITY CENTER AND CHURCH WOULD BE A TREMENDOUSLY DIFFICULT PROJECT FOR THE COMMUNITY AS A WHOLE, GIVEN THE AGING NATURE OF OUR COMMUNITY.

Egils K. Varsbergs

SOUNDTRANSIT RIDE THE WAVE

I-334-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: John Westfall <westfallj@pioneernet.net>
Sent: Monday, September 16, 2013 7:39 PM
To: Lynnwood Link DEIS
Subject: DEIS Comments

Dear Lynnwood Link:

I-335-001 I wish to voice my support for Segment B2A, that provides a stop at 220th St SW in Mountlake Terrace.

Anticipating area population increases and existing large employers and service-providers in the 220th St SW corridor of Mountlake Terrace leading to Edmonds, this stop will be an important connection to Community Transit to make connection to Swedish Hospital Edmonds, Premera/Blue Cross, businesses and many multi-residential apartments in the area.

I-335-002 Currently, Melody Hill Elementary has been demolished and there is land available through Edmonds School District on the west side of I5, south of 220th.

Thanks,
John Westfall, Brier, WA

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I-335-001

Thank you for stating your preference for Alternative B2A with a proposed light rail transit station at 220th Street SW.

I-335-002

Sound Transit learned of the demolition of the Melody Hill Elementary School building owned by the Edmonds School District after the publication of the Draft EIS. The Final EIS has been revised to accommodate this change. A station at 220th Street SW utilizing this property is evaluated as an optional station location for the Preferred Alternative in the Final EIS.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: IEVA ° DONALD YOUNG

ADDRESS: 19802 2nd AVE SW

CITY: Normandy Park STATE: WA ZIP CODE: 98166

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-336-001

For the past 41 years we have been coming to the Latvian Center to participate, enjoy, share with other Latvians at our center and church. The Seattle Latvian Folk Dance Group practice weekly and perform several times a year for their own fulfilment and enjoyment for this community. Without the center this would be hard to do.

Latvian Americans have strong ethnic ties to each other, and need access to the center for cultural events, for the nourishment of our souls.

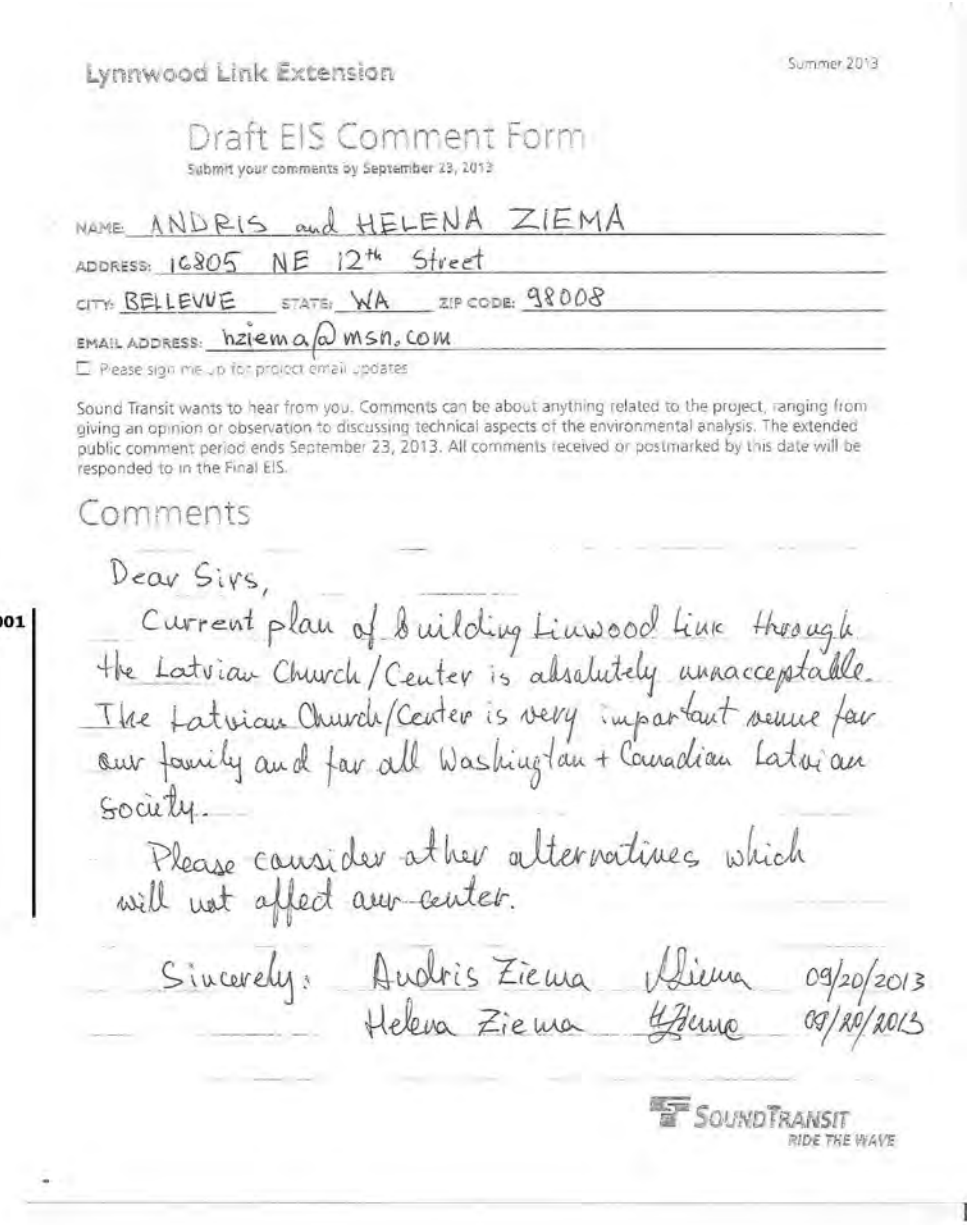
Ieva Young.

15 Sept. 2013.

SOUNDTRANSIT RIDE THE WAVE

I-336-001

Thank you for your comments about the Latvian Center. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: ANDRIS and HELENA ZIEMA

ADDRESS: 16805 NE 12th Street

CITY: BELLEVUE STATE: WA ZIP CODE: 98008

EMAIL ADDRESS: hziema@msn.com

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-337-001

Dear Sirs,

Current plan of building Linwood Link through the Latvian Church/Center is absolutely unacceptable. The Latvian Church/Center is very important venue for our family and for all Washington + Canadian Latvian society.

Please consider other alternatives which will not affect our center.

Sincerely: Andris Ziema 09/20/2013

Helena Ziema 09/20/2013

SOUNDTRANSIT
RIDE THE WAVE

I-337-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: thehelix@comcast.net
Sent: Tuesday, September 17, 2013 3:46 PM
To: Lynnwood Link DEIS
Subject: Sound Transit Link impacting the Seattle Latvian Center

September 17, 2013

Subject: Lynnwood Link Extension Draft Environmental Impact Statement - Impact to the Seattle Latvian Church and Center at 11710 3rd Ave N.E, Seattle, WA 98125

Dear Sound Transit Board,

I-338-001 Today I am writing to share my concern about the future of the Latvian Church and Community Center.

I attended the Latvian school at this center and graduated in 1980, I can still speak, read and write in Latvian. In the class room area of this center there are photos on display, still today, of students with high scores on exams administered nationally by the American Latvian Association. I managed to get an honorable mention and thus a photo of me is up on the wall with the others for my 7 year old daughter to see. Last Saturday my daughter, started her 4th year in this school in the very same building. I hope that when my daughter gets older she will join the dance group Trejdeksnitis and eventually travel to Latvia to participate in a song festival as others did earlier this year.

Latvian families like my parents came to America after World War II to make a better life for their families. Even while in Displaced Persons Camps in Germany after the war they organized schools, theater troupes, music ensembles etc. The sense of community and education was strong and as you have read elsewhere the Northgate location is not this community's first residence. The generation that came to America had an irrepressible goal, to pass their culture and language to their children, thus they built a 2nd church and community center. As such communities assimilate over generations this singular focus gets diluted and the challenges of financing, designing and building a 3rd community center becomes insurmountable. If we loose access and have to relocate this physical anchor which sustains our regions Baltic communities will disappear. The language and culture continues because we have a physical location to carry on.

Please help the Latvian Church and Community Center stay whole and unaltered in its present location.

Thank you for your time and consideration.

Eriks Rauda

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I-338-001

Thank you for describing the importance of the Latvian Church to you and the local Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

10916 North Park Ave N
Seattle, Wa. 98133

From: Liz Rekevics <lizr@flyingcroc.com>
Sent: Wednesday, September 18, 2013 1:23 PM
To: Lynnwood Link DEIS
Subject: Latvian Community Center and Church

To Whom it May Concern,

My name is Liz Rekevics (Elizabete Alma Astra Rekevics in full), and I'm Latvian.

My parents immigrated to the US during WWII and made their home here in Seattle where I was born and raised. The Latvian Center, exists and was built for my generation and those to come. I attended Latvian school there, numerous church/community events, was confirmed there – and bid my grandparents and both my parents farewell at the Latvian house.

I-339-001

I currently see a full capacity school, an active church community, frequent use by all age groups and Baltic groups. Compared to any other stop along your path to Lynwood, I don't see any other community so drastically affected by your plans. You wouldn't dare blast through any one of the many silly chain restaurants at Northgate, why is a hub of an entire community any less valuable? How many other community centers are you considering dissolving along the way?

Relocation, not an option. Families have intentionally moved to the area to be closer to our center. This is where we continue our existence. We bought the land, we should get to use it.

You've seen our access point – it's not significant, but does the trick. The VERY least you could do is to allow us to KEEP an access point. You will already change our entire experience with noise, view etc – but let us GET WHERE WE NEED TO BE! My suggestion is to provide an alternate access point off of 5th. There are a number of homes which I'm sure will be running for the hills the moment they realize the train is coming through their back yard. I'm sure there are options available. But blocking us out, or taking it away is simply NOT AN OPTION.

Please consider your path wisely. I understand the need for light rail, but wrecking an entire community that has worked so long and hard to create such an important place, is not necessary. This is far more than a community center. This is a home base to so many who have been uprooted many times.

Thank you

Liz Rekevics
3611 NE 137th St
Seattle WA 98125

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I-339-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

From: Jana Vitols <janavitols@hotmail.com>
Sent: Thursday, September 19, 2013 11:33 PM
To: Lynnwood Link DEIS
Subject: Concerns about Sound Transit and the Latvian Center

Dear Lauren Swift,

I-340-001 I am writing in response to the Lynnwood Sound Transit DEIS. As a Latvian American with strong ties to the Seattle Latvian Center, I am concerned about the possible adverse side effects of of the proposed light rail construction.

Being involved with the Latvian Center these past 12 years, I have found community through dancing and performing with the internationally recognized folk dance group, Tredeksnitis. Discovering the Latvian Center here also connected me to the Latvian language, which I wasn't raised speaking (in large part because there was no Latvian Center near where I grew up). The Latvian Center broadened my awareness of other Latvian educational opportunities in the Northwest, eventually connecting me to the University of Washington's Baltic Studies Program where I was able to continue my study of the language. I will be joining the Latvian choir this fall and look forward to learning more about the Latvian language through this experience.

The Latvian Center is a culturally important gathering place that brings together all ages to celebrate and pass along cultural traditions and values. I believe that the plans to proceed with building the Sound Transit Lynnwood Link line needs to take into account the least disruption to the center possible. I think this could be best done by building the non-elevated line and assuring that access to the center is guaranteed at all times during construction.

I hope in planning this you will be sensitive to the history that so many Latvian elders and their children experienced as displaced persons and refugees during WWII and their subsequent immigration to America. I urge you to consider the significance that the Latvian Center has in Seattle. Unlike other ethnic communities that have multiple gathering places, this is the singular center for the entirety of the Latvian community in Seattle.

Thank you for your consideration and preservation of this gem of a community space, gathering place, church, and educational center.

Sincerely,
Jana Vitols
3815 25th Ave. S.
Seattle, Wa. 98108

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I-340-001

Thank you for describing the importance of the Latvian Center to you and the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: home <abcs04@comcast.net>
Sent: Saturday, September 21, 2013 3:44 PM
To: Lynnwood Link DEIS
Subject: Comments on DEIS

A very comprehensive report, and the volume of information is overwhelming for a decision-maker. Some observations and suggestions:

I-341-001
- All of the criteria seem to be presented as equal to one another. For instance, the number of properties expected to be taken by any one option is equated to a ridership estimate. Check the results from Central Link for both of these – and the other elements – and you'll no doubt find that some were more accurate than others. This "certain" information should be a major consideration, as this is *actual* experience, even though it's a different segment with, more than likely, different people making the estimates...but, their methodologies are probably similar. I'm comfortable in my feeling that you'll find that property impacts and capital cost estimates were closer to reality than ridership estimates were for Central Link. A percent accuracy for each element would be useful, so as to not fall into a trap of considering each element is equally accurate, which is what looked to be the case in my reviewing this DEIS.

I-341-002
- "Cheap" shouldn't be the top priority, but perhaps "bang for the buck" should be. I'd rather see 4 stations built well than 5 or 6 stations built bare-bones.

I-341-003
- Spacing of stations should be considered, as well as what that conveys/feels like, i.e., is this a limited-stop transit mode, or more like a bus or streetcar? Additionally, does a station at location "X" give you something valuable enough that otherwise would be lost. I was glad to see that there were estimates for gains and losses associated with each station in the DEIS, as this hasn't been presented verbally, rather, I have only heard of the "ridership" lost, which is misleading, not only for the gray area that ridership estimates tread into, but also for a lack of completeness, because there are a myriad of objective "pros" and "cons" that should all be presented as a table for you to weigh.
- Regarding spacing, on approximately a straight line, the mileages from Northgate Station to: 130th (1.5), 145th (2.3), 155th (2.8). The mileages from 130th to: 145th (0.8), 155th (1.3), 185th (2.8). The mileage from 185th to Mountlake Terrace Transit Center: 3.1, The mileage from Mountlake Terrace Transit Center to: 220th (1.0), Lynnwood Transit Center (2.0). This spacing, along with access considerations/feasibility, suggests that an option that's not listed may be more prudent, stations at 130th and 185th. The ST2 plan defined a "general" scope for the project, voters expect the decision makers to wade through the options, not capitulate to cities' whims (e.g., your board bypassing Southcenter) unless they make sense to the region, with the result not precisely what they saw in the initial materials (e.g., King County Metro's upcoming plan for reductions will differ from what they suggested last spring). It's a fluid process, most voters are smart enough to realize that, and we saw that the "actual" Central Link differed from the initial proposal. Beware of the territoriality of the proponents of various options!!!

I-341-004
- Connections to regional multi-modal transportation systems is a goal. It is instructive as to where we are **today** at each of the proposed station locations, as we are in a financially-challenged environment and are likely to continue to be so; all one has to do is look at the federal debt issue or the state special session issue. As one statement noted, you should seek: "stations that are easily accessible by foot, bike, bus, or car." I'd add: "given the financial environment of **today**." Are sidewalks complete, which the DEIS didn't seem to focus on well, and from which directions from what population would this draw from? Are there bicycle lanes in place, and what is the total population that this may draw from

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I-341-001
Your comments concerning the presentation of information used to compare project alternatives are noted. The purpose of an EIS is to present potential impacts of a project to the public and decision makers. The various environmental resources are not weighted. The methodologies used to make estimates for project impacts are generally similar to the methodology used for the Central Link environmental review document and both are based on conceptual engineering design.

I-341-002
Sound Transit's objective is to develop a project that best meets the purpose and need for the project, minimizes environmental impacts, and is cost effective.

I-341-003
Your comments on spacing between the proposed light rail transit stations are noted. As a regional facility that is linked with the local transit network, the station spacing reflects a balance between access, travel times, ridership, current land use, and the land use plans of local jurisdictions. The neighborhoods between NE 130th and NE 155th Streets are among the most dense in the corridor, and therefore one station only with a larger gap between the stations would have given fewer people good accessibility to transit (particularly for walk or bike trips). The Draft EIS alternatives also were arranged to allow other combinations of stations, but as the strongest support in public comments and from local jurisdictions was for a NE 145th Station from early scoping through the Draft EIS, a unique alternative featuring a NE 130th and NE 185th combination did not appear necessary.

I-341-004
A detailed inventory of existing pedestrian facilities within 1/2 mile of the stations and existing bicycle facilities within 1 mile of the stations is

I-341-004 (neighborhood streets would have a higher possibility than major arterials)? What transit routes serve that location, particularly all-day service, and how frequent? What are today's traffic volumes on the major approach streets? Hopefully, you've seen this first-hand during peak a.m. and peak p.m. commutes at each prospective station location, knowing that light rail-bound motorists will seek neighborhood cut-throughs where main streets are clogged. What multi-family and business developments are nearby or are proposed for the next 10 years? The certainty favors today's conditions over tomorrow's possibilities under a "if money is no object" perspective that some proponents are using in their attempt to influence you, which is a dangerous assumption to take on.

I-341-005
- It should be considered secondary what is possible in order of cost (weighting each). For instance, are existing roads nearby the proposed locations wide enough **today** where bicycle lanes could be striped, a relatively-inexpensive proposition that has high likelihood of reality, and then what's the feasibility of their widespread use (neighborhood streets would have a higher possibility than major arterials)? The same question for completing sidewalks and widening them, which is more expensive and thus less likely of becoming reality, and should be weighted as such. Three of the overpasses in the study: 130th, 145th, and 185th, have narrow sidewalks, and the first two have heavy vehicular traffic volumes adjacent and harrowing (at best) bicycle conditions that are only for the "professional" bicycle commuter. The same question for widening streets, but here the possibility of securing funding coupled with the dwindling time (less than 10 years) are **huge** impediments, sharply reducing the possibility of this coming to fruition, and mitigation of existing traffic during construction should be a consideration. While I didn't see the volume numbers within the DEIS (it is a huge document), I did see the proof that traffic volume matters within the DEIS, with the highest accident incidents on 145th, then 130th, and none at 185th. Each of these accident numbers would be higher with the addition of a light rail station on those streets.

I-341-006
- It should be considered tertiary if something's been *zoned* for higher density with no developer in the wings, as a development could take years or decades. It should be considered how many quadrants around the stations *could* be developed: all four corners, 3, 2, or only 1. For instance, the 130th location has a park in one quadrant and part of another. The 145th location has a park and a private school in two quadrants. The 155th location has a park in one quadrant. The 185th location has a school district property in one quadrant...though, that quadrant is also a destination of a senior center and stadium.

I-341-007
- It should be considered secondary what bus transit *may* do, as we're talking 10 years from now, and most of the planners making the guesses today will be in different positions or retired by then, while nobody can guess with certainty what the financial situation will be in 2023. At present, we're awaiting a cut in Metro service that is to start 1 year from now that's equivalent to eliminating Community Transit's *entire* service. It's therefore more instructive what transit is doing today: are they avoiding certain streets and using others. For instance, 130th has no service cross-town over the freeway, but the BRT-like Metro #41 (from Lake City to Northgate) is 5 blocks south. At 145th, the peak-hour service goes north/south on 5th NE in the peak direction, another travels in the opposite of peak going east in 145th in the a.m., all avoiding the I-5 overpass; one peak direction, peak only route (#308) comes from the east over that overpass, another (#304) from the west turns short of it; the only all-day route (#347) goes the off direction for peak direction travel. There's no cross-town service on this street. The 155th, 185th, and 220th locations have some degree of cross-town service. Mountlake Terrace and Lynnwood Transit Centers have ample transit service all day today.

I-341-008
- Regarding specific locations: 130th should have parking along 5th NE just north of the prospective station, and particularly if the next station north is at 155th or 185th. For 145th, due to the high traffic on that street (over 30,000 vehicles/day on the east approach, over 25,000 from the west; see http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/Council/Staffreports/2012/Staffreport022712-9a.pdf), parking should be split: perhaps a location in the 145th/15th NE-20th NE area, which should be a consideration for 130th and 155th options as well. For 155th, I was surprised that expanding the existing parking at Twin Ponds Park (just west of the I 5 overpass) into a garage wasn't considered. Shoreline Community College to the west is expanding its campus, the city is aiming to make the Westminster Square to the west more viable, developments are planned to the east (15th NE), other destinations (Crest Cinemas, skateboard park) are nearby, and buses travail in all 4 directions. For 185th,

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provided in the Transportation Technical Report that supports the Draft EIS impact analysis as well as the design of station areas and ongoing access planning. An inventory of existing transit services is also included in the Transportation Technical Report. City future land use plans were evaluated during analysis of station siting, and is also discussed in Section 4.4 of the EIS.

I-341-005

All of the light rail alternatives would meet or exceed local jurisdictional, Sound Transit, and ADA design standards for pedestrian facilities fronting the stations areas and roadways that are reconstructed as part of the project. Specific locations where increased sidewalk widths are needed to accommodate peak pedestrian volumes are identified in the Transportation Technical Report, which is included the Final EIS as an electronic document. Bicycle lanes may be added to roadways reconstructed for the project where possible, but extensive bicycle lane striping or sidewalk completion is not a component of this project.

Section 3.2.8 discusses safety at intersections impacted by the project. Pedestrian and bicycle volumes are expected to increase at intersections near proposed stations, which could result in greater potential for conflicts. However, the project would have minimal impact on traffic safety; station areas will be designed for multimodal access and to minimize the potential for traffic conflicts. At NE 145th Street, for example, the project would improve safety with geometric modifications and access changes with a new signal at the I-5 northbound on-ramp at 5th Avenue NE.

I-341-006

Your comment is noted. These factors were considered in the TOD potential analysis.

I-341-008

doing the same – expanding the existing – in this case stadium parking lot into a garage makes the most sense, and I'd like to see wider sidewalks over I-5 in any event. In conjunction, WSDOT should install a traffic signal at 205th St./244th SW/SR-104 and 5th NE, as I suspect that 5th NE will become a major access route (given that access from beyond 10th NE to the east is challenging), perhaps even for *Swift* or *RapidRide* bus rapid transit buses. For the Mountlake Terrace Transit Center, the east location is the only one that makes sense, and they have a wide sidewalk over I-5 on the north side, while bicyclists have plenty of room to operate, though they could use a striped lane.

Good luck in what I hope is narrowing down the options, not selecting a final one.

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I-341-007

Your comment is noted. Current transit service in the project study area is discussed in Section 3.1.2 of the EIS.

I-341-008

Your comments about parking are noted. The Final EIS discusses Sound Transit's current parking plans at each proposed station; see Section 3.2.7.

From: bruno.strautins@lma.lv
Sent: Saturday, September 21, 2013 10:59 AM
To: Lynnwood Link DEIS
Subject: Latviešu Sabiedriskais centrs

I-342-001

Sveicināti,dārgie tautieši!Esmu sašutis par ideju likvidēt Latviešu Sabiedrisko centru.To nedrīkst pieļaut!Tā ir viena
no mūsu mazās tautas nedaudzajām kultūras saliņām plašajā pasaulē!!!

Cerēsim,ka izdosies to nosargāt!!!

Sirsnīgus sveicienus no Latvijas-Rīgas-sūtot,

Bruno Strautiņš, Latvijas Mākslas akadēmijas profesors

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I-342-001

This comment required translation into English. The translation is located on the next page along with Sound Transit's response.

I-342-002

Latvian	English
Sveicināti,dārgie tautieši!Esmu sašutis par ideju likvidēt Latviešu Sabiedrisko centru. To nedrīkst pielaut! Tā ir viena no mūsu mazās tautas nedaudzajām kultūras saliņām plašajā pasaulē!!!	Dear fellow countryman! The idea of the liquidation of the Latvian Community Centre has shocked me. This cannot be permitted! This is one of the few islands of culture of our small nation within the global world!!!
Cerēsim, ka izdosies to nosargāt!!!	Let's hope we succeed in defending it!!!
Sirsnīgus sveicienus no Latvijas-Rīgas-sūtot, Bruno Strautiņš, Latvijas Mākslas akadēmijas profesors	With warmhearted greetings from Latvia – Riga, Bruno Strautiņš, Professor of the Art Academy of Latvia

I-342-002

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Emily Jewell <eajewell@hotmail.com>
Sent: Saturday, September 21, 2013 9:19 PM
To: Lynnwood Link DEIS
Subject: FW: Comments on alternatives for segment A

From: eajewell@hotmail.com
To: lynwoodlinkdeis@soundtransit.org
Subject: Comments on alternatives for segment A
Date: Sat, 21 Sep 2013 21:15:14 -0700

To Whom It May Concern:
After carefully reading through your executive summary of the DEIS, my heart is in my throat. I am going to
have difficulty commenting on it without expressing that, but that panic is, in and of itself, something you
I-343-001 need to know. I may not have a property that you confiscate (call it what it really is), but how you proceed with this project will either only moderately affect myself and my neighbors, or ruin my neighborhood (and possibly my finances). "The Greatest Good of the Greatest Number" should not come at such
a high cost to those of us that already live here.

I live within 100 yards of the intersection of Roosevelt Way and 5th Ave NE. I often work from home, and
have done since Nov 2006, so I know my street intimately. My street, NE 130th, will see only 4-6 cars NOT
belonging to residents all day long. Neighbors walk their dogs up and down it. Hardly anyone parks on it -
cars are tucked neatly into driveways. Gardens are usually well-tended, even creative, since they are on
show to everyone. Because of our numerous trees, we get many birds, from migrating Juncos, to resident
hummingbirds and Steller's Jays. My neighbors two doors down the hill have had the rare and endangered
Pileated Woodpeckers visiting their garden all summer. We only get this sort of wildlife here because of
our extensive tree canopy and our peace and quiet. If the wind is from the east, birdsong is often louder
than I-5.

1

I-343-001

Your concerns about the Lynnwood Link Extension impacting your neighborhood are noted.

I-343-002 If you put a station at NE 130th St, the ensuing traffic (car and foot), and noise, as well as the felling
of so many mature trees that screen us from the freeway, will considerably diminish our quality of life.
There is very little room for a station at this intersection, compared to what is available at NE 145th St,
which you can plainly see from the satellite view on Google Maps. Noise will more than double, and because
of the 130th St Bridge over the freeway, you won't be able to erect a noise mitigation wall which will help
us. Soundproofing insulation in our houses won't help if we want to open a window - or enjoy gardening, or
a barbeque outside; nor will it keep wildlife from being frightened away.

I-343-003 Because of the tight site at NE 130th St, you won't be able to provide nearly enough parking, so train
riders will either not be able to find parking in the designated lot you will supposedly build, or will
I-343-004 ignore it, and will turn our street into a parking garage instead. Inevitably, car crime, litter, and graffiti will follow. It's no good saying that you will plan for this contingency - you will plan for what
you think SHOULD happen rather than for actual human behaviour. If this sounds cynical, I can point to an
excellent example of this 250 yards down 5th Ave NE, where the elimination of the Northgate North Park &
Ride to build a new park resulted in most of those people driving half a mile north and parking all up and
down 5th Ave NE (making it much more dangerous to cycle there, past all of those parked cars (none of whom
ever seem to look before opening their doors)). Send someone up here and I'll be happy to show you this
Unintended Consequence. Moreover, your own studies apparently state that you'll hardly gain any riders by putting a station at 130th St. Is it worth ruining our neighborhood to serve a few hundred other people?

I-343-005 My comments could apply nearly as well to the proposed 155th St site. Once again, it is a relatively quiet
residential area, though it already has more traffic than we do. To my mind, the alternatives that put a
station at 145th St are the only ones that keep disruption to a minimum throughout segment A. 145th St is
already very busy, and has much more room geographically speaking for a station and parking which could
serve both North Seattle and South Shoreline. This more versatile location would save money by eliminating

2

I-343-002

Noise walls are planned for all alternatives in this area as mitigation for the light rail noise impacts that exceed the FTA criteria. See Section 4.7 in the Final EIS for the projected noise impacts in your area.

Foliage, if dense, can provide slight reductions in noise levels. It could provide up to a 3-dBA reduction in transportation noise for locations with at least 100 feet of dense foliage that contains leaves year-round. However, a 3-dB reduction in noise level is barely perceptible to most people, so foliage in virtually all areas of this project corridor has little effect in reducing noise.

I-343-003

As you noted, parking would be limited at the NE 130th Street Station, if it is built. One station option calls for approximately 100 spaces at a leased lot and another station option would not include parking. Chapter 2 of the Final EIS describes the NE 130th Street Station options.

I-343-004

Your comments about crime at the NE 130th Street Station are noted. See Section 4.14.2 in the Final EIS for Sound Transit crime analysis. Crime is not expected to increase as a result of operation of the stations. Several studies have concluded that crime around stations mirrors crime rates in the surrounding neighborhoods. Most areas in the project corridor have low crime rates. The stations would be well lit, continually monitored by security cameras, and regularly monitored by security personnel. 2010 crime statistics related to already built Sound Transit facilities show that the crime rate per number of riders at transit facilities and on light rail and commuter rail trains is substantially lower compared to overall per capita crime rates in the surrounding neighborhoods.

I-343-005 one station; the money saved there could be spent to make sure that the mitigation for local residents and wildlife was as effective as possible - instead of an afterthought. With that in mind only alternatives A1 and A3 are acceptable.

I-343-006 If those of us who live on the doorstep of a proposed station weren't scared already, your online panel discussion would have done it. Your spokesman Michelle made it clear from the language that she used in the panel discussion that one of your goals is to PROMOTE "Transit-Oriented Development" in the neighborhood of the stations - which virtually assures that whatever neighborhood gets a station will change out of all recognition. This will certainly increase tax revenues from the people you can shoehorn into the site, and

I-343-007 will certainly eliminate yet more of Seattle's already shrinking tree canopy. Your spokesman Steve, when asked about impact on the Thornton Creek watershed, just muttered something about "complying with all the regulations" by which he means he doesn't give a f**k as long as all the correct boxes are ticked on the forms. He mentioned providing "replacement wetlands" - clearly NOT in the Thornton Creek watershed (and therefore no use to those of us who live there), which, in case you had forgotten, is supposedly a salmon stream, albeit a degraded one. I find it utterly hypocritical of you to be so easy on yourselves in these circumstances when you are so tough on struggling farmers in these counties if they get anywhere remotely NEAR a tiny tributary of a salmon stream. But hey, they aren't a fashionable minority either, are they? We can get our food from Mexico, right?

I-343-008 In summary: If you put a station at 130th, you may not need to confiscate my house, but you will probably degrade my neighborhood's quality of life so much that I will be forced to try to sell it, and probably lose money on it, 'cause no family in their right mind will want it. A developer will be able to buy it cheap enough that he can put a "multi-family" development on it - shorthand for an edge-to-edge 4-pak

I-343-009 townhouse development encouraged by your TOD rezoning, complete with poisonous stormwater runoff flowing directly downhill into Thornton Creek and thence into Lake Washington. You will have eliminated all the mature vegetation that provides stormwater storage and filtration, and wildlife habitat. A win-win situation all round.

3

I-343-005

Your comment stating your preference for the Segment A alternatives that include a proposed light rail transit station at NE 145th Street is noted.

I-343-006

Sound Transit is interested in transit-oriented development in locations where it makes sense, so each proposed station location was assessed for that potential; see Section 4.2.4 of the Final EIS. This does not mean that all stations are good candidates for future development. Sound Transit prepared a *Station Area Transit-Oriented Development Potential Report* that provides details about each station area and how it might (or might not) support future development. Each city must be involved in discussions about how, and if, development might occur around a station. At the NE 130th Street Station, the current zoning to support future development is limited. Any rezoning is the responsibility of the City of Seattle and not part of the Lynnwood Link Extension project.

I-343-007

One of the key considerations in the development of the design alternatives was the protection of ecosystems, including wetlands and streams. Numerous federal, state, and local environmental laws and regulations have been enacted with this goal in mind; Sound Transit plans to comply with these laws and regulations. Sound Transit's commitment to ecosystem protection is further demonstrated through the agency's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation, which is to avoid impacts on environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure no net loss of ecosystem function and acreage as a result of agency projects. These values are incorporated in the design of the alternatives for this project.

I challenge your design team to prove me wrong.
Dejectedly yours,
Dr. Emily A. Jewell DVM

4

Section 4.8 of the Final EIS presents all the anticipated impacts on ecosystem resources by the project, and presents mitigation measures to address those impacts that would be unavoidable. One of the potential compensatory mitigation locations for wetland impacts is along North Branch Thornton Creek.

I-343-008

Your concerns about the value of your property near a light rail station are acknowledged. Section 4.3 of the EIS discusses the impact of the transit facilities on property values.

I-343-009

Sound Transit recognizes the importance of Thornton Creek and the citizens living within its watershed. Managing stormwater runoff to Thornton Creek and its tributaries is a priority for Sound Transit. Sound Transit will control potential risks to water resources through project planning, design, and the application of required best management practices. Sound Transit will improve conditions in the watershed by replacing existing areas of non-native vegetation with native plants. Sound Transit also will minimize the potential for construction of the project to interfere with possible future fish habitat restoration projects by designing and locating project features to avoid Thornton Creek.

To The Sound Transit Board,

My name is Wendy Nelson and my family lives at 20043 12th Ave.N.E. directly below the Lake Forest Park/ Edmonds exit of I -5. This also puts us directly below the path of your Sound Transit project which will have a major impact on our home and neighborhood. I have read the DEIS report and talked to Matt Sheldon several times about our serious safety concerns. I would like to thank Mr. Sheldon, again, for coming to our neighborhood barbecue to speak with us about Sound Transit's plans. Still many of my fundamental questions have yet to be answered with any degree of certainty or hard information.

I-344-001

The terrain between our home and I-5 is a very steep, tree covered hillside comprised mostly of fill dirt from the original I-5 project. My home is at the very bottom of this hillside and roughly 90 feet from your proposed rail line. This greenbelt between us and the freeway acts as a sound barrier, a beautiful visual barrier but more importantly the trees protect the hillside from erosion and absorb a great deal of water runoff heading towards the creek that borders the other side of our neighborhood. I would like to know your plans for dealing with the water run-off, the destabilization of our hillside during construction and the continued stability of the hill after your project is finished. I would also like to know your plans for sound mitigation as well as the impact of continued vibration on the hillside. What safeguards are in place in case of earthquake or accident? Where can I see the results of your soil tests from our hillside? Who do we contact when trees from the state's hillside fall onto our property once you remove the current windbreak of trees? What are your precautions to prevent mudslides?

I-344-002

My neighbor Michael Cameron has submitted an alternate plan for this leg of your project and I ask that you please give it serious consideration. It allows the track to avoid our neighborhood entirely and puts the rails on a trajectory more inline with the Mountlake Terrace transit center where the station will be located. I can only hope this change would be more cost effective than building sound walls, walls with landscaping for erosion control, catch ponds for water run -off and the strong possibility of lawsuits should any of these solutions fail to work. While we have been told repeatedly that you will be living up to all the required federal standards for all of these issues it has been my observation that federal standards are generally not the " gold standard" for an industry but more along the lines of the bare minimum required by law. We find these are very limited reassurances for us.

We love our homes and the quality of life our neighborhood has provided for us. We all chose this area for the beauty of it's setting. We're blessed with the variety of wildlife that inhabits the hillside including the occasional deer. I hope you will give us the same kind of consideration you would want for yourselves and your neighbors if this project was in your backyard.

Sincerely,

Wendy and Ken Nelson

I-344-001

The EIS includes a summary of the geologic hazards that have been identified in the project areas. The project design will address identified geologic hazards, including evaluation of erosion potential and slope stability along the project alignment, in accordance with applicable building codes. The project design plans will address stability of both the light rail elevated structure and the steep slope between I-5 and your property that is affected during construction and after construction. At this time, site-specific recommendations for prevention of mudslides or landslides on your property are unavailable, but will be available as the design progresses into final design. Sound Transit will employ measures to prevent slope destabilization during construction and operation of the project. Section 4.9 of the EIS discusses the mitigation for erosion and sediment control during construction. Section 4.11 discusses impacts to the geology and soils in the project area. Section 4.7 addresses noise and vibration impacts, and describes mitigation to address them.

I-344-002

Your concerns about the project's potential impacts on your property are noted. Sound Transit received Mr. Cameron's alternate plan, and it is included in this set of comments and responses. The Final EIS Appendix F, Conceptual Plans, shows the proposed alignment for the Preferred Alternative. Sound Transit has proposed mitigation outlined in the Final EIS and mitigation commitments listed in Appendix N to address project impacts, with the intention of avoiding and minimizing impacts on adjacent land uses.

From: karin <k-rana@comcast.net>
Sent: Saturday, September 21, 2013 11:02 PM
To: Lynnwood Link DEIS
Subject: RE: Lynnwood Extension DEIS

Please use this copy not the one previously sent.

Thank you for the opportunity to review and comment on the Draft DEIS for the Lynnwood Extension. This email contains comments and concerns regarding the routing and analysis. For perspective, I have a degree in Sustainable Transportation and Livable Communities and worked on the design and build-out of several LRT lines in the Minneapolis-Saint Paul region and served on the Senior Staff team for the HUD Sustainable Communities Grant. I also worked for the State of Washington for 17 years leading implementation of the Economic Adjustment Initiative, a component of the NW Forest Plan, and served as Senior Planner under Growth Management Services where my specialties were SEPA-GMA integration and economic development. I have been active in the Latvian community in Minneapolis and in Seattle, where I taught in the Latvian School, performed with the folk dancing troupe, and sang and led ensembles and artistic performances. My son was christened at the church.

My comments are specific to the environmental justice aspects of the project, and the preferred alternative.

Environmental justice

I-345-001 Nineteen years have passed since the signing of Executive Order 12898. While the Environmental Protection Agency has been the primary steward of the Environmental Justice Executive Order. In 2010 the Federal Transportation Department and the US Department of Housing and Urban Development joined the effort , thus escalating the importance and prominence of environmental justice in decision affecting the building of regional transit systems and other major federal investments. This action had immediate effect in Saint Paul, where during the planning for the Central Corridor the lo-mod income community in the Rondo neighborhood was bypassed by the train that would pass directly through their community. The outcome of their outrage and concern was the addition of three stations and commensurate federal resources to accomplish the task. It also put the federal spotlight on Minneapolis-Saint Paul to ensure that the region developed and implemented citizen participation and engagement in a matter that was culture and community sensitive, genuine and creative in its tools and tactics, and shared decision-making with the communities.

The Minneapolis and Saint Paul community where highly sensitized to the various aspects of environmental justice; that it is more than giving those from underserved and underrepresented communities the vehicles and the direct access into the decision making process for major infrastructure investments like light rail, it was also recognition that culture is an important aspect of environmental justice. This is important as our country and the Pacific Northwest region continue to diversify.

It is my assertion that cultural diversity and the definition of environmental justice communities are relevant when considering the impacts of routing, mode, and construction of the proposed Lynnwood extension. Culture is a component of sustainability and environmental justice. In 2004, the National Environmental Justice Advisory Council released a report containing several recommendations that are directly relevant to this project including:

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I-345-001

Thank you for your detailed comments on the environmental justice, pertinent regulation, and your own personal experience associated with the Saint Paul Central Corridor Light Rail Project. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Sound Transit communicated with representatives from the Latvian Evangelical Lutheran Church prior to the release of the Draft EIS; see Appendix L of the EIS, which lists all the project's outreach activities.

I-345-001

- "Encourage enhanced community assessments and communication methods to improve cultural sensitivity for environmental justice communities"
- "There is an acute necessity to improve and create more effective communication between facilities, regulators and environmental justice communities"
- "New and consistent opportunities are needed to help environmental justice communities influence decisions"

While the provides the standard socio-economic review typical of most planning documents of its kind, it is silent on the matter of cultural environmental justice. Cultural environmental justice is not always correlated with underrepresented or underserved communities, it is often associated with a history of diaspora. If a community has a critical mass in a community like Seattle, for example, the reasons are often linked to displacement and where refugees secured sponsorships to relocate and start new lives. Our country has experienced waves of displaced people coming to its shores. Many of these communities stick together, recreating home and continuing traditions while living in a larger macro American society.

I think the environmental review of the Lynnwood alternatives should be strengthened with language added that: 1) the Latvian Lutheran Church is a vital cultural center that serves as a focal point for cultural, social, and political activities of Baltic communities across the western states and Canada, 2) there should be on-going communication between the Project Office and the Baltic community, with the community invited to participate on the Communication Advisory Committee, the Business Advisory Committee for the LRT project and other project management bodies, and that 3) the Baltic Community should be directly involved in the decision-making for the proposed Lynnwood extension.

My understanding is that the leadership and members of these communities had no idea that the alternatives analysis was underway in 2010-2011, so the DEIS was a surprising and unpleasant shock. It goes to show that standard forums of outreach: press releases, public meetings, etc. are not the most effective ways of reaching today's public; intentional and innovative community engagement by Sound Transit. This is especially needed in corridors like this one where there are multiple issues and multiple actors. Sound Transit failed in this area and needs to do more to genuinely engage the communities it seeks to serve.

I-345-002

Preferred alternative

First, it needs to be stated that light rail is not going to resolve the congestion issues in the project area. Congestion is likely to worsen even with the introduction of light rail. Light rail could possibly be part of a solution that includes completing the HOV lanes, introducing BRT along key corridors and on I5, and ensuring that different transit modes, including bike and pedestrian amenities, are built out and functional. I know there is some BRT in the area but it really doesn't function like BRT should (and the removal of express bus service because there is now BRT does not serve the region's riders at all.) Further, since more modes will be needed, are the proposed stations located in the right place? Will future BRT stop in the same places? Will the modes "talk" with each other to make navigating the systems easy for riders?

Second, each alternative considers only at-grade and elevated tracks. The Sounder between downtown and the airport does a little bit of everything: at-grade, elevated and tunneled. Why isn't tunneling considered along this segment of the build-out? It seems that more geotechnical analysis is in order before it is determined that one of the proposed alternatives is the best one.

Third, any alternative that takes out housing, multifamily housing, and environmental features like a restored wetland is a red flag. In the instance of multifamily housing, removing these developments to make way for light rail is an oxymoron. Light rail encourages density. In this instance, the train is taking it out.

2

I-345-002

The analysis of traffic conditions presented in Chapter 3 compare future traffic conditions for 2035 for the No Build Alternative (without extension of the light rail system) and the light rail alternatives as people will opt to ride light rail. Section 3.2 explains that vehicular traffic will increase in the future, but it will not increase as much under the light rail alternatives. Completing the HOV lanes on I-5 is part of the evaluation of alternatives considered in the Draft EIS because such improvements are not under the purview of Sound Transit. Sound Transit will coordinate with the transit agencies serving each of the station areas in the future, but it will be the responsibility of the transit agencies to decide on the best alternative to improve bus transit connections to the proposed light rail stations. Light rail stations will included pedestrian and bicycle facilities; see Section 3.2.5 in the Final EIS. Chapter 3 discusses bus integration in Section 3.1.2.

Regarding tunneling, the topography in the project corridor lacks major changes that would point to a tunnel configuration as the most practical or cost-effective design approach. Sound Transit's alignment policy, described in Chapter 2, reserves tunneling as an alternative only when topographic, density, lack of available right-of-way, or environmental concerns mark other options inappropriate.

It is true that the Lynnwood Link Extension Project would remove multi-family housing and impact some wetlands. Sound Transit has attempted to minimize these types of impacts to the extent possible while designing the project to address the project Purpose and Need.

The extensive traffic modeling conducted at this initial phase of the project examined travel patterns of the work force residing in north Seattle to make sure that the selected project corridor would best serve the travel needs of workers. A map of the travel patterns of the north Seattle to Lynnwood laborshed is not included in the EIS, but the

I-345-002

Finally, I have several macro suggestions:

- that you add a laborshed analysis to your review to determine if the workforce actually resides where the proposed stations are placed. It is possible to map laborsheds, Portland does this for example with planning routes, and you may not be reaching the places where the most workers reside or need to go, and
- that Sounder revisit its alternatives analysis to determine if all possibilities were really examined or not (going where you have the most right of way isn't always the best route.) It seems that they were not, especially when coupled with the reasonable assumption that the engagement during the alternatives analysis phase was minimal and passive.

I-345-003

In closing, any route that removes a cultural center of regional significance, has only five stations with negligible or minimal opportunities for transit-oriented development, and that removes housing is unacceptable. In the spirit of environmental justice where:

- Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies

- Meaningful Involvement means that:
  1. people have an opportunity to participate in decisions about activities that may affect their environment and/or health;
  2. the public's contribution can influence the regulatory agency's decision;
  3. their concerns will be considered in the decision making process; and
  4. the decision makers seek out and facilitate the involvement of those potentially affected

the impacts of the Preferred Alternative to the Baltic community and its cultural center of regional significance are unacceptable. A route, mode, or engineering solution that removes the impacts is welcomed.
If, upon further, transparent and inclusive analysis other routes prove unfeasible for technical reasons then, commensurate compensation to the center and the community for the loss or reduced functionality of its center is appropriate, as is an environmental justice grant to support collaborative problem-solving and participation in the planning process and in developing mitigation priorities of any impacts and unforeseen and unintended consequences.

Sincerely,
Karina Berkholtz

From: karin [mailto:k-rana@comcast.net]
Sent: Sunday, September 22, 2013 12:53 AM
To: 'LynnwoodLinkDEIS@soundtransit.org'
Subject: Lynnwood Extension DEIS

Thank you for the opportunity to review and comment on the Draft DEIS for the Lynnwood Extension. This email contains comments and concerns regarding the routing and analysis. For perspective, I have a degree in Sustainable Transportation and Livable Communities and worked on the design and build-out of several LRT lines in the Minneapolis-Saint Paul region and served on the Senior Staff team for the HUD Sustainable Communities Grant. I also worked for the State of Washington for 17 years leading implementation of the Economic Adjustment Initiative, a component of the NW Forest Plan, and served as Senior Planner under

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analysis conducted closely examined available data to make sure the selected light rail transit corridor would best serve the metropolitan area.

Prior to starting the EIS analysis, Sound Transit performed an extensive Alternatives Analysis, which considered several routes and transit concepts. The Alternatives Analysis is located on the Lynnwood Link Extension Project website, within the document archive. Chapter 6 of the Final EIS describes the public outreach encompassing the Alternatives Analysis and continuing through the EIS process.

I-345-003

Your comments are noted. As mentioned in the response to comment I-345-001, the Latvian Church will not be displaced by the Lynnwood Link Extension because Sound Transit was able to redesign the access to that property.

Note: A duplicate set of comments was received as part of the email and is not reproduced here but is retained in the project files.

From: Ginny Harris <ginnyharris777@gmail.com>
Sent: Friday, September 20, 2013 5:33 PM
To: Lynnwood Link DEIS
Subject: Sound Transit Lynnwood

I-346-001 I prefer the **C-4** plan proposed by the City of Lynnwood to Soundtransit for the LynnwoodLink.

C-4 has the least impact on Scriber Lake Park, wetlands and wildlife in our area.
Also, **C-4** has the least impact on businesses and residents who would need to relocate.

C-1, C-2 and **C-3 are not acceptable!**

I attended the Sept. 14th meeting at city hall regarding this subject.

Thank you,

Ginny Harris
5823 202nd. St. SW.
Lynnwood, WA 98036

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I-346-001

Your preference for a new Alternative C4 that has been recommended to Sound Transit by the City of Lynnwood is noted. What you refer to as Alternative C4 is similar to a modified Alternative C3, which is the Preferred Alternative. Chapter 2 of the Final EIS provides a description of the Preferred Alternative.

From: Mary <brierpatch111@hotmail.com>
Sent: Friday, September 20, 2013 4:57 PM
To: Lynnwood Link DEIS
Subject: Rail station in Lynnwood

I attended the meeting on Sat. Sept. 14 at Lynnwood City Hall where the proposals for the location of the new light rail station was shown and discussed by the people attending. I would like to see the rail line put where there is the least disturbance to the Scriber Lake and creek areas and also to not displace homes and businesses. After reviewing the proposals and also by going by car over to see the sites I think a rail line and station can be put where there is no tearing down of homes or business buildings. I-347-001

There was concern about the disabled not being able to get off the rail train and getting over to the buses. I think that is where the Dart buses would come in to play. The rail station can be put very close to the Lynnwood Park and Ride bus station where transfers can be made easily by walking or by the Dart bus. I-347-002

The "C" Proposal would be the best of the proposals that we were given to consider. I understand that the fourth proposal could not be used because the rail line at this time stops at the Lynnwood Park and Ride. I would like to see the "C" Proposal used as the priority and from that proposal make modifications if they are needed. I-347-003

Mary Glover

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I-347-001

The Preferred Alternative evaluated in the Final EIS minimizes impacts to Scriber Creek Park and wetlands, businesses, and residents. Section 4.1 of the Final EIS discusses the project's property impacts for each alternative, Section 4.8 for wetland impacts, and Section 4.17 for parks impacts.

I-347-002

All Sound Transit facilities are designed to meet the requirements of the American with Disabilities Act (ADA). Paratransit load/unload locations will be reviewed during final design to minimize travel distance for persons with disabilities.

I-347-003

The comment names a proposal that was not part of the EIS or part of later suggestions by the City of Lynnwood. Sound Transit has developed a modified Alternative C3 as the Preferred Alternative.

From: Breezy Freimanis <breezyf@gmail.com>
Sent: Sunday, September 22, 2013 2:21 PM
To: Lynnwood Link DEIS
Subject: LATVIAN CENTER - Northgate - Sound Transit Link Light Rail

Hello,

My name is Brianna Freimanis. I am a member of the Latvian community here in Seattle and am here to voice my concerns of the impact of the Lynnwood Link Extension in Northgate on our church and community center.

The Latvian Lutheran Church is the central gathering place for friends and families of Latvians living in the area. It is used very frequently by Latvians, Lithuanians, and Estonians living in and around Seattle for functions such as church services, rehearsals, weddings, meetings, and a Latvian school, which I attended as a child.

I am a member of the Latvian folk dance group, Trejdeksnitis. We rehearse at the Latvian center every week, and would like to continue doing so as we perform very frequently and at international festivals, like the Latvian Song and Dance Festival we participated in this summer. I am also a singer in our choir, Sigulda, which performs at various festivals, community gatherings, and church services. Personally, the groups I am involved in use the center at least 2 times a week. If we lose this place to rehearse, I fear the effect it will have on our ability to continue the amazing work we do.

I-348-001

It is imperative that as construction moves forward with the Link Light Rail, we are allowed access to our center. Disrupted access or relocation of our center would weaken our community, both financially and emotionally. We have spent years re-establishing our community after the loss of our last center in the 1970s to eminent domain. We are fortunate, as a cultural group, to have recovered and maintained a place where we, friends, and family from across the country and world, can gather to celebrate our traditions. My concern is that another relocation or disruption would be detrimental to our continued cultural heritage, and perhaps would be one we may not recover from.

I fully support the Link Light Rail, and continue to hope that you will take into consideration the ongoing effects it will have on our Latvian community. Please allow us continued access to our center as you move forward with the Lynnwood Link extension project. Thank you.

Respectfully,
Brianna Freimanis

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I-348-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative. Sound Transit will also maintain access to the church and center during construction.

From: Hank Landau <hglandau@aol.com>
Sent: Saturday, September 21, 2013 10:16 AM
To: Lynnwood Link DEIS
Subject: Transit

Greetings

I-349-001 I urge you to take all reasonable means to accommodate bicycle riders on light rail and to encourage the development of safe bicycle and pedestrian routes to transit stations

My children, grandchildren and I all ride bicycles and would appreciate a safe and convenient alternative to the automobile

Thank you

Hank Landau

Henry G. Landau Ph. D.
23829 115th Pl. W
Edmonds, WA 98020
206 546 2093

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I-349-001

Bicycle facilities, including bicycle parking, will be included at light rail stations and on the trains. The project will include ADA-compliant pedestrian facilities that front the station areas and roadways that are reconstructed as part of the project.

From: mattymaxus@yahoo.com
Sent: Friday, September 20, 2013 3:22 PM
To: Lynnwood Link DEIS
Subject: Options at 145th St. Station

I-350-001

A formal request to highly consider the option that moves the on-ramp North.

It is evident that this option is more difficult to adopt due to additional logistics with the DOT.

However, I implore that it IS THE adopted option due to additional bus access to the station (distance from on-ramp will be from one side of station rather than in the middle, allowing for a more sophisticated Shoreline bus transfer location than just two bus slots).

Another important item to consider is the reduced need to acquire the properties on the South side of 148th St., as well as reducing the negative effect of the properties on the North side of 148th St.

I thank you for reading this email, and I sincerely hope that these comments are deemed sound enough to warrant serious consideration.

Sincerely,
Matthew Alan Maxwell
(Life long resident of 145th impact area.)

What great thing would you attempt if you knew you could not fail?
-Robert H. Schuller

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I-350-001

The Preferred Alternative moves the on-ramp to the north, which you indicate would be your preference. See Appendix F, Conceptual Plans, of the Final EIS. Section 4.1 and Appendix I-4.2 discuss the project's property impacts.

From: Jerry Rice <jrice300@outlook.com>
Sent: Saturday, September 21, 2013 6:57 PM
To: Lynnwood Link DEIS
Subject: Draft EIS coments

To whom it may concern:

I-351-001 I live on 148th street across from the proposed parking garage. As it stands at this point our property will not be taken. I have concerns about my ease of access to my home on this dead end street during and after construction. It s my understanding that there will not be a traffic light to regulate traffic in and out of the garage with both the entry and exit on my street. I understand Seattle is doing all this without parking garages. If "no garages" is going to work for Seattle why not Shoreline? If we are beating a dead horse on this, I feel the less of evils is alternative #2 as proposed.

I-351-002 Another concern I have during the construction phase is the hours of operation. Will the construction noise levels be lowered during the overnight hours? And if so, to what degree?

Jerry & Carol Rice
330 NE 148th St.
Shoreline, WA 98155
206-364-7342

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I-351-001

Please see the Final EIS Appendix F, Conceptual Plans, for specific details on the NE 145th Street Station. The ingress and egress to the parking garage will not be located on NE 148th Street.

Station parking facility sizing balances the need for parking supply with other good multi-modal connections in order to serve the needs of the region as well as local communities. Sound Transit promotes multi-modal access to their stations by including pedestrian and bicycle facilities, including bicycle parking, and by integrating bus and paratransit.

I-351-002

For construction, the local construction noise ordinance will be applicable, and Sound Transit is committed to maintaining construction noise levels within the criteria. Sound Transit would work with residents and businesses to minimize construction noise impacts.

For nighttime construction, some aspects of which could be needed due to the heavy volumes of traffic on I-5 and other arterial roads, a noise variance would be required from each of the cities where construction would be performed. During that time, Sound Transit will work with the local jurisdiction to arrive at construction specifications that minimize construction-related impacts to nearby communities. However, this would likely affect trucking or hauling activities, rather than the on-site work needed to build a garage or the station.

From: Tom P <tommpoi@hotmail.com>
Sent: Sunday, September 22, 2013 12:54 PM
To: Lynnwood Link DEIS
Subject: Comment on the draft DEIS

Sound Transit DEIS Comment:

I-352-001

I support locating Shoreline's southern Sound Transit station at the 145th street site. I prefer this location because fewer homeowners will be negatively affected there than would be at the 155th option. This is because the Jackson Park Golf Course and Lakeside School would be on the southern side of the station, not family homes. Neither the golf course nor the school would be negatively affected by that station. I am sure almost all people who bought homes in Shoreline did so because they like it as is and want to keep it that way, not to be bought out by developers or live in a high density congested area surrounded by apartment houses. For the common good Sound Transit should take those homeowners into consideration, and doing so would not negatively affect Sound Transit. For Sound Transit to succeed, the bulk of your riders will come from the entire region, not from the removal of single family homes and densification of small areas around your stations. I do not believe you will gain significantly more riders by choosing the 155th St. location over the one at 145th St. In addition, it should be much cheaper for Sound Transit and all government agencies to upgrade the infrastructure around the 145th St. exit, which is what most of your riders will use to access your station.

Again, I support locating the station at 145th street. Thank you.

Tom Poitras

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I-352-001

Your comments stating your support for a light rail transit station to be located at NE 145th Street is noted.

From: darcy niedermeyer <darcymn@yahoo.com>
Sent: Saturday, September 21, 2013 8:44 PM
To: Lynnwood Link DEIS
Subject: DEIS comment

Dear Sirs,
Please accept this email as a comment on the Lynnwood Link Extension project.
Name: Darcy Niedermeyer
Mailing address: 13330 3rd AVe NE, Seattle, WA 98125
Property address: 147 NE 116th St, Seattle, WA 98125

This property is on the east side of 15, next to the 117th St overpass as it becomes 1st Ave NE.

I-353-001 This comment is concerning Segment A, Northgate to Shoreline. There are 6 Alternatives to consider. Here are my opinions as they relate to the property at 147 NE 116th st, and the livability of that home.

A1 keeps the light rail away from the home and away from the nieghborhood. It also preserves more homes in the neighborhood, with out having to purchase and relocate many local residents. This option keeps the rail the furthest possible from the neighborhood. With a planting buffer, this keeps this small neighborhood livable. This is my preferred option.

A3 (A7 & 11) & A5 (A10) both have the rail line running on my property line, with no buffer. This puts the rail 12' from the bedrooms of the home. This would be a major impact on the quality of life for living in this home. With the light rail running 20 hr a day, this will impact the people occupying the home for the next 50 years. It will also diminish the value of the property for resale, with no compensation from Sound Transit.

Thank you for your time in considering this comment.
Darcy Niedermeyer

I-353-001

Your preference for Alternative A1 is noted. The Preferred Alternative for this project includes Alternative A1 with modifications. The Preferred Alternative at your location would have a wall between the tracks and residences. See Figure G-13 in Appendix G of the Final EIS for an example.

From: Dagnija Johnson <dagnijajohnson@msn.com>
Sent: Sunday, September 22, 2013 1:40 PM
To: Lynnwood Link DEIS
Subject: Draft EIS Commment re: Seattle Latvian Community Center & Church

I-354-001

The Latvian Community Center and Church play a vital role in keeping the Latvian language and culture alive. Saturday School is well attended by students up to the 12th grade. The students learn the language, customs, songs etc.. We have an annual garage sale which, in addition to being a fundraiser, brings neighbors from far and near to purchase many Latvian baked goods. And buy high quality garage sale items. The majority of the attendees are repeat customers. Our Christmas Bazaar also brings repeat customers, some from as far away as Whidbey Island, Tacoma and Portland. This event offers the opportunity for the Saturday School parents to raise funds to keep the school viable. Also, the customers may purchase hand-made goods, jewelry and baked goods. Thus bringing our culture to many people.

Our dance troupe utilizes the Center for practicing, as well as performing. They raise funds through their performances so they can represent the Seattle Latvian Community at Latvian Song/Dance Festivals in North America and abroad.

The Center hosts a fund raiser to support the Baltic Studies program at the University of Washington. The program includes Latvian, Estonian and Lithuanian studies.

The Church services are well attended and have an English language service once a month. Thus not excluding those who do not speak Latvian. They also have Sunday School for youngsters and Bible study sessions.

Our Center is not only for Latvian events, but is open for Estonian and Lithuanian events such as their independence day celebrations. They also participate in events hosted by the Latvian Community.

The current site has been home for many years after being displace from the Wallingford location in 1969. It would be a major financial impact to our community if we need to start all over again. Also, many of our population are elderly. A move may affect their ability to get to an unfamiliar location. The caretaker and her family live in a house on the property, the proposed change will disrupt an entire family.

There are many negative impacts to the Latvian Community if the Sound Transit proposal is approved. Please take these in to serious consideration before making a decision.

Thank you

Dagnija Valdmanis Johnson

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I-354-001

Your comments about the importance of the Latvian Church and community center to you is acknowledged. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Renee Laigo

1116 NE 195th Ct. Shoreline, WA 98155 206-306-1021

September 22, 2013

To: Sound Transit Board Members
Re: Lynnwood Link Ext. Preferred Alternatives

Here is my wish-list for the 185th St. station and remarks for the preferred alternative south of the station. I grew up in Shoreline and live ½ mile (20 min walk) from proposed station. I drive through all proposed station areas on a daily basis.

I-355-001

185th St. Station Option #1

- At Grade
- Parking Garage on West Side with good lighting and emergency call stations
  - (Much less of an eyesore and more conducive to community development on east side)
- Covered walkways from garage crossing 1-5
- Pedestrian safety for crossing 185th from South side of 5th must be considered. Is it possible to have a station entrance on South side of o185th?
- Also Kiss-n-ride as conceptualized seems to be in poor proximity to intersection for merging
- Prefer design details reflective of natural environment as opposed to any one ethnic group, with exception of Northwest Native American
- It is hoped that when 5th avenue is re-aligned that mature trees to the east can be preserved as our mature trees define our area.
- Station design to promote ability to have community open space as this is currently a walking community and we anticipate further transit oriented development
- Bike lockers and water fountains.

If 145th station is chosen I advocate for OPTION 1. I am highly concerned re: bus pedestrian, and general traffic surrounding this intersection. The North placed parking garage seems to be a safer option so that garage and bus turn around entrances and exits be off 148th st. rather than directly on/off of 5th avenue. In the second option you have the garage exiting where the lineup to the northbound on ramp is making Left turns impossible from the garage. However, even with Option 1 I think more can be done for making more room for busses to have a loop on the first floor of the parking garage that is a separate entrance from cars etc. So travelers coming from East, West and South of 145th do not have to cross highly busy streets. It will likely be safer for the 1-5 Northbound ramp traffic. Also the Kiss-n-ride/paratransit area right on 5th seems like a difficult place to merge. Covered Pedestrian walkways in plaza area to S. of garage, maybe translucent of some sort, would be desirable in our climate.

I-355-002

I notice most of the board members live on the East side and that you will have a video tour of the proposed station areas, but have found in my own consideration of optimal station areas it is helpful to walk/drive around the proposed station areas to get more of a feel. For instance if your goal is to increase pedestrian ridership there are more

I-355-001

Your desired improvements for the NE 185th Street Station are noted. Many of the items listed are included in the current design such as, at-grade, parking garage on the west side of I-5 and bicycle parking. See Appendix F for the current design of this station.

I-355-002

Your comments about to the proposed light rail transit stations at NE 130th, NE 145th, and NE 155th Streets are noted. Your preference for the NE 145th Street Station Option 1 is noted. The station design at NE 145th Street for the Preferred Alternative has been revised since the Draft EIS; see Appendix F of the Final EIS for the current design.

The current design has the entrance/exit for the parking garage on 5th Avenue NE, not NE 148th Street. Also, the kiss and ride area is not located right off of 5th Avenue NE.

As your comment suggests, there are trade-offs and pros and cons at each of these locations. Station analysis indicates that ridership will be similar regardless of the station locations; see Section 3.2.2 of the Final EIS.

I-355-002 homes within a 15 min. walking radius (I walked it!) around the 155th st. station vs the 145th St. station. Diverting increased bus traffic to 155th may be better than the already clogged 145th area. Driving on 5th Avenue near 145th will give you a better sense of traffic. I don't envy the decision you have to make re: 145th vs 130th and/or 155th st. stations. I would say that 130th provides easier access for more low income homes concentrated in that area and connects the Lake City and Bitter Lake areas to lightrail, but your materials seem to suggest that people in those areas would take the bus south to the Northgate station.

Thank you for you enormously detailed DEIS. I look forward to participating further as station design progresses.

Sincerely,

Renee L Laigo

From: Tija Iles <tija.iles@gmail.com>
Sent: Saturday, September 21, 2013 10:40 AM
To: Lynnwood Link DEIS
Subject: Sound Transit Link Light Rail system impacting the Seattle Latvian Church and Center at 11710 3rd Ave N.E, Seattle, WA 98125

I am writing to voice concern over the proposed plans for the Lynnwood Link Extension of the Sound Transit Link Light Rail system, specifically as it pertains to the Latvian Church and Community Center.

I-356-001

I have been a long time user of Sound Transit and always support the growth and expansion of mass transit. While I believe the extension of the Light Rail system would be a valuable asset to the greater Puget Sound region, I urge the board to carefully consider the impact on the local community in drafting the proposed line.

As a member of the Latvian community, I primarily use the Latvian center for dance practices, fundraisers, and performances with the folk dance group Trejdeksnitis. Our group is very active in the larger community, regularly performing at Folk Life, Yule Fest, and the Seattle Public Library's "Baltic Rites of Spring" program. Through the support of the local community, our group has been able to travel all over the United States as well as to Latvia to participate in the UNESCO recognized Latvian Song and Dance Festival, as recently as this summer. I take great pride in being a member of this group as we are widely recognized as being one of the top dance troupes outside of Latvia.

Having the ability to participate in this group through the use of the Latvian Center has been essential in keeping me connected to the larger Latvian Community. Sometimes multiple times a week I find myself commuting to Seattle from my home in Tacoma to participate not only in dance activities, but also to attend or volunteer at special events or fundraisers, including our yearly Christmas Bazaar and Spring Rummage Sale. The Latvian center hosts many events such as this that are enjoyed and celebrated not only by the Latvian community all over the Northwest, but also by the larger Seattle community.

I am also a graduate of the University of Washington's Baltic Studies program. The use of the Latvian community center is vital to my undergraduate program. It provides a host for many important lectures, visiting speakers, and events, including hosting the Latvian President this upcoming Sunday. As the local Estonian and Lithuanian communities have no cultural centers of their own, they have built a strong relationship with the Latvian community and have shared use of our facility since its inception. The Latvian Church and Community Center is an irreplaceable home base for all members of the Baltic community to connect, as well as a place for the Seattle community to celebrate three often overlooked cultures and heritages.

The loss of home is not a foreign concept for the Baltic community, considering that our local community was founded by members who were forced to flee their homeland and settle in the Seattle area in exile. The preservation of our heritage is of utmost importance to this community,

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I-356-001

Thank you for your personal comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, and the larger Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-356-001 and the Latvian Church and Community Center has been an essential part of that preservation. I urge the Sound Transit board members, engineers and planning committees to find a solution that does not once again force us to lose what we've worked so hard to build and maintain.

Thank you,

Tija Iles

8509 57th Ave E

Puyallup, WA 98371

From: Erik Rusis <erik.rusis@gmail.com>
Sent: Sunday, September 22, 2013 7:43 AM
To: Lynnwood Link DEIS
Subject: Sound Transit Link Light Rail system impacting the Seattle Latvian Church and Center at 11710 3rd Ave N.E, Seattle, WA 98125

Sound Transit DEIS
c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

Re: Sound Transit Link Light Rail system impacting the Seattle Latvian Church and Center at 11710 3rd Ave N.E, Seattle, WA 98125

Dear Ms. Swift,

I-357-001 I wish to add my voice to the many concerns you must have received over the proposed plans for the Lynnwood Link Extension of the Sound Transit Link Light Rail system, along the east side of I-5, with potential devastating effect on the Baltic community in Seattle and beyond.

I was born and raised in a Latvian family in Seattle. A huge part of my childhood and youth were spent at the Latvian center, where there was always something going on: Latvian school on Saturdays, church on Sundays, folk dancing, choir, crafts groups and so on. I remember pitching in as a teenager on volunteer weekends to help build the church and center. Next to me were other teenagers, pensioners, people from all over the Northwest. One big family doing their best to build a home for future generations to be able to preserve and honor their heritage.

As it happens, I have now lived most of my life in Europe, away from Seattle -- but not really ever away from the Latvian center at 11710 3rd Ave N.E. Over the years, I have always managed to return there for family events -- weddings, milestones, and funerals. I celebrated my own marriage there and attended the funerals of both of my parents. In short, I could not begin to imagine my family's life without the Latvian church and community center, which are now under such grave threat. To me and to many others these are not just buildings on a piece of land. This is a major part of us.

Surely there must be a way to develop modern transportation networks without crippling a community that brings a cultural richness to the diverse mosaic that is the strength of Seattle and, indeed, the USA. Please consider these very human factors as you continue to evaluate the impact of the proposed plan. Thank you.

Sincerely,

Erik Rusis

London

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I-357-001

Thank you for expressing the importance of the Latvian Center to you and the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Yoshiko Saheki <bczbczbcz@msn.com>
Sent: Sunday, September 22, 2013 7:26 AM
To: Lynnwood Link DEIS
Subject: comment on DEIS

I-358-001 I am opposed to parking structures at proposed stations on 145th and 155th in Shoreline.

Light rail through Shoreline is suppose to curb automobile use. However, any parking lot invites automobile use. By building a parking structure, you are encouraging commuters to drive through the surrounding neighborhoods of the station to get to the station. To make light rail more environmentally friendly, you should instead be promoting walking, biking or taking the bus to the station, not driving a car. Moreover, a parking structure would blight the neighborhood of the light rail station. Who wants to live near a parking structure?

As I understand it, there is a city ordinance in Seattle that prohibits creation of new parking lots. Shoreline has no such ordinance. Given the proximity of the proposed stations to Seattle, a parking structure would attract a significant number of Seattle commuters. There is something unfair about this and the impact will be borne entirely on the Shoreline neighborhoods surrounding the new station, whether that is on 145th or 155th.

Yoshiko Saheki
2349 N 147th
Shoreline, WA 98133

I-358-001

Station parking facility sizing balances the need for parking supply with other good multi-modal connections in order to serve the needs of the region as well as local communities. Sound Transit promotes multi-modal access to their stations by including pedestrian and bicycle facilities, including bicycle parking, and by integrating bus and paratransit.

From: Julia Deak Sandler <juliadeak@gmail.com>
Sent: Sunday, September 22, 2013 9:16 AM
To: Lynnwood Link DEIS
Subject: Proposed stations for lynnwood extension

Hello,

I-359-001 I am a resident of the olympic hills neighborhood of seattle, and I am very excited about light rail coming here to the north end! I urge you to complete this project as soon as possible so that we can decrease congestion on I-5 and make our city cleaner and more walkable. To that end, I would advocate for a stop at 130th St and Roosevelt Way, which is a large, walkable intersection served by the 41 bus and near high density housing and some retail.

So I would like to see option A5, A7, A10 or A11 implemented.

Thank you.
Sincerely,
Julia Sandler
1714 NE Brockman Place
Seattle, WA 98125

--
Julia Deak Sandler, PhD
Extension Lecturer
Univ. of Washington Int'l & English Language Programs
phone: 206-522-5578

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I-359-001

Thank you for your comment stating your overall support of the Lynnwood Link Extension project and your particular support for the A5, A7, A10, and A11 alternatives.

From: Shane Valle <shane.valle@gmail.com>
Sent: Sunday, September 22, 2013 8:28 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Link DEIS comments

Hello:

I-360-001

Aside from my complete disagreement with the choice to site the Lynnwood Link alignment in the same right of way as I-5 (I'm guessing the potential cost of land acquisition was the determining factor - kind of short-sighted when considering this is intended to be a regional rapid transit system to last a century), which serves a market already served by I-5 instead of serving a new market and/or creating a new market via development, I have only one bone to pick with the design. I listened to the entirety of the "tech talk" on the 13th and I still can't figure out why the potential for development in surrounding station areas has not been maximized. The immediate station areas are slated to include a parking garage and not much else. Parking lots are not inherently bad. However, rail transit has a unique ability to move large amounts of people in and out of an area without the negative impacts automobiles bring. The impacts include but are not limited to constant noise, pedestrian safety concerns and the large allocation of space required to store and move automobiles which has no alternate use. These aspects negatively impact the environment that pedestrians find safe and comforting. To create the sustainable, dense and walkable nodes that rail transit enables it is imperative that the station area be as welcoming to pedestrians as possible. Every single rapid transit rail station is an opportunity to flip the paradigm that rules in the suburban Puget Sound - where the basic unit of design can again be the pedestrian instead of the car.

With the given alignment choice it will already be an uphill battle to get dense, pedestrian-oriented development in the immediate station area but that doesn't mean there shouldn't be a push for it. How about consolidating the park and rides and placing them at just a few locations? Make them larger and site them at the stations that have the least potential for non-automobile-oriented development. Depending on the aim of the park and ride (to take motorists off of I-5 as they approach the station and take the train into the city or divert motorists that normally travel to I-5 via surface streets and then into the city)

I-360-002

I was shocked when during the meeting the question was asked if there was a "preferred alternative" among the board and the answer was no. As a planning and capital project agency ST should have a pretty clear idea of what the "best" system looks like and have rational reasoning to back it up instead of fearing public backlash for having such a position. Public input should be an important part of planning for establishing what is valuable but planners and engineers are brought in to think in a broader sense, both spacial and temporal. Leaving such decisions up to the public is slightly reckless. I would like to see a preferred option and then a discussion about that.

I-360-003

This wasn't supposed to turn into rhetoric-spewing, a sermon or a lecture. It's just frustrating to see great opportunity squandered while taxpayers pay a premium for it. Should this extension of Link prove to be nothing more than train stations and parking lots to access them I am afraid the project will accomplish little more than adding a few lanes to Interstate 5. What is currently being planned

I-360-001

Please see Chapter 2, Sections 2.6.1 and 2.6.2, for a discussion of the environmental, transportation, land use, and other factors that led to alternatives along I-5. As Section 4.1 of the EIS explains, using I-5 right-of-way reduces the amount of private property acquisitions.

Station parking facility sizing balances the need for parking supply with other good multi-modal connections in order to serve the needs of the region as well as local communities. Sound Transit promotes multi-modal access to their stations by including pedestrian and bicycle facilities, including bicycle parking, and by integrating bus and paratransit.

Sound Transit's transit-oriented development policies support such development around its stations, with Sound Transit working in partnership with local jurisdictions and potential developers. However, local jurisdictions control the land use decisions that ultimately determine what kinds of development can occur.

I-360-002

Agencies often do not have a Preferred Alternative identified during the Draft EIS evaluation stage because the Draft EIS is the first time all the potential impacts of a project are presented to the public and decision makers. The Preferred Alternative is identified in the Final EIS.

I-360-003

Your comments about the Lynnwood Link Extension are noted. Chapter 6 of the Draft EIS provides an overview of the public outreach activities and methods for this project.

I-360-003 will constitute a commuter railroad that sees limited use outside of peak hours. I understand that ST has to look out for many interest groups but the future of our region should have immense weight when considering the design details of a project that will not be fully-realized for 10 years and will have an indelible affect on the spacial composition of our region for decades afterward.

Last but not least, thank you! Keeping a pulse on public sentiment around a large project is no small task and I can't even begin to fully appreciate all of the measures taken to make sure as much of the public is engaged as possible. I am curious about all of the different ways you field public input and how you weight it and how it shapes a project. Is there any more detail you can provide about the process than what is on the web site?

Thank you so much!

--
Shane Valle
University of Washington '14
Civil Engineering
School of Music

Save The Seattle Latvian Center

I-361-001 I was born in Milwaukee, Wisconsin to Latvian and American parents. My parents were instrumental in my developing a keen interest in my family heritage, both American and Latvian.

I am a proud US citizen. I am also proud of my Latvian heritage.

I moved to Seattle in 1978, when I was 21 years old and discovered the Seattle Latvian Center and Church in the early 1980's when I started attending the annual Christmas Bazaar (held each year in early November). It satisfied my hunger for the taste of the foods and the sound of the Latvian language of my Latvian mother and her parents.

I joined the Seattle Latvian Folk Dance Group Trejdeksnitis (tray-decks-neet-iss), in 2002 and have been a member ever since. We rehearse in the wonderful hall at the Center each week for 3 hours from September through June or July. We are able to learn and share the richness of Latvian music and dance by performing at key events in the Seattle Latvian community as well as for local community events (NW Folklife Festival), at the North American Latvian Song and Dance Festivals, and of course, the epic Latvian National Song and Dance Festival in Riga. This summer, we had the thrill of participating in the Song and Dance Festival and joined the largest group of participants in the history of the Festival (over 40,000 singers, dancers, musicians and artisans) due in large

I-361-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you and the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-361-001

part from the support and guidance of the Seattle Latvian Community Center and its numerous organizations. Being able to be a part of something so culturally significant is something younger generations should be able to look forward to. Trejdeksnitis (tray-decks-neet-iss) has been in existence since 1962 and there would be a huge void if its Latvian Center home no longer existed.

Because I see the importance of learning and sharing cultural heritage, over the years my involvement in the Seattle Latvian community has deepened. I have studied Latvian language at the UW Baltic Studies Program, which has strong ties to the Center. My daughter attended the Latvian Saturday School here for 2 years and joined me in the dance group for 4 years.

I have been singing with the Latvian Vocal Ensemble Sigulda for the last 2 years. This wonderful collection of singers, and our dedicated director, rehearse at the Center weekly (in the hall or church) and perform for church holidays and important cultural gatherings.

I volunteer for events and fundraisers as I can, to support the hard working, dedicated and resilient people that are the roots that keep the American-Latvian community alive.

This Center is a beacon for Latvian-Americans in the Pacific Northwest, and needs to continue to act as a central hub. It needs to be a hub for social and cultural gatherings, to provide people with the opportunity to network with one another, allowing experiences and information to be passed around. The sharing of ideas is arguably one of the most important facets of a progressive society as it promotes collaboration amongst people and helps define what is commonly called community.

I-361-001 The unity of the Latvian community has played a huge role in preserving its culture over time.

The Seattle Latvian Center needs to remain as a beacon of culture, especially as younger generations may find the need to become educated about their heritage.

Sincerely,

Sandra A Vetter

2315 NE 89th St.

Seattle, WA 98115

206-930-8326

svetter@seanet.com

September 22, 2013

Dear Sound Transit Board,

I submit the following letter of comment concerning the Draft EIS report Sound Transit prepared for the Lynnwood Link Extension project.

I-362-001

As a resident in the general vicinity of the 185th St Station (approximately ¾ mile west of the station and just N. of N. 185th St.), one of my major concerns is accessibility to the station by means other than the automobile. The station and train route will obviously have the most visual and auditory impact to those residents living adjacent to the sites. On the other hand, the congestion that comes with increased traffic flow to and fro the station will have an impact to all the residential neighborhoods surrounding the station.

Transit service and connectivity, as well as safe pedestrian and bicycle routes need to be prioritized in the station area planning. This should include:

- Covered walkways, bike lanes, and dedicated transit lanes as part of the rebuild of the NE 185th St .bridge on I-5.
- Promote pedestrian safety and access by building sidewalks to/from the station
- Parking should be provided as part of the station, but the number of parking spaces should be carefully considered. Build too many, and single occupancy vehicular traffic will be encouraged. Build too little, and residential streets may be over run with station parking. I am a proponent of a 300 car capacity parking garage on the west side of I-5 along NE 185th St..
- Add appropriate traffic control devices and/or design elements to promote safety for commuters, neighborhood residents, and vehicles at the redesigned intersection of NE 185th St (as shown in Option 1).
- Transit access loop turning into the station from 8th Ave NE and exiting the station via NE 185th St (as shown in Option 1).
- An at-grade train track and center platform design as shown in Option 1. At – grade is preferable over the visual and auditory impact of an elevated train.

I am concerned that the N. 185th St. station could become a large Park and Ride facility, when it should be so much more. The station will be a large physical presence in the community. As such, its design elements should support the surrounding community in order to mitigate the visual and sound effects of the station and train route. These design elements should include:

- Architectural and artistic elements to the station building and surrounding area to create a station that is aesthetically pleasing and reflective of our community's cultural diversity.
- Locate the parking garage on the West side of I-5 along NE 185th St (as shown in Option 1). This parking garage could help with the parking needs of large sports events such as the high school football games and soccer tournaments
- The station design should include public gathering places to enjoy music and mingle with friends. Provide inside and outside public gathering places. Include a

I-362-001

Your comments about the NE 185th Street Station design are noted. Appendix F, Conceptual Plans, contains Sound Transit's current design for that station.

The light rail stations will have pedestrian, bicycle, and transit facilities to support and encourage multi-modal access. The project will construct ADA-compliant pedestrian facilities fronting the station areas and along roadways that are reconstructed for the project.

Design elements of the station and parking garage will consider the context in which the light rail facility is located. However, the final design of the station will focus on providing the necessary features of a light rail station.

Station parking facility sizing balances the need for parking supply with other good multi-modal connections in order to serve the needs of the region as well as local communities. Sound Transit promotes multi-modal access to their stations by including pedestrian and bicycle facilities, including bicycle parking, and by integrating bus and paratransit.

I-362-001

solarium with bright light, public art, plants inside and an outside gathering place to rest, eat and meet your neighbors and enjoy the music of buskers.

I-362-002

Shoreline, like so many other communities in the Pacific Northwest, prides itself on our parks, tree-lined streets and a heightened environmental consciousness. A few years ago we increased our property taxes in support of our parks and green spaces. Protection of our tree canopy is a community priority. The Lynnwood Link Expansion project will necessitate the removal of trees along the train route. The station site itself will also create more paved surfaces. To mitigate the loss of trees and vegetative cover, Sound Transit should:

- Preserve as many of our mature trees as possible
- Replant the areas disturbed to restore and maintain our "urban forest"
- Incorporate public green spaces adjacent to the train station area
- To mitigate the removal of CO2 sequestering services of mature trees and increased paved areas, incorporate green roofs in the station area design
- Wherever possible, use permeable pavement to minimize the overall increase of impermeable surface areas and its effect on surface water management.

Respectfully submitted,

Barbara Guthrie
18531 Ashworth Ave N.
Shoreline, WA 98133

I-362-002

Sound Transit will preserve as many mature trees as possible, and replant disturbed areas. The incorporation of green roofs could be incorporated in the design, but that decision would be made during final design.

Sound Transit requires all projects to consider low-impact development (LID) methods, such as permeable pavement, as a first choice for stormwater treatment (Design Criteria Manual, July 2012). Sound Transit will evaluate the feasibility of permeable pavement throughout the project area.

Astrida R. Blukis Onat

2001 E. Lynn St. Seattle, WA 98112 USA
tel: 206 324-4365
email: astrida@comcast.net

MEMO: September 22, 2013

To: LynnwoodLinkDEIS

From: Astrida R. Blukis Onat, PhD

Re: Latvian Center

Prior retiring my company - BOAS Inc. - from active cultural resource work, we had the opportunity to serve Sound Transit as a contractor on the main Link Light Rail project. It was overall a positive relationship and I have always supported public transit, as a concept and personally.

I-363-001

Little did I expect that the Sound Transit project beyond Northgate would negatively impact the heart of the Latvian Center, a place that is the core of the Latvian American community in Seattle, a community of which I am a part. As an anthropologist, I have worked with many communities as they have struggled with forces that are a constant threat to their existence. The current interaction between Sound Transit and the Latvian Center community (including American of Latvian, Lithuanian, and Estonian descent) is not unlike others I have worked with. Except this time it is happening in the context of my own ethnic community,

Community centers of various ethnicities are often the key points of contact between members of a specific community as members strive to maintain an ethnic identity. This process of retaining identity while becoming a part of the American fabric is an important aspect of our larger society. You will undoubtedly be getting many letters detailing the significance of the Center from individuals and institution to whom it is of great and sustaining importance. I would like to add my name to that of my fellow American of Latvian descent. Please do seriously reconsider alternatives to the impact your current plan will have on this community.

If I can be of any assistance in this process, please let me know.

I-363-001

Thank you for your comments describing the importance of the Latvian Center to you. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Eduard Raisters
5436 17th Ave SW
Seattle, WA 98106

Sound Transit DEIS
Comments c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

RE: Sound Transit Link Light Rail system impacting the Seattle Latvian Church and Center at 11710 3rd Avenue N.E., Seattle, WA 98125

Dear Ms. Swift,

I-364-001 I am writing this letter out of concern for the impact of the Lynnwood Link Extension on the Latvian Church and Community Center located at the above address. As it is currently slated, any of the link options provided in the DEIS by Sound Transit will severely limit, if not bar, access and use of the community center that is home to many, and that simply cannot be allowed.

This center is home to more than just a church, it is also the local hub for all Baltic (Estonian, Latvian and Lithuanian) communities and their respective activities. Much of my life has been spent at the Latvian Center, including but not limited to: Saturday morning Latvian language school, Sunday church services, dance practices for the local folk dance ensemble "Trejdeksnītis" and confirmation classes. This church and center has seen the beginnings of many new lives, as well as the final farewells for others. These activities have had a profound impact on who I have become as a person, and continue to shape the youth of the Latvian American community here in Seattle. I am concerned that limiting access and use of the Latvian Center during and after construction will have an unfathomable impact on the Latvian community as a whole. In 1969 our first Latvian center in the Wallingford area of Seattle was acquired by eminent domain for the construction of a park. This was perceived by the Latvian community as an opportunity to construct the very center that is now threatened by the Lynnwood Link Extension. From 1969 to 1972, when the construction of the new center was completed, the Latvian community had a difficult time keeping the church, school and cultural activities operating in various rental spaces. This time around relocation cannot be an option, as many families have moved to the area in order to be proximate to the center.

Even if access and use of our center is barred only for the duration of the construction of the link, it would have a devastating impact on our community, especially the youth who are currently learning what it means to be Latvian. Without a home for our Latvian community during those years, I feel that there could be an insurmountable decline in community participation and engagement in cultural activities. I urge Sound Transit to continue to explore different options in the engineering and construction of this link segment that would not impact this center as drastically as it is currently slated to.

I thank you for taking the time to read my comments and concerns, as well as those from other members of the community. I sincerely hope you come to recognize the grim situation we currently find ourselves in.

Sincerely,

Eduard Raisters
Project Lead, The Gear Works, Seattle

I-364-001

Thank you for your comments describing the importance of the Latvian Center to you and the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained during construction and operation of the project.

From: dzommers@q.com
Sent: Monday, September 23, 2013 3:27 PM
To: Lynnwood Link DEIS
Subject: DEIS comment etter

Sound
Transit Dat
ed September 23, 2013
Draft EIS
Comments Trans
mitted via Email
c/o Lauren Swift

Re: Lynnwood Link DEIS/Seattle Latvian Lutheran Church and Community Center

I-365-001

This letter concerns the Lynnwood Link DEIS issued July 26, 2013, involving the Seattle Latvian Church and Community Center located at 11710 - 3rd Ave NE.

Much has already been said about the Latvian Church and Center and its impact not only on the Latvian community but other Baltic communities and perhaps even other small countries no one seems to know much about. Since from 1950 and on I witnessed many of the events leading up to today's crisis so I believe I can relate some of the thoughts, feelings, and most of all, determination, behind building this Church and Center.

Those of us lucky enough to emigrate to America clearly understood our good fortune. After all, we had just escaped our homeland feeling pretty lucky being still alive, spent years as refugees, and once here, spent years looking for family members who, as it turned out, had not been so lucky. Very quickly it also became clear that there was a very energetic effort in place to delete the very country of Latvia and its language off the map, off the face of the earth. Against their will Latvians were scattered throughout the vast Soviet Union and other ethnicities were imported (usually against their will) to Latvia. Seeing and hearing this, we, the lucky ones, felt obligated to prevent the Soviets from accomplishing their goal. Besides, we now lived in America..

Naturally, this early on, language was a barrier so the Latvians migrated toward each other for company. I still remember the many, many discussions around the dinner table comparing, telling and retelling each other's stories, experiences. At the same time it became obviously necessary to include others outside our personal circle of friends but with the same background which eventually led to the forming of the church. That was done but we had to use other church facilities for our services. Eventually as families settled in, got jobs, paid off their emigration and education expenses (most were educated but without US credentials) the next step was to

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I-365-001

Thank you for your comments describing the history of the Latvian community in the US and in Seattle, and the Latvian Center's importance to the community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained during construction and operation of the project.

I-365-001

acquire a church and center of our own. I believe our first church and center at 43rd and Densmore (and how we lost it) has already been thoroughly discussed.

The 43rd and Densmore matter was a huge setback, left us with very little money, and begging and pleading for other facilities in order for us to continue our activities. It must be said there were many, many helping hands in that regard but we still did not have a home of our own.

In time a property was found, donations and personal loans made and eventually we commenced building our "Latvia in Exile", still with the determination that we would not be wiped off the face of the earth. This "Latvia in Exile" purposefully was designed and built to handle all sorts of activities, activities to maintain and teach our language and culture (and have some fun as well). Large and small spaces were provided for innumerable activities, many focused on teaching our children about our heritage. There were classrooms, meeting rooms, a large kitchen, a large hall with a stage and one that could be used for dances, balls, and large meetings. I must point out here that these dances were family affairs attended by grandma, grandpa, mom, dad, the teenagers and even the little kids. They were all generational and, on a personal note, great fun.

A somewhat unexpected outcome of the Church and Center is that it has become our day by day, nail by nail living history of us all for the past 65 years. The moment you walk onto the property you see evidence of who did what, when. We see the work of an uncle (now deceased, but remembered) who did the landscaping, we see the work of a father, grandfather or even great-grandfather who worked on the roof, we see the building a father, and now grandfather, spent hours, days, weeks to design (during his "free time") all with the goal of leaving something for his family and their future. It is a walk down memory lane for those of us who knew these people, but more importantly it is a living monument of the work done by the parents, grandparents and great grandparents who first lost everything, started over, started over again, and then over again until they finally prevailed.

No spanking brand new building will ever replace this facility. Mitigations you promise and swear by will do nothing but, in time, make the place so unpalatable that eventually people will stop coming (Christmas Eve candle light service with trains zooming by every couple of minutes?). In essence, what the Soviets could not accomplish Puget Sound Transit will - all under the guise of fairness and freedom for all.

Dzintra A. Zommers
5341 Ruby Way NE
Bainbridge Island, WA 98110
dzommers@q.com

The building was built without asking for any handouts or favors from the government or any other entity whatsoever. It was built solely with the community's own labor. Vacations were given up as were weekends and holidays.

3

Sound Transit DEIS
c/o Lauren Swift
401 S. Jackson Street
Seattle, WA. 98104
LynnwoodLinkDEIS@soundtransit.org

Re: Sound Transit Light Rail system impacting the Seattle Latvian Lutheran Evangelical Church and Seattle Latvian Community Center at 11710 3rd Avenue NE, Seattle, WA. 98125

Dear Ms. Swift,

I-366-001

I am writing to you today to add my voice to the many concerns regarding the Lynnwood Link extension of the Sound Transit Link Light Rail system along the eastside of Interstate-5. This extension of Light Rail Link will have devastating effects on not only the Latvian community of Seattle, but the Baltic community of the Pacific Northwest.

While I did not grow up in Seattle, as many of the people you have been hearing from did, I spent a great deal of my adult years there, with the Latvian Community Center as the epicenter of my activities. I have spent countless hours singing in the Latvian women's choir, dancing with the Latvian folk dance group, teaching Latvian school, worshipping at our church, meeting foreign dignitaries, and celebrating the many milestones of my ancestors at our Latvian Community Center. I have met and befriended people from all around the world- from students who are now teachers, to pensioners who have told the most amazing first-hand stories of life in Latvia, to the best friends anyone could ever ask for.

Though I have spent much of my life away from the Seattle Latvian Center, I have never felt closer to it. The Latvian Community Center has been part of my life for over 20 years. I simply can't imagine a Seattle without this institution. The level of activities and pride in the Seattle Latvian Center are greater than ever before. If the Latvian Community Center were to cease to exist, the impact would be devastating and demoralizing to our community. The loss would extend to social, cultural, religious, educational, and developmental activities.

I urge the Sound Transit board members, engineers, and planning committees to find a solution that allows the Latvian community to retain its present property and location in a way that maintains its viability. If our community should be forced to relocate itself, for the second time in forty years, it would be an insurmountable challenge.

Thank you for your consideration. I truly hope a reasonable solution can be found.

Sincerely,

Dina Alita Kancs
dinaalita@gmail.com

I-366-001

Thank you for your comments describing the importance of the Latvian Community Center to you. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

23 September 2013

Sound Transit DEIS
401 S. Jackson Street
Seattle, WA 98104

Comments on Lynnwood Link Extension Draft EIS

Attention: Lauren Swift
Via email: LynnwoodLinkDEIS@soundtransit.org

Dear Ms. Swift:

This letter is written in support of the I-5 Light Rail alternative based on ridership (5.9 million new riders/18.5 million riders annually), capacity (8,880 riders/hour), capital costs ($108/ rider w/estimated ridership) and annual operating costs ($1.24/rider w/estimated ridership). [*Alternative Analysis Report*, p 3-50]

I-367-001

Preferred alternative station placement in Lynnwood
Regarding the placement of the Lynnwood station, **this letter rejects C-1** because of its negative impact on existing property owners (106 parcels, 77 residences and 31 businesses) and its negative impact on Scriber Creek Park. There is no sound economic reason to run the elevated railway above 52nd Ave West, which is developed, instead of along I-5, which is not.

C3: ALONG I-5 TO LYNNWOOD PARK-AND-RIDE STATION

I-367-001

Your comments about the Segment C alternatives are noted. The Preferred Alternative evaluated in the Final EIS includes a modified Alternative C3. This alternative minimizes Scriber Creek Park and wetland impacts, and realigns the guideway and station to better connect with the Lynnwood Transit Center.

I-367-001 **Regarding alternatives C-2 and C-3**, our project support hinges on two things: parking garage access and impacts to Scriber Creek Park and the Interurban Trail. Of the two alternatives, C-3 has the least impact on Scriber Creek Park and C-2 the least impact on the Interurban Trail. As proposed, C-2 is more likely to attract ridership because of ease of access to the rail station. However, we do not believe that the C-2 proposal is the best solution for commuters, residents or the environment.

I-367-002 Regardless of the alternative chosen, expanded parking at the transit center is essential as it is already over-capacity. **For aesthetics and practicalities, the logical location of the parking garage should be in the current southeast park-and-ride lot, east of 46th Ave West.** The Draft EIS includes analysis only for locating the parking garage west of 46th Ave West.

Alternative parking proposal for C3.

- First, this section of the park-and-ride (southeast of the transit center) is in an area of negative slope relative to 200 Street SW and the transit center. Thus an elevated parking garage would be less visible from residences and businesses.

- Second, an elevated station could connect directly onto the parking garage, which could serve as the foundation for a pedestrian and bicycle walkway to the transit center area (perhaps exiting alongside the existing 4-way stop, east side). This walkway could also provide ADA-compliant access to the transit center.

  Without easy access, the distance from the transit center and elevation differential will be a barrier to ridership for the C-3 alternative. For example, the walk from the (current) leased Northgate parking garage spaces (southwest corner) to the transit center is approximately 200 feet, on level ground. The Lynnwood walk could be as much as 500

I-367-002

The current design for the station and garage at the Lynnwood Transit Center for the Preferred Alternative includes some of your suggestions: the garage is located to the east of 46th Avenue West, and the station would connect to it. The Preferred Alternative would result in approximately 530 more spaces than there are today.

I-367-002

feet and on an incline.

- Placing the parking garage alongside the rail station means that the current transit center would not need relocation. It would, however, require re-engineering with regard to exit-and-entrance paths. It might be reasonable to allow access only on the north side, for example, via 46th Ave West, and exit only on the southwest side along the perimeter of the existing parking lot via 48th Ave West.

With the parking garage placed in the current southeast section of the park-and-ride area, we support C3, assuming limited impact on the Interurban Trail.

A word about economic impacts

I-367-003

At the Lynnwood public meeting on 14 September, some citizens expressed concern that the transit station would result in decreased property values. Research suggests the opposite if the project is implemented well.

Research on property values in San Francisco after the 20th anniversary of the BART system identified the "rent premium" associated with being within one-quarter mile of BART was $34 per month. In addition, the models suggest that a house immediately adjacent to BART would have a resale value approximately 38% more than an identical home 35 kilometers away and not near BART service. Researchers have found similar increased property values in Buffalo, NY; eastern Massachusetts; suburban New Jersey; suburban Philadelphia; Portland, OR; and St. Louis. [1,2,3,4]

In addition, residents of multi-modal neighborhoods have lower total transportation costs than people who live in "automobile-dependent" communities. Moreover, proximity to transit is a boon to employment and education centers. [5]

However, it is important to minimize nuisance effects, such as noise and poor aesthetics. This is one research finding that bolsters building the parking garage in the southwest corner of the existing park-and-ride and works against alternatives C2 and C3 with the elevated train running along 52nd and through the park. [6]

I-367-004

Preferred alternative station placement in Mountlake Terrace

As with the Lynnwood location, we want to make sure that the light rail station integrates with and complements the existing transit station. In this instance, there is also a new parking garage to consider. **This parking facility is already over-capacity on many weekdays**. It is critical that the light rail system integrate seamlessly with parking and that parking at the Mountlake Terrace Transit Center be expanded to accommodate additional riders.

- The proposal to maintain parking at the current 880 spaces is insufficient (B1).
- The proposal to expand parking by 200 spaces is insufficient (B2A) but it is the best of the alternatives because it considers the need for expanded parking.

I-367-003

Your comments about the potential economic impact of the project on property values are noted. See Section 4.3.4 of the Final EIS for a discussion of this topic.

I-367-004

Station parking facility sizing and design is balanced with the need for good multi-modal connections in order to serve the needs of the region as well as local communities.

As with all its light rail and parking facilities, Sound Transit will design the Mountlake Terrace Transit Center Station and parking facility to fit well within the community, and to effectively provide access. The Preferred Alternative would not add more parking spaces, but the Final EIS includes options at the Mountlake Terrace and the Lynnwood Transit Center that would increase the overall total compared to the Draft EIS alternatives. Section 3.2.7 of the Final EIS discusses the proposed parking facilities.

Thank you for the opportunity to comment on these proceedings.

Kathy E. Gill & Michael S. Schamens
7025 193rd Pl SW
Lynnwood WA 98036

Laura & John Kimball
7123 192nd PL SW
Lynnwood, WA 98036

Colleen Kwan
5605 219th Pl SW
Mountlake Terrace, WA 98043

Maurice & Dixie Schamens
7033 193rd Pl SW
Lynnwood WA 98036

Endnotes

Lynnwood Draft EIS and supporting documents accessed from SoundTransit.org: http://www.soundtransit.org/Projects-and-Plans/Lynnwood-Link-Extension/Lynnwood-Link-Document-Archive/Lynnwood-Draft-Environmental-Impact-Statement

[1] Diaz, R.B. (n.d.) "Impacts Of Rail Transit On Property Values," Booz Allen & Hamilton Inc, Mclean VA. Retrieved from http://www.rtd-fastracks.com/media/uploads/nm/impacts_of_rail_transit_on_property_values.pdf, 22 September 2013.

[2] National Realtors Association. (n.d.) "Public Transit Boosts Property Values, If Conditions are Right." Retrieved from http://www.ppta.net/todtoolkit/assets/downloads/ValueMarketability_Link_TransitBoostsPropertyValues.pdf, 22 September 2013.

[3] Hess, D.B. and Almeida, T.A. (May 2007) "Impact of Proximity to Light Rail Rapid Transit on Station-area Property Values in Buffalo, New York," Environmental Studies. doi: 10.1080/00420980701256005. Retrieved from http://usj.sagepub.com/content/44/5-6/1041.abstract, 22 September 2013.

[4] Armstrong, R.J. and Rodriguez, D.A. (January 2006) "An Evaluation of the Accessibility Benefits of Commuter Rail in Eastern Massachusetts using Spatial Hedonic Price Functions," Transportation, doi: 0.1007/s11116-005-0949-x. Retrieved from http://link.springer.com/article/10.1007%2Fs11116-005-0949-x, 22 September 2013.

[5] Smith, J.J. and Gihring, T.A. (2010, November 28) "Financing Transit Systems Through Value Capture," Victoria Transport Policy Institute. Retrieved from http://www.reconnectingamerica.org/assets/Uploads/Value-Capture-Annotated-Bibliography-Litman.pdf, 22 September 2013.

[6] Garrett, T.A. (2004) "Light-Rail Transit in America. Policy Issues and Prospects for Economic Development," Federal Reserve Bank of St. Louis. Retrieved from http://www.stlouisfed.org/community_development/assets/pdf/light_rail.pdf, 22 September 2013.

September 23, 2013

Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St.,
Seattle, WA 98104

Dear Sound Transit:

I write to state my concern about the fate of Latvian Church & Community Center as you proceed with Light Rail extension to Lynnwood. On this subject you will have already heard from many Latvians, Estonians and Lithuanians, who for obvious reasons want to save the Center for their own unique purposes of cultural and religious expression and preservation. My perspective comes at one remove from those of Baltic heritage but it is nonetheless deeply felt. I have no Baltic family lineage but my wife of 40 years is Latvian-American. Through the decades I have learnt a good deal of the Latvian language, sufficient to take some part in the richness of this vibrant culture.

You should keep in mind that there are many like me, non-Balts who are yet part of the extended reach of the Baltic tradition and who value it profoundly. It is not only Balts who go to the wide range of events at the Latvian Community Center & Church nor it is only Balts who see the beneficial workings of these institutions on broader society.

I-368-001

While I have nothing against the expansion of light rail, and, indeed, as a Lynnwood resident welcome it, I do feel you need to rethink the effect of your plans and revise them in such a way as to leave the Center and Church as undisturbed as possible.

Yours very truly,

Richard C. Wiest
2030 151st PL SW
Lynnwood, WA 98087-6345
Tel. 425-678-8774
porculcelmic@gmail.com

I-368-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-369-001

22 September 2013

Sound Transit DEIS
401 S. Jackson Street
Seattle, WA 98104

Comments on Lynnwood Link Extension Draft EIS

Attention: Lauren Swift
Via email: LynnwoodLinkDEIS@soundtransit.org

Dear Ms. Swift:

A few thoughts concerning the Lynnwood Station and MLT stations.

Placement - Lynnwood station, I reject C-1 and C-2 because of their negative impact on existing property owners, their negative impact on Scriber Creek Park, and poor use of existing right-of-way (I-5 corridor). There is no viable reason I can see to run the elevated railway above 52nd Ave West, instead of along I-5.

C3: ALONG I-5 TO LYNNWOOD PARK-AND-RIDE STATION

Alternative C-3 is my preferred option, especially if the parking garage is put where the current transit center parking is at, and expanded vertically. The same goes for Mountlake Terrace Freeway Station, increase of parking capacity is necessary (I currently live very near it and frequently the parking is full). I do understand option C-3 impacts the Interurban Trail but compared to alternatives C-1/2, it has the least impact on Scriber Creek Park and surrounding established neighborhoods.

I-369-001

Your comment stating your preference for Alternative C3 is noted. The Preferred Alternative in the Final EIS is a modified Alternative C3, with a parking garage east of 46th Avenue West. See Appendix F, Conceptual Plans, for the current design drawings.

I-369-002 Expanded parking at the transit centers is essential as they are already over-capacity. The logical location of the parking garage should be in the current southeast park-and-ride lot, east of 46th Ave West. The Draft EIS includes analysis only for locating the parking garage west of 46th Ave West which I feel negatively impacts/displaces too many established, developed areas.

With the parking garage placed in the current southeast section of the park-and-ride area, I support C3knowing that some impacts on the Interurban Trail will require mitigation.

I-369-003 It is important to minimize nuisance effects, such as noise and poor aesthetics. This is best accomplished by utilizing the I-5 corridor to its maximum as those 2 issues are currently being mitigated to an extent (sound barriers and walls). Using the limited access area improves the security of the system (minimal access to passers-by).

Rolf Vitous
5904 236th St SW
Mountlake Terrace, WA 98043

I-369-002

The Preferred Alternative includes a parking garage located on the east side of 46th Avenue West.

I-369-003

Your comment about minimizing nuisance effects by utilizing the I-5 corridor is noted.

September 22, 2013

Sound Transit
Draft EIS comments
c/o Lauren Swift

I am commenting on the Lynnwood Link DEIS issued July 26, 2013. As a member of the Seattle Latvian Community, whose Community Center and Church at 11710 - 3rd Ave NE in the Northgate area of Seattle, scheduled for destructive impacts should any of the alternatives be approved, I am writing to voice my concern over the proposed action.

The decision impacts not only the Latvian and Baltic communities, who have been active within the halls of the center for over 40 years. Countless other groups have used the center and continue to use it for their own functions, meetings and church services.

I-370-001

The loss of the entrance/exit to the center may as well be seen as a total loss of the property, a problem that could be solved with a better alternative than the ones currently presented.
The meaning behind the church and community center has been a monument to a struggling, small, immigrant community who built the structure; a testament to a people who were able to escape Soviet-occupied Latvia and make a new life for themselves and future generations in the Seattle area.
The gravity and impact of removing this church and community center from us would be huge, the impact of which would be reflected on the children and community who would have no place to go for some time.

Given the aging Latvian community here in Seattle, the idea of relocating is not very viable. I hope that a solution can be created that would allow for the progress of Sound Transit as well as the continuing existence of the Latvian Community Center.

Sincerely,
Monika Hanley

I-370-001

Thank you for your comments describing the importance of the Latvian Community Center to the Latvian Community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained.

To Whom it Concerns,

I-371-001

My father passed away in 2007. When my brother and I went though his belongings, we found, tucked away in a box along with his yearbooks, diplomas and other important documents, a spiral-bound notebook. I can best describe it as a project record, a yearbook in its own right, showing the various stages of the construction and of the completion of the Seattle Latvian Center.

This document was written in 1972, long before "PC" and "Mac" were household terms; long before, with the simple click of a mouse, one could apply Latvian fonts with its own custom accent marks that make each word more legible to its Latvian reader; long before there was a Kinkos on every corner or a Shutterfly from which one could order a custom-printed and professionally-bound hardcover book. In 1972, someone keyed this document on a typewriter, added BY HAND page after page of accent marks, photocopied pictures, timelines & ledgers, then penned a custom message to each receiver: "Dear Mr. & Mrs. Aldis L. Andrejevs, thank you for your donation."

Why? Why would someone spend all of that time to put together a construction report for a couple hundred members of some obscure community? For the same reason my dad kept it for 35 years along side his other most sentimental records – because it's important; because that report represents a monumental event for Seattle's ever-growing Latvian population. It marks the time in our history when we got our very own community center.

I don't know if you know anything about Baltic immigrants, or the vast number of cities where populations of Latvians have sprouted up. I won't bother you with the historic details of our ancestor's exodus from the fatherland, but I will assure you that those who found their way to the shores of Elliot Bay were a proud people who understood that the only way to maintain our Latvian heritage, culture and language was to give themselves and future generations a gathering place - a place to be used for education, a place to celebrate spirituality, a place for open forums, exchanging ideas, and social events where young Latvians (who would otherwise have no way to interact with other Latvian youth), could meet, perhaps even fall in love, and add to the population a couple of kids named Markus and Daira.

The author of this report, Edvins Circenis, included this passage within its first few pages. It's titled "For the Latvian Youth and our Country's Freedom".

"The last clanging hammer has rung, quiet now is the singing saw, the hurried diligence of the workers has finally come to an end. Among a grove of 100-year-old pines stands our newly completed church & community center.

This new center affirms our faith in the future of Latvia and in its freedom. It will serve to house our spiritual and public forums and, more importantly, will harbor the growth of our Latvian youth to insure our culture and our beliefs will not disappear with future generations.

Let this center & church be a symbol of our Latvian culture, our Latvian spirit and our Latvian togetherness. May it give us the strength to survive and to fight for that which is most important to us – our country's freedom."

My grandmother just turned 95 years old this month. She and my grandfather worked along side several other volunteers to build our center. Although her short-term memory fails her from time to time, her long term memory is still sharp as a tack. I am one of the lucky few who still get to hear the stories direct from the source. "Daira", she tells me, "with my own two hands, I hammered nails into

I-371-001

Thank you for your comments about the importance of the Latvian Community Center to you, and the larger Latvian and Baltic communities in Seattle. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-371-001

that church ceiling." My grandmother is one of the proudest of the proud – I've heard most of the stories of her accomplishments: from her days in Germany during the war, working in a hospital with no nurses training, to her time at Boeing, where she secured a laboratory job for .80¢ an hour, just barely speaking English, supporting a crippled husband and 2 small children, and never having worked in a lab a day in her life! Despite all of her achievements, one of her proudest moments to date is helping to build our community center. When her family moved to Seattle from Houghton, MI, the local Latvian Church funded the move with what seemed like an impossible sum of money to a struggling, immigrant family. By helping to build the center & church, my grandmother feels like she gave back to the community a gift of immeasurable value. And you know what, she's right. She did. They all did. It is their legacy.

Do you know how difficult it is to grow up a native-speaking Latvian, or Lithuanian, or Estonian in America? It's kind of like raising a Husky in Cougar territory – not impossible but really hard without the right support system. Now, imagine you're a Husky fan without a stadium. Taking the center away from us is like telling all the Husky fans in Seattle that they can still celebrate the purple & gold – they just have to do it in Pullman. It's not going to happen. You're going to lose members, you're going to lose support and, most importantly, you're going to lose future generations.

In my right mind, I cannot sit back passively and let our center be eradicated, not when the first thoughts that popped into my head when my son was born was what it was going to be like to take him to his first Christmas service at this church, or to his first day at Latvian School, or wondering at which social function, in the very same ballroom where his parents celebrated their matrimony, he might meet his future wife?

I beg you, from my generation of Seattle Latvians who grew up at this center, please, do not destroy this legacy. Don't take this birthright away from our children. There has to be another way, a way that will not disrupt the operations of the center & church, a way that will not leave hundreds of us wondering, "What now?" or, more appropriately, "Where now?"

I thank you for both your time and your consideration.

Sincerely,
Daira L. Anderson

dairaanderson@gmail.com
425-773-2195

From: Maira Rusis <rigasmaira@clearwire.net>
Sent: Sunday, September 22, 2013 4:32 PM
To: Lynnwood Link DEIS
Subject: Latvian Cultural Center Impact

I-372-001

I am a first generation Latvian who came to the United States in 1950 having lived with my family as refugees in Germany since the age of 8 months until I was 6 years old. Along with thousands of other displaced Latvians, my family lost everything they owned and had to start completely over in the United States.

I moved to Seattle in 1969 and immediately became active in the Latvian community. We had a small community center at that time, but with the heart, soul, labor, and love, built our present Latvian Community Center and Church. This was no small task and it has been the hub of our, both, cultural and religious activity. The center not only serves Latvians, but also Estonians and Lithuanians.

The center hosts weekly activities from Latvian school, to church services and various meetings. Throughout the years, I have been active in the drama group, choir, school and Latvian camp. I am happy to say that the next generation is still active in the center's activities and sending their children to Latvian school as well as participating in its many other activities.

To say we could relocate is a travesty. The cost of building a new center would be prohibitive to our community and the location would no longer be the conveniently central one for our community.

The sound transit committee NEEDS to hear our voices and RESPECT the cultural importance of our center and impact of SOUND TRANSIT'S potential destruction or negative consequences by the running of its line so near or through our center.

Respectfully yours,

Maira Rusis

1

I-372-001

Thank you for your comment describing the importance of the Latvian Community Center and Church to you, and giving a brief history of it. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

To:
Sound Transit Lynnwood Link
DEIS Comments c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

From:
Capt. Andrew Reay-Ellers
3560 NE 180th Street
Lake Forest Park, WA 98155

23 September 2013

Dear Sound Transit Board,

I am a huge fan and advocate for Public Transit. During the past dozen years I was instrumental in the urban design and station-area efforts in the Roosevelt Neighborhood that led to shifting the planned Light Rail alignment, updating the neighborhood plan, and re-zoning the neighborhood. This was all done to encourage and foster Transit-Oriented-Development, and embrace strategies of "smart growth", as the community evolves with its implementation of Station-Area-Planning. Furthermore, I spent several years as a member of Sound Transit's Citizen Oversight Panel. I do not list these accomplishments here to claim that my comments should receive any extra weight, but rather to give some background to explain my previous experiences and understanding of transit and urban design.

As a resident, member of the public, and supporter of transit, I am excited by the creation and ongoing expansion of a region-wide public transit system. I recognize and understand that this is not simply a means of "moving" us, but rather --through a network of "station areas"-- integration into our neighborhoods; connecting and complementing our communities. Unfortunately, in reviewing the Lynnwood Link DEIS, I am frustrated and disappointed by much of what is outlined.

I-373-001

Simply put, it seems that the communities north of Northgate are being asked to accommodate a series of large Park & Ride facilities in the service of a commuter railroad. No doubt, one of the purposes of Sound Transit's Light Rail system is to meet the needs of commuters, but this is not its only use, nor the only goal identified by the Sound Transit Board. The Lynnwood Link Extension needs to serve commuters, AND ALSO to support, and be oriented towards, the local neighborhoods. These are the communities that will live with, and be the principle support of the system.

The Lynnwood Link must be much more than a commuter-centric system, with park-and-ride stations. Sound Transit must design a system, build stations, and facilitate station-areas which all work together to create an integrated whole that serves the public AND provides vital community hubs as part of the entire regional public transit system. Sound Transit needs to undertake these expansions of our transit system as one key factor in the overall upgrade, development, and improvement of our urban environment. It would be a sad mistake, and the squandering of a once-

I-373-001

Your comments about the purpose of the Lynnwood Link Extension are acknowledged. The proposed levels of parking are part of a balanced approach to provide access to the light rail line, allowing patrons to arrive by bus, walking, biking, or by car. Sound Transit supports and encourages transit-oriented development around its stations and the integration of its stations into the surrounding community. The purpose of this project is to expand Link light rail from Northgate north into Shoreline, Mountlake Terrace, and Lynnwood; see Chapter 2 for the project's Purpose and Need Statement. See Section 4.5.2 of Final EIS for practices Sound Transit uses to help integrate the stations into the community. As described in Section 4.2.4 of the Final EIS, in areas where local jurisdictions have indicated a desire to attract transit oriented development and have adopted regulations consistent with this, the Lynnwood Link Extension would support those goals and policies.

I-373-001 in-a-lifetime opportunity, to just the build a railroad the quickest and easiest way with little consideration of integrating and orienting towards the community it serves.

So I offer my comments on the Lynnwood Link DEIS with the hope that Sound Transit will make decisions to increase the system's integration and connections to the communities through which Light Rail will operate. By making smart choices in design and planning the Lynnwood Link can create a truly great extension of the existing system with vibrant station areas, and transit-oriented neighborhoods.

NOTE:
To present my comments, I have organized them into four sections. The first three sections each focus on a single broad concept which applies to the entire system as shown in the DEIS. These topics are: Connectivity, Transit-Oriented-Development, and overall Layout & Strategy. In a fourth section I address each of the separate stations individually.

Section 1: CONNECTIVITY

There is no other item more important to the success of this transit system than Public Safety and Accessibility. When getting to and using the system, if the public does not experience a basic level of ease, comfort, and sense of safety, then they will not use the system.

I-373-002 I bring this up because there are few details in the DEIS which prioritize pedestrian, transit connectivity, and bicycle access to the system. In some cases this may simply be that the details remain to be created once the station alternatives are selected; or in some cases these are details which will be dealt with by local municipalities. But this is one of the areas which left me feeling that the system was being designed more to accommodate park-and-ride commuters, and less to provide for local non-vehicle access (foot, bike) and transit connections. Bus stops are shown in places across busy (and certain to get busier) arterials; parking garages indicate an expected great increase in traffic congestion, without commensurate increases in sidewalks, crosswalks, traffic signals. This is all the more important since studies show that ridership participation can be deeply affected by rider's experiences making connections and waiting at transit stops.

I-373-003 One of my biggest frustrations with Sound Transit's long-term planning is the failure to connect new transit developments with existing corridors, transit, and travel patterns. The Link Light Rail system has always been said to be a "spine" from which other transit will connect. Well, the most obvious west/east "rib" route north of Seattle is the SR104 corridor, and the plans as presented in the DEIS do not consider this at all. Consider this corridor from west-to-east, starting in Edmonds: there is the ferry dock and Amtrak/Sounder Station; Edmonds itself; a center of development at 100th Avenue W; a major connection to Aurora/SR99 with the Aurora Village Transit Center; continuing through Ballinger with the center of development just east of I-5; Lake Forest Park; and then onto SR522 through Kemore; Bothell (and the UW campus there); on to Woodinville; and beyond.

Imagine someone getting off the ferry or train in Edmonds who wants to get onto Link to get to UW, downtown, the airport, etc. Same thing for folks at the Bothell UW campus, or coming in on a bus from the NE (Woodinville, Monroe, etc). All the local transit is going to want to make connections to Light Rail, and the DEIS does not mention how any of this is going to work. And this is my fear: that its NOT going to work, so Link will NOT be an attractive alternative for any of the potential riders from the ferry, Edmonds, UW Bothell, etc.

I-373-004 With no description given, it appears that no thought has been given to how new or existing bus routes are going to get to any of the proposed stations. Many routes will most probably want to connect to the 185th station, but for instance there's simply no easy way to/from the NE to this station. It would appear that all of these stations --positioned as they are next to the highway at overpasses-- are going to be difficult for buses to connect to. (imagine an eastbound 331 bus on Ballinger Way needing to take19th-->196th-->Perkins-->10th-->185th to connect riders to the 185th Street station....)

Moreover, the current express service buses, like 522, 312, 372, etc. are going to want to connect to Link to get commuters downtown – How (where?) are these connections going to work, and aren't

I-373-002

The Draft EIS Transportation Technical Report includes an inventory of pedestrian facilities within 1/2-mile of station and bicycle facilities within 1-mile of stations. This inventory is a basis for Sound Transit to work with local jurisdictions on pedestrian and bicycle enhancements to improve accessibility and ridership at stations. Sound Transit also coordinated with local bus operators to develop bus integration plans to complement the rail project. These provide a basis for future transit integration work. Section 3.2.5 of the Final EIS discusses the nonmotorized facilities that will be included in the project. Stations will have pedestrian and bicycle facilities, including bicycle parking. Stations will be designed to accommodate pedestrians, bicyclists, and bus riders as part of a balanced approach to effective access.

I-373-003

Your comments about the SR104 corridor are noted. The purpose of the Lynnwood Link Extension is to expand the Link light rail system from Northgate north into Shoreline, Mountlake Terrace, and Lynnwood, while connecting with other transit systems and infrastructure. The previous decisions to build the Mountlake Terrace Transit Center at 236th Street rather than SR 104 recognized that major traffic corridors are not always the best places to create multimodal centers. Finally, the purpose and need identifies a major north-south trip market to be served; east-west trips may benefit and connect, but the line reflects the needs of the majority of the anticipated trips.

I-373-004

Before the light rail begins operation, Sound Transit will work with the other transit providers in the project area to revise service plans to provide improved or new connections to the Lynnwood Link Extension stations. Sound Transit worked with King County Metro, Community Transit, and Sound Transit Express to outline representative bus

I-373-004 these bus routes going to be greatly encumbered and slowed down by traffic congestion which is already bad at some of these station locations and certain to become worse with the increase of traffic (vehicle, transit, foot, & bike) once light rail service begins?

I-373-005 The issue of congestion at these station sites --bad, and bound to get worse-- CANNOT simply be considered something that the public is going to have to "get used to". With road traffic (vehicle, transit, bike) increasing at the same time of MANY additional pedestrians in crosswalks, there are certain to be threats to public safety (accidents) and obvious adverse effects to surface traffic flow.

I-373-006 Therefore, if these are to be the locations of the Link stations, much more must be done to design for the accommodation of transit connections. Some form of short Bus-Rapid-Transit (BRT) with dedicated bus right-of-ways leading to/from stations should be included in the Lynnwood Link plans at all of the stations so that transit is not as encumbered by surface congestion and rider transfers can be made quickly and safely.

Likewise, some of the alternatives shown in the DEIS negatively impact, or even eliminate, currently existing BRT infrastructure (i.e. Mountlake Terrace Alternative B4). This is a very bad idea. Not only should all of the current transit capabilities be maintained, but they should be accommodated and "connected to". For instance, Mountlake Terrace Alternatives B1, B2, B2A show no direct pedestrian connection to the neighboring "flyer stop", even though they are both elevated stations at the same site. There are many people who will want and need to transfer between these two systems, especially in the decades prior to the completion of Link to Everett.

Taken all together, these multiple issues indicate that connectivity needs to be better considered, planned for, and prioritized. The Lynnwood Link designers need to do a much better job accommodating transit riders connecting to Light Rail throughout this proposed extension of the system.

operation plans to serve the project to evaluate the effects of potential service changes for the EIS.

I-373-005

Chapter 3, Transportation, of the EIS discusses these potential issues. Sound Transit will provide mitigation at intersections with impacts from light rail that operate below level-of-service standards; see Section 3.6.4. Potential safety issues are discussed in Section 3.2.8.

I-373-006

The light rail stations will be designed to accommodate bus transit with bus facilities on-site. Connections to other nearby destinations via local transit service will be developed through a coordinated planning effort with partner transit agencies. The Preferred Alternative studied in the Final EIS assumes that the Mountlake Terrace light rail station will not displace the existing Mountlake Terrace freeway bus station, but future use of the existing freeway station would ultimately be decided separately.

Section 2: TRANSIT-ORIENTED DEVELOPMENT

I-373-007

There is almost nothing as important to the success of the long-term success of the Light Rail system than fostering Transit-Oriented-Development (TOD). It gives a station a ready source of steady riders, it turns a station-area into a destination for other riders, it makes transferring at a station more pleasant, and it engenders community support as it integrates into the community. Unfortunately it is sadly lacking in the current plan as presented in the Lynnwood Link DEIS.

Following Sound Transit's TOD policy, all the proposed stations were analyzed 5 months ago to determine the potential for TOD, and it was found to be mostly "limited". In some places this rating was raised to "limited/moderate" (i.e. 185th), but this assuming that a nearby landholder (Shoreline Schools) eventually transfers the property to be re-developed. This seems like a faulty assumption, since the presence of a light rail station is bound to encourage increased residential density and might require the school district to utilize its property for school expansion.

Most of the details proposed in the DEIS do not follow the Sound Transit Board's guidance to facilitate TOD strategies on its own property and in areas around its transit facilities. The sound transit TOD policy says (1st page, 3rd paragraph):
".....The legislation also guides Sound Transit to work with public and private interests to facilitate TOD. For example, Sound Transit is guided to work with local jurisdictions to set forth conditions for assuring land uses compatible with development of high-capacity transportation systems, such as providing for sufficient land use densities through local actions in high capacity transit corridors and near passenger stations, preserving transit rights-of-way, and protecting the region's environmental quality. Additionally, the legislation guides the agency, in cooperation with pubic and private interests, to promote transit compatible land uses and development, which includes joint development."

It appears that the Lynnwood Link conceptual design, as described in the DEIS, pretty much completely disregarded Sound Transit's own policy. The development of designs are directed to "facilitate TOD" (Sound Transit's words) -- NOT to simply study the issue and then report that, "nope, not much chance of TOD here..." (my paraphrase).

I have been told by Sound Transit staff that, "....every station site cannot allow for extensive TOD....", something I do tend to believe is true -- the fact is (as established by Sound Transit's own report), that for instance, NONE of the 4 proposed "Segment A" stations allow for appreciable TOD. Moreover, depending on which station sites are selected in segment B (Mountlake Terrace) and segment C (Lynnwood), the potential for TOD at those sites is limited as well....

I understand that this extension of Link Light Rail is never going to have the TOD potential of some of the station sites in Seattle. Likewise, it would be too much to expect that Sound Transit would site, design, and build every one of the Lynnwood Link stations to maximize TOD potential. But NONE??

Eight months after Sound Transit publicly commits to a policy of designing its transit projects to encourage and facilitate TOD, and the very next project design which is released to the public has little to none. It is frustrating that this project's planners chose to disregard the Sound Transit

I-373-007

Your comments about transit-oriented development (TOD) are noted. The station area TOD potential was assessed at all potential station locations and was based on existing conditions. Since the Draft EIS, changes have occurred at station areas and this information is reflected in the updated *Station Area Transit-Oriented Development Potential Report*, as referred to in the Final EIS. For example, the City of Shoreline has adopted a subarea plan with transit-compatible zoning near the NE 185th Street Station and is in the process of developing a similar plan for the NE 145th Street Station. Lynnwood Transit Center Station has been modified to provide better future development potential on privately owned properties within the City's designated City Center.

Overbuilding of a station or parking garage to provide development opportunities is a complex issue. As you mentioned, such options are anticipated in Sound Transit's TOD Policy, and Sound Transit will consider a joint development project if a number of conditions are met. Currently, there is no specific proposal for joint development at the Lynnwood Link Extension stations, but Sound Transit will continue to investigate possibilities.

The NE 8th Street corridor was not considered for detailed study because a tunnel concept would not meet Sound Transit's criteria for equitably selecting alignment types for its system (see Section 2.4). In addition, NE 8th Street is largely residential, would require sharp turns to reconnect with other north-south corridors beyond the section described, and construction period impacts would be very high.

I-373-007

Board's guidance and directions on something as vital to the system's success as Transit-Oriented-Development. This obvious oversight is the most significant short-coming of the project as proposed.

At some point in design and scoping -- especially after the Sound Transit board adopted an official policy and commitment to TOD -- there should have been a recognition that the current design was not meeting Sound Transit's own criteria. So we are now at a point in the process where the public is asked to comment on the alternatives listed in the DEIS -- and yet the list of alternatives is very obviously incomplete, since no alternatives provide even an average amount of TOD potential. In failing to develop a design which meets Sound Transit's own policies and goals, I find that in this way the DEIS is deeply flawed.

It seems like the lessons learned by Sound Transit a mere ten years have already been forgotten. At that time, the preferred alternative of locating a Light Rail station alongside the highway at NE 65th was realized to be a mistake --both by the local community AND the Sound Transit Board-- simply on the basis of the lack of TOD potential.

No transit station which is sited immediately adjacent to a highway will ever encourage --or even allow for-- effective TOD and integration into the surrounding community. By definition and simply geometry, half of the land adjacent to a station located immediately next to a highway can never be developed, because it is taken up by the highway itself. And then the other half of the the land adjacent to the station will never foster good, valuable, and attractive urban development, because all of that property, by definition, is next to a highway. Shifting the alignment and station locations even a few hundred feet (let alone a block or two) would make a world of difference, and that is exactly what Sound Transit choose to do at NE 65th -- even though it meant that the costs of developing that segment are now higher.

I understand that it must seem the obvious solution to run LINK along the edge of I-5 from Northgate to Lynnwood -- its simpler, and probably cheaper. But by choosing this 'easy' way, Sound Transit has disregarded what it has already learned about station areas. North of Northgate does not suddenly turn into a rural area, which simply needs to accommodate the passage of a train. Rather than serving the city of Shoreline, and helping to foster transit-oriented neighborhoods within the station areas, the current Lynnwood LINK design is little more than a commuter rail line.

This did not "have to be". This was NOT the only choice. When Sound Transit's planners were charged with the task of extending Light Rail north to Lynnwood in the I-5 corridor, it did not mean that the rails had to stay principally within the right-of-way of the highway. Instead of using the public land immediately adjacent to the highway, the alignment could have been a cut-and-cover route making use of the public utility right-of-way along 8th Ave. NE from 145th through 185th. A straight line, no complex and costly rebuilding of freeway overpasses and interchanges – and while still within the I-5 corridor it would have been that all-important few blocks from the highway which would have facilitated a MUCH greater potential for TOD.

I-373-007

The currently proposed station locations and siting shown in the DEIS don't allow for significant Transit-Oriented-Development, or efficient integration -- and that is exactly what is needed if Link is to be a success and have a consequential positive impact throughout our area. If the Lynnwood LINK is to truly serve the communities north of Seattle --and to meet the criteria, strategies, policies, and goals set by Sound Transit-- then a re-examination and adjustment of the project's design is necessary.

I believe the alignment and siting of stations should be adjusted to increase the potential for Transit-Oriented-Development. Even barring that, at the very least a number of steps should be taken to increase the potential for TOD at the station site which are proposed in the DEIS. These improvements to the Lynnwood Link Plan should include:

1. Choose the station alternatives which allow for the most develop-able land immediately adjacent to the station site.

2. Adopt whatever station configuration which does the most to screen the highway from the immediate station area.

3. Incorporate additional elements into the station to screen the highway from the immediate station area.

4. "Overbuild"/"Underbuild" – each station's design/lay-out/configuration should not simply accommodate development nearby, but actually incorporate development --such as public/ retail/commercial/residential space-- integrated as part of the same structure as the station itself.

5. Considering #1 above, if there HAS to be a parking garage (and it should not be a "given"), it should be as small and as far from the station as possible .

Section 3: LAYOUT AND STRATEGY

3.1 Layout:

Perhaps the biggest questions which are sought to be answered by the responses to the DEIS are: Which stations? And where? I have separate comments prepared regarding the details of each station individually in the section which follows, but here I think it is important to first address the extension as a whole.

This segment is defined by the end points of Northgate and the Lynnwood Park & Ride, between which there two relatively fixed station locations chosen (NE 185th and Mountlake Terrace), and three significant questions of additional station locations. This is without getting into the more detailed questions of each station's placement and elevation. These three principle questions of system layout are:

1. Station at 130th NE: Yes or No?
2. Station at NE 145th <or> NE 155th?
3. Station at 220th SW: Yes or No?

I-373-008

3.1.1 Question: Station at 130th NE: Yes or No?

Regarding this first question, there should positively be a station at NE 130th. Without it, everyone to the NE, and especially everyone to the NW from about 100th to 140th will need to make their way (by car, bus, bike, or foot) through all of the congestion at Northgate to get to the station south of the mall. This is already currently one of the most congested areas in North Seattle, and with the coming of Light Rail to Northgate (and its associated parking garage and connecting transit routes) the congestion is certain to get worse. This is no small factor, since whether or not people can easily get themselves to transit is often the deciding factor of whether they use the system. So yes, definitely build a station at NE 130th. I expect it will be a popular location and help the system's ridership numbers.

3.1.2 Question: Station at NE 145th <or> NE 155th?

Considering that there would therefore be a station at NE 130th (see 3.1.1 above), the next station should be at 155th, NOT 145th. A station at NE 145h would seem very close to the 130th street station, and a station at 155th more evenly divides the distance between a station at 130th and the planned a station at NE 185th. While the site at NE 155th is not the best for a station, the location at NE 145th and I-5 is certainly the worst spot for a station considered in the entire DEIS. The existing current conditions at that location are already terribly congested and often backed-up in every direction, and the idea of adding a station with thousands of boarding means a significant increase of pedestrians in crosswalks; connecting transit coming to this site; and hundreds of vehicles accessing the planned park & ride garage. Basically, with a station at this location there can expected to be utter gridlock at "rush-hour(s)", every morning and evening. Furthermore, the NE

I-373-008

Your preference for stations at NE 130th and NE 155th Streets is noted.

I-373-008 145th location offers almost no Transit-Oriented-Development potential, with three out the four surrounding quadrants (highway, highway, golf course) unable to be developed at all.

So with the answers to these first two issues (yes to 130th; choose 155th over 145th), I have fallen in line with what is described in the DEIS as Alternative A5 for Segment A (following my preference listed in 4.4 below for an at-grade 185th Station).

3.1.3 Question: Station at 220th SW: Yes or No?

I-373-009 The final of these three principle questions about system layout is whether or not there should be a station at 220th SW. A station located here would be a great positive to to the whole system, with increase ridership, easier access, and reduced congestion leading to the adjacent stations (Mountlake Terrace and Lynnwood P&R); so a strong "yes". One only need look at a map to see that a station at 200th SW will offer much better connections than the other station to transit traveling East/West, and also transit in the SR99 corridor. Furthermore, a station at this location provides significantly improved access for residents West of I-5 between the county line and at least 196th; AND it would serve as easy access to/from the substantial commercial and residential developments already in the area from I-5 to 76th Ave. West.

In the terms of the DEIS alternatives, by my support of the construction of the 220th Street Station I am therefore selecting Alternative B2A as representing the best choice offered for the "B" segment.

The other alternatives to be discussed concern specific station sites: precise location, alignment, and elevation. I will comment on those individually below (section 4) as I discuss the stations separately; but for the record, in Segment "C" I prefer Alternative C1.

3.2 Strategy

I-373-010 A weakness of the Lynnwood Link Extension as currently presented in the DEIS is the attempt to meet every need at every station – which will lead to to congestion of all movement and negatively impact the station-areas. (this planning falls into the trap: "Jack-of-All-Trades; Master of None.") Just as I can accept that every station site will not be perfect for Transit-Oriented-Development; Sound Transit should not insist on extensive vehicle AND transit access at every station location. Planning should designate the focus and goals of each station, and concentrate on those uses at each locations.

The most significant difference in uses is between individual vehicles vs. transit. Both the cars coming to park at a station, and the transit (principally buses) stopping for riders to make connections are going to congest the station area. At a broad, spread out location (e.g. SeaTac Airport), both can and will coexist. But some of the station sites along the Lynnwood Link are already cramped, they have a small number of adjacent arterials, and they have limited street connections to the surrounding communities. This is not simply a conflict of different vehicles (bus vs. car) on the road – buses make stops, take up more of the road, and let off passengers who

I-373-009

Your comment stating your preference for a light rail transit station at 220th Street SW, as included in Alternative B2A, is noted. Sound Transit also acknowledges your preference for Alternative C1.

I-373-010

Your comments about station planning are noted. For the Lynnwood Link Extension, Sound Transit is designing the stations to accommodate pedestrians, bicyclists, bus transit riders and vehicles, as the station site allows. Note that the NE 130th Street stations would have limited or no parking due to site constraints. Each station is designed with its site location in mind.

I-373-010 then become pedestrians in crosswalks. All of this cause public safety issues and can slow down car traffic, which in turn can clog up intersections and roadways limiting the bus's ability to stay on schedule and make their connections.

I-373-011 It is true that these are public streets, and everyone is welcome to use whatever station they wish. But Sound Transit, along with its partner agencies and municipalities can manage and moderate some of this conflict, segregating differing uses to some locations but not others. Transit /buses can easily be controlled through the design of routes and schedules; and the amount of cars typically using a station can be limited by the amount of parking available. If parking is limited, so is car traffic at and near a station.

Looking at "the whole" of the Light Rail system from Northgate to Lynnwood, there already exists (or is planned) extensive commuter parking at Northgate, Mountlake Terrace, and the Lynnwood Transit Center. Parking could therefore be evenly distributed by only adding a significant parking structure at 145th/155th.

This creates a pattern of every-other-station focusing on park & ride commuters vs. bus-riding transfers as shown in the following chart:

Northgate	–	significant parking	and	transit connections
NE 130th	–			transit connections
NE 145th/155th	–	significant parking		
NE 185th	–			transit connections
Mountlake Terrace	–	significant parking	and	transit connections
220th SW	–			transit connections
Lynnwood	–	significant parking	and	transit connections

This pattern also falls in line with my comments above (section 1) regarding the 185th station's need to be better focused on connecting to transit on SR104; and also my comments (section 3.1.2) that the current congestion near NE 145th makes transit movement through this area problematic.

So I suggest that a new parking structure ONLY be built at a 145th/155th station, and do not build them –or at least greatly reduce them– at 130th, 185th, and 220th. Likewise, in turn, concentrate the efforts of designing for and accommodating transit connections at those same stations but accept that those efforts can be minimized at 145th/155th.

I-373-011

Your comments regarding the location of station parking along the Lynnwood Link Extension are noted. Sound Transit currently plans to include parking at all the Preferred Alternative stations; see Chapter 2 of the Final EIS.

Section 4: PLAN & DESIGN DETAILS – STATION by STATION

4.1: NE 130th Street Station

I-373-012

-----As discussed in Section 3.1.1 above, the inclusion of the 130th street station seems vital to the Light Rail system north of Northgate. Without it, everyone to the NE, and especially everyone to the NW from about 100th to 140th will need to make their way (by car, bus, bike, or foot) through all of the congestion at Northgate to get to the station south of the mall. This would mean so much frustration that fewer people will use the system.

-----I strongly support Option #1, with the less-disruptive at-grade station and no significant additional parking created (see 3.2 above).

-----Enhance potential TOD development at 130th by designing to allow station "overbuild" to provide commercial and/or community space above the station. Besides allowing the best possible integration of the station with the local community, this would help shield the neighborhood from the sights and sounds of the highway and light rail.

-----Shift the station (shown in Option 1), which has its rail alignment pass under the NE 130th Street bridge, towards the south approximately 150 feet, "spanning under" the bridge. This would create a direct connection from eastbound buses to the station rather than forcing people transferring to cross the arterial on foot. This would also decrease the amount of vehicles and bicycles making left turns onto 5th to get to the station; and significantly reduce the number people needing to use the crosswalk across NE 130th Street - a busy arterial that will become more congested with the opening of the station. [Note that this strategy of "spanning" the adjacent east/west arterial is shown in the DEIS at the proposed 155th , 236th, and 220th stations].

4.2: NE 145th Street Station

I-373-013

As discussed above in Section 3.1.2, locating a station at 155th rather than 145th makes much more sense. Beyond that, 145th is just basically a lousy site for a station — no adjacent land available for TOD in 3 out of the 4 surrounding quadrants (hwy, hwy, golf course); AND the location is already a choke-point with bad congestion in all directions. Bringing hundreds more cars, bus connections, bike riders, and pedestrians to this location every day would seem to be a recipe for public-safety issues and grid-lock.

If, regardless of these factor, Sound Transit still chooses to build a station at NE 145th Street, the following issues should be noted;

-----Of the 2 options for the 145th Street Station shown in the DEIS, Option #2 is preferable, with its smaller footprint having less of a negative impact on the surrounding land and therefore allowing for more potential TOD.

-----The elevated station shown in Option #2 should however be shifted to the south (approximately 200 feet?) to "span" NE 145th much as the elevated stations shown in the DEIS at 155th, 236th, and 220th are

I-373-012

Your comments in support of the NE 130th Street Station and on its design are noted. Alternatives that include the NE 130th Street Station may draw some demand away from Northgate. Such a configuration adds travel time and delay to riders from north of that point. With the station locations, Sound Transit attempted to achieve many objectives, one of which is to balance the need to provide regional high capacity, high speed travel and local access. Although it does not include a station at NE 130th Street, the Preferred Alternative has an option to consider a 130th Street Station.

The suggested design option to shift the station was explored, but it would have more operational, construction, and cost impacts upstream and downstream of NE 130th Street.

I-373-013

Your comments regarding the NE 145th Street Station are noted. Section 3.2.4 of the Final EIS discusses traffic operations at that location. Your suggestion for shifting the station south to span NE 145th Street was not advanced because it increased constructability risks without improving access or operations, as the area to the south has no populated adjacent areas.

I-373-013 sited. As noted above in the comments to the NE130th location, this creates a direct connection from eastbound buses to the station rather than people needing to cross the arterial, and also also decreases the amount of vehicles and bicycles making left turns onto 5th to get to the station. This is already an incredibly congested intersection, and introduction of hundreds more vehicle left-turns AND hundreds more pedestrians in the crosswalks sounds like a nightmare.

I-373-014 -----If the construction of this station goes forward, along with the reconstruction of portions of the highway ramps, this opportunity should be exploited to also reconfigure the express transit "flyer stops". Currently, express buses need to 'weave' from the inside car pool / transit lane to the outside of the highway lanes at NE 145th Street. This is dangerous, inefficient, and slows down traffic and the express buses At first glance, it almost seems like the arrival of Light Rail along I-5 will make these express-bus routes and "flyer stops" obsolete - but there are many people who will still want and need to transfer between these two systems, especially in the decades prior to the completion of Link to Everett. Therefore, Sound Transit should work with its partner agencies (WashDOT, King County Metro, etc.) to redesign this entire interchange to allow for express-lane flyer-stops, AND plan a connection of the light rail station directly to/from these flyer stops with a pedestrian bridge or a similar feature.

I-373-015 -----Enhance potential TOD at NE 145th Street by designing to allow station "overbuild/underbuild" and incorporating space into the parking structure to provide commercial and/or community space. This would help increase the potential for TOD from the current VERY limited status, and allow the best possible integration of the station with the local neighborhood.

4.3 NE 155th Street Station

I-373-016 As mentioned in Section 3.1.2 above, locating a station at here at 155th rather than 145th makes much more sense. From a purely arithmetic / theoretical /strategic standpoint, a station at 155th better divides the 55 blocks between 130th and 185th. Moreover, it actually provides a higher potential for TOD and better connections to other transit due to the lower amount of surface congestion at this spot. Issues that should be considered for a station at this site include:

-----There are no alternate station options listed at this site, but let me call attention to, and strongly support its layout /design "spanning" the adjacent east-west arterial – something which should also be done for the designs at 130th, 145th, and 185th. Better transit connections, less public safety issues, fewer negative impacts on surface congestion.

-----This site needs better transit connections for local North-South buses A transit-only "back gate" south out of the site should be designed which connects into 152nd or 153rd to allow buses on 5th NE to make a loop off that arterial to connect to the station.

----- "Surrounding" the fire station with a transit station and parking structure seems like a bad idea, and one in which both parties (Sound Transit and Fire Department) will negatively impact the other. Sound Transit must work with the Fire Department to re-locate and rebuild this station away from this site.

I-373-014

The transit ramps at 145th are anticipated to be decommissioned as part of this project. A pedestrian and bicycle connection from NE 145th Street to the station will be provided.

I-373-015

Overbuilding of a station or parking garage to provide development opportunities is a complex issue. As you mentioned, it is included in Sound Transit's TOD Policy, and Sound Transit will consider a joint development project if a number of conditions are met. Currently, there is no plan for joint development at the Lynnwood Link Extension stations, but Sound Transit will continue to investigate possibilities in coordination with local jurisdictions and other agencies.

I-373-016

Your comments about the NE 155th Street Station are noted. It is not included in the Final EIS Preferred Alternative.

Section 4.14 addresses possible impacts of a station at NE 155th Street on the operations of the fire station. If selected as the alternative to be built, Sound Transit would work closely with the Fire Department to resolve potential conflicts with bus and vehicle traffic to maintain emergency response times during the construction period and operation of light rail.

See response to I-373-07 above.

I-373-016 -----Enhance potential TOD development at NE 155th Street by designing to allow station "overbuild/underbuild" and incorporating space into the parking structure to provide commercial and/or community space. This would help increase the potential for TOD at this site; would allow the best possible integration of the station with the local community, this would help shield the surrounding neighborhood from the sights and sounds of the highway and light rail.

4.4 NE 185th Street Station

I-373-017 As mentioned above in Sections 1 and 3.2, this station will be situated where transit connections are VITAL, but also very challenging. Therefore, a prioritization of connectivity, public safety, and Transit-Oriented-Development is essential. Specific issues include:

-----The at-grade train tracks and center platform design shown in Option #1 is vastly preferable to the elevated station shown in the DEIS, and this choice is supported by the vast majority of the public input collected from area residents.

-----As discussed elsewhere, and shown in the DEIS for the 155th, 236th, and 220th stations; the 185th Street Station should be shifted towards the south approximately 150 feet, "spanning under" the 185th St Bridge so eastbound bus, pedestrian, and bicycle traffic on NE 185th Street can access the station directly. This would decrease the amount of vehicles making left turns off the arterial, and significantly reduce the number people needing to use the crosswalk across NE 185th St - a busy arterial that will become more congested with the opening of the station.

-----Transit access loop turning into the station from 8th Ave NE and exiting the station via NE 185th St (as shown in Option 1) should be aligned with the "reconstructed" 5th Avenue East" (also shown in Option #1). Currently in the drawings the southbound lanes out of the station are aligned head-to-head with the northbound 5th Avenue traffic. Furthermore, this resulting intersection should be provided with a traffic light.

-----As mentioned in Section 3.2 above, it will make for a better strategy to focus the 185th station of transit connections and NOT commuter park & ride passengers; so therefore NO significant parking or parking structures should be added at this location. HOWEVER, if Sound Transit insists on constructing additional parking, a structure located on the West side of I-5 along NE 185th St (as shown in Option 1) is the preferable option since it would have the least negative impact on the station area, and have the beneficial effect of helping with the challenges of parking during events at the adjacent school district facilities.

-----Reconfigure the station site (as shown in Option 1) to maximize potential Transit-Oriented-Development immediately adjacent to the station. Currently the design shows a great deal of the land immediately adjacent to the station taken up with bioretention cells, service vehicle parking & ancillary buildings, and a large (.75 acre) blank "Landscaped Area". These areas represent the absolute best sites for TOD and should not be used for non-public infrastructure or overly large, non-supportive open space. The station, and station area, would be much better served by the inclusion of a smaller town-square type public area as an open-space and a focus for TOD.

I-373-017

Your design strategies for the NE 185th Street Station are noted. Appendix F of the Final EIS contains current design drawings for this station, as well as the others proposed for the Preferred Alternative. The design of this station has been modified since the Draft EIS, including transit ingress and egress on NE 185th Street and relocated infiltration ponds. Parking at this station is proposed in a new garage on the west side of I-5 under the Preferred Alternative. The suggestion to shift the station south was not advanced because it would increase construction impacts without improving access or operations.

Please see response to I -373-07.

I-373-017 -----Further enhance potential TOD development by designing for, and allowing station "overbuild" to provide commercial and/or community space above the station. Besides fostering the best possible integration of the station with local businesses, this would further shield the adjacent neighborhood and planned open spaces from the sights and sounds of the highway and light rail.

4.5 Mountlake Terrace

I-373-018 For the sake of transit connectivity (see section #1 above), potential Transit-Oriented-Development (see section #2 above), and the preservation of existing express transit (again, section #1 above) the Station at the Mountlake Terrace Transit Center should be constructed as shown in the design for Alternatives B1, B2, B2A – Spanning across 236th Street SW. This alignment and layout works to streamline transit connections and minimize surface congestion impacts, while also opening up a broader area of adjacent land for potential TOD. The alternative, displacing the Express Bus "flyer stop" in the center of the highway, is a very bad idea. While at first glance, it almost seems like the arrival of Light Rail along I-5 will make these express-bus routes and "flyer stops" obsolete, this is certainly NOT true. There are many people who will still want and need to ride on express buses on the highway – and transfer between these two systems – especially in the decades prior to the completion of Link to Everett.

Other details which should be considered for the Mountlake Terrace Station include:

-----Design and build a direct pedestrian connection from the Light Rail Station to the neighboring "flyer stop". Currently the drawings (Alternatives B1, B2, B2A) show no such link even though they are both elevated stations at the same site.

-----Increase the potential for TOD adjacent to this transit center by designing to allow station "overbuild/underbuild" and incorporating space into the structures which provide commercial and/or community space. This would help increase the potential for TOD within this important station-area, allow the best possible integration of the station with the local neighborhood, and help shield the community from the sights and sounds of the highway and light rail.

4.6 220th SW Street Station

I-373-019 As discussed above in Section 3.1.3, there should positively be a station at this location. It would be an asset to to the whole system, with increase ridership, easier access, and reduced congestion leading to the adjacent stations (Mountlake Terrace and Lynnwood P&R). One only need look at a map to see that a station at 200th SW will offer much better connections than the other stations to transit traveling East/West, and also transit in the SR99 corridor. Furthermore, a station at this location provides significantly improved access for residents west of I-5 between the county line and at least 196th; AND it would serve as easy access to/from the substantial commercial and residential developments already in the area from I-5 to 76th Avenue W.

I-373-018

The Preferred Alternative evaluated in the Final EIS locates the light rail station over 236th Street SW. The freeway flyer stop is currently connected by a pedestrian walkway to the existing Mountlake Terrace Transit Center parking garage. This connection would remain, and a new one would not be built.

All alternatives except Alternative B4 would allow the freeway station to be used longer term, although the long term use depends on transit-integration decisions yet to be made by the transit operators (Community Transit, Sound Transit, and Metro) currently serving the station.

Please see response to comment I-373-007 regarding TOD.

I-373-019

Alternative options to provide for a future station at 220th Street SW are considered in the Final EIS.

I-373-019 There are no alternatives or separate options listed for a 220th SW station in the DEIS, so there is no preference to be stated here, other that to repeat the this station should definitely be included as part of the project. Also, its current design "spanning" 220th, is something which is a great asset and should be supported as I have mentioned with the other stations (stations shown at 236th and 155th are designed this way – stations at 130th, 145th, and 185th and not, BUT SHOULD BE).

I-373-020 ----As has been mentioned with the other stations, TOD potential should be increased at this station site by designing to allow "overbuild/underbuild" and incorporating areas into the structures which provide commercial and/or community space. This would help increase the potential for TOD within this station-area, allow better integration of the station with the local area, and help shield the community from the sights and sounds of the highway and light rail.

I-373-021 -----The other comment I'd make to the design of the 220th Street Station is that the Parking Structure shown should NOT be built. As discussed in Section 3.2 above, there will already be significant park & ride capacity at two nearby stations (Lynnwood and Mountlake Terrace Transit Centers), and a station at 220th SW would better serve the community with a strong focus on transit connections, NOT as a park & ride facility.

4.6 Lynnwood Transit Center

I-373-022 Given the importance and value of Transit-Oriented-Development (see Section 2 above), and its ability to help support the Link Light Rail System, Alternate C1 appears to be the best option. It provides a station furthest away from the highway, so it has the most land which could potentially be developed as TOD, and those developments would be more attractive since they would not be immediately adjacent to the highway.

So this is a great start, but other factors to consider include:

-----Further increase the potential for TOD,and really maximizing the station's integration into the community by designing station "overbuild/underbuild" and incorporating spaces into the adjacent structures which provide commercial and/or community space.

-----Remember that rider's experiences at stations are as important to a transit system's success. Because of this, make certain that the issue of transit transfers are prioritized, included into the planning, and that the station's design incorporates features that streamline connections and make waiting and transferring safe, easy, comfortable. Considering DEIS design C1, this should mean that the station has a mezzanine level with an elevated and covered pedestrian walkway connecting into the adjacent parking garage, and then on across over to the center of the Bus Transit Center where pedestrians could descend to the platform. This would speed up access into and out of the Light Rail Station, and by grade-separating pedestrians from surface traffic public safety will be enhanced and transit delays minimized.

I-373-020

Please refer to I-373-007.

I-373-021

If built, parking is proposed at the 220th Street SW Station.

I-373-022

Your preference for Alternative C1, and your design suggestions for the transit center are noted. Alternative C1 is not included in the Final EIS Preferred Alternative. See Appendix F for the current design proposed for this station with the Preferred Alternative. Please refer to the response to I-373-007.

Thank you for your summary of preferences for the Lynnwood Link Extension.

SUMMARY:

I-373-022

In the terms of the DEIS alternatives listed I support an Lynnwood Link Extension which would be described as: Alternative A5; Alternative B2A; Alternative C1.

Beyond those choices as listed in the DEIS, significant changes to what is listed in the DEIS should include (all the details as to "why" I make these comments can be found in the preceding sections as indicated):

1. Alter designs at every station to increase the potential for Transit-Oriented-Development. This includes: allowing for over/under build of station itself; moving and minimizing the presence of non-vital systems and facilities away from the station core; reduce the amount of parking; foster the creation of community "hubs" at each station to anchor and support the development of each Station Area. (see Section 2; Section 4.1 through 4.6)

2. The current design of some stations (155th, 236th, 220th) "spanning" the adjacent east—west arterial, is a great feature which all of the station designs (130th, 145th, 185th) should also emulate. As discussed: it increases public safety, will mitigate some of the negative impact the stations will have on surface congestion in the station-areas, and will streamline and make more pleasant rider's experiences accessing and transferring at the stations. (see Sections 4.1 through 4.6)

3. The only significant parking structure which should be constructed as part of this project would be the garage at NE 155th Street. (see Section 3.2)

4. Much more attention must be given to this Light Rail line's connectivity to the current and future transit system must be much better studied; and efforts must be made to design and plan efficient and effective transfers to/from the Lynnwood Link. (see Section 1; Section 4.1 through 4.6)

CONCLUSIONS:

I-373-023

Reading the Lynnwood Link DIES it unfortunately looks like the communities and neighborhoods to the north of Northgate are being asked to accommodate a series of large Park & Ride facilities for a commuter railroad. The residential densities are slightly lower than in downtown Seattle, but this area is all a part of the same continuous metropolitan area — an area ready to be served by this intra-urban transit system which will in turn support urban growth and increasing density.

I don't know if the designs in the DEIS fall short because of perceived potential cost pressures, or just a notion that it would be more expedient to simply focus on the needs of commuters rather that to plan a system which integrates with each community it serves. No doubt, one goal of Sound Transit's Light Rail system is to meet the needs of commuters, but this is not its only use, nor the only goal identified by Sound Transit's Board. Each station needs to support its immediate community, and foster the TOD that will in turn help support the station and the whole system.

Last April, Sound Transit's own analysis reported that the potential for TOD at the proposed Lynnwood Link station sites to be poor. Unfortunately, in the intervening 4 months between doing this research and issuing the DEIS in July it appears that little or nothing changed – there was no recognition that the current design was not meeting Sound Transit's own Transit-Oriented-Development criteria (ST Policies issued December 2012). This is frustrating, because even though this route will always be greatly limited by its alignment down the edge of the highway, the designs of the stations can be modified to better mitigate the negative impacts and integrate into the neighborhoods – and that in turn will better support Station-Area-Plans in each community.

Jumping all the way back to my very first line of these comments, please remember that I am a huge fan and advocate for Public Transit. My comments, complaints, and suggestions here do not represent someone fighting against the construction of Light Rail – just the opposite. I want all these transit systems built, and then more! But I watch and see just how costly these plans and developments are, and how long it takes to complete – and that leaves me with the unmistakable impression that we've only got a single chance to create these systems (in our lifetimes anyway), so we better all do the best we can at "Getting it Right the First Time".

So I take part in the public process, and send in these comments, in hopes that we don't just build the quickest, easiest, most expedient solution which satisfies the broad goal (in this case, getting Light Rail to Lynnwood) – but instead takes the time to figure out creative solutions which maximize the value and guarantees the worth of every aspect of what Sound Transit creates.

It is what our neighborhoods, communities, and the entire region demands and deserves. I hope that Sound Transit takes the time to plan and implement a design which results in truly great stations, supporting vibrant station areas in transit-oriented neighborhood, all of which is vital for our regional transit system to succeed.

Regards--

Andrew Reay-Ellers

I-373-023

Thank you for your comments and concerns. Sound Transit appreciates your time and input in the public process.

Sound Transit refined the project design for the Preferred Alternative in the Final EIS; see Appendix F for conceptual designs.

September 23, 2013

Pauls Zommers
4750 – 46th Avenue NE
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pzommers@hotmail.com / (206) 369-0757

Sound Transit
Draft EIS Comments, c/o Lauren Swift
401 South Jackson Street
Seattle, WA 98104
LynnwoodLinkDEIS@soundtransit.org

Dear Members of the Sound Transit Board –

I-374-001 I am writing to express my concerns over the planned light rail extension to Lynnwood, and specifically how this project is going to impact our Latvian community's church and cultural center.

Our center is of significant historical importance to me, my family and the rest of the Latvian and Baltic communities. The "christening" of the church took place on February 6th, 1972. I was born just a few weeks later on March 16th, 1972, and soon after was one of the first children christened in our church (see pics below signature). I have been an active member of the Seattle Latvian-American community since early childhood, and attended the Seattle Latvian School on Saturdays.

Over the last few decades, we have also enjoyed countless events at the center, from the beautiful Christmas Eve church service to dances, choir performances, bazaars, birthday parties, weddings, confirmations and the like. Now I have a family of my own, and all three of my children were christened in the very church I was 40+ years ago. My three kids are also following in the footsteps of my generation by attending the Latvian School and enjoying all the same dynamic functions. At school, the kids learn all about the Latvian language, history, folklore, traditional dancing and singing. But they also have the unique opportunity to share their very own Latvian family history with friends.

My parents fled Latvia on foot during World War II, and after a few years in Displaced Persons camps in Germany, immigrated to the United States. After the original Latvian Center in Wallingford was claimed by eminent domain, my Mom and Dad were part of the crew who hand-built the center near 117th Street and 3rd Avenue, next to I-5. Specifically, my parents were largely responsible for the interior design elements of the building, most of which is still in place after all this time. Relocating our center would not just destroy the physical structure built by our original Seattle Latvian community members, but it would also end the decades of fond memories for 3 generations of families.

I-374-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, and the larger Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-374-001 Our center is living, breathing history. It simply cannot be replaced by an alternative property. The loss to our Baltic community would be completely devastating.

Although there are challenges the board faces with the potential light rail routes, it is imperative that our center face minimal impact from the Sound Transit expansion to Lynnwood, both during construction and after completion. I sincerely hope that a route can be established that would allow for light rail to be constructed at grade to help minimize or eliminate the noise and vibration caused by the frequently passing trains. From the peaceful services and ceremonies in the church to traditional Latvian performances in the hall, adding these unwanted elements would permanently alter our enjoyment of the center. The center is the hub of our active and vibrant Latvian community, and even short-term closure would have an adverse effect on our families.

Elimination of the Latvian church and cultural center for Sound Transit expansion simply should not be considered in your construction plans. Please consider a route that would have the least impact on our community center.

Respectfully,

Pauls Zommers (and Family: wife Julie, daughters Laila and Anna, son Aleksandrs)

LEFT: My mother Dzintra Zommers holding me tight after my christening in 1972. We are joined by Minister Ābolinš with my Dad and Godparents close behind.

RIGHT: Four decades later! My son Aleksandrs (youngest of our 3 kids) after his christening in 2011. Minister Cilnis and parents Pauls and Julie are book-ended by Aleks' Godparents.

September 23, 2013

To: Sound Transit - Attention Joni Earl and Board Members

From: Ed Paskovskis, 2905 25th Ave West Seattle, WA 98199

Regarding: Lynnwood Link Extension Draft EIS

Thank-you for the opportunity to comment of the proposed Lynnwood Link Extension project.

I-375-001

I urge the Sound Transit Board to find an alternative route for the above mentioned Link Extension. Under the current Draft EIS proposal the Latvian Church and Community Center (LCCC) will be threatened in its ability to serve its stakeholder communities during construction and implementation. Specifically, my Baltic-American family of three generations has used these facilities since the 1960's. We are genuinely concerned that the Lynnwood Link Extension will adversely affect the religious, historical and cultural traditions this location has offered the Baltic-American Community of Puget Sound.

The property upon which the LCCC is situated upon is a vision realized by scores of Baltic-Americans, many of whom immigrated to this country after the occupation of the Baltic States, Estonia, Latvia and Lithuania by the Soviet Union in 1944. Since the 1960's this parcel of land has been a symbol of freedom to exercise religious, cultural and community traditions. The property is most unique in that is provides a private sanctuary under evergreen trees in an urban setting. Needless to say, the privacy aspect of this property may be impaired by this project proposal.

Please respond the following concerns in the EIS:

1) What project location alternatives are available that do not result in any property takings from the LCCC?

2) If LCCC property takings are warranted during construction and/or implementation what alternative sites are within proximity?

3) What if any impact will be generated by additional noise reflecting to the LCCC?

4) What if any impact will be generated by additional lighting reflecting to the LCCC?

5) What if any impact will be generated by vibration to the LCCC?.

6) Is there any data to indicate similar projects generate crime in the neighboring areas?

We look forward to Sound Transit's response.

I-375-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describing the acquisition impacts; Section 4.4 describing impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including portions of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

The EIS discusses noise and vibration impacts in Section 4.7, visual and aesthetic impacts in Section 4.5, and safety in Section 4.14.

Edmunds M Lettis
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September 23, 2013

Sound Transit
DEIS Comments c/o Lauren Swift
401 Jackson St.
Seattle, WA 98104

I-376-001

I am writing to voice my concerns over the current preferred designs that staff have presented to the board, specific to the section adjacent to the Latvian Church located at 11710 3rd Ave NE Seattle WA. I am a member of the congregation and sit on the board of directors of the community center.

My parents were both born in Latvia, immigrated to the United Sates after WWII and settled in Sacramento California where they raised their family. My brother, sisters and I were caught the Latvian language from an early age at home, as well as attending Latvian school on Saturdays, where we were taught the language, history, songs, dance and culture of the Latvian people. Just like here in Seattle, Sacramento had a Latvian Lutheran church, school and a community center where we all came together to share not only or religious beliefs, but the language and culture of Latvia.

I left Sacramento in 1980 to find my way in the world and eventually got married and started my own family. We moved to Seattle in 1989 and started our family with our first born in 1993 and 3 years later our second son was born. Both my sons have attend and graduated from the Seattle Latvian school. Have attend church there and participated in many events over the years. Both sons have traveled to Latvia through a program called "Sveiks Latvia" which is sponsored by the Latvian government as well as the American Latvian Association of America in conjunction with the local Latvian schools here in the United States and other countries around the world. My oldest son is a member of the local Latvian dance group "Trejdeksnitis" and has performed at many events with them.

My point is, that this church/community center has been a huge part of my family's life here in Seattle and I don't know how I could exposed my sons and family to my rich heritage that my parents exposed me to. They will both be better men and people with this experience and hope that they will be able to share it with their families when that time comes.

My family and I are not against the light rail being expanded throughout this area, but we are against it encroaching on the church/community centers property. Please take the time to design the rail, so that it does not affect the property in any way, so it can continue to prosper and provide experiences for my children and their children in the future.

Sincerely:

Edmunds Lettis

I-376-001

Thank you for describing the importance of the Latvian Evangelical Lutheran Church to you and your family.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Draft EIS Comments

September 23, 2013

From Mary Monaghan
5214 - 201st Pl S.W.
Lynnwood, WA 98036

I-377-001 I spoke at the Embassy Suites in Lynnwood, WA on August 21, 2013 but did not have time to address the errors on the DEIS. There is mislabeling on attachment F on maps of noise wall mitigation – Locations – 200th St is mislabeled 196th for pages on C1, C2 and C3.

I-377-002 Attachment D – Vibration Impact by Build Alternative Table D-3 Projected Vibraation for Segment C without mitigation - The distance to nearest track (ft) is incorrect on C2M and C3M and C2W and 3W – We live on 5214 – 201st Pl S.W. in Lynnwood and they have us closer to C3 than C2 and we are closer to C1 and C2. They all seem to be switched around on all addresses or at least in our neighborhood and on 52nd.

I-377-003 Under Character and Cohesion changes – Both C1 and C2 would feature design measures to avoid noise impacts, but the elevated guideways would change views and Alternative C3 would have the least effect on this neighborhood because it is largely adjacent or parallel to 1-5. Table 4.5-1 Visual Quality Impacts – page 4-81 – High visual impacts for C1 and C2. Elevated guideways on east side of 52nd Ave. W would visually intrude upon the integrity and unity of the residential area.
P. 4-82 We on 201st Pl. S.W. down by the Spragues Ponds and mini park will be impacted visually by the skyline and loss of mature old growth vegetation and trees. On page S-32 under S.10 you talk of longer term visual impacts that might not be mitigated. Does this mean if you destroy a park and wetlands, you cannot or will not mitigate and put the wetlands back together or it may take a hundred years for things to grow back? There is no way ST can give back all of this old growth vegetation and trees after construction which are a buffer to freeway noise now.

I-377-004 The bogs and wetlands are a natural filtration ecosystem which work hand in hand and should not be messed with. We need this natural filtration in our community because of the transit center where many busses and vehicles come into and also when the Edmonds School District build there buss barn facility, there will be even more need for these wetlands and bogs to help keep the air clean. If you disrupt this delicate balance, it could be disastrous to our air quality, wildlife, animals, fish, birds and even bees. A quote from Albert Einstein "If the bee disappeared off the face of the earth, man would only have four years left to live." If the human race continues to destroy our precious wetlands and bogs, this could very well contribute to our demise.

I-377-005 I feel the light rail should use the new alternative C3M and stay in the middle of the freeway as long as possible and then cross over to the transit center.
I

I-377-001
We reviewed the maps showing noise and vibration impacts to make sure they show the correct parcels with impacts.

I-377-002
A labeling error occurred which resulted in a portion of Alternative C2 to be switched with a portion of Alternative C3 during the vibration analysis (from Civil Station 522+00 to the north end of the alignment). This error had no effect on the conclusion that vibration mitigation was not required for receivers along that segment of the alignment. The correct distances are used for all receivers in the Final EIS and the correct vibration levels are reported.

I-377-003
Your concerns about visual impacts related to the elevated guideway are noted. Sound Transit will mitigate impacts to parks and wetlands, but if mature trees must be removed, it will take time for the replanted trees to grow in. It is this potential impact that the text in the Summary is acknowledging. Modified Alternative C3 is the Preferred Alternative in the Final EIS, which avoids impacts to Scriber Creek Park and reduces wetland impacts compared to some other alternatives.

I-377-004
Your comments regarding the importance of wetlands are noted. Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts on environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure no net loss of ecosystem function and acreage as a result of agency projects.

I-377-005
Your preference for modified Alternative C3 is noted.

Imants F. Holmquist
1712 44th Ave SW
Seattle, WA 98116
imants@gmail.com

September 23, 2013

VIA EMAIL ONLY

Sound Transit
c/o Lauren Swift
401 Jackson Street
Seattle, WA 98104
LynwoodlinkDEIS@soundtransit.org

Re: Comment on the Sound Transit Lynwood Link Extension Draft Environmental Impact Statement Dated July 26, 2013, (the "DEIS")

To Whom It May Concern:

I-378-001 I have reviewed the DEIS and I have several comments regarding the impacts on the various alternative routes would have on the Latvian church and community center located at 11710 3rd Ave NE, Seattle, WA 98125. By way of background, my personal use of the Latvian Center includes among other things: my christening, ten years of Latvian school on Saturdays, Latvian folk dancing for six years, and countless social and cultural events while I attended the University of Washington's Baltic studies Program. Now that I have a family of my own, my daughters attend the Latvian School on Saturdays and we attend many of the other events at the Latvian Center including performances, shows, and the candle light services. I anticipate that my daughters will be at the school for the next ten years or longer, and participate in the same events I was lucky enough to experience at the Latvian Center. I cannot imagine raising my family without the Latvian Center and the cultural events that occur there.

Comments on Impacts of Elevated Routes

The DEIS does not clearly define exactly where the elevated alternatives will run in relation to the Latvian Center. I urge Sound Transit to review an alignment of the elevated tracks that keeps them as far away from the Latvian Center as possible. To the extent the caretaker's house must be taken, I urge Sound Transit to compensate sufficiently to replace the caretaker's house with another house on one of the properties adjacent to the Latvian Center. Without a caretaker's house, the center would be

I-378-002 susceptible to criminal activity due to its isolation. The DEIS fails to outline specific noise mitigation to the Latvian Center. It should review noise impacts and mitigation

I-378-001

Thank you for describing the importance of the Latvian Church and community center to you and your family.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property as shown in Appendix F of the Draft and Final EIS.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describing the acquisition impacts; Section 4.4 describing impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations. As noted in Section 4.1, any acquisition of property, including portions of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

I-378-002

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below these criteria. Potential mitigation measures for noise impacts are described in Section 4.7.7 of the Final EIS.

I-378-002 for sound and vibration and specifically the impacts on a school playground that close to the track.

Comments on Impact of At Grade Routes

I-378-003 The DEIS calls for acquisition of the Latvian Center under all of the at grade alternatives. The DEIS should review and research alternative track alignments that do not result in taking the ingress and egress to the Latvian Center. Further, to the extent the ingress and egress must be acquired to make way for the track, the DEIS should provide a track alignment that is as far from the Latvian Center as possible to reduce noise and allow space for a noise wall. The DEIS should study noise impacts at the Latvian Center given the desire to keep the Latvian Center in its present location. Sound Transit should assist the Latvian Center with purchasing at least two adjacent properties for ingress and egress, lost parking, and a replacement of the caretaker's house. Further Sound Transit should pay for the construction and planning required to create a new ingress and egress to the Latvian Center. Anything less than this mitigation is unacceptable.

Impact on the Community of loss of cultural facility

I-378-004 In light of the above comments, the DEIS should consider the cultural impact of the loss of a Latvian school and community center to the community as a whole and to the Baltic community in Washington. At one of the public hearings for the Lynwood Link, a member of our community noted that there were over 800 families listed in the Latvian community phone book. This means that there are thousands of total Latvians in the community. In addition, the other two Baltic nations have strong communities in Seattle that use the Center. I do not know the numbers, but assuming conservatively another 300 Estonian families and 300 Lithuanian families, the Baltic community is roughly 1400 families in the state of Washington. The DEIS should consider the impact of stripping this cultural group of its community center during construction of the Lynwood Link and in the event acquisition does not cover the cost of relocation to a similar site in a similar geographic region. The DEIS does not reference these impacts, nor does it discuss the broader impact to Seattle and the Northwest of not having this cultural facility.

Sound Transit Should Avoid Acquisition/Relocation of the Latvian Center

The Center was acquired, designed, and built by donations from the members of our community. My understanding is that the previous Latvian community center was the subject of eminent domain in 1969. At that time, the funds provided by the government fell woefully short of the cost to acquire the current property and build the current Latvian Center. This scenario was unfortunate, and would be devastating if it occurred a second time. Accordingly, if at all possible, Sound Transit should cooperate with the Latvian community's leadership to plan the Lynwood Link in such a way that the Latvian Center does not have to be acquired in its entirety and relocated. The end

Draft EIS at-grade alternatives did not provide noise mitigation as the facility was assumed to be displaced. The Noise and Vibration Technical Report for the Draft EIS did include noise impacts and mitigation specific to the church. The Final EIS addresses noise impacts and mitigation for the church in the Noise and Vibration Technical Report. Attachment F shows the location of noise walls by alternative.

I-378-003

As mentioned in the response to comment I-378-001 above, the project will no longer displace the church or remove its access. Noise impacts were evaluated in the EIS in Section 4.7 and in the Noise and Vibration Technical Report.

As noted in Section 4.1, any acquisition of property, including portions of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

I-378-004

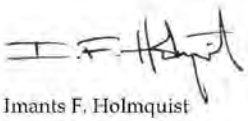
Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church, and for providing a history of how it came to be in its current location. As mentioned in the response to I-378-001, none of the Segment A alternatives avoid displace the church.

The church's importance to the community is noted in Chapter 7.

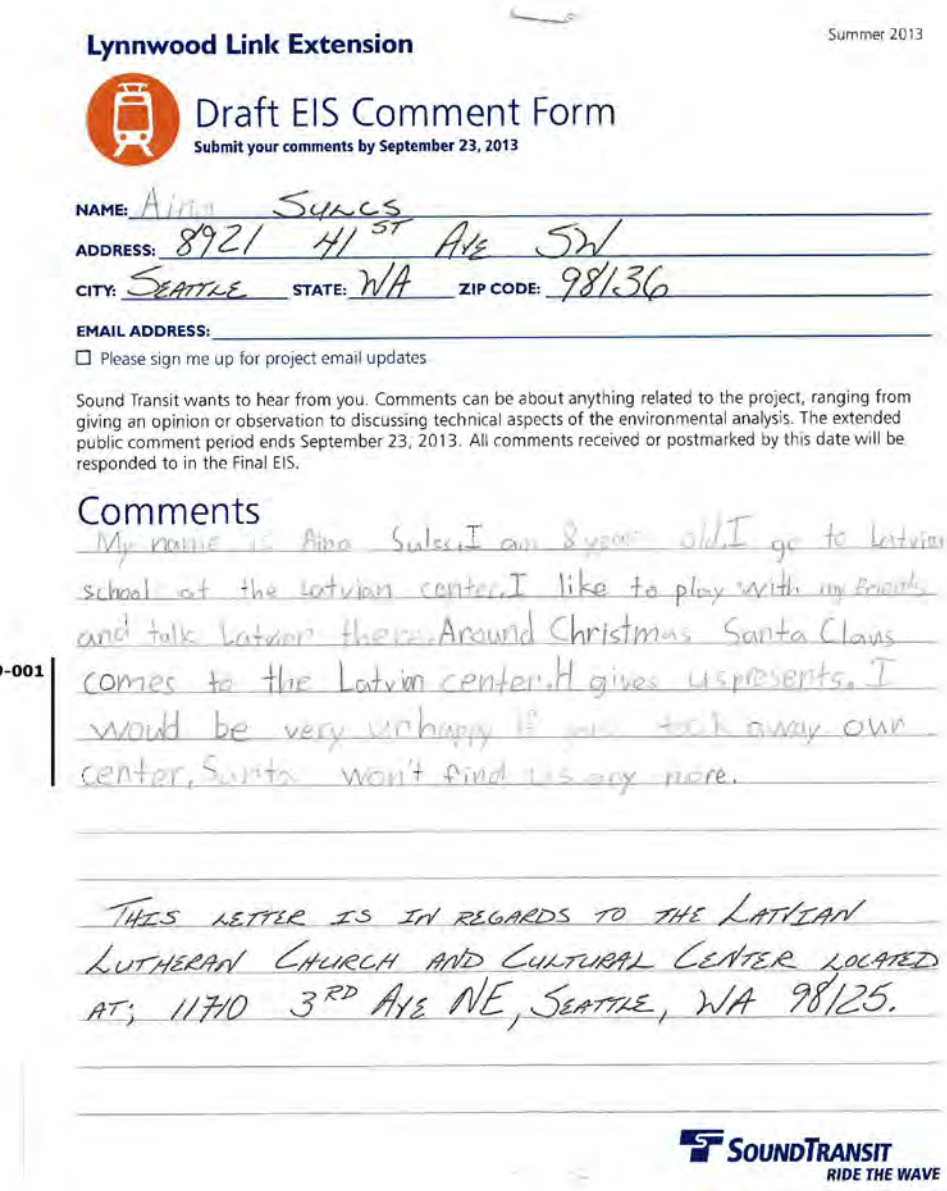
I-378-004 impact of the Lynwood Link should not be the destruction of this regionally and cultural significant community center if it can at all be avoided. The DEIS does not adequately address this impact to our community.

Thank you in advance for considering my comments. I am hopeful Sound Transit will act on these concerns and the Latvian Center will be able to continue its long and rich history in its present location.

Sincerely,



Imants F. Holmquist



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Aina Sulcs

ADDRESS: 8921 41 ST Ave SW

CITY: Seattle STATE: WA ZIP CODE: 98136

EMAIL ADDRESS:

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-379-001

My name is Aina Sulcs. I am 8 years old. I go to Latvian school at the Latvian center. I like to play with my friends and talk Latvian there. Around Christmas Santa Claus comes to the Latvian center. He gives us presents. I would be very unhappy if you took away our center, Santa won't find us any more.

THIS LETTER IS IN REGARDS TO THE LATVIAN LUTHERAN CHURCH AND CULTURAL CENTER LOCATED AT; 11710 3RD AVE NE, SEATTLE, WA 98125.

SOUNDTRANSIT
RIDE THE WAVE

I-379-001

Thank you for your comment. Sound Transit's Lynnwood Link Extension Project will not take away your center. Santa will be able to find you there for many years to come.

Sound Transit DEIS c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

Re: Sound Transit Link Light Rail system impacting the Seattle Latvian Church and Center at 11710 3rd Ave N.E, Seattle, WA 98125

I-380-001

Dear Ms. Swift,
After carefully reviewing Sound Transit's development proposal, I would like to express my deep concerns regarding the suggested plans for the Lynnwood Link Extension of the Sound Transit Link Light Rail system, along the east side of I-5. I believe the development would permanently cripple an artifact of historical and cultural significance in Northwest Seattle.

I was originally born in Latvia and moved to the U.S. for college. In 2012 after a few years of working and finishing gradschool Amazon recruited me to Seattle. A significant draw to the area versus say other opportunities in San Francisco or New York City was the vibrant Latvian community that I had heard so much about. While living so far from my native homeland, it was very important for me to preserve my cultural heritage, language and traditions.

Seattle's Latvian Church and Center did not disappoint. Quickly I got acquainted with the Center's welcoming community and became a regular member of the folk dance group Trejdeksnitis. In just over a year we have performed at numerous concerts all throughout Seattle, the group has made an international trip to the world's largest song and dance festivals in Riga and we have helped educate others about Latvian culture. And all while retaining and expanding a roster of young, committed individuals with background varying from finance to engineering, and from education to medicine for whom preserving, practicing and sharing our traditions has been immensely important.

Moreover, in the year I have been part of the Center I have seen it welcome new people to the area and helping them orient in the neighborhood. The Center fundraises and provides much needed social and material assistance to the oldest generations. Furthermore it shares its culture freely with the wider Seattle community through concerts, dinners and lectures – all events that have always been very well attended.

But the workings of this thriving place are fragile and should not be taken for granted. The people see in this physical space the work of their younger selves, their parents and grandparents. They see drapes that were sewn by their grandmothers and trees that were planted by their fathers. It is a place to honor the hardships and sacrifices that Latvian emigrants endured escaping the atrocities of WWII. This is also a place to celebrate a newly resurging independent Latvian nation. It is not just a complex of a few buildings. It's a monument to the life's work of the generations before and the generations still to come. It provides the necessary historical continuity much like other valued Seattle historic places.

Real, lasting damage will be brought by the current proposal to this vibrant cultural Seattle gem and I implore you to reconsider the plan. Please adjust your plans so as to leave this area untouched.

Sincerely,

Martins Blums
mblums@amazon.com

I-380-001

Thank you for describing the cultural importance of the Latvian Evangelical Lutheran Church and community center to you and the Latvian community.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Ina Bray <inabray@comcast.net>
Sent: Saturday, September 14, 2013 4:07 PM
To: Lynnwood Link DEIS
Cc: Rimas Miksys
Subject: Save the Latvian Center!

Dear Sound Transit,

I-381-001

Your massive improvements in our area's transit connections are commendable. Yet the impact on the Latvian Center, the Latvian Lutheran Church and the Latvian *and* Baltic Communities could be devastating.

As you know, the land was purchased and these structures were built because of the intense dedication to their ethnic roots of post World War II Latvian immigrants, with time attracting diligent and most responsible Latvian individuals to the Northeast neighborhood. The neighborhood grew, with the Latvian Center and all its activities as its focus.

From the mid-1970's to the early 1990's I served as the president of the *Lithuanian* Community and for us the Latvian Center was "home." That is where we celebrated, commemorated, came together for political, religious, ethnic or social reasons, strengthening our Baltic roots as well as our sense of belonging to America. Most of these activities in those days were forbidden in our home countries of Soviet Latvia, Lithuania and Estonia.

I urge you to be cognizant of the fact that major destruction of or intrusion onto the Latvian Church and the Latvian Center will have and equally major impact on all three of our communities.

If a relocation of that facility indeed would become unavoidable, the new facility cannot be established at considerable distance but needs to remain in that general North Seattle area as the central point of the community.

Sincerely,

Ina Bertulyte Bray

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I-381-001

Thank you for describing the importance of the Latvian Evangelical Lutheran Church and the Latvian Center to you and the Latvian community.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Willis Cole <colews@earthlink.net>
Sent: Sunday, September 22, 2013 10:17 AM
To: Lynnwood Link DEIS
Subject: Lynnwood Link Writtent Comment

Dear Sir/Madam:

Thank you for the opportunity to submit a comment regarding the proposals being considered for the Lynnwood Link of Sound Transit. I have closely followed the process and have attended two separate meetings in addition to email and mailed information. I submit the following:

I-382-001 It would be a mistake to rule out the options which place the Lynnwood Link Rail Station AS CLOSE AS POSSIBLE TO THE NEIGHBORHOOD (200TH AND CITY CENTER). Simply stated, light rail access will enhance the neighborhoods around the station and easy access to the City Center project will ensure its success for decades to come. Far too often, Lynnwood has place emphasis on traffic considerations rather than focusing upon its residents. Placement of the Lynnwood Link at 200th (despite the cost to relocated businesses and personal residences) will create a TRUE integration of light rail into Lynnwood. The true value and neighborhood enhancement has been realized by those neighborhoods in Portland, OR and Vancouver, BC after seeing first hand the benefits of accessibility. The City of Lynnwood and some of its citizenry have taken a shortsighted view of locating the station beyond pedestrian easy access. This is a mistake. Please consider Option 1 as the true solution for decades to come.

Please locate the maintenance facility in Lynnwood. It will ensure that the Lynnwood Link is built in a timely manner and ensure Lynnwood's importance as a business and residential center for decades.

Thank you,

Willis Cole
Owner 18020 48th Ave W Lynnwood, WA 98037
206-940-0225

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I-382-001

Your preference for the Alternative C1 is noted.

The Link Operations and Maintenance Satellite Facility is a separate project proposed by Sound Transit and is not part of the Lynnwood Link Extension project. See Section 2.9 in the Final EIS for additional information about this facility. Sound Transit prepared a Draft EIS for this project, which can be found on Sound Transit's website: www.soundtransit.org.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: AUSRA VALANCIAUSKIENE

ADDRESS: 1717 16th Ave, # 10

CITY: Seattle STATE: WA ZIP CODE: 98122

EMAIL ADDRESS: ausrav@uw.edu

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

I-383-001

Comments

I am a Lithuanian teaches at Lithuanian Saturday Heritage school and a Visiting Lecturer at UW. I am a member of the Lithuanian – American community. We use Latvian Center a lot for all over holidays (Independence Day, Easter, Christmas, etc) and common events for Baltic Studies Program at UW. Having access to this center is very important for both - Lithuanian and Latvian communities and especially for our children – to make them familiar with our traditions and culture and to keep them for their children.

The proposed Light Rail line may have very severe impact on the Latvian Center. I am writing to ask to do everything in your power to keep access to the center open during construction. Please mitigate as much as it is possible construction impacts (vibration, noise, dust, etc)

SOUNDTRANSIT
RIDE THE WAVE

I-383-001

Thank you for describing how you and the local Lithuanian community use the Latvian Center.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Construction impacts will be mitigated as described in the applicable EIS sections: 4.6 for air quality and 4.7 for noise and vibration for example. The Center's access will be maintained during construction.

September 19, 2013

Sound Transit Draft EIS Comment
c/o Lauren Swift
401 Jackson St.
Seattle, WA 98014

I-384-001

I am a member of the Seattle Latvian Lutheran Church and the Latvian Association of the State of Washington. As a Lynnwood resident I support the Light Rail extension to Lynnwood, but I am deeply concerned about the effect the project will have on the Latvian Center, as the proposed rail line will go on our side of the freeway. As it now stands, at-grade tracks would take our entrance, our caretaker's house and part of our parking lot. There is a possibility that we might lose our Center altogether. This would be a great blow not only to the Latvian community, but to the Estonian and Lithuanian communities as well. They too use our church and community center for worship and social and cultural activities.

The Center, financed and built by members of the Latvian community, has been our "home" for more than 40 years. Both my father and brother spent many hours after work and on weekends helping with the construction. People of all generations use the Center: children attend the Latvian Saturday School, young people practice folk-dancing, sing in the choir, seniors meet for lunch and cultural programs. Much of our time away from work and duties at home is spent at the center. This month Latvia's President and the ambassador of Latvia in Washington DC will be visiting the Center. A week later we will have a visiting theater performance from Latvia. In October we have our annual Harvest Festival, in November our Christmas bazaar and Independence Day commemoration, to name a few major events. The church is used not only for services, but christenings, weddings and funerals as well. The Center is a vital part of our existence and it is hard to imagine that we could start anew at another location.

Latvian Americans who came to this country as refugees from communism are grateful to the United States for taking us in and giving us the opportunity to live in freedom. We are good citizens and have raised our children to love and respect America – after all, we are all Americans. But we also want our children to know about their roots. Please do everything possible to allow us to keep our church and center in its present location.

Sincerely yours,

Inta Wiest

Inta Wiest
2030 151st Pl. SW
Lynnwood, WA 98087-6345

I-384-001

Thank you for describing the importance of the Latvian Center to you and the Baltic communities, and for providing some history about the center.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describing the acquisition impacts; Section 4.4 describing impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations. As noted in Section 4.1, any acquisition of property, including portions of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

From: Linda At Sea <lindaatsea@yahoo.com>
Sent: Sunday, September 22, 2013 11:51 PM
To: Lynnwood Link DEIS
Subject: C Alternatives - for the record

Mayor Gough and Lynnwood City Council Members,

I-385-001

I spoke with Diane Bailey, the Administrator of the Conservation Futures Fund, and she told me that the Fund's records show the City of Lynnwood received funding for both Scriber Creek Watershed #1 and the Scriber Creek Wetlands Complex. She recommended that the City of Lynnwood check into how those monies were spent; specifically if there were Inter-local Agreements and Declarations of Protective Covenant for the properties funded with Conservation Futures, and to check on possible matching funds for these monies and any stipulations. (In addition, due to the naming conventions used in the City's, the Deis's and the Conservation Futures Fund's maps, I believe these funds may have been used to purchase other parcels of land impacted in the Lynnwood Link C Alternatives.)

Ms. Bailey also said to check the Title Report for the properties regarding any encumbrances which could have a significant impact on the use of these lands. Nancy Bartley, reporter, "The Seattle Times," interviewed David Somers, Council Member, Snohomish County Conservation Futures Program Advisory Board. It is my understanding he is getting an opinion from a Snohomish County attorney regarding the legal use of these properties. Also, a Field Visit to the potentially impacted lands is being scheduled by the EPA, with the FTA and Sound Transit.

I hope the Council ensures that all necessary information is obtained before making a final recommendation on the Lynnwood Link Alternatives on September 23, as there are many unanswered questions.

The future of a sensitive ecosystem, a large condominium community, many businesses, and the fate of a neighborhood rests with you. I believe Sound Transit will follow your lead and develop the route you recommend as it is easier to follow the path of least resistance. I also respectfully request that a motion be made by a council member for a Roll Call Vote so that citizens/voters know who agreed or disagreed with the City's recommended route to Sound Transit.

Thank you for your consideration,

Respectfully,
Linda Willemarck

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I-385-001

Sound Transit has received this copy of your letter written to the City of Lynnwood City Council and Mayor, which asks for their leadership in recommending to the Sound Transit Board the project alternative that best serves the city of Lynnwood's natural environment, residents, and businesses.

The Preferred Alternative is a modified Alternative C3. If another alternative is selected requiring acquisition of property funded by the Conservation Futures Program, Sound Transit will work with the City of Lynnwood and Snohomish County to address the requirements of existing agreements.

From: Linda At Sea <lindaatsea@yahoo.com>
Sent: Sunday, September 22, 2013 11:54 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Link - for the record

I-386-001

City of Lynnwood, 20015 Cedar Valley Road, "Scriber Creek Park", Neighborhood Park / Open Space – 3.8 acres.
However, Snohomish County Assessor, Parcel 00608400300101, 20015 Cedar Valley Road, City of Lynnwood, 761 parks – general recreation, 4.59 acres.
In addition, this parcel is listed as "City of Lynnwood Scriber Creek Wetlands Park" in Backflow Prevention along Scriber Creek Attachment A-1, Scope of Work., 6/28/11.
Page 4-27 Segment C: Mountlake Terrace to Lynnwood. Alternative C1 – 50 Full Acquisitions
However, Table 4.1-1 Potential property acquisition and displacement C1 total full acquisitions – 80
Table 4.2-2 Estimated area of acreage by land use. C1 multifamily lists .83 acres.
However, The 76 Multifamily units are over 3.0 acres alone.
Table 4.17-5 Potential Construction Impacts on Scriber Creek Park. "Short-term partial closure of the park during construction." *THIS IS THE ONLY NOTATION.*
However, the C2 and C3 categories note noise and visual impacts, *yet not in C1.*
Table 4.8-1 Streams in study area, Coho Salmon and Cutthroat Trout noted. See figure 3.1c in the DEIS.
OMSF Site Evaluation October 2012, City of Lynnwood: The City was also concerned about the sites proximity and potential impacts to the Interurban Trail (linear park on the south side) and Scriber Creek (salmonid bearing waterway north of the site) and potential loss of flood storage capacity.
However, (Summary) S-20 No adverse impacts on threatened or endangered species. ...in seismically active area therefore, localized geological hazards and risks are possible.
City of Lynnwood, Chapter 17.10, Environmentally Critical Areas: 17.10.060 Stream – Rating.
A. Category I. The following streams are classified as **Category I: Scriber Creek**, Swamp Creek, Lunds Creek and Halls Creek. The Sensitive Areas Ordinance requires buffers from the nearest development.
However, 17.10.062 Stream alteration allowed.
A. All Category I streams shall be preserved. The city may only allow alteration of Category I streams when approved under LMC 17.10.048 and 17.10.049.
A. An application for a reasonable use exception containing the elements required in LMC 17.10.049 shall be filed with the department and shall be considered by the hearing examiner at a public hearing under Process I (LMC 1.35.100 through 1.35.180).

I-386-001

The Lynnwood Link Extension will comply with all federal, state, and local environmental laws and regulations to avoid and minimize impacts on ecosystems resources, as discussed in Section 4.8 of the EIS. Also, as noted in Section 4.8, the study area for ecosystems was defined as the area within 200 feet of the project alternatives and features to capture potential impacts on regulatory buffers for wetlands and water bodies.

Table 4.2-2 identifies the estimated acreage of land permanently converted to a transportation use; in some cases, a larger parcel could be impacted and its use displaced, but not all of that parcel would be likely to remain as a transportation use.

I-386-001

S-20 Water resources – the Segment C alternatives could place structures in the Scriber Creek Floodplain.
However, S-31 C1 would have columns and a section of the elevated guideway within the Park

Native Growth Protection Area. Sign Installation Guidelines Sign placement shall be up to the approval of Snohomish County. All signs must be secure and permanent.
However, there are at least 7 signs which our group has found on the C Alternatives property. One sign is only 50 feet away from 52nd Ave W. With the dense wooded area it is difficult to note with any accuracy how many more signs there actually are.
Table 4.1-1 Property acquisition list includes Multifamily use.
However, Table 4.1-3 Property available for relocation has NO Multifamily listed
Figure 4.17-4 Scriber Creek Park Potential Impacts with Alternatives C1 and C2.
However, Scriber Lake Creek is labeled where Scriber Creek is.
Page 1-4 1.3.1 – Aquatic Species and Habitat, 1.3.2 – Vegetation, Terrestrial Wildlife and Wildlife Habitat and, 1.3.3 – Wetlands. *They talk about looking at impacts 100-200 feet outside the direct project area. Sprague's Ponds are across the street from Scriber Creek Park and I've read no mention on the impacts the Light Rail would have on that waterfowl and wildlife area.*
1.4.3– Avoiding and Minimizing Impacts on Sensitive Ecosystem Resources. *If Sound Transit's first priority is to avoid impacts to sensitive areas, then why are they building on a wetland, watershed, and wildlife habitat?*

From: Linda At Sea <lindaatsea@yahoo.com>
Sent: Sunday, September 22, 2013 11:55 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Link - for the record

My name is Linda Willemarck. I live at 4900 200th St SW in Lynnwood. Since learning about the Sound Transit's Alternatives for the Lynnwood Link, a mere 3 months ago, I have spent a great deal of time trying to understand what properties are involved and what impacts it will have.

I-387-001 As you know, both the C1 and C2 Alternatives would be going down 52nd Ave West/Cedar Valley Road. In my research I found a very compelling document that really puts into perspective the importance of this area. The document reads, quote "...an established single family neighborhood containing hundreds of affordable homes and is in close proximity to several affordable housing apartments and condominium complexes, all of which would be adversely impacted by light, noise, property values, and other impacts ..."
"directly impacts hundreds of affordable homes when there are other sites available, raises social justice issues..."

I-387-002 "...located adjacent to significant city recreational resources of Scriber Creek and associated wetlands, and the city's Scriber Creek Park, that provide places to experience nature in close proximity to Lynnwood's City Center and regional Interurban Trail, both of which would be negatively impacted..."

I-387-003 "...Therefore, the City Council of the City of Lynnwood does hereby resolve and request the Sound Transit Board to remove from its potential sites and evaluations list the Lynnwood 52nd Avenue West/Cedar Valley Road site..."
....that such site not be included in any environmental analysis, due to its many significant and unresolvable and irreparable impacts upon the City of Lynnwood, its residents and businesses and upon the Edmonds School District."
These quotes were taken from Resolution No. 2012-07 of the City of Lynnwood, Washington, regarding issues concerning the potential siting by Sound Transit. It was signed by Mayor Gough of Lynnwood on 10/22/2012.

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I-387-001

Thank you for your concerns about the impacts to neighborhood character and cohesion from Alternatives C1 and C2 in Lynnwood. Section 4.4 addresses neighborhood impacts and Appendix C provides an Environmental Justice Analysis.

I-387-002

See Sections 4.17 and 4.18, which evaluate impacts to Scriber Creek Park under the various alternatives.

I-387-003

Thank you for your comment that summarizes the City of Lynnwood's Resolution 2012-07.

Lynnwood Link Extension Representatives
Sound Transit
401 S. Jackson St.
Seattle, WA 98104

September 22, 2013

Dear Sound Transit Representatives,

My name is Indra Ekmanis and I am a 24-year-old doctoral student at the University of Washington. I am writing in support of the efforts to preserve and maintain access to the Seattle Latvian Church and Community Center, which is currently in the path of the proposed Lynnwood Link light rail extension. I would like to convey the profound cultural, religious, and academic impact this Center has had, both on my personal life and those of my peers, as well as on the greater Seattle community; I request that you address these attributes of the Center in continued planning for the Link extension.

I relocated to Seattle two years ago as a master's degree student in the Henry M. Jackson School of International Studies at UW, from which I graduated this June and where I will continue my doctoral studies. Here, I worked in close concert with the Baltic Studies Program at UW, which is a program unparalleled in the entire country and which functions, in large part, from the support it receives from the Latvian Center and associated Baltic communities in the Puget Sound area. This Program is of great importance, not only to the University, but also to the field of multidisciplinary area studies in a region that is critical to U.S. and European security prospects, economies and cultural development. Should it be of interest, I invite your request for any policy briefs I have written on the significance on the Baltic States, which demonstrate the necessity of such a Program to be active and functioning.

The Latvian Center is a critical support beam for this Program — this extends beyond the support of individuals who may belong to community organizations to the actual building itself. The Center is the main gathering place and host multiple fundraisers critical to the continued functioning of the Program at the University. Given the current fiscal threat to higher education, this is more necessary than ever before. The financial support emanating from this community is certain to be negatively affected if the Center faces relocation, taking a severe toll on the academic offerings of the University through this important Program.

In addition to its unmatched support for the Baltic Studies Program, the Center is a critical hub for multiple generations of individuals to come together. Without this Center, I would have been lost in my transition to Seattle. Indeed, my community revolves around this Center; my week is full of activities hosted within its walls. Wednesday evenings are dedicated to choir practice, Saturday mornings I teach third grade students at Latvian school, Sunday mornings are for church services, Bible study and meetings, while Sunday evenings I rehearse with our award-winning folk dance ensemble, Trejdeksnitis. Youth organizations, such as the Association of Latvian University

I-388-001

Students and the American Latvian Youth Association, also make use of this space for community building.

Not only do I participate in the multiple events hosted at the Center, but the connections forged here have also led to being active in the greater Seattle and world community. Indeed, Trejdeksnitis has participated for years in Seattle community enrichment programs, including annual performances at the Seattle Public Library, as well as in various Folklife festivals. Trejdeksnitis was the most advanced American dance group to participate in this year's Latvian Song and Dance Festival in Riga, where we represented Seattle with pride. Removing access to this space would be catastrophic, degrading activities that not only foster our community growth, but bring recognition and interest in Seattle to communities across the world.

The Baltic communities have contributed much to the Seattle area. This property, built by individuals who saw their homes decimated by the tragedies of World War II, is a testament to the rich history of immigrants who have added greatly to the culture and economy of Washington State. This building is a vital gathering place for multiple generations. Indeed, without this center, children and young adults from our community would be robbed of the ability to actively interact with the refugee generation that sought solace in the aftermath of a horrific war. The importance of these connections cannot be stressed enough — to require a relocation or lack of access to this Center would decimate this tie to the past and to the history of these individuals.

I write this letter to stress the vitality and necessity of this community, not only for those who built it many years ago, but those who will continue to use it for many years to come. I appreciate the efforts of Sound Transit to develop the public transportation system, but I urge you to follow the options that will not cause detriment to a Center that has done, and has the potential to do, so much more good for the Seattle community. I request that you address these points and invite any request for additional correspondence.

Sincerely,

Indra Ekmanis

Doctoral Student
Henry M. Jackson School of International Studies
University of Washington
indraekm@uw.edu

I-388-001

Thank you for describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, and the larger Baltic community.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: ILMA APSITIS

ADDRESS: 3502 NE 182ND STREET

CITY: LAKE FOREST PARK STATE: WA ZIP CODE: 98155-4222

EMAIL ADDRESS: N/A

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

Lynnwood Link Extension
Comments:

I-389-001

Many, many years ago a wise man, called Hippocrates, in his writings said: "Do no harm!" The medical field has the Hippocratic oath that also incorporated the same idea.

The planners of the Light Rail certainly would benefit from this advice. Harm arises from not considering the repercussions to a large group of taxpayers. The various groups using The Latvian church and community center worked very hard to provide a place where to continue using their cultural values. These ethnic activities enrich not just them but also a much wider circle. None of these people expect government largesse but they do expect consideration from the government when it proposes to take away their way of life.
The loss of the center would irreparably damage all current activities.
Cultural activities should be valued and not dismissed. Consequences matter.

Ilma Apsitis

RIDE THE WAVE

I-389-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Jan Ahlquist-Niemi <jan_niemi@juno.com>
Sent: Monday, September 23, 2013 1:14 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Link Extension Draft EIS Comment Submittal

I-390-001

I have a few concerns about Link Light Rail "access" and "storage" for bicyclists.

One cyclist I know who has used the Vancouver rail with his bike said that it was quite easy to use, although he commented that they don't allow bikes on the stairs, so he had to use the elevator.

Another cyclist that I know, who emailed me a few weeks ago, said that he's used our Seattle Link light rail with his bicycle at different locations, and he said that if it's an elevated or below street level boarding area for the light rail, then he was forced to have to use the very small & crowded elevator or carry his bike on the stairs, which was okay for him (he's strong). Then once he boards Link light rail, the area on the rail car that is now labeled "bikes & luggage" was already full with luggage, so he had to hold his bike near the boarding door, so it wouldn't flop over, while he rides the Link.

I was a bicycle & Sounder commuter for 3 years between Edmonds & Seattle. In my experience with the Sounder train station in downtown Seattle with my bike, the elevators are always overcrowded and I would end up waiting for at least 2-3 elevator runs up & down before there was room for me & my bike. I finally started going to the least-used set of stairs on the very south-end of Seattle's train platform & carried my bike up to street level...I got stronger doing so too, but some cyclists might not be able to do the same.

I also sometimes ran into an overcrowded problem on the Sounder train, typically during the summer, but especially in busy May (bike month) when many cyclists start to ride the train with their bikes for just the one month and would fill up the reserved spots on-board for "bikes or wheelchair", so I also had to sometimes stand holding my bike near the boarding door for the half hour ride, or wait for the next train & hope that it had empty bike spots.

Early on in my bike/train commuting days, one day on the Sounder while I was riding home to Edmonds, one of the two too-short Velcro straps that go through the bike wheels to hold the bikes upright came off my bike's rear wheel, and with only my front wheel then being held by a strap, when the train jostled through a rail switch on the tracks, my bike flopped over and my front wheel rim (still strapped in) got severely bent. My bike was positioned in the spot next to the aisle, not next to the wall. The other bike next to the wall had bulky and thick packs/panniers on both sides of its rear wheel, which forced my bike's position even further away from the wall, and thus the Velcro straps were not really quite long enough to securely hold my bike in-place when going over the rail switch, as I learned that day.

There are various alternatives (location & type of station) for the Lynnwood Link Extension being considered right now, for all 3 segments: A-Shoreline area, B-Mountlake Terrace, C-Lynnwood. Most of the station types for segments A, B, C being considered are "elevated" station options. Very few are "at grade".

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I-390-001

Thank you for your input regarding bringing bikes aboard light rail vehicles. While the amount of storage on board Sounder trains is not within the scope of this project, providing adequate access for bicyclists to get their bikes to the train is considered and provided for in the station design. Stations will include bicycle parking. The inclusion of bike gutters is a final design decision, so whether stations will include them is unknown at this time.

So my concerns are:

I-390-001

1) About accessing an elevated platform. Will bicycles be allowed on both stairs & elevators? Will bike gutters/runnels be in-place?
2) I did not see any information at the August 14 open house (at the Nile Shrine Golf Center in Mountlake Terrace), nor in the Draft EIS, about where & how bicycles can be stored on the future Lynnwood Link rail cars once a cyclist has boarded. Bike hooks on Amtrak seem to work well, I've heard. The reserved "bikes or wheelchair" spots (two bikes, side-by-side) on the Sounder trains work fairly well, as long as your bike is the first one loaded next to the wall, but if you are the second bike loaded (nearest to the aisle), then the Velcro strap may or may not be long enough to securely hold your bike upright, as I experienced, and I ended up with a very badly damaged wheel rim when my bike fell over. My bike was un-ride-able when we arrived at the Edmonds station that day.

Thank you for your consideration of my observations and questions.

Regards,

Jan Ahlquist-Niemi
Co-Chair

Edmonds Bicycle Advocacy Group

EBAG Website: http://www.edmondsbicyclegroup.org/

"Raising safety awareness for both cyclists and pedestrians"

From: Anda Allen <andaallen@yahoo.com>
Sent: Sunday, September 22, 2013 11:55 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Link Extension

Re: The Latvian Church/Center

I-391-001

I was horrified to learn of the impact that he light rail would have on our Center. I moved to the State of Washington from Alaska twenty-three years ago and the Center has become important in my life. I have attended concerts, lectures, folk dancing, cooking classes and church services. I have also used the Latvian Library at the Center. I have attended events by the Lithuanians and Estonians, who rent the Center. I help out at the annual rummage sale that provides inexpensive goods for the local community, a lot of students and immigrants attend the sale to purchase items they couldn't otherwise afford.

I'm concerned because of the noise level, lack of access and lack of parking if the light rail is built near our Center. Today, the President of Latvia and some of his staff attended a function at the Center and we had a huge turnout. The Center had the windows open because it was warm. I can't imagine being able to hear a speaker, if the windows are open and the light rail is going by. The attendance was so large, that parking overflowed into the surrounding neighborhood. It would be difficult to park, if we lost part of our property.

It's ironic that in 1970 we lost by eminent domain our Latvian Center so that Seattle could have a park! Please tell me that this is not going to happen again. I've reconnected with my Latvian heritage and I would like to continue participating in events at the Center.

Anda Allen

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I-391-001

Thank you for describing the importance of the Latvian Center to you.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Project noise impacts are evaluated in Section 4.7 of the Final EIS. At the location of the church, there would be a wall separating the light rail from the church property. See Figure G-17 in Appendix G, Visual Simulations and Illustrations.

From: cander3867@aol.com
Sent: Monday, September 23, 2013 8:52 PM
To: Lynnwood Link DEIS
Subject: Seattle Latvian Lutheran Church

Attn: Lauren Swift

Dear Ms. Swift,
My voice is small and insignificant and I trust that you are making every effort to add your wisdom to this process. The only thing that I can offer to help you in this matter is to share a little bit of the history of this church.

I-392-001

It is important for you to know that this is more than a church it is a community and cultural gathering center. The Latvian community, culture, language, music, folk art and identity have thrived because of the vision and hard work of members of the Latvian community.
This was a self-funded work of love and labor to build a place (and the significance of place can never be overstated) for generations to gather, to share their religion, teach their language to the children, to teach Latvian folk dance and songs, to have New Years Eve parties, celebrate Christenings, Confirmations, Weddings and funerals.

It was always important to the WWII Latvian emigrants who were fleeing the war zone that was Latvia to be together. This place was the center for the gatherings and events. The many elders of the Latvian community who planned and saved and did the hard labor to build this church worked so hard for so many years to perpetuate all that was important to them. They worked so future generations would know their heritage. You can walk into the foyer and see so many Latvian folk symbols. The Red, White, Red Latvian flag so respectfully hung to honor a recently deceased veteran. The love of nature that is central to Latvians is evidenced in the thoughtful yet simple arrangements on the tables. You can see Latvian art on the walls as well as sculptures and carvings. These people were very deliberate in their planning and execution of this site. It is private so as to not impact the neighborhood. The kitchen facility is impeccably planned to serve the needs of the many gatherings and the preparation of traditional foods that are such an important part of any ceremony. And because this place was the heart of the people, the place for coming together, it has served as the anchor for all that is important to the Latvian people.

The need for this place was clear to the now deceased elders, they knew what the coming generations would need and their legacy needs to be respected. Now they are gone but the "rock" they built still stands as a beacon to the younger people who must work even harder to preserve their heritage and culture. The future of the Latvian community in Seattle is at risk without this space. As the elders pass on, the history, stories, songs, plays, foods and traditions are gradually being diluted and risk being lost. You may say that the Latvian culture can still be found in Latvia. This is not exactly true. The current day Latvia is a post-war Latvia that has had to try to survive under Soviet rule. The Soviets banned the language and music, destroyed literature written in Latvian and changed the names of the streets. The "ethnic" Latvians living there today, that were born during the Soviet occupation don't even speak Latvian, they speak Russian. So this church is actually a little island being overtaken by the dominant culture, while the culture of the homeland has been forbidden for so many years. They are trying to re-build Latvia IN Latvian. So, it is imperative that this church remain where it is. What was built with love so many years ago cannot be built again.

Please, anything you can do the protect the history and memories of this Church will be so appreciated. I pray for you the vision to see all possible solutions.

Sincerely,
Cheryl Anderson
Serila Andersons

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I-392-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you and the Latvian community.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Rimas Miksys <rimas.miksys@gmail.com>
Sent: Monday, September 23, 2013 3:44 PM
To: Lynnwood Link DEIS
Subject: The Latvian Center and light rail

I have been active in the Lithuanian-American Community for 15 years. The LAC does not have its own church or hall in Seattle. While some smaller gatherings of our organization are held in members' homes in and around Seattle, we hold most of our meetings and celebrations at the Latvian Center. Two years ago I even moved to the Northgate area to be closer to the Latvian Center.

I-393-001 It would be very disruptive to our community if the Center was closed during construction of the rail line or worse still if the Center had to be closed and relocated. I urge the Sound Transit Board to consider the unique status of the Center in the social web of the Lithuanian, Latvian and Estonian communities. We all gather there with our extended families to celebrate significant events in the lives of our communities and our members. That family web may be destroyed beyond repair if the Center could not be used during or after construction.

Please take any and all precautions to reduce the impact of dust, noise, vibration. Give us access during construction.

The caretaker's house next door is vital to the daily operation of the Center. Can you find a way to save it?

When construction is complete we expect that there will be changes we will have to live with but we also expect Sound Transit to restore the site to something resembling its present condition.

Rimas Miksys

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I-393-001

Thank you for describing the importance of the Latvian Center to the Lithuanian-American community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Sound Transit will use mitigation measures to avoid or minimize construction impacts on nearby properties.

Sound Transit
Draft EIS comments
c/o Lauren Swift

23rd of September, 2013

I-394-001

I am writing in order to express my concerns over the plans for the Lynnwood Link Extension of the Sound Transit Link Light Rail system that may affect the accessibility and usability of the Seattle Latvian Community Center at 11710 3rd Avenue NE.

I moved to the United States to do my Master's in Civil Engineering at University of Washington a year ago and became an active member of the Seattle Latvian Community only this February when I joined the folk dance group "Trejdeksnitis" and a choir "Sigulda". Ever since then I have been coming to the Community center twice a week for the rehearsals and participated in several concerts that have been taking place there. Both singing and dancing is a very important part of Latvian culture and I have been doing one or another or sometimes even both of them at the same time for most of my life and I feel extremely happy to have the opportunity to do it again here in the Seattle Latvian Community Center. Moreover, this summer I also had the honor to participate with the Seattle Latvian folk dance group "Trejdeksnitis" in Song and Dance Festival in Latvia that takes place every five years and unites tens of thousands of Latvians from all around the country and overseas communities in several unforgettable performances.

Having grown up in Latvia and getting to personally know the American Latvian Community only a half a year ago I've became truly impressed about all the effort that these people are putting in order to keep the Latvian traditions, language and culture alive this far from our motherland. I knew, of course, already before coming to the United States that there existed such communities, but I had no idea that they were as active and large before I got to know the Seattle Latvians. Most of these people have lived here in America for the past 60 years and their children and grand children have been born and raised here, but still they are able to speak Latvian, sing Latvian songs, celebrate all of the traditional Latvian holidays despite that many of them have been only a few times in Latvia and some of them have even never been there at all and from time to time when I'm talking to them I have to realize that actually sometimes the American Latvians know more about our traditions and history than I - as a person, who has lived most of the life in Latvia and many of my friends back home would do. However, while being very oriented towards keeping the Latvian traditions alive in their families and the community, meanwhile all of the community is very opened and respectful also to the local – American Society. Both - the dance and choir practices as well as most of the concerts are conducted in English thereby making them opened to everyone who's interested in joining these activities and I know several American spouses of Latvians that do take part very actively in it and take the opportunity to explore and get to know more about our culture through dancing, singing and just being surrounded by the Latvians.

From the very first time when I came into the Latvian Community Centre here in Seattle I've always felt warmly welcomed there and in this half a year since I joined its activities I've gained several really close friends there and I can not anymore imagine my life without having this place to meet for all the practices and celebrations. It has become an absolutely integral part of my daily life here in Seattle and if it would have to be closed down or become inaccessible for even just a period of time, I would feel that as a huge personal loss.

I-394-001

Thank you for describing the importance of the Latvian Community Center to you.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. Sound Transit's policy is to mitigate moderate or severe impacts. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Noise walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, any existing WSDOT noise walls removed as part of the project will be replaced.

I-394-001

I would also like to pay an attention to the importance of the possible negative effect of the noise caused by the light rail transportation to the church services which are taking place in the side of the building at the closest proximity to the proposed light rail alignment and emphasize the importance of considering proper noise isolative systems. Even though I am not a member of the Lutheran congregation and don't regularly attend the church services, the concerts of my choir are most of the time taking place at the Church and I expect that the noise coming from the traffic would be a noticeable nuisance for us to perform as well as for others to listen to our performances and therefore I would be personally influenced by the possible noise coming from the traffic.

All in all, now after six months of being an active member of Seattle Latvian Community, I can without any doubts say that the decision to join all of these activities has been one of the best things that has happened to me here in Seattle. I feel extremely grateful to all of those people from the community who have worked on creating the building itself and are continuously working to keep it working. We are a small nation having population of only around 2 millions, but most of us feel really explicit connection to our motherland no matter how far of it we actually are. Knowing that the Seattle Latvian Community once has already been forced to change its location due to a construction of new infrastructure in Wallingford, I think that going through a similar experience once again would cause a noticeable negative impact on the entire community.

This weekend the President of Latvia was visiting our community center and when he was starting his speech, the first thing he said was: "I really understand why this building is so extremely important to you - it is very homelike, it looks here as if I was now in Latvia." And I can totally agree to what he said. After I joined all the activities in the Seattle Latvian Community Center, Seattle has really become like a home – far away from home to me.

In conclusion I would like to emphasize that similarly like no one else in the community I am not against the building of Link Light Rail system and I do believe that it is a very important and necessary improvement of infrastructure to all of the inhabitants of Seattle. But meanwhile, I believe that a solution that has the least possible impact on our community's property and that would ensure continuous access and usage of this building can be found.

Thank you for your consideration.

Sincerely,

Ruta Ikauniece

From: Linda At Sea <lindaatsea@yahoo.com>
Sent: Monday, September 23, 2013 12:16 AM
To: Lynnwood Link DEIS
Subject: Sound Transit Lynnwood Link Comments

I-395-001

My name is Linda Willemarck. I live at 4900 200th St SW in Lynnwood. Since learning about the Sound Transit's Alternatives for the Lynnwood Link, a mere 3 months ago, I have spent a great deal of time trying to understand what properties are involved and what impacts it will have.

As you know, both the C1 and C2 Alternatives would be going down 52nd Ave West/Cedar Valley Road. In my research I found a very compelling document that really puts into perspective the importance of this area. The document reads, quote "...an established single family neighborhood containing hundreds of affordable homes and is in close proximity to several affordable housing apartments and condominium complexes, all of which would be adversely impacted by light, noise, property values, and other impacts ..."

"directly impacts hundreds of affordable homes when there are other sites available, raises social justice issues..."

"...located adjacent to significant city recreational resources of Scriber Creek and associated wetlands, and the city's Scriber Creek Park, that provide places to experience nature in close proximity to Lynnwood's City Center and regional Interurban Trail, both of which would be negatively impacted..."

"...Therefore, the City Council of the City of Lynnwood does hereby resolve and request the Sound Transit Board to remove from its potential sites and evaluations list the Lynnwood 52nd Avenue West/Cedar Valley Road site..."

....that such site not be included in any environmental analysis, due to its many significant and unresolvable and irreparable impacts upon the City of Lynnwood, its residents and businesses and upon the Edmonds School District."

These quotes were taken from Resolution No. 2012-07 of the City of Lynnwood, Washington, regarding issues concerning the potential siting by Sound Transit. It was signed by Mayor Gough of Lynnwood on 10/22/2012.

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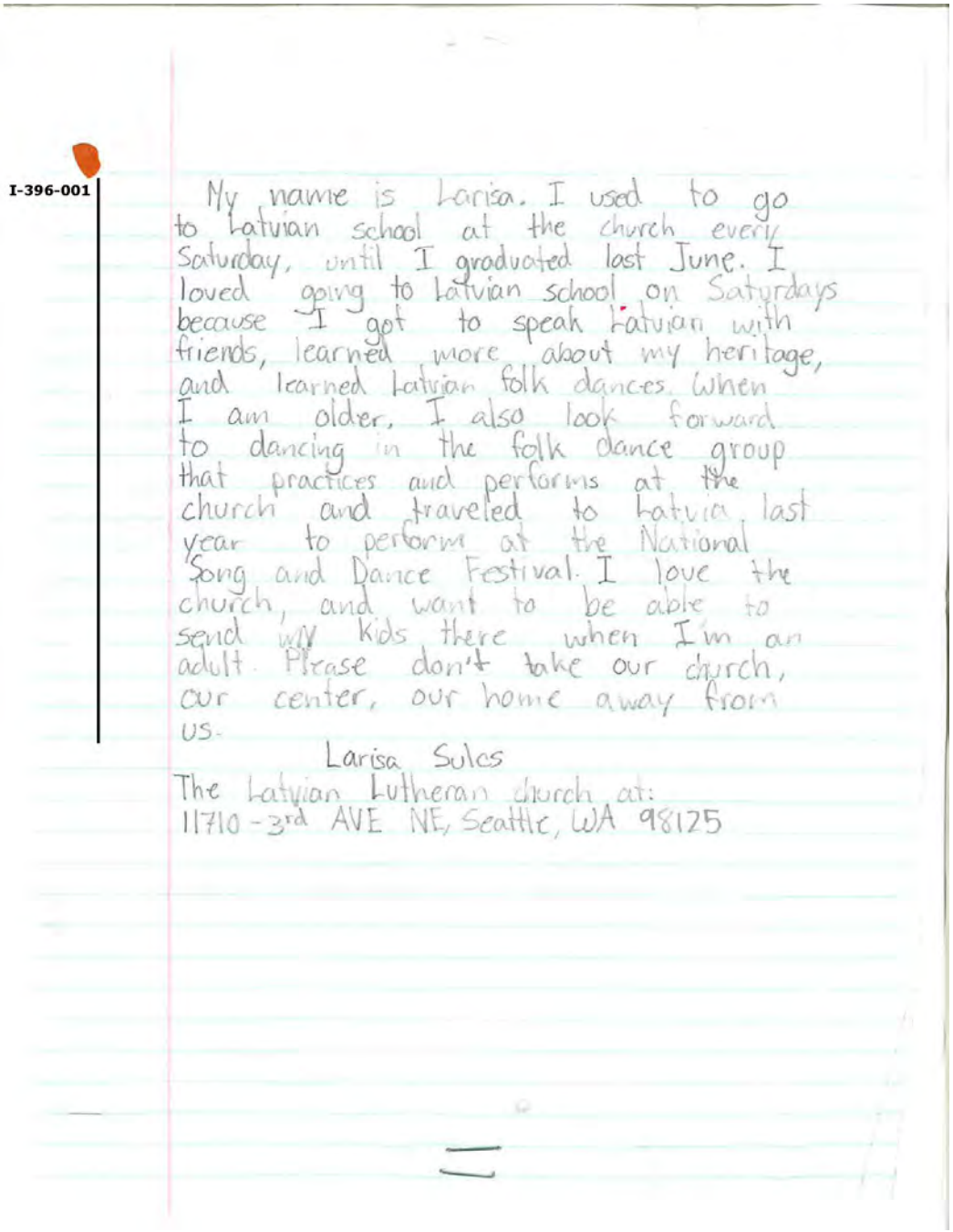
I-395-001

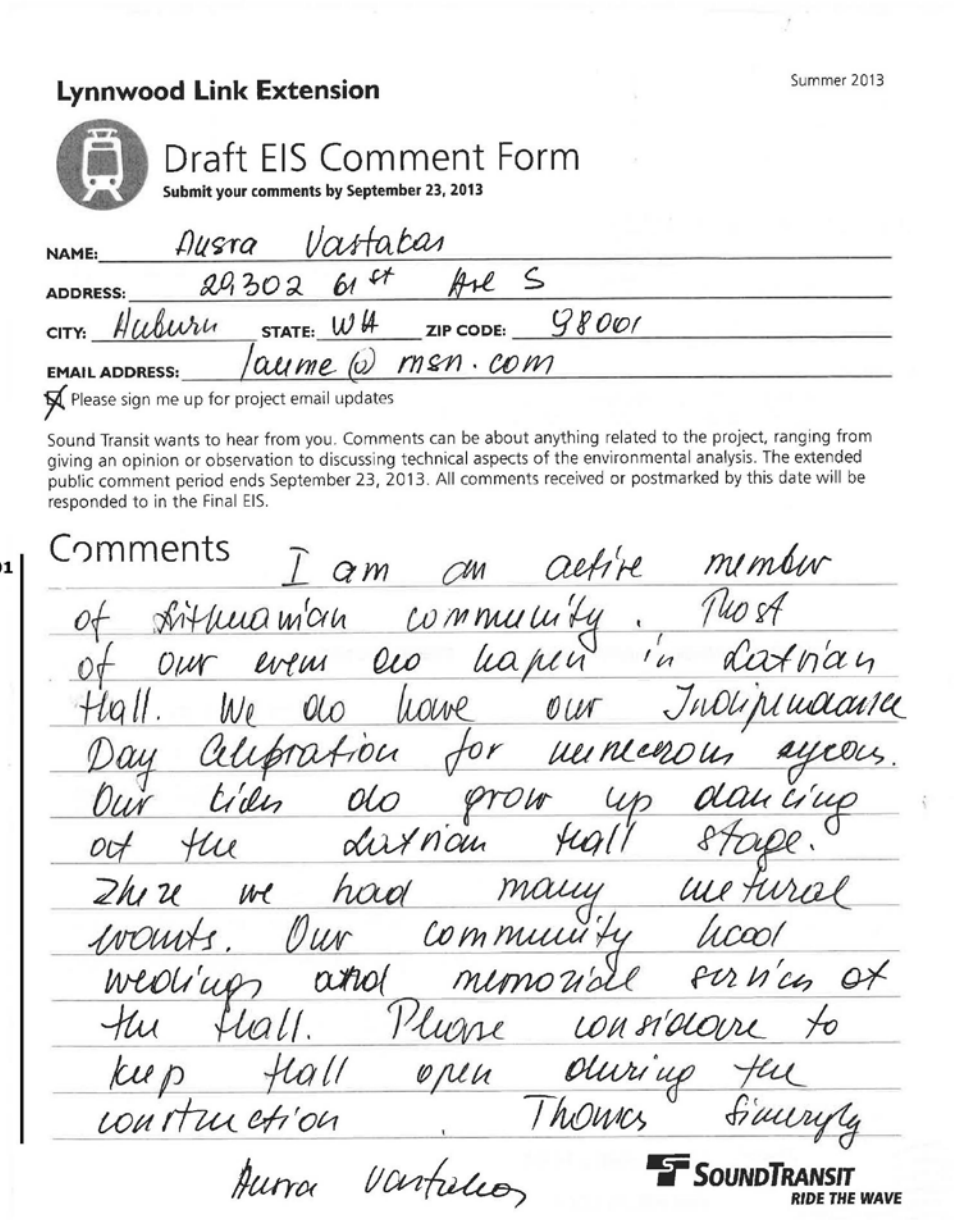
Your comments regarding the impacts of Alternatives C1 and C2 on the community are noted. The Draft and Final EIS discuss in detail the potential impacts to neighborhoods in Section 4.4, Ecosystem Resources in Section 4.8, Parks in Section 4.17, and Environmental Justice in Appendix C. The Final EIS evaluates a modified Alternative C3 as the Preferred Alternative.



I-396-001

Thank you for describing the importance of the Latvian Lutheran Church to you.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Ausra Vastakas

ADDRESS: 29302 61st Ave S

CITY: Auburn STATE: WA ZIP CODE: 98001

EMAIL ADDRESS: laume@msn.com

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

I-397-001

Comments I am an active member of Lithuanian community. Most of our events do happen in Latvian Hall. We do have our Independance Day Celebration for numerous years. Our kids do grow up dancing at the Latvian Hall stage. There we had many cultural events. Our community host weddings and memorable services at the Hall. Please consider to keep Hall open during the construction. Thanks Sincerely

Ausra Vastakas

SOUNDTRANSIT RIDE THE WAVE

I-397-001

Thank you for describing the importance of the Latvian Community Center to the Lithuanian community.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Access to the church and church hall will be maintained during construction of the Lynnwood Link Extension.

Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Audrius Vaitekai

ADDRESS: 29302 61 Ave. S.

CITY: Auburn STATE: WA ZIP CODE: 98001

EMAIL ADDRESS: AUDRIUS@COMCAST.NET

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

I-398-001

Comments Latvian Hall is a very important place for cultural activities of Latvian, Lithuanian and Estonian communities. Relocation of the Hall would have a big negative impact.

SOUNDTRANSIT
RIDE THE WAVE

I-398-001

Thank you for describing the importance of the Latvian Hall to the local Baltic communities.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Iwata, Roger
Sent: Monday, September 23, 2013 9:24 AM
To: Lynnwood Link DEIS
Subject: FW: Lynwood link / DEIS comment /130th 145th,155th St. Stations

DEIS comment.

From: Ryan Basile [mailto:ryanbasile@gmail.com]
Sent: Sunday, September 22, 2013 8:38 PM
To: Iwata, Roger
Subject: Lynwood link / DEIS comment /130th 145th,155th St. Stations

Roger,

I-399-001 Hello. I am very excited for the light rail system and the ability to walk to a light rail station from my house. I do have legitimate concerns over the Shoreline City Council's recommendation for the light rail station and parking structure to be placed at 145th St. (SR-523) and I-5. The Shoreline City Council is not discussing the reality of the conditions of traffic on 145th Street, or the 130th/155th St. options with WSDOT, Sound Transit, or the community.

The intersection where it would be placed (145th St. NE and I-5) is already a highly congested area. According to WSDOT, the intersection and the stretch of NE 145th St. surrounding it is already, in their words, over-capacity. Adding another destination focal point can only cause more congestion.

There are a couple of contributing factors to this, including, but not limited to: * It is the only complete set of I-5 on and off-ramps between Northgate and 175th St. NE. * There is minimal queuing area for the cars to enter the I-5 on-ramps. Which creates backups on 145th St. east and west of the intersection and in-between on the overpass bridge. This, in turn, creates backups on the I-5 off-ramps. * It is a main arterial to I-5, that receives the bulk auto traffic not only from Shoreline neighborhoods, but also from Haller Lake, Greenwood, Aurora, Lake City,Bothell, Woodinville, Pinehurst, Lake Forest Park, Kenmore, and east-side traffic. * According to WSDOT, traffic increased 11-15% on NE 145th St./SR-523 after the 520 bridge was tolled and people started using it as the connector around the north-side of the lake to I-5.

Currently, 145th St. east and west of the I-5 intersection during morning and evening rush-hour has two-lane 1/4 to 1/2 mile backups of cars waiting to go northbound and southbound onto I-5. One of the major problems is there is no good way to mitigate the issues of a light rail station on 145th. Some of the ideas floated are: * Add complete sets of off and on-ramps at 130th and 155th St. to reduce the influx of vehicles that use 145th. St solely for the purpose of I-5 access. (which WSDOT says it will not do) * Acquire hundreds of folks properties to widen the 145th arterial, in some instances this would place a state highway within feet of Seattle and Shoreline folks' front doors, or directly in the path of current homes. There is also current infrastructure and or protected spaces in the immediate vicinity, such as a pumping station, Thornton Creek, and the Jackson Park Golf Course. * Add direct on and off-ramps to the station and parking structures from I-5.

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I-399-001

Your comments voicing concern about the NE 145th Street Station location are noted. Sound Transit will mitigate traffic impacts caused by the project at NE 145th Street; however, building additional I-5 ramps to/from NE 130th and NE 155th Streets is outside the scope of this project. Sound Transit is currently coordinating with both the City of Shoreline and WSDOT on potential improvements in the NE 145th Street/I-5 interchange area.

I-399-001 When I asked the Shoreline City Council how they plan to address this, or if they have worked with WSDOT to address these concerns, I receive blank stares and replies along the lines of "WSDOT will mitigate any issues". When I asked WSDOT if they had an official position, they said they had not released one but would be more than happy to talk to Sound Transit about the facts. I encourage you to speak to the WSDOT planners and employees who control this area.

I-399-002 I have been to multiple Ridgecrest community meetings, and to the majority of the folks in the effected neighborhoods it makes much more sense to have the proposed two stations at 130th St. and 155th St. Some contributing factors supporting this are: * The already over-capacity and congested NE 145th St. arterial. * 130th is an arterial from Greenwood/99 to Lake City, but currently does not have the congested traffic that 145th St. does. *155th is an arterial from Greenwood (via turning into Westminster Way, which turns into Greenwood), Aurora/99, to 15th Ave. NE * The more stations a mass-transit system has, the more people will have access to it, and more people will use it. The two stations, 130th and 155th St. would server a greater amount of citizens and provide access to more light-rail riders. * Two stations will split the traffic, and if applicable, the parking between two stations. * It will allow people to access the stations from 130th(125th&Roosevelt&130th), 145th, and 155th (All of which are East/West arterials). * 155th St. and 130th St. both have designated bike lines. 145th Street does not have a bike line, and is not safe for bicycle traffic. * 155th St. and 130th St. both have newer accessible sidewalks. The 145th St. and I-5 intersection is not very walkable, nor accessible. The sidewalks, where they exist, are not accessible. * It creates easy light-rail access not only for the Ridgecrest and Parkwood neighborhoods, but also for Lake City, Pinehurst, Bitter Lake, Haller Lake, Olympic Hills,and Broadview. * This will free up the East/West arterials for the crosstown bus routes to feed the stations. * Less, if any at all property and homes would need to be acquired. The property around the proposed 130th St. and 155th. St. stations are owned by the municipalities.

If you can, please visit and observe the congested NE 145th St. and I-5 intersection during morning or even rush hour. You will see how wanting to place a light rail station at 145th St. is very troubling.

Thank you for your time.

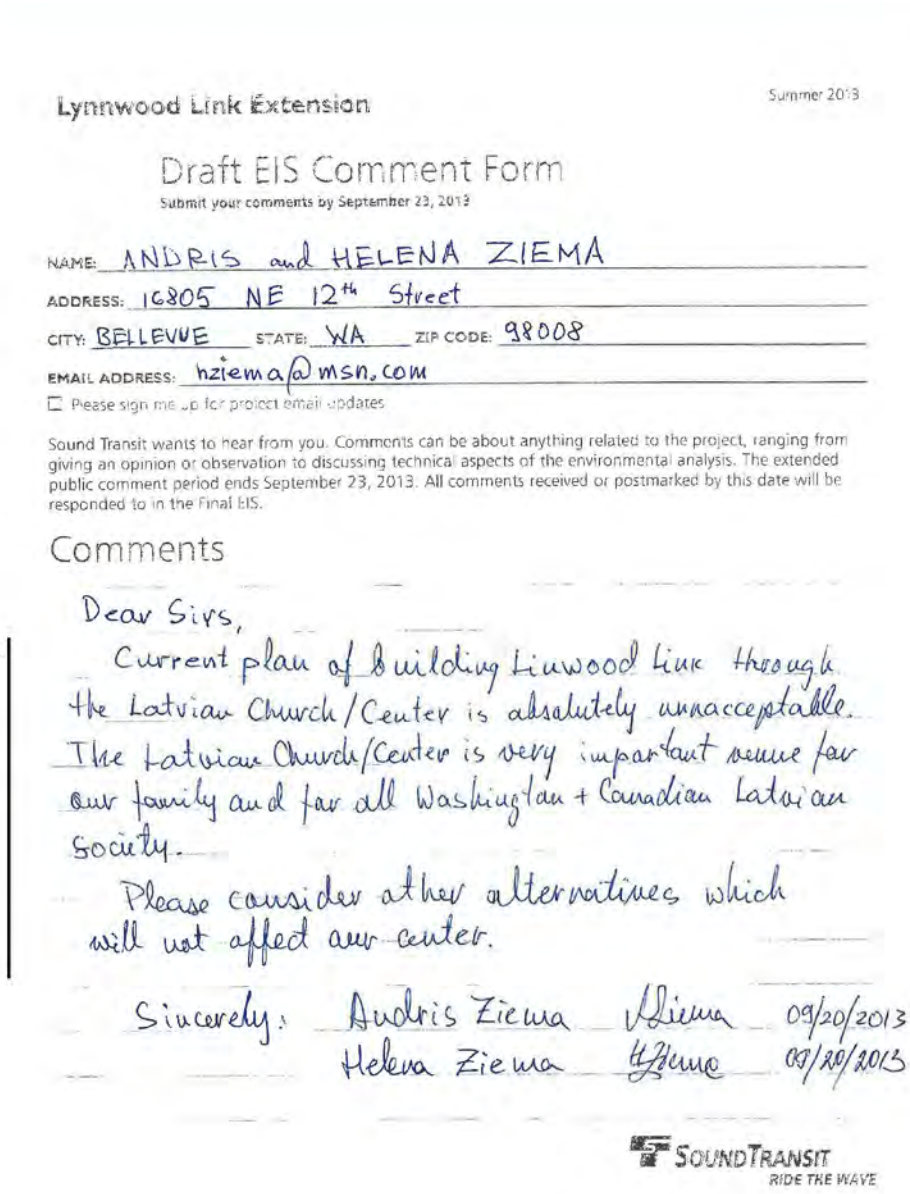
Ryan Basile 921 NE 146th Street Shoreline, WA 98155

2

I-399-002

Your comments in favor of the NE 130th Street and NE 155th Street Station locations are noted. Although the Preferred Alternative in the Final EIS does not include these station locations, Sound Transit did continue to evaluate them in the Final EIS.

Chapter 3 evaluates potential impacts, identifies mitigation measures, discusses bike and pedestrian improvements in the station area, and ridership.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: ANDRIS and HELENA ZIEMA

ADDRESS: 16805 NE 12th Street

CITY: BELLEVUE STATE: WA ZIP CODE: 98008

EMAIL ADDRESS: hziema@msn.com

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-400-001

Dear Sirs,

Current plan of Building Linwood Link through the Latvian Church/Center is absolutely unacceptable. The Latvian Church/Center is very important venue for our family and for all Washington + Canadian Latvian Society.

Please consider other alternatives which will not affect our center.

Sincerely: Andris Ziema A.Ziema 09/20/2013

Helena Ziema H.Ziema 09/20/2013

SOUNDTRANSIT
RIDE THE WAVE

I-400-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I of IV

Seattle, Sept. 19th 2013

Daidra Razevska
UPANS
11515 - 4th Ave. NE
Seattle, WA. 98125

TO: Sound Transit Board
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

Dear ladies & Gentlemen,

I am a member of the Latvian Ev. Lutheran Church and Community center (11710 - 3rd Ave. NE Seattle, WA 98125)

since 1961 - In USA since 1951.

I-401-001

The present proposed route of the Lynnwood Link light rail will destroy our Church and Community Center: first the construction equipment, noise etc. and later the light rail itself passing every 3-10 min. in front directly of our church's

I-401-001

Thank you for describing the importance of the church to you and the community, and for discussing its history and activities. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Although construction activities will be adjacent to the church, Sound Transit will work closely with the church to maintain access, minimize parking loss, and reduce other potential construction disruptions to ongoing church and center activities. The primary construction in the area would be ongoing for 1-2 years in the area, but major construction activities would be shorter duration. For temporary impacts such as truck traffic, detours, noise, dust, light and glare, Sound Transit proposes best management practices to avoid and minimize impacts in Sections 3.6, 4.5.7, 4.6.7, and 4.7.7. The construction area would also be fenced to protect public safety, and the church would have a direct contact at Sound Transit to discuss any issues of concern. When operations begin, noise and visual impacts would be minimized by the sound walls proposed along the guideway.

I-401-001

II & IV doors and windows, school-children's playground.
Your engineers know that better than we can imagine!!!
Therefore I ask you to find an alternative route more distant from our property. I am convinced that this is possible once your engineers know & can do that.
The reason I am asking you to respect our church's property on the present piece of land / location - because it was build only with our own caring hands and hearts. -> The Latvian W.W.II refugees, who had lost everything when the soviet army for the second time at the end of W.W.II occupied their country Latvia.
The IRON curtain came down and divide the people. There was no way back for us.
They had lost everything - their country, their homes - families were split, livelihoods gone.

III of IV many left only with what they could carry, previous lives destroyed We needed each other to survive in a new foreign country - kind but strange country, foreign language - we needed each other for moral support, for companionship, also financial support.
And we build our church and the center and made a new life in this country that gave us the opportunity to do so. And we worked all together giving each other moral, physical support and companionship It helped us to start new life - find jobs, educate our children and by now we all had rediscovered the old Latvian truth - Education - education & health / community - you can loose everything, but if you have these 3 things - there is always possibility for survival
It is a memorial for a group of the Baltic refugees, many by now dead. Between the many

I also my late husband who with our late pastor Abolins was hammering nails on the church roof.

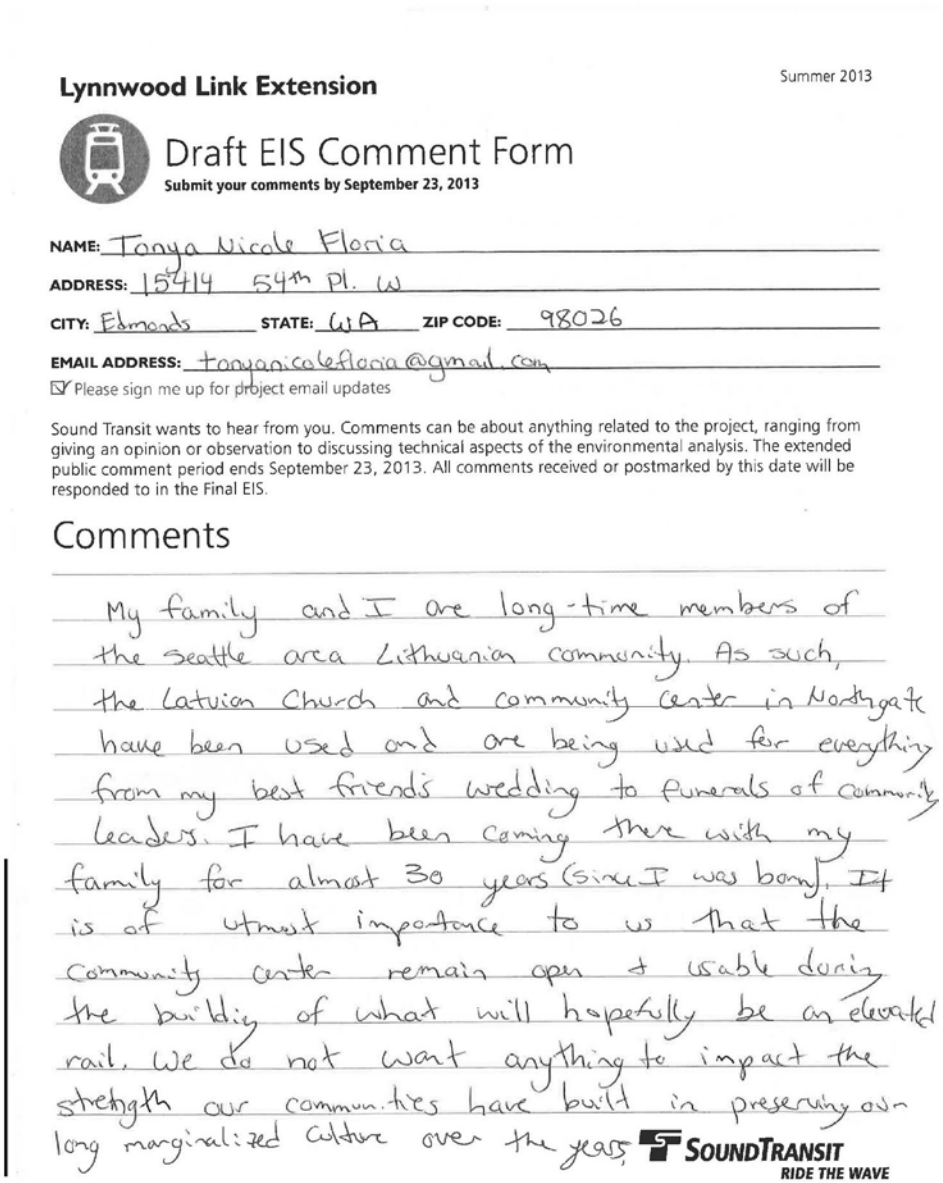
This present piece of land and the buildings on this particular piece of land is so important to us - as a memorial as something that will provide continuation between the builders, their children, grandchildren and their children - so they know who they are, where they roots are and who grand and great grandparents left their own country. Don't destroy something beautiful and unique just for convenience sake.

Do the right and just thing.

Thank you -

Dzidra Rasevska

Lepaus



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Tonya Nicole Floria

ADDRESS: 15414 54th Pl. W

CITY: Edmonds STATE: WA ZIP CODE: 98026

EMAIL ADDRESS: tonyanicolefloria@gmail.com

☑ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

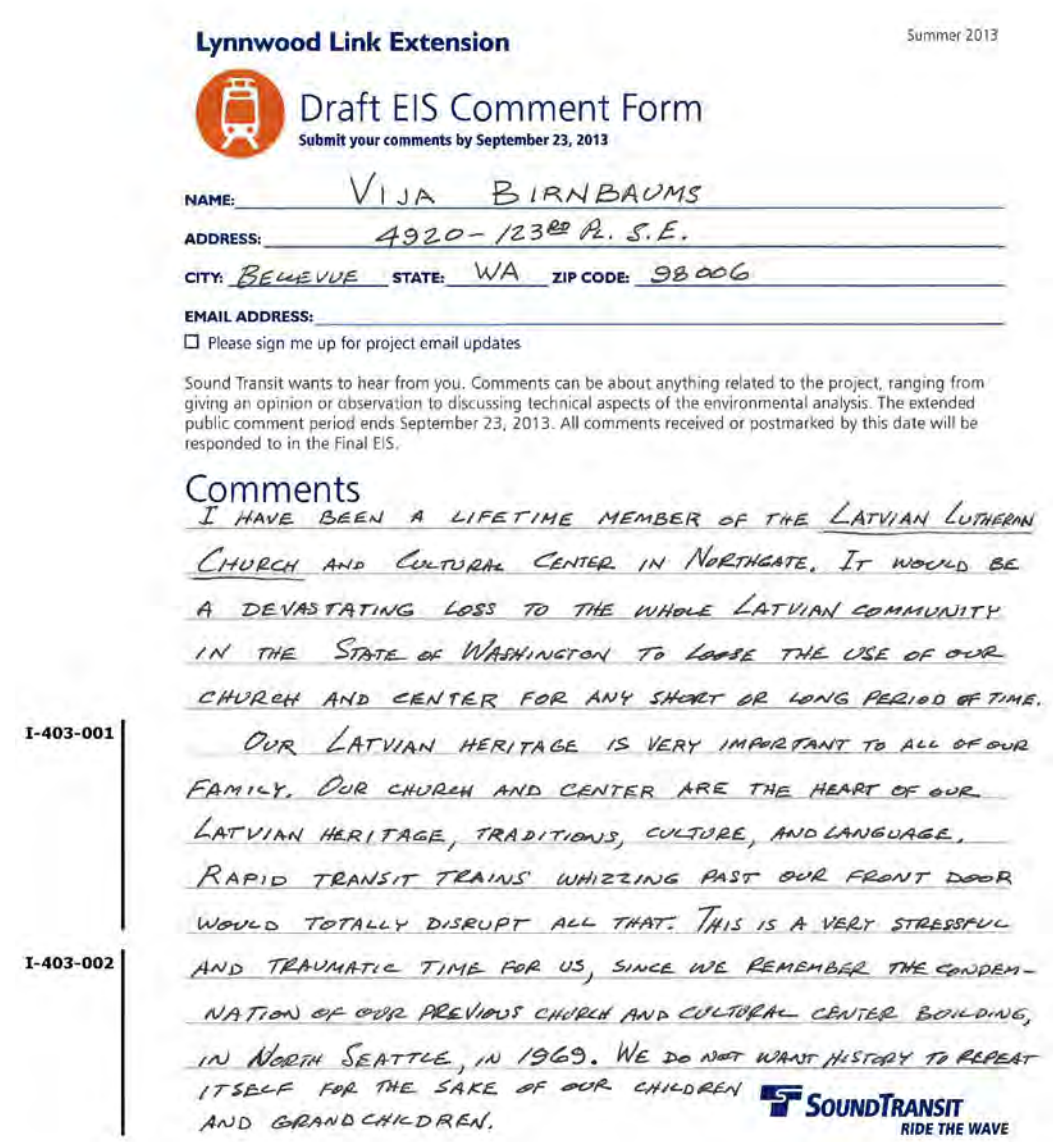
My family and I are long-time members of the Seattle area Lithuanian community. As such, the Latvian Church and community center in Northgate have been used and are being used for everything from my best friend's wedding to funerals of community leaders. I have been coming there with my family for almost 30 years (since I was born). It is of utmost importance to us that the community center remain open & usable during the building of what will hopefully be an elevated rail. We do not want anything to impact the strength our communities have built in preserving our long marginalized culture over the years.

SOUNDTRANSIT RIDE THE WAVE

I-402-001

I-402-001

Thank you for your personal comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: VIJA BIRNBAUMS

ADDRESS: 4920-123RD A. S.E.

CITY: BELLEVUE STATE: WA ZIP CODE: 98006

EMAIL ADDRESS:

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I HAVE BEEN A LIFETIME MEMBER OF THE LATVIAN LUTHERAN CHURCH AND CULTURAL CENTER IN NORTHGATE. IT WOULD BE A DEVASTATING LOSS TO THE WHOLE LATVIAN COMMUNITY IN THE STATE OF WASHINGTON TO LOOSE THE USE OF OUR CHURCH AND CENTER FOR ANY SHORT OR LONG PERIOD OF TIME.

I-403-001

OUR LATVIAN HERITAGE IS VERY IMPORTANT TO ALL OF OUR FAMILY. OUR CHURCH AND CENTER ARE THE HEART OF OUR LATVIAN HERITAGE, TRADITIONS, CULTURE, AND LANGUAGE. RAPID TRANSIT TRAINS WHIZZING PAST OUR FRONT DOOR WOULD TOTALLY DISRUPT ALL THAT. THIS IS A VERY STRESSFUL

I-403-002

AND TRAUMATIC TIME FOR US, SINCE WE REMEMBER THE CONDEMNATION OF OUR PREVIOUS CHURCH AND CULTURAL CENTER BUILDING, IN NORTH SEATTLE, IN 1969. WE DO NOT WANT HISTORY TO REPEAT ITSELF FOR THE SAKE OF OUR CHILDREN AND GRANDCHILDREN.

SOUNDTRANSIT RIDE THE WAVE

I-403-001

Thank you for your personal comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you. The project includes a noise wall in this area that would mitigate noise impacts to the church as well as adjacent residences. Please see Section 4.7.7 for details.

I-403-002

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Sound Transit September, 18, 2013

Comments c/o Lauren Swift

401 Jackson Street

Seattle, WA 98104

Our organization, Seattle Estonian Society (SES), has reviewed the Lynnwood Link Extension DEIS and concluded that all the alternatives presented severely impact the Latvian Church and Community Center. As a member of Seattle Estonian Society, I can assure that SES relies heavily on this facility for fund raising, performances and meetings. Any disruption to its availability, whether temporary or permanent, will disrupt SES's work especially since Latvian Churh is a main meeting place for our SES Board. Since Estonians do not have a place of our own, Latvian Church has become like home for us. SES would hate to see Latvian Center cease to exist, it will be a tremendous loss for our community.

I-404-001 Please make sure that all construction related impacts to the Latvian Center be mitigated in a manner which allows our continued use of this facility during construction, and that long term impact resulting from the operation of the light rail system be mitigated in a manner allowing our continued use of this facility.

Sincerely,

Mai Teras

Board Member of Seattle Estonian Society

I-404-001

Thank you for describing your concerns about potential effects the Latvian Evangelical Church and for highlighting its importance to the region's Baltic community. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Several sections in the environmental document have updated discussions of potential construction and long-term project impacts as well as describing mitigation that would allow the church and hall to continue their activities during and after construction. Section 2.5.1 describes the refined alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods; Sections 4.5 and 4.7 present discussions of visual and noise impacts respectively, including mitigation measures.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: SANDIS KONDRATS

ADDRESS: 1312 108TH ST S, TACOMA, WA

CITY: TACOMA STATE: WA ZIP CODE: 98444

EMAIL ADDRESS: SANDIS.KONDRATS@GMAIL.COM

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I IMMIGRATED FROM LATVIA TO USA WASHINGTON STATE HALF A YEAR AGO AND DID NOT KNEW ANYONE IN THE AREA, EXCEPT MY AMERICAN WIFE AND FEW OF HER FRIENDS. MANY MONTHS I HAD HARDSHIP TO ADAPT AND I AM REALLY GRATEFUL FOR FINDING AND GETTING INVOLVED AT THE LATVIAN LUTHERAN CHURCH AND COMMUNITY CENTER. SINCE I BEEN INVOLVED WITH SEATTLE LATVIAN COMMUNITY I AM FEELING MUCH BETTER BY LIVING IN WASHINGTON STATE, AMERICAN-LATVIANS HAS HELPED ME TO ADAPT AND TO FEEL AS AT HOME.

I-405-001

IF LATVIAN LUTHERAN CHURCH AND COMMUNITY CENTER WOULD BE SHOT DOWN TEMPRORARY OR RELOCATED, THAT WOULD GREATLY IMPACT PACIFIC NORTHWEST LATVIAN COMMUNITY AND COMMUNITY SPIRIT WOULD BE DESTROYED!

SEP 17, 2013

SOUNDTRANSIT RIDE THE WAVE

I-405-001

Thank you for describing the importance of the church and community center to you and the Seattle Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-406-001

Latvian	English
Sveicināti,dārgie tautiešiEsmu sašutis par ideju likvidēt Latviešu Sabiedrisko centru. To nedrīkst pieļaut! Tā ir viena no mūsu mazās tautas nedaudzajām kultūras saliņām plašajā pasaulē!!!	Dear fellow countryman! The idea of the liquidation of the Latvian Community Centre has shocked me. This cannot be permitted! This is one of the few islands of culture of our small nation within the global world!!!
Cerēsim, ka izdosies to nosargāt!!!	Let's hope we succeed in defending it!!!
Sirsnīgus sveicienus no Latvijas-Rīgas-sūtot, Bruno Strautiņš, Latvijas Mākslas akadēmijas profesors	With warmhearted greetings from Latvia – Riga, Bruno Strautiņš, Professor of the Art Academy of Latvia

I-406-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Arnie Lusis and Daina Birnbaums <alusmuca@centurytel.net>
Sent: Saturday, September 21, 2013 11:38 AM
To: Lynnwood Link DEIS
Subject: Lynnwood Link impact on Latvian Center

Dear Sound Transit Board,

I-407-001 I am writing to you to let you how the proposed Lynnwood Link would impact my family and the Baltic community as a whole. Along with my parents, my family has attended church, Latvian school, folk dancing, concerts, plays and social events at the Seattle Latvian Center since its founding. My confirmation and wedding were celebrated in the church; I currently live in Kingston with my husband and our two teenage boys. Along with this third generation, we continue these same traditions – both of our children have attended and graduated from the Seattle Latvian School and continue to participate in events at the center. The Seattle Latvian Center is a regional gathering place for the entire Baltic community. If not handled correctly, the impact of the proposed light rail link will be devastating on this valuable group.

I-407-002 The Latvian Center and Church was designed and built by the community itself in its present location near Northgate after being relocated from Wallingford when the city of Seattle needed that land. To relocate

I-407-003 and rebuild again would be an unfathomable burden both emotionally and financially. I urge Sound Transit to proceed carefully and in good faith to allow us the use of our center while under construction, to mitigate noise, vibration, dust and any other impacts before, during and after without expense to the

I-407-004 center. If this is not possible, all efforts need to be made by Sound Transit to relocate the center to an equivalent location with room for all of the many groups that currently use it. As our current center and church were custom built with all of this in mind, the alternative must be equal to the current location in size, scale, interior customization and ease of access. I ask that you work with the Seattle and greater northwest Latvian, Lithuanian and Estonian communities to preserve this community resource.

Thank you,

Daina Birnbaums

Hillbend Lane NE

Kingston, WA

360-297-3304

I-407-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church.

I-407-002

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-407-003

Construction of the light rail guideway in proximity to the Latvian Evangelical Lutheran Church would take approximately 1 to 2 years, and mostly occur between 8 am and 6 pm during weekdays with occasional nighttime and weekend construction. Near-term construction activities would included outreach and coordination with the church. Access to the church and community center buildings would be maintained before and during construction, though the access may change somewhat from existing conditions for short periods. Visual, air quality, and noise impacts would be avoided and minimized with the implementation of best management practices. These would include fencing the construction area for public safety, spraying the construction area with water to reduce dust, and use of temporary noise walls. For additional information, see Sections 4.5.7, 4.6.7, and 4.7.7, respectively.

The discussion of potential long-term impacts associated with the refined Segment A alternatives has been incorporated into the the Final EIS. Section 4.5.2 describes visual and aesthetic impacts; Section 4.6.2 outlines impacts to air quality; and Section 4.7.2 presents anticipated noise and vibration impacts. Potential mitigation measures

for unavoidable impacts are listed in the following sections respectively: Section 4.5.7, Section 4.6.7, and Section 4.7.7.

I-407-004

Thank you for your comment. Please see the complete response to Comment I-407-001.

From: Anne Cunha <acunha5112@gmail.com>
Sent: Saturday, September 21, 2013 9:57 AM
To: Lynnwood Link DEIS
Subject: Lynnwood Light Rail

Hello -

I have been a resident of Lynnwood for 20+ years and commute to Seattle for work using bus service from the Lynnwood Transit Center.

I-408-001 Having reviewed the documents available online, I believe Segment C3 (at park-and-ride) provides the best alternative given the known potential impacts vs benefits.

Thank you for taking my input into consideration.

You are doing a great job of of informing the public and inviting input.

Anne Cunha
6600 191st Street SW

1

I-408-001

Thank you for your comment stating your preference for the C3 alternative.

From: Wendy DiPeso <wdipeso@gmail.com>
Sent: Sunday, September 22, 2013 10:31 AM
To: Lynnwood Link DEIS
Cc: John Behrens
Subject: DEIS Comment

Regarding the DEIS for the 185th Street station location:

I-409-001 The current DEIS suggests options for building one large or a couple small parking garages. One idea floated is to have one small garage on the West side of I-5 that would also serve as stadium parking for the Shoreline School District.

It is premature to offer suggestions for building parking garages without first doing a traffic study. Parking needs for the stadium are seasonal. There is some overflow parking on 185th and 5th Avenue during football season on Friday nights. The rest of the time the existing lot is largely empty.

Has the Shoreline School District been asked whether they intend to even keep the Stadium? They might like to get a big check from a developer instead.

Even with anticipated increase in traffic and demand for parking with the addition of a station, Sound Transit needs baseline knowledge of existing traffic patterns in the area before they can justify building a parking structure.

I do not have an opinion of whether a station should be built. I would like to see a traffic study before making any conclusions.

A second concern regarding parking:

I-409-002 Sound Transit has a limit as to how much money can be invested into the community to mitigate the impacts of the station. If a lot of funds are spent on a parking garage, those are funds that will not be available for sidewalks, cross walks and stop lights, which are items required for pedestrian and auto safety in order to make the new station acceptable to the community.

Sound Transit cannot assume that the City of Shoreline has the resources to provide these amenities. The City will instead expect developers to build sidewalks and stop lights as part of TOD. This strategy would result in piecemeal upgrades without the connectivity required for a safe and effective traffic plan.

For the sake of better decision making it is imperative that Sound Transit disclose to the community the consequences of each decision. What are the opportunity costs? For example, if X dollars are spent on parking structures, how many street lights and sidewalks would have to be eliminated from the plan?

1

I-409-001

Sound Transit has been coordinating with the Shoreline School District, which has expressed an interest in a shared facility. Section 3.2.4 of the Draft EIS documents the traffic analysis conducted at each of the potential station locations, including surrounding the NE 185th Street area. Morning (AM) and evening (PM) peak hour conditions today, and in the future with and without the stations were analyzed. More detailed documentation is included in the Transportation Technical Report that supports the Final EIS. Chapter 3 identifies the improvements and mitigation that could be implemented with the various alternatives, all of which assume parking as part of a multimodal access program.

I-409-002

Although Sound Transit has defined a project budget, it is also committed to mitigating adverse impacts identified in the Final EIS. The Preferred Alternative and other alternatives have defined bicycle and pedestrian improvements in the station area, and the project does not create safety hazards requiring mitigation.

I-409-002 The tendency of the community is to envision grand plans without an understanding of the budget limits involved. Then, the City and/or other agencies are blamed when the citizens are disappointed with the end results. Better upfront disclosure of what is/is not feasible will help the community prioritize what it is they want to lobby for.

I was a member of the 185th street station committee from its inception but had to withdraw due to changing family responsibilities. Therefore, my concerns were not included in the letter that you received from them.

There are others in the community who have expressed similar concerns or do not want to see a parking structure built at all. Their voices are also not represented by the 185th Street Station organization. The committee has done a lot of outreach to residents to inform them of the station and that now is the time to weigh in on its design.

Thank you for considering my comments.

Wendy DiPeso
253-740-6569

From: Terry & Kathie Forsyth <cooper1@rockisland.com>
Sent: Saturday, September 21, 2013 4:46 AM
To: Lynnwood Link DEIS
Subject: DEIS Lynnwood I

Morning,

Instead of a long letter, the following are some final thoughts.

I-410-001 a. Glad to see all line on east side of I-5 until above Lake Forest Park station then down I-5 median.

b. Believing immediate access between parking structure, local buses and light rail is design's highest priority, Lake Forest Park station should also be on east side of I-5.

I-410-002 c. Lynnwood Park and Ride station. With future extension of light rail to surely to Paine Field's future commercial airport and Everett, distance equals time which makes the straight-line down I-5 favored. However, I prefer Option A because it eliminates the long walk between the far ends of the parking structure and the station--distant parking is much closer to trains but moreso is safety for people walking to cars late at night. Surely the shorter the distance between cars and trains also reduces cost of security officers making Option C more expensive to operate.

I-410-003 d. All stations seem to have a maximum parking structure plan of 1900 cars. Are all stations designed for future expansion? My thoughts return to the Silver Spring, MD parking structure for the DC Metro station. Would be

I-410-004 interesting to learn the vehicle capacity of that parking structure--it includes parking over a street. Related to this would be to learn how much they spend on security patrols at that station because the parking structure is separated from the station by the huge bus terminal and compare Sound Transit parking structure designs to projectable annual security costs to system budgeting.

Thanks,

Terry Forsyth
Friday Harbor, WA

1

I-410-001
Your interest in the median alignment is noted. We assume that you mean the Mountlake Terrace Station, and a preference for the station alternatives at the center, rather than the freeway station.

I-410-002
Thank you for the comment. The Preferred Alternative features a refined station design that places parking and the station close to the transit center, which reduces walk distances. Security costs at the system level would be generally similar for all alternatives, however.

I-410-003
Station parking, facility sizing, and design is balanced between the demand for parking and the need for good multi-modal connections in order to serve the needs of the region as well as local communities.

I-410-004
Security will be a consideration as the design of the station and parking area are refined in the Final Design phase of the project.

From: Hill, Victoria R <v.hill@umiami.edu>
Sent: Friday, September 20, 2013 3:40 PM
To: Lynnwood Link DEIS
Cc: Lynnwood Link DEIS
Subject: My Grandfather's Hands: Latvian Church and Hall

Dear Whomever it may concern,

My grandmother and mother are both Latvian refugees who came to America when Latvia was invaded by the Soviet Union. I was born right before Latvia was freed from the Soviet Union. Even though my parents lived in Utah at the time, they brought me to Seattle where I was christened and baptized in the Seattle Latvian Church at age 4 months. This Latvian church and hall wasn't and isn't just a place for worship, it is the only place that we can share our Latvian heritage, have Latvian language school, and get to know each other. My grandfather, over 40 years ago, helped build this church with his very own hands and last year we held his funeral service at this very church which was attended by over 100 other Latvians. Every event that occurs in the Latvian community happens here: birthdays, funerals, christenings, celebrations, school shows etc. I am 22 years old and I want to be able to provide my future children Latvian heritage and show them a building and a center that their great-grandparents created and built. This building has housed mine and every other Latvian's most important events of our entire lives. Not only does it provide a shelter for the Seattle Latvians, but it allows a place for Latvians from around the world to come and visit. In fact, the President of Latvia, who recently met with President Obama, will be visiting the Seattle Latvian Church and Hall at 11:30 am September 22nd 2013. My grandparents specifically bought their house over 40 years ago because it is less than a block away from our Latvian Center. I have spent many Christmases and New Years walking from our house to our Latvian church. I can hardly bear the thought of not being able to do that anymore, especially since my grandfather just passed and it is a place of solace in my grandmother's life. I am telling you all this because if you choose to destroy The Latvian Center you will not just be tearing down a building, you will be throwing a whole community into debt and disarray. Losing the Latvian church would not only break our hearts, it will likely be a blow that the Latvian community will never be able to recover from. So I please ask you to realize the consequences of this action and know that a whole community filled with grandmothers, grandfathers, teenagers, babies, and parents will be permanently affected.

I-411-001

Sincerely,
Viktorija R. Hill

1

I-411-001

Thank you for describing the importance of the church and center to your family and the Latvian/Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: anitaozol iles <anitaozol@outlook.com>
Sent: Saturday, September 21, 2013 11:48 AM
To: Lynnwood Link DEIS
Subject: Sound Transit Link Light Rail system impacting the Seattle Latvian Church and Center at 11710 3rd Ave N.E, Seattle, WA 98125

I-412-001

I am writing to voice concern over the proposed plans for the Lynnwood Link Extension of the Sound Transit Link Light Rail system as it pertains to the Latvian Church and Community Center.

I was born in Latvia in 1943 and in 1944 my family was forced to flee our home to escape the invading Soviet Army. We lived in a Displaced Persons camp in Germany until 1949 when we were sponsored by the Lutheran Church to relocate to Olympia, Washington. This is a story many Latvians of my generation have. My parents, along with fellow Latvians that emigrated to Washington, worked hard to build a new life in America after losing everything.

My parents eventually settled in Sumner, Washington and were active in building the foundation for both the Tacoma and Seattle Latvian Communities. My father even helped to build the Seattle Latvian Church and Community Center. As a community in exile, it was of the utmost importance to have a way to preserve our language and heritage and to guarantee that it would be passed on to future generations.

As my parents grew older, I would drive them up to Seattle regularly to enjoy cultural and religious events, such as weddings, confirmations, holiday parties, plays and programs. I can attest to the fact that the Church and Community Center is as actively used today, if not more so, than it was during my parents' generation. Their dream of preserving the Latvian heritage is seen nearly every day at the Latvian center, from Latvian school to folk dance and choir, and larger community activities. Please don't deny future generations a chance to celebrate their heritage.

The Latvian Community Center has allowed me to keep active in my older years and stay involved with our community. Living in Puyallup, it is one of the few opportunities I have to meet and socialize with old friends and speak in our native language. I enjoy attending all of the cultural programming the Center hosts, including folk dance performances, the Christmas Bazaar, Latvian school programs, the annual Rummage Sale, as well as significant celebrations marking important Latvian holidays. I have also gotten involved with volunteering at some of these events.

I am also a member of the Tacoma Latvian Lutheran Church, which has been on the verge of losing a meeting place for our church services. It is becoming likely that our congregation will have to

I-412-001

Thank you for describing the importance of the church and center to your family and the Latvian/Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-412-001 start commuting to Seattle for church services, as this is our only other viable option. A loss of the Seattle Latvian Church and Community Center would mean the end of our congregation.

For Latvians living all over the Puget Sound, the Seattle Community Center is essential. It is the only place we are all able to gather for community and social events. There is no other place for us to gather without the Seattle Latvian Community Center. A loss of this center, even temporarily, would be devastating. I urge the Sound Transit board to work with us to find a solution that does not result in the loss of Seattle Latvian Church and Community Center. Please help us to keep our heritage alive for future generations and to not let everything my parents' generation worked for to be in vain.

Thank you,

Anita Iles
8509 57th Ave E
Puyallup WA 98371

From: Sarmite L <sarmite21@yahoo.com>
Sent: Friday, September 20, 2013 11:11 PM
To: Lynnwood Link DEIS
Subject: Light Rail Extension

To whom it may concern,

All people of Baltic descent - Latvians,Lithuanians and Estonians living in this area are deeply interested in preserving the Latvian Community Center. All our everyday activities are connected with the Community Center. We had and have invested much effort in creating,building and preserving it.

I-413-001 My request for Sound Transit is to keep the Center in its present location and ensure its operation in future.

Yours faithfully,
Sarmite Lunde
116 NW 55th Street
Seattle,WA 98107

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I-413-001

Thank you for describing the importance of the church and center to your family and the Latvian/Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Ints Luters <iluters@me.com>
Sent: Sunday, September 22, 2013 10:02 AM
To: Lynnwood Link DEIS
Subject: Draft eis comments

The proposed impacts to the Latvian Community Center and church are not acceptable. The Latvian community in Seattle has had to suffer being uprooted from their homeland, then again uprooted from their original community center for "the public good" by the city of Seattle and is now under threat from wsdot and sound transit to be uprooted yet again.

I-414-001 The at grade alternative eliminates our access, reduces parking and condemns the caretakers residence while the elevated alternative transforms the entrance to our church and community center into an environment not unlike that under or adjacent to the elevated section of SR 99 through downtown. Neither of these are acceptable. The at grade alternative could be acceptable if through the adjacent condemned properties, the Latvian Community Center and church could be provided a new access, a new caretakers residence, parking, bike or transit support.

I-414-002 The elevated alternative could only potentially be acceptable if the elevated rail section were routed further west, maybe between the I-5 though lanes and the northbound northgate way on ramp/NE 130th street off ramp merge lanes. That might put it far enough west to avoid impacts to the Latvian community center, church and other adjacent properties. Please consider this as a potential solution to minimize impacts to the Latvians and other residents along this section of the light rail extension.

I-414-003 As the project moves forward, I expect that wsdot and sound transit will keep our community informed and seek our input on the design as the project moves ahead. Instead of simply asking us whether the visual and other environmental impacts are acceptable, why not engage and involve us in defining some of the aesthetic opportunities that might present themselves to reflect our culture and heritage within the actual design along this section of track. Form liner patterns are an example of something that could reflect our rich heritage to both riders of light rail and possible travelers along I-5.

I-414-004 The proposed alternatives both have impacts that have the potential to fatally affect our Latvian community and the greater Baltic community of Seattle and the northwest. Our community has to struggle to maintain our cultural identity and to convey our heritage to our children. We expect that the public agencies who are responsible for the Lynwood light rail extension will ensure that their project does not compromise our future and our children's futures.

Sincerely,
Ints Luters and the Luters family

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I-414-001

Thank you for your concerns about the potential displacement of the Latvian Evangelical Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. The Preferred Alternative realigns the access road, which would also provide the opportunity to maintain adequate parking supply.

I-414-002

The potential for this approach was reviewed during early planning described in Chapter 2 of the Draft EIS. I-5 lacks the available median in this section of the freeway to accommodate light rail and construction impacts would be higher; relocating lanes would also be more impacting than the currently proposed alternatives. This is consistent with the review of potential alignments described in Chapter 2 and it reflects the results of the compatibility report developed in collaboration with WSDOT. The elevated alternatives require a similar amount of land on the west side of the church parcel, but they would not need to realign the road.

I-414-003

Sound Transit will continue to involve the church and the community as design for the project progresses.

I-414-004

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church.

From: Imants Virsnieks <imantsjv@gmail.com>
Sent: Saturday, September 21, 2013 6:01 AM
To: Lynnwood Link DEIS
Subject: Save the Latvian Church

I-415-001 Save the Latvian Lutheran church. The church has provided continuity for Latvian in culture. It is just as important now as it was during the Cold War. Perhaps even more so. Now that Latvia is free country once again the members of the church and their children can travel there and use their language and experience their culture. This is especially important for the children who went to Latvian school at the church. Now with the added incentive of visits to a free Latvia the children and grand children can in turn raise their children to be bilingual in English and Latvian. They are in a a unique position to appreciate freedom, democracy and self-determination .

Imants Virsnieks
PO Box 7937
San Diego, Ca 92167

Imants

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I-415-001

Thank you for describing the importance of the church and center to the Latvian/Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Shane Hope <SHope@ci.mlt.wa.us>
Sent: Monday, September 23, 2013 5:16 PM
To: Lynnwood Link DEIS
Subject: DEIS comment

I-416-001

Good info in the DEIS. For the B section of Lynnwood Link, I support Alternative B2 or B2A. It will support the most ridership and transit-oriented development. A station on the east side of the Transit Center at I-5 and 236th Street is a priority for maximizing the use of light rail and ridership opportunities in this area. This is consistent with Alternatives B1, B2 and B2A. Aligning the rail line so that a future station is possible at 220th and I-5 is also wise; this can happen under Alternative B2 or B2A. More ridership is possible with transit-oriented development near both stations than is currently acknowledged in the DEIS.

Shane Hope, AICP
Community & Economic Development Director
City of Mountlake Terrace
6100 219th St SW, Suite 200
Mountlake Terrace, WA 98043
425.744.6281
email: shope@ci.mlt.wa.us
website: www.cityofmlt.com

I-416-001

Thank you for your support of the B2 or B2A alternative. A station located on the east side of I-5 adjacent to the Mountlake Terrace Transit Center is the Preferred Alternative. Section 4.2 continues to show the transit center station as having higher TOD potential than the freeway station. The Final EIS evaluates a 220th Street SW Station as an option to the Preferred Alternative.

From: Daiva Dambrauskas <daivad@outlook.com>
Sent: Monday, September 23, 2013 10:04 PM
To: Lynnwood Link DEIS
Cc: Daiva Dambrauskas
Subject: Appeal to preserve Latvian Center in Sound Transit Expansion

Dear Sound Transit Decision Makers,

I-417-001 My name is Daiva Dambrauskas and I am a member of the Lithuanian-American Community of Seattle. I am writing today to ensure the continued lifeline of the Latvian Center which is under threat from the future Lynnwood rail link.

The Latvian Center has played an important part of preserving my own heritage and connecting me with others of my Baltic heritage (Lithuanians, Latvians and Estonians). Fourteen years ago I moved to Seattle from Chicago for a career opportunity. When I moved here, I knew all of one person in Seattle. Aside from this one friend, I did not know anyone of Lithuanian or Baltic heritage. A few weeks after my move to Seattle, I attended the Lithuanian Independence Day celebration at the Latvian Hall. It was at this event in the first few weeks of moving to Seattle where I met new lifetime friends who shared my heritage. Since that fateful day of attending the event at the Latvian Hall, I have worked with the Baltic Community at this site to host the St. Martin's Eve fundraising event for the Baltic Studies Program at the University of Washington as well as attend other Baltic Community Events.

Additionally, I write to express the unwavering need that the Latvian Center continue to be open during construction. Without the facility, these communities lack a space to meet for events that are hosted here: the Saturday school, the independence day celebrations of these three small nations, the St. Martin's fundraising event, church services,folk dancing and folk singing practices for the respective groups...the list continues one. Coupled with keeping the Center open also means that activity to mitigate the impact of construction; we will need access and parking and that power, lighting remain intact.

The Latvian Center in Seattle is unique and special in so many ways. I know of no other Baltic center in the United States that consistently supports all three Baltic communities. Seattle is a special place that has welcomed all three nationalities and enabled them to flourish under one roof, in one location. Any relocation or threat to the Latvian Center means a threat to all three cultures, all three communities and diminished access to a center of cultural importance.

Regards,
Daiva Dambrauskas
Seattle, WA
206-484-8172

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I-417-001

Thanks for describing the importance of the church and center to the Latvian/Baltic communities. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. Access to the church and community center will be maintained during project construction.

From: Nancy Andvik <andvik@wavecable.com>
Sent: Monday, September 23, 2013 10:12 PM
To: Lynnwood Link DEIS
Subject: Latvian Center

Importance: High

I-418-001

Dear Sound Transit,

The Latvian Center has been an important part of my life for over 20 years. Because of the Center and the communities it is home to (The Lithuanian, Latvian, and Estonian communities) the University of Washington has a Baltic Studies Program with a teaching staff. It is through activities at the center for over 20 years that this program has come into existence and receives continued support.

The Center provides on-going educational opportunities for university students, families, community members, and the public. Without the Latvian Center, these opportunities to gather in one consistent location would not be possible. The Center is a church and provides a wide variety of services.

My life-connection to friends both at the Latvian Center and in the Baltic countries is a direct result of the activities at the Center.

I urge you to keep the center open during construction phases, preserving parking access and the continuation of the Center as a facility after the construction is complete.

Sincerely,
Nanci Andvik
Lithuanian and Estonian Community Member
Seattle, WA 98125
andvik@wavecable.com

I-418-001

Thank you for describing the importance of the church and center to the Latvian/Baltic communities. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. Access to the church and church hall will also be maintained during construction.

From: Daiva Dambrauskas <toothwart2@hotmail.com>
Sent: Monday, September 23, 2013 10:22 PM
To: Lynnwood Link DEIS
Subject: Please respect and preserve the Latvian Center of Seattle

Hello,

I-419-001 I am writing this email to express the importance of respecting and preserving the Latvian Center of Seattle during the upcoming Sound Transit rail link construction to Lynnwood.

Though I am not Latvian, I am Lithuanian and I know what it means to have your place of worship and cultural heritage threatened and, ultimately, extinguished by outside forces. I am not speaking of the experience of my parents who fled their native country to escape Soviet rule, but rather the struggle and ultimate closure of my own Lithuanian parish and school in Gary, Indiana. Since the closure of my parish and the school where I learned to read and write in my parent's native language, the Lithuanian community there has lacked a place to meet and experienced a slow and painful dissolution.

Having personally experienced the loss of my own cultural center, I fear that the outcome to the Latvian Center will also be one of dissolution. Creating and allowing easy access to the Center during construction will enable all of the users a place to meet and continue their social, religious and cultural events. Don't do to the Latvian Center as other outside forces have done in other places in the US and caused the dissolution of a community and heritage in the name of progress. This truly is a Baltic center with all three heritages utilizing the facility.

If the Latvian Center should close or be moved, the displacement will be to all three heritages and communities and to a center that is one of a kind not just in the Pacific Northwest, but in the United States.

Regards,
Daiva Dambrauskas

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I-419-001

Thank you for describing the importance of the church and center to the Latvian/Baltic communities. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: jdubman@gmail.com on behalf of Jonathan Dubman <jon@dubman.com>
Sent: Monday, September 23, 2013 10:26 PM
To: Lynnwood Link DEIS
Subject: In favor of B2A for Segment B

I-420-001

For Segment B which includes Mountlake Terrace, I'm writing to support alternative B2A, which serves both the Mountlake Terrace Transit Center and the "optional" station at 220th Street SW.

The Mountlake Terrace Transit Center is a significantly better station location than the Mountlake Terrace Freeway Station (alternative B4), due to its proximity to the business district of Mountlake Terrace, designated a Town Center in the city's official comprehensive plan.

The importance of the freeway station location will diminish over time as Link is extended to the north. The Mountlake Terrace town center, in contrast, will become increasingly important over time to this growing community that has been especially proactive in imagining a better future for its downtown. As it stands there is a bit of a walk between the transit center and the true town center; the location in the freeway median is too indirect for a significant population, especially the less abled, to consider "walking distance" from the town center, thus severely diminishing the synergies that town center will hopefully feel with the region at large once this Link connection is constructed.

Meanwhile, it would not make sense to omit a station at 220th St.SW, This area already has strong employment density and has the potential for significant residential and employment growth over time. This location is one of the points where I-5 and SR 99 are closest. Without a station at 220th St., a very long stretch would be underserved by Link, and a station there will yield many long-term benefits.

thank you,
Jonathan Dubman
2014 E Calhoun St.
Seattle, WA

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I-420-001

Thank you for your comment stating your preference for the B2A alternative with the Mountlake Terrace Transit Station and 220th Street SW optional station. The Preferred Alternative is based on Alternative B2, but has an option for a 220th Street SW Station.

From: Paul & Geni <paulfao@earthlink.net>
Sent: Monday, September 23, 2013 10:30 PM
To: Lynnwood Link DEIS
Subject: Impact on Latvian Center with Light Rail

I-421-001

I am a long time member of the Seattle Lithuanian Community. We have had many opportunities to use the Latvian Center over the years. We have been able to participate in weddings, funerals, fund raisers, cultural events, Lithuanian events, Latvian events, events including all three Baltic countries, and fundraisers for the programs at the University of Washington. The Latvian center is a special facility for us since it houses a chapel, a main hall with a stage and kitchen, and classrooms downstairs. My request is that during the construction of the rail line, that the center be allowed to stay open for us to use for our regularly scheduled events. It seems that an at-grade line would make the least amount of impact on the center. If we were to lose the use of the center, I don't know where we could go that would replicate what we have with the main hall, stage, kitchen, etc. I worry that the relocation of the center would be next to impossible for all of us who use it. The Latvian center was built at a time when economically, it was easier, and there were donation monies and labor that would not be available in this current day.

The Latvian Center is the focal point for all of the three Baltic Communities that use it. I hope that Sound Transit will do all in its power to see that the center stays open in the future and functions as it does today.

Geni Orrico

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I-421-001

Thank you for describing the importance of the church and center to the Latvian/Baltic communities. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Didzis Beitlers <didzis3d@gmail.com>
Sent: Monday, September 23, 2013 10:42 PM
To: Lynnwood Link DEIS
Subject: About the Latvian Hall.

To whom it may concern:

I-422-001 Please do your best to find a solution that works for both the rail line and to keep the Latvian hall operable. There won't be another one like this one put up in its place. The Latvians who came here during WW2, built it with their bare hands. If the hall is lost, so is a little part of Seattle's soul!

Sincerely,

Didzis Beitlers

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I-422-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: g.rauda@comcast.net
Sent: Monday, September 23, 2013 10:49 PM
To: Lynnwood Link DEIS
Cc: melissarauda@comcast.net
Subject: Light Rail

I-423-001

To whom it my concern,
I am a member of the Latvian Center next to I-5 that will be impacted by the extension of the Light Rail to Lynwood. I support Light Rail, but would it be possiblevery much appreciated if you could come up with a plan that would not disrupt or eliminate the Latvian Center.
I personally went to Latvian School in this building until the 10th grade. I was confirmed at the Latvian Church in 1980. I danced in the Latvian fold dancing group from 1988 - 1993. My son goes to the Latvian school for the past 3 years and will be going for the next 6years hopefully. I have a 22 month old who will start going to the preschool starting next year. My mom had here 80th birthday party at the Center. My grand parents and my fathers Memorial service was held at the Latvian Church/center.
Beyond a personal story, Seattle is enriched culturally by the presence of the Latvian community. There are only 2 million people in the entire world that speak the Latvian language. It is considered possibly the oldest spoken language in Europe. The other 2 ancient ethinc groups from Europe are the Lithuanians and Estonians. They also use the Latvian center for their community events. Seattle has bragging rights. The only University in the world that teaches Latvian, Lithuanian and Estonian is the University of Washington. That would not have been possible without a strong Baltic community.
Please work on a solution that will not disrupt the Latian Center.
Thank You
Gunars Rauda
5829 5th NW
Seattle WA 98107
206-781-7206

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I-423-001

Thank you for describing the importance of the church and center to you and the Latvian/Baltic communities. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Steve Beland <stevefay2001@yahoo.com>
Sent: Monday, September 23, 2013 11:44 PM
To: Lynnwood Link DEIS
Subject: Draft EIS Comments

Sound Transit:

I-424-001 Thank you for the opportunity to comment on your Draft EIS. I am enthusiastic about the light rail extension and would like for it to proceed once the implantation details are vetted with the community. Regarding the particular light rail route, I would like a stop in Shoreline near NE 175th or NE 185th Streets.

I-424-002 However, an existing transit operational deficiency in the area along this route needs to be considered in this EIS. With this route crossing county borders, particularly with each county served by their own bus transit systems, I am concerned that the overall transit plan overlooks the potential benefits of merging the 2 county's separate bus transit systems into a single entity. From the perspective of a reverse-commuter and one who works at a facility with the world's largest building and a huge commuting workforce, the regional transit is woefully inadequate today, and the alternatives in the draft EIS do not appear to address this shortfall or its role in the future. I live in Lake Forest Park and work at Paine Field in Everett. This deficiency should be addressed as an alternative in the EIS for a more technically complete comparison, and beyond just a what-if study, it could provide seamless bus service to greatly serve the community and reduce traffic growth with minimal incremental cost.

Such a single regional bus transit agency would realize efficiencies, provide missing cross-boundary transit services, and allow reallocation of existing labor and equipment resources. Specifically, this merger would include the Transit portion of Metro, Snohomish County's Community Transit, and perhaps Pierce County's Pierce Transit all under Sound Transit. Some cities have small transit services (e.g. Everett Transit) that may or may not join this merger but may readjust their routes to complement a re-organized regional transit authority.

This proposal comes from seeing nearly an estimated hundred or so empty dead-heading Community Transit (CT) or Sound Transit (ST) buses per week along my commute between Lake Forest Park and Everett, with the frustration that they are taking a route very close to my commute and I can't ride them! These are not just small buses, but the newer double-length or double-decker buses. Metro provides service toward Seattle and a milk-run towards Bellevue, but no service along the heavily traveled I-5 corridor, and certainly nothing worthwhile into Snohomish County. The CT and ST buses deadhead northbound in the morning out of Seattle and the Eastside to their two parking bases within a short walk of the Boeing plant with thousands of workers who commute from King County in their cars working in one concentrated location with virtually no transit service because of the jurisdictional boundary of the county line. In the afternoon, this process reverses with many buses deadheading south into King County. One of the subject CT bus facilities is at Kasch Park a couple blocks south of the main factory and the other is east of the engineering office buildings and buses pass through the main intersection that is closer to the building than most people can park their cars.

CT's goal is understandably to get Snohomish County residents into King County in the morning and back in the afternoon so stopping for other riders (like me) who live and pay taxes in King County is not in their direct interest and would slow down their buses' return to fetch more of their residents. Meanwhile, those of us within a couple miles of the county line in north King County live in a no-man's-land of bus practical service. Sure, Metro offers a small number of "custom buses" early to support a small number of factory workers but these are expensive because they go out of King County, run infrequently and are too early for many workers thus are not a viable commute approach for anyone needing the slightest flexibility in their work schedule. This leaves people in my situation not getting served despite paying taxes to support both Metro and Sound Transit.

In my daily commute of about 25 minutes each way, I'd estimate that I see nearly a hundred empty dead-heading buses each week (about 10 each way, 5 days per week = 10 x 2 x 5 = 100) so I'd estimate there are a more such dead-heading buses if I were to extrapolate my 25 minute commute samples out over the whole peak commute times. Although some ST buses occasionally have passengers, they are operated by CT with overlapping objectives thus not realizing their full potential as a regional transit solution.

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I-424-001

Thank you for your comment stating your overall support for the Lynnwood Link Extension project and a preference for a light rail station at NE 185th Street. No transit station is being proposed at NE 175th Street. Please see Section 2.5.1 for a description of the alternatives and especially look at Table 2-1a. A station at NE 175th Street was previously considered, as described in Table 2-3.

I-424-002

Thank you for your perspective on regional transit service. The merging of transit agencies is not within the scope of this study; however, Sound Transit will work with King County Metro and Community Transit to develop/refine transit integration and detail service plans as this project progresses.

I-424-002 Merging these agencies would remove the jurisdictional boundaries along the county lines, which today are nothing more than arbitrary lines as far as commuters are concerned in our regional economy. All of these empty bus trips each week could be re-allocated to meet our growing transit needs and alleviate freeway traffic. Many more commute trips could be accommodated with no additional operating expenses for drivers or maintenance, and no new capital expense for buses. In much the same way that airlines or other companies merge to achieve efficiencies, such a merger of these constrained county agencies into a single agency is overdue.

For my commute, I would like to simply board a frequently-running bus at the new mid-freeway Mountlake Terrace Transit Center at SE 236th Street (which sadly is not used as it could be) and take it all the way to either Kasch Park or the intersection near the engineering buildings (but hopefully not nearly as many of these buses would be dead-heading any longer). I could reverse this process in the afternoon and even ride my bike between the transit center and home when the weather is cooperative.

Sincerely,

Steve Beland
1847 NE 180th Place
Lake Forest Park, WA 98155
email: stevefay2001@yahoo.com

From: Meghan MacKrell <gertruderocks@gmail.com>
Sent: Monday, September 23, 2013 11:54 PM
To: Lynnwood Link DEIS
Subject: DEIS comments in support of a 130th street station

I-425-001

To Whom It May Concern,

I am writing to support a light rail station at 130th Street in Seattle as part of Lynnwood Link, with or without a station at 145th Street. These are the only options under consideration that allow for frequent and direct bus connections to the Bitter Lake Hub Urban Village and the Lake City Hub Urban Village in Seattle. These hub urban villages are an integral part of Seattle's Comprehensive Plan, which itself is integral to the implementation of Washington State's Growth Management Act, an act which also guides Sound Transit.

These urban areas are well established and fast-growing multi-use urban areas. They are served today by bus lines along their principal arterials (SR 99 and Lake City Way), including Sound Transit's own Express route 522, but these buses do not connect with Link, and these intensifying commercial and residential mixed-use neighborhoods lack good transit connectivity to the rest of the destinations on the Link system.

Neither 130th nor 145th has excellent transit-oriented development opportunities due to the effects on the walkshed of I-5, major arterial streets and nearby parks, which is all the more reason why bus connections are so critical at this location. Even if Seattle and/or Shoreline are willing to intensify development around 145th Street, that location is too far north to directly connect the centers of these two northerly urban hubs with connecting bus service without adding travel time and permanently boosting operational expenses. Traffic related to I-5 would impede reliability of east-west bus connections at 145th Street.

An added benefit of a bus line connecting Bitter Lake and Lake City to Link via the 130th Street Link station is the improved direct bus connection that will be created between these two urban hubs, a connection that is lacking today. A crosstown route in this area would create transit synergies via the network effect, given existing and planned transit investments along SR 99 and Lake City Way.

There may be reasons to site a station in the vicinity of 145th Street, but if there is insufficient will or funding to create a station at both 130th and 145th Streets, 130th should take priority due to its proximity and better transit connection opportunities to the largest urban hubs in the northern section of the City of Seattle.

Thank You,
Meghan MacKrell
6387 NE Radford Drive
Apt. #4124
Seattle, WA 98115

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I-425-001

Your support for a 130th Street Station is noted. However, Sound Transit anticipates the Northgate and the NE 145th Street Stations would also be accessible to transit connecting to Bitter Lake, and Lake City hub urban villages, based on initial planning for transit integration between Sound Transit and King County Metro. The 130th Street Station is included as an option being considered in the Final EIS for the Preferred Alternative.

From: Armand J. MacMurray <armandjohn@earthlink.net>
Sent: Tuesday, September 24, 2013 12:09 AM
To: Lynnwood Link DEIS
Subject: comments on Lynnwood Link Extension Draft Environmental Impact Statement

My comments relate to the impact of the Link extension on the Latvian Lutheran Church, school, and community center complex at 11710 3rd Ave Ne Seattle, WA 98125 (abutting the east side of I-5 between NE 117th and NE 120th St.

I-426-001 The proposed Link extension route passes through the west side of this property, removing the access road and requiring demolition of the caretaker's house. However, I strongly urge that the *entire* property NOT be taken for Link use. The church and community center are a reflection of the diversity of the Puget Sound area population, and serve important community enrichment and civil society functions *in situ* in the Northgate area. It would be difficult to recreate these social benefits at reasonable cost elsewhere, in part due to the relatively large size of the parcel and functions performed there, and in part due to the central and accessible current location.

I-426-002 In order to preserve the important and valuable civil society functions of the Latvian church/community center complex, I urge that Sound Transit make the following mitigations regarding the property:
1) Build one of the elevated options of Link north of 117th St (i.e. A3, A7 or A11).
I-426-003 2) Mitigate the train noise from the elevated section with a sound wall shielding the property to the east from train noise; make additional mitigations to the tracks, train speeds, etc, as necessary to further reduce noise.
I-426-004 3) Provide an alternate access driveway to the complex, either from adjacent properties to the southeast or northeast.
I-426-005 4) Compensate the center for taking the caretaker's house by building or paying for a new caretaker's house on or adjacent to the property.

Thank you for your consideration,
Armand MacMurray
1753 NW 57th St, #304
Seattle, WA 98107
armandjohn@earthlink.net

I-426-001
Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. A portion of land on the edge of the church property would still be acquired for the Preferred Alternative and other at-grade alternatives and the caretaker's house would need to be relocated.

I-426-002
While elevated options remain under consideration, the Preferred Alternative is at-grate, but avoids displacing the church.

I-426-003
The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below FTA criteria. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Noise walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, if existing WSDOT noise walls are removed as part of the project, they will be replaced.

I-426-004
The Preferred Alternative redesigns the access street to the south.

I-426-005
Please see the response to comment I-426-001. Sound Transit would provide for the relocation of the caretaker's residence. As noted in

Section 4.1, any acquisition of property would involve compensation to the property owner in accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970; the Washington State property acquisition policies and procedures in Chapter 8.26 Revised Code of Washington (RCW); and Sound Transit's adopted Real Property Acquisition and Relocation Policy, Procedures, and Guidelines.

From: Gleb S <tallgleb@hotmail.com>
Sent: Monday, September 23, 2013 9:54 PM
To: Lynnwood Link DEIS
Subject: Please consider the following when choosing C1/C2/C3

Please consider the following when making a decision regarding the Lynnwood Light Rail C1/C2/C3 route alternatives.

I-427-001 It is well-known that the C1 alternative would (negatively) affect residential neighborhoods, along with the people who live in them. It is very difficult to put a price on the hardship caused by moving from a place you love, a place you call home - a place you chose to live because of its tranquility, beauty, and the quiet and serene setting. It is also fair to say this would be the case for many. Therefore it would not make any sense to assume that ***some would purposely look forward*** to the unneeded and unnecessary intrusion of the Light Rail Link to snake through our neighborhood, and displace many residents if the C1 alternative is chosen. Yet this is precisely the case!

The C1 alternative, if chosen - will seek to acquire the Cedar Creek condominium complex to make way for the Light Rail Link. This is a privately-owned complex, one that many of us call home, and one that would be acquired in its entirety. It would be logical to think that all the people who live in the Cedar Creek condominium complex would be firmly against the C1 alternative from being chosen. Yet a very small number of residents, ones who reside here, and call this place home - are for the C1 alternative. Why do you ask?

We all know that in 2008, our economy suffered a tremendous negative growth. It was at this precise time that some of these people bought units in the Cedar Creek condominium complex. Naturally, prices paid were much higher than the actual value of the units, and after a few years, these units were labeled as "under water" (price paid is less than what it is worth now.) When Sound Transit released the C1 alternative as one of the possibilities - these people saw the C1 alternative as a way out of their poor financial choice. I find the fact that these people would choose the C1 alternative only because Sound Transit would offer to purchase their units utterly unethical, extremely selfish, and simply inhumane.

I-427-002 The vast majority of our community is against the C1/C2 alternatives since they so negatively affect us, our beautiful and beloved Scriber Creek Park, and the overall tranquility of our serene neighborhood. The vast majority of our community therefore wishes for the C3 alternative to be chosen by Sound Transit Board. We have more than 1800 signatures to show this to be the case. It is therefore only

I-427-001
Thank you for your comment stating your opposition to Alternative C1 due to displacement. Please see Section 4.1 for details on mitigation.

The Preferred Alternative evaluated in the Final EIS is a modified version of Alternative C3, which would avoid displacing residents at the Cedar Creek condominiums. However, if Alternative C1 is selected to be built, Sound Transit will compensate property owners affected by the project; see Section 4.1 of the Final EIS for property acquisition mitigation.

I-427-002
Thank you for your comment stating your opposition to the C1 and C2 alternatives due to the adverse effects on Scriber Creek Park, displacement of adjacent residents, and intrusion into the heart of the neighborhood.

I-427-002 natural for me to ask you not to consider the comments of these people for any financial gain reasons they may forecast. If there are any valid reasons they have for the C1 alternative, consider them instead.

Sincerely,

Gleb Shein
tallgleb@hotmail.com
253-951-1812

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: GUNDEGA ABOLTINA

ADDRESS: 1145 B N 91st St

CITY: Seattle STATE: WA ZIP CODE: 98103

EMAIL ADDRESS: aboltina@aol.com

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-428-001

It is really painful that with Lynwood Link Extension just a straight line is made without regard to destroying the Community Center and the Church for all the Baltic countries (LATVIA, Lithuania and Estonia). They already have a painful road in history – so, the center served as a connection to their countries, culture and kids were able to learn the language and rich history and culture.

SOUNDTRANSIT
RIDE THE WAVE

I-428-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: karen andersen <andkin4@yahoo.com>
Sent: Monday, September 23, 2013 2:47 PM
To: Lynnwood Link DEIS
Subject: Fw: Lynnwood Link

To Whom it May Concern,
I am a resident of South Lynnwood one block west of the proposed Lynnwood Link route for C1 and C2. I am opposed to these proposed routes for the following reasons;

I-429-001 C1: - C1 is the most invasive and disruptive route of the three. It would take out far too many homes, displacing many Lynnwood residents. This route would completely change the dynamic
I-429-002 of quiet neighborhoods, and potentially ruin an F4 designated wetlands.

C2- - C2 is even more harmful to the valued wetlands and park. This plan would destroy the wetlands and endangered wildlife. The park would never return to it's current pristine condition.
I-429-003 It would also bring the train through quiet neighborhoods needlessly and take out a large engineering complex which employs over 100 employees.

I-429-004 C3- Is definitely the least damaging route for the local residents and the wildlife of the wetlands not to mention keeping the spirit of Lynnwood conservation alive. You see we are more than just a mall and a freeway exit. We are a thriving harmonious group of diverse neighborhoods, small businesses, ethnic restaurants and civic minded people.

I urge you to select option C3 as the route for the Lynnwood Link.
Thank you.

Devv Anderson
5308 202nd Pl SW
Lynnwood, WA 98036
206-261-4605

I-429-001
Your opposition to Alternatives C1 and C2 is noted.

I-429-002
In Segment C, Alternative C3 and the Preferred Alternative would have the least impact on the Scriber Creek wetland complex. Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts on environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure no net loss of ecosystem function and acreage as a result of agency projects.

I-429-003
Comment noted. Section 4.4 of the Final EIS evaluates the project's potential impacts on neighborhoods. Section 4.1 discusses potential displacements.

I-429-004
Thank you for your comment stating your preference for Alternative C3.

From: cinesea@comcast.net
Sent: Monday, September 23, 2013 1:48 PM
To: Lynnwood Link DEIS
Cc: chadr@komotv.com; cinesea@comcast.net
Subject: 145th/155th station

I-430-001 After talking with a few neighbors, we submit that a light rail station at 145th would be better than one at 155th Street. But, we do NOT want a parking garage built at either site as it would be extremely disruptive to the flow of traffic throughout our neighborhood. We believe that Sound Transit should NOT be building parking garages--they should be focusing on public transportation, NOT private automobiles. Instead of spending millions of dollars to buy land, force people out of their homes and build a massive concrete structure, that money would be better spent improving and expanding bus services to the light rail station. If someone feels they need to drive to a light rail station, then they can freely drive to Mountlake Terrace or Northgate and catch the light rail there.

I-430-002 Whatever station is built, we also feel it is important to design it in such a way that there are easy and quick connections to bus routes. Having to walk too far in the wind and rain to transfer would make many people not want to take the time for public transportation.

I-430-003 Again, we stress that we do NOT want a parking garage in the Ridgecrest neighborhood and will actively campaign against it as well as any city council member who advocates for it.

Thank you.

Your Ridgecrest Neighbors

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I-430-001

Your preference for a 145th Street Station is noted. The proposed station with a parking facility addresses a need for good multi-modal access serving the needs of the region as well as local communities.

I-430-002

The station includes areas for efficient connections to transit routes feeding the station. Multimodal connections to stations will be refined in coordination with partner transit agencies and local jurisdictions in the Final Design phase of the project. Appendix F of the Final EIS contains the conceptual plans for the project.

I-430-003

Your opposition to a parking garage is noted.

From: Dennis Barrett <dennisbarrett@q.com>
Sent: Monday, September 23, 2013 12:44 PM
To: Lynnwood Link DEIS
Subject: Proposal of NE !45th Station

Planners,

I-431-001 Any combination of sites that would include 145th, is a waste for Sound Transit. A station there would fail from the start and then negatively impact other stations and ST in general. This I5 on/off corridor is already an over worked location and adding ST, Metro and mass parking will not change that location as the #1 choice for most north east (Lake Forest Park, Kenmore, Bothell, N. Kirkland) commuters that want to drive south on I5.

Please contact WADOT for their input concerning this site.

Thank you.

Dennis Barrett
206 364 1188

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I-431-001

Thank you for your comment stating your opposition to a light rail transit station at NE 145th Avenue. Traffic analysis was conducted for the operations of local streets for multiple modes of transportation. Section 3.2 of the Final EIS evaluates potential adverse effects the light rail transit station would have on highway access, local street capacity and level of service, and pedestrian and bicycle facilities. Where negative impacts would affect any of these modes of transportation, mitigation measures have been proposed in Section 3.6 to ensure there would be no deterioration in operations compared to future No Build conditions.

From: Ryan Basile <ryanbasile@gmail.com>
Sent: Sunday, September 22, 2013 6:51 PM
To: Lynnwood Link DEIS
Subject: Sound Transit DEIS / Comments c/o Lauren Swift

Dear Sound Transit Board members,

I-432-001

Hello. I am very excited for the light rail system and the ability to walk to a light rail station from my house. I do have legitimate concerns over the Shoreline City Council's recommendation for the light rail station and parking structure to be placed at 145th St. (SR-523) and I-5. The Shoreline City Council is not discussing the reality of the conditions of traffic on 145th Street, or the 130th/155th St. options with WSDOT, Sound Transit, or the community.

The intersection where it would be placed (145th St. NE and I-5) is already a highly congested area. According to WSDOT, the intersection and the stretch of NE 145th St. surrounding it is already, in their words, over-capacity. Adding another destination focal point can only cause more congestion.

There are a couple of contributing factors to this, including, but not limited to:
* It is the only complete set of I-5 on and off-ramps between Northgate and 175th St. NE.
* There is minimal queuing area for the cars to enter the I-5 on-ramps. Which creates backups on 145th St. east and west of the intersection and in-between on the overpass bridge. This, in turn, creates backups on the I-5 off-ramps.
* It is a main arterial to I-5, that receives the bulk auto traffic not only from Shoreline neighborhoods, but also from Haller Lake, Greenwood, Aurora, Lake City,Bothell, Woodinville, Pinehurst, Lake Forest Park, Kenmore, and east-side traffic.
* According to WSDOT, traffic increased 11-15% on NE 145th St./SR-523 after the 520 bridge was tolled and people started using it as the connector around the north-side of the lake to I-5.

Currently, 145th St. east and west of the I-5 intersection during morning and evening rush-hour has two-lane 1/4 to 1/2 mile backups of cars waiting to go northbound and southbound onto I-5. One of the major problems is there is no good way to mitigate the issues of a light rail station on 145th. Some of the ideas floated are:
* Add complete sets of off and on-ramps at 130th and 155th St, to reduce the influx of vehicles that use 145th. St solely for the purpose of I-5 access. (which WSDOT says it will not do)
* Acquire hundreds of folks properties to widen the 145th arterial, in some instances this would place a state highway within feet of Seattle and Shoreline folks' front doors, or directly in the path of current homes. There is also current infrastructure and or protected spaces in the immediate vicinity, such as a pumping station, Thornton Creek, and the Jackson Park Golf Course.
* Add direct on and off-ramps to the station and parking structures from I-5.

I-432-002

When I asked the Shoreline City Council how they plan to address this, or if they have worked with WSDOT to address these concerns, I receive blank stares and replies along the lines of "WSDOT will mitigate any issues". When I asked WSDOT if they had an official position, they said they had not released one but would be more than happy to talk to Sound Transit about the facts. I encourage you to speak to the WSDOT planners and employees who control this area.

I-432-003

I have been to multiple Ridgecrest community meetings, and to the majority of the folks in the effected neighborhoods it makes much more sense to have the proposed two stations at 130th St. and 155th St. Some contributing factors supporting this are:
* The already over-capacity and congested NE 145th St. arterial.

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I-432-001

The Draft EIS included the results of the traffic analysis conducted for the operations of local streets for multiple modes of transportation, including at NE 145th Street, along 5th Avenue NE, and the on and off ramps and adjacent sections of I-5. Several of the alternatives, including the Preferred Alternative, revise the on-ramp and include features to help move traffic through the area and address queues. This includes turn lane additions, intersection modifications, and new signalized intersections. Section 3.2 of the Final EIS defines the potential adverse effects the light rail transit station alternatives would have on highway access, local street capacity and level of service, and pedestrian and bicycle facilities. Where negative impacts would affect any of these modes of transportation, mitigation measures have been proposed in Section 3.6 to maintain operations at least as good as No Build operations. The analysis does not reveal that the project would notably alter operations on I-5 or increase the volume of vehicles using the I-5 on or off ramps, in part because the interchanges in this area are limited, and because a potential transit patron trying to access light rail via I-5 would have other light rail stations closer to where they would start or end their trip.

I-432-002

Sound Transit and FTA have been working with WSDOT, Shoreline, and area agencies since the start of early scoping for the project alternatives analysis in 2010. WSDOT is a cooperating agency for the Lynnwood Link Extension project and has been extensively involved. As a cooperating agency, WSDOT has jurisdiction by law or special expertise with respect to transportation related impacts involving the interstate.

I-432-003

Thank you for your comment providing a detailed list of reasons for your preference for new light rail transit stations at NE 130th and NE 155th Streets and your opposition to a light rail transit station at NE 145th

I-432-003

* 130th is an arterial from Greenwood/99 to Lake City, but currently does not have the congested traffic that 145th St. does.
*155th is an arterial from Greenwood (via turning into Westminster Way, which turns into Greenwood), Aurora/99, to 15th Ave. NE
* The more stations a mass-transit system has, the more people will have access to it, and more people will use it. The two stations, 130th and 155th St. would server a greater amount of citizens and provide access to more light-rail riders.
* Two stations will split the traffic, and if applicable, the parking between two stations.
* It will allow people to access the stations from 130th(125th&Roosevelt&130th), 145th, and 155th (All of which are East/West arterials).
* 155th St. and 130th St. both have designated bike lines. 145th Street does not have a bike line, and is not safe for bicycle traffic.
* 155th St. and 130th St. both have newer accessible sidewalks. The 145th St. and I-5 intersection is not very walkable, nor accessible. The sidewalks, where they exist, are not accessible.
* It creates easy light-rail access not only for the Ridgecrest and Parkwood neighborhoods, but also for Lake City, Pinehurst, Bitter Lake, Haller Lake, Olympic Hills,and Broadview.
* This will free up the East/West arterials for the crosstown bus routes to feed the stations.
* Less, if any at all property and homes would need to be acquired. The property around the proposed 130th St. and 155th. St. stations are owned by the municipalities.

If you can, please visit and observe the congested NE 145th St. and I-5 intersection during morning or even rush hour. You will see how wanting to place a light rail station at 145th St. is very troubling.

Thank you for your time.

Ryan Basile
921 NE 146th Street
Shoreline, WA 98155

Street. Please see Section 3.2 in the Final EIS for updated discussions of both long-term adverse transportation effects compared to the No Build Alternative and the updated list of potential mitigation measures in Section 3.6. Please note that the Preferred Alternative includes localized bicycle and pedestrian improvements, and safety and operational improvements.

From: Martin Berzin <mberzin@gmail.com>
Sent: Sunday, September 22, 2013 8:31 PM
To: Lynnwood Link DEIS
Subject: Save the Seattle Latvian Lutheran Church

To whom it may concern:

I-433-001

I am writing to you to in hope that the Seattle Latvian Lutheran Church and Latvian Center can continue to operate normally during and after the Lynnwood Link Light Rail construction.

I was born and raised in the Seattle area and grew up a part of the Seattle Latvian community. Due to my career and studies, I moved out of state and overseas for about 14 years and one of the primary reasons I chose to return to Seattle was due to its strong Latvian community. Both of my parents immigrated to the US after WWII and eventually settled in Seattle. My life revolved and continues to revolve around the Latvian center and church: I attended and graduated from our local Latvian school, attended Latvian church for as long as I can remember, danced for many years with the Seattle Latvian folkdance group Trejdeksnitis and even ended up marrying a Latvian from Latvia, who now lives with me in the Seattle area, along with our two young children, who both speak Latvian and attend Latvian school each week. I am part of the Latvian church's board and an active church member. The Latvian church and Center is a place of worship, learning and also a place to meet old and new friends.

I'm very concerned if the Center and church were to relocate as it could really impact my family's ability to participate in the Latvian community, especially if our commute increased significantly or if the new facility was not at least equivalent in size and quality as our current facility. Moving could eventually lead to the collapse of our Latvian community if other members aren't able to regularly participate in the church and Center's activities.

Our Latvian church and Center has already been forced to relocate once before and it seems hardly fair to ask us to relocate again, especially given the number of people who have chosen to live in the current location's vicinity and the extent the Center revolves around our lives. It has always bothered me that my parents could not christen me in our own Latvian church as I was born shortly before the current Latvian church was built and after the previous Latvian church was razed to make way for a park. My children were christened in our current Latvian church and I hope that when they have kids, they can elect to christen and raise their kids in our church as well.

I-433-002

As my family's life revolves around the Latvian church and Center, I feel strongly that we need to have uninterrupted access to the current location during and after construction of the Light Rail. I pray the train's path can be altered to avoid any impact to us, but if that's impossible, please build the train at grade level to minimize the impact (view, noise, hopefully vibration, etc.) to our Center's regular operation.

Thank you,
Martin Berzin
(425) 420-7495

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I-433-001

Thank you for describing the importance of the church and center to you and your family. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-433-002

Access to the church would be maintained during construction. The Preferred Alternative identified by the Sound Transit Board is at-grade adjacent to the church. The project will include design and mitigation measures to minimize visual impacts (Section 4.5 of the EIS). The project will include mitigation to reduce noise and vibration below FTA criteria.

From: Sandra Berzina <sandraberzina@live.com>
Sent: Sunday, September 22, 2013 8:36 PM
To: Lynnwood Link DEIS
Subject: Save the Seattle Latvian Lutheran church and Center

To whom it may concern:

I am providing my comments regarding Sound Transit's plans to build the Lynnwood link.

I've been living in the US for about 6 years and just returned from a trip home to Latvia and realized that I wouldn't feel as comfortable living here without our Latvian community that's been going strong for so many years mainly thanks to the Latvian Center and Latvian Church. It fulfills my need for Latvian culture and language, something that I never really thought about in the past. I've met a lot of friends at the Center – Latvians that were born here and those that have moved here from Latvia. Both of my children regularly attend the Latvian school and I hope that thanks to that they'll grow up truly bilingual. We have quite a lot of things happening in the Center throughout a year – several bazaars a year, different events during Christmas, Easter, Summer Solstice etc. Theater from Latvia visits our Center several times a year and that's especially important for me personally.

I-434-001 Losing the Latvian Center would really impact me and make it more difficult to feel at home here in Seattle as it's a big part of my life. Moving the Center to an inconvenient location would have a huge negative impact on our Latvian community as so many of us have chosen to live in the Center's vicinity and wouldn't be able to remain an active part of the community, which could lead to our Latvian community's eventual collapse. We need our Latvian church and Center to remain at its present location and have its doors open, even throughout the Light Rail's construction period. I'm really concerned that the dust, vibration, noise, access issues and view of the train (especially if it's elevated) will negatively impact our regular church and Center activities.

Thank you.
Sandra Berzina

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I-434-001

Thank you for describing the importance of the church and center to you. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the edge of the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describing the refined alternatives for Segment A; Section 4.1 describing the acquisition impacts; Section 4.4 describing impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including portions of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

Access to the church and center will also be maintained during construction.

From: Biteman, James F <james.f.biteman@boeing.com>
Sent: Monday, September 23, 2013 1:06 PM
To: Lynnwood Link DEIS
Subject: Latvian Community Center - Light Rail

Importance: High

Dear Lauren Swift & Sound Transit,

I am by blood lines, not Latvian. However, I am in my heart and soul a Latvian. I married my wife Ruta in the Latvian Church on May 17th 1986. Our son, Aleksandris was baptized there and attended Latvian School each Saturday for many, many years. The community center is the heart of the community and we Latvians are the blood. One without the other is not possible.

In the 30 years I have been a part of this community it is the Church and Center that has been the example of what the Latvians wished their country to be: Free, open, democratic and safe. The Country of Latvia now has these rights, in part, due to centers like this where ex-pats were able to gather, discuss and even vote for change in their home country.

I-435-001

Many of the Latvian elders have moved to neighborhoods near the Latvian Church so they may be close to those they care most about and to be able to be a part of this very special community. To displace the function, the Baltic communities that know this place as a sanctuary, would be to essentially disband the community and send them adrift in a sea of uncertainty…like they were in World War 2 and in 1969 when the church was forced to relocate previously. In 1969 the community was much smaller, but just as tight and as important as it is today. However today, the Church and Community has grown to a size that would making it extremely difficult to move and have it survive for those it serves.

For the record, I am a huge supporter of Light Rail. Having lived in, and traveled throughout Europe over the years I know how important this is to our community in so many ways. I want to see Light Rail succeed.

I do not envy you and your team in this process of evaluating the best solution. What we do need is a solution that will be the best for all involved, and that would have to include the Latvian Church and property staying there and available to its members and friends as it has for so many years.

Thank you for the work you do.

Warm Regards,

Jim Biteman
Manager
West Corridor Analysts / Lean / Employee Involvement
Ph. 206.662.2445 Cell 206.854.5175 M/C 46-89
"If yesterday was tomorrow would you do anything differently?"

"The time it takes to do the job safely, is the time it takes to do the job."
GO4ZERO

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I-435-001

Thank you for describing the importance of the church and center to you and the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Wes Brandon <wesley.j.brandon@gmail.com>
Sent: Monday, September 23, 2013 4:10 PM
To: Lynnwood Link DEIS
Subject: comments on DEIS

I reside at 20314 5th NE in Shoreline WA. I am both excited and concerned about the siting of stations at 236th SW and 185th NE.

I-436-001

Living just outside the impact rings drawn by both station plans I would like to urge your team to consider the possible ramifications of the design of either of these stations on the families living along 5th NE. I would like the impacts of the siting both stations to be considered concurrently as a whole and not separately. 5th AVE NE is the closest through street on the west side of the freeway and I assume traffic will increase as ridership increases. Myself and about ten residences face 5th and are outside the half-mile zone that is in consideration for planning of the two stations. I am concerned that the impacts will be considerable if proper planning for alternative routes to and from the stations are not addressed. Currently the neighborhood in which I live (Northridge) is isolated by 205th NE to the north and I-5 to the east. The site planning for the station at 236th SW should address pedestrian and automobile access from the south for this area and the commuters from Lake Forest Park to help mitigate turning 5th NE into the major access route from 205th NE. I recall all to well the diversion created when the carpool and traffic flow regulation signals were installed. The time to get this right is now during planning. I do not want to see my street turned into a thoroughfare for commuters. This was and still is a neighborhood and planning should take into account the human scale impacts. Our neighborhood has had to absorb much of the noise, congestion and aggravation of the increased traffic moving down I-5 without much in the way of return. I would hope that this project would consider the historical impacts and seek to minimize the effects of this new stage of transportation development

Thank you for your time,
Sincerely
Wes Brandon

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I-436-001

It is anticipated that 5 to 10 percent of the trips accessing the 185th Street Station would drive on 5th Avenue NE, which translates to 25 vehicles or less in the morning (AM) or evening (PM) peak hour. This is a relatively small addition to the traffic already using the facility. Chapter 3 of the Final EIS describes potential impacts and identifies mitigation measures in Section 3.6.

From: Steve Buck <sbuck@uw.edu>
Sent: Monday, September 23, 2013 7:25 PM
To: Lynnwood Link DEIS
Subject: Preserve the Latvian Center

Folks,

I-437-001 I am glad that Light Rail will be extended but I hope that you can arrange to preserve the functionality of the Latvian Center and church. This facility serves as the hub, not just for the Latvian Lutheran congregation, but for the extended cultural communities of all of the Baltic countries in Washington State. For the past 30 years, I have been learned much and met many people representing Lithuanian, Estonian, and Latvian communities at the Latvian Center. We have celebrated our respective independence days, held schools for our children and fund-raising and cultural celebration events, and come together across the three communities in ways that only a large facility of this sort permits. These events and the school that is held there are key links in nurturing and preserving the culture and language of these communities. This is where we come together to sing, to dance, to pray, to honor our heritage, and to support each other as we move forward.

Please work out ways that the center can remain open and functional during construction and will retain as much access and parking as possible after construction is completed.

Sincerely,

Steven L. Buck
Treasurer,
Lietutis Lithuanian Dancers

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I-437-001

Thank you for describing the importance of the church to the region's Baltic communities. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Nancy Celms <nancycelms@gmail.com>
Sent: Monday, September 23, 2013 5:58 PM
To: Lynnwood Link DEIS
Subject: Latvian Lutheran Church

To whom it may concern:

I lived in the SF Bay Area when BART first opened and have ridden it periodically when I return to visits. I applauded the Seattle area finally getting a rapid transit system and voted for it many years ago and look forward to it being up and running sometime in my life time...maybe even along the I-405 corridor as well.

Imagine my dismay when I found out the light rail was going to adversely affect the Latvian Lutheran Church! This church has been an important part of my family's life since I married my Latvian husband. When my husband's parents were still alive, we would take my them there for senior citizen club and to watch my father in law perform in plays.

After we had our children, Latvian Saturday school became part of our lives. Our daughter was confirmed there and danced on Sunday evenings with the Tredekitnis dance group. I learned both Latvian cooking and Latvian sewing there. We look forward to annual Latvian bazaar each November.

I-438-001 I don't understand why you think it would be okay to affect our cultural center by building your light rail on the east side of the freeway. It seems like you could move the light rail on the west side of I-5 instead with less impact on communities.

Thank you-
Nancy Celms

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I-438-001

Thank you for describing the cultural importance of the Latvian Evangelical Lutheran Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Sara Celms <saraecelms@gmail.com>
Sent: Monday, September 23, 2013 5:45 PM
To: Lynnwood Link DEIS
Subject: Latvian Community Center

I-439-001 I am writing to voice my dismay that the light rail train will run right past my community center. I deeply wish that the train could run along the west side of the freeway. I feel like that would spare us and other families and communities from much distress.

I-439-002 Understanding that Sound Transit has moved ahead with its planning with the line running along the east side of the freeway, I hope that a ground level option will be selected. In addition, I hope that a sound barrier will be build to protect my community center from noise disruption and that

I-439-003 our caretakers' home will be replaced. It is necessary for us to have continuous access to the community center throughout the construction process so I hope that will be taken care of as well.

Thank you for your time,

Sara Celms

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I-439-001

Thank you for your comment stating your concerns about impacts to the Latvian Evangelical Lutheran Church. The Preferred Alternative is at-grade, but all alternatives now avoid displacing the church and hall. During early project planning, a broad range of corridors and alternative alignments were considered. The results of this analysis are found in the Alternatives Analysis Report and described in Chapter 2, Section 2.6.

I-439-002

The noise analysis for the Lynnwood Link uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below this criteria. Sound Transit's policy is to mitigate moderate or severe impacts. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Noise walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts.

I-439-003

Although current designs show the caretaker's residence needs to be relocated, Sound Transit would provide for the relocation, as described in Section 4.1. Access to the church and hall would be maintained during construction.

From: Bridgett Chandler <bridgett.a.chandler@gmail.com>
Sent: Monday, September 23, 2013 5:02 PM
To: Lynnwood Link DEIS
Subject: DEIS

September 23, 2013

Sound Transit

ATTN: Lauren Swift

401 Jackson St

Seattle, WA 98104

LynnwoodLinkDEIS@soundtransit.org

RE: Comments on 7/26/2013 DEIS

To Whom It May Concern,

I-440-001

I am writing as a Seattle resident to express my support for regional light rail. and, in doing so, to urge Sound Transit to do right by a longstanding community organization that has been unduly disrupted by our civic decisions and needs over the years. The Latvian church and community center plays an irreplaceable role in the lives of many people in our region, and a solution that allows them to continue to operate as a place of worship and an essential cultural gathering place must be found.

It was a pleasure to read in the local paper today that the President of Latvia was visiting on a trade mission. I am sure you appreciate how extraordinary it is for a visiting head of state to decide to weigh in on a local civic matter. He clearly understood how very critical it is for emigres to have a place that connects them to their culture and personal history. That is especially true when the reason for their emigration was to escape an invading regime that represents a world view that we as Americans have a long tradition of trying to contain in the

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I-440-001

Thank you for describing the importance of the church and hall to the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

name of values we hold dear: life, liberty, the pursuit of happiness, the common good, justice, equality, diversity, truth, popular sovereignty, and patriotism.

I have personal, professional, and civic relationships with members of the Latvian community in the Northwest that go back to my childhood. I care deeply about the impacts our collective decisions have on any individual or group. I am particularly concerned when the same group has been asked to pay such an extremely high price multiple times. I know them to be supporters of light rail, and I know them to be extremely productive and valuable members of our larger community.

I-440-001 I have to say that I don't see how any of the alternatives in the DEIS give them a fighting chance to continue to enjoy their space for religious and cultural events. I want to support a fair outcome for this and any group so seriously affected by how we meet our regional needs.

Sincerely,

Bridgett Chandler

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Best,
Bridgett

bachandler@post.harvard.edu

From: Iwata, Roger
Sent: Tuesday, September 24, 2013 10:09 AM
To: Michael Christopher
Cc: Lynnwood Link DEIS
Subject: RE: Dangers of loosing our heritage by relocation of Latvian Center

Mr. Christopher,

Your comment has been forwarded to the email inbox for DEIS comments on the Lynnwood Link Extension and will be included as part of the public record. I noticed an "n" missing in the email address you used so this is the reason it did not work.

Thanks for taking the time out to comment on the project.

Regards,

Roger Iwata

***Roger Iwata**, Community Outreach Corridor Lead*
Sound Transit, Design Engineering & Construction Management
401 S. Jackson St., Seattle, WA 98104
206.689.4904

From: Michael Christopher [mailto:michael.christopher@orangelv.com]
Sent: Tuesday, September 24, 2013 3:20 AM
To: Iwata, Roger
Subject: Fwd: Dangers of loosing our heritage by relocation of Latvian Center

Dear Roger,

I am forwarding you an email that I have been trying to send to lynwoodlinkdeis@soundtransit.org. It seems the email I have received is not working. This letter is in response to the idea of relocating the Latvian Community center based on the possibly transit expansion of the lynwood link.

Could you please help me with forwarding this email to the right address? The email basically informs the cultural significance of this facility. The center has been a hub to latvians and my family for the past 40 years.

Thank you,
Michael

---------- Forwarded message ----------
From: **Michael Christopher** <michael.christopher@orangelv.com>
Date: Tue, Sep 24, 2013 at 3:04 AM
Subject: Dangers of loosing our heritage by relocation of Latvian Center
To: lynwoodlinkdeis@soundtransit.org

Dear Sir or Madame of Sound Transit,

I-441-001

My family and I are very distressed by the thought of and disruption of the Latvian Center. This is a massively important place for us as we use the facility at least twice a week by us from school to church. It is the only location that is offering language for my children. I met my wife there baptized my family buried my grandfather... This has been for the past 40 years a huge part of my identity.

The significance of this facility has a massive historical significance to the Lavian community as it was raised by refugees of the 2nd world war. During the 50 years of occupation the Latvian culture and people have been almost completely destroyed. Most of the population does no longer speaks the language or knows the culture. Facilities like this one in Seattle USA provides a beacon of hope of what the country could be again. Relocation again will be dangerous as we will loose more members as proven by history.

Latvian come to visit center and go to the local Universities. The local community center raises money yearly for the University of Washington thru donations and rummage sales. The donations support the Baltic studies program. With out the center we would risk loosing the yearly efforts and capital needed to fund the Baltic studies program.

Thank you,

Michael

--
Michael Christopher

I-441-001

Thank you for your comments about the importance of the Latvian Center to the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Dan Dale <danieldale@gmail.com>
Sent: Monday, September 23, 2013 1:57 PM
To: Lynnwood Link DEIS
Subject: Future Light Rail station in Shoreline @ 185th

Lauren and Sound Transit Board:

Thank you for taking the time to review public input on the DEIS.

I represent a number of homeowners on the east side of the freeway in North City in the likely future station area.

I-442-001 We believe that the best way to distribute the impact of a Light Rail station at 185th is to have the parking structure on the West side of the freeway adjacent to the current parking lot at Shoreline Stadium---that is part of **Option A1**. This parking structure would not displace any houses and would divide the impact of Station East side - Parking structure West side.

A short walk from the future station - (much shorter than the walk from parking garage to current busses at the Mountlake Terrace Transportation Center) - the parking structure in this location also better serves the bulk of Shoreline traffic/population from the west side of the freeway via Meridian and 185th - as well as connecing to 200th via 5th avenue. Another future overall benefit of the structure being in this location would be to provide addtional parking for events at Shoreline stadium and Shoreline Center, (depending on its future use for light rail drivers - being first priority).

I-442-002 The other key component of the benefits of **Option A1**, is that it is At Grade with less noise and visual impact to the neighborhood. This is very important to the home owners east of I-5 in the station area. This would also be a cost savings to the project as all of the options North of 185th (The Section of track from 185th to approx. 200th are At Grade.) The line could have almost all of the section from just north of 155th up to 200th At Grade! (besides the need to elevate over 175th intersection). Actually from 117th - 200th.

I-442-003 Regardless of what happens in terms of stations south of 185th - please be flexible and fluid in the design plans to consider these suggestions. The garage at 185th could be west of the freeway AND this section could be At Grade - regardless of some of the plan details that transpire to the south - stations and sections. Please take a mix/match approach and don't just stick to the options as presented. These parts of **Option 1A** could be mixed with the 'best' parts of sections south.

- Spread the impact of the station on the neighborhoods around 185th - Put the Parking structure, tucked into the hill along side the west side of the freeway.

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I-442-001
Thank you for your comment stating your preference for layout of the parking garage at the proposed light rail transit station at NE 185th Street.

I-442-002
Thank you for your comment stating your preference for an at-grade alignment. The Preferred Alternative is mostly at-grade in Segment A.

I-442-003
In the Final EIS, the Preferred Alternative includes a station at NE 185th Street to the north of NE 185th Street and east of I-5. The parking garage would be located on the west side of I-5. Please see the Final EIS Chapter 2 Alternatives Considered for more detail on the Preferred Alternative.

Options to extend the station south were not advanced because the station requires a straight section, and the area to the south would not accommodate the station without more impacts.

I-442-003 - Please put the Line At Grade! Less noise, less visual impact and the opportunity for cost savings to have long sections of track At Grade from 117th to almost 200th!

- Please consider the idea of moving/streching the station - just a bit south - to utilize the relatively large section of unused property just south of 185th between I-5 and 5th Avenue. If the station were to 'straddle - strech' under the 185th street bridge - it would make better use of the available space, could provide access to the station without having to cross the street (185th) and could hopefully make better use of the available footprint - decreasing the impact on the neighborhood. Please investigate using this section of available land for the Final EIS and design plans.

I-442-004 - Please continue to work with the City of Shoreline to measure the impact a station will have on drivers cutting through North City from Lake Forest Park.
Perkins Way and NE188th are narrow, low visibility, blind turn streets that will need study and mitigation. 185th in the Station area is a minor arterial that does not connect to 15th or 522 to the East.

- Please work with the City of Shoreline to slow down traffic in the station area, making it Pedestrian and Bike focused - with good, well lit, safe covered walkway from the garage and consider dropping the Speed Limit around the station area to 20-25mph. We must all work to slow traffic down in this area.

I-442-005 - Please contiue to work with the City of Shoreline to emphasize how to be succesful in putting a Light Rail station into a neighborhood with minimal current (or future) opportunity for T.O.D. Sound Transit does not need T.O.D. at 185th for the Lynnwood link to be successful and meet ridership goals!
By providing a parking garage, Buses connecting from Aurora Avenue, the Aurora Transit station near Costco and to North City - the station and the line can be successful without having lots of T.O.D. The city of Shoreline has gone beyond painting the picture of an "opportunity" for the city and have instead described the "requirement of T.O.D." when this just simply is not the case. 185th is unlike any other station currently on the Rail Line (or future stations). It is NOT on a major arterial, like 145th or 175th or 130th, or MLK Way. It is NOT in an area of already up-zoned w/commercial like on Capital Hill, the U-District, Northgate or Beacon Hill. It is NOT like the huge footprint opportuniy at the Mountlake Terrace station with the current garage or future commercial development south of there along the freeway.

What 185th IS is an opportunity for a carefully designed - neighborhood station - unlike anywhere else on the Sound Transit line. Though there may be some change with some controlled development over time - everyone needs to approach the success of the station and its impact on traffic and the existing neighborhoods with the idea that T.O.D. might not happen for quite some time - and needs to be planned very carefully. (This onus falling on the City of Shoreline of course).

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I-442-004

The Final EIS Section 3.6.5 identifies mitigation measures to discourage station-related cut-through traffic. All the stations will have pedestrian and bicycle facilities to support and encourage use of those modes. Stations will be designed with safety in mind; see Section 4.14 of the Final EIS for the safety analysis.

I-442-005

Thank you for your interest in Lynnwood Link Extension and your comment regarding TOD and the NE 185th Street Station. The City of Shoreline developed a subarea plan near the proposed NE 185th Street Station that may permit some commercial development and higher density housing near the station. The subarea plan also addresses other aspects of the neighborhood including public spaces, recreation, and access.

Thank you for taking the time to read, incorporate and respond to public input.

Best regards,

Dan Dale
North City, Shoreline
206.661.6033

From: Austina De Bonte <austinad@hotmail.com>
Sent: Monday, September 23, 2013 3:19 PM
To: Lynnwood Link DEIS
Subject: Lithuanian community member on behalf of Latvian Center

I am a member of the Lithuanian-American community that regularly uses the Latvian Educational Center that would be impacted by the new Sound Transit railroad plan.

My family attends events at the Latvian center often, including:
- folk dance rehearsals for my 10 year old daughter
- singing rehearsals for my 7 year old son
- February 16 independence day celebration every year where the kids perform, the community gathers, and many congressmen and other dignitaries attend
- St. Martin's Eve party to celebrate Halloween Baltic-style!
- Spring fundraising event for the Lankas Lithuanian youth summer camp
- Lithuanian school events, which both of my children attend
- And plenty of other events and parties throughout the year...

I-443-001 I urge you to do whatever is possible to maintain access to the Latvian Center during construction, and to make it possible for us to use it productively throughout that time, with a similar amount of parking and some reasonable access both during and after the train is

I-443-002 built. It appears that the at-grade option would likely be preferred for our needs, to minimize noise impacts long term.

I-443-003 Many people have reorganized their schedules, lives, even where they live based on the location of this important community building for the entire Baltic community. Relocating the Latvian Center would be a major disruption, and for many, this building holds special memories and sentimental value that cannot be replaced.

Thank you for your consideration!
austina

Austina De Bonte

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I-443-001

Sound Transit plans to maintain access to the church property during project construction. Details of construction access would be defined in coordination with the church after the publication of the Final EIS, during the final design and construction planning phase.

I-443-002

Thank you for your comment. Noise walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts.

I-443-003

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Pieter De Temmerman <detemp@gmail.com>
Sent: Monday, September 23, 2013 1:24 AM
To: Lynnwood Link DEIS
Subject: Lynnwood Link DEIS comments

Dear Lynnwood Link,

I have carefully read the DEIS and have watched the September 13th Tech Talk. I am looking forward to the completion of the Northgate to Lynnwood segment of the Link. Please consider the following comments:

I-444-001

1. As a resident in the Haller Lake neighborhood, I am in support of the at-grade option in the segment from Northgate to 130th, along with careful mitigation of noise pollution through use of sound walls. At-grade choice is preferred to minimize the negative visual impacts and to preserve the residential landscape. As a resident of the area, noise pollution from I-5 is already an issue, and we would appreciate your help to minimize further addition to noise pollution. As for visual impacts, we are a quiet residential neighborhood where many homes are single story structures. Having an elevated track would be a bit of an eye-sore. Furthermore, I did not see any indication in the DEIS referring to adequate noise mitigation in elevated options. My worry is that an elevated track will only allow the noise to travel even further, affecting more people, inside or outside of buildings.
2. I support a station at 130th in segment A.

I-444-002

3. Please consider putting in less infrastructure for cars and more infrastructure for bikes (including bike parking and safe bike lanes to reach stations).

Thank you for considering our needs and preferences. Please do not hesitate to contact me if you have any questions.

Sincerely,

Pieter De Temmerman

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I-444-001

The noise analysis for the Lynnwood Link Extension uses the FTA impact criteria and Sound Transit's policy is to mitigate moderate or severe impacts under FTA criteria. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Noise walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. The visual impacts of the project are evaluated in Section 4.5 of the EIS.

I-444-002

The park-and-ride facilities have been sized to accommodate a balance between forecasted parking demand and minimizing potential impacts created by the facility. Stations will include pedestrian and bicycle facilities.

From: jdubman@gmail.com on behalf of Jonathan Dubman <jon@dubman.com>
Sent: Monday, September 23, 2013 7:48 PM
To: Lynnwood Link DEIS
Subject: DEIS comments supporting a Link station at 130th Street

I-445-001 I'm writing to support a light rail station at 130th Street in Seattle as part of Lynnwood Link, with or without a station at 145th Street. These are the only options under consideration that allow for frequent and direct bus connections to the Bitter Lake Hub Urban Village and the Lake City Hub Urban Village in Seattle. These hub urban villages are an integral part of Seattle's Comprehensive Plan, which itself is integral to the implementation of Washington State's Growth Management Act, an act which also guides Sound Transit.

These urban areas are well established and fast-growing multi-use urban areas. They are served today by bus lines along their principal arterials (SR 99 and Lake City Way), including Sound Transit's own Express route 522, but these buses do not connect with Link, and these intensifying commercial and residential mixed-use neighborhoods lack good transit connectivity to the rest of the destinations on the Link system.

I-445-002 Neither 130th nor 145th has excellent transit-oriented development opportunities due to the effects on the walkshed of I-5, major arterial streets and nearby parks, which is all the more reason why bus connections are so critical at this location. Even if Seattle and/or Shoreline are willing to intensify development around 145th Street, that location is too far north to directly connect the centers of these two northerly urban hubs with connecting bus service without adding travel time and permanently boosting operational expenses. Traffic related to I-5 would impede reliability of east-west bus connections at 145th Street.

I-445-003 An added benefit of a bus line connecting Bitter Lake and Lake City to Link via the 130th Street Link station is the improved direct bus connection that will be created between these two urban hubs, a connection that is lacking today. A crosstown route in this area would create transit synergies via the network effect, given existing and planned transit investments along SR 99 and Lake City Way.

There may be reasons to site a station in the vicinity of 145th Street, but if there is insufficient will or funding to create a station at both 130th and 145th Streets, 130th should take priority due to its proximity and better transit connection opportunities to the largest urban hubs in the northern section of the City of Seattle.

thank you,
Jonathan Dubman
2014 E Calhoun Street
Seattle, WA 98112

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I-445-001
Your support for the NE 130th Street Station is noted. The 130th Street Station is included as an option to the Preferred Alternative in the Final EIS.

I-445-002
Thank your for your comment regarding the applicability of walk sheds and light rail stations. Sound Transit developed a walk shed and bicycle shed analysis for each station and identified barriers to each station. As you mentioned, I-5 and large parks do limit the walk shed to a station and accessing the station by transit becomes more important. The stations at NE 130th Street and NE 145th Street were assessed for future TOD and results are documented in the *Station Area Transit-Oriented Development Potential Report*, as referred to in the Final EIS, Chapter 4.2.

I-445-003
Multimodal connections to stations, including bus connections, will be refined in coordination with partner transit agencies and local jurisdictions in the Final Design phase of the project.

From: Justin Elder <jelder81@gmail.com>
Sent: Sunday, September 22, 2013 4:55 PM
To: Lynnwood Link DEIS
Subject: Comments

I-446-001 | Please include a station at NE 130th. Also, please don't make the Lynnwood extension just another
I-446-002 | commuter railroad with lots of park and rides. That's what Sounder is for. Link should be an urban rapid transit system with plenty of transit-oriented development around the stations. Station areas need housing, jobs, and shopping centers. They do NOT need massive park and rides.

Yours,

Justin Elder

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I-446-001

Your support for a station at NE 130th Street is noted. Parking supply is being offered at the stations as part of a balanced multimodal access program that serves the mobility needs of the nearby communities and the region.

I-446-002

Sound Transit's TOD policy in part, states: “Assess the extent to which development of alignments, station locations, and transit support facilities affect and support implementation of Agency and Community TOD strategies.” Sound Transit prepared a *Station Area Transit-Oriented Development Potential Report* that provides details about each station area and how it might (or might not) support future development. Section 4.2 on Land Use includes information on the plans of corridor jurisdictions.

From: andrafreet@gmail.com on behalf of Andra Freet <andra@andrafreetcreative.com>
Sent: Monday, September 23, 2013 10:37 AM
To: Lynnwood Link DEIS
Subject: Save the Latvian Community Center - Lynwood Link DEIS

To the Sound Transit team-

I-447-001 I thank you for giving the Latvian community a chance to voice our concerns about the Lynwood light rail encroaching onto our property, making it impossible to access our community center.

I am urging you to come up with some other solutions that would deter you from harming our most special center, as this unbelievable place can never be replicated nor replaced.

I am a first generation Latvian, who grew up attending the Latvian church and Saturday school. There I made friendships that have lasted my entire lifetime, I have found a sense of community with so many people from all generations who fled Latvia to find a safe and free place to live and build their families. Now I am proud to say that my 4 yr.-old son is attending this very same school so that he may experience the same friendships and strong community that I did when I was younger. He just attended his first class this past Saturday, September 21st and said he had the greatest day, that it was even better than his regular pre-school. That says a lot, considering he loves his American pre-school. It brings me SUCH joy to be able to pass down the language and culture to my kids, and I cannot even express to you what a tragedy it would be for us to lose this place for our children's use. Without this gathering place for the Baltic communities we run the risk of losing members and losing touch with our Latvian roots.

I hope that you have the heart to come up with a solution that would allow us to keep our present location in tact. Our families have already lost so much, sacrificed so much and this is not just a building, this is the heart of our community. Please don't take that away from our children.

Thank you for your time and your help in this very important matter.

Sincerely,

andra freet (36, mother of two)

[redacted]
www.andrafreetcreative.com

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I-447-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Jeremiah Fulford-Foster <akahead@gmail.com>
Sent: Monday, September 23, 2013 1:54 PM
To: Lynnwood Link DEIS
Subject: Comment on Lynnwood DEIS

I-448-001 I think the best alignment for the Lynnwood link is with the stations at 130th and 155th. There are enough "transit stations" along the Lynnwood link, one at Northgate, Mountlake terrace park and ride, as well as the Lynnwood transit station. We need neighbor station where people can easily walk to the station and keep cars off the roads

Jeremiah Fulford-Foster

Sent from my Windows Phone

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I-448-001

Your preference for stations at NE 130th and NE 155th Streets is noted. The NE 130th Street Station is included as an option in the Final EIS. Station parking facility sizing and design proposals were developed to balance the need for good multi-modal connections and access to serve local communities and the region.

From: Jeremiah Fulford-Foster <akahead@gmail.com>
Sent: Monday, September 23, 2013 6:43 PM
To: Lynnwood Link DEIS
Subject: Comments on Lynnwood link DEIS

To Whom it may concern,

I am a resident of the Ridgecrest neighborhood, in south Shoreline. I would like to comment on the DIES for the Lynnwood light rail extension; especially with regards to the proposed and currently undecided stations at 145th or 155th.

I-449-001
- I and many neighbors in my neighborhood would like to see little to no use of parking garages, around the planned stations. It seems puzzling to us that Seattle Stations do not have planned parking garages but Shoreline Stations all have planned parking garages. In general, If there must be a garage around the station I/we would like the garage to be as unobtrusive as possible, displacing the fewest number of residents as possible. That being said I would prefer a smaller station at a 155th street and move the site of the garage, to the north side of the street and to the east of I-5, where the small church is. By doing this you displace fewer residents and you hide the garage against the freeway. You also make the garage more accessible to driving north along 1st. It's then just a short walk under the covered freeway overpass to the proposed station.

I-449-002
- Accessibility to these stations is also a very large concern for residents in Shoreline. If people aren't able to easily reach the stations then no one is going to use them. One idea I've heard that to help make either station more accessible is a walking/bike path along the tracks of the trains against the freeway. The biggest way to increase accessibility for Shoreline residents are the chosen locations. I feel that a 155th Street Station is a better choice for our area. It is has far more residents currently living within walking distance of the station. The 145th Street station only has a few neighbors living to the north east and even fewer to the west. Also as zoning restrictions change the area around the 155th station will be able to add more new housing without displacing as many current residents since both the north and south sides of the street will be open to development. In the case of the 145th Street station only the north side of the street will be open to development. this also means that any development at the station location would have to be a large condominium or apartment structures which no one in the neighborhood wants to see. The 155th Street station will also be more bike friendly since that street already has bike lanes moving in both directions. 145th Street currently has none. Finally accessing the station by car will also be easier at the 155th St station. 145th Street itself is currently being used at peak capacity. During rush hour times traffic can be backed up all the way to 15th Ave, and we are still 10 years away from having a station put in. To that even more cars from people trying to access the station and that street will be a nightmare. The only way to make that 145th Street more useable will be to widen it. With Jackson park and Lakeside School to the south the only way to widen

I-449-003

I-449-004

I-449-005

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I-449-001

Your preference for a station a NE 155th Street is noted. Station parking facility sizing and design proposals were developed to balance the need for good multi-modal connections and access to serve local communities and the region.

I-449-002

Park-and-ride spaces provide access to light rail for areas transitioning from suburban to urban densities and reduce spillover parking impacts to neighborhoods. Sound Transit's design seeks to find a balance between competing interests of providing auto access to stations, potential spillover parking, and encouraging pedestrian, bicycle, and transit access to light rail stations.

I-449-003

Thank you for noting your preference for a station at NE 155th Street, rather than at NE 145th Street.

I-449-004

Your comment on bike lanes on NE 155th Street is noted.

I-449-005

The Preferred Alternative includes a station at NE 145th Street. The Final EIS analyzes potential traffic impacts in Chapter 3. All alternatives would include improvements that address traffic impacts as detailed in Section 3.6.4.

I-449-005

that street would be to take properties away from Shoreline residents, probably in the amount of 20ft or more, which would displace hundreds of local residents. Traffic at 155th Street is not anywhere as bad as 145th and in fact the street could still handle more cars and not be over used. To top it off all of 155th street could be widened by 20ft, to better handle the increased traffic do to the station, without displacing any current residents (just possible easements). Because both sides of the street could be used to widen the road, only people's yards and a small strip of two parks would have to be taken.

I hope you will take our concerns seriously, I see light rail transportation as a great remedy to our current worsening traffic problems. However, if you do not make it easily accessible, no one will use it.

Thank you,

Jeremiah K. Fulford-Foster

From: Roxanne Garzon <rxgarzon@comcast.net>
Sent: Sunday, September 22, 2013 6:39 PM
To: Lynnwood Link DEIS
Subject: Shoreline station

I-450-001 1) The station in Shoreline needs to be connected to other transit options. There also needs to be adequate parking. More people will use transit if there is parking nearby (as can be seen in current light rail stations by the low ridership where there are no parking spots nearby). Most residents who want to commute by train year round are going to have to park their cars, not bike, not walk. Not many people out there taking a stroll during the November-March weather.

I-450-002 2) 185th street is a small residential area and there are not any public transit options on that route. There are also a high number of young drivers/pedestrians using that access to the stadium for games, matches etc. Keeping those kids safe around the train station could be problematic-locate the tracks as far from the stadium as possible-kids between 13-18 are not known for their common sense.

I-450-003 3) 145th street seems to be the most viable option for the train station. It doesn't give as good of access to the upper areas of Shoreline, but it has better transit options, parking options, existing areas.

I-450-004 4) The light rail project could very easily be put in the middle of the I-5 corridor. It's flat, it's clear, and people are already able to access it easily. Other cities have done it with far more efficiency.

I-450-005 I have one final comment. This project is very bogged down in the political process and it frustrates me that the light rail won't be here until 2023. The Panama Canal did not take that long to build!

Roxanne Garzon
Mary Kay Future Sales Director
206-432-0789
www.marykay.com/rgarzon

Check out the e-catalog:
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Inspiring women with hope that they can live their best life ever

I-450-001

Multimodal connections to stations will be refined in coordination with partner transit agencies and local jurisdictions in the Final Design phase of the project. Sound Transit's design seeks to find a balance between competing interests of providing auto access to stations, potential spillover parking, and encouraging pedestrian, bicycle, and transit access to light rail stations.

I-450-002

Your concern for the safety of children in and around the NE 185th Street Station is noted. All light rail alternatives are entirely grade-separated in a secure, protected guideway. Further discussion of public safety is discussed in Section 2.3 for station areas and in Section 3.2.8 for analysis of transportation issues related to public safety. NE 185th Street currently has bus transit service. This transit service would integrate with the light rail station.

I-450-003

Comment noted. A station at 145th is included in the options considered in the Final EIS.

I-450-004

The proposed construction of rail in the middle of the I-5 corridor was not advanced for further consideration in Segment A. There is insufficient room to construct light rail in the median until Mountlake Terrace, and widening the roadway and moving lanes out would have similar property impacts and greater environmental impacts, particularly during construction. Additional details are provided in Final EIS Sections 2.5.1 and 2.5.2.

I-450-005

Comment noted; the project schedule reflects the time required to help

the project successfully meet requirements for federal funding approvals as well as local approvals needed for construction.

From: eric goodman <ejosephgoodman@excite.com>
Sent: Monday, September 23, 2013 5:56 PM
To: Lynnwood Link DEIS
Subject: Comments

Thank you for taking comments on the Lynnwood Link project.

I-451-001

1. I would like to express my preference for the Segment A5 or A7 alignments that include stations at 130th St. 155th St. and 185th St. This arrangement has geometry on its side. It has the best spacing between stations and the best placement of stations in the street grid for future development oriented to maximizing our transit investment. This arrangement keeps the stations away from routes that are auto dominated and makes them more central to neighborhoods. A station at 130th is critical to avoid drawing thousands of people and cars south across Northgate way everyday. If these people can board at 130th, more of them will ride and overall tranffic and transit operations will be much better in the area. 155th St. will not work as well as 145th St. for cars coming from farther than 1 mile away. That is exactly why it should be chosen. You don't want to draw cars and then spend millions to mitigate the impact. You should draw the people who live close by and 155th has the best ped / bike connections. For 185th please keep everything on one side of the highway and provide adequate space for bus turnarounds.

I-451-002

2. In the B segment the station at Mountlake Terrace Transit Center should be placed East of the current garage, not in the freeway station. The walk to the freeway station is too long and will depress ridership and nearby development potential. The location of the proposed 220th St. Station should be altered slightly to go under the highway bridge on the west side of I-5. More riders would be drawn to the station if it were submerged rather than elevated at this point. The 220th St. Station would provide a good linkage with areas ripe for additional development and already hosting the densest concentration of jobs in South Snohomish County. Becaue many employees travel to these jobs from the North, the station may draw significantly more ridership than projected in the current study when further extensions are completed on the Link system. For that reason, even if the ST board chooses not to fund a station there at this time, it would be wise to reserve a place in the alignment for a future station to be voted on and built with ST3. This station would be the closest for many Edmonds residents and much easier for them to reach due to congestion expected to grow around Lynnwood. It has the potential to play an outsized role in shifting mode share of residents and employees in the area because of proximity to the Interurban Trail and Swift Bus Rapid Transit on Hwy. 99. Building a station at 220th St. could also relieve some pressure from intersections along 44th Ave. where residents living to the east would turn to reach light rail if it was only accessible at Lynnwood Transit Center or Mountlake Terrace Transit Center.

I-451-003

3. In the C segment, C3 is the clear winner. The impacts associated with the other two alternatives are not acceptable and would turn many light rail supporters in Lynnwood into vocal opponents of further expansion. C3 is actually closer to the core of Lynnwood's planned downtown development than the other options and would be the best site for walkability, despite

I-451-001

Your preferences for either Alternative A5 or Alternative A7 and the reasons why you support these alternatives are noted.

I-451-002

Your preferences for stations at Mountlake Terrace Transit Center and 220th Street SW, and the reasons why you support these alternatives are noted.

I-451-003

Your preference for Alternative C3 and the reasons why you support this alternative are noted. The Preferred Alternative evaluated in the Final EIS includes a modified Alternative C3, which realigns the guideway and station to better connect with the Lynnwood Transit Center.

I-451-003 proximity to the interstate. It could be designed to have direct access to the existing ped bridge that is part of the Interurban Trail and would thus avoid sending a flood of pedestrians across 200th St at 44th, 46th and 48th Aves. These are already horrific intersections for everyone, especially transit buses. If C3 is selected, the bus transit center should be moved to be proximate to the LRT station. Moving the bus bays to the SE quadrant of the site will allow better access from the highway HOV ramps with less conflicts. There should also be transit access provided at 202nd St. from 44th Ave. This would speed up trips and reduce congestion on 200th St. Also, as a mitigation, please explore extending the HOV lanes of 46th Ave. north from 200th St to 196th St. This improvement would likely reduce traffic loads significantly at 44th & I-5, 44th & 200th, 44th & 196th, 48th & 200th and 50th & 200th. In conjunction with the Lynnwood Link extension more work need to be done to provide for bus access to Lynnwood Transit Center. It is currently impossible to enter LTC from the HOV direct access ramps when coming from or going to I-405 or SR525. There is also a missed opportunity to have freeway stops on SR525 at 164th and on I-5 at 128th St. The Swamp Creek Park and Ride and Mariner Park and Ride are currently underutilized due to the lack of direct stops and ST service. The lack of stops confounds routing and forces duplicate service to be provided from Everett to the south, wasting precious transit operating funds.

I-451-004 4. Either I missed it or, The DEIS fails to account for a low parking scenario where auto parking is effectively managed and priced so that some spaces are always available, but demand is balanced by assessing to users the cost of parking provision and congestion while bicycle parking is expanded, with maintenance and sharing service also accomodated on site. Considering the cost of parking improvements and traffic mitigation proposed as part of the project, such an omission is not acceptable.

I-451-005 5. Finally, There is little discussion of the power used for train propulsion. Electric power drawn by LRT trains should not cause the region to increase generation or purchase of power from sources that are not clean and renewable. LRT should include regenerative braking and battery systems and should incorporate solar, micro-hydro or wind power generating equipment in the stations, guideway and right-of-way whenever possible.

Thank you for your time in reviewing my comments and for all the hard work that has gone into this project. I support it 100% and look forward to using Link more regularly.

Eric Goodman, AICP
8010 181ST PL SW
EDMONDS, WA 98026

I-451-004

The EIS considers the highest traffic impact with no parking restrictions at the stations. The station parking facility sizing and design proposals were developed to create balanced multi-modal access programs that serve the needs of the region as well as local communities. Parking management strategies, including pricing, may be considered in future phases of the project, based on Sound Transit Board directions for applying its system access policy.

I-451-005

The light rail alternatives are expected to primarily shift commuters from automobiles and light trucks to light rail as well as bus traffic to light rail. It is projected that with light rail, energy consumption would decrease by about a half of 1 percent as a result of mode shift as well as higher operating speeds on roadways, which would improve fuel economies for all vehicle classifications. During final design, Sound Transit would investigate methods of reducing energy use during light rail operations and construction as part of its *Sustainability Plan* and agency-wide sustainability efforts. Please see Section 4.10 of the Draft EIS for more information.

From: Bill Graffis <bgraffi1@ix.netcom.com>
Sent: Sunday, September 22, 2013 8:16 PM
To: Lynnwood Link DEIS
Subject: Please Save the Latvian Church and Community Center

Hello,
My wife and I are members of the Lithuanian community and I am writing to you to regarding the Latvian Church and Community Center. The Latvian Community generously allows our community to utilize its facilities.

Connecting with the Baltic people at the Latvian Church and community center has greatly enriched our lives here in Seattle. I have attended St Martins festivals, Independence Day Celebrations, religious worship service, funerals, and Memorial Services for the Anniversary of the Deportation of Baltic People to Siberia (some of which my wife's family endured. I participate regularly in these events at this center, and it has connected me to a community that I hold dear.

I-452-001 Losing this great facility would impact our lives and be a great loss to Seattle. This community center is just the kind of thing that makes Seattle a multi-cultural and unique place in which to live.

I understand that construction will go forth with the rail line, but please include the following requests during construction in order to keep our Church and Center available to the community.

- Please keep access to the Latvian center open during construction, at-grade rather than the elevated options

I-452-002
- Please mitigate construction and post construction impacts such as dust, noise and vibration.

I-452-003
- Please do NOT relocate the Latvian Center. Please help us find ways to keep adequate parking and access.
- If it mandatory that that Latvian Center be relocated, please ensure that a fair price is paid and that we are able to relocate to a nearby location of the same size and accessibility

Thank you very much in advance for including these requests in your construction plan.

Sincerely ,
Bill Graffis

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I-452-001
Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. Access to the church would be maintained during construction.

I-452-002
Sound Transit would mitigate dust during construction. Please refer to Section 4.6 in the Draft EIS for more details on air quality and specific mitigation commitments.

Sound Transit would mitigate noise and vibration during construction and would provide noise and vibration mitigation where feasible and reasonable. Please refer to Section 4.7 in the Draft EIS for more details on noise and specific mitigation commitments.

I-452-003
Thank you for your comments. Please see Sound Transit's full response to comment I-452-001.

From: Valdis Grauds <graudsvl@earthlink.net>
Sent: Monday, September 23, 2013 12:58 PM
To: Lynnwood Link DEIS
Subject: Latvian Lutheran Church, Northgate

Dear Board,

I-453-001 I'm writing you with extreme concern about the fate of the Latvian Lutheran Church and Community Center in the Northgate area. This is a facility I helped build when I was 12 years old. My main job at that time was to help pick up trash. After its completion I attended Latvian school there in the early 70's. I also went to listen to choir concerts and watch plays. During the Cold War period, I remember going and listening to Senator "Scoop" Jackson speak about the U.S. position on Latvia with respect to the Soviet Union. For years I participated with the Latvian folk dance group as we rehearsed for various song festivals around the US and numerous trips to Latvia to perform. I have been a official member of the Latvian Lutheran Church, since my confirmation there in 1977. I was married in the Church in 1998.

Currently, I attend various functions at the church or community center numerous times per month. I purchased my house in the Shoreline area to be close to this cultural/religious center. We frequently hold events at the center that includes Latvians from up and down the West Coast. We have concerts or plays from groups from Europe, Australia and Latvia.

I would strongly urge the board to follow the suggestions/whishes of the Latvian Assoc./Church board that you have been meeting with.

As a side note, in the back of the Church is a play area for the kids that attend the Saturday Latvian school. This area is dedicated to my cousin, who died tragically, way too young. He was a student and teacher at the school. I would hate to loose access to this area.

Thanks and regards,

Valdis Grauds and family
14813 Interlake Ave N
Shoreline, WA 98133
Phone: (206)364-9434
e-mail: graudsvl@earthlink.net

I-453-001

Thank you for your personal comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Julija Heine <rankisj@gmail.com>
Sent: Monday, September 23, 2013 4:20 PM
To: Lynnwood Link DEIS
Subject: Save the Seattle Latvian Hall

Good afternoon,

I-454-001 I am a member of the Seattle Lithuaninan and Seattle Latvian communitites having a Lithuanian mother and Latvian father. I have attended events at the Latvian hall since I was a baby over 30 years ago and now have a child of my own that I hope will attend events at the hall.

Besides the many cultural events that include Independence Day celebrations, folk dancing practice, Latvian school, Christmas and other holiday get togethers; I've been to baptisms, memorial services, concerts, and weddings including my sister's wedding in 2009. When I graduated college my friends and I held a large party at the hall.

This year I was the director of Lankas, the Lithuanian American children's camp. We depend on events held at the Latvian Hall for our fundraising events and to build up our community.
Our communities have been struggling financially for years and we depend on the Latvian Hall as a place dear to our hearts but also as an affordable venue.
The hall is important to our communities for many reasons and while I understand the transit will come I sincerely hope you take our letters into serious consideration and work with us to find a solution that satifies all sides.
If we must move, we need a venue that meets many needs-a church, a large hall or auditorium with a stage that can accomodate 200 people, classrooms, handicap accessable restrooms, a kitchen, pleasent grounds outsides with a reasonable amount of parking and a place that is easy to find.
I know that older members of our communities live close to the hall and very much hope their needs will be considered as well.

The hall is used frequently and we hope that the hall can stay open during construction as we do not have other available venues.

Maintaining our cultural identity and passing on the traditions to our children is crucial and the Seattle Latvian Hall is thet primary venue for the Lithuanians, Latvians, and Estonians to do so.
Thank you,
Julija

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I-454-001

Thank you for describing the importance of the Latvian Hall to you and the Baltic communities. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained during construction and operation of the project.

From: Joanne Ho <joanche@gmail.com>
Sent: Sunday, September 22, 2013 11:19 PM
To: Lynnwood Link DEIS
Subject: submitting comment

Hello,

I-455-001 I would like to submit comment to support the building of a link station at 130th St and I-5. If there are any questions of clarification you would like from me, please do not hesitate to let me know. Thank you for hearing my comments.

Joanne Ho
mobile: +1 (206) 850-8945
blog: www.powerhouse360.com

I-455-001

Your preference for a station at NE 130th Street is noted.

From: Joanne Ho <joanche@gmail.com>
Sent: Monday, September 23, 2013 1:05 AM
To: Lynnwood Link DEIS
Subject: Re: submitting comment

Hello,

I would like to submit the following additional comments:

I-456-001 1. Infrastructure for bicycle parking at Northgate station and all additional stations would be beneficial.

I-456-002 2. As a resident in the Haller Lake neighborhood, I support at-grade choices in the segment from Northgate to 130th with careful mitigation of noise pollution through use of sound walls. At-grade choice is preferred to minimize the negative visual impacts and to preserve the residential landscape.

I-456-003 3. I support a station at 130th in segment A.

4. Please consider putting in less infrastructure for cars and more infrastructure for bikes (including bike parking and safe bike lanes to reach stations).

Thank you for considering our needs and preferences. Please do not hesitate to contact me if you have any questions.

Sincerely,

Joanne Ho
mobile: +1 (206) 850-8945
blog: www.powerhouse360.com

On Mon, Sep 23, 2013 at 8:18 AM, Joanne Ho <joanche@gmail.com> wrote:
Hello,

I would like to submit comment to support the building of a link station at 130th St and I-5. If there are any questions of clarification you would like from me, please do not hesitate to let me know. Thank you for hearing my comments.

Joanne Ho
mobile: +1 (206) 850-8945
blog: www.powerhouse360.com

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I-456-001
Bicycle parking will be provided at all stations.

I-456-002
Thank you for your comment. Noise walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail noise impacts.

I-456-003
Your support for a station at NE 130th Street is noted.

Stations will include pedestrian and bicycle facilities (including bicycle parking) to support and encourage non-motorized transportation to the stations.

From: shhvellaxel@aol.com
Sent: Monday, September 23, 2013 9:34 PM
To: Lynnwood Link DEIS
Subject: Sound Transit Lynnwood Link Alternatives

Sound Transit Board Members,

My name is Jeffrey Janssen, and I have been a resident of Lynnwood for 23 years, living in the same home, raising five children. My address is 20314 56th Ave W. I live four blocks from the cross streets of 204th St SW and 52nd Ave W. After attending the most recent Sound Transit/Lynnwood Community meeting on September 14th, I was approached by seven of my neighbors and asked to write a letter to the board and express our concerns, referencing the options C-1 through C-4, Lynnwood Link Extension. I respect the endeavor, the process and obligation Sound Transit is charged with.

I-457-001

Regarding the alternatives Sound Transit presented to citizens of Lynnwood, at a meeting on September 14th, 2013, for consideration in extending Link Light Rail into our community; we believe the options labeled C-1 and C-2, to be inferior and destructive to our neighborhood and the city of Lynnwood, as a whole. Option C-3 and the additional option C-4, are vastly superior in scope and far less intrusive to the people who will be impacted the greatest.

Options C-1 and C-2, continue the erosion of our neighborhood and the very structure of the city itself. In years past, Lynnwood has been bisected by the construction of Interstate 5, which directly results in significant and constant traffic headaches moving people and services from East to West and vice-versa. The neighborhood in question, from 200th St SW to 212th St SW, and from 52nd Ave W to the Interstate has also been greatly impacted by the Lynnwood Park N Ride. In short, we cannot move along the streets without a constant stream of stagnant traffic. The end result is a much lower standard of living for the surrounding residents as well as the business owners trying to make ends meet, midst an already poor and elderly population. Options C-1 and C-2, will continue to destroy this fragile community, remove businesses from their property and customer base, as well as uproot a large number of families. The very idea that a resident of this neighborhood must remain in their home and be offered a 'view' of an elevated track and train from their living room window is repugnant.

C-1 and C-2, will obviously destroy a substantial area of existing wetlands and a small but environmentally important park. Why this is an option is beyond reason. The damage to 52nd Ave and 200th St SW will never be reversed and can't be mitigated. Certainly, along 200th St SW, from 52nd to the East entrance of the Lynnwood Park N Ride, this tree lined avenue is attractive and although heavily traveled, very inviting. C-1 and C-2, will be a permanent eyesore with far-reaching consequences to the citizens of an already low-income community.

Please consider option C-3 and the possible option, C-4. Both offer a lower dollar cost as well as a much lower cost to the immediate environment and neighborhood. The proposed Lynnwood Sound Transit Station, needs to be a 'get on, get off' affair. Any illusions that this particular station will become anything more than a hub, is at the very least, unrealistic. 'Destinations' should be reserved for future light-rail extensions, serving and supporting the Lynnwood Convention Center and Alderwood Mall. The Sound Transit Board should consider these options with concern for the citizens they serve.

Thank you;

Jeff Janssen
425-773-6682

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I-457-001

Your preference for Alternatives C3 and Alternative C4 suggested by the City of Lynnwood, which are similar to the modified alternative C3 (Preferred Alternative) in the Final EIS, is noted.

The Final EIS evaluates the Preferred Alternative, and provides discussion on its potential neighborhood (Section 4.4), transportation (Chapter 3), wetland (Section 4.8), and park (Section 4.17) impacts.

From: Matt Johnson <matthew.james.johnson@gmail.com>
Sent: Monday, September 23, 2013 10:24 AM
To: Lynnwood Link DEIS
Subject: Public Comment.

I-458-001 The 130th and 155th street stations need to be advanced to the FEIS. Bus/Rail transfers need to be one of the most important criteria when studying station siting and design.

Matthew James Johnson

Sent from my Windows Phone

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I-458-001

Both the NE 130th Street and NE 155th Street Stations are evaluated in the Final EIS. The 130th Street Station is included as an option of the Preferred Alternative in the Final EIS, while 155th Street Station is not part of the Preferred Alternative. Multimodal connections to stations will be refined in coordination with partner transit agencies and local jurisdictions. Section 3.2.2 of the Final EIS discusses bus transit integration with the light rail.

From: lindakask@aol.com
Sent: Monday, September 23, 2013 1:38 PM
To: Lynnwood Link DEIS
Subject: Lynwood Extension/Latvian Church

I-459-001 I think this would be a real disservice and hardship to the Baltic community. The Estonians and Lithuanians also use this facility, and it is thus a public facility for the 3 Baltic American groups. I have been going there for 40 years -- to church, to public holiday and commemorative celebrations, and for private celebrations like weddings and funeral memorials. Lack of access, plus the noise and vibrations, would mean the end for these uses, and result in the end of these vibrant communities since they have nowhere else to go that is large enough. Would you do this to any other cultural group? I doubt it.

Linda R. Kask
206 232 9388

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I-459-001

Thank you for describing the cultural importance of the Latvian Evangelical Lutheran Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Violeta Kelertas <kelertas@uic.edu>
Sent: Monday, September 23, 2013 3:53 PM
To: Lynnwood Link DEIS
Subject: Latvian Center

I-460-001

As part of the Lithuanian-American Community organization, I am dismayed that the center of our cultural activity is in jeopardy. The numerous members of the Baltic community and their friends from other ethnic and American groups in Seattle and from the whole world attend meetings, concerts, commemorations and various other activities at the Center which is geographically ideally located for our events. As an affiliated professor at the University of Washington, I go to the Center several times a month, as does my daughter's family, living in North Beach with her husband and two young children--in fact, they go even more often than I. They participate in folk dancing, singing, Christmas party with Santa, egg-dying at Easter, Saturday school and other activities too numerous to mention. I go to other events, many of them educational or cultural. The Center is a focal point of many of our civic and cultural meetings and lectures and it would be an incredible loss for our extended communites, if the building and parking lot were to become unuseable for us. Currently the Center has a very comfortable layout, and great facilities with church, various halls, kitchen, and room for all our and other organizations' needs.
This is the result of the efforts of many people over many years and cannot be allowed to go to waste.

Although we are aware that the rail line extension is a valuable project and will be of benefit to many, I hope that a way can be found to minimize the impact on the Latvian Center at all times, during construction and in the future. I would like to state my preference for the at-grade option as leaving us a workable parking lot. Of course, I am very concerned that the Center and its surroundings remain open and useable during construction. I am sure that a workable solution can be found and appreciate any and all efforts to accomodate our needs. The Center is one of the bonuses and delights of living in Seattle for many.
I thank you for your attention and wish you all the best in your difficult but judicious deliberations,

Violeta Kelertas PhD
Affiliate professor UW, Scandinavian Department,
20110 21st Ave NW
Shoreline WA 98177

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I-460-001

Thank you for describing the cultural importance of the Latvian Evangelical Lutheran Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. Access to the church will be maintained during project construction. Mitigation measures will eliminate or minimize impacts during construction.

From: Pat Kenney <patkenney00@hotmail.com>
Sent: Sunday, September 22, 2013 11:45 PM
To: Lynnwood Link DEIS
Subject: DEIS Comments

From: Pat Kenney
14824 Densmore Ave N
Shoreline, WA 98133
Patkenney00@hotmail.com
Please sign me up for project email updates.

Thank you for this opportunity to respond to the Draft EIS for the Lynnwood Link Extension. I believe the increased transit options will add a great deal to Parkwood neighborhood and all of Shoreline. My major concern is for safety and the environment.

I-461-001 Safety includes not only at the stations but in the near vicinity and access routes to the station. This includes good lighting that lights the intended space and does not cause excess light to residents, neighborhoods, or parks. Sidewalks are necessary for the access to the station to allow for wheelchairs, strollers, and luggage. Intersections must have good crosswalks, be well lit, and have pedestrians separate from vehicles and have accommodation for slow walkers, and have good signage prior to the approaches The traffic lights need to be timed to reduce the frustrations that cause pedestrians to race through traffic across streets and drivers to pull into a clogged intersection.

I-461-002 Land Use; I realize some homes will be purchased or property reduced and that the owners will be appropriately compensated and assisted to find alternatives. This is for the good of many more. I am concerned that lands that are habitat for migratory birds be replaced in as close proximity as possible with similar fauna. There is concern that sandy soil (around Ridgecrest Park) if disrupted could put homes above in danger, and that bog land (Ronald Bog and vicinity) could also impact homes.

I-461-003 Economy: A station at NE 155th would be closer to local business in Shoreline, and closer to the Aurora Square Retail/Condo complex envisioned for 155th near Aurora.

I-461-004 Neighborhoods: There will be spillover traffic on neighboring streets which must be mitigated for with circles or other speed control measures.

I-461-005 Visual and Aesthetic Resources: Trees and vegetation removed should have new greenery which will mitigate both the noise and the lack of view.

I-461-006 Air Quality & Greenhouse Gas Emissions: There should be adequate turn around for buses and for safe drop off of riders in order to reduce idling time and emissions.

I-461-007 Noise and Vibration: Sound barriers can be living rather than cement which vibrates sound back and forth.

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I-461-001
Sound Transit will work with jurisdictions and local communities to determine the most appropriate treatments to provide for safe and effective pedestrian access to and from the station for pedestrians. Sound Transit will build ADA-compliant pedestrian facilities fronting the station areas and roadways that are reconstructed as part of the project. It would be a local responsibility to complete sidewalk links away from the station. Section 4.14 of the Final EIS discusses safety.

I-461-002
Sound Transit's *Sustainability Plan* promotes the establishment of native vegetation. The revegetation plan for this project will emphasize the use of native plants.

During preliminary design, Sound Transit conducted geotechnical borings and detailed soil analysis to inform and refine potential design and construction approaches to avoid potential impacts. At Ronald Bog Park, the preferred alignment will be located on the east side of the freeway. Because of the distance of the project from the park, the construction and operation of light rail are unlikely to affect the soils below the park. See Section 4.11 of the Final EIS for the discussion of geology impacts.

I-461-003
Your comment is noted.

I-461-004
Sound Transit will mitigate for traffic impacts caused by the project at intersections that will operate at levels of service below standards.

I-461-005

I-461-008 Ecosystem Resources: Permeable pavements for sidewalks and driveways would minimize runoff. The additional traffic to and from the station will produce more toxins getting into the ground water. The effect should be mitigated from getting into the waterways nearby (streams, creeks, ponds, and
I-461-009 bogs). Solar technology should be used for lighting and signaling as much as possible.

I-461-010 Station Amenities: There should be drinking water and restrooms at the stations. There should be adequate handicap parking, as well as space for scooters and other mechanical means of transportation which help riders get to the stations without using cars. These should be close to the station, especially where the parking garage is at a distance.

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See Section 4.5.6 in the Final EIS for discussion of the potential visual impact mitigation measures.

I-461-006

Stations are designed to provide adequate access and turn around for buses and for safe drop off of riders. See Appendix F for the project's conceptual plans.

I-461-007

Your comment is noted.

Vegetation offers limited noise abatement value. At least 100 feet of dense foliage that contains leaves year round is needed to provide up to 3-dBA reduction. However, a 3-dBA reduction in noise is barely perceptible to most people. Noise walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts.

I-461-008

Managing stormwater is a priority for Sound Transit. The project would be designed to comply with all federal, state, and local regulations, controlling potential risks to water resources through project planning, design, and the application of required best management practices. In addition, Sound Transit requires all projects to consider low-impact development (LID) methods, such as permeable pavement, as a first choice for stormwater treatment (Design Criteria Manual, July 2012).

I-461-009

During final design, Sound Transit will investigate methods of reducing energy use during light rail operations and construction as part of its *Sustainability Plan* and agency-wide sustainability efforts.

I-461-010

Sound Transit station designs do not include public restrooms, partly for health and safety/security reasons, and drinking fountains are not standard features of the current system's light rail stations. The stations will include pedestrian and bicycle facilities to support and encourage the use of nonmotorized transportation to the stations.

From: Harold Key <keyharold@hotmail.com>
Sent: Monday, September 23, 2013 4:44 PM
To: Lynnwood Link DEIS
Subject: Lynnwood EIS

To Whom it may concern,

I-462-001 Please select the B2A Eastside to Mountlake Terrace Transit Center to Westside with 220th Street SW Station.

Alternative B4 is the worst alternavie as it destroys a brand new improvement.

I would also prefer A3 and C3.

Thanks,

Harold Key
22705 58th Avenue West
Mountlake Terrace WA 98043

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I-462-001

Your preferences for Alternatives A3, B2A, and C3 are noted.

From: karen andersen <andkin4@yahoo.com>
Sent: Monday, September 23, 2013 2:39 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Link

To Whom it May Concern,
I am a resident of South Lynnwood one block west of the proposed Lynnwood Link route for C1 and C2. I am opposed to these proposed routes for the following reasons;

I-463-001

C1: - C1 is the most invasive and disruptive route of the three. It would take out far too many homes, displace many Lynnwood residents, completely change the dynamic of quiet neighborhoods, and potentially ruin an F4 designated wetlands. This is seriously a bad plan.

C2- - C2 is even more harmful the valued wetlands and park. This plan would destroy the wetlands and wildlife. It would never return to it's current pristine condition. It would also bring the train through quiet neighborhoods needlessly and take out a large engineering complex.

C3- Is definitely the least damaging route for the local residents and the wildlife of the wetlands not to mention keeping the spirit of Lynnwood conservation alive. You see we are more than just a mall and a freeway exit. We are a thriving harmonious group of diverse neighborhoods, small businesses, ethnic restaurants and civic minded people. We like our city.

I urge you to select option C3 as the route for the Lynnwood Link.
Thank you.

Karen Kinman
5308 202nd Pl SW
Lynnwood, WA 98036

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I-463-001

Your preference for Alternative C3 is noted. The Preferred Alternative in the EIS is a modified Alternative C3.

From: Wknedlik@aol.com
Sent: Monday, September 23, 2013 4:53 PM
To: Lynnwood Link DEIS
Subject: Comment on DEIS for the Lynnwood Link Extension proposal

Sir or Madam:

Major inadequacies in the nominal DEIS for the Lynnwood Link Extension proposal are patent in several essential areas, including at least those five critical-to-fatal defects identified hereinafter.

I-464-001 Highly adverse impacts on the state highway system by the proposal at issue are inadequately addressed to fulfill central requirements of the Washington Administrative Code, including explicit legal responsibilities to examine negative impacts thereon, so as thereby to yield a legally deficient nominal DEIS due to failures to meet minimal adequacy requirements for any acceptable DEIS, pursuant to WAC 197-11-440, *via* analyses of "reasonable alternatives" and of "costs of and effects on public services," inclusive of "roads" specifically.

The nominal DEIS also fails to analyze pivotal legal limitations imposed upon the proposal, both pursuant to the WAC provision cited *supra* and also otherwise, due to inadequate evaluations of: (2) insufficient funding resources available to the proponent to pay full and fair market value for extensive state highway rights-of-way required for the proposed project as is indisputably required legally by the 18th Amendment under the Washington State Constitution following our state Supreme Court's decision on September 12, 2013 in *Freeman v. State*, ___ Wn.2d ___ (2013); (3) planned reliance upon financial resources from an anticipated federal full funding grant agreement in a fashion squarely contrary to legally mandatory application of Sound Transit's "subarea equity" obligations to allocate federal grant funds across all five subareas so as to benefit East Link equitably; (4) further planned reliance upon debt financing far beyond said agency's $800 million maximum limit upon total long-term debt for the project at issue pursuant to statutory contract obligations that it squarely undertook, legally, to obtain any taxing authority from King, Pierce and Snohomish counties, including Pierce County's incorporation of said legal limitations into its authorizing ordinance; and (5) clear lack of adequate parking within the City of Seattle for the Lynnwood Link Extension to operate as a part of a reasonably functional light rail system.

Respectfully yours,

Will Knedlik

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I-464-001

Your comments are noted. Sound Transit and FTA have prepared a legally sufficient Draft EIS and Final EIS pursuant to NEPA and SEPA. Both documents contain reasonable alternatives (see Chapter 2) and discussion of the potential impacts of the project on environmental resources (Chapter 4), and the highway system (Chapter 3).

The Lynnwood Link Extension is part of the Sound Transit 2 system expansion that voters approved in 2008. Sound Transit's financial plan assumed some federal funding as well as voter approved sales, motor vehicle excise and rental car taxes, state and federal grants, passenger fares, and bond proceeds.

From: rima kulikauskas <rimakuli@yahoo.com>
Sent: Monday, September 23, 2013 4:09 PM
To: Lynnwood Link DEIS
Subject: save the Latvian Center!

I-465-001

I am writing with a concern about the construction plans for the Lynnwood link extension. I strongly urge you to keep the Latvian Center (11710 3rd Ave N.E., SEATTLE, WA 98125) open during construction, specifically the at-grade option, not the elevated option. Please do everything you can to keep the Center open after construction as well.

I am a member of the Lithuanian-American community. We use the Latvian Center regularly throughout the year for miscellaneous cultural events. My family specifically uses the Center for weekly folk dance lessons and for summer camp planning meetings. We go to holiday parties which foster connectivity in our community. We attend our annual Independence Day event, with guests from the region, as well as other cities and states, and even from Lithuania. I am also a member of the charity group Daughters of Lithuania, which hosts many events there, including fundraisers and memorial services. The Latvian Center is just the- central to our lives. Please consider the impact of any changes you make during and after construction!

Thank you for your time,

Rima Kulikauskas
7345 18th Ave NE
Seattle, WA 98115

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I-465-001

Thank you for describing the importance of the Latvian Center to you and the Lithuanian-American community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained during construction and operation of the project.

From: Paul Kulits <drpaul@kulitsortho.com>
Sent: Sunday, September 22, 2013 3:25 PM
To: Lynnwood Link DEIS
Subject: Effect of Lynnwood Link on the Seattle Latvian Cultural Center and Church

Dear Members of the Board,

I-466-001 I am writing to you with the hope that you will consider choosing the route option that is the LEAST disruptive to the existence and operation of the Latvian Cultural Center and Church just north of Northgate.

I am a first generation Latvian-American and have lived in the Seattle area since 1992 when I moved here from the East Coast. The Latvian Center has been my home away from home and has allowed me to continue participating in the cultural activities that I enjoyed growing up in New York and Connecticut. In addition to attending church services, I am a member of the choral group "Sigulda" and we use the Center for weekly practices and regular performances. I am a member of the student fraternity "Beveronia" and we use the center for our meetings. My young son just started Latvian School this month and will spend several hours every Saturday learning about Latvian traditions, folk songs, and language (which his mother and I speak at home). In addition to these main uses of the Latvian Center, we also attend dance performances, lectures, concerts, films, weddings, and dinners.

The Seattle Latvian Center is the hub of a great number of events that help preserve the culture of our parents and grandparents. Any disruption to its operation (even temporarily) would negatively affect the important work that is done there.

I hope that the board will choose a route that will minimize impact on the Latvian Cultural Center. Thank you for your time.

Sincerely,

Dr. Paul Kulits
Everett, WA
425-210-1462 (cell)

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I-466-001

Thank you for describing the cultural importance of the Latvian Evangelical Lutheran Church to you and the region's Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: katrina luters <katrinaluters@me.com>
Sent: Sunday, September 22, 2013 6:44 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Link Extension

To whom it may concern,

I-467-001 Please save the Latvian Community Center and Church. It is the hub of the Latvian/American community and all Latvian cultural and religious activity in Seattle. It has been built up over many many years by the community and it would be an inestimable loss that would be very hard, if not impossible, to replace.

Thank you,

Katrina Luters

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I-467-001

Thank you for describing the importance of the Latvian Community Center and church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Tanya Marcy <tanyamarcy@gmail.com>
Sent: Monday, September 23, 2013 1:14 PM
To: Lynnwood Link DEIS
Subject: ATTENTION: In Support of The Seattle Latvian Evangelical Lutheran Church/Center

Hi, there!

I recently heard about the possible extension of the light rail through The Seattle Latvian Evangelical Lutheran Church/Center from a good friend of mine who is of Latvian heritage and has been part of the Latvian community her entire life. I know my e-mail is last-minute, but I really wanted to lend my support to the Center. :)

I-468-001 I don't live in Seattle, so the Church/Center doesn't affect me directly. But I do know how important Latvian culture is to my friend, and that she not only spends a lot of time at the center itself but also works to bring cultural experiences such as those shared there to communities outside the Seattle area. I believe it's important to do our best to preserve our multi-cultural opportunities, and I'm sure the Center means just as much to a lot of other people in the area, too. So I hope that a compromise can be made so that they can continue to access the Church/Center alongside the new light rail plan.

Thank you for listening! I appreciate your time.

--
~Tanya

stickTnotes
Twitter.com/sticky_t

I-468-001

Thank you for your comments about the Seattle Latvian Evangelical Lutheran Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: imants <imants.mohseni@gmail.com>
Sent: Monday, September 23, 2013 3:11 PM
To: Lynnwood Link DEIS
Subject: Symbols of Latvian Freedom

To Whom It May Concern:

I-469-001 I am writing to you because I have just learned the unfortunate news that the Latvian church and community center in North Gate is in danger of being torn down or a similar fate in order to make way for a light rail system.

While I recognize that local governments must do an extraordinary balancing act when planning such necessities as mass transit, it is my hope that I can appeal to your sense of appreciation for what exactly this place means and what it stands for.

I could discuss at length about what amazing services that the place currently offers, or how much it meant to our grandparents, refugees from the war, to build such a center. But I'm sure that others haven't already written at length about this. Instead, I'm going to tell you about what this place symbolizes.

Living on the East coast, in cities such as Washington, DC, Boston, New York and Philadelphia, one actually gets to immerse oneself in our Nation's history, including the revolutionary war. A lot of that history is enshrined in many of the historic buildings and structures that dot the cityscape as well as the countryside. Many of these buildings, such as the Carpenters' Hall in Philadelphia, are not historic only because they're old. They're historic also because they played such a pivotal role in shaping our history. In the case of Carpenters' Hall, it is the site of the meeting of the First Continental Congress. No history lesson needs to be given as to how important the Continental Congress was.

Much the same way that the Carpenters' Hall continues to stand to this day because it was so instrumental in helping to enshrine the fundamental groundwork of this Nation, including our many liberties and rights that we cherish so dearly, our Latvian center continues to stand in large part because it served as a stalwart in Latvia's existential fight against Soviet aggression. As long as that building has stood, Latvians and their allies have had a place to convene.
Not just for the sake of fraternity and community, but also for the sake of planning and action. The Latvian struggle for independence was long, and it was hard, but the sweet nectar of freedom and liberty from the Soviet yoke meant that it was worth it.

It is a little known fact that many Latvian organizations, such as the American Latvian Youth Association (http://alja.org/en/about/) received seed money for their founding from the CIA. These organizations were on the front lines in organizing the people into action and bringing awareness to the Baltic plight. These organizations were of such vital importance to not only Latvia's continued existence, but also to U.S. national security and foreign policy interests that the American intelligence apparatus helped to prop them up. And these same organizations have hosted countless meetings, conferences, conventions and congresses; many of them at this very Latvian center under question.

Today, Latvia stands free, but the shadow of Russian power is long, and it is dark. Latvian centers such as this one serve as a daily reminder of what it took to stand free. They also offer a place to go in case Latvian freedom is ever threatened again. And this last part is important, because many Russian polls consistently list Latvia as a top

I-469-001

Thank you for your comments about the need for the Latvian Center. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-469-001 enemy of the Russian state. Because of this, Latvia and Latvians must always remain vigilant, and we will always need the Latvian center.

Carpenter's Hall in Philadelphia, because of its roll in our history, will essentially never be in danger of a mass transit system ruining its historical integrity. Considering this Latvian church and community center's historical context, it should not be too much to ask to extend it a similar respect.

Warmest regards,

Imants Mohseni
Germantown, MD

From: ROCASCADE@aol.com
Sent: Sunday, September 22, 2013 6:23 PM
To: Lynnwood Link DEIS
Subject: Lynnwood link for Sound Transit input

Sound Transit,

I have attended the recent Lynnwood meeting for information on the proposed Transit link up in Lynnwood and would like to put forth my input.

I-470-001 C#1 and C#2 cause most disruption and ecological damage. C#3 avoids much disruption but is in conflict with the existing transit offramp and the Lynnwood Treatment plant that needs to be enlarged.

The proposed amended C#3A (C#4) is the best of all proposals; it avoids most disruption, Environmental damage and places the off load in a favorable location. It will also be in the best location for further rout direction in the future... I commend the Lynnwood Engineering Department for thier C#3A (C#4) proposal.

Sincerely,
-Roger Oborn

Lynnwood area resident

I-470-001

Your preference for Alternative "C#3A" is noted. "C#3A" is a modified version of Alternative C3 that was developed by the City of Lynnwood.

The Preferred Alternative for this project, as described and evaluated in the Final EIS, includes Alternative C3, modified from what was shown in the Draft EIS so that it better connects with the Lynnwood Transit Center, preserves more re-developable area, and further minimizes wetland and stream impacts to the extent feasible.

From: Ieva Ohaks <ieva@pandorahouse.org>
Sent: Tuesday, September 24, 2013 12:17 AM
To: Lynnwood Link DEIS
Subject: Sound Transit station @ NE 185th St

Dear Transit Planners...

I am writing in regards to the proposed station at NE 185th St in Shoreline.

I-471-001 I am very pleased at the prospect of a station quite convenient to my home. Looking at the possible station orientations and facilities I note particularly the proposed parking solutions.

The most useful placement for parking for people using the light rail is on the East side of the freeway, as close as possible to the station itself. The most useful configuration is a structure rather than a strictly ground-level lot.

If the parking lot is too far, for example on the West side of the freeway, or the secondary lot proposed for the 10th Ave NE open space, people will not want to walk Anyone with a mobility challenge or material to carry would find the trip daunting.

In order to serve the purpose of increasing the use of mass transit instead of single-occupant cars, the system must be convenient and easy to use. If people have to walk far, or drive around looking for a place to park, they will choose to drive instead.

Thank you for considering this opinion.

Sincerely,

Ieva Ohaks

17810 3rd Ave NE

Shoreline, WA, 98155

206-362-9252

ieva@pandorahouse.org

I-471-001

You comments are noted. The station a NE 185th Street will have bus transit, pedestrian, and bicycle facilities to support and encourage other modes of transportation than cars.

From: Aivars Osvalds <aeosvalds@gmail.com>
Sent: Monday, September 23, 2013 12:30 PM
To: Lynnwood Link DEIS
Subject: ATT: Lauren Swift RE: Latvian Center

Dear Sound Transit officials:

I-472-001 I am writing from Washington, DC in support of the movement to resolve the issue regarding the possible displacement of the Latvian Church and Center because of the northward expansion of the Sound Transit line.

My wife's family has been actively involved in the Latvian community through theater, folk dance, choir and Latvian school since they arrived in Seattle in the early 1950's. My late father-in-law was president of the Latvian Organizations of Washington State for more than 10 years.

We were married at the church and celebrated our wedding at the center. In our 35th year of marriage we still maintain close ties to the Latvian community in Seattle and many of my wife's childhood friends remain our closest friends. Our children have become friends as well. The common thread in these relationships is the cultural, academic and spiritual experiences and bonds that the Center and its community have provided. We have a similar Latvian Church and Center here in Washington DC which bonds our community together as well.

Endangering the Center is not the same as, for example, a church being demolished and the parishioners simply asked to move to another church. There is no other Latvian Church or Center in the Seattle area that holds all of its functions in the Latvian language and maintains the traditions of our Latvian heritage. It is hard to imagine all that would be involved to develop a new location.

The Center is the heart of the community and losing it would indeed be the loss of our community as we know it. I hope that our letters will address both the hearts and minds of the Sound Transit Board and move them to seek an alternate solution perhaps something as simple as having the line traverse I-5 at some point before the location of the Latvian Center.

Kind regards,

Aivars Osvalds
Scarlett Berkolds Osvalds
Laura Osvalds Kalnins
Grant Osvalds

Washington, DC.

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I-472-001

Thank you for describing the importance of the Latvian church and center to your family and the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Jana Pelekis <jana.pelekis@gmail.com>
Sent: Monday, September 23, 2013 7:26 PM
To: Lynnwood Link DEIS
Subject: Seattle Latvian Evangelical Lutheran Church

To whom it may concern.

I am very concerned about the impact of the light rail on my Latvian Cultural Center at 11710 Third Ave. N.E. Seattle, WA 98115

I-473-001 For almost 30 years, the Latvian Center has been an integral part of my life. Growing up, I went there every Saturday to learn Latvian culture and language. My father was forced to leave his country when he was just a young boy. The Latvian Center allowed him to stay connected with his roots and people, and also allowed my sister and I to learn the language and culture. Words cannot express what this meant to our family. I have so many memories from the center. I love it so much, that I decided to get married there this last summer. I would be deeply saddened if this was taken away from our family and community. It would be so sad to think that people who were forced to leave their country, would now years later be forced to loose their cultural center as well.

Jana Pelekis

I-473-001

Thank you for describing the cultural importance of the Latvian Evangelical Lutheran Church to you. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Joseph Petkus <juozpet@hotmail.com>
Sent: Monday, September 23, 2013 4:42 PM
To: Lynnwood Link DEIS
Subject: Lynwood Link Effects on the Latvian center

Good afternoon

I-474-001 As an active member of the Lithuanian-American Community in Seattle since moving here in 1978, I have regarded the Latvian Center as a home-away-from-home. Without immediate family here, the Center has provided a means of gathering with our extended family of local Lithuanians and fellow Balts, the Latvians and Estonians, to celebrate our rich ethnic heritage, enjoy happy events and commemorate the sad ones. The Latvian Center plays a critical part in maintaining our quality of life and wealth of our cultural diversity in the Pacific Northwest.

I understand that the region must move forward in developing alternate transportation schemes to the automobile and that the Latvian Center sits along the route devised for Sound Transit's light rail line between Lynnwood and Northgate. From my perspective as an engineer, the "at-grade option" would certainly be the most economical in terms of simpler construction complexity, lower long term maintenance costs and overall safety than the "elevated option".

Regardless of the final scheme, I respectfully request that all potential impacts on the functionality and viability of the Latvian Center during and after construction be carefully identified, evaluated and resolved well before breaking any ground at the Center. Significant impacts would include:

- preserving access to the Center
- minimizing noise, dust, runoff and other environmental hazards
- maintaining parking space quantity that the Center's users require

The possibility of relocating the Latvian Center (as was done once before) would unfairly impose punishing burdens on all the members of the Latvian, Lithuanian and Estonian Communities in this region and should not be considered a viable option in these difficult economic times.

In your reviews, determinations, planning and execution of this project please bear in mind the spirit of a simple door sign in my Boeing office conference room -

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I-474-001

Thank you for describing the importance of the Latvian center to you and the Baltic community.

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Sound Transit will avoid or minimize project impacts as described in the EIS: Section 4.6 (air quality), Section 4.7 (noise), and the rest of Chapter 4. The project would modify the church's parking, but the supply would be maintained.

I-474-001 "PLEASE LEAVE THIS PLACE IN THE CONDITION YOU FOUND IT OR BETTER". I would hope that Sound Transit will first try to make things better.

Sincerely,

Joseph G. Petkus

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From: Cynthia Phillips <sintija815@hotmail.com>
Sent: Sunday, September 22, 2013 9:34 PM
To: Lynnwood Link DEIS
Subject: Latvian Church and Community Center

Importance: High

Dear Pat McCarthy,

I-475-001

I am writing to you in deep concern about the possible destruction of the Latvian Center and Church. The Latvian Church and Community Center is a historical building for the Latvian Community because it was designed and built by the Latvian Community. This building cannot be replaced. Because of these buildings have been the center of the Latvian community for over 40 years many elderly Latvians have established there homes within walking distance. Historical events are held at this Church and Community Center that allows the Latvian,Lithuanian and Estonian culture to flourish. Not only is this a Latvian historical building but, many other communities relies on this location for important events some examples are: Latvian Fraternity meetings, Latvian, Estonian and Lithuanian celebrations, Baltic Studies program meetings and fundraisers, Church, Latvian dance groups, weddings, presidential visits, school for the children, group meetings,choir, cultural celebrations etc. The Baltic community has a very rich culture and importance of history and traditions.

The many people rely on this historical building to continue the culture of Latvian, Lithuanian and Estonian cultures. If this building is destroyed or access is limited to this historical site the culture of the Latvian, Lithuanian, and Estonian will be endangered.

Do not allow the historical Latvian Church and Center to be destroyed. The Latvian people have worked endlessly to build a center that provides the Baltic's a historical location to continue the culture. If you allow this to occur a historical building will be lost and culture of the Baltic Community.

Paldies-Thank you,

Cynthia Phillips

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I-475-001

Thank your for describing the importance of the Latvian Center and Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Sandra Phillips <mumsee8@hotmail.com>
Sent: Monday, September 23, 2013 1:06 PM
To: Lynnwood Link DEIS
Subject: Lynnwood transit center

I-476-001

Dear Sound Transit,

I would like to submit my opinion for your consideration about the Lynnwood link extension. I have attended a lot of meetings and open houses and have come to the conclusion that the proposed Alternative link C-4 seems the best option to me. I have read the city of Lynnwood staff comments about the DEIS and think they have done a good job and bring up a lot of good points. So I would like to see Sound transit look at the C-4 alternative . I am very happy that transit will finally be coming to Lynnwood and appreciate all the opportunity for the public to find out information on it. Thank you .

Sandy Phillips
4116 189th PL SW
Lynnwood WA 98036

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I-476-001

Your preference for "Alternative C4" proposed by the City of Lynnwood is noted. The Preferred Alternative evaluated in the Final EIS is a modified version of the City of Lynnwood's proposed "Alternative C4."

From: Kirk Pittman <kirkpittman@me.com>
Sent: Sunday, September 22, 2013 10:04 PM
To: Lynnwood Link DEIS
Subject: Comments Regarding Lynnwood Link Light Rail and Latvian Church and Center

Greetings,

I-477-001

While only recently introduced to the Latvian community, it became abundantly and immediately clear what a positive and critical impact the Latvian Lutheran Church and community center has on the generations of Latvian-Americans in King County (and beyond) that use and depend on it.

Talk, and better yet, listen to young and old tell stories of people renewing and being strengthened by their faith, children being educated, families and friends meeting at a long-since familiar place, a strong culture being preserved, and I'm sure you'll agree that this is not simply another building whose disposition can be determined quite so easily.

While all in greater Seattle certainly understand the importance of light rail, we ask that all consideration and effort be given by Sound Transit to not just minimizing the impact of light rail, but ensuring that the Latvian Lutheran Church and community center can continue and thrive in peace.

Specifically, this consideration should come in the form of:

- Actively working and consulting with the church and community center in ensuring that there are no access restrictions to the property during any and all phases of planning and construction. This should include, prior to any work being done, providing (at a minimum) an equal number of close, off-street parking spaces as currently exist.
- Construction noise being kept to a minimum.
- Construction debris/dust cleaned up regularly.
- The trains being slowed to the absolute most minimum speed as they past by the center as to minimize noise.

I thank you for your time and consideration.

Kirk Pittman
Infrastructure Analyst
Costco Wholesale

32331 East Morrison Street
Carnation, WA
98014
425-270-7192

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I-477-001

Thank you for describing the importance of the Latvian Lutheran Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall, during construction and operation of the project.

For construction, the local construction noise ordinance would be applicable, and Sound Transit is committed to maintaining construction noise levels within the criteria. For operation, noise walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. See Section 4.7 of the Final EIS for proposed noise mitigation.

Sound Transit would mitigate debris and dust during construction. Please refer to Section 4.6 in the Draft EIS for more details on air quality and specific mitigation commitments.

From: Liz Poitras <lizpoitras@hotmail.com>
Sent: Sunday, September 22, 2013 8:11 PM
To: Lynnwood Link DEIS
Subject: Comments on the Draft DEIS

Dear Sirs:

I would prefer to see a train station at 145th instead of 155th for 3 main reasons:

I-478-001

1) I think a station at 145th would be desirable since it would have I5 access. If other station parking areas start filling up, people will start using a different station where there is more parking. If that station is in Lynnwood, they probably would head for another station with easy access, such as at an I5 exit. That won't be the 185th station or the 155th station. If 155th starts filling up, to get to 185th, they would probably start using some smaller streets like 5th and 15th causing a lot more traffic on those roads. If the station was at 155th, then there would be no Shoreline station with an I5 access.

I-478-002

2) If there were a station at 155th, I would be concerned about pedestrian, and in particular, child safety due to increased traffic along 155th. Just a few blocks east of the station on 155th is Paramount Park with a picnic area and skate park right on 155th. Just a few blocks west of the station is Twin Ponds Park and a little further west is an elementary school both of which are on 155th.

In addition, currently in the morning when school starts and in the afternoon when school ends there is a stretch along 155th in front of the school that requires traffic to slow to 20 MPH. I wouldn't want to see train riders ignoring those speed limits and putting children in jeopardy in order to catch a train.

I-478-003

3) If the station were at 155th, it does not seem wise having it right next to a fire station.

I am concerned about pedestrian and bicyclist safety around the fire station. Pedestrians and bicyclists might take shortcuts getting to the train station, going through areas they should not be near in the event of a fire or emergency.

Commuters might be annoyed because they missed a train while their car was waiting for fire engines and/or emergency vehicles. The trains will be running on schedules but fires and emergencies do not.

Thank you,
Liz Poitras
Shoreline resident

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I-478-001

Your preference for a NE 145th Street Station is noted. The Sound Transit Board identified the 145th Street Station as part of the Preferred Alternative, and not the NE 155th Street Station.

I-478-002

Sound Transit will work with local jurisdictions to determine the most appropriate treatments to provide for safe and effective pedestrian access to and from the station and for students and other pedestrians around the station. See Section 3.2.8 of the Final EIS for long term safety impacts.

I-478-003

In the design and development of a station at that location, and the management of traffic serving the station, Sound Transit would work closely with the Fire Department to resolve any potential conflicts with bus and vehicle traffic to ensure that emergency response times would be maintained both during the construction period and operation of light rail. See Section 4.14 of the Final EIS for impacts and potential mitigation measures on public services, safety, and security.

From: Iwata, Roger
Sent: Monday, September 23, 2013 3:55 PM
To: Albert Priidik
Cc: Lynnwood Link DEIS
Subject: RE: Lynwood Link Light Rail

Mr. Priidik,

Thanks for your comments. I have forwarded them to the email inbox for formal comments on the Lynnwood Link Extension DEIS and they have been submitted for the public record.

Your comments are appreciated.

Regards,

Roger Iwata

***Roger Iwata**, Community Outreach Corridor Lead*
Sound Transit, Design Engineering & Construction Management
401 S. Jackson St., Seattle, WA 98104
206.689.4904

From: Albert Priidik [mailto:ennop14@icloud.com]
Sent: Monday, September 23, 2013 3:37 PM
To: Iwata, Roger
Subject: Lynwood Link Light Rail

Dear Mr. Iwata,

I-479-001 I just wanted you to know that I am not in favor of this Light Rail extension if it means that the Latvian Church of Seattle will be destroyed. This Church has been there for many, many years and is very important to the Latvian, Estonian and Lithuanian communities. The destruction of this Church (in it's present location) is not worth the "progress" of light rail to Lynwood.

Thank you.

Albert E. Priidik
1540 S. Fairview Dr.
Tacoma, WA 98465
(253) 564-9188

I-479-001

Thank you for your comments about the potential impacts to the Latvian church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Albert Priidik <ennop14@icloud.com>
Sent: Monday, September 23, 2013 4:40 PM
To: Lynnwood Link DEIS
Subject: Lynwood Extension of Light Rail

To Whom it May Concern,

I-480-001

I am not in favor of the Lynwood Light Rail extension, if it means the demolishing of the Latvian Church in Seattle. This church has been in it's present location many, many years and is very important to the Latvian, Estonian and Lithuanian communities of Seattle. Mass transit to Lynwood is not worth the demolishing of the Latvian Church.

Please come up with another solution to Light Rail extension to Lynwood.

Thank you.

Albert E. Priidik
1540 S. Fairview Dr.
Tacoma, WA 98465
(253) 564-9188

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I-480-001

Thank you for your comments about the potential impacts to the Latvian Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Andris Pruzinskis <pruzinskis1@msn.com>
Sent: Sunday, September 22, 2013 8:21 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Link DEIS
Attachments: 7867_534226503303838_1845110271_n.jpg; 67856_4936321165108_1852342293_n.jpg; Iesvetibas Laikam.png; 2009 Christmas to Mom & Martins 058.JPG; Julim Iesv Bildes 71-74074.jpg; Julim Iesv Bildes 62-65064.jpg; 2009 Christmas to Mom & Martins 108.jpg; 2009 Christmas to Mom & Martins 052.JPG; ADr 1002489_10151704265555914_252778060_n.jpg; EIS Latvian Center001.jpg

FROM: Andris Pruzinskis
11728 19th Ave. NE
Seattle , Wa. 98125
206-406-3123

To Whom It May Concern,

I-481-001

I will preface this by saying that I am a San Francisco latvian. I moved to Seattle in 1980. However, I had traveled to Seattle a number of times previously for some latvian functions, i.e. the West Coast Latvian Song Festival held in Seattle in the summer of 1975, a West Coast Latvian volleyball/basketball tournament in the spring of '75, as a member of the latvian singing group 'Līča Vēji'. Through various latvian functions up and down the west coast (Los Angeles, SF, Portland, Seattle) I did not arrive in Seattle fresh off the boat, but had a good group of latvian contacts and friends when I moved.

We call it the 'Latviešu Nams' which is the 'Latvian House'. Just like when you are growing up, your house is the center of your life and activities, parents, family, relatives, and friends. The Latvian House (and it's previous incarnation in Seattle) was and is our cultural and spiritual house where most of the area Latvians were raised in, a home away from home. Raised in by our WWII DP (displaced persons) parents, coming to America with young kids to start a new life or like me, a '50's first generation kid born in America to these Latvian parents.

Christmas service, Candlelight, Easter, the Latvian Independence Day, baptisms, confirmations, weddings, or memorial services. Rehearsals and staging for in-house Latvian theater or actual theater troupes from Latvia. The Latvian choir getting programs ready for the holidays or to travel to the West Coast Latvian Song Festivals, or the national US or Canadian Latvian Song Festivals. The folk dance group Trejdeksnitis practicing and getting ready for the same or performing at the Folk Life Festival or at one function or another at the UW. The local singing group Staburadze, the Portland singing group Dzintars, a 'friendly' basketball/volleyball match between the Seattle Latvians and the Australian Latvians as they traveled to 'Garezers', in Michigan, for the Latvian Sports games in the mid-80's..

Many an hour was spent at home as a child doing my Latvian homework, a school attended on Saturdays. Language, history, literature, catechism, latvian culture were all taught at this school. I did not find it odd that my grade school friends had Hebrew school or their Catechism classes

I-481-001

Thank you for describing the importance of the Latvian Church and center to you and the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained during construction and operation of the project.

I-481-001

during the week. My wife Lisa attended her last years of Latvian school at the present site of the Latvian House. Both our sons graduated from Latvian school here, at the end of their 8th grade year. With both boy's dancing in the folk dance group 'Trejdeksnitis' and now out of high school, our family of four made the first time trek to Latvia this summer for the Latvian Song and Dance Festival.

My wife and I were married here in the Latvian Church, both our kids baptized and confirmed here. Our kids did the 'Latvian' stuff, 10 years each at the Latvian summer camp 'Mežotne', now as camp counselors. They spent two or three summers at the Latvian teen camp 'Kursa'. The West Coast Latvian Education Center located outside of Shelton, Wa. was built by many of the same hands and their sons and daughters, that built our current Latvian House in the early '70's. Currently (or near) Trejdeksnitis had a spring fundraising dinner and dance program, as they headed off in July to participate in the actual Latvian Song and Dance Festival held in Riga, Latvia. The SLGA just finished their 13th Annual golf tournament at the Jackson Golf Course, with an awards and steak dinner at the Latvian House. The Latvian kid's school just started, the President of Latvia, Andris Bērziņš, just visited. In October we have the Harvest Festival brunch, also various individuals and groups are preparing for the November Christmas Bazaar, and of course the 18th of November, Latvia's original Independence day. Church services are most every Sunday, on occasion in English.

All these events are directly involved with or indirectly made possible by each and every function that goes on at the 'Latviešu Nams'. This is a place to go back to when you've been away. I can reasonably, without a doubt, say that you can apply these functions and events to just about any larger west coast city where Latvians congregate at their 'Latviešu Nams'.

Personally speaking, a yearlong interruption or a claim of Eminent Domain would be a death knell. What we have now provides sustainability for the local Latvian population, it's an attraction for out-of-towners, another facility for national or international Latvian troupes or groups. It provides fuel to run the only children and teen Latvian summer camps in the Western United States, down in Shelton. In the end it would not be good.

Thank You

1 - The Trejdeksnitis folk dance group that went to Riga, Latvia this summer.
2 - Wife and son Julijs (L), and Julijs' friend Peter working at the Latvian Christmas Bazaar last November.
3 - Julijs after his confirmation at the Latvian Church.
4 - Older son Krisjanis after his confirmation at the Latvian Church.
5 - My wife Lisa's confirmation at the same Latvian Church.
6 - Lisa's mom after her Latvian confirmation service in Seattle, before the current Latvian Church building was built.
7 - Krisjanis and his two best latvian friends (Alex and Modris) at 8th grade Latvian School graduation.
8 - Julijs and his graduating class.
9 - This year's Mezotne summer camp with many future Latvians of the NW. The Littlebird parents at one time were attendees when the camp was still up at Camp Waskowitz in North Bend.
10 - This is a 519 page book published in 2011 about the various activities, organizations, and groups that were/are a part of Northern California latvian community, basically from postwar

immigration in the 1950's onward. Theoretically you could apply this type of voluminous history to Seattle, Portland, Vancouver, BC and so on. Our parents and grandparents accomplished a lot coming here with just a couple of suitcases.

From: Krisjanis Pruzinskis <krisjanispruz@gmail.com>
Sent: Monday, September 23, 2013 7:23 PM
To: Lynnwood Link DEIS
Subject: Latvian Center- Northgate

I-482-001

The Latvian Center has been a huge part of my life ever since I was a young boy. Attending Latvian Saturday School for 10 years and meeting some of my best friends. I have participated in the Latvian dance group Trejdeksnitis for the last 3 to 4 years and this past summer we went to Latvija to dance in the Latvian song an dance festival. None of that would have happened if we didn't have our Center. It's where we can keep our culture and traditions alive. I would feel as though a piece of me would disappear if we were to lose the center. This center helps not only us but the other Baltic countries keep some traditions going. Losing the center would only weaken our community which has already been moved from our original location years ago. We may not live in Latvija this helps us keep our little piece of Latvija together.

Thanks,

Krisjanis Pruzinskis

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I-482-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Brigita Rutenbergs <brigita.dzintra@gmail.com>
Sent: Monday, September 23, 2013 12:22 PM
To: Lynnwood Link DEIS
Subject: Lauren Swift - SAVE THE SEATTLE LATVIAN EVANGELICAL LUTHERAN CHURCH/CENTER

I am writing to save the Seattle Latvian Evangelical Lutheran Church/Center! When I first heard of the sound transit planning a light rail many months ago, my initial thought was that it is a good idea, and am happy that public transport is growing in America. But, when I learned further that it would possibly run through the Seattle Latvian Evangelical Lutheran Church/Center, I became sad and thus writing this letter.

I myself grew up in Los Angeles, but spent all of my summers in Washington, where there is a Latvian summer camp. Being at summer camp, from time to time, we would travel to the Seattle Latvian Center to perform the folk dances we learned, or sing, or meet other groups visiting from Latvia. Most of my Latvian friends had grown up going to the Center for Latvian school, they participate in the folk dancing group, they sing in the choir, and they go to church. I had the joy to fly up from time to time to visit their Latvian school, and attend my friends' confirmations later. I had the pleasure of being there a couple years ago again for my godson's christening.

I-483-001

I personally realize how important such a center and church is to a community - because growing up in Los Angeles, I attended both. Now I live in Norway, and can't say how much it is missed. Although there is a Latvian community here, we do not have a center or a church. It makes it a lot more difficult to regularly meet because of not having a center or a church that is easily accessible for all the cultural things. It isn't easy to find halls for the folk dance group to have their practices and performances in, it isn't easy to find rooms for the choir to meet, and isn't easy to rooms to hold Latvian school on Saturdays/Sundays...non the less to have regular church services. With not having a church and center, there is less motivation for Latvians here to meet, then less motivation to teach our children the language, the traditions, the culture. The Latvian community in Seattle has the benefits to accommodate all the needs to help the culture thrive outside of Latvia. To take away their community center and church would be absolutely detrimental.

Please find a solution that would allow the center and church to remain at the current location.

Kind regards,
Brigita Pukite

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+47 46431176
Hafrsfjordgata 29 A
0268 Oslo
Norway

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I-483-001

Thank you for describing the importance of the church and community center to you and the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Ilze Pukite <ilze_p90@yahoo.com>
Sent: Monday, September 23, 2013 12:34 AM
To: Lynnwood Link DEIS
Subject: Please save the Seattle Latvian Community Center!

Ilze Puķīte

760 N 7th St., Apt. #4319

San Jose, CA 95112

Comments

c/o Lauren Smith

401 S. Jackson St.

Seattle, CA 98104

September 20, 2013

To Whom It May Concern,

My name is Ilze Puķīte, and I am you writing regarding the Lynwood Link DEIS issued July 26, 2013. It may surprise you that a comment regarding this situation is arriving from California, but I hope you will nonetheless take my opinion to heart, even though I may not be a member of your voting block. It is my sincerest hope that the time I take now, to write you from over 800 miles away, is not wasted, but helps to bring to your attention the importance of the dire situation which you have created for the Seattle Latvian Community Center.

I-484-001 The Latvian community is one of the most closely knit communities I have ever had the honor to be a part of. Our culture is a small one, and our home country of Latvia has a population just barely topping 2 million – less than a fifth the size of LA. However, our people are strong, and united. When Latvia was occupied by the USSR, thousands of Latvian refugees fled the country, and many found save haven in the United States. There, we found solace in each other, and vowed to keep our language, traditions, and history alive, despite the tragedies back home. To this end, we created Latvian Centers all across America – including Seattle.

I-484-001

Thank you for describing the importance of the church and center. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-484-001 These community hubs served as schools, dance centers, churches, choir halls, and homes. They host everything from Christmas bazaars to rummage sales, to folk dance performances and evenings of song. I have fond memories of the Latvian Center in Seattle, when my mom and I would occasionally drive up from Portland, where I grew up, to participate in an event or see a Latvian group performing. These centers provide so much for the communities they serve – they inspire children to take pride in their heritage, they give our seniors opportunities to socialize, and they unite us as a community.

I do not doubt for a moment that the proposed changes – whether "just" losing ingress/egress and parts of the lot, or losing the property as a whole – would be devastating to the Seattle Latvian Community. While I am absolutely supportive of public transportation expansion, I wonder if there are no possible alternatives to this. It is, quite frankly, shocking to me that this plan has gotten so far. I wonder that at no point during the propositions for this expansion did anyone think to wonder what this building was, and, if they did inquire as to its usage, did they really think it should be razed nonetheless? Were this new construction going to have to go through a 7-11, well, I think the world would be quite indifferent, as there is one on every corner. Of Latvian Centers, however, we have very little, and the community it supports would be very hard pressed indeed to find a replacement, let alone afford the move.

I sincerely hope that the efforts of our community to reach out to you do not go in vain. I am certain that we can find a solution that will no longer put the Seattle Latvian Community Center in peril, and I hope that you will take the necessary steps to protect this dearly loved fixture of the community.

Sincerely,

Ilze Puķīte

From: Douglas Resnick <dresnick1@comcast.net>
Sent: Sunday, September 22, 2013 6:14 PM
To: Lynnwood Link DEIS
Subject: Comment in favor of C3

Dear Sound Transit Board:

I first read about the proposals to extend the light rail to Lynnwood in the September 2, 2013 edition of The Seattle Times. Based on that report, I was concerned that a valuable park in my area would be damaged, when other options were available. My preference, other things being equal, would be to preserve the park as it is.

I am a resident of Edmonds, but I often visit Lynnwood, either to walk in the parks or shop at the stores. I appreciate what Lynnwood offers to Snohomish County.

I am a customer of Sound Transit. During a typical week, I ride the Sounder to Seattle five times a week; and, of course, five times back again to Edmonds. I appreciate what Sound Transit offers to Snohomish County.

I-486-001 I have examined the alternative routes for segment C of the light-rail extension, according to the DEIS, as well as the impacts listed as Potential Property Acquisitions and Displacements (Table 4.1-1). It seems clear that, beyond my preference for preserving natural areas, alternative C3 is the most practical alternative: it is the shortest, most direct route, and it affects the fewest parcels.

Please choose C3.

Thank you.

Sincerely,
Douglas Resnick

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I-486-001

Thank you for your comment stating your preference for Alternative C3.

From: Sid Roberts <sidroberts2@gmail.com>
Sent: Monday, September 23, 2013 3:14 PM
To: Lynnwood Link DEIS
Subject: Comments

Dear Sound Transit Board c/o Lauren Swift,

I-487-001 I'm a resident of Lynnwood and have earnestly followed the DEIS from Sound Transit and the comments of Lynnwood citizens. I have also attended several meetings and have studied the DEIS to some degree. I favor the C3-Modified as presented by the City of Lynnwood. C1 and C2 are simply too intrusive and disruptive to our city, to homeowners, to businesses and to the ecosystem. C3 has some problems too and has the terminal too far from boarders. C3-Modified corrects many of the challenges of

With that said, I would hope that the engineers and planners keep looking at ways to perfect C3-Modified. Since the track it is a permanent structure, please make it as citizen friendly as possible to our eyes, to our ears and to the landscape. Please also take into consideration where it would need to depart if ST3 is approved and what the disruption would be there.

I-487-002 Please also take seriously the traffic impacts associated with 20,000 riders per day. I don't believe that most of them will come by bus.

Thank you so much for bringing light rail as far as Lynnwood. Overall, it will make it better for us in the long run.

Sincerely,

Sid Roberts
Lynnwood, WA 98037

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I-487-001

Thank you for your comment stating your support for Alternative C3 as modified by the City of Lynnwood. This alternative was not evaluated in the Final EIS; however, elements of the alternative have been incorporated into the modified C3 Segment C alternative evaluated in the Final EIS. Please see Section 2.3 for an updated description of the refined Segment C alternatives currently under consideration by Sound Transit.

I-487-002

A traffic analysis was performed for the Lynnwood area taking into account the additional 500 parking spaces that are provided at the station as part of the project. Sound transit will work with the City of Lynnwood to provide mitigation for traffic impacts caused by the project.

From: Ed Rusis <erusis@cox.net>
Sent: Monday, September 23, 2013 1:16 AM
To: Lynnwood Link DEIS
Subject: Draft EIS comments re: Latvian Community Center & Church
Attachments: ST DEIS comments Ed Rusis.docx

September 22, 2013

Sound Transit
Draft EIS comments
c/o Lauren Swift

I-488-001

I am commenting on the Lynnwood Link DEIS issued July 26, 2013. I am a member of the Seattle Latvian Community, whose Community Center and Church at 11710 - 3rd Ave NE in the Northgate area of Seattle, is slated to have tremendous impacts with any of the alternatives presented to date. The property would either be acquired in total or lose ingress/egress, as well as the caretaker's house and a significant section of parking and entrance areas. More significant, will be the impacts to the Latvian and other Baltic Communities – not just in the Northgate area, but all throughout Seattle and the surrounding area, and in some cases, throughout the West Coast.

The Seattle Latvian Community Center and Lutheran Church, over the last 40 years, has become the vital epicenter for preservation of Baltic (Latvian, Estonian, and Lithuanian) culture, religion, education, and social interaction in the Pacific Northwest. It has also become a political symbol, representing our success in resisting Soviet occupation, preventing "Russification", and restoration of democracy in the Baltic republics. Historically, the Center has hosted several visits from Baltic presidents, Seattle mayors, and Sen. Henry M. Jackson. The beautifully designed church, community hall, and school, are a source of pride for the Latvian community, because it was built by their own hands – their own donations, volunteer labor, and skills. Today, the Center also serves as meeting place, and source of information and "networking" contacts for new immigrants from the Baltic countries.

I was born, raised, and educated in Seattle. For me personally, the Latvian Community Center & Church greatly influenced my life, and continues to do so. My father was one of the primary Latvian activists and community leaders, that guided the development of the Center in the 1970's. The Center was intended to serve the Latvian community, and our children's children. As a teen, I worked on the construction of the church and school – as did many of my relatives and friends. As soon as the Center was completed, our family relocated from Magnolia to Northgate, so that we would be close by. As a youth, I attended the Latvian School and Lutheran Church there. During weekends, I learned the Latvian language, history, literature, religion and culture. Even while studying at the University of Washington, most of my extra-curricular activities (music, folk dancing, traditions, social events) were at the Latvian Center – regularly, several times per week.

Looking forward, if the Latvian community were to lose access to this Center - I'm not so worried about the impacts to myself – but more for the youth of the community. My loss would probably be limited to a disruption in social, cultural, and religious gatherings. For the youth, the loss will also be

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I-488-001

Thank you for describing the importance of the church and center. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-488-001 educational, and developmental – which will be unrecoverable, if the disruption due to relocation/re-construction lasts several years. Without a "home", this gap could cause a loss of "critical mass", and the Latvian community membership and activities could severely decline.

There is already a precedent for this kind of disruption to the Latvian community in Seattle. The first Latvian Center in the Wallingford area of Seattle was acquired by eminent domain in 1969 for the construction of a park. This first Center was a run-down, old building that had been purchased, so was perceived by some as a "call to action" – that the Latvians should build their own community center. Many still remember the difficulty in keeping the church, school, and cultural activities going in various rental spaces, during the interim years of 1969 until 1972, when the presently used Center was opened, Since the level of activities and pride at our present Center are much greater than in the past, and the same Center is also key to Estonian and Lithuanian communities in Seattle, I believe the impacts will also be much greater. This time they will be demoralizing, and devastating.

I urge the Sound Transit board members, engineers and planning committees to find a solution that allows the Latvian Community to retain its present property and location in a way that maintains its viability. If our community should be forced to relocate yet again, I feel it would be an insurmountable challenge.

Thank you for your consideration. I truly hope a reasonable solution can be found.

Sincerely,

Ed Rusis
erusis@cox.net

From: ruta BITEMAN <rutabite@msn.com>
Sent: Monday, September 23, 2013 3:18 PM
To: Lynnwood Link DEIS
Subject: Latvian Community Center / Light Rail project

Sound Transit
Draft EIS comments
c/o Lauren Swift

I-489-001

I am commenting on the Lynnwood Link DEIS issued July 26th, 2013. I am an active member of the Seattle Latvian Community , whose Center is at 11710 3rd Ave NE in the Northgate area of Seattle. The property is slated for monumental impact with any of the options presented to date.

I was born in Seattle in 1964 and I have been a part of this community and Church which has greatly influenced my life and family. It's our place of worship, community, sanctuary.

In 1969 we lost our church to eminent domain in the Wallingford area. The result of this is the present day Latvian center... it was built by the community... including my family. It is an example of what the Latvians wished their country to be: Free, open, democratic and safe. The Country of Latvia now has these rights, in part, due to centers like this where ex-pats were able to gather, discuss and even vote for change in their home country. However today, the Church and Community has grown to a size that would make it extremely difficult to move and have it survive for those it serves. Many families have relocated there over the years to be near the church and hall. The loss of the church to the elderly would be insurmountable. The loss to the youth of our community would be unrecoverable and this disruption devastating to my family, our community and the Latvian people.

For the record, I am a huge supporter of Light Rail. Having traveled throughout Europe over the years I know how important this is to our community in so many ways. We do want to see Light Rail succeed.

I do not envy you and your team in this process of evaluating the best solution. What we do need is a solution that will be the best for all involved, and that would have to include the Latvian Church and property staying there and available to its members and friends as it has for so many years.

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I-489-001

Thank you for describing the importance of the church and center. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-489-001 I urge the Sound Transit board members and planning committee that allows the Latvian community to retain its present property and location in a way that maintains its viability.

Thank you for your consideration,

Sincerely,

Ruta Sankalis-Biteman

From: Andy Seglins <AndyS@vaupell.com>
Sent: Tuesday, September 24, 2013 9:18 AM
To: Lynnwood Link DEIS
Subject: Please don't displace the Latvian Church and Center!

I understand that this is a day late – our server kicked it back and I am trying again.

The Latvian Church and Center represents much more than just a church, more than just a gathering place. I grew up near Martha Lake and spent a good part of the 70's and 80's travelling up and down I-5 to the Center for Latvian school on Saturdays, folk dancing on Wednesday nights, church on Sundays, Concerts, holiday bazaars, rummage sales, men's choir... the list goes on. I was married there, I first met a US Senator there (Scoop!), I saw Lithuanian and Estonian performers there, and it has grown to to be the heart of our entire extended Baltic community today. Due to service in the Air Force, I was away from Seattle for almost twenty years, but the Center today is the hub of a community as strong as what I remember from my youth.

When I was a kid, the "Latvian Community" was a homogenous, Latvian speaking community centered on its cultural connection. Today that community is just as vibrant, but the Latvian Center rings with all of the Baltic languages, as well as English (mixed with Latvian!) with visits from Baltic Studies Program students from UW, non-Latvian speaking spouses and friends. But all come to give and to get, what it is that makes this a special place in our community.

I-490-001 I would only hope that the discussions currently taking place are all focused on how best to find an amenable solution that keeps the center where it is. Displacement should not be an option. As an Engineer and supporter of infrastructure that will make our city a better place to live (including light rail), I know there has to be a solution that keeps the Latvian Center functioning as it does, where it stands, with minimal disruption. Please don't lose sight that the Latvian Center is also part of the structure that makes Seattle a great place to live.

Thanks.

Andy

Andy Seglins
Engineering Manager
Vaupell
Vaupell Northwest Molding & Tooling
1144 N.W. 53rd | Seattle, WA 98107
P: (206)676-8236 | C: (206)850-7471 | F: (206)783-9062
www.vaupell.com

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I-490-001

Thank you for describing the importance of the church and center. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Please consider the environment before printing this email.

From: Gleb S <tallgleb@hotmail.com>
Sent: Monday, September 23, 2013 11:58 AM
To: Lynnwood Link DEIS
Subject: Lynnwood C1/C2/C3 alternative - NO to C1

Please consider and address before making a decision regarding the Lynnwood Link Extension C1/C2/C3 alternatives:

I-491-001 The C1/C2 alternatives proposed by the Sound Transit as possible options to route the Light Rail Link are simply unacceptable for our neighborhood community, for our beautiful local environment, and for our working business professionals. There is the C3 alternative - one that makes perfect and clear sense. The C3 alternative is the rational and responsible way to route the Light Rail Link for current and future use. Below is a list of explanations and concerns that support these statements.

I-491-002 First and foremost, the C1 alternative is the most intrusive and the most negatively-impacting route choice. It is a very unnecessary route to follow while building the Light Rail Link. Sure, it may be closer to the "Lynnwood City Center" and it the final stop would be serving the highest amount of people within a walking distance. However, Lynnwood City Center is something that actually doesn't exist. The Lynnwood City Hall sits empty, and council sessions bring a handful of people in. The Lynnwood Pool is a destination - yet because it is more than 1 mile away from the C1's proposed final stop, it would not make a difference regarding the C1/C2/C3 final stops, as just a hundred yards that would separate these stops make no difference to those who would walk that far. As far as walkability for local residents - they will definitely NOT be the primary users of this mode of transportation. The vast majority of people who come to the current Lynnwood Transit Center DRIVE, and will continue to do so! Having a stop a few hundred yards to either direction makes no difference at all!

I-491-003 Secondly, the current amount of high-density living, shops, businesses, and a beautiful Scriber Creek Park, designated a 4F and federally protected public space will suffer tremendously. With the C1 alternative, 77 high-density private residential units will be demolished. In our current day and age, real estate is not easy to come by in a metropolitan area, as everything is already developed. Choosing the C1 route will uproot a close-knit community of neighbors, retired seniors, young professionals, and young families. With the C3 alternative - this will be unnecessary. Furthermore, due to the fact that the C1 alternative has a route that goes directly through a single-family dense neighborhood, a lot more families will be affected by the visual, noise, and construction effects that come with this project.

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I-491-001
Thank you for your comment stating your preference for Alternative C3.

I-491-002
Thank you for your comment stating your reasons for opposing Alternative C1.

I-491-003
Thank you for your comment stating the reasons you do not support Alternative C1.

I-491-004 Third - the Scriber Creek Park (as mentioned previously) is a federally - protected park. It was purchased with Futures Conservation Fund - SO THAT FUTURE GENERATIONS COULD ENJOY THIS TRANQUIL PLACE. It is a neighborhood mini-park. The C1 (and the C2) route directly negatively affects this park, its usability, and its fundamental beauty. The C1 alternative route has a plan to purchase ½ acre of this park - the absolute-most usable part of the park, with picnic benches, open areas for human congregations, and so on. The C1 alternative has a plan to route the Light Rail Link directly over this pristine land, thus making the park fundamentally different in every way, shape, and form. It is important to note that this park has ancient bogs, a creek that runs to Lake Washington, becoming a habitat to a vast amount of wild life. Running rail over this land, developing it during construction, and maintaining light rail above this land is unfeasible - basic understanding of this is before our eyes.

I-491-005 As the C1 proposed path continues on north - east toward its final stop, the plan would be to demolish high-density business parks, as well as one more very dangerous place - a HazMat site. The only hazardous materials site anywhere in S2 Light Rail link extension from Seattle to Lynnwood is impacted - with the C1 alternative. This is a very dangerous situation, where choosing C3 alternative will definitely avoid it.

All the aforementioned negative impacts the C1 alternative brings with it make this a very unrealistic choice to route the Light Rail in Lynnwood. Seriously consider just a small handful of concerns that come with this project, as you make the decision to build the Light Rail route from Mountlake Terrace to Lynnwood. Choose the C3 alternative when you plan to build the Light Rail in Lynnwood.

Sincerely,

Gleb Shein
tallgleb@hotmail.com
253-951-1812

I-491-004

Thank you for describing the importance of Scriber Creek Park and your desire that Sound Transit avoid impacting it. Section 4.18 describes the results of the Section 4(f) analysis Sound Transit and FTA have conducted, indicating that Alternative C1 would not be approved in its current form due to the acquisition of and impacts to the park.

I-491-005

Thank you for your comment stating the reasons why you prefer Alternative C3 over Alternative C1. Sections 4.12.2 and 4.12.3 of the EIS analyze potential impacts due to hazardous waste sites. Mitigation measures are discussed in Section 4.12.6.

From: Aleks Sils <aksils7@gmail.com>
Sent: Sunday, September 22, 2013 10:51 PM
To: Lynnwood Link DEIS
Subject: Latvian Lutheran Church

To Whom it May Concern,

My name is Aleks Sils and I have been an active member of the Seattle Latvian Community for virtually my entire life (23 years). I attended the Seattle Latvian School almost every Saturday for thirteen years as well as participated and assisted in a great number of cultural, religious, and educational events that were ALWAYS at the Latvian Hall.

I am currently a Graduate Student at Washington State University and as you can imagine I have been extremely busy, however I am taking this time to write to you and express my deep concern about the potential loss of our beloved church and center.

I-492-001 What needs to be understood here is that the Seattle Latvian Church is not just some small church with a short history. This property has been home to many years of Latvian school, cultural gatherings, weddings, freedom celebrations, town-hall meetings, and of course a healthy following of church goers.

In fact, my parents Vilnis Sils and Rita Ridzenieks met at the Seattle Latvian Hall some 24 years ago and my Grandfather, Karlis Ridzenieks built this church. Therefore, I owe my life to the existence of this hall.

I-492-002 I will ask you to please reconsider the current Link Light Rail route that would damage our ONE standing community center and church.

Thank you,

Aleks Sils

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I-492-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church.

I-492-002

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: William Sils <wvsils@gmail.com>
Sent: Sunday, September 22, 2013 11:16 PM
To: Lynnwood Link DEIS
Subject: Effect on Latvian Center of Lynnwood Sound Transit Extension

To whom it may concern,

I-493-001

My name is William V Sils and I am a 61 year old Latvian-American currently living on Bainbridge Island. It has come to my attention that the proposed light rail extension to Lynnwood is likely to negatively impact the Latvian Center located just north of Northgate way. While I am generally in favor of providing mass transit opportunities to the public, I must caution the government entities involved with this project to keep in mind that minimizing the importance of the Latvian Center to the Baltic community would be a gross injustice.

Please add my voice to the many others that have contacted you urging care and consideration of the Latvian Center. As a community, we have a need to have a place where we can come together and maintain our cultural identity. The Latvian Center has functioned in this capacity for 50 years and should continue to do so for the good of the entire Baltic community.

Thank you for your attention to this matter.

-William Vilnis Sils
7756 NE Yeomalt Point Dr.
Bainbridge Island, WA. 98110
206-949-0363

I-493-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Aija Stapars <astapars@comcast.net>
Sent: Sunday, September 22, 2013 8:05 PM
To: Lynnwood Link DEIS
Subject: Sound Transit - Comments Regarding Light Rail and Latvian Church and Center

To whom it may concern,

I-494-001

I am a member of the Latvian Lutheran Church and also the Latvian Community in Seattle. I am writing to you to express my concern regarding the impact of the proposed Sound Transit Light Rail line extending northward from Northgate. You have identified the need to build this link parallel to I-5 on the East side of the freeway which impacts our current community center and our church. While I understand the need to build the Light Rail and support the overall project, I ask that you consider any and all alternatives to find a route that does not impact our center.

I was a child attending the Latvian school in the Densmore/Greenlake area when we had to relocate to Northgate. I remember bringing pennies each week to Latvian school to save and help build our new community center. My deceased father, a brick mason, and my brother laid the brick and slate in the current Latvian church and school. To me it's more than a building. It represents the generation that fled their homeland after Soviet occupation and build a new community home.

I finished Latvian school in this new community center and was confirmed in the Latvian Lutheran church. I have also taught in our Latvian school and Sunday School. I cannot imagine us relocating again or impacting our current property to the degree that the initial designs have proposed.

As a long-time Seattle resident, I ask for your understanding of the importance of this church and community center. I ask for your consideration of our community, the entire Baltic community and the next generation of children being raised in this community. Please find a way for us to keep our church and cultural center, minimize the impact of noise from the light rail, and provide us access to the church and center such that we can continue church services and our cultural activities that on any given week can run 24/7.

Respectfully,
Aija Stapars, VP Human Resources
Wesley Homes

7220 39th Ave SW
Seattle, WA
98136

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I-494-001

Thank you for describing the importance of the church and center to you and your family. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. Noise walls in the area are being provided to minimize noise impacts to the church and residences as described in Section 4.7.

From: Zachary Stephen <zrs420@uw.edu>
Sent: Monday, September 23, 2013 10:52 AM
To: Lynnwood Link DEIS
Subject: Comments for Lynwood Rail Extension

I-495-001 I am a resident in the Northgate/Pinehurst neighborhood and reside at 325 NE 117th St, Seattle, WA 98125 which is about one block away from the current East sound wall along 1-5. With the draft EIS published, it is clear from the report, that no matter what route is decided that my residence will be impacted greatly by the decisions made by the board.

I-495-002 First, I would like to state that I think that a high capacity bus alternative should be studied more as a possible solution as opposed to the link light rail. The associated cost of construction, realignment and residential property impacted with a no-build alternative is low compared to a Light Rail Extension.

I-495-003 However, It appears that the board will be moving forward with the Lynnwood Light Rail Extension and with a route along the 1-5 corridor per the results of the Lynnwood Link Extension Draft EIS. If that is the case, I would like to voice that I prefer an at grade option along the 1-5 corridor as opposed to an elevated structure. The elevated structure will have a very high visual impact for both neighborhoods east and west of I-5 and I as a residential property owner do not want to see a large concrete structure housing a train from my front yard that can be seen above the East Sound Wall. The Northgate neighborhood has had many cosmetic improvements over the last 10 years and is becoming more of an urban center and I think that an elevated structure that can be seen from residences along both the West and East-side of Interstate 5 will be counterproductive to the neighborhood improvements that Northgate/Pinehurst neighborhood has undergone.

I-495-004 My first and really only preference would be A1: At-grade/elevated to NE 145th and NE 185th east side stations. I prefer the at grade option over an elevated structure due to the lower visual impact, noise during construction (DEIS states that an elevated structure would probably require work at night and on the weekends due to interstate traffic) and the associated lower cost of construction. Station placed at 145th and 185th make more sense with the existing structures and projected ridership levels. I think that 3 stations placed at 130th, 155th and 185th will over-saturate the neighborhood and will delay ridership with an extra stop. A station placed at 145th as opposed to 155th makes more sense due to ease of access to I-5 from 145th as opposed to 155th.

I-495-005 A5 is not an at grade alternative that I would prefer as my neighborhood would be impacted by placing an at-grade structure east of the 117th overpass as opposed to moving the train under a re-built 117th overpass. A3 moves the light rail closer to my residential property than A1, and will disrupt the bike and

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I-495-001
Sound Transit developed the alternatives considered in the Draft EIS based in large part on their ability to minimize acquisitions, displacements, and relocations, compared to other possible alternatives, but some property acquisitions will be unavoidable. Chapter 2 of the Draft EIS describes the other options considered during early planning, most of which involved higher levels of property or other environmental impacts.

I-495-002
Thank you for your comment recommending that a high capacity bus alternative be studied as a solution instead of the Lynnwood Link Extension project. In fact, this mode of transportation as well as other modes were evaluated, along with other corridors serving the north Seattle to Lynnwood area. This analysis is presented in detail in a separate report titled the *Alternatives Analysis Report (*Appendix K of the Draft EIS) and is summarized in Section 2.5 of the Final EIS. It was not advanced because it was less effective in providing the speed, reliability, and capacity needed in the corridor.

I-495-003
Your reasons for preferring at-grade alignments are noted. Visual impacts and mitigation are discussed in Section 4.5 of the EIS.

I-495-004
Your comment stating your preference for Alternative A1, which was the basis for the Preferred Alternative, is noted.

I-495-005
Thank you for your comment stating the reasons why you oppose Alternatives A3 and A5. The Preferred Alternative features an alignment east of the NE 117th Street bridge, but has refined the design to replace

I-495-005 pedestrian path used by local residents to cross over 1-5 to schools, parks and churches as the overpass will be untouched in this alternative.

I-495-006 I understand that the Seattle Latvian Evangelical Lutheran Church, which is about a block away from my house will be possibly forced to relocate, if an at-grade option for segment A (A1, A5 and A10) is selected. I also realize that the parishioners at the Latvian Church have fairly strong ties to the Church structure and most would probably prefer an elevated structure so the church is not displaced. However, as a residential property owner in the area that will be impacted, I and my neighbors will be the ones that live 24/7 near the link light rail extension and I think that our preference for an at-grade structure should be given more weight than the church members.

I-495-007 Once again, I think a no build alternative should be more seriously considered, however, if the Lynnwood Light-rail Extension is to proceed further my preference as an impacted property owner would be for Alternative A1, an at grade alternative as the associated visual impact is lower for both neighborhoods East and West of 1-5

Sincerly,

Zachary Stephen

Graduate Research Assistant

University of Washington

Dept of Materials Science and Engineering

sidewalks and the bike path to maintain the connections currently made.

I-495-006

Thank you for your comment stating your preference for the at-grade alignments of the guideway. The Segment A Preferred Alternative, and all at-grade alternatives now avoid displacement of the church, as described in Section 2.3 of the Final EIS.

I-495-007

Thank you for your comment stating your preference for the No Build alternative or Alternative A1.

From:	junefossti@comcast.net
Sent:	Monday, September 23, 2013 12:13 PM
To:	Lynnwood Link DEIS
Subject:	ALTERNATE C-3 PREFERRED

I-496-001 **C-3 is best. Affects fewer properties and persons.**

I-496-002 **Today's Seattle Times' hard-luck story of the church property interference is just too bad -- they can live with it.**
Other proposed alternatives have negative impact on too many people.

June Foster Stinson
4111 164th St SW Space 43
Lynnwood 98087

I-496-001

Thank you for your comment stating your preference for Alternative C3 due to lower acquisition impacts.

I-496-002

Your comment about Segment A is noted.

From: Rebecca Stradling <rebastrad@yahoo.com>
Sent: Sunday, September 22, 2013 4:23 PM
To: Lynnwood Link DEIS
Subject: Please choose C3!

Sound Transit,

I-497-001 Please make the obvious choice of C3. Obvious due to it being the lowest cost, as well as the lowest impact to residents, business and wildlife. I live in a zone that would have a "moderate" noise impact from the other two choices and worry about my future property value and quality of life. Please treat every neighborhood like it matters.

Sincerely,

Rebecca Stradling
425 418-5804

Sent from my iPhone

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I-497-001

Thank you for your comment stating your preference for Alternative C3.

From: Iwata, Roger
Sent: Monday, September 23, 2013 4:07 PM
To: Lynnwood Link DEIS
Subject: FW: Latvian Hall

-----Original Message-----
From: Scott Strickland [mailto:SStrickl@bnbseattle.com]
Sent: Monday, September 23, 2013 4:02 PM
To: Dixon, Rhonda
Subject: Latvian Hall

Please forward this comment to the proper regulator as we understand this is last day for pubic comment.

I-498-001 We Scott Maria Eva Alexander and Anna are opposed to your light rail transit expansion if it in any way damages, imperils or condemns the Latvian church or community center Our Lithuanian family has spent much time celebrating our Baltic culture with the gracious assistance of the Latvian Community at this location over the past 3 decades. Taking this property from the people like our parents in laws and grand parents who saw Stalin and Hitler take their possessions countries and lives is at best ill advised and at best insensative.

You need to provide recompense for relocation at an. amount that is realistic to resettle rather than split this property.

We have lived in Seattle since 1981.

Sent from my iPhone
[We want to hear from you. Click or visit bblistens.com] <http://bblistens.com>

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I-498-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

As noted in Section 4.1, any acquisition of property, including portions of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

From: T.J. Stutman <tstutman@gmail.com>
Sent: Monday, September 23, 2013 9:14 PM
To: Lynnwood Link DEIS
Subject: Feedback on Draft EIS - Segment A

I-499-001 I live in Seattle about a half-mile west of the site of the potential Segment A Light Rail stop on 130th Ave NE. I recommend putting a stop at that location, so I endorse options A5, A7, A10, and A11. This site makes the most sense to me as it would be far easier for my community (Haller Lake) to access light rail instead of needing first to commute south to the Northgate Transit Center, and transit options could also link the Bitter Lake and Lake City communities with the 130th Ave light rail stop. A potential stop on 145th would not be as easily accessible to Bitter Lake or Lake City residents, and I know that these are the urban villages where the City expects to concentrate future development.

I-499-002 That said, I am also concerned about additional noise from construction and subsequent operations that a 130th stop would bring to the neighborhood, as well as what the options would be for park&ride

I-499-003 commuters. I suggest that the recommended option consider how to best mitigate the potential negative effects on the neighborhood, by selecting the option (at/grade or elevated) that would be least disruptive to the neighborhood and which option would offer suitable parking for commuters (to limit the number of commuters parking on neighborhood streets).

I-499-004 My take on the alternatives is that A5 (at-grade stop at 130th NE, with 100 parking spots) would be the best option given my concerns.

T.J. Stutman

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I-499-001

Thank you for your comment stating your preference for a station at NE 130th Street (over a station at NE 145th Street) due to improved access for residents living west of the I-5 highway. A station at NE 130th Street was identified as an option for the Preferred Alternative by the Sound Transit Board.

I-499-002

For construction, the local construction noise ordinance would be applicable, and Sound Transit is committed to maintaining construction noise levels within the criteria. Further, construction noise for this project is similar to construction noise for a paving project, building construction, or any other construction project. Best practices and mitigation measures are described in Section 4.7.

I-499-003

The 130th Street Station is included as an option being considered in the Final EIS. Station parking facility sizing and design will be balanced with the need for good multi-modal connections in order to serve the needs of the region as well as local communities. Minimal parking is anticipated to be provided at a 130th Street Station should it move forward.

I-499-004

Thank you for your comment stating your preference is for Alternative A5 considering your primary concerns.

From: John Sulcs <jsulcs@gmail.com>
Sent: Monday, September 23, 2013 1:28 PM
To: Lynnwood Link DEIS
Subject: Latvian Cultural Center

Sound Transit;
ATT: Lauren Swift

I-500-001 My family have been members of the Latvian Lutheran Church of Seattle for 15 years. Since moving to this area we have attended worship services and celebrated all life affirming events at the Latvian center. My children attend Latvian school at this location, have sung in the chorus, danced in Christmas performances, and performed in school plays. This is more than a church and an assembly hall.
The cultural aspects of this Center can not be overstated. Latvians, Lithuanians, and Estonians throughout the Northwest congregate at this location to share their rich heritage with children and the community at large. The recent visit by the President of Latvia is a good indication of the importance of this Center. The fact that it is also recognized as a voting location for national Latvian elections, is another indicator as to the importance of the Center.

I-500-002 The taking of the land the Latvian Center stands on can not be valued by mere dollars and cents. Disrupting events and worship services would likely result in the demise of this culture in the pacific NW, and cost the Northgate community one of the things that makes it a diverse and ethnically rich community.
If the minimal information provided in the Sound Transit Lynwood Link Extension DEIS is to be believed, either the raised or at grade option would be disruptive to every event held at this venue. Neither church services, school, nor any sort of cultural performance could be held with trains rumbling past every 4-7 minutes. I am sure that this will be self evident when the Sound Transit Board visits the site and observes the proximity of the proposed rail line to the Center. Will the Sound Transit Board visit this location that is so important to the community at large?
I ask that the Sound Transit Board reconsider the proposed location for the Lynwood Link Extension. Moving the rail slightly west, away from the Latvian Cultural Center located at 11710 3rd Ave NE, Seattle, WA, 98125, more onto WSDOT land would be much less disruptive to the community as a whole, and likely save taxpayer monies.
I support enhanced public transportation, but feel that the Sound Transit Lynwood Link Extension DEIS has not adequately explored the options available to the location of the rail line or considered the true life impacts of the current proposal. Moving forward with a plan that is not well considered will only lead to bad policy, and further community resentment.
Sound Transit's job #1 should be to enhance the community they are trying to serve, not taking an option that is detrimental to the communities they are working in.
Please Respond.
Sincerely,
John M. Sulcs
8921 41st Ave SW, Seattle, WA, 98126

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I-500-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church.

I-500-002

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Karl Taht <karlc280@yahoo.com>
Sent: Sunday, September 22, 2013 10:42 PM
To: Lynnwood Link DEIS
Subject: Fw: Help Save the Latvian Hall

To: Lauren Swift
Sound Transit

The Latvian Community Center and Church, used by Estonians, Latvians, Lithuanians, is in danger to be impacted due to the routing of the Sound Transit Link. For years the Church and the Center has been used by the whole Baltic community residing in the greater Seattle area. In addition to regular Church Services, performances of Weddings, Baptisms and Memorial services, the Center has been utilized for our Independence Day, Mother's Day, St Martin's Day, Christmas celebrations etc. It has been available for Baltic Exhibits, Folkdance and Choir practices.

I-501-001 Any disruption to its availability, weather temporary or permanent, will either severely disrupt our Baltic community or eliminate its existence.

As an Estonian of the Baltic community, I urgently request that Lynnwood transit consider route alternatives that will preserves the Latvian Lutheran Church and Community Center, most precious for me and my family.

Sincerely,

Karl Taht

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I-501-001

Thank you for describing the importance of the Latvian Community Center and church to the Baltic communities. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Martha Thomas <martita518@earthlink.net>
Sent: Sunday, September 22, 2013 7:30 PM
To: Lynnwood Link DEIS
Subject: Please save the Latvian Church and Community Center

Hello,
I am a member of the Lithuanian community and I am writing to you to regarding the Latvian Church and Community Center. The Latvian Community generously allows our community to utilize its facilities. We often also host group programs with the Estonian, Lithuanian, and Latvian community together.

I moved to Seattle 6 years ago and was delighted to learn of the Lithuanian community and this Community Center. Connecting with the Baltic people at the Latvian Church and community center has greatly enriched my life here in Seattle. I have attended St Martins festivals, Independence Day Celebrations, worship service, funerals, and Memorial Services for the Anniversary of the Deportation of Baltic People to Siberia
(some of which my family endured). I am also part of the Lithuanian singing group, and we often perform at the Latvian Church and Community Center. I participate regularly in these events at this center, and it has brought me a great personal connection to my family history that I would otherwise would not have had.

I-502-001 Losing this great facility would mean a huge deficit in my life, and a great loss to Seattle.
This community center is just the kind of thing that makes Seattle a multi-cultural and unique place.

I understand that construction will go forth with the rail line, but please consider these requests in order to keep our Church and Center available to the community.

- Please keep access to the Latvian center open during construction, at-grade rather than the elevated options
- Please mitigate construction and post construction impacts such as dust, noise and vibration.
- Please do NOT relocate the Latvian Center. Please help us find ways to keep adequate parking and access.
- If it mandatory that that Latvian Center be relocated, please ensure that a fair price is paid and that we are able to relocate to a nearby location of the same size and accessibility

Thank you very much in advance for including these requests in your construction plan.

Sincerely,
Martha Thomas

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I-502-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the Preferred Alternative and the refinements in other alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods. In addition, Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative, and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property, including a portion of a property, would require fair compensation to the property owner in accordance with Sound Transit policy and federal and state law.

Short-term visual, air quality, and noise impacts would be avoided and minimized with the implementation of best management practices. These would include fencing the construction area for public safety, spraying the construction area with water to reduce dust, and use of temporary noise walls. For additional information, see Sections 4.5.7, 4.6.7, and 4.7.7, respectively.

From: astrida tralmaks <ilze101@hotmail.com>
Sent: Sunday, September 22, 2013 7:33 PM
To: Lynnwood Link DEIS
Subject: Re: Latvian Church

Hello,

I-503-001 I am requesting that you find an alternate route for your Link, in lieu of destroying what the Latvian Community has built up by a lifetime of hard work and love. Every time that I go to this church/center I feel the love of the many who have built and sustained this community. We Latvians have nothing else and this is HOME. It is not a pile of building materials and dirt. Many of those who helped create this community are no longer with us. World War II unfairly took our country away from us and now this becomes another heartless removal of our new home.

I am 62 yrs. old and want to see the next generation able to carry on our culture. You are dealing with a unique situation that you must look at seriously. This is also our church and one that is not easily replicated. We are in a delicate time of transition for the younger generation and we cannot survive as a viable Latvian home for spiritual, social and cultural connection with your Link replacing, or compromising, our beautiful center.

I came to hear our President speak at the Latvian Center today and I hope his pleas might lend a bit more weight than just our local community. Please understand that, even from afar, we are still Latvians and also Americans. You may contact me for further input anytime.

Sincerely,
Astrida Tralmaks
120318 15th Ave. NE Apt. 307
Shoreline, WA 98155
206-290-5279

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I-503-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Walgamott, Amy <amy.walgamott@sea.procure.com>
Sent: Monday, September 23, 2013 10:32 AM
To: Lynnwood Link DEIS
Subject: Comments on DEIS

Dear Sound Transit,
I want to make a final comment before the period closes, specifically addressing the City of Shoreline's comments.

I-504-001
1. Contrary to what the city says in its comments, the area around the proposed 145th St station IS ALL single family homes. There is currently no commercial or high-density residential use. Therefore, the 145th station would impact the community just as much as the 155th St station. Having the 155th St station as a community station makes more sense.

I-504-002
2. The residents of the Ridgecrest neighborhood DO NOT want parking garages built at either option. Parking garages will encourage driving. The stations should be community stations and the money planned for parking garages should be used to make bike and pedestrian commuting to the stations optimal.

Sincerely,
Amy Walgamott

Amy Walgamott
Marketing Coordinator
p[206]306.2810
amy.walgamott@sea.procure.com
Seattle Cancer Care Alliance | Proton Therapy

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I-504-001

Your comment stating your preference for a light rail transit station at NE 155th Street instead of at NE 145th Street is noted.

I-504-002

Your comment about no parking garages is noted. Sound Transit would include pedestrian and bicycle facilities adjacent to stations. Station parking facility sizing and design are balanced with the need for good multimodal connections in order to serve the needs of the region as well as local communities.

From: Andy Walgamott <wigglemott@yahoo.com>
Sent: Sunday, September 22, 2013 3:52 PM
To: Lynnwood Link DEIS
Subject: Comments on Lynnwood Light Rail Extension DEIS

Hi, my name is Andy Walgamott, I live at 14802 5th Ave. NE, near the proposed light rail station and very large garage at 145th.

I-505-001 I completely support extending light rail north from Seattle and I would support a smaller station at 145th with appropriate mitigation for the neighborhood. However, I find it difficult to support a station that would also include a 500-car parking garage and redesigned onramp to I-5, both of which may be built diagonal to my home.

Such a large parking garage would be out of scale with our neighborhood of single-family homes and bring about a fundamental shift in the quality of the area. My home would be impacted by noise and light pollution, our view of nice big, slow-growing trees, which also buffer us from I-5, would be impacted, and such a station would bring sharply increased traffic to the area. In one of the proposed configurations, our home somehow is NOT impacted by noise but neighbors on either side of us are. How can that be? I also have very serious doubts that the intersection of 145th and 5th Ave. NE/I-5 can handle the construction of a giant garage shoehorned into a limited space, and afterwards, the subsequently increased traffic load, without major impact to local residents and travelers using 145th to access I-5 or continue west to Aurora and Shoreline Community College.

I-505-002 I do support a station at 130th St. Is it possible to build a multi-story garage there, using the space between I-5 and the golf course, and ***above*** 5th Ave.? I understand that City of Seattle of policies don't allow that, but utilizing that strip of land, while being careful not to impact Thornton Creek, would not impact near the number of residents as one at 145th would. I would support a local station at 155th to better balance the distribution of stations through Shoreline, assuming that Northgate and Lynnwood would be major hubs for riders to embark and detrain. I also support increased bussing to stations from existing park-and-rides.

Thank you,
AW

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I-505-001
Your comments about the parking garage at NE 145th Street are noted.

The parking garage would be visible from your property. See Section 4.5 for visual impacts and Section 4.7 for noise impacts and mitigation. Chapter 3 discusses traffic impacts and mitigation. The Noise and Vibration Technical Report provides additional information on noise impacts and mitigation at your property.

I-505-002
Your comments about the NE 130th Street Station location are noted. Per City of Seattle plans and policy, parking at a NE 130th Street Station would be either zero or minimal (~100 spaces). Station parking facility sizing and design are balanced with the need for good multimodal connections in order to serve the needs of the region as well as local communities.

From: Linda At Sea <lindaatsea@yahoo.com>
Sent: Monday, September 23, 2013 12:08 AM
To: Lynnwood Link DEIS; McCarthy, Pat (DO NOT USE); Patterson, Julia; Balducci, Claudia; Conlin, Richard; Earling, David; Marchione, John; McGinn, Mike; Peterson, Lynn; Strickland, Marilyn; PRoberts@ci.everett.wa.us; Butler, Fred; Constantine, Dow; Enslow, Dave; joe.mcdermott@kingcounty.gov; Moss, Mary (DO NOT USE); Phillips, Larry; von Reichbauer, Pete
Subject: Lynnwood Link

I-506-001

Lynnwood City Council Members:
I assure you that if C4 (C3 modified) had been in the original DEIS documentation, everyone who signed our petition against C1 and C2 would still be in favor of the original C3 Alternative (1800 signatures). This modification is too intrusive on the wetlands. And, as you know, these are the highest quality of wetlands within this entire Sound Transit project. C3 is a viable alternative and should be the recommendation given by this Council and be the Preferred Alternative of the Sound Transit Board.

Linda Willemarck

cc: Sound Transit Board

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I-506-001

Your comment stating your preference for Alternative C3 is noted. Section 4.8 in the Final EIS provides information on ecosystem resource impacts and mitigation for all alternatives.

From: Linda At Sea <lindaatsea@yahoo.com>
Sent: Monday, September 23, 2013 12:14 AM
To: Lynnwood Link DEIS
Subject: Lynnwood Link Comments

I-507-001

When I found out that Sound Transit was considering putting train rails through a protected wetland, watershed, waterfowl refuge, and wildlife habitat, I couldn't believe it was possible for this to happen. There are laws in place to keep this very thing from happening.

Scriber Creek Park and Wetlands are protected under federal regulations, like Section 4f, that states the administration may not approve the use of this property unless there is no feasible and prudent avoidance alternative and that there be sufficient supporting documentation to demonstrate why there is no feasible and prudent avoidance alternative. We all know that there are alternatives in this situation.

The City's own resolution 2012-07 refers to this area as "significant city recreational resources of Scriber Creek and associated wetlands, and the city's Scriber Creek Park, that provide places to experience nature in close proximity to Lynnwood's City Center and regional Interurban Trail, both of which would be negatively impacted.."

The City purchased the Park with Conservation Futures Funds "a fund from property taxes specifically for the purpose of preserving open space, farm land or wooded acreage. "*...to protect, preserve, maintain, improve, restore, limit the future use of, or otherwise conserve land... for public use or enjoyment."* I understand that a Snohomish County Attorney has been asked to check into the use of the funds and the proposed land use implications.

Why is the City of Lynnwood asking for more conservation monies and at the same time they are considering allowing land purchased from those same monies to be unnecessarily, and irreparably altered when there are other sites available.

Linda Willemarck

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I-507-001

The Lynnwood Link Extension will abide by all applicable federal, state, and local environmental laws and regulations. Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts on environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure no net loss of ecosystem function and acreage as a result of agency projects.

You are correct that there are legal and administrative requirements that would need to be satisfied prior to use of park properties for a light rail facility. These requirements reflect the high value placed on these resources as public benefits. The environmental review process includes these considerations when evaluating the impacts and benefits of potential alternatives. If a Preferred Alternative is selected that includes impacts to Scriber Creek Park and/or the Interurban Trail, all legal and administrative requirements will be met prior to any transfer of properties for light rail use.

I-508-001

From: Linda Willemarck <lindaatsea@hotmail.com>
Sent: Monday, September 23, 2013 1:10 AM
To: Lynnwood Link DEIS
Subject: FW: Scriber Creek Park - Lynnwood Link

For those of you who have not been able to walk through the park. A wetland, watershed, and wildlife habitat protected under the 4f federal ruling.

Scriber Creek Park - Lynnwood Link

VIEW SLIDE SHOW DOWNLOAD ALL

This album has 5 photos and will be available on SkyDrive until 12/19/2013.

You have been sent 5 pictures.

100_0961.jpg
100_0969.jpg
100_1199.jpg
100_1135.jpg
100_1141.jpg

These pictures were sent with Picasa, from Google.
Try it out here: http://picasa.google.com/

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I-508-001

Sound Transit has received these pictures.

From: Linda At Sea <lindaatsea@yahoo.com>
Sent: Monday, September 23, 2013 3:28 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Link - Native Growth Protection Area

I-509-001

There are at least half a dozen different signs posted in the various C Alternatives in Lynnwood. In that the land is quite dense, they can be difficult to find. These lands are to be protected permanently.

A Native Growth Protection Area (NGPA) is a parcel of land, usually wooded, that may have a stream or wetland nearby. Land in NGPAs are protected from human disturbance, alteration and development because of the environmental purposes that this land regularly serves. Often, an NGPA will store water and reduce flooding in nearby areas, help maintain good water quality, and provide valuable rearing and feeding opportunities for local wildlife.

If you live near an NGPA, here are a few things you can do to help protect this valuable environmental resource:
••Refrain from spraying pesticides in or nearby an NGPA as this can harm sensitive plants and animals who live in the area
••Do not dump yard waste or plants into the NGPA as this can smother native plant growth and introduce invasive plant species into a native ecosystem
••Do not remove vegetation, dig or deposit earth, or construct any structure within these areas without prior approval by the City's Public Works Department

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I-509-001

Thank you for information about Native Growth Protection Areas. Sound Transit will comply with applicable local land use codes.

From: joe zahn <integra95gsr@hotmail.com>
Sent: Monday, September 23, 2013 8:44 PM
To: Lynnwood Link DEIS
Subject: RE: LIGHT RAIL

Dear Sound Transit,

I-510-001 Please don't demo 4920 200th ST SW. I live here and I would be kicked out and still owe 10s of thousands on my loan after the housing crash. Market value will not cover what I owe.

I will absolutely sue. You can bet on it.

Sincerely,

Joe Zahn
Cedar Creek Condo Resident

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I-510-001

Your comment regarding acquisition of your condo is noted. The Preferred Alternative evaluated in the Final EIS avoids displacing any residents of Cedar Creek Condominiums.

From: Anna <annaegrant@gmail.com>
Sent: Sunday, September 15, 2013 10:26 AM
To: Lynnwood Link DEIS
Subject: Community engagement for Sound Transit Lynnwood Link program - Latvian Evangelical Lutheran Church
Attachments: Sound Transit - Latvian Evangelical Lutheran Church.pdf

Dear Ms. Swift,
Please find the attached community engagement letter regarding the Sound Transit Lynnwood Link project and the Latvian Evangelical Lutheran Church, 11710 3rd Avenue N.E. Seattle, Washington.

Thank you for your attention.

Anna Grant, Sean Smith, Ilga Grant, Arvid Grant, Zane Grant and Mara Grant Pugel

Sound Transit
401 South Jackson Street
Seattle, Washington
98104
Email: LynnwoodLinkDEIS@soundtransit.org

15 September, 2013

Subject: Parcel #6411600420 – Seattle Latvian Evangelical Lutheran Church, 11710 3rd Avenue N.E., Seattle

Dear Sir or Madam,

I-511-001 As active members of the Seattle public and Latvian Community, we would like to convey to Sound Transit that plans to expropriate the Seattle Latvian Evangelical Lutheran Church, situated along the planned Lynnwood Link Extension, are wholly unacceptable to our three-generation family as members of the Seattle Latvian Community.

The Seattle Latvian Evangelical Lutheran Church is the center of the Latvian, Lithuanian and Estonian communities in the Pacific Northwest. Acquiring the Church building and/or land to construct the Lynnwood Link Extension is inconsistent with the stated goals of the project to "support the development of Northgate and Lynnwood – the corridor's two designated regional growth centers." Northgate community centers such as the Seattle Latvian Evangelical Lutheran Church support positive community development by providing a meeting center for multiple generations and connect Northgate/Seattle with the wider Baltic ethnic communities around the world.

The Seattle Latvian Evangelical Lutheran Church is a significant center for our family. This Church was built in 1971 with donations from a group of immigrant Latvian families, including our own. Since then, this Church has been a place of worship for our entire family, a meeting place for Latvian community events, a place to mourn our fellow Latvians' who have passed away and a place to teach our youngest Latvians about our culture, language and common history. Indeed, the Seattle Latvian Evangelical Lutheran Church is particularly important for my husband and I as it is the place where we were wed.

In summary, the Latvian Evangelical Lutheran Church is integral to our family's connection with our wider Baltic community. We find Sound Transit's plans to expropriate this land and building as inconsistent with Sound Transit's stated goals of community development when our Church already serves to foster positive community development in the North Seattle area.

Regards,
Anna Grant and Sean Smith

On behalf of:
Ilga and Arvid Grant, Zane Grant, Mara Grant Pugel

I-511-001

Thank you for describing the importance of the Seattle Latvian Evangelical Lutheran Church to your family. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Anna Grant and Sean Smith
4814 Interlake Avenue North
Seattle, Washington 98103

Ilga and Arvid Grant
1909 Forest Hill Drive
Olympia, Washington 98501

Zane Grant
2710 Fir Street S.E.
Olympia, Washington 98501

Mara Grant Pugel
3901 Wollochet Drive NW
Gig Harbor, Washington 98335

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: INGRIDA GRAY

ADDRESS: 12740 30th Ave NE #515

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS: igray319@gmail.com

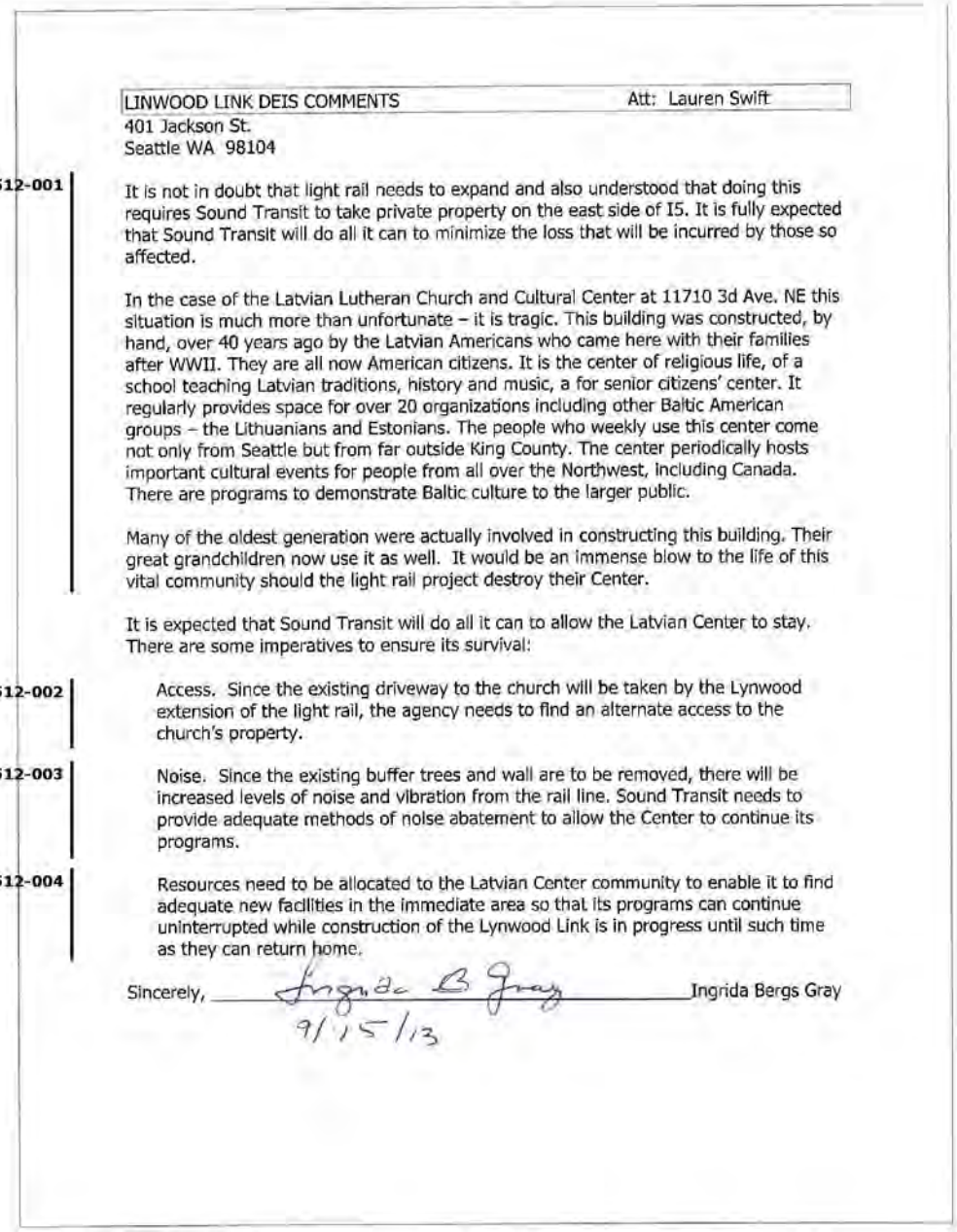
☑ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

attached

SOUNDTRANSIT
RIDE THE WAVE



LINWOOD LINK DEIS COMMENTS Att: Lauren Swift
401 Jackson St.
Seattle WA 98104

I-512-001

It is not in doubt that light rail needs to expand and also understood that doing this requires Sound Transit to take private property on the east side of I5. It is fully expected that Sound Transit will do all it can to minimize the loss that will be incurred by those so affected.

In the case of the Latvian Lutheran Church and Cultural Center at 11710 3d Ave. NE this situation is much more than unfortunate – it is tragic. This building was constructed, by hand, over 40 years ago by the Latvian Americans who came here with their families after WWII. They are all now American citizens. It is the center of religious life, of a school teaching Latvian traditions, history and music, a for senior citizens' center. It regularly provides space for over 20 organizations including other Baltic American groups – the Lithuanians and Estonians. The people who weekly use this center come not only from Seattle but from far outside King County. The center periodically hosts important cultural events for people from all over the Northwest, including Canada. There are programs to demonstrate Baltic culture to the larger public.

Many of the oldest generation were actually involved in constructing this building. Their great grandchildren now use it as well. It would be an immense blow to the life of this vital community should the light rail project destroy their Center.

It is expected that Sound Transit will do all it can to allow the Latvian Center to stay. There are some imperatives to ensure its survival:

I-512-002

Access. Since the existing driveway to the church will be taken by the Lynwood extension of the light rail, the agency needs to find an alternate access to the church's property.

I-512-003

Noise. Since the existing buffer trees and wall are to be removed, there will be increased levels of noise and vibration from the rail line. Sound Transit needs to provide adequate methods of noise abatement to allow the Center to continue its programs.

I-512-004

Resources need to be allocated to the Latvian Center community to enable it to find adequate new facilities in the immediate area so that its programs can continue uninterrupted while construction of the Lynwood Link is in progress until such time as they can return home.

Sincerely, Ingrida B Gray Ingrida Bergs Gray
9/15/13

I-512-001

Thank you for describing the history and importance of the Latvian Lutheran Church and Cultural Center to the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained.

I-512-002

Access to the property and its functions will be maintained.

I-512-003

Noise walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts. In addition, any existing WSDOT noise walls removed as part of the project would be replaced. The existing vegetation is not a notable source of noise reduction.

I-512-004

The Latvian Evangelical Lutheran Church and Community Center will not by displaced by the project.

8168 Cultus Bay Rd.
Clinton WA 98236
(360) 579-4105
Sept. 16, 2013

Sound Transit
Draft EIS Comments
C/O Lauren Swift
401 S. Jackson St, Seattle, WA 98104

Re: Latvian Church/Center

I have been attending Latvian/Baltic events at the Latvian Church/Center for 20+ years. I travel some distance. These events are important to me.

I-513-001

Therefore I am requesting minimal interference to the Church/Center. These must include:

1) Access
2) Caretaker's house
3) Parking

I suppose a full environmental/justice assessment needs to be done also.

Unlike what we Latvians received from Soviet Russians and Nazi Germans I expect a sense of fair play from you. I grew up without grandparents, aunts uncles, etc. To me who I meet at the Church/Center is my extended family.

Thank you.

Mara A. Johnson

I-513-001

Thank you for describing the importance of the Latvian Church to you. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

The caretaker's house would be displaced but Sound Transit would help with its relocation as described in Section 4.1 of the EIS. An environmental justice analysis was done for this project. It is located in the Final EIS Section 4.4 and Appendix C.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: JANIS PELEKIS

ADDRESS: 10017 36th AVE N.E.

CITY: SEATTLE STATE: WA ZIP CODE: 98125

EMAIL ADDRESS: PELEKIS@COMCAST.NET

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-514-001

WHILE THE SEATTLE AREA NEEDS A RAPID TRANSIT SYSTEM IT ALSO NEEDS TO PRESERVE OUR UNIQUE NORTHWEST LIFE STYLE. AND DIVERSITY (ESPECIALLY THE LATVIAN CHURCH AND COMMUNITY CENTER) AS A NATURALIZED CITIZEN AND ~~FORMER~~ VIETNAM US. VETERAN (NAVY) IT IS SO IMPORTANT FOR US BALTIC PEOPLE to HAVE A PLACE TO ATTEND CHURCH, HAVE OUR KIDS SCHOOL AND HAVE OUR ETHNIC EVENTS. THE CHURCH AND CENTER WAS TOTALLY BUILT BY LATVIANS USING THEIR SWEAT AND DETERMINATION TO HAVE A PLACE TO MEET, TEACH, CELEBRATE AND TO PRAY, MOST OF THE ORIGINAL WORKERS AND PLANNERS HAVE PAST ON THEREFORE IT IS MORE IMPORTANT THAN EVER TO PRESERVE THEIR VISION. MY CHILDREN WERE BAPTISED THERE, ATTENDED LANGUAGE SCHOOL, JANA WAS MARRIED AND CELEBRATED THERE, MY FATHER FUNERAL WAS THERE. WE REALLY HAVE TO FIND A WAY to MAINTAIN OR CHURCH AND COMMODITY CENTER

SOUNDTRANSIT RIDE THE WAVE

I-514-001

Thank you for describing the importance of the Latvian church to you and the Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Mary Peleckis

ADDRESS: 10017 36th Ave NE

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS: mary.pelekis@gmail.com

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-515-001

I have reviewed a portion of the DEIS and find my primary issue is that the Latvian Church + Center will be compromised. My family has had the benefit of the center for the 30+ years we have lived in Seattle. It represents the victory over unbelievable hardships endured by the Baltic peoples that was partially accomplished by their rights of US Citizens. My children were Baptized there, attended 10 years of culture + language classes, made friends for a lifetime. My eldest daughter, living in CA, chose to be married at the Latvian Church as it is "home" to her. Please consider the strength the center gives us all. Thank you, Mary Pelekis

SOUNDTRANSIT RIDE THE WAVE

I-515-001

Thank you for describing the importance of the Latvian Church and Center to you and your family. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Vija Pelekis

ADDRESS: 10017 36th Ave NE

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS: Vija.Pelekis@gmail.com

☐ Please sign me up for project email updates

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Comments

I-516-001

Although I fully support Sound Transit's Lynnwood Link Extension because I recognize the need for comprehensive mass transit in the region, I am concerned about the proposed loss of the Seattle Latvian Church & Center in Northgate. My father is Latvian and my sister and I spent our childhoods embracing our culture at the Latvian center while attending weekend cultural school. The Latvian Center is extremely important to the Baltic community in the Pacific Northwest and serves as the nexus which preserves our culture and community. I understand that many comprimises will have to be made in developing the light rail, but please consider the implications of destroying the Seattle Latvian Church & Center.

SOUNDTRANSIT RIDE THE WAVE

I-516-001

Thank you for describing the importance of the Seattle Latvian Church and Center to you and the Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Zita Petkus

ADDRESS: 6216 - 105th Avenue NE

CITY: Kirkland STATE: WA ZIP CODE: 98033

EMAIL ADDRESS: KANTRYBE@HOTMAIL.COM

☐ Please sign me up for project email updates

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Comments

For the past 35 years, from the time our family moved to the Northwest, we have been attending Lithuanian-American Community events in the Latvian Center in Northgate. The Latvian Center has become very important to the Lithuanian Community over the years. I am the founder and director of the Lietutis Lithuanian Folk Dance Group which on many occasions has used Latvian Hall for its practices. One of many highlights includes the Northwest Baltic "Tap 'n Clap," a workshop which was hosted in 1983 and 1985 and which brought together Lithuanian, Latvian, Estonian and Finnish dance groups from Portland, Seattle and Vancouver into a fantastic evening of sharing. I served on the Board of the Washington State Lithuanian-American Community from the mid '80's to 2006. During my tenure on the Board we had many occasions to gather in Latvian Hall. In particular I remember the huge celebration on March 11, 1990, when Lithuania re-established its independence from the Soviet Union. We met with the press and representatives from Congress as we celebrated. I remember being interviewed by Chris Legeros of KIRO-TV in 1991 for reaction to the first President Bush dragging his tail on recognizing Lithuania as a sovereign nation. We chose Latvian Hall for that interview because it was a friendly, welcoming and central meeting location for all Baltic groups, not just the Latvians. I remember the many(and ongoing) University of Washington Baltic Studies Fundraisers held in Latvian Hall through the joint efforts of the local Estonian, Lithuanian and Latvian communities in collaboration with the University of Washington. I remember the memorials for deceased Lithuanian Community members, and the wedding celebrations for newlyweds; I remember landmark birthday parties – all at Latvian Hall. It would be extremely painful for the Lithuanian Community to experience the loss of Latvian Hall in Northgate. It has become and continues to be the ethnic, cultural, educational and social hub for so many groups. As you seek to resolve rapid transit challenges, please take into account the multitude of ways you are severely impacting the many ethnic groups served by the Latvian Center. To us, it has great emotional significance and immense practical value. Please stick to the at-grade option that appears to offer the least amount of disruption to the facility and its functions. Note that even that interference will be substantial. Thank you for your consideration of the communities which your decisions are impacting.

Zita E. Petkus

I-517-001

SOUNDTRANSIT
RIDE THE WAVE

I-517-001

Thank you for describing the importance of the Latvian Center to the Lithuanian-American community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: TEX AND AUSMA WILSON

ADDRESS: 1000 VINTAGE LANE APT. 320

CITY: MT. VERNON STATE: WA ZIP CODE: 98273

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-518-001

We wish to add two more voices of opposition regarding the Lynnwood Link Extension. Historically the Latvian people have been forced to relocate many, many times because of "supposedly" the benefit of the many. Now it appears they will be "displaced" AGAIN in a free society. This Latvian Church and Community Center benefits thousands of people, not just a few. The plan to move ahead with this Rail Link project seems to be in total disregard of what these people contribute to the American society. I wonder if these Latvians were of a different ethnic group and scream the message of "discrimination" they just might have more clout. We desperately and respectfully ask that the DEIS consider other possibilities as to where the rail link could be located. There simply HAS to be another solution. Is 5th Ave. being considered? Also there seems to be ample space on either side of I-5 at freeway level. Has that been reviewed? Would a cross-over elevated track to the West side of the freeway be out of the question? The current plan whether at grade or elevated level would be an absolute travesty to thousands of people who participate in the multitude of activities provided by this Latvian Center. As one person said, "This is not just a church and community building but a monument".

Sincerely, Tex Wilson Ausma Wilson

SOUNDTRANSIT
RIDE THE WAVE

I-518-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Ruta York

ADDRESS: 14527 SE 183 Street

CITY: Renton STATE: WA ZIP CODE: 98058

EMAIL ADDRESS: YORKRL@comcast.Net

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-519-001 My husband and I moved to Seattle in 1965 due to a job transfer but the move was also enhanced by the large Latvian community here. We sent our children to Latvian School and took part in many activities at the Center. When the Latvian Center lost their "home" to the Wallingford Playfield, it was a huge disruption for our family. Now for over 40 years the present site had been the home for Latv. Evangelical Lutheran Church and Center, not just for the Latvians but for the Estonians and Lithuanian communities as well. I can't believe that for the 2nd time you want to destroy our "home."

Many elderly and retired Latvians have bought homes close to the Center so they can either walk or drive a very short distance to church services and the many activities there. What will become of them?!!

This is not the way to treat people and just not acceptable!

SOUNDTRANSIT RIDE THE WAVE

I-519-001

Thank you for describing the importance of the Latvian Evangelical Lutheran Church to you and the Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Draft EIS comment for the Lynnwood Light Rail
September 23, 2013

To Sound Transit,

This is in regards to the DEIS for the Lynnwood Light Rail.

I-520-001 I voted for the light rail to come north, but I expected it to follow the freeway Interstate-5 into the Lynnwood Transit Station not come into our neighborhood. I completely support the C3 alternative route option especially the C3M which follows the Interstate-5 freeway in the center of the south and north bound lanes. I am against the C1 and C2 options because of the intrusive and destructive path it takes into our quiet, vulnerable neighborhood. The C4 option the City of Lynnwood has recently proposed does nothing to convince me is the right option because I have not seen any data or a written proposal from Sound Transit that accepts the C4 as even being considered an option. The photos of C4 show the Light Rail destroying more wetland and displacing several more businesses than the C3 option.

I-520-002 While reading the DEIS I found numerous inconsistencies, calculation errors, failure to include and assumptions made about our neighborhood, especially West of 52nd/Cedar Valley Rd. This leaves me concerned that not enough detailed attention was put into a large scale Federal Government project as the Light Rail. I expect with so much money going into this project that the DEIS would be professionally and accurately handled with less errors. This study is embarrassing for such a large scale company as Sound Transit. I really expected more.

List of Errors in DEIS:

I-520-003 Technical Report Noise and Vibration, Part 7, Attachment D (Vibration Impacts by Build Alternative), Page D-54. The distance to nearest track (ft) is incorrect on C2M and C3M and C2W and C3W. Living at 5214 201st PL SW I can assure you that I live closer to the C2M and C2W than the C3M and C3M. It appears that all the C2 and C3 numbers have been switched and not just for our house but everyone on our block as well as others on nearby streets. It makes me wonder if the numbers are even correct in footage or did you just eye it.

It was stated at meetings that no noise or vibration monitors were even put near Cedar Valley Road or our part of the neighborhood across from where C1 would travel. How do you even know what noise levels are now in our part of the neighborhood. It sounds like an assumption was made based off the noise monitor put by the Park-n-Ride Transit Station. We felt excluded and left out of the survey. Sound Transit rarely mentions the neighborhood west of 52nd/Cedar Valley Rd. The DEIS just states that the neighborhood would have a negative visual and aesthetic impact as well as noise that mitigation would be used and other features used for the visual impact. I really don't

I-520-001
Your comment stating your support for the Lynnwood Link Extension project and your preference for Alternative C3 is noted. The Preferred Alternative in Segment C is a modified Alternative C3.

I-520-002
It is Sound Transit's goal to produce environmental documents that contain accurate environmental information with the purpose to help decision-makers make decisions. The purpose of the Draft EIS public comment period is to provide the opportunity for members of the public to point out things that they believe should be included. Sound Transit has received good feedback from agencies and the public, and has used the relevant comments to improve the document.

I-520-003
A labeling error occurred which resulted in a portion of Alternative C2 to be switched with a portion of Alternative C3 during the vibration analysis (from Civil Station 522+00 to the north end of the alignment). This error had no effect on the conclusion that vibration mitigation was not required for receivers along that segment of the alignment. The correct distances are used for all receivers in the Final EIS and the correct vibration levels are reported.

As shown in Final EIS Figure 4.7-4b, noise monitoring site M-51 was near the corner of 200th Street SW and Cedar Valley Road, site M-49 on 52nd Avenue W between 204th and 206th Streets SW, and site M-48 on 52nd Avenue W between 206th and 208th Streets SW. These measurements were used to characterize existing sound levels in the Cedar Valley Road and 52nd Avenue W neighborhood. The noise analysis included modeling of residences in the neighborhood, as shown in Figure 4.7-5d of the Final EIS. Impacts to the neighborhood were considered at the same level of detail as impacts to other neighborhoods adjacent to the potential project alignments.

I-520-004

know how your going to block a 40ft plus structure that looks down on a neighborhood. Trees will not work because they have to be 30ft from structure so I guess Sound Transit will have to plant large trees on 52nd street or just a large wall for all the gangs to put graffiti on.

The DEIS states the the C1 and C2 alternative routes are cohesive to the neighborhood. That is so laughable and is such an assumption. If Sound Transit looks at the corner of 200th and 52nd/Cedar Valley Rd. they would see that it is cohesive and in harmony with nature right now. The Cedar Valley Business Building and Sprague"s Ponds and park are across the street from the C1option that takes out the Scriber Creek Park and Cedar Creek Condominiums. If C1 is selected, the harmony, flow, and unity of the blending of the East and West of 52nd/Cedar Valley Rd. will no longer be. It will be a visual and aesthetic disaster.

I-520-005

I did not read anything about Crime. How will it affect the surrounding communities and neighborhoods around the structures(pillars) and the Sound Transit Stations? At Sound Transit meetings all that could be said was that it would increase crime in our neighborhoods. I am not happy about this and hope Sound Transit works with the local Lynnwood Police Department on the possible increase of crime in our neighborhood.

I-520-006

I really think Sound Transit needs to let go of the C1 and C2 options because the City of Lynnwood has a great park and wetland that is a very unique and beautiful sanctuary for wild habitat and people. The Trees are large and old and are a natural barrier and buffer for our neighborhood from the Park-n-Ride Transit Station. The wetlands and bogs clean and filter the pollution from the city, cars, buses and people. Nature can be calming to commuters driving, walking, biking or railing in to a city. C3 is far enough away to not hurt the surrounding neighborhoods and the wetlands, but close enough that the people on the Light Rail can see the beauty of the ponds,trees,wetlands, and animals that is a part of Lynnwood.

Choose C3M.

Tricia Monaghan
5214 201st PL. S.W.
Lynnwood, WA 98036
(425) 778-3242

I-520-004

The Draft EIS analysis is generally consistent with your characterization of high visual impacts in the 52nd Street vicinity with Alternatives C1 and C2. The extent to which visual impacts affect neighborhood cohesion is related to a wider range of issues than the visual appearance. The Draft EIS on page 4-59 states that Alternatives C1 and C2 would travel along the eastern boundary of the South Lynnwood and Hazelwood neighborhoods and would change views but not change the character and cohesion of the neighborhoods. The aesthetic analysis on page 4-81 states that the elevated guideway in Alternatives C1 and C2 would visually intrude upon the integrity and unity of the residential neighborhood on the opposite side of the street and is rated as a high visual impact. As indicated in the analysis, the visual impacts at the periphery of the neighborhood would not be expected to affect neighborhood, cohesion which relates to well-defined neighborhood boundaries, transportation connections, stable land use, and opportunities for local interaction. See Section 4.5 of the Final EIS for more detail about visual impacts of the project and mitigation.

I-520-005

Section 4.14 of the EIS discusses crime. Crime is not expected to increase as a result of operation of the stations. Several studies have concluded that crime around stations mirrors crime rates in the surrounding neighborhoods. Most areas in the project corridor have low crime rates. The stations would be well lit, continually monitored by security cameras, and regularly monitored by security personnel.

The project's final design will incorporate Crime Prevention Through Environmental Design principles, which will consider structures and pillars.

I-520-006

Your opposition to Alternatives C1 and C2 and your preference for

Alternative C3 are noted. A modified Alternative C3 is evaluated as the Preferred Alternative in the Final EIS.

From: Jane Cutter <jncutter@gmail.com>
Sent: Saturday, September 14, 2013 11:22 AM
To: Lynnwood Link DEIS
Subject: Shoreline light rail station location

To Whom it May Concern:

I-521-001 I think the light rail station should be located at 155th St. Currently, 145th is already very congested. At 155th, the station will still be very accessible to the community but will not add to the congestion at 145th.

yours
Jane Cutter
14521 6th Ave NE
Shoreline WA 98155

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I-521-001

Your preference for a light rail transit station at NE 155th Street instead of a station at NE 145th Street is noted.

From: K. Everett <kdeeverett@hotmail.com>
Sent: Saturday, September 14, 2013 11:31 AM
To: Lynnwood Link DEIS
Subject: comment on Sound Transit Lynnwood Link
Attachments: Light Rail Chicago.jpg

I-522-001 Sorry to have missed the meeting this morning. I think Alternative C3 is the best alternative. This design is consistent with the objective of the Lynnwood Station: a stop on the way to parts North.

The line should not transit up 52nd Ave W, as would occur with the C1 and C2 alternatives. C1 and C2 trap valuable acreage between the train line and I5. This trapped acreage would only be useful if the Lynnwood stop were an end of the rail line. And no one living in Lynnwood wants a train yard here (see attached).

I-522-002 At the previous meeting in Lynnwood it was explained that the expected increase in citizen traffic into the new Lynnwood Station would be 20,000 people per day and provide 1,900 parking spaces. This parking is only an increase of 500 above the current parking, which is always totally full. The C1, C2, and C3 options would all be grossly deficient in parking space for this increase.

I-522-003 Finally, Lynnwood roads in this area also poorly support the accompanying increase in local traffic: they include school zones, residential areas, and 2 lane roads. The expected 10-fold increase in transit will tie these roads in knots at the height of rush hour.

Cheers,
Karin Everett
6006 172nd Place SW
Lynnwood, WA 98037
360-556-8183

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I-522-001
Your comment stating your preference for Alternative C3 is noted.

Your comment about the train yard is noted, but the Sound Transit Operations and Maintenance Satellite Facility is a separate project.

I-522-002
The projected 20,000 rail boardings are not expected to arrive all in the form of cars. The majority of those riders are expected to arrive by bus, as well as by bicycle and on foot. Station parking facility sizing and design is balanced with the need for good multi-modal connections in order to serve the needs of the region as well as local communities.

I-522-003
A traffic analysis was performed for the Lynnwood station area taking into account the additional 500 parking spaces that are provided at the station as part of the project. Sound transit will work with the City of Lynnwood to provide mitigation for any traffic impacts caused by the project.

From: davidlovesjesus7@comcast.net
Sent: Saturday, September 14, 2013 1:08 AM
To: Lynnwood Link DEIS
Subject: Lynnwood Link DEIS

I-523-001

I live in the Cambridge Apartments, on 200th St. SW between 48th Ave. W and 46th Ave. W, really close to Lynnwood Transit Center.

I appreciate that, so far, everything is planned to stay south of 200th St. SW, including option C1, which puts the Link Station on the south side of 200th St. SW, directly across the street from Cambridge Apartments.

I think its very possible I will live in Cambridge Apartments for a very long time. I do not want any project to take away any part of Cambridge Apartments. This project should not destroy any housing, and I appreciate that option C1 goes directly across the street, but does not remove any part of Cambridge Apartments.

Thank you for your time. --- David L. Harbaugh

I-523-001

Your comments regarding property impacts and keeping the project south of 200th Street SW are noted.

From: Joanne Ho <joanche@gmail.com>
Sent: Sunday, September 15, 2013 11:35 PM
To: Lynnwood Link DEIS
Subject: question reqarding 1st Ave N & 117th St

Hello,

I-524-001 Apologies for not being able to make it to any of the public open houses for the Lynnwood Link. I have a question regarding the segment between Northgate Transit Center and 130th. The DEIS says that 1st Ave N will need to be altered at the junction with 117th, but it doesn't say exactly how it will be altered. I live near that intersection, and how that part is built is important to me. Can you please provide some insight into the plans for how that location will be affected by the plan?

I-524-002 Secondly, I would like to show support for the option with a Link stop at 130th and I-5 junction. Who do I convey my support to?

Thank you for your attention.

Kind regards,

Joanne Ho
mobile: +1 (206) 850-8945
blog: www.powerhouse360.com

I-524-001

None of the alternatives evaluated in the Final EIS would require realignment of First Avenue NE at NE 117th Street. First Avenue NE would be realigned farther north in sections around NE 160th Street. The NE 117th Street overpass would be reconstructed with Alternative A1. See Appendix F of the Final EIS for the project's conceptual designs.

I-524-002

Your preference for a light rail transit station at NE 130th Street is noted. By submitting your comment letter on the Draft EIS, your comment was given to Sound Transit for consideration in identifying a Preferred Alternative in the refinement of the Segment A alternatives evaluated in the Final EIS.

From: buck.norris@comcast.net
Sent: Sunday, September 15, 2013 10:01 PM
To: Lynnwood Link DEIS
Subject: Save Latvian Community Center

I-525-001

I am writing to express my concern about the possible impact of the Sound Transit Lynnwood Link Extension on the Latvian Lutheran Church and Community Center in North Seattle. The Draft Environmental Impact Statement for this project fails to recognize the importance of this facility to all of the Baltic communities in the Pacific Northwest. The Latvian Center is not merely a church used for a few hours each Sunday. It is the hub of social and cultural activities for Latvians, Lithuanians, and Estonians throughout the region. It is used throughout the week for a variety of cultural, educational, social, and religious events. Any negative impacts on the Center's ability to function will have serious ramifications for thousands of families who depend on it to maintain ties with their heritage.

As a Lithuanian-American, I have been involved in Lithuanian and other Baltic community activities since 1984 and thus have spent countless hours at the Latvian Center attending cultural celebrations, social events, dance practices as both teacher and participant, weddings, and funerals. Because my own family lives on the other side of the country, the Lithuanian community here is my extended family. Participating in activities at the Latvian Center has provided me with the ability to pass on my culture to the next generation. My son, who is now 22 years old, literally grew up at the Center, having attended his first celebration of Lithuanian independence when he was less than 2 months old. He went on to become a member of the Lithuanian dance groups Lankas and Linas and as such participated in Lithuanian dance festivals in Chicago that drew dance groups from literally all over the world. He developed strong relationships with other Lithuanian-American children that last to this day, and his appreciation of our culture would not have been possible without these relationships and a place to form them. His involvement with the Lithuanian community growing up laid the foundation for his interest in and appreciation of all world cultures. In fact, he graduated from college this year with a bachelor's degree in International Studies.

Our Lithuanian community ties have been cemented by having the Latvian Center available to us. Being a relatively small community in the Northwest, we Lithuanians do not have the resources to build our own Center and have depended on our Latvian friends' generosity in allowing us to use theirs. Closing the Latvian Center would have a devastating effect on our ability to flourish as a viable cultural entity.

While I recognize the importance of extending light rail to the north suburbs, I urge you to engineer the project in ways that will have minimal impact on the Latvian Center. All of the involved communities need to maintain constant and consistent access to the Center throughout the construction period. In addition, the Latvian Center needs to be able to function normally as it has for more than 4 decades in its present location after construction is finished and the light rail system is in operation.

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I-525-001

Thank you for your comments describing the cultural importance of the Latvian Evangelical Lutheran Church to you and the Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained.

In these days when American culture becomes ever more homogenized by consumer-based corporate influences, government should do everything possible to promote cultural diversity. Everyone who lives in the Puget Sound region benefits from its cultural richness directly or indirectly. Please allow our Baltic communities to continue to thrive by reducing negative impacts on the Latvian Center in whatever ways possible. Thank you for your attention.

Jeanette Norris
4310 Bagley Ave N
Seattle, WA 98103
Phone: 206-634-3753

From: Eriks Raisters <raisters@comcast.net>
Sent: Saturday, September 14, 2013 12:43 PM
To: Lynnwood Link DEIS
Cc: Raisters@Home
Subject: Comments on Lynnwood Link DEIS

September 13, 2013

Sound Transit

Draft EIS Comments

c/o Lauren Swift

I-526-001

I would like to take the opportunity to comment to Sound Transit on your Lynnwood Link Draft Environmental Impact Statement (DEIS). I think, with all of the testimony at your Open House meetings, as well as comment letters from individuals and organizations associated with the Seattle Latvian Church and Community Center, at 11710 3rd Avenue NE, you are beginning to understand the importance and uniqueness of this facility in the Pacific Northwest.

I was born in Seattle and christened in the previous church facility on Densmore Avenue, but moved away before that facility was taken by the City of Seattle. When I returned to Seattle in 1975, I spent many happy years dancing folk dances with Trejdeksnitis in the hall. I also married my wife and christened and confirmed both our sons in the current church, so the facility has very deep ethnic and religious meaning to me. Our sons also attended Latvian school and danced with the folk dance group and are still active in Latvian activities and speak the language. Without this facility built by our parents, none of us would have had a chance to learn our ancestor's language, history and culture.

I am now able to give back to this community by taking several leadership roles, as vice president of the board of the Latvian Evangelical Lutheran Congregation of Seattle, past secretary/treasurer of the folk dance group Trejdeksnitis, past administrative director of the 1992 West Coast Latvian Song Festival organizing committee's folk dance performances, and secretary of the State of Washington chapter of fraternity Lettonia. This is the second, and in some cases third, generation of Latvian-Americans who now lead the community organizations – all made possible by the hard work of parents and grandparents who arrived in Washington from the Displaced Persons camps of Europe, often with little more than the clothes on their backs, their education and tenacious spirit.

The activities provided for youth at the Center have kept them busy and out of trouble, and established life-long friendships. It has also allowed them to travel to Latvia, most recently to perform in the 2013 Latvian Song and Dance Festival, with the capability to speak the language and understand the culture. The multi-generational nature of our community is difficult to find elsewhere in American culture.

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I-526-001

Thank you for describing the importance of the Latvian Church to you and the Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-526-001

I hope that you will find a mutually acceptable solution to the impacts on the Center, as outlined in the official letter from the joint owners of the property you will receive, that will allow it stay in its current location and provide uninterrupted service to the Baltic community.

Sincerely

Eric Raisters

10507 64th Place West

Mukilteo, Washington 98275

From: Gayle Sreibers <gsreibers@hotmail.com>
Sent: Saturday, September 14, 2013 6:02 PM
To: Lynnwood Link DEIS
Subject: Draft EIS Comment Regarding Impact on Latvian Lutheran Church and Community Center

I-527-001

As an American-born woman, married to a second-generation Latvian, I have been blessed to share in the rich religious and cultural activities of Seattle's Latvian Lutheran Church and Community Center. My husband and I were married over 36 years ago in the Latvian Church. Our two children, Peter and Lara, were baptized in the church and both attended and graduated from Seattle's Latvian School, housed in the community center. Lara was confirmed in the Latvian Church at the age of sixteen, and Peter and his fiancée, Lauren, will be married in the Latvian Church next summer.

As my interest in Latvian culture has grown over the many years, I have learned to cook a variety of Latvian dishes and now coordinate and teach Latvian cooking classes at the Latvian community center. To further enhance my involvement in Latvian activities, I participated for several years in a Latvian language class, tailored for non-Latvian speaking adults. To this day, I frequently contribute to, participate in and enjoy the many activities offered at our church and community center.

Clearly, I embrace what Seattle's Latvian Lutheran Church and Community Center offer to me personally, to my family, and to the Seattle Latvian community as a whole.

Sound Transit's Draft EIS, which discusses extension of the Link Light Rail System from Northgate to Lynnwood, troubles me deeply, as I understand the alignment of it will possibly severely limit or even eliminate our access to our church and center, putting ongoing existence of our community at great risk.

I urge the Sound Transit Board to recognize the intrinsic value of our church and center to the Latvian community on the west coast of the United States and Canada and maintain it at its present location.

Gayle Sreibers
gsreibers@hotmail.com
425-743-6170

I-527-001

Thank you for describing the importance of the Latvian Lutheran Church and Community Center to you and your family. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained.

From: Lara Sreibers <lsreibers@gmail.com>
Sent: Sunday, September 15, 2013 10:03 AM
To: Lynnwood Link DEIS
Subject: Draft EIS Comment - Latvian Church and Community Center

To whom it may concern,

I-528-001

I am currently an international graduate student at the University of Edmonton in Alberta, Canada. I've recently learned from both my family as well as longtime Latvian friends in Seattle of Sound Transit's Draft EIS which discusses extension of the Link Light Rail System from Northgate to Lynnwood, passing in close proximity to or possibly even directly through the property on which Seattle's Latvian Lutheran Church and Community Center are located. I find this information unbelievable and impossible to comprehend.

For my entire life, I've been closely tied to the church and community center. I was born in Seattle in 1990 and was baptized at the Latvian Lutheran Church. From the age of five to thirteen I attended and graduated from Seattle's Latvian Saturday School. As a high school student, I danced with Seattle's Latvian dance group, Trejdeksnitis. I was confirmed in the Latvian Church at the age of sixteen.

I attended undergraduate college out of state and am now attending graduate school out of country, however I return to Seattle frequently for visits with my family and friends and routinely participate in religious and social events at the Latvian Church and Community Center while I am in town.

Clearly, Seattle's Latvian Church and Community Center have been and continue to be an integral part of my life. Any light rail plans that would either limit or eliminate use of the Latvian church and community center would have a profound effect on me personally, not to mention the Latvian community throughout the entire West coast of the United States and Canada.

I urge the Sound Transit Board to consider the unique nature of our church and community center and maintain it at its present location.

Regards,

Lara Kristine Sreibers

lsreibers@gmail.com

780-298-3979

I-528-001

Thank you for describing the cultural importance of the Latvian Evangelical Lutheran Church to you, the region's Latvian community, and the larger Baltic community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: fmassaro@comcast.net
Sent: Monday, September 23, 2013 12:16 AM
To: Lynnwood Link DEIS
Subject: DEIS Commentary for Lynnwood Link Rail Extension

Greetings,

My name is Frank Massaro of 19522 5th Avenue NE, in Shoreline. I am writing to offer my commentary on the DEIS for the proposed Lynnwood Link Extension proposed by Sound Transit.

I-529-001 **It is my opinion that Option 1, with tracks at grade, a center platform, and a 500 car parking structure located on the west side of I-5 should be the preferred solution chosen as the project moves forward. I feel that this alternative provides the greatest opportunities for our community; both in terms of providing a design for the station that is compatible with our existing neighborhoods, but also one that provides potential for a productive future of the station area.**

I-529-002 **I would also like to indicate that I feel that traffic control devices, namely a traffic signal should be installed at 5th Ave NE and NE 185th Street. This is a confusing and somewhat dangerous intersection given the discontinuity of 5th Ave NE at NE 185th Street.**

I-529-003 **Similarly, I feel that sidewalks and traffic calming devices will be required in the station area – namely along 5th Avenue NE between NE 185th and 205th Streets. These elements have not been shown in any design alternatives. The impacts will be similar regardless of which alternative design is chosen. These impacts should not be carried on the backs of neighborhood residents and should be planned for in the design of the 185th Street station, and provided by Sound Transit. Most simply put, I am not interested in having a property assessment to install a sidewalk or similar feature on my street as a result of Sound Transit's impact on my street and neighborhood.**

I-529-004 **As a member of the 185th Street Station Citizen's Committee, I have been involved in a number of outreach activities that have made contact with a good number of our fellow neighbors. I believe that the preference I have stated above closely echoes that of many fellow area residents, and as a result, the 185th Street Station Committee.**

I am hopeful that the comments submitted both by me and others with respect to our preference for the station design will not be ignored, and that a station that is respectful to the wishes of residents of the affected communities will be the result. I also feel that it needs to be stated that we, who live in the area immediately impacted by this project, are the ones who will continue to make our lives in the area once the project is completed.

Please feel free to contact me at my e-mail address, or by phone at (206) 219-3628.

Sincerely,

Frank Massaro

Shoreline WA

1

I-529-001

Thank you for your comment stating your preference for the Option 1 layout of the proposed light rail transit station at NE 185th Street with the parking garage on the west side of I-5.

I-529-002

Traffic analysis conducted for the EIS indicates the intersection functions at an acceptable level of service as a stop-controlled intersection. At this location, the Preferred Alternative would realign 5th Avenue NE to better integrate with the I-5 off-ramp and the intersection with NE 185th Street.

I-529-003

The extent of traffic calming designed with the project will be further evaluated during final design. Sound Transit will provide sidewalks for pedestrian access to the station, where they are determined to be necessary due to the project.

I-529-004

Thank you for your comment indicating the proposed Option 1 light rail transit station at NE 185th Street appears to be supported by many with whom you have spoken to in your neighborhood. Your comments, and others submitted to Sound Transit through the community outreach program and during the comment period for the Draft EIS, will be considered by Sound Transit in making their final decision for the Preferred Alternative.

Elaine,

Great talking with you. Please let me know when there will be an on-site visit to the Scriber Creek Park area and I will be there with a few others who know the area well.

I am out of town until September 11, but wanted you to have some information that I've uncovered regarding the Lynnwood Link. It has been very unsettling to find so many discrepancies. The more questions I try to get answered, the more questions I have. Hope this research is helpful for you.

I-530-001

City of Lynnwood, 20015 Cedar Valley Road, "Scriber Creek Park", Neighborhood Park / Open Space – 3.8 acres.
However, Snohomish County Assessor, Parcel 00608400300101, 20015 Cedar Valley Road, City of Lynnwood, 761 parks – general recreation, 4.59 acres.
In addition, this parcel is listed as "City of Lynnwood Scriber Creek Wetlands Park" in Backflow Prevention along Scriber Creek Attachment A-1, Scope of Work., 6/28/11.

Page 4-27 Segment C: Mountlake Terrace to Lynnwood. Alternative C1 – 50 Full Acquisitions
However, Table 4.1-1 Potential property acquisition and displacement C1 total full acquisitions – 80

Table 4.2-2 Estimated area of acreage by land use. C1 multifamily lists .83 acres.
However, The 76 Multifamily units are over 3.0 acres alone.

Table 4.17-5 Potential Construction Impacts on Scriber Creek Park. "Short-term partial closure of the park during construction." *THIS IS THE ONLY NOTATION.*
However, the C2 and C3 categories note noise and visual impacts, *yet not in C1.*

Table 4.8-1 Streams in study area, Coho Salmon and Cutthroat Trout noted. See figure 3.1c in the DEIS.
OMSF Site Evaluation October 2012, City of Lynnwood: The City was also concerned about the sites proximity and potential impacts to the Interurban Trail (linear park on the south side) and Scriber Creek (salmonid bearing waterway north of the site) and potential loss of flood storage capacity.
However, (Summary) S-20 No adverse impacts on threatened or endangered species. ...in seismically active area therefore, localized geological hazards and risks are possible.

City of Lynnwood, Chapter 17.10, Environmentally Critical Areas: 17.10.060 Stream – Rating.
A. Category I. The following streams are classified as **Category I: Scriber Creek**, Swamp Creek, Lunds Creek and Halls Creek. The Sensitive Areas Ordinance requires buffers from the nearest development.
However, 17.10.062 Stream alteration allowed.
A. All Category I streams shall be preserved. The city may only allow alteration of Category I streams when approved under LMC 17.10.048 and 17.10.049.
A. An application for a reasonable use exception containing the elements required in LMC 17.10.049 shall be filed with the department and shall be considered by the hearing examiner at a public hearing under Process I (LMC 1.35.100 through 1.35.180).

S-20 Water resources – the Segment C alternatives could place structures in the Scriber Creek Floodplain.
However, S-31 C1 would have columns and a section of the elevated guideway within the Park

I-530-001

These comments were submitted by Linda Willemark previously. See response to comment I-386.

I-530-001

Native Growth Protection Area. Sign Installation Guidelines Sign placement shall be up to the approval of Snohomish County. All signs must be secure and permanent.
However, there are at least 7 signs which our group has found on the C Alternatives property. One sign is only 50 feet away from 52nd Ave W. With the dense wooded area it is difficult to note with any accuracy how many more signs there actually are.

Table 4.1-1 Property acquisition list includes Multifamily use.
However, Table 4.1-3 Property available for relocation has NO Multifamily listed

Figure 4.17-4 Scriber Creek Park Potential Impacts with Alternatives C1 and C2.
However, Scriber Lake Creek is labeled where Scriber Creek is.

Page 1-4 1.3.1 – Aquatic Species and Habitat, 1.3.2 – Vegetation, Terrestrial Wildlife and Wildlife Habitat and, 1.3.3 – Wetlands. *They talk about looking at impacts 100-200 feet outside the direct project area. Sprague's Ponds are across the street from Scriber Creek Park and I've read no mention on the impacts the Light Rail would have on that waterfowl and wildlife area.*

1.4.3– Avoiding and Minimizing Impacts on Sensitive Ecosystem Resources. *If Sound Transit's first priority is to avoid impacts to sensitive areas, then why are they building on a wetland, watershed, and wildlife habitat?*

To Sound Transit and the Counsel,

I-532-001 I understand Shoreline voters voted in light rail sometime back, although I don't recall when exactly this occurred. Now that Shoreline is in the planning stage, they have had meetings and asked for comments regarding their various plans. They no doubt are doing this as a courtesy so that Shoreline's residents feel they are a part of the decision making process. However, I question if consideration is being given to these comments, as it appears Shoreline has for the most part made up their mind on many aspects already. I feel that those decisions made by counsel members should have been voted on by we the citizens. I feel that until the rail is built and it is determined what the actual usage is, we should not be building new stations and garages, but use the stations and garages currently used by the bus systems. Oregon and other areas with light rail experienced much less usage than what was projected.

I-532-002 I do not feel a station should be built at 185th. That would make the stops too close together. The existing garage near Ballinger along with the current 145th station should be sufficient. We should use what we have and not waste money. Usage is a big "IF" at this time. Also, residents on the east side of the freeway should not be uprooted or exposed to all the noise a train would bring. This is very unfair to those living in that area. Put yourself in their shoes. I wonder how you counsel members would feel if you lived in the area affected by these changes. Shoreline needs to slow down and stop spending. The Federal government is broke and cities and states should limit the amount they are requesting and getting.

I-532-003 In the end, we the people are the ones who end up paying for it with higher taxes etc. I challenge you the counsel members to take a more conservative approach. When all is said and done, you will be responsible for spending our money and not considering what we the people want. You need to put these prospective issues to a vote and not decide for yourselves what we the people need. That is not a democracy. We should want Shoreline to be a different type of city-a city that involves all of its citizens and not dictatorial like the government is becoming.

Thanks for reading this letter. A concerned Shoreline resident,

Sherri Andersen

I-532-001

Your comments are noted.

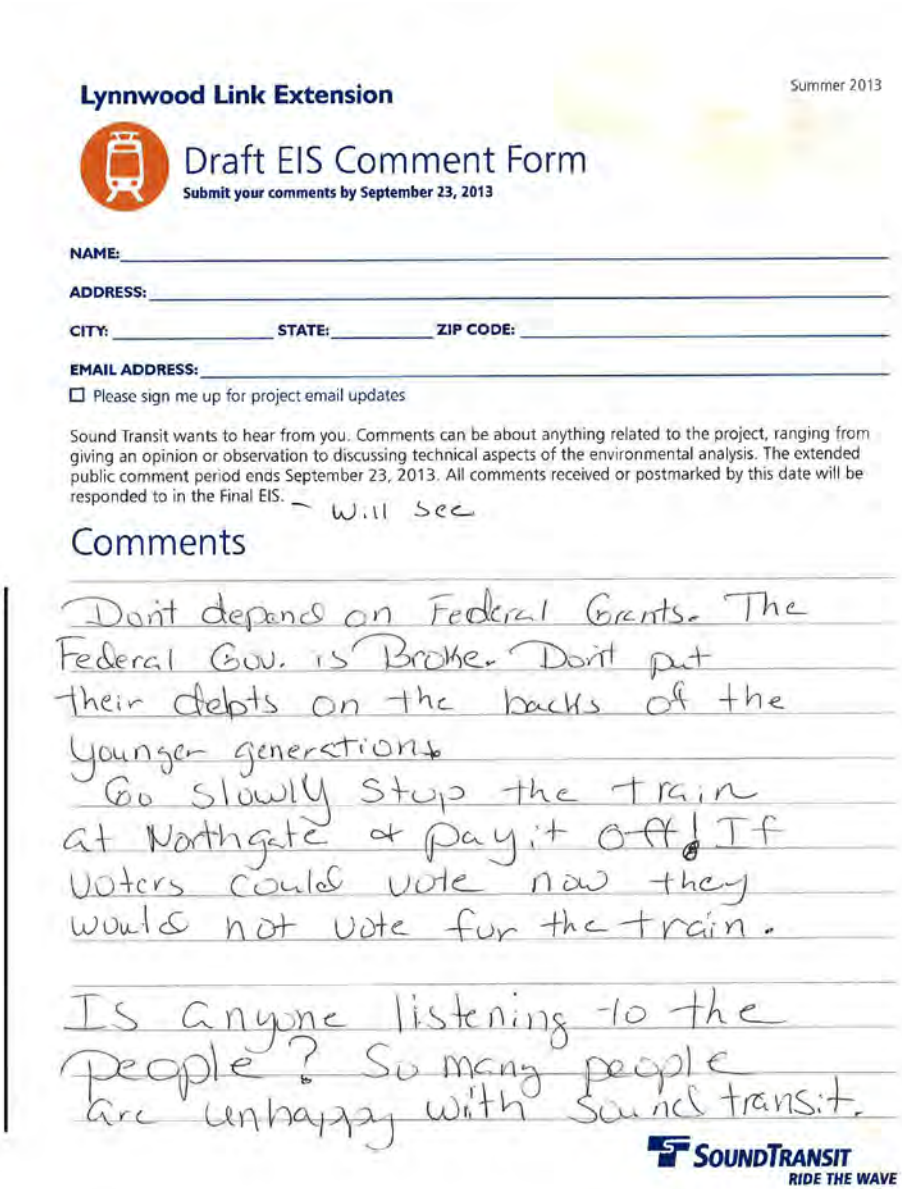
I-532-002

Considerable analysis was conducted to determine the number, location, and amenities to be located at each of the proposed light rail transit stations prior to the selection of the alternatives for evaluation in the Draft EIS. Rather than distance between proposed stations, the more important factors are the forecasted number of residences (single family, apartments, or condominiums) and forecasted number of jobs within proximity of the station site. Peak use of the light rail system is primarily determined by commuters leaving homes and traveling to jobs in the peak morning and late afternoon periods. Please see the *Alternatives Analysis Report* in Appendix K for more detailed information.

The project will be selected and constructed by Sound Transit, partially with FTA funding, not the City of Shoreline.

I-532-003

Your comments and concerns are noted. However, Sound Transit is not involved in the governance of the city of Shoreline.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

EMAIL ADDRESS: _____

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS. – Will see

Comments

I-533-001

Don't depend on Federal Grants. The Federal Gov. is Broke. Don't put their debts on the backs of the younger generations.
Go slowly Stop the train at Northgate & pay it off! If voters could vote now they would not vote for the train.

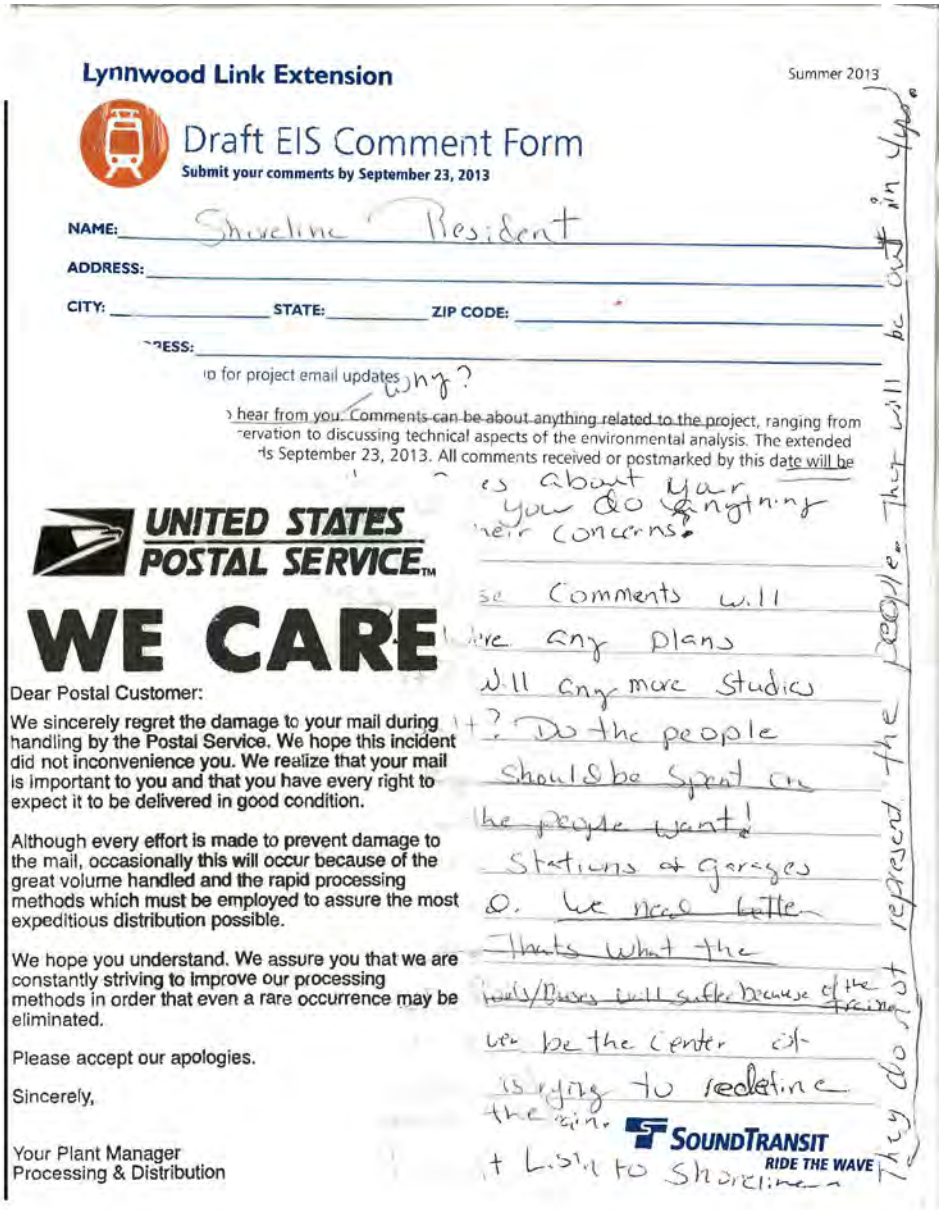
Is anyone listening to the people? So many people are unhappy with Sound transit.

SOUNDTRANSIT RIDE THE WAVE

I-533-001

The Lynnwood Link Extension is part of the Sound Transit 2 system expansion that voters approved in 2008. Sound Transit's financial plan has assumed that the agency would secure some federal funding for this project; therefore, Sound Transit plans to pursue a grant through the Federal Transit Administration's New Starts program.

I-534-001



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Shoreline Resident

ADDRESS:

CITY: STATE: ZIP CODE:

RESS:

ID for project email updates why?

hear from you. Comments can be about anything related to the project, ranging from ervation to discussing technical aspects of the environmental analysis. The extended ds September 23, 2013. All comments received or postmarked by this date will be es about your you do anything heir concerns.

se Comments will ve any plans Will any more Studies ? Do the people should be Spent on he people want! Stations at garages O. We need better Thats what the

UNITED STATES POSTAL SERVICE

WE CARE

Dear Postal Customer:

We sincerely regret the damage to your mail during handling by the Postal Service. We hope this incident did not inconvenience you. We realize that your mail is important to you and that you have every right to expect it to be delivered in good condition.

Although every effort is made to prevent damage to the mail, occasionally this will occur because of the great volume handled and the rapid processing methods which must be employed to assure the most expeditious distribution possible.

We hope you understand. We assure you that we are constantly striving to improve our processing methods in order that even a rare occurrence may be eliminated.

Please accept our apologies.

Sincerely,

Your Plant Manager
Processing & Distribution

hools/Buses will suffer because of the trains we be the Center of is trying to redefine the sing. t Link to Shoreline

SOUNDTRANSIT RIDE THE WAVE

They do not represent the people. That will be out in Spring

I-534-001

Unfortunately, your comment form was damaged by the post office en route to Sound Transit, and we were unable to read it to provide a coherent response. With no name or address, we were unable to follow up with you. Thank you for taking the time to comment on the Lynnwood Link Extension. Please see the Final EIS for information about the Preferred Alternative and updated information about the alternatives evaluated in the Draft EIS.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: David Zakitholet

ADDRESS: 20316 52ND AVE W.

CITY: Lynnwood STATE: WA ZIP CODE: 98036-

EMAIL ADDRESS: DaveZakitholet@yahoo.com

X Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

I-535-001

Comments

I RECENTLY BOUGHT A HOUSE ON 52ND AVE W. NEAR THE CORNER OF 204TH. I AM OPPOSED TO THE PROPOSED C1 & C2 ROUTE FOR MANY REASONS OTHER THAN IT BEING THE FIRST THING I SEE EVERYTIME I STEP OUT MY DOOR ALONG WITH THE HORRIBLE NOISE. I AM ALL FOR PUBLIC TRANSPORTATION - I TAKE COMMUNITY TRANSIT #511 TO WORK AND BACK FIVE DAYS A WEEK AND I KNOW THE CONTINUATION & CONSTRUCTION OF THE LIGHT RAIL IS INEVITABLE, I FEEL THE PROPOSED C3 ROUTE WOULD HAVE THE LEAST IMPACT TO THE FAMILIES, HOMES, AND LIVELIHOODS IN THE COMMUNITY. THIS IN SHORT REFLECTS WHY I AM OPPOSED TO THE DEMOLITION OF THE BUILDING EITHER THE C1 OR C2 ROUTE. PLEASE FOCUS ON THE C3 OPTION

THANK YOU.

SOUNDTRANSIT RIDE THE WAVE

I-535-001

Your opposition to Alternatives C1 and C2 and your preference for Alternative C3 are noted.

From: BOUDRISSA, ZOHRA <zb6635@att.com>
Sent: Wednesday, August 21, 2013 2:25 PM
To: Lynnwood Link DEIS
Subject: Comment on DEIS - Lynnwood Light Rail Extension

Hi, I'd like to submit my official comment on the DEIS for the Lynnwood Light Rail Extension.

I-536-001 I think C1 is the best route due to less impact to the wetlands.

Sincerely,

Zohra Boudrissa
Resident of Cedar Creek
(4820 200th St SW B304, Lynnwood, WA 98036)

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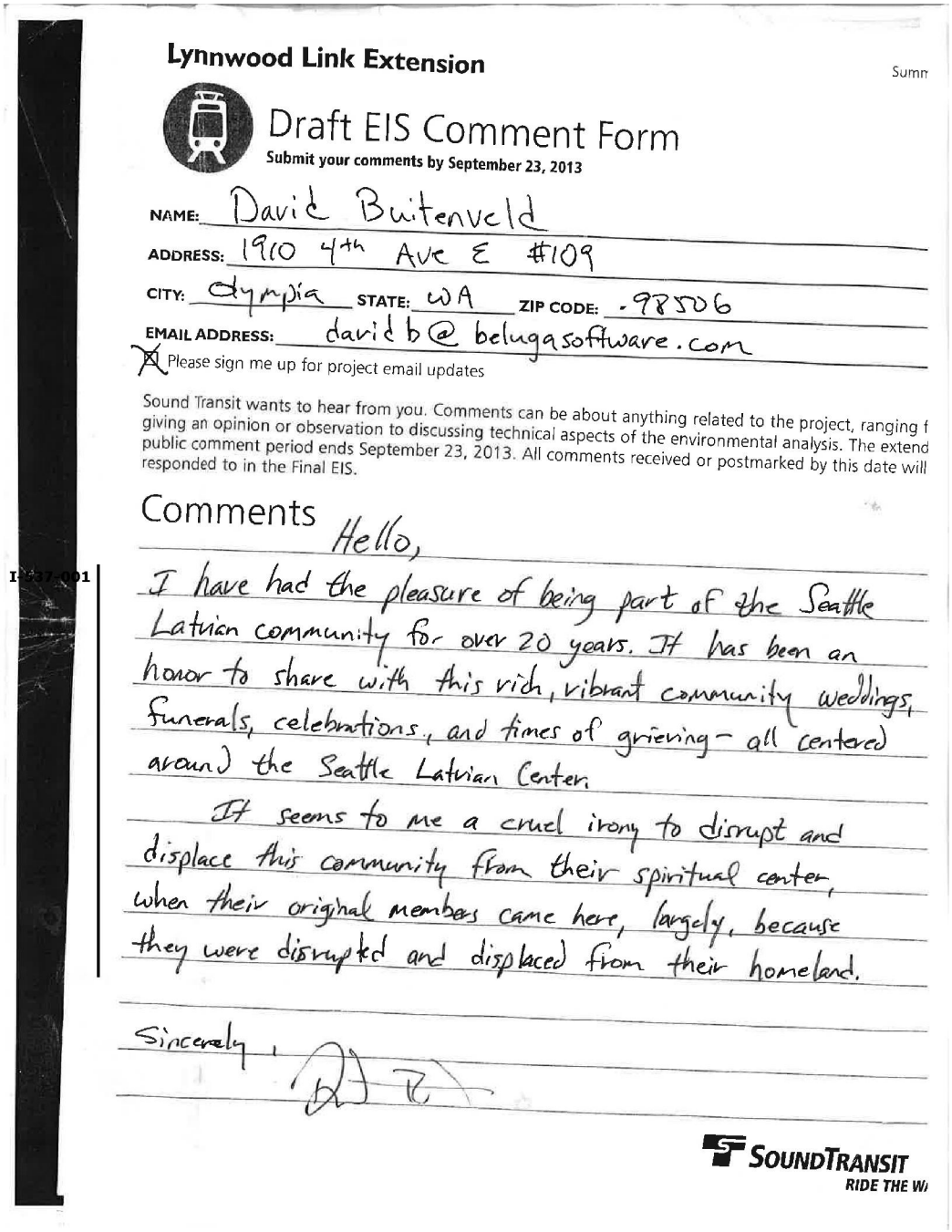
I-536-001

Your preference for Alternative C1 is noted.



Lynnwood Link Extension

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: David Buitenveld

ADDRESS: 1910 4th Ave E #109

CITY: Olympia STATE: WA ZIP CODE: 98506

EMAIL ADDRESS: davidb@belugasoftware.com

[X] Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging f giving an opinion or observation to discussing technical aspects of the environmental analysis. The extend public comment period ends September 23, 2013. All comments received or postmarked by this date will responded to in the Final EIS.

Comments

Hello,

I-537-001

I have had the pleasure of being part of the Seattle Latvian community for over 20 years. It has been an honor to share with this rich, vibrant community weddings, funerals, celebrations, and times of grieving - all centered around the Seattle Latvian Center.

It seems to me a cruel irony to disrupt and displace this community from their spiritual center, when their original members came here, largely, because they were disrupted and displaced from their homeland.

Sincerely,

SOUNDTRANSIT

RIDE THE W

I-537-001

Thank you for your comments about the Latvian Center. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Diana Chism <diana_chism@yahoo.com>
Sent: Tuesday, August 27, 2013 12:53 PM
To: Lynnwood Link DEIS
Subject: Losing our Latvian Cultural Center
Attachments: Latviesu nams - Diana Chism.docx

First, I would like to thank you for providing multiple forums for feedback, as I attended many of the townhall meetings for the Lynnwood to Northgate extension, but was not comfortable standing up to present my thoughts. I do support light rail and mass transit in general, and am very excited to see Seattle moving forward in this direction.

Attached is my formal letter with thoughts and feedback! Please let me know that you have received and are able to read the attached Word document.

Thank you!

-Diana

I-539-001

Fulfilling a dream!

The future of the Latvian Evangelical Lutheran Church and Center (Latvian Center), located at 11710 3rd Ave N.E. Seattle, WA is currently being threatened by Sound Transit's plan to run a light rail line from Northgate to Lynnwood. While the collective Latvian Church and Latvian Association of Washington State boards continue to work on our joint formal response to the Sound Transit DEIS (Draft Environmental Impact Study), I wanted to respond from my personal experiences with our Latvian Center.

I was lucky enough to still have a Grandmother into adulthood and to be able to hear her stories about Latvia, as she lived a very long life into her 90's. She spoke of the hardships leaving her country to go "somewhere safe" – traveling with three small children and pregnant. Leaving with only what they could carry, they escaped Communist rule and first fled to a Displaced Person Camps in Germany. After several years there, they finally ended up in Washington State, sponsored by a Lutheran Church that gave their pledge that the Latvians arriving would be hard working, trustworthy, respectful, law abiding citizens of their new country. My mother was 9 years old when she first came to America, my father a little older as he first spent time in England. They have fulfilled their promise of being exemplary citizens of very high character and integrity.

Growing up in a Latvian family was unique. I knew I was different from my friends. I spoke a different language from birth, had activities outside of school that my friends didn't understand, I couldn't always participate in weekend events because I had to attend Latvian school. It was as if I lived two separate lives, with different sets of friends and activities. Some weeks I would travel from Lynnwood to Northgate (with my family) to functions five (or more) days out of seven days of the week. Choir practice, folk dancing, confirmation studies, Latvian School (where we learned Latvia's geography, Latvian grammar, history of Latvia, religion, Latvian literature – ALL in our native Latvian tongue), and then special performances from various Latvian groups traveling to Seattle from Australia, Latvia, Sweden, England, Germany – all parts of the world. It was a very, very rich life that has helped me better understand other cultures and ethnic diversity. I still remain very active in our Latvian Society and am often at the Latvian Center - attending church services /funerals/christening/confirmations, performing with singing groups, assisting with the Christmas Bazaar/and other activities, and attending a variety of traveling productions that we are fortunate to be able to accommodate in our Latvian Center.

My "growing up Latvian" culminated this year as I fulfilled a lifelong dream to visit Latvia and sing in the Worldwide Latvian Song and Dance Festival. The Latvian Song and Dance Festival is an important event in Latvian culture and social life and has been held since 1873, normally every five years. Our strong culture and unified feeling even kept these festivals alive during soviet and other occupations. The festival in 1990 played a pivot role in the singing revolution and the eventual restoration of Latvia's independence a year later. I have dreamed of singing in this festival all of my life. I sang this summer; united with 15,000 other singers, in a beautiful outdoor amphitheater to another 15,000 spectators...it was beyond all expectations, surreal and beyond words. The other altos next to me were from various parts of Latvia, some from Australia, from Sweden, Norway, all over the world...there were Latvians from over 400 choirs singing together in this most sacred, exalted event. Singing our National anthem

I-539-001

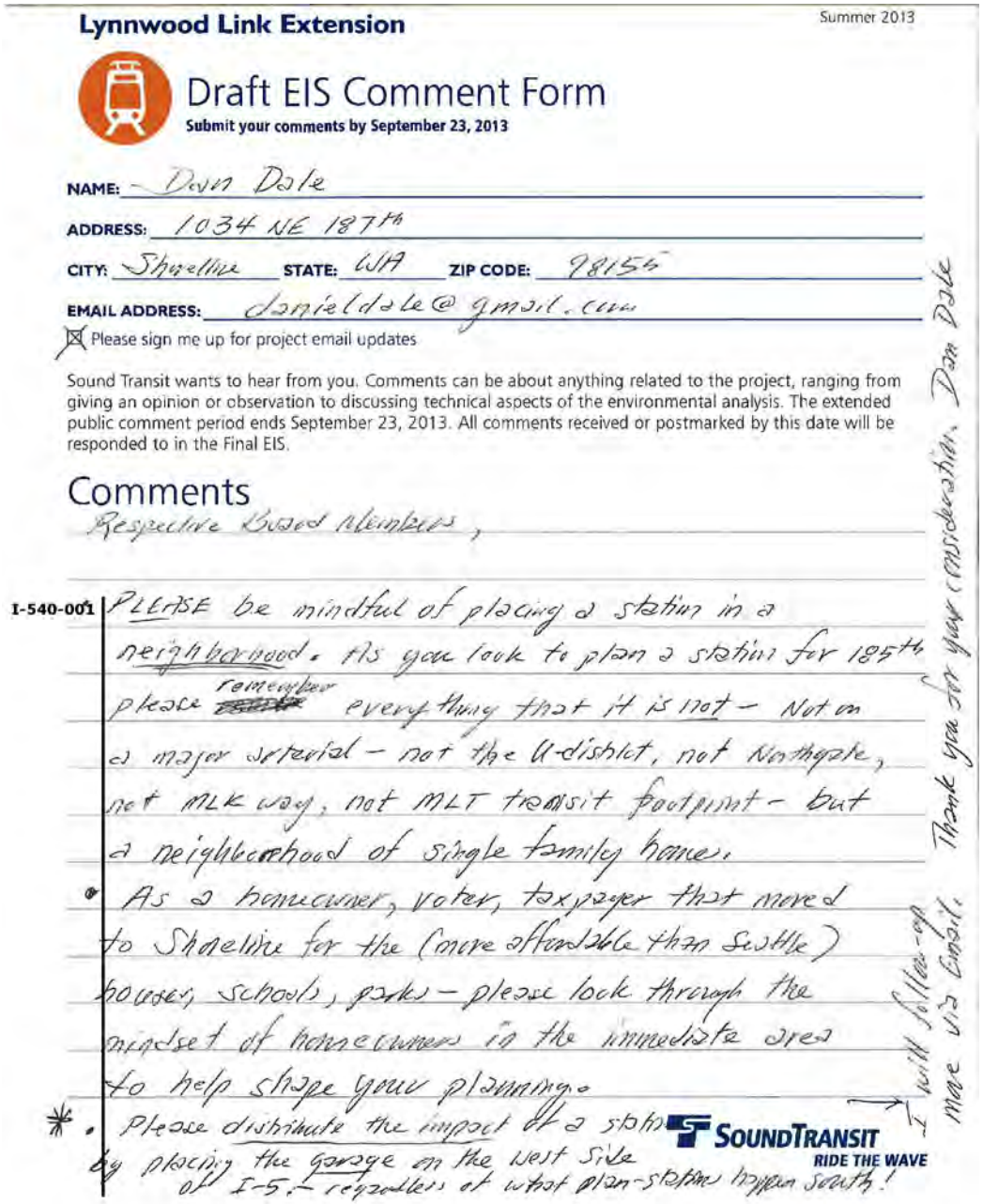
Thank you for sharing your family history and describing the importance of the Latvian Center to you. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

I-539-001 the first day, I was overwhelmed with emotion. With tears streaming down my face, I looked up to the sky thanking my father (who is buried in Jaunsaule, Latvia where he was born) and my mother who was home in Seattle, for the incredible gift of my Latvian heritage. I did not make it easy for them growing up, but understand the great gift they have given me, now.

Without our Latvian Center, none of this would have existed for me. I am sure I would still be of good moral character and be respectful and have integrity, but I would have half of the life I now have. Please, Sound Transit, do not take our Latvian Center away. It is unacceptable and heartbreaking to even think of the elimination of this type of community gathering place for future generations!

Thank you for your time and attention!

Diana K Chism
7741 S Mission Dr
Seattle, WA 98178



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Dan Dale

ADDRESS: 1034 NE 187th

CITY: Shoreline STATE: WA ZIP CODE: 98155

EMAIL ADDRESS: daniel dale@gmail.com

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

Respected Board Members,

I-540-001 PLEASE be mindful of placing a station in a neighborhood. As you look to plan a station for 185th please remember ~~remember~~ everything that it is not – Not on a major arterial – not the U-district, not Northgate, not MLK way, not MLT transit footprint – but a neighborhood of single family homes.

As a homeowner, voter, taxpayer that moved to Shoreline for the (more affordable than Seattle) houses, schools, parks – please look through the mindset of homeowners in the immediate area to help shape your planning.

Please distribute the impact of a station by placing the garage on the West Side of I-5. – regardless of what plan-station happen South!

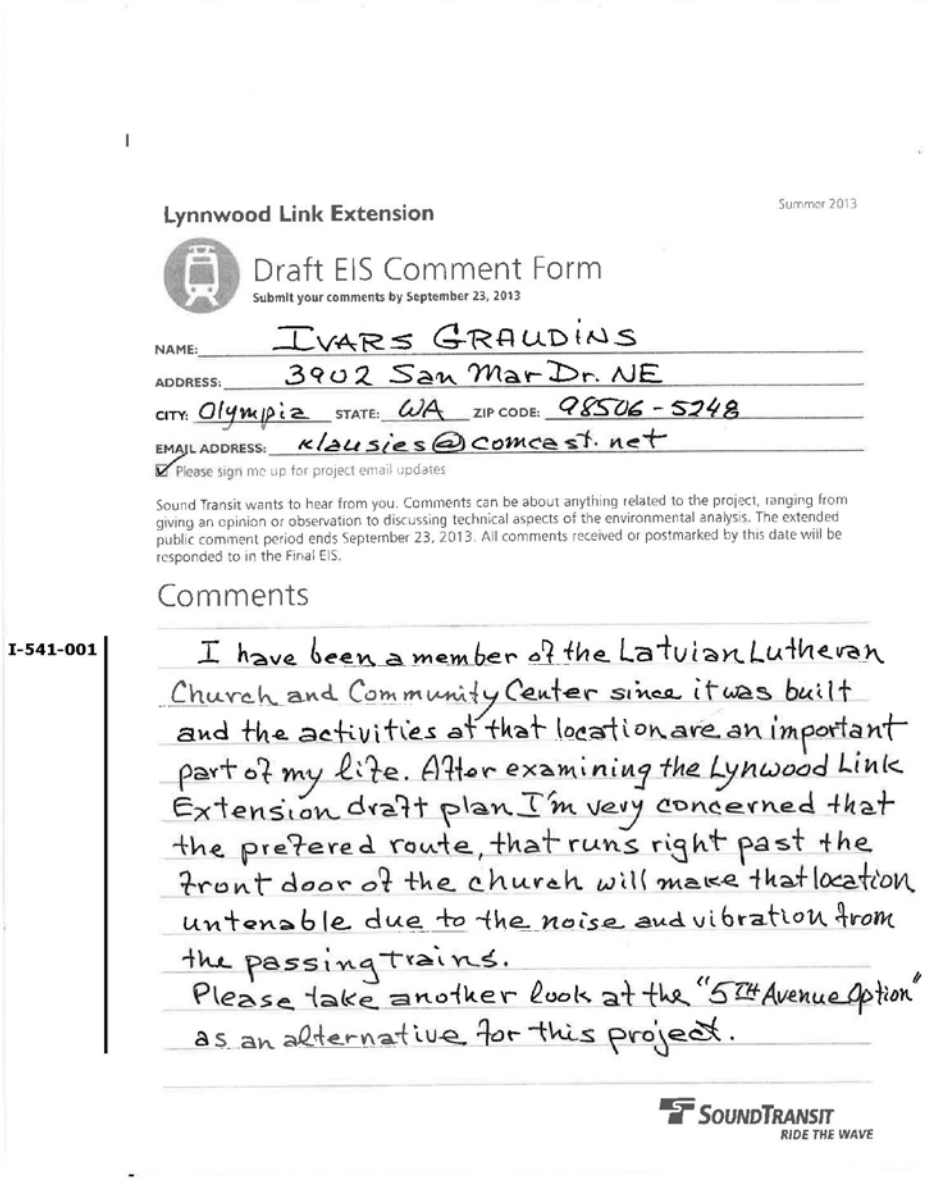
Thank you for your consideration. Dan Dale

I will follow-up more via Email.

SOUNDTRANSIT RIDE THE WAVE

I-540-001

Your concerns about the NE 185th Street Station are noted. The Sound Transit Board identified its Preferred Alternative, which includes parking for the NE 185th Street Station on the west side of I-5. Sound Transit will not make a final decision about what gets built until after the publication of the Final EIS.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: IVARS GRAUDINS

ADDRESS: 3902 San Mar Dr. NE

CITY: Olympia STATE: WA ZIP CODE: 98506-5248

EMAIL ADDRESS: klausies@comcast.net

☑ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-541-001

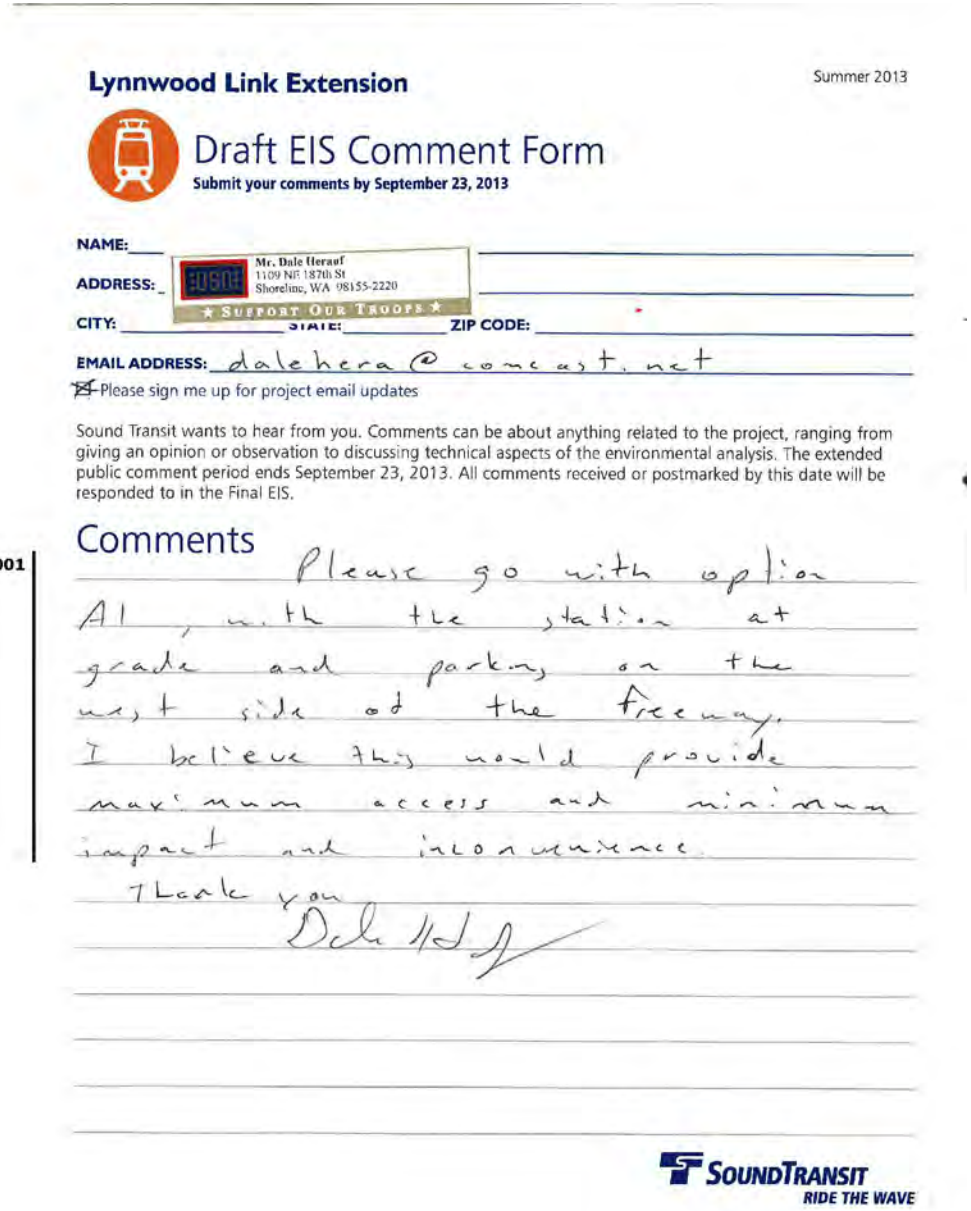
I have been a member of the Latvian Lutheran Church and Community Center since it was built and the activities at that location are an important part of my life. After examining the Lynwood Link Extension draft plan I'm very concerned that the prefered route, that runs right past the front door of the church will make that location untenable due to the noise and vibration from the passing trains.

Please take another look at the "5th Avenue Option" as an alternative for this project.

SOUNDTRANSIT RIDE THE WAVE

I-541-001

Your concerns about the potential impacts on the Latvian Evangelical Lutheran Church and community center are noted. At the church location, there would be a wall built between the church property and the light rail guideway with the Preferred Alternative. See Figure G-17 in Appendix G of the Final EIS for a visual simulation. Section 4.7 of the Final EIS discusses noise and vibration impacts from the project.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: _____

ADDRESS: Mr. Dale Herauf 1109 NE 187th St Shoreline, WA 98155-2220 ★ Support Our Troops ★

CITY: _____ STATE: _____ ZIP CODE: _____

EMAIL ADDRESS: dalehera@comcast.net

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-542-001

Please go with option A1, with the station at grade and parking on the west side of the freeway. I believe this would provide maximum access and minimum impact and inconvenience.

Thank you

Dale Herauf

SOUNDTRANSIT RIDE THE WAVE

I-542-001

Your preference for Alternative A1, including the at-grade station at NE 185th Street and the parking garage on the west side of the highway, is noted.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Valdis J Jodais
ADDRESS: 25425 34th Pl S
Kent WA 98032-9725

CITY: _____ STATE: _____ ZIP CODE: _____

EMAIL ADDRESS: _____

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Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-543-001

I am bitterly disappointed about the proposed Light Rail plan to disrupt in a major way the well being and perhaps even destroy the existence of the Latvian Lutheran Church and Cultural Center by constructing the Light Rail link between Northgate and Lynnwood. In my lifetime we were forced by the dictatorial regime to leave Latvia with just what we had on our backs. In the United States we were again driven out of the haven that we were using as a cultural and religious Center. Now we are facing a similar fate for the third time

We believe that the Sound Transit has not fully examined nor addressed and given clear responses to our concerns. Frankly, I feel that the Sound Transit doesn't care, except that we are not faced with death this time. There is no meaningful rail alignment option given where the rail bed could be moved few feet westerly. There has been no meaningful concern about the noise, vibration, lights and radio interference nor is there evidence of geotechnical studies having been performed. You have given minimal, if any, concern about the cultural, ethnic and religious impact that this would cause to a very large group of people.

For that reason we respectfully request that you seriously review your plan and provide us with some other workable alternatives.

V. Jodais

SOUNDTRANSIT
RIDE THE WAVE

I-543-001

Your disappointment with the potential displacement of the Latvian Church is acknowledged. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

The EIS has evaluated the areas of concern you note. For the evaluation of potential noise and vibration impacts, see Section 4.7. For potential visual impacts (light), see Section 4.5. For potential radio interference impacts, see Section 4.13. For potential geology impacts, see Section 4.11.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Lara Johnson

ADDRESS: 2800 Franklin Ave. E. #2

CITY: Seattle STATE: WA ZIP CODE: 98102

EMAIL ADDRESS:

☐ Please sign me up for project email updates

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Comments

I-544-001

It is my understanding that the current Lynnwood Link Extension project would require the destruction of the current Latvian Center and church in Northgate. I hope that this can be prevented. The Latvian community is very passionate about their current building and location — much work has gone into making the Latvian Center what it currently is. The current center provides access to many aging Latvians (who may have trouble with stairs) and a caretaker's house on the property — both of these aspects are important to the community. I hope the plans can be revised so the current building for the center is saved; there is much love and history in that building and a new one could never truly replace it.

SOUNDTRANSIT RIDE THE WAVE

I-544-001

Thank you for your comments regarding the Latvian Center and church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

18739 12th Ave NE
Shoreline, WA 98155
September 21, 2013

Sound Transit
Draft EIS Comments c/o Lauren Swift
401 S. Jackson St.
Seattle, WA 98104

Dear Ms. Swift and Sound Transit:

I am a newly-retired RN who has lived in her home on 12th Ave between 187th and 188th streets for 12 years.

I-545-001

I am writing to express my belief that Option A1 is the best plan for the Lynnwood Link Extension.

- An at-grade station would be less noisy and less visually distracting.

- Placing the parking garage on the W side facilitates/encourages commuter access via Meridian Ave, an established arterial. I'm concerned about the route commuters coming from Lake Forest Park would take to and from the station. 188th street is dangerous at the current level of use; it is narrow with a blind hill/rise. Placing the parking garage on the E side would invite commuters to use 182nd, which cannot accommodate more vehicles.

- Please build for 500 parking spaces. Commuters parking on our narrow, sidewalk-less streets would greatly and negatively impact residents' quality of life.

I-545-001

Your preference for Alternative A1 and concerns regarding neighborhoods, traffic, and access are noted. The Preferred Alternative places the NE 185th Street Station park-and-ride garage on the west side of I-5 with access to 5th Avenue NE. Parking is being planned for 500 spaces with pedestrian improvements across I-5 between the park-and-ride garage and the station.

I-545-001

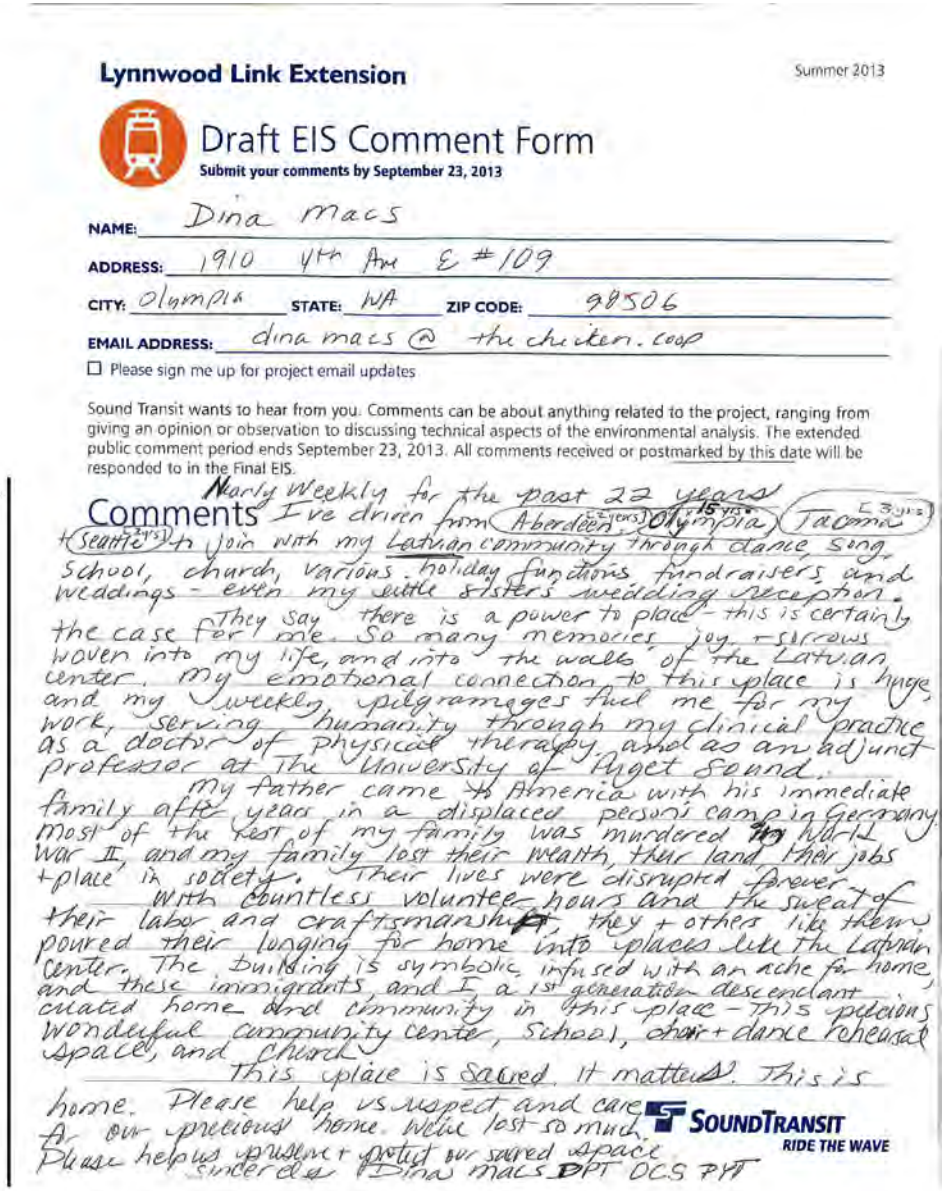
– Please respect our valuing of our green spaces and Trees and choose plans that preserve them as much as possible.

Thank you for giving this your consideration.

Sincerely,

Mary K Knoll

Mary K. Knoll



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Dina Macs

ADDRESS: 1910 4th Ave E #109

CITY: Olympia STATE: WA ZIP CODE: 98506

EMAIL ADDRESS: dina macs @ the chicken.coop

☐ Please sign me up for project email updates

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I-546-001

Comments

Nearly Weekly for the past 22 years I've driven from Aberdeen (22 years) Olympia (15 yrs) Tacoma (3 yrs) + Seattle (7 yrs) to join with my Latvian community through dance, song, school, church, various holiday functions, fundraisers, and weddings - even my little sisters wedding reception. They say there is a power to place - this is certainly the case for me. So many memories, joy, + sorrows woven into my life, and into the walls of the Latvian center. My emotional connection to this place is huge, and my weekly pilgrimages fuel me for my work, serving humanity through my clinical practice as a doctor of physical therapy, as well as an adjunct professor at The University of Puget Sound.

My father came to America with his immediate family after years in a displaced persons camp in Germany. Most of the rest of my family was murdered by Nazis in World War II, and my family lost their wealth, their land, their jobs + place in society. Their lives were disrupted forever.

With countless volunteer hours and the sweat of their labor and craftsmanship, they + others like them poured their longing for home into places like The Latvian Center. The building is symbolic, infused with an ache for home, and these immigrants, and I a 1st generation descendant, created home and community in this place - this precious wonderful community center, school, choir + dance rehearsal space, and church.

This place is sacred. It matters. This is home. Please help us respect and care for our precious home. We've lost so much. Please help us preserve + protect our sacred space.

Sincerely, Dina Macs DPT OCS PT

SOUNDTRANSIT RIDE THE WAVE

I-546-001

Thank you for describing the importance of the Latvian Center to you. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

From: Iwata, Roger
Sent: Friday, August 23, 2013 1:36 PM
To: Lynnwood Link DEIS
Subject: FW: Seattle Latvian Evangelical Lutheran Church and Center

From: Madara McFarlane [mailto:madara.mcfarlane@gmail.com]
Sent: Wednesday, August 21, 2013 8:03 PM
To: Dixon, Rhonda
Subject: Seattle Latvian Evangelical Lutheran Church and Center

I-547-001

I would like to express my deep concern about the threat to the Seattle Latvian Evangelical Lutheran Church and Center as a result of the proposed Lynnwood link. This church and center has been such an important cultural hub for my family and all the Latvians, Lithuanians and Estonians in the Seattle area. It is a place where my children have learned of their heritage and would be impossible to replace. It continues to be a center for all our important cultural traditions. Please consider preserving our center in your plans!!

I-547-001

Thank you for describing the importance of the Latvian Evangelical Lutheran Church to you. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

To Sound Transit and the Counsel,

I-548-001

I question all the decisions made by the Shoreline Counsel. I believe Shoreline makes many decisions that are never voted on by the people and that is not fair. Many people voted for light rail, but they didn't have all the facts. For example, where the stations would be, who would be impacted etc. Will people get out of their cars to even take the rail and how will that affect the buses?

Shoreline spends so much money. For example the trail from 150th to 200th cost some 13 million dollars. I rarely see people even walking on this trail. WASTE, WASTE, WASTE is Shoreline's motto.

Most of the decisions about light rail affect people east of the freeway. Yet those west of the freeway should not just think of their own interests. Each and every aspect of this light rail should be voted upon. Perhaps they move too quickly without thinking of the consequences. Let's slow down and reconsider the consequences. Also a station at 185th is a poor location. I live in Edmonds and would never use that station. Perhaps I would use the Ballinger area. That is a better location. Still in this economy we should think twice about all these decisions and put things before the people to vote on. Example: plastic vs paper bags. The community should vote on everything

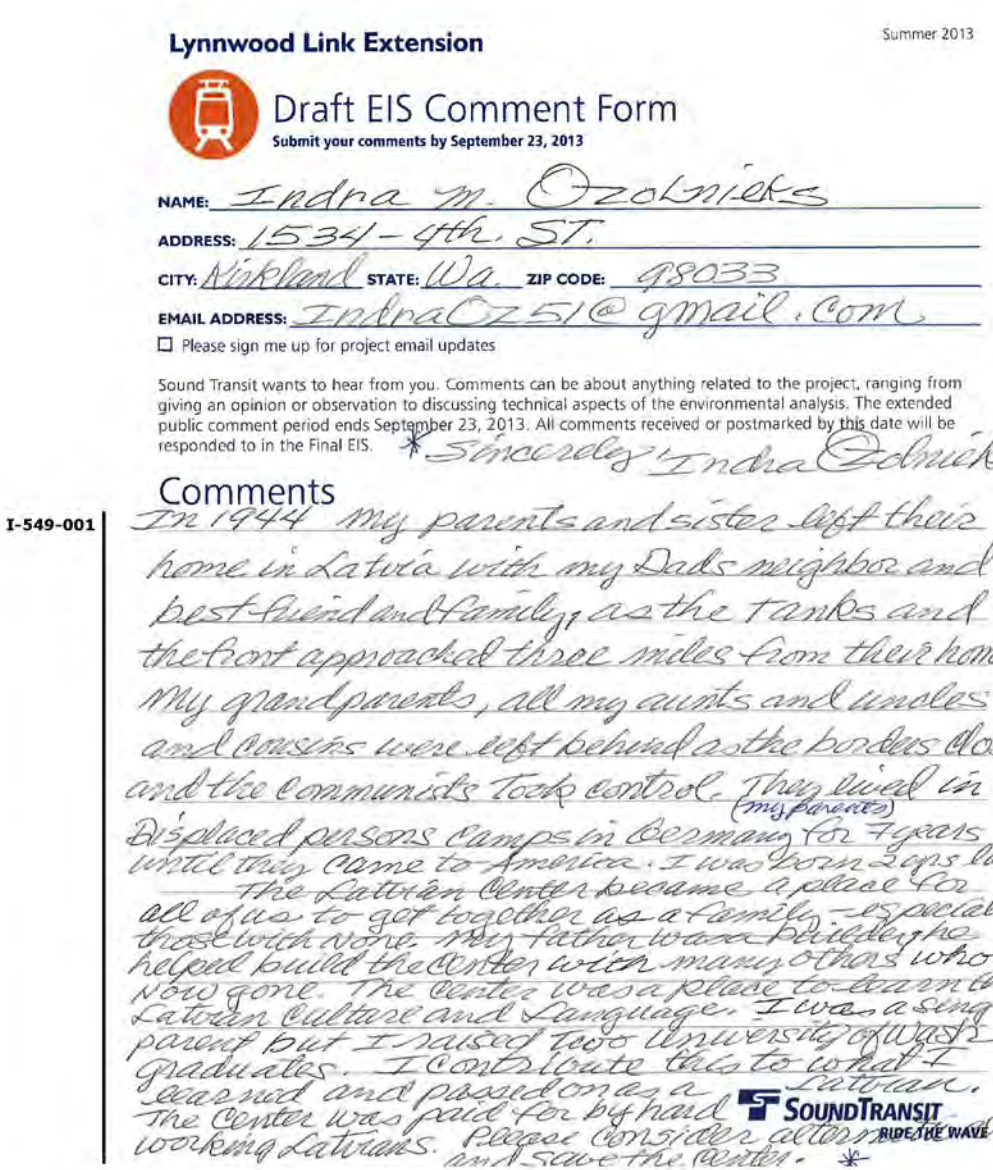
Personally, I'm against light rail. I question if it will really be used, and now we're in competition with buses. If the rail sits vacant, who pays all the costs? I'm really concerned about Shoreline and how they do business.

Please think seriously about this rail and where the stations will be located. Thank you for reading this letter. A concerned citizen,

Carolyn Moore

I-548-001

Your comments against light rail are noted. The Sound Transit 2 package that voters approved in 2008 included this project and indicated likely station locations. The City of Shoreline is not a financial partner for the Lynnwood Link Extension.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Indra M. Ozolnieks

ADDRESS: 1534 - 4th. ST.

CITY: Kirkland STATE: Wa. ZIP CODE: 98033

EMAIL ADDRESS: IndraOz51@gmail.com

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS. *Sincerely Indra Ozolnieks

Comments

I-549-001

In 1944 my parents and sister left their home in Latvia with my Dads neighbor and best friend and family, as the tanks and the front approached three miles from their homes. My grandparents, all my aunts and uncles and cousins were left behind as the borders closed and the communists took control. They lived in (my parents) Displaced persons camps in Germany for 7 years until they came to America. I was born 2 yrs later. The Latvian Center became a place for all of us to get together as a family - especially those with none. My father was building he helped build the Center with many others who are now gone. The Center was a place to learn the Latvian Culture and Language. I was a single parent but I raised two University of Wash graduates. I contribute this to what I learned and passed on as a Latvian. The Center was paid for by hard working Latvians. Please consider alternatives and save the Center. *

SOUNDTRANSIT RIDE THE WAVE

I-549-001

Thank you for describing your family's history and the importance of the Latvian Center to you. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

This applies to all Light Rail Stations.

I-550-001

1.**Residents need to vote on these decisions and demand that they be voted on**. Just because people voted for light rail does not mean they have agreed to all the light rail plans. They should be aware what each station costs, decide how many we need and vote on where they would be located. They should know how many people will be impacted, and the number of homes and businesses that need to be relocated. All the impact is on the East side of the freeway. Decisions are made by an elected few. Most, if not all, are living on the West side of the freeway. They were elected to represent all of the people, People believe they have already made up their mind on what they are going to do and these meetings are just to let the people vent. I agree.

I-550-002

2. **Any stations should be located near the already existing freeway exits and already existing parking areas, not in the middle of the communities. Traffic will increase making it unsafe and crime will increase as well.** Making a 500 car parking garage and trying to bring cars into the area will destroy the quality of peoples lives. The 185th station is a perfect example. Seniors and young adults use the churches, senior center, stadium, pool and tennis courts. There is a lot of pedestrian traffic in that area. They don't need more car traffic. Shoreline officials, not the transit company is and has all along pushed for this 185th station and put it in all their options. A better option would be to put it on the North side of Ballinger way . **Shoreline would only need one station at 145th** . The Ballinger way station would be used by Edmonds, Lk Forest Park, Shoreline, Mt Lake Terrace. Shoreline is just diving in and has out of control spending of our already too high taxes and the money from the federal government is also coming out of ours and our children's pockets.

I-550-003

3. Of course they will need riders to pay for this. The people I have talked to will not be riding the train and they expect trains to be empty like all the bicycle paths are. How much has been spent on bicycle paths? How many people are using them? How much did that overpass cost that is on 155th & Aurora. Shoreline wants to get rid of the single family homes and make multiplexes and microplexes increasing the density for more revenue and put them near the stations so they will have more riders. They say its for the low income and seniors but they need to say this to get money from the federal government. Seniors need to be safe. Crime will increase and traffic will make it unsafe for them. **Again a few people can change the codes and offer building incentives to carry out their vision without the residents voting on them. We are letting a few people determine how we will live. Residents need to be informed with the Pros and Cons and Vote on everything.** We can stop this if we all work together. People need to get involved now. Single family homes are being taken down and builders are getting incentives to do this. Look at the Ballard area and their new plans for microplexes (43 units with only 6 kitchens) on a 5000 sq ' lot where there was one single family home. Drive to North City 175th & 10th Ave. It is starting to look as bad as Ballard.

I-550-004

4. I believe that the best choice for a train would have been to go to Northgate and then Hwy 99. Others say it should always have followed Hwy 99. They could use existing

I-550-001

The Lynnwood Link Extension is part of the Sound Transit 2 program of projects, which was approved by voters in 2008. The final decision regarding what will be built will be made by the Sound Transit Board after publication of the Final EIS.

I-550-002

Section 3.2 outlines anticipated long-term operation transportation impacts such as increased traffic congestion, and Section 3.6 identifies mitigation measures that Sound Transit commits to implement to prevent a worsening of project conditions without the proposed light rail system extension.

The City of Shoreline is not a financial partner with Sound Transit for the construction and operation of the Lynnwood Link Extension. See Section 5.3.1 for additional information.

I-550-003

Your concerns regarding density are noted. Zoning is the responsibility of the City, not Sound Transit. Section 4.14 discusses safety around station areas. Typically, crime at stations reflects the conditions of the surrounding neighborhood.

I-550-004

Construction of a high-capacity transit system from Northgate to Lynnwood following Aurora Avenue (Highway 99) was considered in early planning studies for the project. Please see the *Alternatives Analysis Report* in Appendix K. The final evaluation showed light rail alternatives along Aurora Avenue would be substantially more expensive due to acquisition of right-of-way along the entire length in order to widen the roadway and lower ridership.

I-550-004 transit parking. Riders would have the option to use bus or train and have it go to Lynnwood and then to Everett. A few stations could be made now and more added as needed. This would be more fiscally responsible. Land for stations could be purchased as it becomes available. Noise would not be a factor.

I-550-005 5. **When there is a decision to have level or elevated they should always choose the one that would not take peoples property. Level uses more property**. When they do take property they should offer 2x the current property value so the person would have a good chance to find a new home instead of being put out of the housing market.

I-550-006 6. The people along the freeway have to constantly hear the traffic and noise from the freeway. **It is unfair to run the train along the freeway increasing the noise and also the additional noise at the stations of the trains arrival and departure.** No one cares about those people. Most of them are older homes, lower income and Seniors. Its more like get out of the way the train in coming and if you don't like it move.

P.O. Box 55392
Shoreline WA 98155

I-550-005

Sound Transit developed the alternatives considered in the EIS based in part on their ability to minimize acquisitions, compared to other possible alternatives, but some property acquisitions will be unavoidable. Section 4.1 discusses Sound Transit's mitigation for acquired property.

I-550-006

The noise analysis for the Lynnwood Link Extension uses the FTA impact criteria and Sound Transit mitigates noise impacts to levels below these criteria. Potential mitigation measures for noise are described in Section 4.7.7 of the Final EIS.

Noise walls are planned for all alternatives in this area, either at-grade or elevated, as mitigation for the light rail impacts.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Selga Petersons

ADDRESS: 11716 3rd Ave NE

CITY: Seattle STATE: WA ZIP CODE: 98125

EMAIL ADDRESS: namamate@hotmail.com

☐ Please sign me up for project email updates

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Comments

I-551-001

I am writing in regards to the impact the current option will have on the Latvian Lutheran Church & Culture Center in Northgate I am the caretaker and have been for the last 26 years. This complex is more than you can imagine. We have visitors here from all over the world.

Please reconsider. Save our Church!

Sincerely,

Selga Petersons

SOUNDTRANSIT RIDE THE WAVE

I-551-001

Thank you for your comments about the Latvian Lutheran Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property. The caretaker's house would be displaced, but Sound Transit will help with its relocation, consistent with relocation policies as described in Section 4.1 of the Final EIS.

Oskars Poukens
760 N 7th St., Apt. #4319
San Jose, CA 95112

Comments
c/o Lauren Smith
401 S. Jackson St.
Seattle, WA 98104

September 20, 2013

To Whom It May Concern,

I-552-001

My name is Oskars Poukens, and I am you writing regarding the Lynwood Link DEIS issued July 26, 2013. It may surprise you that a comment regarding this situation is arriving from California, but I hope you will nonetheless take my opinion to heart, even though I may not be a member of your voting block. It is my sincerest hope that the time I take now, to write you from over 800 miles away, is not wasted, but helps to bring to your attention the importance of the dire situation which you have created for the Seattle Latvian Community Center.

The Latvian Community Center serves as a Sunday school, church, holds choir practices and dance practices, hosts rummage sales and bazaars, plays and more. It is a wonderful place where we can meet and socialize and strengthen our community bonds. We are fortunate enough to have a center here in San Francisco, and I could not even imagine the hit our community would take if someone were to take that away from us. My friends in Washington have reached out to me and I am writing on their behalf, because any loss in our community is all our loss.

I do not doubt for a moment that the proposed changes – whether "just" losing ingress/egress and parts of the lot, or losing the property as a whole – would be devastating to the Seattle Latvian Community. While I am absolutely supportive of public transportation expansion, I wonder if there are no possible alternatives to this. The Seattle Latvian Center is a unique and irreplacable place for the Seattle Latvian Community, and it would be wildly difficult if not impossible for the community to replace this building were it taken away from them. Finding another building that so perfectly suits all of their needs would be difficult enough, but at this point in time, thinking financially, I think it would be impossible.

I sincerely hope that the efforts of our community to reach out to you do not go in vain. I am certain that we can find a solution that will still enable an expansion to the public transport line, but no longer put the Seattle Latvian Community Center in peril. I hope that you will work with us to protect this dearly loved fixture of the community.

Sincerely,

Oskars Poukens

I-552-001

Thank you for describing the importance of the Latvian Community Center to you and the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Ilze Pukite
760 N 7th St., Apt. #4319
San Jose, CA 95112

Comments
c/o Lauren Smith
401 S. Jackson St.
Seattle, WA 98104

September 20, 2013

To Whom It May Concern,

I-553-001

My name is Ilze Pukite, and I am you writing regarding the Lynwood Link DEIS issued July 26, 2013. It may surprise you that a comment regarding this situation is arriving from California, but I hope you will nonetheless take my opinion to heart, even though I may not be a member of your voting block. It is my sincerest hope that the time I take now, to write you from over 800 miles away, is not wasted, but helps to bring to your attention the importance of the dire situation which you have created for the Seattle Latvian Community Center.

The Latvian community is one of the most closely knit communities I have ever had the honor to be a part of. Our culture is a small one, and our home country of Latvia has a population just barely topping 2 million – less than a fifth the size of LA. However, our people are strong, and united. When Latvia was occupied by the USSR, thousands of Latvian refugees fled the country, and many found save haven in the United States. There, we found solace in each other, and vowed to keep our language, traditions, and history alive, despite the tragedies back home. To this end, we created Latvian Centers all across America – including Seattle.

These community hubs served as schools, dance centers, churches, choir halls, and homes. They host everything from Christmas bazaars to rummage sales, to folk dance performances and evenings of song. I have fond memories of the Latvian Center in Seattle, when my mom and I would occasionally drive up from Portland, where I grew up, to participate in an event or see a Latvian group performing. These centers provide so much for the communities they serve – they inspire children to take pride in their heritage, they give our seniors opportunities to socialize, and they unite us as a community.

I do not doubt for a moment that the proposed changes – whether "just" losing ingress/egress and parts of the lot, or losing the property as a whole – would be devastating to the Seattle Latvian Community. While I am absolutely supportive of public transportation expansion, I wonder if there are no possible alternatives to this. It is, quite frankly, shocking to me that this plan has gotten so far. I wonder that at no point during the propositions for this expansion did anyone think to wonder what this building was, and, if they did inquire as to its usage, did they really think it should be razed nonetheless? Were this new construction going to have to go through a 7-11, well, I think the world would be quite indifferent, as there is one on every corner. Of Latvian Centers, however, we have very little, and the community it supports would be very hard pressed indeed to find a replacement, let alone afford the move.

I sincerely hope that the efforts of our community to reach out to you do not go in vain. I am certain that we can find a solution that will no longer put the Seattle Latvian Community Center in peril, and I hope that you will take the necessary steps to protect this dearly loved fixture of the community.

Sincerely,

Ilze Pukite

I-553-001

Thank you for describing the importance of the Latvian Center and the Latvian community. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Lija Pures

ADDRESS: 6806 27TH Ave NE, Seattle WA 98115

CITY: Seattle STATE: Wasgh ZIP CODE:

EMAIL ADDRESS:

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-554-001

This School is imortant to me because Santa Wont find us no because IWere will we go When we Wunt learn lativan, latvian? This School is imortant to me, & everone else.

From,

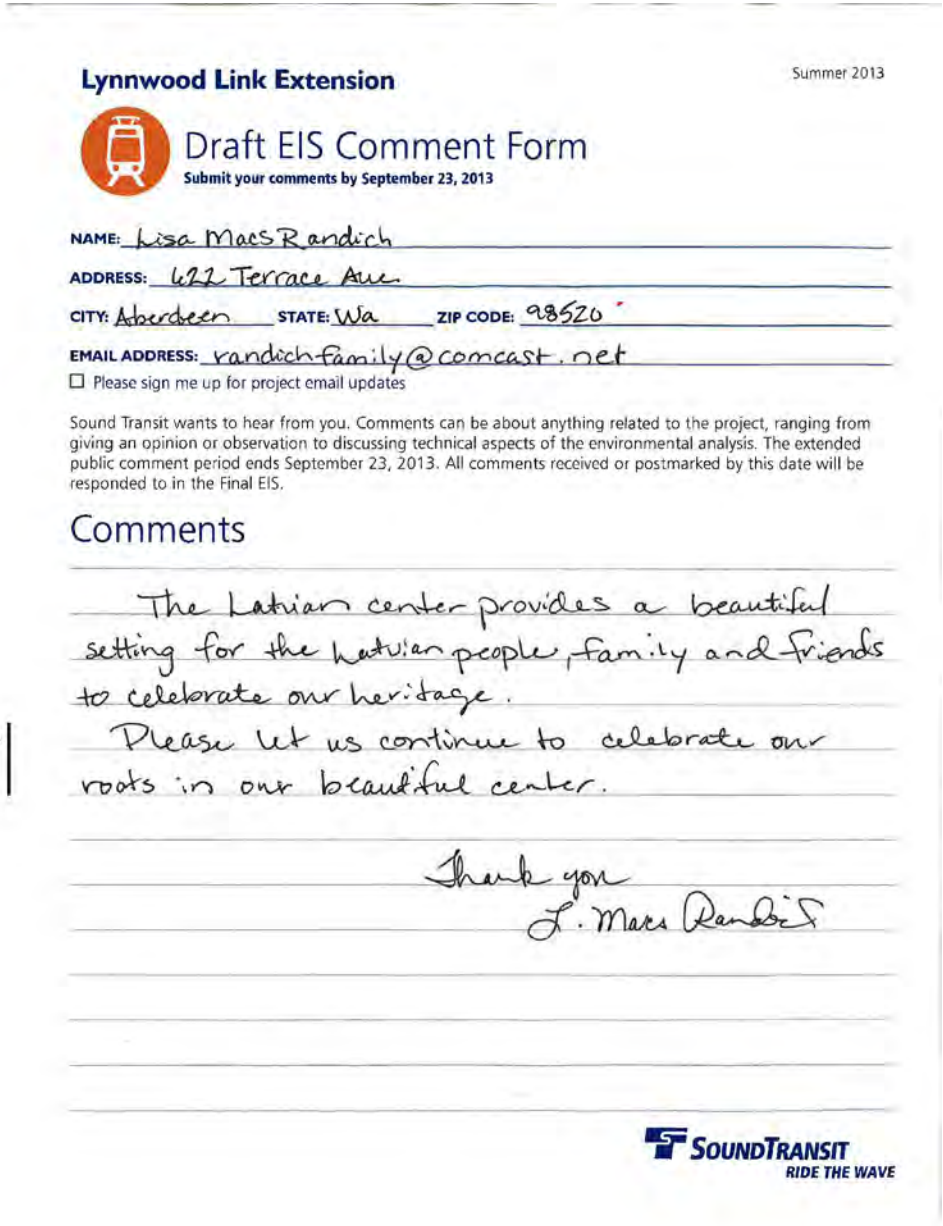
Lija

IN SUPPORT OF LATVIAN CHURCH AT; 11710 3RD AVE NE, SEATTLE, WA, 98125.

SOUNDTRANSIT RIDE THE WAVE

I-554-001

Santa will be able to find you at the Latvian Church for years to come because the Lynnwood Link Extension will not remove the church. You will also be able to continue to learn Latvian there. Thank you for telling us the school is important to you.



Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Lisa MacsRandich

ADDRESS: 622 Terrace Ave

CITY: Aberdeen STATE: Wa ZIP CODE: 98520

EMAIL ADDRESS: randichfamily@comcast.net

☐ Please sign me up for project email updates

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Comments

The Latvian center provides a beautiful setting for the Latvian people, family and friends to celebrate our heritage.

I-555-001 Please let us continue to celebrate our roots in our beautiful center.

Thank you
L. Macs Randich

SOUNDTRANSIT
RIDE THE WAVE

I-555-001

Thank you for your comments about the Latvian Center. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Rachel Randich

ADDRESS: 622 Terrace Ave.

CITY: Aberdeen STATE: Wa. ZIP CODE: 98520

EMAIL ADDRESS: randichfamily@comcast.net

☐ Please sign me up for project email updates

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Comments

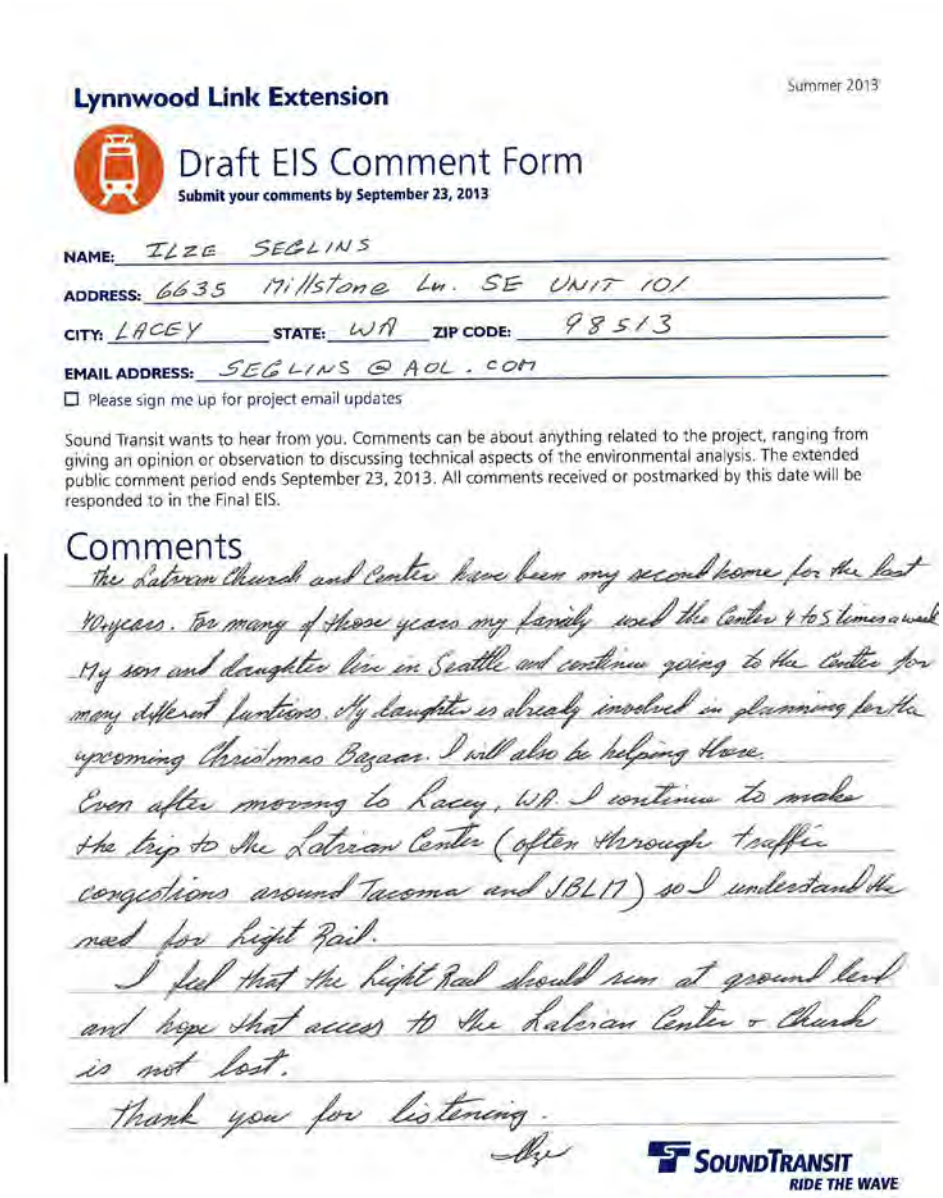
I-556-001

Please don't close the Latvian center - it means everything to the people who lost their home land.

SOUNDTRANSIT RIDE THE WAVE

I-556-001

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: ILZE SEGLINS

ADDRESS: 6635 Millstone Ln. SE UNIT 101

CITY: LACEY STATE: WA ZIP CODE: 98513

EMAIL ADDRESS: SEGLINS@AOL.COM

☐ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-557-001

The Latvian Church and Center have been my second home for the last 40 years. For many of those years my family used the Center 4 to 5 times a week. My son and daughter live in Seattle and continue going to the Center for many different functions. My daughter is already involved in planning for the upcoming Christmas Bazaar. I will also be helping there.

Even after moving to Lacey, WA. I continue to make the trip to the Latvian Center (often through traffic congestions around Tacoma and I5/I7) so I understand the need for Light Rail.

I feel that the Light Rail should run at ground level and hope that access to the Latvian Center + Church is not lost.

Thank you for listening.

Ilze

SOUNDTRANSIT RIDE THE WAVE

I-557-001

Thank you for describing the importance of the Latvian Church and Center to you. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall. With the realigned street, access to the property has been maintained, although a portion of land on the church property would be acquired for the Preferred Alternative and other at-grade alternatives.

Lynnwood Link Extension Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: David C. WILLIAMSON

ADDRESS: 4800-200th St. SW. Apt. E205

CITY: Lynnwood STATE: WA ZIP CODE: 98036-6362

EMAIL ADDRESS: dcw481@yahoo.com

☒ Please sign me up for project email updates

Sound Transit wants to hear from you. Comments can be about anything related to the project, ranging from giving an opinion or observation to discussing technical aspects of the environmental analysis. The extended public comment period ends September 23, 2013. All comments received or postmarked by this date will be responded to in the Final EIS.

Comments

I-559-001

I, David C. WILLIAMSON, live in the CEDAR CREEK CONDO-MINIUM and have made comments before on objecting (opposing) your C-1 and C-2 alternatives in favor of C-3. I must ask for the geology of the area to be SERIOUSLY noted and acted on ESPECIALLY with EARTH-QUAKES. The Nisqually Earth quake in 2001 was the last one I have personally lived through. At 6.8 on the Richter Scale and its epi-center 32 miles under ground the damage it caused would be mild in comparison to the next Cascadia mega-earthquake. The last occurred on January 26, 1700 (and was about a 9 on the scale) when few people lived here. Brian Attwater of USGS and David Yamaguchi are your best sources, CONSULT, for the Scriber Creek wet lands could liquid-fact the ground under your piers and lead to collapse in a large quake

SOUNDTRANSIT RIDE THE WAVE

I-559-001

Your preference for Alternative C3 is noted. The EIS includes a summary of the geologic hazards that have been identified in the project areas, including the Scriber Creek area. The project design will address identified geologic hazards, and will include earthquake engineering in accordance with applicable building codes. Earthquake engineering includes evaluations of and design for ground shaking, liquefaction, lateral spread, liquefaction-induced settlement, and seismically induced slope instability. The earthquake engineering building codes incorporate USGS research on hazards from identified faults in the Puget Sound area, including the Cascadia subduction zone.

September 23, 2013

Sound Transit
Draft EIS Comments
c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

Dear Lauren Swift and Staff,

I-560-001

40 years ago I helped design the Latvian Center. Edvins Circenis was in charge of the overall design and he and I chose everything that went into the building. Every capable person in the Latvian community helped build the church and the hall next to it, as well as all the school classrooms/meeting rooms on the second level of the hall.

Soon after the center was built my youngest son was christened in the church.

30 years ago we celebrated my grandmother's 100th birthday in the community hall.

During these years all of my kids got up on Saturday mornings, missed the cartoons, and attended school in those classrooms. . For all these years there have been weddings, celebrations of births, christenings, confirmations, folk dance rehearsals and dances, play practice and theatre, community choir rehearsals and community choir performances, ladies aid "quilts", seniors' evenings ---and funerals.

Now my grandkids get up on Saturday mornings and go to the same school as did their fathers. The next generation to take charge is coming right up.

Two years ago my youngest son christened **his** youngest son and there was a huge celebration in the hall afterwards, as there always is.

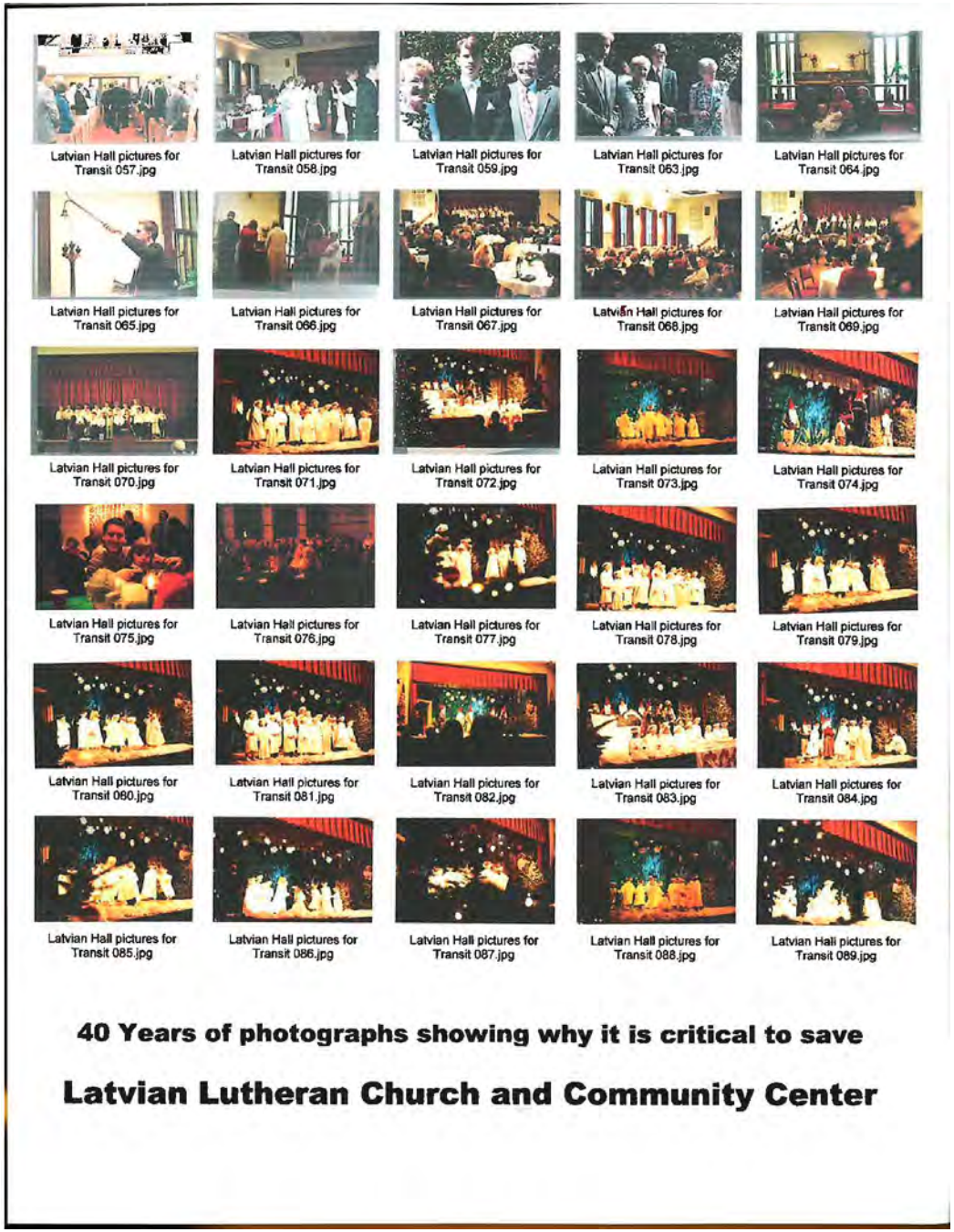
Yesterday, September 22, 2013 The President of Latvia, Andris Bērziņš, spoke to all of us gathered in a full hall, and at least 5 generations celebrated that event.

Juris Zommers
8876 Driscoll Lane NE
Bainbridge Island WA 98110

206/842-2525 juris@zommers.com

I-560-001

Thank you for describing the importance of the Latvian Evangelical Lutheran Church to you and your family, and the pictures you sent.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40 Years of photographs showing why it is critical to save
Latvian Lutheran Church and Community Center

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40 Years of photographs showing why it is critical to save

Latvian Lutheran Church and Community Center

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Latvian President Andris Berzins 9-22-2013.jpg

40 Years of photographs showing why it is critical to save

Latvian Lutheran Church and Community Center

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40 Years of photographs showing why it is critical to save
Latvian Lutheran Church and Community Center

From: LindaZopfi@aol.com
Sent: Wednesday, September 11, 2013 9:53 AM
To: Lynnwood Link DEIS
Cc: pkrauss@ci.lynnwood.wa.us; jlambert@ci.lynnwood.wa.us; Iwata, Roger
Subject: Lynnwood Link - Route C3!!

I-561-001

Hello - would someone kindly acknowledge that this email has been received? I will not be able to attend the community meeting in Lynnwood on Saturday regarding the Route Alignments, and I want to be certain that my opinion/preference is noted and considered.

As a Lynnwood homeowner for 24 yrs, and a home-based small business owner for over 20 yrs, I feel the ONLY possible and acceptable route that should be considered for the track alignments through the City of Lynnwood is the one called "C3". This option not only spares our parks and wildlife, but also homes and businesses and will cause the least amount of interruption to our daily life here in the City we call home.

I appreciate your consideration and I am hopeful that the correct choice will be made. Thank you.

Best,
Linda (Melinda) Zopfi
20026 53rd Place West
Lynnwood, WA 98036

Linda Zopfi
A Zopfi Production LLC
PO Box 1998
Lynnwood, WA 98046
425-670-1220
www.facebook.com/AZopfiProductionLLC

Exclusive Entertainment Producer for The Groupon Bite of Seattle and The Emerald Queen Taste of Tacoma

1

I-561-001

Your preference for Alternative C3 is noted. A modified Alternative C3 is evaluated in the Final EIS as the Preferred Alternative.

From: Minda Tochihara <mytochihara@yahoo.com>
Sent: Sunday, September 08, 2013 9:19 PM
To: Lynnwood Link DEIS
Subject: comments

I-562-001 | I think the station should be at 155th St.

1

I-562-001

Your preference for a station at NE 155th Street is noted.

Shoreline Fire Department
Dedicated to the Protection of Life and Property

FIRE CHIEF
Matt Cowan

COMMISSIONERS
Ken Callahan, Jim Fisher, David Harris, Rod Hellvin, Jon Kennison

July 29, 2013

RECEIVED
AUG 14 2013
SOUND TRANSIT
BOARD ADMINISTRATION OFFICE

The Honorable Pat McCarthy
Chair, Sound Transit Board
401 South Jackson Street
Seattle, WA 98104

RE: Support or Light Rail Station at NE 145th Street in Shoreline

Dear Chair McCarthy:

L-001-001 The Shoreline Fire Department would like to offer its support for designating a Light Rail Station at NE 145th Street in Shoreline as part of Sound Transit's Lynnwood Link Extension Project.

We strongly support a station at NE 145th and I-5 as it will serve as a regional station. Due to its proximity to Bothell Way NE/Lake City Way NE (SR 522), the NE 145th Street station will act as a regional station for residents of Lake Forest Park, Kenmore, Bothell and potentially points east, and northwest Seattle residents. We believe that convenient access off main thoroughfares is the most appropriate location for a regional station.

L-001-002 In addition, we are concerned that a station at 155th Street may interfere with our existing Fire Station just east of I-5 and therefore may negatively impact response times due to increased bus and vehicle traffic the station would generate. Further, depending on the specific design of the rail line itself and/or the station and the subsequent increase in traffic, we may have to consider moving the facility all together.

L-001-003 The City of Shoreline has already begun station area planning which includes increasing density around stations to facilitate transit-oriented development. Part of that commitment is to increase pedestrian and bicycle access and improvements to the road network to facilitate transit to serve the stations. The City is also pursuing ownership of 145th Street in order to improve the transportation facilities for vehicles, buses and non-motorized users; therefore, helping to improve the access to the station.

L-001-004 The Shoreline Fire Department strongly urges you to designate NE 145th Street as a station location as it supports greater regional access, provides opportunities for improved transit and non-motorized transportation facilities, and allows for greater opportunities for transit-oriented development.

Thank you for your time and consideration of this important issue.

Sincerely,

Matt Cowan, Fire Chief
Shoreline Fire Department

17525 Aurora Avenue North • Shoreline, WA 98133 • PHONE: (206) 533-6500 • FAX: (206) 546-5719
www.shorelinefire.com

L-001-001

Thank you for your comment stating a preference and reason for preferring the station at NE 145th Street in Shoreline.

L-001-002

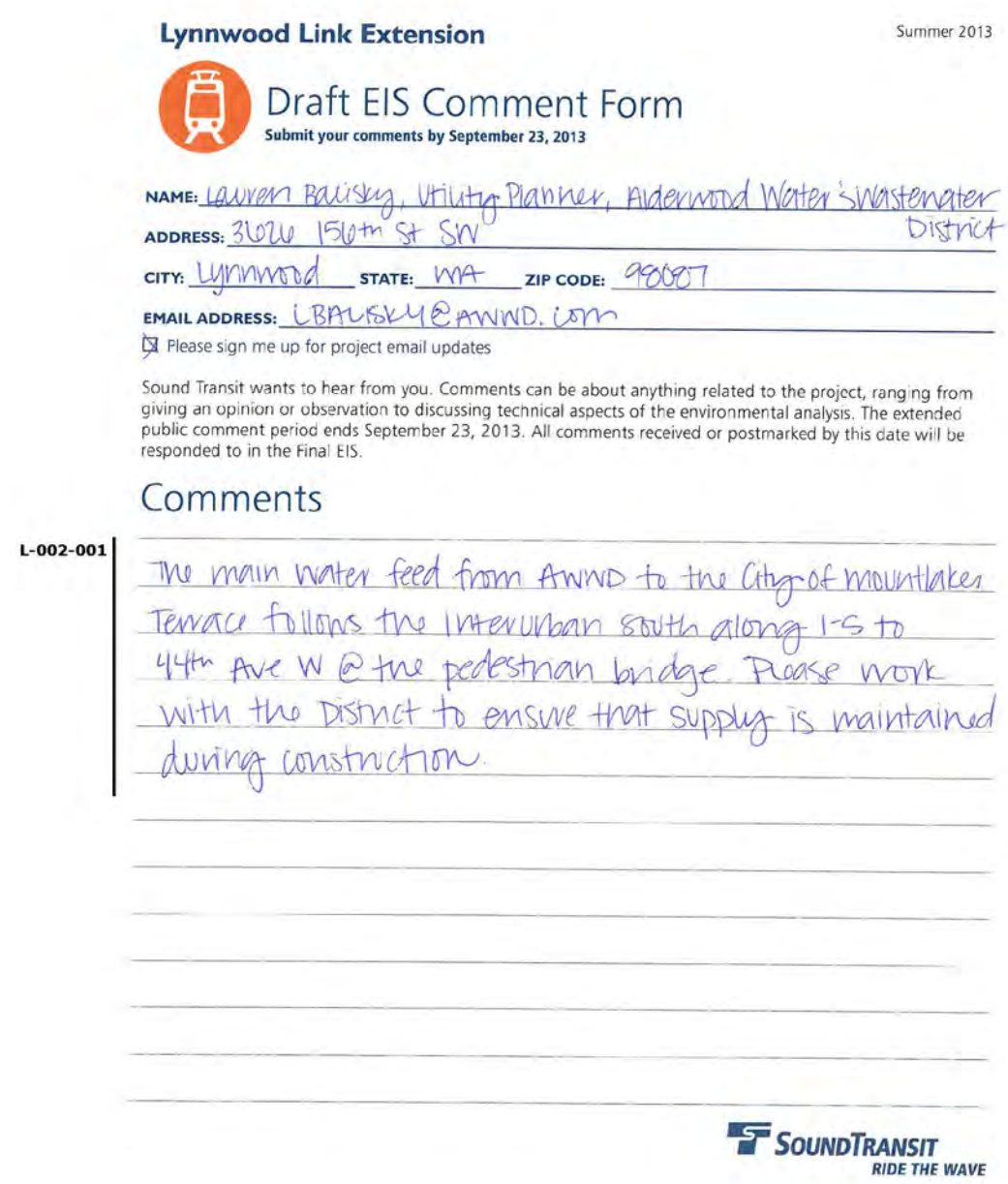
Sound Transit is aware of the Fire Department's concerns about the possible impacts of a light rail station at NE 155th Street on operations of the fire station at that location. If this station were to be advanced as part of the project, Sound Transit would further define measures to manage traffic serving the station while maintaining effective access for the fire station. Sound Transit would work closely with the city and the Fire Department to resolve potential conflicts with bus and vehicle traffic and to maintain emergency response times and access during the construction period and operation of light rail. However, the Preferred Alternative does not include this station site.

L-001-003

Thank you for noting the City of Shoreline's station area planning efforts around the NE 185th Street Station and at the NE 145th Street Station; the Draft EIS and the Final EIS both note the City's preference for these stations and include information about station access.

L-001-004

Thank you for the comment stating a preference for the NE 145th Street Station in Shoreline. This letter was noted in the materials provided to the Sound Transit Board, prior to their selection of the Preferred Alternative for Segment A, which includes a NE 145th Street Station.



Lynnwood Link Extension

Summer 2013

Draft EIS Comment Form

Submit your comments by September 23, 2013

NAME: Lauren Balisky, Utility Planner, Alderwood Water & Wastewater District

ADDRESS: 3626 156th St SW

CITY: Lynnwood STATE: WA ZIP CODE: 98087

EMAIL ADDRESS: LBALISKY@AWWD.com

☒ Please sign me up for project email updates

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Comments

L-002-001

The main water feed from AWWD to the City of Mountlake Terrace follows the Interurban South along I-5 to 44th Ave W @ the pedestrian bridge. Please work with the District to ensure that supply is maintained during construction.

SOUNDTRANSIT RIDE THE WAVE

L-002-001

Thank you for noting the importance of the District's main water line serving Mountlake Terrace and its proximity to the project. In producing the Final EIS and for the Preliminary Engineering for the Preferred Alternative, Sound Transit continued to identify utilities with potential conflicts; any plans for constructing the project would include a commitment to maintain service on significant connections such as the water line, and Sound Transit will continue to coordinate with the District during final design and construction.

Mayor
Mary Jane Goss

17425 Ballinger Way NE
Lake Forest Park, WA 98155-5556
Telephone: 206-368-5440
Fax: 206-364-6521
E-mail: cityhall@ci.lake-forest-park.wa.us
www.cityoflfp.com

Councilmembers
Don Fiene
Tom French
Jeff R. Johnson
Sandy Koppenol
Robert E. Lee
Catherine Stanford
John A. E. Wright

September 18, 2013

Sound Transit DEIS Comments
c/o Lauren Swift
401 S Jackson St.
Seattle, WA 98104

RE: Support for Siting Light Rail Station at 145th in Shoreline

Dear Sound Transit:

L-003-001 The City of Lake Forest Park has a vital interest in the outcome of the final decision on the siting of the Link stations for the Lynnwood Link Extension. Our residents have supported the objectives of Sound Transit since its inception and have long anticipated the promise of service commensurate to accommodate the need for regional transit service to the north-end cities beyond Seattle city limits.

Sound Transit representatives updated the City at our May 9, 2013 City Council meeting regarding the status of the Link stations still under study.

We would like to express our support of the following:

- Alignment of the Link Light Rail along the east side of the I-5 alignment through segments 'A' and 'B'.
- Locating segment 'A' stations at NE 145th and NE 185th Streets, as supported by the City of Shoreline.
- Providing adequate Park N Ride facilities at or very near Link stations is extremely important for system access by our citizens.
- Providing adequate bus capacity to serve the communities close to the stations.
- Designing stations to preserve the free-flow of east/west vehicular traffic, bicycle and pedestrian access across the I-5 alignment and to prevent choke points.

L-003-002 The City Council of Lake Forest Park recently passed the Southern Gateway Sub Area Plan zoning changes which allows for residential development and higher density along the SR-522 corridor beginning at 145th. The City committed significant time and resources to this planning effort, recognizing the need for housing along the transit corridor.

L-003-001

Thank you for your comment stating the City's overall support for the project, its preferred alignment and station locations, as well as other aspects of the project the City is encouraging. The Final EIS includes further information about how the Preferred Alternative and other alternatives would provide transit access and parking while maintaining effective multimodal access and circulation around stations.

L-003-002

Thank you for providing additional details about the City's progress in developing the Southern Gateway subarea plan and the need for improved transit access. The added density and provision for housing along the corridor connecting to a NE 145th Street Station are consistent with the future patterns of growth that Sound Transit anticipates in ridership forecasts for the project.

L-003-002 Even with this housing in place, the majority of Lake Forest Park residents intending to use mass transit will continue to face the challenge of accessing transit options. Our physical geography and terrain make regular transit circulation service within the city impractical, and our citizens are forced to travel to transit system access points.

Siting stations on the east side of the I-5 alignment and providing parking in their immediate vicinity will allow them that access. Stations at 145th and 185th would provide Lake Forest Park with direct access to Link more than any of the other stations currently under study, and would provide an even 40-block separation between stations more effectively serving the population while maintaining system efficiency. As the configuration of SR-522 at Seattle's northeast boundary constricts all traffic on SR-522 southbound, the access to a 145th St station for commuters is essential and needed.

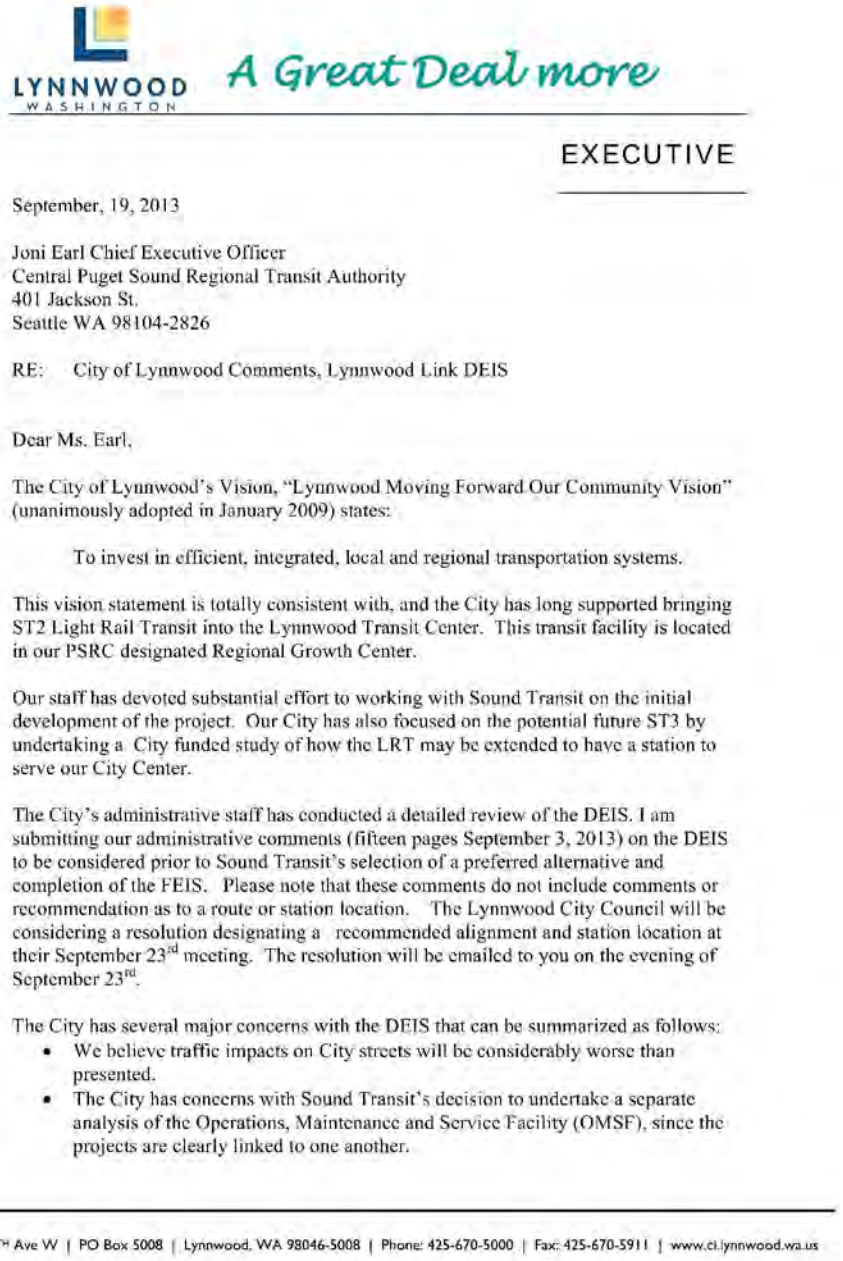
SR-522 helps to provide linkage to the UW Seattle and UW Bothell. A Link station at 145th (SR-523) would help to provide the first step towards regional transit access from the east side of Lake Washington to the Shoreline Community College. This route would be an excellent application for future bus rapid transit (BRT).

We appreciate your consideration of the needs of our citizens.

Sincerely,

Mary Jane Goss

Mary Jane Goss
Mayor



LYNNWOOD
WASHINGTON

A Great Deal more

EXECUTIVE

September, 19, 2013

Joni Earl Chief Executive Officer
Central Puget Sound Regional Transit Authority
401 Jackson St.
Seattle WA 98104-2826

RE: City of Lynnwood Comments, Lynnwood Link DEIS

Dear Ms. Earl,

The City of Lynnwood's Vision, "Lynnwood Moving Forward Our Community Vision" (unanimously adopted in January 2009) states:

To invest in efficient, integrated, local and regional transportation systems.

This vision statement is totally consistent with, and the City has long supported bringing ST2 Light Rail Transit into the Lynnwood Transit Center. This transit facility is located in our PSRC designated Regional Growth Center.

L-004-001

Our staff has devoted substantial effort to working with Sound Transit on the initial development of the project. Our City has also focused on the potential future ST3 by undertaking a City funded study of how the LRT may be extended to have a station to serve our City Center.

The City's administrative staff has conducted a detailed review of the DEIS. I am submitting our administrative comments (fifteen pages September 3, 2013) on the DEIS to be considered prior to Sound Transit's selection of a preferred alternative and completion of the FEIS. Please note that these comments do not include comments or recommendation as to a route or station location. The Lynnwood City Council will be considering a resolution designating a recommended alignment and station location at their September 23rd meeting. The resolution will be emailed to you on the evening of September 23rd.

The City has several major concerns with the DEIS that can be summarized as follows:

L-004-002

- We believe traffic impacts on City streets will be considerably worse than presented.

L-004-003

- The City has concerns with Sound Transit's decision to undertake a separate analysis of the Operations, Maintenance and Service Facility (OMSF), since the projects are clearly linked to one another.

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L-004-001

Sound Transit appreciates the City's collaboration through the Draft EIS preparation for the Lynnwood Link Extension and in the planning efforts for ST3.

L-004-002

The traffic analysis around the Lynnwood Transit Center Station has been updated for the Final EIS, including using Vissim software and expanding the coverage area to include the intersections related to the 196th Street/Poplar Way interchange. The scope of this revised analysis was coordinated with the City of Lynnwood, and is discussed in more detail in the Final EIS Transportation Technical Report.

L-004-003

Section 2.8.1 of the EIS describes the separate utility of the proposed Operations and Maintenance Satellite Facility (OMSF) under NEPA and SEPA. Sound Transit is currently developing a separate EIS for the OMSF, which evaluates operations and maintenance needs across the Sound Transit district and is not focused on a specific corridor. The Draft EIS for the OMSF was issued in May 2014.

LYNNWOOD
WASHINGTON
EXECUTIVE

L-004-004
- Sound Transit's expectation that 80% of riders will arrive by bus appears to be very optimistic. Failure to achieve this goal will result in significant traffic congestion and an extreme shortage of parking which will substantially interfere with properties in the area and will quite probably impact negatively our ability to achieve the goals of Lynnwood's City Center Plan.

L-004-005
- The analysis of C3 contains substantial errors as to which properties east of 44th Ave. will be demolished and taken. Further, C3 fails to consider impacts on our critical Lift Station 10 which is planned for expansion, has associated odor issues, and there is localized flooding in the same area.

L-004-006
- The DEIS fails to consider the implications that decisions made now with ST2 will pre-determine impacts that the potential ST3 will have on the City Center block located east of 44th Ave.

L-004-007
On behalf of the City I want to thank you for considering the City's administrative comments. I especially and sincerely appreciate your willingness to agree to my request that the DEIS comment period be extended substantially beyond the normal time period. This was very helpful for many of our residents to participate when they would have otherwise been doing summer vacations or related activities.

Sincerely,

Don Gough
Mayor, City of Lynnwood

CC: Sound Transit Board
Steve Kennedy, Sound Transit Staff

Attachments

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L-004-004

The Final EIS has updated estimates for ridership and preliminary concepts call for even more connecting transit service when the light rail opens. However, the forecasts take into account the patterns of ridership that exist today, which has a fairly high number of riders reaching the Lynnwood Transit Center using transit. In addition, the estimated level of riders arriving by bus at the Lynnwood Transit Center Station reflects ridership for the entire day. Park-and-ride access would be higher during the peak period, while bus access would be higher during midday when parking is full, as is seen in many other areas in the Sound Transit system. The Final EIS also defines measures that would minimize the potential for spill-over parking into surrounding areas.

L-004-005

Sound Transit, in coordination with the City of Lynnwood, developed a modified Alternative C3, which was evaluated in the Final EIS and defined measures that would avoid impacting the City's ability to upgrade Lift Station 10. The property acquisition information for Alternative C3 has been updated in the Final EIS, including the error on page 4-29 of the Draft EIS that indicated that the La Quinta Inn would be displaced.

L-004-006

The Draft EIS did not include a detailed assessment of impacts to individual properties because any extension would need to be part of a future ST3 program that has not yet been fully defined or approved. While it would be speculative to identify specific properties, particularly given the lack of information on timing, the Final EIS does discuss under cumulative impacts the likely level of impacts that could occur.

L-004-007

Thank you for your comment.

Sound Transit Lynnwood Link DEIS
City of Lynnwood Comments
September 3, 2013

1. **General Comment:** Sound Transit has provided analysis of three track alignments and station locations referred to as C1 (north along 200th), C2 (middle route above existing bus platforms) and C3 (southern). Each option presents significant issues.
   - C1-Noise and visual impacts to homes along 52nd, impacts to Scriber Creek Park, removal of many homes and business along 200th
   - C2- Noise and visual impacts to homes along 52nd similar to C1, impacts to Scriber Creek wetland
   - C3-Poor location for supporting City Center development, potential impacts to a major City sewage lift station (10) and potential flooding issues and major property takes/ loss of development potential on the block east of 44th (La Quinta Inn, Veterinary Building and others), poor access to bus transfers unless a completely new bus facility closer to the station is built at public expense.

2. **General Comment:** Sound Transit staff has referred to the three alternatives as "bookends" indicating that variations of the alignments may in fact be possible. Staff believes that an option we are calling "C3 Modified" is worthy of study. As envisioned it would leave the I-5 ROW at the same point as C3, eliminating direct impacts to homes along 52nd, avoiding Scriber Creek Park and the need to acquire homes and businesses along 200th. It would run over the rear of the School District property, behind their proposed building over an open area designated for outdoor bus parking. It would enter the Transit Center on an angle, running northeast. The station would be located near the existing bus platforms supporting intermodal access and eliminating the cost of relocation. The tail track would be aimed in the general direction of the intersection of 200th and 44th in such a way that under ST3 the line could be extended over or adjacent to Alderwood Mall Boulevard thereby avoiding most of the properties on the block east of 44th . This alignment would offer a station location that creates good development potential (due to better access) in City Center. This option would also avoid impacting City Lift Station 10 which is planned for a major expansion, associated odor issues and potential flooding problems experienced in that area. C3 Modified is presented in a map attached to this document.

3. **General Comment**: The Lynnwood Link DEIS contains a critical flaw. In spite of earlier requests by the City, the DEIS disregards the impact result directly from ST2 decisions when ST3 is advanced. The three track alignments and station locations in Lynnwood will of necessity result in three different alignments of track extensions under ST3 when this project advances. The three alignment options therefore have an immediate, direct and immutable impact upon the entire block bounded by 44th Ave. W, 40th Ave. W, Alderwood

L-004-008

The City's concerns for Alternative C1 are noted and are addressed in more detail in response to your comments below.

L-004-009

Thank you for your comment. Responses to these comments are provided where they are discussed in greater detail in your comment letter.

L-004-010

Thank you for identifying the City's concerns with Alternative C3; modifications of Alternative C3 developed with Lynnwood staff have reduced impacts on the block east of 44th Avenue W and improved the light rail station/transit center connection. This modified Alternative C3 is evaluated in the Final EIS.

L-004-011

The Final EIS incorporates and examines in detail Alternative C3 Modified, which was developed in coordination with the City.

L-004-012

The Draft EIS did not include a detailed assessment of impacts to individual properties because any extension would need to be part of a future ST3 program that has not yet been fully defined or approved. It would be speculative to identify specific future properties for acquisition and displacement, particularly given the lack of information on timing and the potential that future projects could involve alternatives that avoid the next property or properties. However, the Final EIS does discuss under cumulative impacts the likely level of impacts that could occur for each alternative. This includes the modified Alternative C3, which avoids some of the properties of concern to the City.

L-004-012

Mall Boulevard and I-5. This block is located within Lynnwood's City Center-Core which is planned for the highest density urban development in Lynnwood. Redevelopment of this block is critical to realizing the goals of the City Center Plan and also to achieving the goals of the State Growth Management Act and designated Puget Sound Regional Council's Regional Growth Center. Impacts of the planned but as yet unfunded ST3 extension in this area must be assessed to provide a full analysis of the impacts from Lynnwood Link. As presently designed, the C1 alignment would allow for the track extension to align with Alderwood Mall Boulevard offering the probability of the lowest amount of impact on the City Center Core block for the future extension. C2 has some potential for impacts from a future extension on the southwest corner of the City Center Core block although the City has been informed that it may be possible to route the track in the vicinity of I-5 and the Interurban Trail thereby minimizing impact on the block. C3, whose tail track has a significant immediate impact upon the City Center Core block in the current ST2 phase of Sound Transit's expansion, under ST3 results in splitting the triangular block in half rendering it difficult or impossible to redevelop in any meaningful manner. Further, is this centerline is extended further it appears that additional City Center blocks further east could be impacted as well. We also note that the DEIS erroneously states that C3 will require removal of the La Quinta Inn when in fact it will require removal of a multi-story office building located west of the hotel. The La Quinta appears to be able to remain at this point although it appears that it could be significantly impacted by having the tail track proximate to and aimed at their upper floors. As such Alternative C3 removes this block slated for the highest density development in the Lynnwood Regional Growth Center from being utilized as planned and runs counter to both the purpose and need statements (pages S-2, 1-4, 1-5 and 5-2) for the Lynnwood Link project and to the Federal New Starts Economic Effects criteria to support the project's funding (p. 5-13).

L-004-013

4. **General Comment:** Sound Transit is assuming the some 16,000 of the 20,000 daily boardings at Lynnwood will be arriving by bus in the form of intermodal transfers. The DEIS does not appear to contain an analysis of whether the bus providers have sufficient capacity to handle this increase in ridership and if not, how they will be able to obtain funding to achieve it. The City is also critically concerned that the significant increase in bus movements combined with parking for 500 additional cars, most of which would occur during a short period of time (peak hours) will significantly impact Lynnwood's street system in ways the DIES fails to analyze. While some of the bus routes will use the direct ramps to I-5, many more along with all the automobile traffic will use local streets that already have capacity issues. In addition, many of the commuters will arrive from points north of Lynnwood. The closest I-5 interchange this traffic can use is at Poplar Way. Sound Transit's traffic analysis fails to assess this impact.

L-004-013

An analysis was conducted regarding the capacity of local bus service to accomodate the increased demand, and it was determined that buses would not be overloaded. Also, while Sound Transit does not have authority over funding for improvements to local bus transit service, Sound Transit will coordinate with Community Transit in the development of appropriate modifications to local bus service to best accommodate demand at the station. Regarding traffic arriving from points north of Lynnwood, an updated analysis has been performed using microsimulation to better capture congested conditions, which is reflected in the Final EIS.

L-004-014

5. **General Comment**: All references to Lynnwood creating a Town Center need to be changed to City Center.

L-004-015

6. **S.2 Purpose and Need for the Lynnwood Link Extension, P. S-2:** Purpose and need for the Lynnwood Link Extension: The project is needed to… *Create the transit infrastructure needed to support the development of Northgate and Lynnwood (language proposed by the City)*- the corridor's two designated Regional Growth Centers.

L-004-016

7. **S.9, P. S-31 and 5.3.4, P. 5-15 Areas of Controversy and Issues to be Resolved:** The DEIS claims that both Lynnwood and the Edmonds School District "expressed concerns" regarding the potential location of the Operations and Maintenance Satellite Facility (OMSF), in Lynnwood. This statement incorrectly characterizes the positions of the City and School District. Both Lynnwood and the District opposed the designation of an OMSF site in Lynnwood in writing (in Lynnwood's case a Resolution adopted by the City Council) and in verbal comments offered at the ST Board Public Hearing. The many obvious flaws of this site were pointed out including its location directly across the street from hundreds of affordable homes, impact to critical wetlands and the fact that the School District has approval to build their Administration complex on the site. Both the City and District asked the ST Board to eliminate the Lynnwood OMSF site from consideration. The Board went ahead and approved consideration of the site along with others in Bellevue. It is also significant to note that the two Board representatives from Snohomish County stated on the record that by voting to approve consideration of the Lynnwood site, they understood its many flaws. Further, it was their desire to see an OMSF located not in in Lynnwood, but rather near Payne Field when ST3 is built.

L-004-017

8. **Table 2-1c Alternatives Considered, Summary of Design Features for Segment C Alternatives, P. 2-13**: Description of the alternatives ends at the Lynnwood Transit Center. The table fails to mention that the C3 tail track will extend across 44th Ave and require removal of buildings east of 44th or the resulting impacts from ST3 extensions that would result from ST2 decisions.

9. **2.5.2 Alternatives Considered, Developing Details of the Alternatives, P.2-35:** "The evaluation criteria included the following factors: … Station area development potential (existing land use **and** transit-oriented development potential". The DEIS focuses on existing land use for alternative C3 and fails to mention impacts of C3 on the high density development potential dividing the block north of 44th in half with its tail track. We disagree that the alternative C3 station location has the same development / TOD potential as C1 and C2 which are closer walking distances to the City Center, (within the PSRC Lynnwood Regional Growth Center slated for highest development potential in Lynnwood). P. 4-18 states that Segment C ends within the Lynnwood City Center, inside of the PSRC -

L-004-014

The Final EIS has been revised to change "Town Center" to "City Center."

L-004-015

The comment appears to state the purpose and need as it was published; it is unclear what other language the City is proposing. Sound Transit is retaining the purpose and need as it was published in the Draft EIS; the current purpose and need reflects public input from two scoping periods that were held prior to the Draft EIS development.

L-004-016

As described above (per Section 2.8.1 of the Draft EIS), the Link Operations and Maintenance Satellite Facility (OMSF) is a separate project that would support the Lynnwood Link Extension as well as East Link and other ongoing system growth. The separate OMSF Draft EIS published in May 2014 evaluated the impacts from alternative locations for that facility. The Final EIS for the Lynnwood Link Extension has been revised to note the opposition of the City and the School District to the site.

L-004-017

The intent of Table 2-1C was to convey design features and potential impacts for the Draft EIS alternatives, and did not attempt to speculate about possible impacts or conflicts with potential future planning efforts related to the Long-Range Plan or future development projects that have not yet been defined. Potential property impacts associated with the proposed Alternative C3 are discussed in the Draft EIS in Chapter 4 (Section 4.1 Acquisitions, Displacement, and Relocation). Table I-4.1.3 in Appendix I-4.1 Acquisitions, Displacements, and Relocations identifies five parcels that could potentially be affected by the tail track under Alternative C3.

L-004-017

designated regional growth center, which is anticipated to accommodate much of the growth between Northgate and Everett. If this growth is to be accommodated, then the impacts of eliminating the development potential of a large block of the highest density in City Center, needs to be clearly identified and mitigated.

L-004-018

10. **2.8.1 Link Operations and Maintenance Satellite Facility**: This section contains several factual errors and misstatements. The fact that analysis of the OMSF has been severed from the Lynnwood Link DEIS remains a questionable decision and tactic. ST has made it clear that ST2 cannot operate without an OMSF being built somewhere thus the projects are inextricably linked. Under Washington environmental law they would be required to be analyzed together.

11. The DEIS purports that the OMSF DEIS will be issued "in late 2013 or early 2014". We have recently been informed that due to unspecified problems the release date is being pushed back to the summer of 2014. This is particularly unfortunate since Lynnwood residents and homeowners who will be severely impacted by the OMSF will not have any certainty regarding their future for a protracted period of time. During this time they conceivably will have difficulty in selling their homes or deciding if repairs or improvements are warranted.

12. The DEIS states that "because the projects have independent utility" this DEIS does not analyze the impacts of the OMSF. The City questions how it can be concluded that the OMSF has independent utility? "But for" ST2, Lynnwood Link and other planned extensions, the OMSF would not exist. Then the text goes on to actually discuss some of the potential impacts of the OMSF in somewhat favorable terms which violates the supposed separation between the two projects while being misleading and erroneous.

13. It is noted that the OMSF would occupy parcels of land needed for the School Districts support center but then concludes that if the site is selected ST would work with the District on joint use. In fact, ST has attempted to work with the District on joint use and has been rebuffed being informed that the School District Service Center will be moving forward. Further, the DEIS fails to state that ST has no ability to exercise eminent domain over District property.

14. The text also asserts that "potential cumulative effects "of the OMSF have been analyzed in this DEIS. ST staff has repeatedly told City staff that the OMSF would need to be completed and opened well in advance of the completion of Lynnwood Link to prepare rail cars for service. The opening date for the OMSF is marketed as 2020 whereas the tracks will not be completed to Lynnwood for another three years. As such, there should be no cumulative construction impacts. If anything, there will be sequential impacts where construction

Sound Transit assessed TOD potential within station areas based on four key factors: existing conditions, transit-supportive plans and policies, station access, and potential development opportunities. Among the three Lynnwood alternatives, some minor differences were noted in the assessment. However, these differences were not significant enough to warrant a change in the overall rating and therefore ratings were similar for all alternatives.

Through coordination with the City of Lynnwood, Sound Transit developed a modification to the alignment proposed under Alternative C3. The revised alignment is a component of the Preferred Alternative, which relocates the tail tracks to run directly south of Alderwood Mall Boulevard, preserving the majority of the block east of 44th Avenue W. In Section 4.2.4 of the Final EIS, a comparison of the TOD potential will be revised to include the modified alignment. In addition to analysis of the new alignment under the Preferred Alternative, the Final EIS revisits the TOD assessment performed for the Draft EIS.

L-004-018

The decision to treat the OMSF as a project with independent utility was made by FTA in conjunction with Sound Transit, but the two projects have continued to disclose their combined impacts in cumulative effects discussions. Sound Transit recognizes the City's concerns with the Lynnwood OMSF site, but comments about that project are being addressed through that project's separate process. As such, this project has no influence over the OMSF EIS schedule; the OMSF Draft EIS was published in May 2014.

activity will go on for years. The text needs to be revised. Either all OMSF impacts should be analyzed or none should and the positions of the parties should be accurately presented.

15. **3.1.7 Parking, P. 3-16:** The DEIS offers an analysis of on-street and private parking availability proximate to the three C alignments in Lynnwood without clarifying why this exercise was undertaken or potential implications. The only conclusion we can draw is that this represents a back-door plan for ST to find ways to utilize parking outside of the transit center for commuters. This is completely unacceptable to the City. On-street parking is for the use of local residents or customers, not commuters. Similarly, privately owned parking in City Center represent a major part of the areas potential to support redevelopment consistent with City plans, State Growth Management Act and the Puget Sound Regional Council's Vision 2040. Off-site parking is completely unacceptable to the City. ST is being asked to eliminate this analysis from the DEIS and commit to the City in writing that there is no intention or plan to seek commuter parking outside of what can be accommodated within the Lynnwood Transit Center.

16. **3.2.4 Arterials and Local Streets, P. 3-37 / 3.4 Indirect and Secondary Impacts, P. 3-48 / 4.1 Acquisitions, Displacements and Relocations P. 4-3:** The majority of the southbound traffic of the to the Lynnwood ST2 terminus will come from points north on I-5 and enter the City Center at the only available southbound interchange in this area at 196th ST SW (SR 524). This access will significantly increase traffic impacts not only at that interchange and off-ramp into the City Center, but through the entire City Center street system to access the transit center. Traffic will be required to traverse local, collector and arterial streets resulting in significant impacts. This will be compounded by the large increase in bus traffic resulting from the fact that ST is projecting that 89% of the 20,000 riders each day will arrive by bus. Studying only a 0.5 mile radius is inadequate in this case. The intersections from the I-5 / 196th off-ramp to 40th Ave. W need to be studied.

17. **3.2.7 Parking, P. 3-39 / 3.6.7 Parking, P. 3-54:** It is noted that if spillover parking occurred in Lynnwood it would be onto private property (in the City Center this parking is planned for high density redevelopment to accommodate regional growth) which the City would then need to patrol locally. This spillover parking is an unacceptable result. It would damage the City's ability to achieve the goals of the City Center Plan while adding to the City's cost to patrol and manage. The text also states the amount of parking provided at each station may be further refined in future phases. The parking proposed for the Lynnwood station needs to be sized appropriately to reasonably accommodate the projected 20,000 boardings per day.

18. **3.5 Transportation Cumulative Impacts, P. 3-48:** 1) This section does not address the impact to the residential neighborhood adjacent to the OMSF with the increase in late night

L-004-019

Sound Transit generally does not support the use of on-street parking or parking in privately owned lots for transit users, although some private lot use is used by other transit agencies in the region. The parking analysis was performed to determine the current parking utilization in the area, and to see if there would be potential for hide-and-ride parking impacts. As described in the Draft EIS, if there are impacts, mitigation measures, such as adding parking zones and monitoring private lots, could be used to minimize the potential for hide-and-ride parking. Section 3.6 of the Final EIS specifically identifies the mitigation measures Sound Transit proposes to apply.

L-004-020

The analysis has been expanded to include the I-5/196th Street/Poplar Way interchange to better determine impacts.

L-004-021

Additional analysis has been performed to evaluate additional parking at the Lynnwood Transit Center Station. Long-term parking impacts are examined in Section 3.2.7 in the Draft EIS.

L-004-022

Issues related specifically to the OMSF are being addressed through that project's independent EIS review process.

L-004-022 trips from midnight - 5 am which may be disruptive to the sleeping residents. 2) Strike the references relating to the ESD plans, as this has no relation to the Lynnwood Link project (additionally it omits that the administrative building will buffer the bus fleet to the street and residents). 3) Any discussion of the OMSF in Lynnwood should also include the requirement for a second smaller OMSF facility being still required in Bellevue. It should also note that if the OMSF is built in Bellevue, no facility would be needed in Lynnwood.

L-004-023 **19. 3.6.3 Transportation - Freeway Operations, P. 3-49:** DEIS text should be corrected as follows: "or may affect ~~adjacent~~ freeway ramp operations" to "or may affect nearby primary access freeway ramp operations" or similar. The adjacent freeway ramp at I-5/44th is only a half interchange and does not provide the access from the northern boarders that the I-5/196th off-ramp will.

L-004-024 **20. Table 3-27 Transportation, Segment C Potential Mitigations, P. 3-53:** Restriping the 200th/44th intersection as proposed is not sufficient to accommodate 20,000 daily boardings at an already low functioning roadway particularly during the PM peak. Plans should study widening City Center streets to accommodate ST's projected vehicular and transit trips on 200thSt SW, 40th Ave W and 48th Ave W.

L-004-025 **21. 4.1 Acquisitions, Displacements and Relocations:** Information concerning some of the impacts of the three track alignments in Lynnwood is missing or contains errors:
(1) In all cases there is a failure to analyze the impacts of extending any of the C alternatives under ST 3 even though they are directly linked to alignment decisions made in ST2.
(2) Information concerning the impacts of C3 is erroneous. The DEIS indicates that C3 would result in the removal of one business, the La Quinta Inn hotel east of 44th Ave. This is incorrect since the tail track must impact one or two other commercial buildings west of the hotel before it can get there. This concern was raised to ST staff who indicated an error had been made in the DEIS. Apparently the hotel will not be fully taken in ST2 but a multi-story, multi-tenant commercial building would be. Clarifications and updates to all related items are necessary. The DEIS fails to analyze the potential for increased costs and impacts due to inverse condemnations of other properties in the vicinity.

22. It is evident that the La Quinta hotel would need to be taken in ST3 if C3 is selected in ST2. The hotel would also have impacts under ST2 related to the end of the tail track pointed at and close to the building. The DEIS also fails to accurately indicate impacts that would result from C3 to businesses located near I-5. Because of these errors, the true cost of C3 is misstated and likely is greater than indicated. It is not possible to accurately weigh the pros and cons of the C1/2/3 alignments without this critical information taken into account.

L-004-023

The sentence will be updated as suggested.

L-004-024

The Final EIS Chapter 3 includes updated analysis of the project's impacts related to trips to the Lynnwood Transit Center Station and park-and-ride, including the intersections of 200th with 40th Avenue W, 44th Avenue W, and 48th Avenue W. The Preferred Alternative includes street widening and intersection improvements as part of its definition, which addresses impacts previously described in the Draft EIS for all alternatives.

L-004-025

In responses above, Sound Transit has addressed the reasons why the impacts of potential future extensions are not identified in detail in the Draft EIS; the potential effects of possible ST3 projects are discussed in the Final EIS, but it remains premature to identify possible impacts to specific properties.

For the acquisitions information, the properties identified in Section 4.1 Acquisitions, Displacements and Relocation and in the related appendix are accurate; the hotel was incorrectly identified as a displacement in Section 4.2 Land Use, and this has been corrected for the Final EIS. However, the level of impacts by alternative, as well as the proposed mitigation measures, remain otherwise accurate, and the information in the Draft EIS gave an appropriate basis for public review and discussion of the alternatives under consideration. The Draft EIS notes that the parcel-level impacts are based on conceptual designs, and any properties required for the project would be covered by Sound Transit commitments to conduct property acquisition activities in accordance with state and federal law.

L-004-026

23. 4.1.5 Cumulative Impacts, P. 4-9 and Appendix H - Other Projects Considered for Cumulative Effects, P. H-3 and H-4: The Lynnwood City Center should be included in these sections. The recently approved 308 unit Lynnwood City Center Senior Living Apartments on 1.8 acres located at 19501 40th Ave. W in the City Center should also be included separately, as these are as relevant to the Lynnwood Link as both the Mountlake Terrace Senior Living Apartments and the Mountlake Terrace Town Center plan are. The Poplar Way Bridge across I-5 at 33rd Ave. W should also be included as this will impact off-ramp access and finally the 196th widening and addition of possible Bus Rapid Transit Lanes should also be included in the evaluation.

L-004-027

24. Section 4.15 Cumulative Impacts: Alternative C-3 directly impacts City of Lynnwood Wastewater Pump Station #10 and associated piping under the existing transit station parking lots. The City Center Sub-Area Plan (September, 2007) states the following: *All of the wastewater generated in the City Center Sub-Area flows to Lift Station 10, either by gravity or from force-mains associated with pump stations No. 4 and 8. Flow collected at Lift Station No. 10 is pumped to a 36-inch interceptor line via a 9,500 ft 24-inch force main, where it then gravity flows to the treatment plant. The capacity of Lift Station 10 is 6,000 gallons per minute (8.84 million gallons per day). Since existing peak hour flows exceed the capacity, modifications to Lift Station No. 10 will be required, or construction of a new lift station to bypass a portion of the flow.* There are likely impacts to the station in the existing condition, and necessary expected upgrades. At a minimum, there are likely temporary impacts during construction. The pump station was not even identified in the EIS, let alone any potential impacts analyzed. Impacts to this essential public facility must be analyzed and addressed. Further. There are odor issues associated with the lift station that would become an issue if the LRT station and bus bays were located adjacent to it as proposed. Finally, there are localized flooding issues in this area that ST appears to have overlooked.

L-004-028

25. Table 4.2-1, Locally Adopted Plans and Policies, P. 4-13: City of Lynnwood Plans should also include:

- City Center VMT & CO2 Emissions Modeling Report, January 2010;
- ULI Innovations TOD Workshop June 25, 2009 - Lynnwood Station Team Presentation;
- Extension of Light Rail to Lynnwood City Center Technical Memorandum, August 2011
- City of Lynnwood Economic Development Action Plan, 2005-2010

26. 4.2.1 Affected Environment, P. 4-18: DEIS text should be corrected as follows:
"Lynnwood's zoning regulations and design guidelines support ~~a~~ mixed use high-density ~~neighborhood~~ development in the City Center near the existing Lynnwood Transit Center, which is composed of three districts. The density ~~types of use~~ permitted varies among the districts. All Segment C station alternatives are located in the "City Center West" zone, envisioned to have a mix of high density mixed-use residential, retail, restaurants, and office~~, and high-density housing~~. The tail track of Alternative C3 would cross 44th Avenue West into the center of the large block of the higher density "City Center Core" zone, the

L-004-026

Thank you for identifying these additional projects for consideration in the cumulative effects analysis. Appendix H in the Draft EIS did include the 196th widening project, but did not include the other three projects that you mentioned. The Final EIS now reflects these projects in Appendix H.

L-004-027

Sound Transit has worked with Lynnwood staff to define the modification to Alternative C3 to address concerns about the original alternative. Those modifications are evaluated in the Final EIS, and do not conflict with the current footprint of the lift station facility. However, in response to the City's concerns, Sound Transit will coordinate further design and construction for Alternative C3 so as not to preclude or conflict with the City's ability to expand the capacity of the lift station. At this time, the City does not have detailed designs for the expansion, and initial conversations with the staff have indicated that expansion would involve equipment upgrades more than a physical expansion of the facility's footprint. However, consistent with mitigation measures described in Section 4.15.5, this coordinated approach to final design and construction would address potential conflicts.

Floodplains within the project area, and in the vicinity of Alternative C3, were discussed in Section 4.9.2 in the Draft EIS.

L-004-028

The Economic Development Plan has been added to the discussion of adopted plans and policies. The other documents are not directly related to land use plans and policies adopted by the City, so they were not added to the Final EIS. The purpose of the land use review is to identify potential conflicts with existing land use plans. The suggested edits to the text in Section 4.2.1 were made in the Final EIS. The TOD potential report did not include specific property impacts. This assessment has

L-004-028

highest density permitted in the Lynnwood Regional Growth Center and citywide." The implications of this tail track combined with the ST3 extension resulting from this alignment require further evaluation.

L-004-029

27. 4.17.1 Affected Environment, Parks;, **P. 4-220:** Scriber Creek Park, Alternative C1. It states that approximately 0.42 acre of the park would be directly affected. This is a small, pastoral park and the impact from and overhead LRT line is understated. It further states that the elevated guideway would change the experience of the parking lot. We would add that, depending on the location of the support columns, it could potentially eliminate parking spaces needed for the park. Under Alternative C2, it is states that the park is not considered noise sensitive due to higher ambient levels and its activities do not require quiet surroundings. Scriber Creek Park is a passive natural park with no active recreation facilities. Within the interior of the park street noise is negligible most of the day; park users enjoy bird watching and quiet walks through the park accompanied by the sounds of birds, frogs, etc. The park currently provides a quiet environment for these passive recreation activities. We would request that noise mitigation be provided for the park and the trail if required to achieve the existing ambient noise level.

28. 4.17.6 Potential Mitigation Measures p 4-225, Scriber Creek Park. Further research has revealed that the acquisition of the park property was funded by a grant from the Snohomish County Conservation Futures Program in 1991. The Interlocal Agreement describes the use of the "real property forever for purposes consistent with the preservation, protection and maintenance of the property for open space." In addition the Deed of Right to Use Land for Open Space Purposes states "The Grantor (City of Lynnwood) will not make or permit to be made any use of real property…. Or any part of it which is inconsistent with the right of use for public open space purposes herein granted unless such use is authorized by applicable law and the County consents to such use."

L-004-030

29. 4.18.5 Potential Impacts on Section 4(f) resources, p 4-241, The DEIS states that Scriber Creek Park is not considered a noise-sensitive resource. As a passive and natural recreational facility, noise from trains and direct construction would impact the park in ways the DEIS fails to analyze.

L-004-031

30. 4.2.2 Long Term Impacts, P.4.27: Segment C Mountlake Terrace to Lynnwood: DEIS test should be corrected as follows: "Segment C extends to the proposed Lynnwood Transit Center stations and ~~the~~ just into the far southwest corner of the City Center subarea. The proposed stations would be on the east end of the City Center West zone. This zone is envisioned to include a dense mix of commercial (office, retail, and service) uses and a concentration of mid-high density mixed-use residential units. In Alternative C3 the tail track would cross over 44th Avenue West ending in the middle of a block in City Center Core zone, which otherwise would accommodates ~~higher~~-density mixed-use development."

L-004-032

31. Alternative C2: "Alternative C2 would acquire and "convert" fewer properties than Alternative C1, and it would not convert any multifamily residential properties." It may not "convert" it has the potential to impact a multi-family apartment property with its adjacency as it runs into the Transit Center If noise mitigation is not provided.

been updated in a separate document that continues to be referenced in the Final EIS.

L-004-029

The Draft EIS noted that the elevated light rail structure above the parking lot would change the character and user experience of this area of the park, as discussed in the Scriber Creek Park evaluation in Section 4.17.2 of the Draft EIS.

The use of Conservation Futures Funds for property acquisition creates a requirement for review and approval by the original funding jurisdiction if the property is transferred for a different use. Approval of a transfer typically requires mitigation. These requirements were taken into consideration in the selection of the Preferred Alternative and the process to identify mitigation for impacts. However, as noted in several chapters of the Final EIS, Section 4(f) impacts related to the park would not allow Alternative C1 to be approved by FTA without modifying the alternative to either avoid the park or reach agreement with the City that the impacts are minor.

L-004-030

The Draft EIS discussion did address noise effects to the park on page 4-241, although it noted that FTA's definition of a noise sensitive property would not place the park as highly noise sensitive given the lack of quiet in the park today, and that park activities did not require quiet. However, for the Final EIS, the park has been identified as noise sensitive, consistent with the OMSF project Draft EIS and futher discussions with the City. Noise mitigation to be applied for nearby residences (which are noise sensitive) would also help reduce noise levels within the park. Construction activities affecting the park were noted on the same page in the Draft EIS, and the Final EIS more specifically mentions noise as one of the common types of construction period impacts.

L-004-033

32. Alternative C3: DEIS text should be corrected as follows: "Alternative C3 would acquire and convert the fewest properties to transportation use. The affected parcels would be single-family, commercial, industrial, public, and institutional properties ~~and only one existing use (La Quinta Inn) would be displaced~~. These changes in land use ~~are not expected to markedly alter land use patterns or development character~~ will significantly alter the land use of this highest density zoned block in Lynnwood's City Center and Regional Growth Center. ~~The Lynnwood Transit Center Station Options 1 and 2 have different layouts but would affect the same areas, and the land use impacts for both options would be similar~~. Both C1 and C2 station options would be compatible with area development patterns and could reinforce intensification of commercial and higher-density multifamily uses near the station. The C3 station location is remotely located away from City Center and access by pedestrians," The impacts of C3 are different as C1 and C2 do not remove development potential from the City Center Core and are more walkable distances to TOD developable properties, better supporting state, regional and local growth management plans).

L-004-034

33. 4.2.4 Indirect and Secondary Impacts, P. 4-31: The following impacts of Alternative C3 related to the Sound Transit adopted TOD policy from 2012 need to be addressed in the EIS:

- "Support implementation of state, regional and local growth plans, policies and strategies": C3 removes high density development potential with the tail track and future extension under the potential ST3.
- "Encourage convenient, safe multi-modal access to the transit system, with an emphasis on non-motorized access". C3 walking distance is furthest from developable property within City Center.
- "Support economic development efforts". C3 provides the least support for City Center TOD redevelopment. This option removes developable land within the core of the City Center which is further compounded by future impacts of ST3. C3 damages and ultimately eliminates two hotels that are critical to Lynnwood's tourism industry.

L-004-035

34. "To assess land use and economic development performance, the report considered access to regional growth centers and the station area development potential for the station areas served by each alternative. An overall rating was assigned to each station area based on its relative potential to support transit-oriented development, which was assessed by four elements:

- Existing conditions supporting transit-oriented development
- Transit-supportive plans and policies
- Station access
- Potential development opportunities"

These elements illustrate that C3 with its farthest distance from City Center high density , impacts on TOD redevelopment properties , impacts on hotel properties and walkability constraints cannot have development potential equal to the C1 or C2 options with closer their proximity to City Center and less impact from tail tracks and future impacts under ST3.

L-004-036

35. 4.2.4 Land Use Indirect and Secondary Impacts, P. 4-32 and Table 4.2-3 Summary of Station Area TOD Potential by Station Area, P. 4-33:. Arguably, TOD potential in Lynnwood is much higher than the equally ranked Mountlake Terrace options which have only a small

L-004-031

This text was revised for the Final EIS generally as suggested.

L-004-032

Sound Transit's noise mitigation commitments, described in Section 4.6, address potential noise impacts.

L-004-033

Text has been added to the Final EIS to revise the parcels that would be affected and to revise the statement regarding land use patterns and development character.

L-004-034

Sound Transit's TOD policy was considered in the development of TOD potential for the project, which was referenced in the Draft EIS. Sound Transit assessed TOD potential within station areas based on four key factors: existing conditions, transit-supportive plans and policies, station access, and potential development opportunities. Sound Transit has considered the City's comments and a comparison of TOD potential will be revised to include the modified Alternative C3. In addition to analysis of the new alignment under the Preferred Alternative, the Final EIS revisits the TOD assessment performed for the Draft EIS.

L-004-035

As noted above, the evaluation of TOD was documented in a supporting planning document and was used in the EIS primarily as a means for weighing the potential magnitude of future changes in land use if a station were built. Among the three Lynnwood alternatives, some minor differences were noted in the assessment. However, these differences were not significant enough to warrant a change in the overall rating and therefore ratings were similar for all alternatives. Sound Transit has

L-004-036

amount of developable land in close proximity and Mountlake Terrace is not a designated Regional Growth Center. We would also argue that Lynnwood's TOD potential is on par with Northgate's. Further since Northgate has already seen significant intensification long before the arrival of LRT, going forward in the timeframe of Lynnwood Link, Lynnwood City Centers potential is much higher. Within the Lynnwood Transit Center we also take exception with the equal ranking of TOD potential for all of the alignments and station locations. C1 with a station proximate to 200th and City Center clearly has the greatest potential. C2 offers decreased but still significant potential particularly if ST actively encourages redevelopment over their property. C3 has a station located in a remote and largely hidden site far removed from developable property, City Center and pedestrian access. The C3 tail track and its extension under ST3 also eliminate major potential TOD sites east of 44th Ave. C3 is focused on serving commuters rather than being supportive of TOD and meeting the goals of the City Center Plan. The City believes that in so doing C3 does not meet the criteria required under the Federal New Starts program that will be providing essential funding.

L-004-037

36. **4.2.2 Economics Impacts of Displacements on Tax Base for Cities, P. 4-41:** Revenue potential for the highest density zone in the City Center under the C3 alternative will be significantly impacted by tail track construction into middle of the block. This will be further exacerbated by the extension of the line under ST3. These impacts must be analyzed and considered.

L-004-038

37. **4.2.5 Cumulative Effects, P. 4-34:** If the OMSF is to be open by 2020 construction will not be concurrent with the Lynnwood Link Extension completed by 2023. Thus there will be no simultaneous construction activity to take advantage of. In fact, the opposite is true. Due to construction schedules the surrounding area will be impacted by construction activity for an excessively protracted period of time. The DEIS and its assumptions must be corrected.

L-004-039

38. **4.3.5 Economics Cumulative Impacts, p 4**-46: The DEIS states that the OMSF would have similar or greater multiplier effects on the regional economy as the Lynnwood Link. While we question this conclusion we note that the impacts on the local economy are much more significant. The OMSF does not offer realistic TOD benefits to Lynnwood or support for City Center development in the way Lynnwood Link can (depending upon the route alternative that is selected). The employment benefits are unlikely to accrue locally. In fact, in OMSF, as an inappropriately located heavy industrial use, creates much more significant negative cumulative impacts for the City and our residents and businesses.

L-004-040

39. **Figure 4.4-4c Social Impacts, Community Facilities Within 0.5 Mile of Light Rail Alternatives, P. 4-55:** The DEIS fails to consider significant community facilities in Lynnwood.

Cedar Valley Grange

Area of Potential Impact is described as the geographic area within which an undertaking may directly or indirectly cause alterations to the character or use of a historic property. The Cedar Valley Grange (Originally Hall Lake Grange and founded in 1909) was moved to its present location in 1948. Although the building exterior has been remodeled, it is the oldest social organization in the Lynnwood area still in existence with the early rosters

considered the City's comments as well as other design updates and the Final EIS revisits the TOD assessment performed for the Draft EIS.

L-004-036

Sound Transit has considered the comments by the City and others and has updated the text for the Final EIS to remove the incorrect reference to the hotel property. The text also now references the City's concerns about impacts to the densely zoned block. However, Sound Transit's conclusions in the EIS regarding the potential for overall land use impacts of the alternative remains similar to the characterization in the Draft EIS. Alternative C3 would not preclude all development on the block, and its other land use impacts are less than the impacts of either Alternative C1 or C2 because it avoids properties along 52nd Avenue and south of 200th Street SW.

TOD potential was one of the aspects of land use change considered in the Draft EIS, but existing uses, land use patterns, adopted plans and policies, and future planned uses are all considered. The City's comment characterizing the Alternative C3 station location as remote overstates the differences in the location of the alternatives and their proximity to other uses, as well as related benefits, but the modified Alternative C3 Sound Transit has developed in coordination with the City does place the station location closer to the city center core.

L-004-037

Section 4.3.2 of the Draft EIS evaluated the direct impacts to one business that would need to be acquired and displaced under Alternative C3. In the Final EIS, the Preferred Alternative modifies Alternative C3 by minimizing the amount of acquisition required within the triangular block east of 44th Avenue West, north of Interstate 5, and south of Alderwood Mall Boulevard. This area has been identified by the City of Lynnwood as an area planned for future high-density development. Alternative C3 Modified, designed with input from the City of Lynnwood, places the tail

L-004-040 including many of the pioneer families. It would be considered eligible for the Lynnwood Register of Historic Landmarks by age and by its exemplifying the cultural, social, or historic heritage of the City. The evaluation of buildings considered "historic" in the report focused on building structures, rather than the role which the buildings and their occupants played in the area history.

To be eligible for registration on the National Register of Historic Places (NRHP), it must meet one of four criteria including the following: "A. That are associated with events that have made a significant contribution to the broad pattern of our history…". Given the role the Grange played in the history of Alderwood Manor and later the City of Lynnwood, it should be considered eligible for the Register. Once a historic resource is identified and evaluated, Criteria of Adverse Effects are applied which include alteration of the property' setting and the introduction of visual, audible, or atmospheric elements that are out of character with the historic property.

Given its location within the 200 foot Area of Potential Impact Zone, the Cedar Valley Grange should be considered subject to an Area of Potential Effect. While the Grange building may not be directly impacted by the construction of Routes C1 and C2 with little impact created by noise and vibration, long-term effects will continue as the proposal is in operation which will impact the site's visual effects, integrity of setting, feeling and association with the surrounding community. Certainly, the OMSF, which is a heavy industrial use that would be located directly across the street from the Grange, would have a significant impact.

Interurban Railway

Although the Interurban Railway has been determined from the scope of this project not to be eligible for NHRP listing, it played a significant role in the shaping of the Alderwood Manor/City of Lynnwood community. In Part 2, Page 8-2, of the Cultural, Archaeological, and Historic Resources Technical Report, no detailed mention is made of the routing of the Interurban (though details are provided for the King County portion of the railway) and its impact on Lynnwood and the surrounding Snohomish County communities. Mention should be made that while both Routes C1 and C2 will impact the route of the railway by crossing over it, Route C3 has a major impact on the aesthetic, noise and visual aspects of the Interurban, with the line paralleling the route of the Railway for between a quarter to a half mile.

Hall's Lake

Although the Hall's Lake and the Hall's Lake Church Camp have been determined from the scope of this project not to be eligible for NHRP listing, activities associated with them played a significant role in the shaping of the Alderwood Manor/City of Lynnwood. Besides being the location of the camp, Halls Lake featured a saw mill which milled much of the timber logged during the early development of the community. Route C3 crosses a corner of the property associated with the site and one building with ties to the camp may be removed adjacent to 54th Avenue W.

track adjacent to and immediately south of Alderwood Mall Boulevard without bisecting the triangular block. The realignment of the tail track minimizes impacts to future redevelopment of parcels within this triangular block by minimizing acquisitions. The revenue potential related to future redevelopment has not been analyzed in the EIS due to the speculative nature of the size, type, and timing of future development. Any future extension of the Link light rail system north of Lynnwood could continue from the tail track section while paralleling Alderwood Mall Boulevard, also minimizing impacts to revenue potential.

L-004-038

Although the Draft EIS noted that the impacts would be higher, the Final EIS has been revised to note that the construction of the two projects could be sequential and extend the duration and severity of the impacts.

L-004-039

Section 4.3.5 of the Final EIS has been revised to state that "the Link Operations and Maintenance Satellite Facility and the larger transportation projects would have similar or greater capital construction expenditures and construction multiplier effects on the regional economy..."

Section 4.3.5 of the Draft EIS does acknowledge that the Link Operations and Maintenance Satellite Facility would also displace some of the opportunities for increased development and redevelopment potential adjacent to stations. Section 4.3.5 of the Draft EIS also acknowledges the potential loss of additional property tax revenue to the City of Lynnwood due to the construction of the Lynnwood Link Extension and the Link Operations and Maintenance Satellite Facility Project.

Increased long-term employment at the Link Operations and Maintenance Satellite Facility during operation would be quantified as

L-004-040

In summary, the construction of Routes C1, C2, and C3 will have an impact on historic resources associated with the Alderwood Manor/Lynnwood community, especially Cedar Valley Grange and the Interurban Railway route. We ask that these impacts be analyzed and mitigation proposed as appropriate. We also request that in the design for the station, consideration be given to the construction of displays that highlight the historic resources that have been impacted.

L-004-041

40. **4.4.2 Social Impacts, Long Term Impacts, page 4-59:** Segment C analysis contains previously mentioned errors regarding impacts from C3 and failure to consider ST3 extensions under any alignment.

41. **4.4.4 Social Impacts, Indirect and Secondary, P. 4-61:** The following statement conflicts with the outcome of Table 4.2.3 for TOD potential. Lynnwood's overall TOD potential should be as stated in comments above. "Construction of the light rail transit facilities could influence real-estate market forces that could increase the potential for transit-oriented development at some station locations as permitted by local zoning regulations. Such changes may be greater in the Lynnwood City Center neighborhood, where transit-oriented development potential is most likely, but most of the immediately surrounding area is characterized by commercial, light industrial, or parking uses. See Section 4.2.2 in Section 4.2, Land Use, for a discussion of long-term changes in land use. Moderate levels of redevelopment may occur in station areas in Mountlake Terrace and Shoreline." This text contradicts Lynnwood's overall TOD potential in Table 4.2-3 equaling Mountlake Terrace Transit Center Station.

L-004-042

42. **Table 4.5-1, Visual Impacts, Potential Visual Impacts, P. 4-82:** Alternative C3 in the 44th Ave W corridor is a high impact (not low to medium) to the existing commercial and planned high density mixed use that can accommodate multi-family residential growth.

43. **4.5.4 Visual Impacts, Indirect and Secondary Impacts, Page 4-89:** Landscaping is not adequate for the tail track C3 mitigation running through a high density zone to support City Center redevelopment plans including multifamily.

44. **4.5.5 Visual Impacts, Cumulative Impacts, P. 4-89, 4-90:** Add similar language as Northgate above in this section for Lynnwood City Center redevelopment plans.

45. **4.5.6 Visual Impacts, Table 4.5-2 Potential Mitigation Measures, , P. 4-93:** We note that Sound Transit is proposing establishing a landscape screen near homes located along the west side of 52nd Ave under the C1/ C2 alignment options. This is an excellent idea since landscaping proximate to the track structure is unlikely to be effective in buffering the homes due to their proximity and topography. ST should consider the potential for building earthen berms and planting coniferous trees long it to improve effectiveness. Add 200th to relocated streets (potential widening) and Landscape Screen for 44th as C1 and C2 have the tail track against boulevard, for visual impact in City Center.

part of the separate NEPA/SEPA analysis being performed for that project.

L-004-040

The Final EIS evaluates potential adverse impacts on the Cedar Valley Grange Hall and the Interurban Railway. The Cedar Valley Grange Hall was added to Figure 4.4-4C, Community Facilities Within 0.5 Mile of Light Rail Alternatives. The Hall Lake Church Camp was not evaluated because it is not an existing community facility. In order to be eligible for listing in the National Register of Historic Places, a property must meet one of several criteria and possess integrity of location, design, setting, materials, workmanship, feeling and association. The Cedar Valley Grange Hall lacks integrity of location, setting, design, materials and feeling. It has been altered with a prominent front entry addition, which changes the design, as well as replacement cladding and window sash made of modern materials. Its setting and location have also been changed. Therefore, FTA determined, and the State Historic Preservation Officer (SHPO) concurred, that it is not eligible for listing in the NRHP. The *Cultural, Archaeological, and Historic Resources Technical Report* notes that this property has an historic importance to the City of Lynnwood. Due to the local importance of the Cedar Valley Grange, Section 4.4.2 of the Final EIS was revised to evaluate potential impacts to this community facility, but concludes it will not be affected by the proposed light rail project.

The Interurban Trail is evaluated for historic significance in the Final EIS, but the analysis determined it lacks integrity of design, materials, workmanship and feeling. It is a paved bicycle and pedestrian trail that retains none of the elements of its original use, such as rails, ties, concrete abutments or other related facilities. Therefore, the trail does not convey the historic significance of the rail line. Accordingly, FTA determined, and the SHPO concurred, that the trail is not eligible for listing in the NRHP. Due to its importance in the community, Section 4.4

L-004-043

46. 4.7.3 Noise and Vibration, Alt C3 Noise Impacts, P.4-121: No analysis of the tail track turnaround noise impact on hotels and properties. Hotels adjacent may have impacts to guests staying overnight and impacts for TOD potential mixed use. A church use is identified for C1, so including analysis of these impacts for C3 would be consistent.

47. 4.7.6 Noise and Vibration, Cumulative Impacts, P. 4-124 states that "Because Sound Transit is mitigating all noise and vibration impacts (as defined by exceeding applicable FTA, state, or local criteria) created by the project, the project would not increase cumulative noise or vibration impacts, considering other current or future actions in the project area." Future actions as described here should include currently adopted City Center Sub-Area Plan within the PSRC designated Regional Growth Center to accommodate high density residential and commercial uses. C3 tail track impacts on this future action are not currently considered in the EIS and need to be.

L-004-044

48. 4.7 Noise and Vibration, Cumulative Impacts, Page 4-126: The DEIS appears to accurately portray the potential for noise impacts to homes under each of the C tack alignments. It then states that "Noise impacts could be mitigated by a 4-6' tall barrier" along the tracks. The City is seeking confirmation that these noise barriers will be designed into the project.

L-004-045

49. 4.8.1 Affected Environment: This section does not include a discussion of fauna that use the C-Segment sites, but may not be listed under ESA. Species may be impacted that have local significance, including birds and mammals (for example - river otters frequently use Scriber Creek and regional wetland). Disruption to these species would have significant emotional impact for locals who take enjoyment in viewing opportunities. This should be acknowledged and the impact assessed.

50. 4.8.2 Long Term Impacts: Impacts to Scriber Creek are understated. Scriber is definitively channelized, contrary to statements made otherwise (particularly as it relates to C-2). This area frequently experiences flooding, backing-up, and flooding of properties immediately upstream. Any activity which may impede capacity, or affect our ability to maintain the channel must be acknowledged and avoided.

51. 4.8.2 Long Term Impacts: There is no discussion of the impact of lighting and noise on the wetland affected by the C-segments. Increased light and noise directly over the Scriber Regional Wetland will impact animal use (particularly nocturnal animals – beaver and raccoons), and nesting birds. Predation of aquatic animals will increase as aquatic visibility increases. Noise and vibration may push out resident mammals (such as the river otters, or beavers) into surrounding areas.

L-004-046

52. 4.8.5 Ecosystem Resources, Cumulative Impacts, Page 4-144: states potential impacts of school district's administrative facility, and 4.15.4 on page 4-196 states the indirect and cumulative impacts of the School District facility as the same as the OMSF, please remove as

Social Impacts, Community Facilities, and Neighborhoods and Section 4.17 Parks and Recreation Resources evaluate potential adverse impacts on the Interurban Trail.

At Hall Lake, no remnant of the saw mill that was originally at this site remains. There are several small houses that may be related to the Church of the Nazarene's Hall Lake camp. However, all of these buildings have been altered and they no longer retain integrity of design, materials and workmanship. For this reason, FTA determined, and the SHPO concurred, that the buildings are not eligible for listing in the NRHP. The *Cultural, Archaeological, and Historic Resources Technical Report* notes that this property has an historic importance to the City of Lynnwood. Due to this local importance, Section 4.4.2 of the Final EIS was revised to evaluate impacts on the lake and concludes the lake will not be affected by the proposed light rail.

As discussed in Section 4.5, Sound Transit will develop design criteria for light rail stations featuring a consistent architectural theme that could include details related a community's settlement, historic resources, or nearby community facilities. Preliminary concepts for station designs will be developed with input from local jurisdictions and WSDOT, and will be vetted with the public. Sound Transit's station design standards will promote visual unity in the station areas.

L-004-041

The discussion of potential long-term impacts (Section 4.4.2) and construction impacts (Section 4.4.3) was expanded to provide more detail on impacts to parklands under each of the three Segment C alternatives.The comment indicates that the discussion of long-term impacts in Section 4.4.2 should have addressed impacts of the ST3 extension. Such impacts would not be directly related to improvements proposed for the Lynnwood Link Extension, because the ST3 extension is a separate project that is independent of improvements associated

their project is not relative to the Lynnwood Link and this is conjecture, how can ST determine that an administrative building with a bus lot, will draw the same power/ water etc. as the OMSF?

53. **4.9.1 Water Resources Affected Environment:** Scriber Creek is in the Swamp Creek Basin (Scriber is the largest tributary and contributing area in Swamp Creek), which is listed on the 303(d) list for numerous pollutants. There is an active TMDL for bacteria currently under implementation.

54. **4.5.5 Cumulative Impacts:** The statement "rainwater would be intercepted by the non-pollution-generating guideway rather than the pollution-generating roadway" thereby converting PGIS surface to NPGIS - is not accurate and should be stricken from the document.

55. **4.11.3 Construction Impacts:** It is unclear why dewatering is not anticipated nor addressed, particularly for the C Segments, given the localized high perched groundwater table, necessary crossing of a wetland, saturated peat soils, and excavation necessary for installation of water quality / quantity treatment facilities (only the shaft foundations were considered in the analysis). Dewatering will be necessary for construction in this area.

56. **4.15:** Alternative C-3 directly impacts City of Lynnwood Wastewater Pump Station #10. At the very least there would be impacts during construction, if not permanent. Mitigation / contingencies should be addressed.

57. **4.16.1 Historic Buildings and Structures:** Refer to comments above dealing with the Grange building, Interurban Railway and Halls Lake.

58. **5.1 Evaluation of Alternatives, Ability to Meet Purpose and Need, P. 5-2:** states "In the project corridor, the major urban growth centers are at Lynnwood and Northgate, which would be connected by light rail....Moreover, light rail can encourage future private development and investment near stations, which would result in economic benefits that would support the region's economic development plans."
The S.2 summary and section 5.1 are clear that included in the purposes and needs is to support redevelopment of Regional Growth Centers of which Lynnwood is the only one served by this project. The July 2013 Transportation Technical Report page 4-100 inventories existing nearby parking on generally underdeveloped private parcels located in the City Center. As mentioned earlier, Sound Transit cannot undersize their parking facility and utilize the existing spaces off premises from the transit center for its parking utilization as this runs counter to the ability to meet the purpose and need encouraging redevelopment and accommodating growth.

with the Lynnwood Link Extension. As such, discussions of these potential impacts should not be addressed in Section 4.4.2, Long-Term Impacts. However, Section 4.4.5, Cumulative Impacts, has been revised to incorporate additional discussion addressing these potential impacts. Additional discussion of potential cumulative impacts associated with the ST3 extension was also included for each of the elements of the environment discussed in Chapter 4 of the Final EIS. The comment indicates there is inconsistent discussion of potential environmental impacts in Section 4.2.4, Land Use and Section 4.4.4, Social Impacts, Community Facilities, and Neighborhoods regarding the potential for transit-oriented development to occur around the proposed transit stations. The text in Section 4.4.4 was revised to be consistent with language in Section 4.2.4 and reflect that the overall TOD potential in the Lynnwood Transit Center Station area would be strong compared to moderate to strong in the Mountlake Terrace Station area and limited for the station areas in Shoreline and north Seattle.

L-004-042

42. Table 4-5-1, Alternative C3. The City commented that the impact should be "high" for the existing commercial and planned high intensity mixed use, including multi-family. No change in the low to medium rating is proposed. The existing low visual quality rating on page 4-72 is based on the City's description of the area in the City Center Subarea Plan as "the dominant visual image is wide barren streets, enormous parking lots, signs and strip shopping centers. There is no sense of a center..." and "the general atmosphere is chaotic, congested and devoid of any character ..." The low impact rating is based on a change from the existing condition. A moderate impact rating is based on consideration of the future character of high intensity development provided for in the subarea plan and zoning. The projected intensity of development with Floor Area Ratios of 8-10 in the core and 3-5 outside of the core and building height in the core of 15 to 34 stories and 5 to 13 stories outside, will render the scale of the proposed elevated light rail system in

L-004-051

59. As the northern terminus and the only Regional Growth Center in this project, Lynnwood will accommodate the highest number of daily boardings in the Lynnwood Link Extension. In order to increase qualifications under New Starts funding criteria and meet Sound Transit's TOD policies, Sound Transit should: Provide increased analysis for C3 tail track impacts related to these purpose and need statements and New Starts funding criteria (below); and Work with the development community to implement its TOD policies consistent with New Starts objectives to accommodate shared use parking with private redevelopment, wherever possible.

L-004-052

60. Table 5-4, Evaluation of Alternatives, Comparison of Segment C Alternatives, P. 5-10: Based upon previous discussions regarding errors in property takes under the C3 alignment, the information presented in the property and total cost is erroneous and should be revised. Based upon the previous discussion on TOD potential, the information presented is erroneous and should be revised. Based upon previous discussions on ST2 alignments direct and immutable impact to Lynnwood City Center Plans and redevelopment potential, a column illustrating ST3 extension impacts on the block east of 44th Ave needs to be added.

Alternative C3 a relatively minor element within a complex and diverse urban setting.

43. Visual Impacts, Indirect and Secondary Impacts, page 4-89. The City commented that landscaping is not adequate for the tail track in Alternative C3 for mitigation of impacts to a high density zone. As indicated above, the light rail elevated system is anticipated to be just one element of a very high intensity and diverse setting. The reference to landscaping on page 4-89 is in reference to light rail stations providing a focus for mixed use development with landscaping and other visual amenities developed as an integrated part of the new developments.

44. Visual Impacts, Cumulative Impacts, pages 4-89 to 90. The City requested language similar to Northgate. Additional discussion of the intensity and scale of planned mixed use development in the Lynnwood City Center has been added to the Final EIS.

45. Visual Impacts, Potential Mitigation Measures, page 4-93. The City supports landscaping near homes along 52nd Avenue and suggest consideration of earthen berms, coniferous trees, and landscaping for 200th Street and 44th Avenue. The discussion of landscaping on pages 4-91 to 4-93 includes concepts that may be applied as designs are further developed. The text notes that it may take 15 to 20 years for plants to grow large enough to screen large facilities and 30 to 50 years to provide the same functions as existing mature vegetation.

L-004-043

46. 4.7.3 Noise and Vibration. Sound Transit analyzed the properties along the tail tracks in the Draft EIS. Although the hotel property is considered an FTA land use category 2 for noise impact analysis, the noise analysis does not indicate that there will be impacts significant enough to require specific mitigation at that location. See the Draft EIS Section 4.7.3 for the discussion on operational impacts of the project.

1

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Impacts along the tail tracks are not likely due to the slow speed of the train on the trail tracks. If impacts are identified, noise walls would be considered as the primary form of mitigation.

47. 4.7.6 Noise and Vibration. See above response to comment #46 on the tail track. For permitted/approved developments with sensitive uses, Sound Transit performed an analysis as if the property were in place and considered mitigation where impacts were identified. Areas that are zoned for mixed uses but with no permitted or approved developments were evaluated based on their existing use. For the Final EIS, Sound Transit's updates included a review of permitted developments.

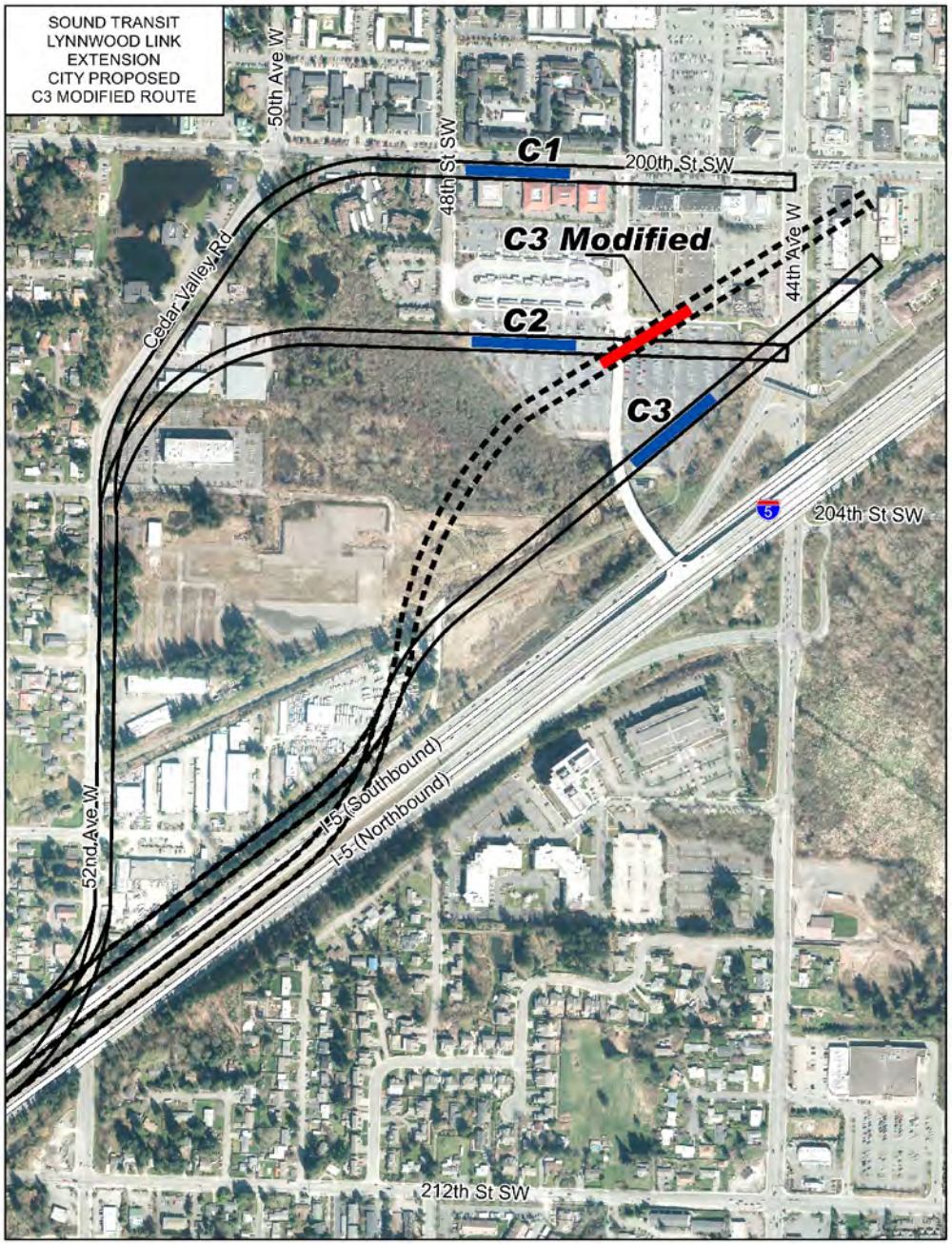
L-004-044

Any noise mitigation measures that are necessary for compliance with the FTA and Sound Transit's Mitigation Policy will be part of the Record of Decision and therefore will be included in the project when constructed.

L-004-045

49. 4.8.1 Affected Environment. The description of the affected environment has been expanded to include more information about wildlife use of the Scriber Creek wetland complex. More detailed information about vegetation and wildlife resources in the study area can be found in the Ecosystem Resources Technical Report. Potential effects related to wildlife viewing opportunities are discussed on page 4-220 of the Draft EIS, in the analysis of effects on Parks and Recreational Resources.

50. 4.8.2 Long Term Impacts. Potential impacts related to changes in the flood storage capacity of the Scriber Creek floodplain are discussed on page 4-156 of the Draft EIS, in the analysis of effects on Water Resources. Potential impacts to the stream channel will be addressed



through the various local, state, and federal permitting processes for this project. For those permits, the stream area that may be impacted by the Preferred Alternative will be identified by delineating the ordinary high water mark (OHWM) of the stream. In low-gradient streams with multiple channels (such as Scriber Creek within the wetland complex in the study area), the OHWM typically encompasses a greater area than the bankfull stream channel. In other words, impacts within the OHWM represent a conservative estimate of stream channel impacts. The impact analyses in the Final EIS reflect the results of these delineations.

51. 4.8.2 Long Term Impacts. Discussions of potential long-term impacts of lighting and noise on wildlife appear on pages 4-135 and 4-136 of the Draft EIS. The analysis in the Final EIS includes additional information about potential effects related to changes in the amounts of noise, lighting, and human activity in the study area, including the Scriber Creek wetland complex.

L-004-046

Section 4.8.5 (page 4-144) of the Draft EIS states that Sound Transit is considering a Link Operations and Maintenance Satellite Facility in the same area as the Edmonds School District master plan. It also states that one or both of these projects may include loss or degradation of vegetation, wildlife habitat, streams, wetlands, and associated buffers. The Ecosystem Resources and Utilities sections do not state that the potential impacts are the same.

L-004-047

53. 4.9.1 Water Resources Affected Environment. The scope of this study focuses only on Scriber Creek because it is located within the proposed project footprint. A brief discussion of the system downstream of Scriber Creek, which includes Swamp Creek, is included for context only. The project would not discharge within the Swamp Creek TMDLs regulated reach; therefore, discussion of its TMDL is beyond the scope

of this study.

54. 4.5.5 Cumulative Impacts (assuming comment pertains to 4.9.2 Water Resources Long-Term Impacts). The language in the Final EIS will be updated to clarify that the proposed project would result in more stormwater runoff generated by non-pollution-generating surfaces and less generated by pollution-generating surfaces compared to the existing condition.

L-004-048

Shaft foundations for Segment C will be completed using cased drilling techniques and methods for placing concrete without the need for dewatering.

Detention facilities are planned in Segment C. If possible, they will be designed to be above the water table. If this is not feasible, dewatering would be necessary for construction of these facilities. The water removed from the excavations would be handled according to the guidelines specified by Washington State Department of Ecology (Stormwater Management Manual for Western Washington).

Section 4.11.3 of the Draft EIS notes that if dewatering is required, methods to reduce settlement from dewatering could include using localized dewatering, reinjecting groundwater, using sheet piles for groundwater cutoff, or underpinning nearby structures.

L-004-049

The Final EIS discussion of impacts related to the pump station has been updated; Sound Transit appreciates the additional detail on the City's expansion plans.

L-004-050

Please see response to comment L-004-040 above.

L-004-051

Although parking is an important component of the access plan for the Lynnwood Transit Center Station, the project's ability to meet the purpose and need does not rest solely on providing parking at levels that might satisfy unconstrained demand. The project would continue to provide speed and reliability benefits to travelers, and it would also encourage higher density development in the surrounding area, which would encourage more biking and walking to reach transit. Community Transit and Sound Transit would also continue to develop and expand service in the area, which could further reduce reliance on the automobile. Sound Transit believes the Draft EIS evaluation of alternatives continued to convey the primary factors distinguishing the alternatives.

Sound Transit will be applying to FTA for New Starts funding and will comply with the August 2013 New Starts and Small Starts Evaluation Rating and Process Final Policy Guidance. Two project justification criteria are related to TOD: economic development effects and land use. Sound Transit will follow FTA's guidance to prepare and submit the required documentation. This effort is not part of the EIS process.

L-004-052

The information regarding property acquisitions in the table of the Draft EIS was accurate. The City has identified an error in Section 4.2 (Land Use) of the Draft EIS that misnamed a single property, but all of the other discussions about properties impacted, including displacements of businesses and employees, were accurate. However, the evaluation has been updated for the Final EIS to specifically note the City's concerns about impacts to the block east of 44th Avenue.

LYNNWOOD
WASHINGTON

A Great Deal more

EXECUTIVE

September, 19, 2013

Joni Earl Chief Executive Officer
Central Puget Sound Regional Transit Authority
401 Jackson St.
Seattle WA 98104-2826

RE: Lynnwood Link DEIS, Public Comments

Dear Ms. Earl,

L-005-001

First let me again thank you for agreeing to my request that Sound Transit extend the comment period for the Lynnwood Link DEIS.

Lynnwood used the extended time to conduct extensive outreach efforts with our residents and business community. We held three forums for residents and businesses, two in June and a third on Saturday September 14th. Each of our meetings was extremely well attended. People were encouraged during the first two forums to offer their comments directly to Sound Transit and when appropriate through the DEIS website.

Also, at our regular Business Meeting on September 9, 2013, we received "open microphone" comments on ST2 and received three written submissions.

At last weekend's meeting we received a large number of comments which the City summarized on easels, as well as written statements which were submitted. We also received one follow-up email on Monday September 16, 2013, from Linda Willemarck. I am forwarding these to you to insure that they are included in the official record and considered by Sound Transit during the DEIS process.

Therefore, the following items are attached:

1. Citizen comments – Business Meeting September 9, 2013, 3 pages,
2. Sound Transit Community Outreach Meeting: Saturday, September 14, 2013 Notes Taken From Citizen Comments,10 pages,
3. Email Monday, September 16 2013, 1 page.

L-005-002

In regard to the September 16th email, we concur with Ms. Willemark's request for a more detailed review of properties in the Conservation Futures Program (CFP), and believe that the detail work will need to be accomplished by Sound Transit to appropriately complete its Environmental Impact Statement process. It would seem appropriate for Sound Transit to follow-

19100 44TH Ave W | PO Box 5008 | Lynnwood, WA 98046-5008 | Phone: 425-670-5000 | Fax: 425-670-5911 | www.ci.lynnwood.wa.us

L-005-001

Sound Transit appreciates the City's efforts to engage the community in reviewing the alternatives under consideration.

L-005-002

For the Final EIS, Sound Transit has examined the properties acquired through the Conservation Futures program. If Sound Transit were to proceed with the conversion of part of a property purchased through the program, the agency would meet the replacement requirements as part of its acquisition process.

LYNNWOOD
WASHINGTON
EXECUTIVE

L-005-002

up with the Snohomish County Conservation Futures Program in regard to property and/or title encumbrances, stipulations, and associated program limitations on the properties. Also, Sound Transit should follow-up with Snohomish County concerning prosecuting attorney legal opinions as to use of CFP properties.

Please convey my appreciation to Board member Paul Roberts, Patrice Hardy, Matt Sheldon, Michelle Ginder and others who helped support our City's outreach efforts.

Sincerely

Don Gough

Mayor, City of Lynnwood

CC: Sound Transit Board
Steve Kennedy, Sound Transit Staff
Lynnwood City Council

Attachments

19100 44TH Ave W | PO Box 5008 | Lynnwood, WA 98046-5008 | Phone: 425-670-5000 | Fax: 425-670-5911 | www.ci.lynnwood.wa.us

L-005-003

Sound Transit Community Outreach Meeting: Saturday, September 14, 2013
Notes Taken From Citizen Comments

C1:

- Wetlands issue and protection of animals: why can Sound Transit disturb the wetlands if the normal citizen cannot.
- Impacts to quality of life to people, financial impacts to businesses, business relocation, park and wetland issues.
- Disturbing this land could cause geological issues
- Traffic impacts
- Home values will decrease and cause decreased tax revenues for the city.
- Getting a light rail station will be positive: some home values will increase due to proximity to the light rail / accessibility of transportation options
- Noise, vibration, aesthetics: not compatible with the neighborhood
- The park was purchased with County Conservation Funds. It is federally protected land unless development is "unavoidable" but is it really "unavoidable"?
- Destroys the neighborhood along the route
- 77 multifamily residents will be displaced and there is no plan to assist them with relocation
- Traffic increased on 200th St – this street is already impacted by traffic
- Cedar Valley Road is not an industrial area, there are professional businesses located there and it is disrupting their business: loss of parking for businesses, construction mess
- It lacks common sense due to the displacement of residents and businesses
- Not a walkability issue, people won't walk regardless of how far the station is. This option displaces people, businesses, parks, and increases noise
- Retention pond mitigation?
- Proximity to residents, construction impacts
- City should be the ones to determine the pros and cons based on City Center plans

C2:

- Park, wetlands, wildlife will experience a direct impact
- Increased crime: drug dealers, gangs
- Visual, aesthetics
- Transit increases foot traffic to small businesses
- Impact / disruption to the Interurban Trail
- Businesses impacts: displacement, loss of professional jobs (100+ employees)
- Negative impact on homes, parks, businesses, attracting visitors: loss tax revenue from displaced residents, infrastructure of the routes are impactful (pillars)
- How does the city replace the lost tax revenue from displaced residents and businesses?
- The numbers of impacted businesses in the DEIS only takes into account those that are displaced, not those that will be negatively affected by construction, loss of parking, etc.
- Curves in the route can cause wear and tear on the equipment.

L-005-003

Sound Transit appreciates the summary of comment issues raised regarding Segment C Alternatives during the City's forums; these are similar to the comments Sound Transit formally received during the scoping period. Chapter 7 of the Final EIS summarizes common comments and responses. Responses to comments from individual parties that submitted remarks to Sound Transit on the Draft EIS are provided in the Final EIS Appendix P.

Sound Transit Community Outreach Meeting: Saturday, September 14, 2013
Notes Taken From Citizen Comments

L-005-003

C3:

- This is positive because it creates a transit node
- Impacts park, wildlife, wetlands
- This option but move it a little closer to the freeway to create a multi-nodal transit center. Can you direct traffic to 208th instead of 200th?
- Would upgrades to the lift station and the retention ponds be charged to Sound Transit?
- Flooding issues are a problem
- This option is less invasive to residents
- This will help us get to Seattle faster, it is less impact to the wetlands and park, and it clumps transit together
- Sound Transit needs to research the impacts of this route more
- Seems like a funny place for the elevated line (where it crosses I-5 ramp)
- This option is too far between transit connections: you need a simple path between bus and train for the access of the riders

General Comments:

- The route should follow along I-5 and the freeway ramp
- Has C4 been researched for the impact on the neighborhood?
- How will the line continue to Everett?
- Taking the route up I-5 would miss the wetlands and not impact residents
- Can the City ask Sound Transit to specify the most stringent environmental impacts in regards to protection of the park, trees, root lines, etc.
- C4 is the best option out of the 4
- Should have the station at Alderwood with a stop at the Transit Center
- These station options aren't close to the types of businesses that you'd walk to, it should be located at Alderwood Mall
- Can we get an extension to the 60 day comment period? There are unanswered questions: EPA site visit
- Concerned about the errors in the DEIS.
- Should use the old Lynnwood High School location as the station or utilize the 'Texas T' on ramp.
- How viable is C4? It seems to be the best option
- Select a route with the least impact to residents and businesses.
- Go to Alderwood Mall, there will be less crime than if it is brought to a neighborhood.
- Additional parking at the Transit Center is needed
- Embassy Suites has had major issues in regards to the wetlands that were very costly, we need to avoid that.
- We should keep Light Rail with the Transit Center
- Should have multiple stops in Lynnwood
- Bus routes have been cut back the past few years – this won't help reduce car trips
- People will still have to drive to the station

Sound Transit Community Outreach Meeting: Saturday, September 14, 2013
Notes Taken From Citizen Comments

L-005-003

- Relocating to Alderwood Mall would negatively impact those businesses
- Developing on wetlands is not safe
- Traffic impacts on 200th St and 196th St
- All lines turn Lynnwood into an industrialized area
- Any disruption of the wetlands and Scriber Lake Park are bad
- All routes would increase crime: drug dealers, gangs
- Can we tunnel instead of raised or ground level routes?
- C3/C4 don't devastate the neighborhoods
- Why doesn't the route stay on I-5
- All routes impact low income residents and seniors as well as parks
- New routes should be created that benefit the Lynnwood community – not impact it
- All routes stand to impact the wetlands
- Mitigate traffic and amount of parking paces
- What impacts will the Lynnwood to Everett line create?
- All routes don't take into account future growth and planning: City Center, Everett extension.

This was meant to be presented as a formal speech in front of the City of Lynnwood Council.

L-005-003

I would like to thank the city council for allowing me to speak and thank everyone for showing up to support their neighbors, as well as, voice their concerns and opinions on this subject of the Lynnwood Light Rail Alignments.

That autumn evening the air was still and silent as I walked through the park like I always did time and time before. Many of the trees had turned into festive colors of greens, reds, yellows and oranges. A father and his young daughter, she must have been only 5 or 6 years old strolled ahead of me and a mysterious and sudden gust of wind blew through the trees carrying the smells of pine through the crisp air. A sudden shriek forced its way out among the tall evergreens and pines as I stopped and watched with amazement as a large gray owl emerged from the tall green trees and flew towards the child and her father, she pointed and said, "Daddy, did you see that!" with large eyes and in complete astonishment. The father seemed to look like a child himself having larger eyes than his daughter and looked amazed and stunned and said," Wow!" The owl cruised over my head and disappeared with a screech into the nearby trees behind me. At that moment I felt so incredibly blessed. I have always known that our neighborhood in Lynnwood was special almost sacred. In my almost 40 years of living and growing up in South Lynnwood this was the first time of having the experience of seeing an owl. I have heard them screeching from time to time in nearby tree lines close to our house, but never seen the nocturnal bird. How fortunate we are to live in a city were nature is so close. That is why I find it so hard to believe that the alignments C1 and C2 for the Light Rail are even being considered. These two alignments are intrusive and destructive in what I and others thought was a protected habitat and sanctuary for a vunearable ecosystem of plants and animals. We in this community as

L-005-003

well as the city have a greater responsibility to conserve and protect this habitat and sanctuary that is home for canadian geese, wood ducks, bald eagles, owls, herons, blue jays, beavers, river otters, raccoons, possum, frogs, salamanders, bats, turtles and list is really endless with so many species not to mention all the varieties of trees and vegetation that hide and protect these creatures.

I urge the City of Lynnwood Council to back the citizens that live and work in the path or near the alignments of C1 and C2. I live near both alignments and I fully support the C3 alignment because it has less of an negative impact on our primarily residential neighborhood and does not take out a large part of the park and wetlands.

I would also like to encourage everyone this autumn to tune back into nature and take a walk in the Scriber Creek Park so that you might experience a Wow! moment. This could possibly be your last opportunity to do so before it's all gone.

Thank you city council and everyone who showed up today.

Tricia Monaghan
5214 201st Pl S.W.
Lynnwood, WA 98036

Thoughts and Concerns on Sound Transit Route Alignments for the Community Outreach Meeting City of Lynnwood/Lynnwood Link Extension

Saturday, September 14th, 2013

By Mary Monaghan

L-005-003

Yes, we need light rail to Lynnwood. But at what cost to the residents who live here. It is quite obvious to me that C3 is the less intrusive and has fewer impacts to our neighborhood and to the Cedar Valley community.

It has come to my attention that the people in the Cedar Creek Condos and some of the businesses did not know of the light rail coming down 200th St. S.W. Our family has been fighting against the Operations Maintenance Satellite Facility and the light rail for a year. These people just recently found out that they are going to loose their homes and businesses if C1 is chosen as the route and they found this out by letter. We tried to let these people know a year ago and left information at the Condos with the property manager and recently found out from some residents that they never received the information. It would seem that information was allegedly being withheld on purpose and none of these people ever received anything addressed directly to them about Sound Transit until this letter came out eight weeks ago about their property.

I am deeply concerned about all of the impacts this whole project will have to our wetlands and the visual and noise impacts to our neighborhood. Please put yourselves in our place. How would you like this 40ft elevated, massive, intrusive cement jungle, across the street from your home that you have lived in for over 40 yrs, a home that you have put your heart and soul into. It seems dangerous and so out of character for this wetland neighborhood.

Both C1 and C2 would feature design measures to avoid noise impacts, but the elevated guide ways would change views and alternative C3 would have the least effect on this neighborhood because it is largely adjacent or parallel to I-5.

We on 201st Pl. S.W. by Sprague Ponds and mini park will also be impacted visually by the skyline and loss of old growth vegetation and trees in the Scriber Creek Park area along 52nd and 200th St. S.W. There is no way Sound Transit can give all of this back after the construction. These trees are old growth and a buffer to freeway and Park- and- ride noise. The light rail trains cannot have trees within 30ft of the rails. How can you expect us to embrace this massive cold and cruel cement jungle over old growth vegetation and trees and wetlands with cut throat trout, salmon spawning, turtles, dragon flies, butterflies, crickets, birds of all kinds including eagles, osprey, blue herons, wood ducks, Canadian geese, mallard ducks and river otters, raccoons, possum, musk rats, beaver, bats, salamanders, frogs and the serene sound of birds which have a calming effect rather than the stressful sounds of light rail. We had six turtles come down our street a month ago to lay eggs in the rocks in front of our house and across the street at our neighbors. How many people get to see that in their neighborhood? This is a protected wetland area labeled 4f and the sign on Scriber Creek Park sign says "Funded by in part by Conservative Futures Grant. Why would you want to put all of this wildlife in jeopardy and displace all of these animals? Why would you want something so massive going down 52nd and 200th and it will be only a block away from the so called Lynnwood City Center. Do you realize the trains will be running until 1:00 a.m. in the morning and then lined up at night on 200th and 44th waiting to be boarded again in the morning. Is this what you want

L-005-003

people to see when they come into Lynnwood? This is no way to beautify Lynnwood by making it look like the SODO district of Seattle. Keep it over by the freeway and out of our neighborhood and wetlands. Also, you could beautify your "Welcome to Lynnwood" sign a bit by putting seasonal plants and flowers in that space and do some weeding now and then. I'm sure you could even get some volunteers to help and maybe get some donations from nurseries in the area. Other towns have garden clubs that help beautify their city with hanging flower baskets like in Edmonds.

The elevated guide ways on the eastside of 52nd would visually intrude upon the integrity and unity of the residential area. We happen to live in a very special area that many people don't realize exists here in Lynnwood. It is our little paradise of wetlands all in walking distance and I don't think the City of Lynnwood appreciates what they have here. Many people from surrounding businesses such as Group Health and even City of Lynnwood employees come to visit the mini park on Sprague's Pond to have lunch and enjoy the beauty of the park and gaze across the pond over to Scriber Creek Park area. This view would drastically be altered if C1 would be chosen so you are not only altering Scriber Creek Park but also all the adjacent parks are affected. These wetlands could be turned into a wildlife preserve and bird sanctuary and bird watching area that people would come and visit and the walkways would all tie into the bus transit center. Lynnwood should embrace the beauty and resources they have now and not have it torn apart and replaced with ugly cement structures in our skyline.

Please choose C3 for this light rail project of the Lynnwood Link Extension.

TO: Mayor Don Gough from Elaine Smith
and
Council Members
- Loren Simmonds
- Sid Roberts
- Van Aubrycho
- M. Christopher Boyer
- Benjamin Goodman
- Kerri Lonergan-Dreke
- and Mark Smith

September 13, 2013

FROM: Elaine Smith
5630-200TH ST. SW #B305
Lynnwood, WA 98036-6262

RE: Lynnwood Link Extension

Dear Mayor and Individual Council Members,

L-005-003

I am so sorry I am unable to attend the Community Outreach Meeting in Council Chambers tomorrow. I did attend the one at the Grange on 6-22-2013.

Please make a strong case to Sound Transit on the DEIS that Option C3 is the only option that makes sense for our community. To try to site the route in our neighborhoods along 52nd Ave. W. (Options C1 and C2) would have the effect of destabilizing and brutally "big city industrializing" of our fragile-enough neighborhoods trying so hard to build up your city's sense of neighborhood closeness and cohesion. We don't need trains running through the delicate eco-system of what we all enjoy as Scriber Lake park, either!

Option C makes sense for consolidating and preserving a transit corridor we are already used to for Lynnwood. I believe it would indeed also be the best revenue-producing alternative for businesses, as many Lynnwood jump at the chance to find the safe harbor of hotels, restaurants, and retail options so close to their train journey's end.

Please, I count on each of you to lobby hard for what is truly best for Lynnwood, Option C3.

Sincerely, Elaine Smith
Elaine Smith

David C. WILLIAMSON
4805 N. 200th St. SW. Apt. E205
Lynnwood WA 98036-6362
425-773-9354

L-005-003

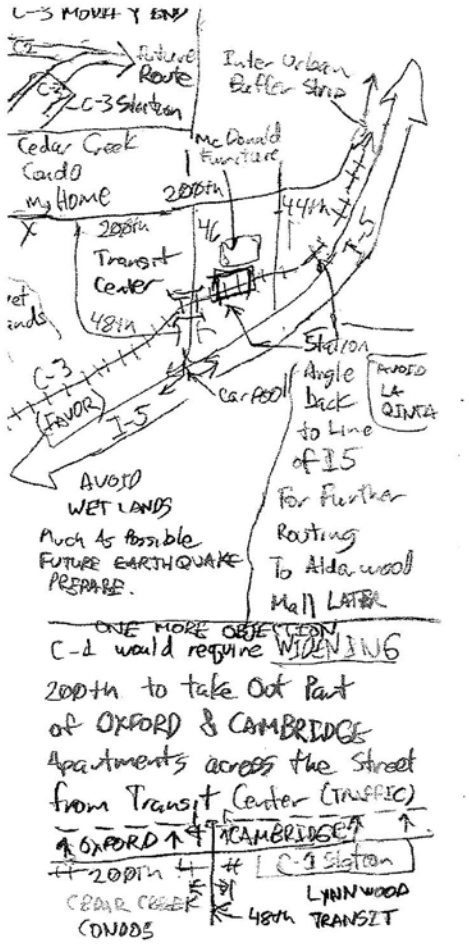
FAVOR: C-3 (modified) → C-4 possible

REASONS:

1) Less Amount of Trackage Needed to Reach between 46th & 44th Street than the other Alternatives (C1 or C2)
2) Fewer businesses & residences Displaced (than C-1) 72 Residences 38 Businesses including
3) Earthquake Issues The BIG Future Cascadia Event → A) 9.0 Richter Megathrust, B) "Shake, Rattle & Roll" last 6 to 10 minutes. IMPACT C2 Above Greater
4) Less Noice & Vibration (Residences)
5) Less Angle of Curve on C-3 or C4 means less Wear & Tear on track & equipment as opposed to 90 Degress On C-1 or C-2
6) Lower Maintenance Cost on Less Trackage, Wear on Curves AVOID wetland as much as Possible

SEND TO PUGET SOUND TRANSIT

L-005-003


C-3 MOVE Y ENV
Future Route
C-3 Station
Inter Urban Buffer Strip
Cedar Creek Condo
My HOME
McDonald Furniture
200th
44th
I-5
200th Transit Center
46
48th
Station
C-3
(FAVOR)
I-5
Carpool
Angle back to Line of I5 For Further Routing To Aldarwood Mall LATER
AVOID LA QUINTA
AVOID WET LANDS
Much As Possible
FUTURE EARTHQUAKE PREPARE.
ONE MORE OBJECTION
C-1 would require WIDENING
200th to take Out Part of OXFORD & CAMBRIDGE Apartments across the Street from Transit Center (TRAFFIC)
OXFORD
CAMBRIDGE
C-1 Station
200th
CEDAR CREEK CONDOS
LYNNWOOD TRANSIT
48th

From: Linda At Sea [mailto:lindaatsea@yahoo.com]
Sent: Monday, September 16, 2013 12:18 AM
To: Don Gough; pete.vonreichbauer@kingcounty.gov; Sid Roberts; Van AuBuchon; Christopher Boyer; Kerri Lonergan; Benjamin Goodwin; Mark Smith
Cc: nicolaformayor@gmail.com; Laurie Cowan
Subject: Lynnwood Link

Mayor Gough and Lynnwood City Council Members,

L-005-003

I spoke with Diane Bailey, the Administrator of the Conservation Futures Fund, and she told me that the Fund's records show the City of Lynnwood received funding for both Scriber Creek Watershed #1 and the Scriber Creek Wetlands Complex. She recommended that the City of Lynnwood check into how those monies were spent; specifically if there were Inter-local Agreements and Declarations of Protective Covenant for the properties funded with Conservation Futures, and to check on possible matching funds for these monies and any stipulations. (In addition, due to the naming conventions used in the City's, the Deis's and the Conservation Futures Fund's maps, I believe these funds may have been used to purchase other parcels of land impacted in the Lynnwood Link C Alternatives.)

Ms. Bailey also said to check the Title Report for the properties regarding any encumbrances which could have a significant impact on the use of these lands. Nancy Bartley, reporter, "The Seattle Times," interviewed David Somers, Council Member, Snohomish County Conservation Futures Program Advisory Board. It is my understanding he is getting an opinion from a Snohomish County attorney regarding the legal use of these properties. Also, a Field Visit to the potentially impacted lands is being scheduled by the EPA, with the FTA and Sound Transit.

I hope the Council ensures that all necessary information is obtained before making a final recommendation on the Lynnwood Link Alternatives on September 23, as there are many unanswered questions.

The future of a sensitive ecosystem, a large condominium community, many businesses, and the fate of a neighborhood rests with you. I believe Sound Transit will follow your lead and develop the route you recommend as it is easier to follow the path of least resistance. I also respectfully request that a motion be made by a council member for a Roll Call Vote so that citizens/voters know who agreed or disagreed with the City's recommended route to Sound Transit.

Thank you for your consideration.

Respectfully,

Linda Willemarck

From: Maureen Wojewodzki <mwojewodzki@ci.lynnwood.wa.us>
Sent: Thursday, September 19, 2013 4:07 PM
To: Lynnwood Link DEIS
Cc: Don Gough; Art Ceniza; Paul Krauss; David Kleitsch; William Franz
Subject: Transmittal of DEIS comments by Lynnwood residents (part 2)
Attachments: CitizenCommentsCouncilMtg.pdf

Dear Ms. Swift:

L-006-001 Please accept the attached transmittal of DEIS comments by Lynnwood residents during the City Council Meeting held September 9, 2013. These comments are referenced in the Mayor's letter dated September 19th that was previously submitted. If you have any questions, please contact me at (425) 670-5001.

Best regards,
Maureen Wojewodzki
Executive Assistant to the Mayor
City of Lynnwood

1

L-006-001

Thank you for submitting the comments received by the City; these comments overlapped with comments Sound Transit received directly, but where they were unique, Sound Transit created a separate entry and responded directly in Appendix P of the Final EIS.

CITIZEN COMMENTS

BUSINESS MEETING

September 9, 2013

TO: Parks and Recreation Board and
TO: City Council

Below are excerpts from the 2020 Comprehensive Plan for Lynnwood that I found online. Note that the C1 and C2 routes for the Light Rail conflict with the spirit and intent of your Plan. Please choose C3 or find an alternative that does not intrude on parks, wetlands and neighborhoods.

Respectfully,

Maryellen Walsh

2020 COMPREHENSIVE PLAN - TRANSPORTATION, PAGE 1

The City's goal for the transportation system is:

To provide mobility options for residents, visitors and commuters through a balanced transportation system that supports the City's land use vision, protects neighborhoods from transportation impacts and minimizes adverse impacts on the environment.

2020 COMPREHENSIVE PLAN - TRANSPORTATION, PAGE 29

Subgoal:Environmental Factors

Minimize the impacts of the transportation system on the City's environment and neighborhood quality of life.

2020 COMPREHENSIVE PLAN - LAND USE, PAGE 21

Park/Recreation/Open Space (PRO)

Purpose: This plan category is intended to provide land area for the active and passive park and recreational needs of the city; and, to set aside areas for natural conservation.

Principal Uses: Public parks, designated open space and public recreational or educational facilities. Structures at properties in this category shall be limited to facilities needed to support the designated or planned park or open space use of the properties.

Locational Criteria: Location of these facilities will be influenced by multiple factors, including but not limited to: proximity to the population served, land availability, and amenity value of the site.

Building Design: Buildings shall be low-rise structures. Buildings in or next to residential areas shall be designed to complement residential design characteristics.

My name is Linda Willemarck. I live at 4900 200th St SW in Lynnwood. Since learning about the Sound Transit's Alternatives for the Lynnwood Link, a mere 3 months ago, I have spent a great deal of time trying to understand what properties are involved and what impacts it will have.

As you know, both the C1 and C2 Alternatives would be going down 52nd Ave West/Cedar Valley Road. In my research I found a very compelling document that really puts into perspective the importance of this area. The document reads, quote "...an established single family neighborhood containing hundreds of affordable homes and is in close proximity to several affordable housing apartments and condominium complexes, all of which would be adversely impacted by light, noise, property values, and other impacts ..."

"directly impacts hundreds of affordable homes when there are other sites available, raises social justice issues..."

"...located adjacent to significant city recreational resources of Scriber Creek and associated wetlands, and the city's Scriber Creek Park, that provide places to experience nature in close proximity to Lynnwood's City Center and regional Interurban Trail, both of which would be negatively impacted..."

"...Therefore, the City Council of the City of Lynnwood does hereby resolve and request the Sound Transit Board to remove from its potential sites and evaluations list the Lynnwood 52nd Avenue West/Cedar Valley Road site..." "

....that such site not be included in any environmental analysis, due to its many significant and unresolvable and irreparable impacts upon the City of Lynnwood, its residents and businesses and upon the Edmonds School District."

These quotes were taken from Resolution No. 2012-07 of the City of Lynnwood, Washington, regarding issues concerning the potential siting by Sound Transit. It was signed by Mayor Gough of Lynnwood on 10/22/2012.

Linda Willemarck

My name is Linda Willemarck. My address is 4900 200th St SW in Lynnwood.

If you're familiar with the Lynnwood Link C Alternatives, then you've heard of Scriber Creek Watershed #1, now known as Scriber Creek Park, as well as the Scriber Creek Wetlands Complex – paid for, at least in part, by the Conservation Futures Fund. A fund from property taxes specifically for the purpose of preserving open space, farmland or wooded acreage.

"*...to protect, preserve, maintain, improve, restore, limit the future use of, or otherwise conserve, selected open space land, farm and agricultural land, and timber land... for public use or enjoyment.* "

Tom Tiegen, Snohomish County Parks and Recreation Director said, "The acquisitions are a chance for the county to make priceless additions that will benefit "our grandchildren's grandchildren."

Conservation Futures Funding got its start in the state in 1971 under the leadership of Gov. Dan Evans. The state Legislature declared citizens had a "fundamental and inalienable right" to a healthy environment.

From "The Healing Power of Nature", Denise Mitten, PhD writes "research has shown that time in natural spaces strengthen neighborhood ties, reduces crime, stimulates social interactions among children, strengthens family connections and decreases domestic violence, assists new immigrants cope with transition, and is cost effective for health benefits.

The Park really speaks for itself.

Linda Willemarck

SHORELINE CITY COUNCIL

Keith A. McGlashan
Mayor

Chris Eggen
Deputy Mayor

Will Hall

Doris McConnell

Chris Roberts

Jesse Salomon

Shari Winstead

September 16, 2013

Sound Transit DEIS
Comments c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

Re: Draft Environmental Impact Statement for the Lynnwood Link Extension

Dear Ms. Swift:

L-007-001

The City of Shoreline would like to take this opportunity to provide Sound Transit with our comments in response to the Draft Environmental Impact Statement for the Lynnwood Link Extension. The City appreciates the opportunities to participate in Sound Transit's planning process to date and the regular updates provided by Sound Transit staff throughout this process.

L-007-002

The City of Shoreline is excited about the extension of light rail to Shoreline in the near future. It is our City's belief that effective, fast and reliable transit service benefits our residents and the region as a whole in a variety of ways. Expanded mobility options, reduced congestion and minimizing our contribution to climate change are just a few of the benefits of a robust transit system that also mirror the goals of our Council and Shoreline's adopted plans and policies. Shoreline citizens overwhelmingly supported Sound Move and ST2.

L-007-003

The City's primary interest with the Lynnwood Link Extension is the inclusion of two light rail stations in Shoreline. In April 2012, the Shoreline City Council identified NE 145th Street and NE 185th Street as the two preferred station locations in Shoreline and sent a letter to the Sound Transit Capital Committee stating this preference. A copy of this letter is enclosed. After reviewing the DEIS and consideration of the impacts of the Lynnwood Link Extension, the City of Shoreline remains committed to this preference. We believe that with appropriate mitigation, NE 145th Street and NE 185th Street locations represent the best alternatives for Shoreline and the region and will result in the most successful project outcome for both Sound Transit and the City of Shoreline.

The alternatives considered in the DEIS identify two station pairings in Shoreline: NE 145th Street and NE 185th Street and NE 155th Street and NE

17500 Midvale Avenue North ▪ Shoreline, Washington 98133-4905
Telephone: (206) 801-2700 ▪ www.shorelinewa.gov

L-007-001

Thank you for your comments and efforts in working on the initial development of the Lynnwood Link Extension.

L-007-002

Thank you for your comment stating support for the Lynnwood Link Extension.

L-007-003

Thank you for your comment stating your station preferences and reasons for wanting stations at NE 145th and NE 185th Streets and reasons for not wanting a station at NE 155th Street. Sound Transit also appreciates the City of Shoreline's willingness to plan around the proposed stations with an emphasis on multimodal access.

L-007-003

185th Street. Shoreline believes that a station at NE 145th Street is preferable to a station at NE 155th Street for several reasons. First, a station at NE 145th Street will serve as a regional station. Due to its proximity to Bothell Way NE/Lake City Way NE (SR 522), the NE 145th Street station will act as the primary station for residents of Lake Forest Park, Kenmore, Bothell and potentially points east. Several of these jurisdictions, as well as other agencies throughout the region, have provided Sound Transit with letters of support for the NE 145th Street station. Additionally, we believe close proximity to a main thoroughfare is the most appropriate location for a regional station and NE 145th Street provides this access. Most importantly, the voter approved ST2 package included stations at NE 145th Street and NE 185th Street.

In anticipation of identification of the Preferred Alternative by the Sound Transit Board, the City of Shoreline has already begun station area planning which includes increasing density around stations to facilitate transit oriented development. A significant component of that work is the evaluation of multi-modal access to the stations, with the intent of identifying new pedestrian, bicycle and transit improvements near the stations. Additionally, the City of Shoreline is leading a multi-jurisdictional planning effort for the 145th Street corridor that will evaluate and ultimately identify the necessary improvements to the roadway for vehicles, buses and nonmotorized users. These improvements will not only help to improve multimodal access to the station, they will help facilitate transit oriented development through additional and upgraded pedestrian facilities and an improved roadway for transit connections that will allow residents to access neighborhoods beyond the light rail station. Shoreline is evaluating the potential annexation of NE 145th Street from the City of Seattle and King County and has begun discussions with these jurisdictions, subject to the designation of a light rail station at NE 145th Street in the Preferred Alternative.

We believe that a station at NE 155th Street will result in significant negative impacts to the surrounding stable, single family neighborhood. The area around the proposed station, as well as properties along the 155th Street corridor, is almost entirely single family residential. The 145th Street corridor includes a mix of multi-family residential, commercial and single family uses. Because 155th Street carries anywhere from one-quarter to one-half of the daily traffic of 145th Street, the traffic impacts associated with a station at NE 155th Street will be much more significant compared to those associated with a station at NE 145th Street. The Shoreline Fire District has a fire station on NE 155th Street located between the proposed light rail station and parking structure. They have written to Sound Transit expressing their concerns that a light rail station at NE 155th Street may negatively impact emergency response times due to the increased vehicle and bus traffic associated with the station.

The City's specific station design preferences include:

L-007-004

- NE 145th Street: Develop a station with an associated 500 space parking facility located just north of the overpass, primarily in the vegetated area between the bridge and a relocated northbound on-ramp, as shown in Alternative A3, Option 2.

L-007-005

- NE 185th Street: Develop an at-grade station on the east side of I-5 with an associated 500 space parking structure located on the west side of I-5, primarily within the I-5 right-of-way and mostly below the grade of NE 185th Street and 5th Avenue NE, as shown in Alternative A1, Option 1.

L-007-006

The City of Shoreline recommends Sound Transit construct a track alignment that is at-grade as much as possible in order to minimize cost, visual and noise impacts. All elevated sections of the alignment need to be designed in a manner that does not impede any future modifications to the interchanges at NE 145th Street, NE 175th Street and NE 205th Street.

Four of the alternatives included in the DEIS include three stations in King County while the ST2 package only anticipated two, both of which are in Shoreline. The Preferred Alternative selected by the Sound Transit Board needs to include two light rail stations in Shoreline at NE 145th Street and NE 185th Street, consistent with the voter approved ST2 plan. Should funding be available, a third station in King County is acceptable; however, the quality of the stations and passenger facilities as well as the necessary mitigation for the impacts of the stations in Shoreline should not be compromised in order to fund the third station.

L-007-007

We understand that light rail passengers will travel to the station by a variety of modes – bus, bicycle, on foot and via automobile and it will be essential to accommodate them all. It is also very important that Sound Transit integrate passenger safety, comfort and convenience into the design of all facilities and transportation improvements serving the stations.

L-007-008

Please find enclosed a list of additional comments, issues and mitigation measures from the City of Shoreline in response to the Draft Environmental Impact Statement. The City would like Sound Transit to incorporate these into the Final Environmental Impact Statement. There are several items, specifically in regard to transportation impacts, where additional information is needed in order to accurately predict potential impacts and identify the appropriate mitigation. We anticipate that staff from both of our agencies will work to reach a resolution to these outstanding issues as part of the FEIS development and will continue to do so for other issues that arise as part of the FEIS development, system and station design and through operation of service. We trust that Sound Transit will fund the mitigation that we jointly agree are

L-007-004

Thank you for your comment stating a preference for Alternative A3, Option 2 for the proposed station at NE 145th Street.

L-007-005

Thank you for your comment stating a preference for Alternative A1, Option 1 for the proposed station at NE 185th Street.

L-007-006

The City's preferences for a Segment A alternative are noted and the letter as well as a summary of the comments were given to the Sound Transit Board after the close of the comment period. The Final EIS includes supporting documentation on proposed modifications in interchange areas. The Transportation Technical Report has further details on the transportation issues in the interchange areas.

L-007-007

Sound Transit is developing the project and its stations to be easily accessible by a variety of modes, and the agency has developed design requirements emphasizing factors including safety, convenience, and comfort for patrons; as the project moves beyond preliminary engineering and into final design, Sound Transit will continue to coordinate with the City in developing station designs.

L-007-008

Sound Transit appreciates the City's review of the EIS and for its collaboration in planning the Lynnwood Link Extension. Responses to the City of Shoreline's detailed comments follow.

L-007-008

necessary to protect the community, preserve safety and provide this much needed light rail system.

Thank you for your consideration of our comments. We look forward to continuing to work with Sound Transit on this important project. If you have any questions or need additional information, feel free to contact Alicia McIntire, Senior Transportation Planner, at 206.801.2483.

Sincerely,

Keith A. McGlashan
Mayor

Enc. City of Shoreline Comments, Lynnwood Link Extension Draft Environmental Impact Statement
April 2012 Screening Alternatives Comment Letter

CITY OF SHORELINE COMMENTS
LYNNWOOD LINK EXTENSION DRAFT ENVIRONMENTAL IMPACT STATEMENT

Transportation

General

L-007-009

- For each station, there will be impacts to nearby intersections and roadways that need to be mitigated. It will be Sound Transit's responsibility to fully mitigate for all transportation impacts resulting from the proposed stations. The City of Shoreline does not agree that Sound Transit will only be responsible for paying a portion of improvements at some locations. Sound Transit is responsible for all costs associated with mitigation for transportation impacts that result in failures to meet Shoreline's adopted concurrency standards. The specific improvements will be designed in coordination with the City's Transportation Planning Manager and Traffic Engineer to ensure they meet the City's design and operational standards. The City of Shoreline is currently considering the adoption of transportation impact fees and an updated concurrency methodology. Sound Transit would be subject to these regulations should they be adopted.

L-007-010

- All roadway improvements must be consistent with the City of Shoreline's adopted roadway standards including lane width, amenity zones, sidewalk width, bicycle facilities, stormwater management (including Low Impact Development) and parking. Improvements should be designed to minimize conflicts between nonmotorized modes (bicyclists and pedestrians) and vehicles. Roadway improvements should be extended to the nearest intersecting arterial.

L-007-011

- During the City's review of the traffic model developed for this project, several errors were noted. Sound Transit needs to work with City of Shoreline staff to identify and correct these errors. Additionally, it appears that the No Build scenarios developed in the model assumed significant growth and development around the stations in Shoreline. However, if light rail stations were not going to be developed in Shoreline, the growth assumptions around these stations would be significantly different, with much less growth planned in these areas. It is critical that the traffic model be accurately calibrated and coded correctly as this will influence the base level of service and model outputs. In addition to the specific transportation mitigation identified below, the corrections to the model may identify additional issues that require mitigation. Mitigation for any newly identified impacts will be discussed and agreed upon between Sound Transit and the City of Shoreline.

- The traffic analysis needs to incorporate the anticipated growth at the Point Wells site in southwest Snohomish County. This development is expected to generate approximately 11,600 daily vehicle trips by 2035 and all of these trips will travel through Shoreline, as the sole access point to the site is in Shoreline. Residents of this development that will use light rail are likely to travel to the station at NE 185th Street. If this growth was not incorporated into Sound Transit's traffic analysis, Sound Transit will need to do so. The results of this revised analysis shall be reviewed with the City of Shoreline. Mitigation for any newly identified impacts will be discussed and agreed upon between Sound Transit and the City of Shoreline.

L-007-009

While some details of the mitigation agreements with the City will depend on final design details, the Final EIS continues to state the impact that Sound Transit's project would create compared to No Action, and it defines Sound Transit's mitigation commitment to achieve future year conditions or better than with the No Build Alternative. While Sound Transit is committed to working with the City to develop solutions that could improve conditions that would be better than under the No Build Alternative, Sound Transit does not accept sole responsiblity for making transportation system improvements at locations that would be below standards even with the No Build Alternative alone. The Final EIS (Section 3.6) includes further details for the Preferred Alternative on how impacts related to stations will be mitigated, and it also has updated the analysis at a number of locations in response to other comments from the City. This section also explains how Sound Transit will coordinate with the City as the project advances, and how Sound Transit could partner with the City to incorporate the Lynnwood Link Extension's proposed improvements and mitigations within projects that the City itself might pursue to address future transportation demands related to its own anticipated growth.

L-007-010

Section 2.6 of the Draft EIS described Sound Transit's Environmental Practices and Commitments, which are directly related to how Sound Transit's design standards, applicable local agency design standards, and permitting processes will be used as the project progresses through final design and into construction. The section notes, "Sound Transit will work collaboratively with other jurisdictions to comply with all required permits and approvals needed for construction and operation."

L-007-011

Sound Transit appreciates the comments on growth levels from the City, noting that the original Draft EIS assumptions for station area

L-007-012

- No mitigation is proposed in the DEIS for NE 175th Street and Meridian Avenue N, either for the temporary impacts associated with construction or for permanent impacts. During construction at NE 185th Street, particularly if the bridge is closed for 9-12 months, the City of Shoreline anticipates that there will be significant traffic diversion to NE 175th Street. These temporary impacts will require mitigation. Sound Transit will need to work with the City of Shoreline to identify the appropriate mitigation for construction. The City of Shoreline believes that permanent traffic impacts to this intersection and corridor can be attributed to the presence of the light rail stations and that Sound Transit is responsible for mitigating these impacts. This intersection may require turn pockets (WB to NB right turn). Other mitigation may be required at the intersection or along the corridor. Sound Transit needs to perform additional analysis of this intersection and corridor and work with the City of Shoreline to identify the appropriate mitigation for impacts to them.

- Cut-through traffic on non-arterial streets in the vicinity of the stations is likely. Measures that are designed to prevent or minimize this cut-through traffic will be required. The City of Shoreline has an adopted Neighborhood Traffic Safety Program which was created to respond to residents' concerns about speeding, cut-through traffic, accidents and pedestrian safety on non-arterial streets. Additionally, the City has developed Neighborhood Traffic Action Plans to improve the safety, mobility and livability of the City's neighborhoods. Sound Transit should contribute funding to the City's existing programs or set aside funding to work with the City of Shoreline once the stations are complete and service is in operation to identify and fund solutions for five years that reduce/mitigate cut-through traffic.

- Any impacts to the roadway network that modify streets need to maintain the existing street grid and not result in new dead end streets.

L-007-013

- Improved bus service that feeds each station will be imperative. Although the specific number of routes and frequency of service is not known at this time, the stations need to be designed to handle the maximum bus service that is forecast to serve them. Because light rail will significantly change bus service in Shoreline, a comprehensive evaluation of all transit service in the City is needed to ensure that the stations have adequate bus facilities, other facilities in the City are adequately served and that feeder service to the stations is serving all neighborhoods in Shoreline. As part of Shoreline's station area planning process this and next year, the City will prepare a Transit Integration Plan that identifies policies addressing future transit needs throughout Shoreline once light rail service begins. This process will identify levels of service and areas the City wants to see served when future service changes are implemented. This will be a coordinated process with Metro, Community Transit and Sound Transit that looks at their current policies for service distribution and redistribution of service hours in conjunction with commencement of light rail service. The expected outcome will be an agreement with Metro, Community Transit and Sound Transit on policies that will direct future transit service integration.

L-007-014

- Safety for all transportation modes is a critical aspect of facility design and development of appropriate mitigation. With the operation of light rail service, the volumes of pedestrian, bicycle, bus and vehicular traffic will increase significantly around the stations and along the roadways serving them. Many of these roadways currently serve several, if not all, of these

developments were developed in coordination with the City. For the Final EIS analysis Sound Transit met with the City to update the assumptions on growth levels. Sound Transit also updated the traffic volumes to include traffic from the proposed Point Wells development. In addition to making these localized adjustments, the forecasts were updated relative to more recent population and employment growth assumptions produced by PSRC and to reflect growth in other areas. Updated analysis of the NE 185th Street Station area and other locations, including the impacts and related mitigation, are documented in the Final EIS and the Transportation Technical Report.

L-007-012

175th at Meridian: An analysis of construction-related impacts was conducted as part of the Draft EIS and, as noted in the comments, specific mitigation was not proposed at this intersection. The Final EIS contains a refined analysis of construction-related impacts and assesses potential impacts at this intersection. The analysis of traffic impacts during the permanent configuration was also revisited for the area around the NE 185th Street Station, including the intersection of NE 175th Street/Meridian Avenue. This location was not identified for mitigation as part of the project, however.

Cut through traffic: In Chapter 3, Transportation, Section 3.6 of the Draft EIS, Sound Transit acknowledges the need to mitigate cut-through traffic and states that the mitigation would be determined in conjunction with local jurisdictions. The Final EIS Chapter 3, Section 3.6, identifies mitigation measures Sound Transit has identified to minimize the potential for cut-through traffic impacts, including neighborhood traffic control strategies that can be implemented in collaboration with the City.

L-007-013

Sound Transit agrees that effective transit connections to the stations is

L-007-014 modes. As a result of the increased volumes, the conflicts between the various modes will increase significantly. For example, buses and bicycles will experience conflicts on shared roadways if buses are able to stop in a bicycle lane. Similarly, if kiss-and-ride spaces are located adjacent to bicycle lanes, there will be conflicts between bicycles and drivers as they enter and exit this area. Sound Transit needs to work with the City of Shoreline to examine the potential for conflicts between travel modes and identify the appropriate solutions to minimize conflicts and maximize safety.

L-007-015
- The DEIS states that potential transit priority treatments along N/NE 185th Street could be considered in the Final EIS. Sound Transit should install transit priority treatments along N/NE 185th Street as well as N/NE 145th Street, N/NE 155th Street and other primary transit corridors serving the light rail stations that are identified as part of the City's Transit Integration Plan.

L-007-016
- All of the alternatives will require demolition and reconstruction of the NE 195th Street pedestrian and bicycle bridge. Design and reconstruction of the bridge shall be coordinated with the City of Shoreline and should include: a minimum width of sixteen feet (eighteen feet is preferred to provide access for emergency or maintenance vehicles); improvements to the approaches that remove the bollards and improve accessibility; provide connections to 5th Avenue NE on the west side and a connection to the school through the park (within the Interstate 5 right-of-way); improved lighting, protection for users and graffiti proof materials. The bridge may be a location where Sound Transit is able to install art.
- In areas where there is connected surplus right-of-way that cannot be utilized for redevelopment purposes, separated pedestrian and bicycle facilities (such as a path adjacent to Interstate 5) should be constructed to facilitate nonmotorized travel to the stations.

L-007-017
- A separate Transportation Impact Analysis will be required for each station in Shoreline at the time of building permit submittal.

L-007-018
- The DEIS states that column locations associated with elevated alignments may constrain sight distances and that mitigation may be required for these impacts, however, no specific mitigation is proposed. The location of any columns must comply with the City's adopted standards for site distance. Column placement will be evaluated by the City during design. Sound Transit will need to work with the City of Shoreline to identify the appropriate mitigation for sight distance impacts.

L-007-019
- The City of Shoreline requires eight foot wide sidewalks adjacent to all uses other than single family residential and in areas where high pedestrian volumes are anticipated. This will be the case for all light rail stations and many of the pedestrian improvements that will serve the stations. Sidewalks must be separated from the travel lane by an amenity zone that is at least five feet wide.

L-007-020
- The construction of any improvements along the west side of Interstate 5, including parking structures and rebuilt bridges, shall not impede the potential for future construction of a southbound Interstate 5 collector-distributor lane from NE 205th Street to NE 145th Street.

very important, and appreciates the City of Shoreline's interest in developing its own Transit Integration Plan to also consider citywide routes and services. Chapter 3 of the EIS describes the transit integration planning process that Sound Transit anticipates for the project as part of the later operational planning steps, working with King County, Community Transit, and the local jurisdictions. The City's policy statements would certainly help support that process, but the transit agencies already have established service planning steps that they must follow in making service adjustments, and levels of service also depend on available revenues for local service. Sound Transit's own service adjustment changes also have a defined process, and are made under the authority of the Sound Transit Board. Sound Transit looks forward to working collaboratively with the City and the other transit agencies during the transit integration process for the project overall, but a separate agreement with the City to direct future service planning is not consistent with the process defined for the project and used for previous projects implemented by the agency.

L-007-014

Sound Transit agrees that safe and convenient access to the stations is important. Sound Transit will work with the City during final design to develop the detailed design for the project.

L-007-015

The Draft EIS did not identify transit priority as a mitigation measure separate from other measures that could be considered to address congestion the project could cause in station areas. Transit priority continues to be noted as a supporting improvement that could be made in partnership with the City of Shoreline, King County Metro, and Community Transit, but it is not specifically part of the proposed project.

NE 145th Street Station

L-007-021

- The City of Shoreline is currently considering annexation of 145th Street and has begun conversations with Seattle and King County regarding this possibility. Should the annexation occur and the roadway be controlled entirely by the City of Shoreline, improvements on 145th Street would be subject to Shoreline adopted roadway and intersection standards and roadway mitigation will be subject to Shoreline's adopted standards.

L-007-022

- The DEIS mentions the current sidewalks on NE 145th Street, however, it fails to adequately describe their very poor condition. Sidewalks on NE 145th Street that would serve the station are substandard, do not meet ADA requirements and often contain barriers to travel, such as utility poles and mailboxes. The pedestrian environment crossing the Interstate 5 overpass is also uncomfortable, with narrow sidewalks and no buffer between pedestrians and vehicles. Other nearby streets connecting to the station are also in need of new or improved sidewalks. In order to facilitate pedestrian access to this station, Sound Transit should construct the following pedestrian improvements. These improvements are consistent with the City of Shoreline's adopted Transportation Master Plan.
  - Reconstruct sidewalks on both sides of NE 145th Street from 1st Avenue NE to 8th Avenue NE to Shoreline city standards. This is a reasonable walking zone to connect nearby residents and Lakeside school attendees along a busy and severely substandard arterial street walkway to the station at NE 145th Street.
  - Improve the pedestrian environment at the Interstate 5 interchange through wider sidewalks that are separated from the travel lanes and safer crossings. This includes the pedestrian crossing at the southbound on-ramp to Interstate 5, as the City of Shoreline does not agree with the assumption that additional traffic will not affect pedestrian safety at Lakeside High School and Middle School as stated in the DEIS.
  - Construct sidewalks on 1st Avenue NE from NE 145th Street to NE 155th Street. This is a reasonable walking distance to connect nearby residents coming from west of Interstate 5.
  - Expand the width of existing sidewalks on NE 145th Street and 5th Avenue NE to eight feet along the frontage of the station as well as at nearby bus stops and from those bus stops to the nearest intersection.
  - Additional sidewalks on non-arterial streets near the station may also be required to facilitate pedestrian movement and safety.
  - Any walkways from the parking structure to the station must be safe, comfortable and provide weather protection for pedestrians.

L-007-023

- Bus service to the station will be critical to provide an option for those who cannot or do not wish to drive in order to access light rail. The following transit improvements are needed at this station:
  - Depending upon how buses are routed to serve the station, there need to be safe facilities for riders boarding and deboarding buses and crossing streets, where necessary. This will be of particular importance if all bus stops are located on-street rather than within the station area.

L-007-016

While design details would be further developed during final design, Sound Transit will coordinate with the City and with Washington State Department of Transportation (WSDOT) for the design and reconstruction of the bridge, and will conform with the applicable standards, permits, and approvals required by the City and WSDOT. The anticipated minimum bridge width would be 14 feet, consistent with WSDOT Design Manual 1510.14(1), but a wider width could be considered. Facilities would be ADA compatible, replace existing connections, and would meet other safety and security requirements and facility design standards. Other beneficial uses would also be considered, such as providing additional replacement vegetation for areas that must be cleared for the project.

L-007-017

Sound Transit will continue to work with the City to meet permitting requirements during the project's final design and permitting stages, but believes that the EIS analysis provides a reasonable basis for determining transportation impact levels for the stations individually as well as the project overall. On other Sound Transit projects, some jurisdictions have adopted the SEPA EIS and included supplemental information for intersection operations with final design details, or added nearer term or year-of-opening traffic projections.

L-007-018

Sound Transit will minimize site distance constraints to extent possible consistent with Design Criteria manual. However, left turns from side streets or driveways under the elevated guideway would likely be restricted and rerouted to the nearest signalized intersection for left turns or U-turns. The Final EIS clarifies the previous statement on sight distances.

L-007-023

- The City supports development of a transit patron loading and unloading area that is off-street in order to minimize street crossings and maximize safety for riders, similar to what is proposed at NE 185th Street. This area needs to be adequate to provide ample space for the various routes serving it, including space for additional bus service as demand grows.
- For safety purposes, if bus stops remain on-street the eastbound bus stop at NE 145th Street and 5th Avenue NE/Interstate 5 should be far side, not near side.

L-007-024

- It is unlikely that significant bicycle improvements will be installed on 145th Street in conjunction with the station development. However, bicyclists are likely to access the station via alternate routes. N/NE 155th Street will serve as the primary east-west route for bicyclists traveling to and from the station as it currently has bicycle lanes from Midvale Avenue N to 5th Avenue NE (bicycle lanes will be extended east to 15th Avenue NE by the City in 2014). Bicyclists are likely to access N/NE 155th Street and the NE 145th Street station and the station via 5th Avenue NE, 10th Avenue NE and Meridian Avenue N. In order to facilitate bicycle access to this station, Sound Transit should construct the following bicycle improvements. These improvements are consistent with the City of Shoreline's adopted Transportation Master Plan.
  - Install bicycle lanes on 5th Avenue NE from NE 145th Street to NE 185th Street. These lanes will also serve the NE 185th Street station.
  - Install bicycle lanes on Meridian Avenue N from N 145th Street to N 200th Street. These lanes will also serve the NE 185th Street station.
  - Install sharrows on 10th Avenue NE from NE 155th Street to NE 175th Street.
  - Install wayfinding signage directing bicyclists to the station along new and existing bicycle facilities. This signage shall be consistent with the City of Shoreline's wayfinding program.
  - Install facilities along new and existing bicycle routes serving the station to minimize the conflicts between bicyclists and buses, including improvements that prevent buses from blocking bicycle lanes at stops.
- Install a separated nonmotorized trail adjacent to Interstate 5/in the Interstate 5 right-of-way from NE 145th Street to NE 155th Street.

L-007-025

- The northbound Interstate 5 on-ramp is currently identified as a High Accident Location and should be signalized for vehicles and pedestrians as suggested in the DEIS.

L-007-026

- The intersection/interchange and NE 145th Street, Interstate 5 and 5th Avenue NE is extremely complicated. The City of Shoreline has concerns about the traffic model results and potential mitigation for this area identified in the DEIS. For example:
  - Potential mitigation at NE 145th Street and 5th Avenue NE includes adding a protected right turn phase from northbound to eastbound traffic. The City of Shoreline disagrees that this mitigation will address the identified problem.
  - The City of Shoreline has concerns about the safety and operation of the garage entrance/exit onto 5th Avenue NE (Option 2).

Due to the close proximity of the existing intersections, the operation of each individual intersection can impact others. The existing signals at the interchange, in addition to those proposed, need to be evaluated as part of the entire corridor/coordinated system. This

L-007-019

Comment acknowledged. As noted previously, Sound Transit will work with the City during final design and permitting to address these detailed design questions.

L-007-020

The conceptual design for the project considers the potential for planned improvements along I-5, as outlined in the Compatibility Report described in Chapter 2, which was developed by Sound Transit and WSDOT, and which anticipates an additional two lanes to be added to I-5 in this area in the future.

L-007-021

As noted previously, Sound Transit is committed to consulting with local jurisdictions to successfully meet the conditions required to permit the project. The Final EIS provides additional detail for mitigation measures, including design refinements, for the project to resolve environmental impacts.

L-007-022

Sound Transit recognizes the City's interests in the conditions of its sidewalk system and in addressing safety concerns in its current system. As is appropriate for an EIS that is meant to identify signficant environmental impacts for a proposed action, the EIS would not include a detailed inventory of sidewalk conditions around station areas, although the Transportation Technical Report does identify gaps. A number of the areas that are noted in the City's comments are included in the refined design developed for the Preferred Alternative. However, where the project does not alter existing facilities that may have current deficiencies, particularly in areas outside the immediate station area, the EIS continues to find that the potential for increased traffic alone does not create a safety impact. Continued growth in traffic would occur with

L-007-026

evaluation should incorporate the location of the parking garage access, off-street transit facility ingress and egress points and the northbound on-ramp. Alternate locations for the parking garage ingress/egress should be examined, including a northern location that is accessed from a roadway adjacent to the on-ramp. . All improvements at this intersection/interchange need to be evaluated simultaneously for all modes to determine the appropriate mitigation at this location. Sound Transit will need to work with the City of Shoreline to identify appropriate mitigation for this intersection.

L-007-027

- The potential mitigation identified in the DEIS for NE 145th Street and 12th Avenue NE includes adding a two way left turn lane/refuge area on NE 145th Street. The City of Shoreline is concerned that this improvement will encourage drivers to use 12th Avenue NE as a cut through route, particularly when 15th Avenue NE is congested. The City of Shoreline disagrees with this proposed mitigation and recommends that it not be installed. The modeling should examine the impacts on 15th Avenue NE at NE 145th Street that this removal may cause. Additional mitigation may be required for 15th Avenue NE and Sound Transit will need to work with the City of Shoreline to identify the appropriate mitigation.

- The intersection at Meridian Avenue N and NE 145th Street is a high accident location. In order to improve safety, the intersection will need improvements in the form of northbound and southbound left turn pockets and signal phasing with protected turn movements. Left turn pockets for eastbound and westbound traffic on NE 145th Street may also be required. Sound Transit will need to work with the City of Shoreline to identify the appropriate mitigation for this intersection.

NE 185th Street Station

L-007-028

- Sidewalks already exist in much of the area around the station location. These sidewalks need to be adequate for anticipated pedestrian volumes. In order to facilitate pedestrian access to this station, Sound Transit should construct the following sidewalk improvements. These improvements are consistent with the City of Shoreline's adopted Transportation Master Plan.
  - Expand the width of existing sidewalks on NE 185th Street to eight feet along the frontage of the station, construct eight foot wide sidewalks along the transit center frontage, at nearby bus stops and from those bus stops to the nearest intersection. Construct a plaza and sidewalks along the station frontage adjacent to the transit center.
  - Construct sidewalks on NE 180th Street from 10th Avenue NE to 15th Avenue NE and 10th Avenue NE from NE 175th Street to NE 195th Street and the NE 195th Street pedestrian/bicycle bridge. This is a reasonable walking zone to connect riders coming from North City and north and east of the station.
  - Construct sidewalks on 5th Avenue NE from NE 185th Street to NE 195th Street. This will connect riders to the Interurban-Burke Gilman Trail connector, which is expected to be a major nonmotorized route to the station. It is a reasonable walking zone to connect riders coming from the north of the station.
  - Construct sidewalks on 5th Avenue NE/7th Avenue NE from NE 175th Street to NE 185th Street. This is a reasonable walking zone to connect riders coming from south of the station.

or without the project, and the City's interest in addressing safety issues, consistent with its Transportation Master Plan, would be present in any case.

L-007-023

The Final EIS and its accompanying design documents have developed further details on access features for the Preferred Alternative. However, these designs are preliminary and details would be confirmed during final design, in collaboration with the City, WSDOT, and transit providers. A near-side bus stop for eastbound buses on NE 145th Street was included in the concept design because it required one street crossing versus two, to reach the station, but again, this configuration, as with all other elements in station areas, reflects the major features that define the physical footprint and operating characteristics that form the basis of the impact analysis contained in the EIS.

L-007-024

The major features of the Preferred Alternative are described in the Final EIS, and this includes the primary access facilities for the stations. During final design, Sound Transit will coordinate with the City to explore opportunities for improving station access. Some of the specific features described in the City's comment are more detailed than the conceptual to preliminary design developed to support the EIS, and these features would be considered in coordination with the City during final design.

L-007-025

The Final EIS has further details on the proposed treatment for the on-ramp intersection. However, final decisions would follow final design, in coordination with WSDOT, the City, and other involved agencies.

L-007-028

- Additional sidewalks on non-arterial streets near the station may also be required to facilitate pedestrian movement and safety.
- Should a parking structure be located on the east side of the freeway, any walkways from the structure to the station must be safe, comfortable and provide weather protection. Should a parking lot be constructed in the Seattle City Light right-of-way, sidewalks to the station should be widened to eight feet and provide weather protection.

- The NE 185th Street bridge will need improvements for pedestrians that are safe, comfortable and provide weather protection. This may come in the form of significant improvements or reconstruction of the NE 185th Street bridge. Should the parking structure be located on the west side of the freeway, a separate pedestrian overcrossing from the parking structure across Interstate 5 to the station may be required. The bridge should provide a strong connection to the Shoreline Center. Sound Transit will need to work with the City of Shoreline to identify the appropriate design and amenities for the bridge.

- Bus service to the station will be critical to provide an option for those who cannot or do not wish to drive in order to access light rail. The following transit improvements are needed at this station:
  - The NE 185th Station is likely to serve as a transit center, with Community Transit considering termination of their Swift BRT service there. The bus facilities at this station should be off-street and need to be adequate to provide ample space for the various routes serving it, including space for additional bus service as demand grows.
  - Safe facilities for riders boarding and deboarding buses and crossing streets should also be installed.
  - Bus pullouts are needed on NE 185th Street at stops near the station to minimize conflicts with bicycles and allow traffic to pass.

L-007-029

- Bicycle safety: N/NE 185th Street currently has bicycle lanes from Midvale Avenue N to 1st Avenue NE (The bicycle lanes will be continued to 10th Avenue NE by the City in fall 2013) and will be the primary east-west bicycle route serving the station. NE 195th Street will be the secondary east-west bicycle route serving the station. Bicyclists are likely to access NE 185th Street and the station via 1st Avenue NE, 5th Avenue NE, 7th Avenue NE and NE 195th Street. Bicyclists coming from North City and east of the station are likely to travel on NE 180th Street, 10th Avenue NE and NE 185th Street. Improvements on these and other routes bicyclists will use to access the station should be installed. The conflicts between bicyclists and buses should also be minimized and buses cannot block bicycle lanes. In order to facilitate bicycle access to this station, Sound Transit should construct the following bicycle improvements. These improvements are consistent with the City of Shoreline's adopted Transportation Master Plan.
  - Install bicycle lanes on 5th Avenue NE from NE 145th Street to NE 185th Street. These lanes will also serve the NE 145th Street or NE 155th Street station.
  - Install bicycle lanes on Meridian Avenue N from N 145th Street to N 200th Street. These lanes will also serve NE 145th Street or NE 155th Street station.
  - Install bicycle lanes on 5th Avenue NE from NE 185th Street to NE 195th Street. These lanes will connect with the Interurban-Burke-Gilman Connector route on NE 195th Street.

L-007-026

Sound Transit agrees operations in this area are complex, and that final design efforts will continue to explore the best options for ensuring effective operations. The Final EIS Chapter 3, Transportation, and the Transportaton Technical Report have the results of an updated analysis of the NE 145th Street Station area using microsimulation software. This tool was also used to evaluate the effectiveness of mitigation measures described in the Final EIS.

L-007-027

Section 3.6, Potential Mitigation Measures of the Draft EIS, describes a potential measure to address the impacts at these intersections. As the Draft EIS states, Sound Transit will provide improvements as agreed to by the local jurisdiction. Sound Transit will continue coordination with the City of Shoreline to develop mitigation measures that are mutually acceptable.

L-007-028

Sidewalks: Sound Transit recognizes the City's interests in the conditions of its sidewalk system and in addressing safety concerns in its current system. As is appropriate for an EIS that is meant to identify significant environmental impacts for a proposed action, the EIS would not include a detailed inventory of sidewalk conditions around station areas, although the Transportation Technical Report does identify gaps. A number of the areas that are noted in the City's comments are included in the refined design developed for the Preferred Alternative. However, where the project does not alter existing facilities that may have current deficiencies, particularly in areas outside the immediate station area, the EIS continues to find that the potential for increased traffic alone does not create a safety impact. Continued growth in traffic would occur with or without the project, and the City's interest in addressing safety issues, consistent with its Transportation Master Plan, would be present in any case.

L-007-029

- Install bicycle lanes on 1st Avenue NE from NE 185th Street to NE 195th Street. These lanes will connect with the Interurban-Burke-Gilman Connector route on NE 195th Street.
- Install wayfinding signage directing cyclists to the station along new and existing bicycle facilities. This signage shall be consistent with the City of Shoreline's wayfinding program.
- Install facilities along new and existing bicycle routes serving the station to minimize the conflicts between bicyclists and buses or vehicles, including improvements that prevent buses from blocking bicycle lanes at stops. Kiss-and-ride facilities should not be located adjacent to bicycle facilities.

L-007-030

- The northeast corner of the intersection at NE 175th Street and 5th Avenue NE has a tight turning radius, which only the shortest Metro buses can navigate. If it is anticipated that larger buses will be utilizing this intersection to serve the station at NE 185th Street, this radius will need to be improved by Sound Transit.

- The potential improvements for 5th Avenue NE on the west side of Interstate 5 and 7th Avenue NE (5th Avenue NE on the east side) include adding a two-way left turn lane or refuge area on NE 185th Street. In addition to a turn lane/refuge area, the City of Shoreline believes a traffic signal will be needed for one or both of these intersections, depending upon the location of the parking garage, the transit center function and the realignment of 7th Avenue NE. It is likely that a signal will be needed at the transit center so that buses can exit quickly and safely. Sound Transit needs to perform additional analysis of these intersections and work with the City of Shoreline to identify the appropriate mitigation for them. Any roadway improvements will need to be in compliance with the City's road standards, including installation of bicycle and pedestrian facilities.

- Regardless of the alternative selected, the entire roadway from 1st Avenue NE to 10th Avenue NE will need to be rechannelized with a three lane cross-section and bicycle lanes to provide for continuous lanes. This will require removal of on-street parking.

- The analysis states that Meridian Avenue N and NE 185th Street will operate at LOS F in the No Build and all of the build options. The City of Shoreline believes that the No Build LOS F may be based on overestimated volume assumptions. The City assumed significant growth around the light rail stations as part of its traffic model provided to Sound Transit for analysis. However, if no light rail station is present, the assumptions would be very different for this area, with almost no growth planned in the vicinity. It appears Sound Transit's No Build alternative assumed the growth levels around light rail station areas in Shoreline would be the same with or without the light rail station. The City of Shoreline believes that the impacts to this intersection are significantly different under the No Build alternative and all options for this station. The City of Shoreline also believes that the proposed improvements of only adding protected-permissive phasing will not be sufficient to correct the level of service deficiencies and that the installation of northbound and southbound add/drop lanes is necessary to mitigate the impacts. Sound Transit needs to perform additional analysis of this intersection and work with the City of Shoreline to identify the appropriate mitigation for it for all options.

NE 185th Street Bridge: While design details would be further developed during final design, Sound Transit will coordinate the provision of acceptable non-motorized crossing facilities adjacent to or part of the 185th Street Bridge if needed to facilitate access to the station.

L-007-029

The major features of the Preferred Alternative are described in the Final EIS, and this includes the primary access facilities for the stations. During final design, Sound Transit will coordinate with the City to explore opportunities for improving station access. Some of the specific features described in the City's comment are more detailed than the conceptual to preliminary design developed to support the EIS, and these features would be considered in coordination with the City during final design.

L-007-030

As the Draft EIS states, Sound Transit will provide improvements as agreed to by the local jurisdiction. Sound Transit will continue coordination with the City of Shoreline to develop mitigation measures that are mutually acceptable.

NE 185th Street at 5th Avenue NE: No adverse impacts, but the Preferred Alternative includes some improvements in the 185th Station area.

NE 185th Street between 1st Avenue NE and 10 Avenue NE: No adverse impacts, potential coordinated improvements are possible along NE 185th Street between 1st Avenue NE and 10th Avenue NE.

NE 185th Street and Meridian Avenue N: The revised analysis shows that the Project causes a failing level of service (LOS) per local jurisdiction standards. Proposed mitigation includes adding protected-

L-007-030

- The DEIS identifies the need for improvements at 10th Avenue NE (add an eastbound right turn pocket) only with the parking lots, not parking garages. The City of Shoreline believes improvements will be needed at this intersection for all of the parking options at this station location. Sound Transit needs to perform additional analysis of this intersection and work with the City of Shoreline to identify the appropriate mitigation for it for all options.

L-007-031

- A parking structure that is located on the west side of Interstate 5 could be jointly used by the Shoreline Center, particularly visitors to the Shoreline Stadium. The potential for shared use during off-peak hours should be explored to maximize the public benefit of this facility.

NE 155th Street Station

L-007-032

As the City of Shoreline cover letter dated September 16, 2013 states, the City strongly prefers that a light rail station be located at NE 145th Street rather than NE 155th Street. The following comments outline the City of Shoreline's concerns and mitigation requirements should a station be located at NE 155th Street. These comments should not be construed as endorsement of the proposed NE 155th Street station location.

L-007-033

- The pedestrian environment around the potential station at NE 155th Street requires improvements. In order to facilitate pedestrian access to this station, Sound Transit should construct the following sidewalk improvements. These improvements are consistent with the City of Shoreline's adopted Transportation Master Plan.
  - Construct improvements to the pedestrian environment on NE 155th Street under the freeway including wider sidewalks that are separated from the travel lanes and pedestrian scale lighting.
  - Expand the width of existing sidewalks on NE 155th Street to eight feet along the frontage of the station, at nearby bus stops and from those bus stops to the nearest intersection.
  - Construct sidewalks on NE 1st Avenue NE from NE 145th Street to NE 155th Street. This is a reasonable walking zone to connect nearby residents and for riders coming the south of the station.
  - Construct/install new and improved pedestrian crossings of NE 155th Street at 1st Avenue NE and at the bus stops. Sound Transit needs to work with the City to identify the appropriate design for these crossings, which may include signalization.
  - Additional sidewalks on non-arterial streets near the station may also be required to facilitate pedestrian movement and safety.
  - Any walkways from the parking structure to the station must be safe, comfortable and provide weather protection.

L-007-034

- Bus service to the station will be critical to provide an option for those who cannot or do not wish to drive in order to access light rail. The following transit improvements are needed at this station:
  - Depending upon how buses are routed to serve the station, there need to be safe facilities for riders boarding and deboarding buses and crossing streets, where necessary. This will be of particular importance if all bus stops are located on-street rather than within the station area.

permissive phasing to the northbound and southbound left-turn movements. This improves intersection operations similar to No Build conditions.

NE 185th Street and 10th Avenue NE: The revised analysis does not identify any adverse impacts and therefore no traffic improvements or mitigation are identified at the NE 185th Street and 10th Avenue NE intersection.

L-007-031

The parking supply anticipated to be needed for the transit project has continued to be the primary consideration in the currently proposed design. For the Preferred Alternative, Sound Transit has included a design option for a joint use parking garage on Shoreline School District Property at 185th Street adjacent to the Shoreline Stadium.

L-007-032

Sound Transit acknowledges the City's preference for a station at NE 145th Street over NE 155th Street, which also was noted in the Draft EIS.

L-007-033

The alternatives featuring a NE 155th Street Station have remained in the Final EIS, but as with the Preferred Alternative, the scope of the proposed features are focused on station areas rather than on improvements needed elsewhere in the transportation system where inadequacies may currently exist. Several of the issues would involve final design details; Sound Transit will develop final design details for the project selected to be built in coordination with the City.

L-007-034

As noted above, the conceptual design elements for the alternatives with

L-007-034

- Develop a transit patron loading and unloading area that is off-street in order to minimize street crossings and maximize safety for riders, similar to what is proposed at NE 185th Street. This area needs to be adequate to provide ample space for the various routes serving it, including space for additional bus service as demand grows.
- Bus pullouts are needed on NE 155th Street at stops near the station to minimize conflicts with bicycles and allow traffic to pass.

L-007-035

- N/NE 155th Street currently has bicycle lanes from Midvale Avenue N to 5th Avenue NE (bicycle lanes will be extended east to 15th Avenue NE by the City in 2014) and will be the primary east-west bicycle route serving the station. Bicyclists are likely to access NE 155th Street and the station via 5th Avenue NE, 10th Avenue NE and Meridian Avenue N. In order to facilitate bicycle access to this station, Sound Transit should construct the following bicycle improvements. These improvements are consistent with the City of Shoreline's adopted Transportation Master Plan.
  - Install bicycle lanes on 5th Avenue NE from NE 145th Street to NE 185th Street. These lanes will also serve the NE 185th Street station.
  - Install bicycle lanes on Meridian Avenue N from N 145th Street to N 200th Street. These lanes will also serve the NE 185th Street station.
  - Install sharrows on 10th Avenue NE from NE 155th Street to NE 175th Street.
  - Install bicycle facilities on 1st Avenue NE from NE 145th Street to NE 155th Street. The City's Transportation Master Plan did not anticipate the need for bicycle facilities on this street, as it was assumed that a light rail station would be located at NE 145th Street rather than NE 155th Street. Sound Transit needs to work with the City of Shoreline to identify the appropriate bicycle facilities for this roadway.
  - Install wayfinding signage directing cyclists to the station along new and existing bicycle facilities. This signage shall be consistent with the City of Shoreline's wayfinding program.
- Install facilities along new and existing bicycle routes serving the station to minimize the conflicts between bicyclists and buses, including improvements that prevent buses from blocking bicycle lanes at stops.

L-007-036

- The City of Shoreline agrees that the eastbound right turn lane at Aurora Avenue N and N 155th Street may need to be changed to a shared through/right-turn lane as suggested in the DEIS. Sound Transit needs to perform additional analysis of this intersection and work with the City of Shoreline to identify the appropriate mitigation for it.
- Potential mitigation at NE 155th Street and 1st Avenue NE includes adding a right turn pocket. The City of Shoreline disagrees that this mitigation will address the identified problem and believes this intersection will require signalization. Sound Transit needs to perform additional analysis of this intersection and work with the City of Shoreline to identify the appropriate mitigation for it.
- Potential mitigation at NE 165th Street and 5th Avenue NE includes adding a second northbound through lane on 5th Avenue NE. The City of Shoreline disagrees that this mitigation will address the identified problem and believes this intersection may require signalization. Sound Transit

the NE 155th Street Station remain largely as discussed in the Draft EIS. As with the Preferred Alternative, Sound Transit will develop final design details for the project selected to be built in collaboration with the City, WSDOT, and transit providers. All facilities would be designed to provide safe and effective access.

L-007-035

The alternatives featuring a NE 155th Street Station have remained in the Final EIS, but as with the Preferred Alternative, the scope of the proposed features are focused on station areas rather than on improvements needed elsewhere in the transportation system where inadequacies may exist. Several of the issues would involve final design details; Sound Transit will develop final design details for the project selected to be built in coordination with the City.

L-007-036

Not affected by the Preferred Alternative. For the Final EIS discussion, options to address the impact for other light rail alternatives could include a range of measures ranging from signalization to the proposal already included in the Draft EIS. As noted in the Draft EIS, Sound Transit would provide the potential improvements discussed or other improvements as agreed to by the local jurisdiction during final design.

L-007-036 needs to perform additional analysis of this intersection and work with the City of Shoreline to identify the appropriate mitigation for it.

L-007-037
- Provide a correction in the FEIS that there is only one option remaining for paratransit and passenger pick up/drop off locations and that it is off street.

L-007-038 *Parking*

- The parking analysis evaluated utilization between 9 am and 11 am and 1 pm and 4 pm. While it is likely that cars will be parked there during those times, drivers that will park in the neighborhoods are likely to arrive earlier and leave later, when local residents still have vehicles parked on street or are returning home. Thus, Sound Transit did not evaluate the worst case scenario for parking impacts. The City of Shoreline is uncertain that the potential for spillover parking is low simply because a large garage is planned as stated in the DEIS, as this does not seem consistent with Sound Transit's experience elsewhere. The DEIS states "For parking controls agreed to with the local jurisdiction, Sound Transit would be responsible for the cost of installing the signage or other parking controls for 1 year after opening the light rail system. The local jurisdictions would be responsible for monitoring the parking controls and providing all enforcement and maintenance". The City of Shoreline does not agree with this mitigation. Sound Transit should set aside funding to work with the City of Shoreline once the stations are complete and service is in operation to identify and fund solutions that reduce/mitigate spillover parking. This may include funding the establishment and enforcement of a residential parking zone for five years. Sound Transit could also consider utilizing parking revenues to fund parking management/enforcement in Shoreline.

Land Use

L-007-039
- When describing the City of Shoreline's Comprehensive Plan Land Use Policies, the DEIS states "The land use policies would further guide land use regulations for station areas at NE 145th and NE 185th streets, including transit-supportive developments with residential components mixed with complementary commercial and office uses". Please note that the City's policies will recommend high-density residential in the station areas around NE 145th Street and NE 185th Street as part of transit-supportive developments.

- As part of its light rail station subarea planning process, the City of Shoreline will explore the creation of development regulations addressing the location of commercial/retail uses as part of parking structures. Sound Transit is subject to the City's land use regulations when developing the light rail stations and associated facilities.

Visual and Aesthetic Resources

L-007-040
- Removal of significant trees is regulated by and may be partly mitigated by replacement as prescribed in the Shoreline Municipal Code. Mitigation for the visual impacts associated with tree removal should include replacement with larger sized trees. Sound Transit should plant replacement vegetation as early as possible to help minimize visual impacts. This may include installation of replacement vegetation outside of disturbance areas prior to construction.

L-007-037

The text describing paratransit elements for the NE 155th Station has been updated for the Final EIS.

L-007-038

The parking inventory was performed during the times when the parking garages are assumed to have the highest utilization and the potential for spillover parking would be greatest. The Final EIS describes the proposed mitigation approach to address the potential for spill-over parking.

L-007-039

The Final EIS has been updated to reflect the City's most current adopted Comprehensive Plan Land Use policies.

L-007-040

Sound Transit will comply with the City of Shoreline tree replacement regulations as applicable and feasible. The City of Shoreline's comments about mitigation for loss of significant trees, including larger specimens, as well as the incorporation of public art, are consistent with the list of mitigation measures on Draft EIS pages 4-91 through 4-93, which include landscaping and elements providing visual interest. Refinement of mitigation approaches will continue through final design.

L-007-040

- It will be important to coordinate with the City regarding station design. The design must comply with the City's commercial, station area or other applicable design standards, depending on the ultimate zoning of the station sites. Other potential mitigation for visual impact would be to use 1% for art on areas that have a high visual impact and low potential for screening.

Noise and Vibration

L-007-041

- Noise walls should be relocated and/or constructed as early as possible to help minimize noise impacts associated with construction.
- Sound Transit should work with property owners both during the design and construction phases to ensure all noise and vibration impacts have been properly mitigated. Once the project is completed and service is operational, Sound Transit should continue to work with property owners to ensure all noise and vibration impacts have been mitigated.

Ecosystem Resources

L-007-042

- Mitigation for wetland impacts shall be as described in Shoreline Municipal Code, including replacement at the ratio described in the code and no net loss of function and value of wetland resources.

Water Resources

L-007-043

- Page I-4.9-7 (Appendix I) lists the stormwater design manuals for jurisdictions in which construction will occur. While these are the current requirements, the National Pollutant Discharge Elimination System Phase II permit will require all jurisdictions to adopt the 2012 Stormwater Manual or equivalent by end of 2016. The stormwater design manuals in some of the jurisdictions are likely to change with the adoption of new requirements.
- All construction and improvements must comply with the City's adopted regulations for stormwater management, including Low Impact Development.

Geology and Soils

L-007-044

- Figure I-4.11-2b does not identify peat located near Ronald Bog located at NE 175th Street and Meridian Avenue N, just west of Interstate 5. It is known that peat exists in this area, however, it is unknown the extent and/or if it extends east of Interstate 5. The area under Interstate 5 was a wetland prior to construction. Since peat is not shown where it is known to exist, soil conditions should be verified in the area east of Interstate 5 where support may be needed. Sound Transit should conduct additional borings in that area to confirm conditions.

Public Services, Safety and Security

L-007-045

- The proposed light rail station at NE 155th Street places the fire station between the light rail station and the parking facility. This location and layout will interfere with the existing Fire

L-007-041

For at-grade noise walls, it is normally the practice to install these walls early in the construction process to aid in the reduction of construction noise levels. This statement was included in the construction noise mitigation section.

Sound Transit will work with property owners during the design, construction, and operation phases of the project to ensure noise and vibration impacts are mitigated to levels below FTA impact thresholds and local criteria.

L-007-042

As noted in the Draft EIS Chapter 2, Environmental Practices and Commitments, Sound Transit will obtain permits required under local critical area codes, including those of the City of Shoreline, and will meet the permit requirements. Where major compensatory mitigation measures are known, potential sites were identified in the Draft EIS and have been refined in the Final EIS, and the anticipated standards are discussed, with details to be further confirmed during permitting phases of the project.

L-007-043

Thank you for your comment pertaining to the stormwater design manuals and the use of low-impact development (LID). Sound Transit will abide by all applicable stormwater design standards and latest approved manuals in the City of Shoreline code, as well as with the updated NPDES Phase II permit requirements. In addition, Sound Transit requires all projects to consider LID methods as a first choice for stormwater treatment (Design Criteria Manual, July 2012), and the agency will continue to review the feasibility of LID strategies as part of the project design.

L-007-045

Station just east of Interstate 5 due to increased bus, vehicle, pedestrian and bicycle traffic generated by the light rail station, thereby negatively impacting emergency response times. Depending on the specific design of the rail line itself and/or the station and the subsequent increase in traffic, the fire department may have to consider moving the facility all together. Sound Transit shall work with the Shoreline Fire Department to ensure emergency service functions and operations can continue during construction and with operation of the light rail station or relocate the fire station.

- In addition to other public safety providers, Sound Transit Police will also have jurisdiction at the light rail stations, which will influence response times. The impacts of this coordination and strategies to reduce redundancies between providers should be described in the FEIS.

- The majority of existing open-air (non-tunnel) Sound Transit stations do not have security personnel physically present as a deterrent. Many stations are monitored via camera by security personnel, who then have to report activity via phone and radio, creating ineffective prevention and response. At minimum, the physical presence of security personnel actively patrolling the facilities and buses serving the stations, combined with CCTV active monitoring, are necessary for prevention and timely reporting. Security shall be funded by Sound Transit.

- Safety and security needs to be fully integrated with design of the stations, parking structures and other facilities. Design of facilities shall be coordinated with the City of Shoreline Police Department. Safety issues that need to be addressed include:

    - Integration of Crime Prevention Through Environmental Design (CPTED) into all facilities.
    - Elevated platform emergency response requires more planning and redundant design features due to choke points inherent to mass movement to the boarding platform.
    - Sound Transit should consider developing City of Shoreline stations as closed system design, requiring pay at surface/grade level in order to enter areas for ridership flow and access to light rail vehicles.
    - Guideways will need significant passive barriers that prevent access to elevated, as well as at grade, locations not intended for rider use. Barriers should be integrated into overall security and CPTED design, as it would serve as a deterrent to theft and vandalism.

Utilities

L-007-046

- The DEIS identifies a 24-inch diameter water line crossing at NE 185th Street (this is incorrectly identified as a Shoreline Water District water line; it is a Seattle Public Utilities water line). Any modifications to or replacement of the NE 185th Street bridge must be sure not to impact this line or disrupt service to customers. This water line may need to be replaced. The City of Shoreline is in the process of acquiring the Seattle Public Utilities water utility located within the city limits and anticipates ownership will be completed by 2020. All design and construction discussions about impacts to this and other Seattle Public Utilities water utility facilities located within the City of Shoreline shall include Shoreline staff prior to and after the acquisition is complete.

L-007-044

Sound Transit is aware of the presence of peat near Ronald Bog and has conducted additional borings on the east side of I-5 to further define soil and groundwater conditions in this area. Additional work and related analysis will be conducted during final design and permitting.

L-007-045

Issue 1: Effects on fire station. Sound Transit is aware of the Fire Department's concerns about the possible impacts of a station at NE 155th Street on the operations of the fire station at that location. In the design and development of a station at that location, and the management of traffic serving the station, Sound Transit would work closely with the Fire Department to resolve any potential conflicts with bus and vehicle traffic to ensure that emergency response times would be maintained both during the construction period and operation of light rail.

Issue 2: Sound Transit Police jurisdiction. Sound Transit currently has several years of experience working in coordination with the public safety providers of local jurisdictions to ensure the safety and security of the public and to reduce redundancies. The Draft EIS discussed Sound Transit's security force, and states that final station designs will incorporate crime prevention through environmental design principles to deter criminal activity and to make station areas safer and more secure.

Issue 3: Open air stations need to have personnel actively patrolling the facilities and buses serving the stations at all times. Sound Transit now has several years of experience with safety and security across all modes, and is confident that its operating systems are appropriate to ensure the personal and physical safety of its passengers. Sound Transit is currently centralizing its video and alarm monitoring system across all modes, including vehicles and stations, and constantly reviews its operations to ensure passenger safety.

L-007-046

- As part of the City of Shoreline's acquisition of the portion of the Seattle Public Utilities water system located within Shoreline, the City is required to separate the system including installation of a new trunk line in the N/NE 145th Street right-of-way. This construction work is likely to occur from 2018-2020, at which time construction on the Lynnwood Link Extension will be underway. As design progresses for both projects, Sound Transit and the City of Shoreline will need to coordinate water line construction schedules to determine the best course of action to minimize disruption to residents and users of the corridor. Opportunities for construction efficiencies should also be explored.

Parks and Recreational Resources/4(f) and 6(f) Evaluation

L-007-047

- Construction will impact Ridgecrest Park as well as access to the park. The DEIS includes a general list of construction mitigation options and states that Sound Transit will work with jurisdictions to develop appropriate construction mitigation. As design progresses and construction plans are developed, the City will work with Sound Transit to identify mitigation to minimize construction impacts to park users and plans for restoration of disturbed areas.

- Ridgecrest Park was originally purchased by King County with Forward Thrust funding. In accordance with the requirements of Forward Thrust, any park land acquired must be replaced with like property. It will be Sound Transit's responsibility to coordinate with King County to prepare the land conversion process with like property. The conversion has to be approved by King County before the City of Shoreline can authorize purchase of the property for the Lynnwood Link Extension. Sound Transit will need to work with the City's Parks Department to identify the appropriate location and type of mitigation for this acquisition.

Construction

L-007-048

- Should the NE 185th Street bridge need to be reconstructed, the DEIS states that the roadway may need to be closed for 9-12 months. A closure of this magnitude will have significant impacts to the community. It will eliminate a major east-west access roadway and result in additional congestion at NE 175th Street, as drivers utilize this roadway as a substitute. Shoreline has a strong preference against full closure of this key arterial corridor and will require Sound Transit to develop options to avoid one, such as a temporary bridge or a half closure. The DEIS does not identify how other roadways, such as NE 175th Street, will be impacted if the NE 185th Street bridge is closed. There is no discussion of any impacts, suggested detours or mitigation. Sound Transit should explore alternative construction methods that do not require a full closure of the roadway should this bridge need to be reconstructed. Sound Transit will need to work with the City of Shoreline to identify the appropriate mitigation for these construction impacts.

- Reconstruction or improvements to the NE 185th Street bridge will need to be staggered with reconstruction of the NE 195th Street bridge so that at least one bridge is usable for bicyclists and pedestrians at all times.

- Shoreline will want to be involved in the early development of construction plans for this project. Coordination between Shoreline, Sound Transit and other agencies will include issues such as phasing and timing for various stages of construction, rerouting of bus service, impacts

Issue 4: Safety and security in design of station and other facilities. Sound Transit integrates Crime Prevention Through Environmental Design (CPTED), as included in Section 4.14.2 in the Draft EIS, in the design of all its facilities. All station platforms, including elevated platforms, are designed to accommodate emergency response and to be able to safely evacuate trains and platforms in the event of an incident. Design and security measures are used to prevent access to areas not intended for rider use.

L-007-046

Geographic Information System (GIS) data on the 24-inch-diameter water line crossing at NE 185th Street confirms that this water line is a Seattle Public Utility water line. It was incorrectly identified in the Utility Conflict Matrix as a Shoreline Water District water line and this was updated for the Final EIS. As the Draft EIS states in Section 4.15.2, Sound Transit will coordinate with the utilities to confirm and resolve potential conflicts. Sound Transit will also continue to work with utility providers to minimize any potential service interruptions (Section 4.15.5 Mitigation).

L-007-047

The Final EIS notes Sound Transit's commitment to working with the City and King County to address Forward Thrust requirements as they apply to the park, and to help the City identify appropriate property to acquire for parks use as compensatory mitigation. Potential replacement property options have been described in the Final EIS. Additional coordination with the City is reflected in the Final EIS.

L-007-048

Bullet 1 (Should the NE 185th...) With the Preferred Alternative the NE 185th Street bridge would not be rebuilt, although some access

L-007-048

to Ridgecrest Park, utility relocations including the City's waterline separation work at N/NE 145th Street, night work, truck/haul routes, detour routes, hazardous materials response planning and inspection coordination.

- The review of plans and construction management for this project will result in a significant work load for the City of Shoreline employees. Sound Transit will need to provide funding to the City to pay for additional human resources tasked with design and construction related review of the project.
- Mitigation is required to ensure that bus service is minimally interrupted during construction. Because the North Jackson Park park and ride facility at NE 145th Street and 5th Avenue NE will be used for construction staging, an alternative, temporary park and ride facility(ies) shall be sited and signed in the vicinity for routes that serve it. The existing transit only off ramps should remain in operation until light rail service begins and bus service is permanently rerouted.
- When access to properties is impacted, it should be partial only. Sound Transit shall maintain access to all properties during construction unless an alternative is mutually agreed upon by Sound Transit and the property owner. Exceptions may include short duration full closures for tasks such as paving and pouring and curing concrete.
- Noise from construction, including night work, must be mitigated to the fullest extent possible.
- Construction equipment has the potential to impact the condition of roadways that are part of haul routes. An assessment of the pavement condition for roads serving the station should be performed by Sound Transit and approved by the City before and after construction to help document any damage that occurs during construction. Damage to roadways resulting from construction activities must be repaired by Sound Transit.
- Measures should be taken during construction to avoid any short term impacts to Thornton Creek. Appropriate Best Management Practices shall be implemented and monitored during construction to avoid impacts to water quality.

modifications for pedestrians may be added; there would be no full closure. For Alternative A1, the Transportation Technical Report incorrectly stated in Table 6-1 for Alternative A1 that the bridge would be fully closed for 9-12 months. This error has been revised to indicate that one lane of the bridge would be closed in each direction for 1 month, as stated in the Draft EIS on page 3-44 and in Table 3-24.

Bullet 2 (Reconstruction or improvements...) The Draft EIS states construction of NE 185th Street would be staged or staggered (Section 3.3 page 3-43).

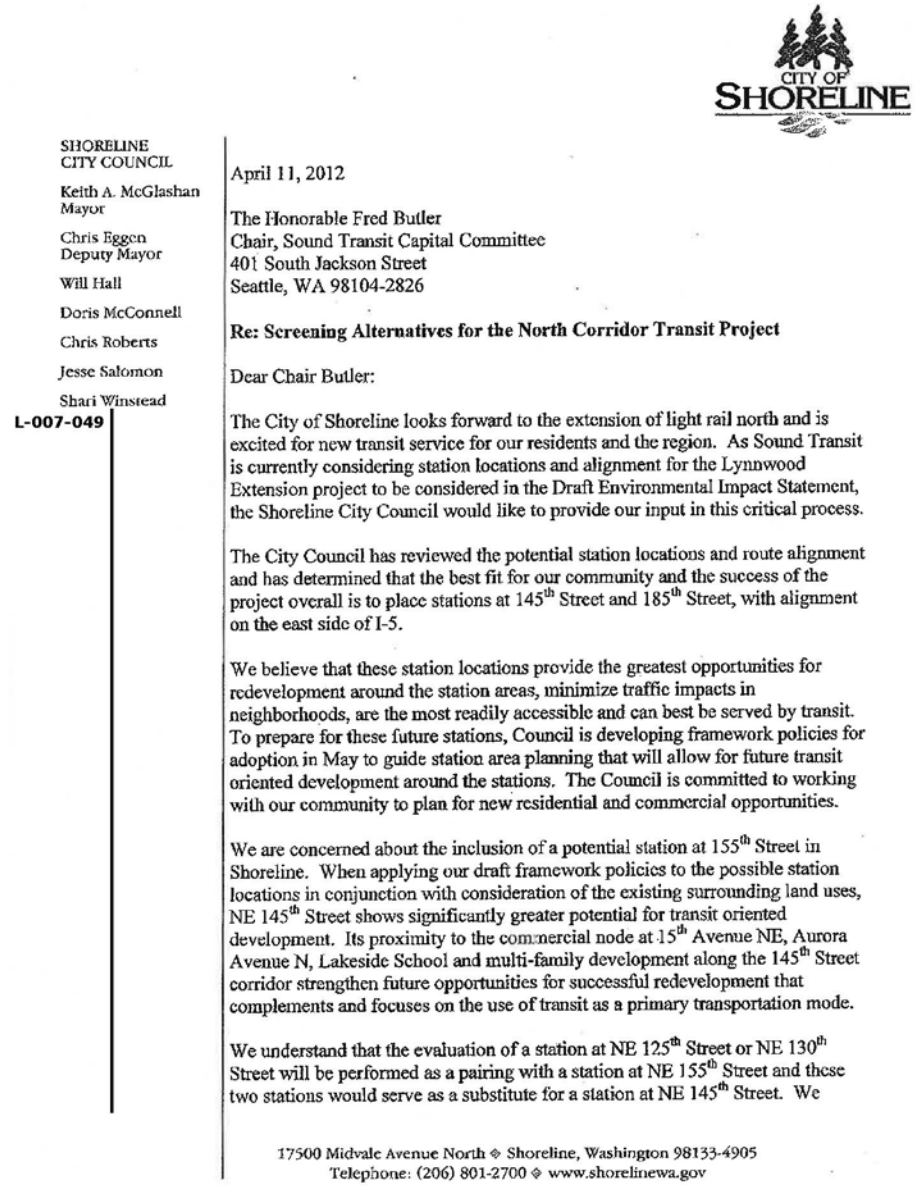
Bullet 3 Sound Transit will involve the City in the development and review of final design details, including construction plans.

Bullet 4 Agreements associated with the next phases of the project will be negotiated as the project moves forward.

Bullet 5 Mitigation for bus service during construction was described in section 3.6.9 of the Draft EIS (page 3-55), and more detail on the degree of mitigation for the specific stations and routes has been included in Section 3.6 of the Final EIS for the Preferred Alternative.

Bullet 6 The Draft EIS, Section 3.6.9 Arterials and Local Streets, states that *if access to the property cannot be maintained, the specific construction activity would be reviewed to determine if it could occur during non-business hours, or if the parking spaces and users of this access (for example, deliveries) could be provided at an alternative location.*

Bullet 7 (noise from construction...) Section 4.7.7 of the Draft EIS describes potential mitigation measures for construction-generated noise. Specifically, Section 4.4.7 states that noise mitigation would be implemented in order to meet local regulatory requirements, noise



CITY OF SHORELINE

SHORELINE CITY COUNCIL

Keith A. McGlashan
Mayor

Chris Eggen
Deputy Mayor

Will Hall

Doris McConnell

Chris Roberts

Jesse Salomon

Shari Winstead

L-007-049

April 11, 2012

The Honorable Fred Butler
Chair, Sound Transit Capital Committee
401 South Jackson Street
Seattle, WA 98104-2826

Re: Screening Alternatives for the North Corridor Transit Project

Dear Chair Butler:

The City of Shoreline looks forward to the extension of light rail north and is excited for new transit service for our residents and the region. As Sound Transit is currently considering station locations and alignment for the Lynnwood Extension project to be considered in the Draft Environmental Impact Statement, the Shoreline City Council would like to provide our input in this critical process.

The City Council has reviewed the potential station locations and route alignment and has determined that the best fit for our community and the success of the project overall is to place stations at 145th Street and 185th Street, with alignment on the east side of I-5.

We believe that these station locations provide the greatest opportunities for redevelopment around the station areas, minimize traffic impacts in neighborhoods, are the most readily accessible and can best be served by transit. To prepare for these future stations, Council is developing framework policies for adoption in May to guide station area planning that will allow for future transit oriented development around the stations. The Council is committed to working with our community to plan for new residential and commercial opportunities.

We are concerned about the inclusion of a potential station at 155th Street in Shoreline. When applying our draft framework policies to the possible station locations in conjunction with consideration of the existing surrounding land uses, NE 145th Street shows significantly greater potential for transit oriented development. Its proximity to the commercial node at 15th Avenue NE, Aurora Avenue N, Lakeside School and multi-family development along the 145th Street corridor strengthen future opportunities for successful redevelopment that complements and focuses on the use of transit as a primary transportation mode.

We understand that the evaluation of a station at NE 125th Street or NE 130th Street will be performed as a pairing with a station at NE 155th Street and these two stations would serve as a substitute for a station at NE 145th Street. We

17500 Midvale Avenue North ◆ Shoreline, Washington 98133-4905
Telephone: (206) 801-2700 ◆ www.shorelinewa.gov

ordinances, and permit and variance conditions.

Bullet 8 (Construction equipment..) Sound Transit will repair any public rights-of-way at Sound Transit work sites that are damaged during construction to substantially the same condition.

Bullet 9 Sound Transit recognizes the importance of Thornton Creek, and the project will abide by all applicable federal, state, and local environmental laws and regulations. Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts on environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure no net loss of ecosystem function and acreage as a result of agency projects. The Lynnwood Link Extension would mitigate impacts on ecosystem resources in accordance with the mitigation sequencing requirements established by NEPA, the Clean Water Act, and local critical areas ordinances.

L-007-049

Thank you for enclosing the City's earlier letter to Sound Transit expressing its views on the range of alternatives the Sound Transit Board was considering for the Draft EIS. Because this letter predates the Draft EIS, no detailed responses are provided here.

L-007-049

understand that the rationale provided for pairing these stations, rather than considering NE 145th Street instead of NE 155th Street is the need to maintain stop spacing of no less than one mile. It is Shoreline's contention that each of these stations needs to be evaluated on its own merits so that they can be fairly compared to one another.

Additionally, the inclusion of a fifth station in the North Corridor Transit project was not anticipated as part of the voter approved ST2 funding package. Should an additional station be approved at NE 125th Street/NE 130th Street, we want Sound Transit to ensure that its design and construction is adequately funded and will not result in the reduction or elimination of facilities, amenities or mitigation at the remaining two stations in the North King subarea.

Finally, the ST2 conceptual alignment includes parking garages at both stations with 500 parking stalls each. The City understands the need for parking facilities at the stations and would like Sound Transit to include evaluation of parking needs as part of the DEIS. As part of this evaluation, we are requesting that Sound Transit examine options that include both a single parking structure for each station and concepts that include multiple, smaller structures. It is the City's belief that while parking is needed, there may be a time in the future where less parking is needed, as riders utilize transit or non-motorized options to access the stations. In those circumstances, the garages may be converted to new uses or provide parking for new developments near the stations. By having parking garages at the two Shoreline stations, Sound Transit would be improving transit access to the region.

Thank you for your consideration of our comments. We look forward to continuing to work with Sound Transit and our neighbors on this important project. If you have any questions or need additional information, feel free to contact Alicia McIntire, Senior Transportation Planner, at 206.801.2483.

Sincerely,

Keith A. McGlashan
Mayor

cc. Joni Earl, CEO Sound Transit
Sound Transit Board
Shoreline City Council
Matt Shelden, North Corridor Project Manager
Julie T. Underwood, City Manager
Mark Relph, Public Works Director
Scott MacColl, Intergovernmental Relations Manager
Alicia McIntire, Senior Transportation Planner

MOUNTLAKE TERRACE

City of Mountlake Terrace
6100 – 219th Street SW, Suite 200
Mountlake Terrace, WA 98043-2222
425.776.1161
www.cityofmlt.com

September 12, 2013

Dear Sound Transit Board:

Thanks for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Lynnwood Link Extension. We appreciate the excellent work and countless hours that has gone into issuing this document.

Our City Council has long been an advocate for light rail for our region. Accordingly, we began planning for transit-oriented development in key areas of our community more than ten years ago. Our focus has been greatest in revitalizing our downtown/Town Center, which is near 236th Street SW, just east of I-5, as well as in developing the commercial/mixed use area immediately south of 236th and also just east of I-5. The latter area includes about 12 acres of vacant land in two parcels, which we have zoned for compact development up to 20 stories. In addition, we have adopted Comprehensive Plan and zoning changes to allow compact, mixed-use development along 220th Street SW, just west of I-5. This area includes about six acres of undeveloped property owned by the Edmonds School District.

L-008-001 We like Alternative B1 for its location of a station at 236th Street SW, close to the Town Center and Freeway/Tourist District. However, it does not support transit oriented development at 220th Street SW, where extensive development is possible.

L-008-002 We ask that you select Alternative B2 or B2A as the Preferred Alternative for rail alignment and station locations that will be included in the Final Environmental Impact Statement. Both alternatives, as with Alternative B1, support a station just east of I-5 at 236th. As with Alternative B1, this station location would provide the greatest opportunity for transit-oriented development and would support our community's Town Center vision. In addition, Alternative B2 has the light rail line crossing from the east side of I-5 to the west side (where at some point it needs to be located anyway to accommodate the Lynnwood connection) in a way that makes it possible for a station to be added at 220th in the future. Alternative B2A is the same as B2 except that it includes actually building the station at 220th.

L-008-003 The alternative we do not favor as the Preferred Alternative is Alternative B4. It provides light rail mostly in the freeway median and would have at least 1,000 less riders daily than any of the other three alternatives for the B section of Lynnwood Link. This is the least supportive of transit-oriented development and downtown revitalization.

We look forward to continuing our partnership and seeing light rail constructed in Snohomish County to attract the greatest ridership possible.

Regards,

Jerry Smith, Mayor

cc: Mountlake Terrace City Council
Scott Hugill, Interim City Manager
Shane Hope, Community and Economic Development Director

L-008-001

Thank you for your observations on Alternative B1.

L-008-002

Thank you for stating your preference for Alternative B2 or B2A. A modified version of Alternative B2 is part of the Preferred Alternative. The modification shifts the alignment west to avoid impacts to the I-5 ramps. The Final EIS also includes an optional station south of 220th Street SW and a 200-car surface parking lot on the site of the former Melody High School.

L-008-003

Thank you for your comment stating your objections to Alternative B4.

EDMONDS SCHOOL DISTRICT

Stewart Mhyre, MBA, CSB.
Executive Director
Business & Operations

20420 68th Ave. W., Lynnwood, WA 98036-7400
http://www.edmonds.wednet.edu

Serving the communities and Students of Brier, Edmonds, Lynnwood, Mountlake Terrace, Woodway and unincorporated Snohomish County

September 20, 2013

Sound Transit DEIS
Comments c/o Lauren Swift
401 S. Jackson Street
Seattle, WA 98104

LynnwoodLinkDEIS@soundtransit.org

Dear Sound Transit Board,

Thank for the opportunity to comment on the Draft Environmental Impact Statement for the Lynnwood Link Extension. I appreciate the numerous occasions for input into the process.

After reviewing all of the alternatives, I have the following feedback for your consideration.

L-009-001

1. Select Alternative B2, putting the Transit Center stop to the east of the current Mountlake Terrace Transit Station.

L-009-002

2. I prefer Alternative B2 or B2A with the alignment going across 220th to the west of the freeway with a possible future transit stop at 220th.

L-009-003

3. Approve the City of Lynnwood's C3 Modified Alternative to be incorporated as part of the Final EIS for the Lynnwood Link Extension. Because of the extensive impact this alternative has for Edmonds School District and its planned use of this property for a Maintenance and Transportation facility, I ask that the District be invited to be a participant in the engineering and planning process of this alternative.

As stated in Section 4.1.2, Long Term Impacts, Segment C, Sound Transit will need to mitigate the impacts to our planned use for this property. The effected facility will most likely be in operation during the construction phase of the C3 Modified Alternative as well as when the link extension is operational.

I look forward to continuing to work with the staff of Sound Transit as they move closer to seeing the much needed Lynnwood Link Extension become a reality.

Sincerely,

Stewart Mhyre

Stewart Mhyre, MBA, CSBA
Executive Director – Business & Operations

Cc: Shane Hope, Community & Economic Development Director-City of Mountlake Terrace
David Kleitsch, Economic Development Director-City of Lynnwood

• OUR MISSION •

To ADVOCATE for all students by PROVIDING a learning environment which EMPOWERS students, staff and the community to MAXIMIZE their personal, creative and academic potential in order to BECOME lifelong learners and responsible world citizens.

L-009-001

Thank you for stating a preference for Alternative B2 and a possible future transit station at 220th Street SW. A modified version of Alternative B2 is part of the Preferred Alternative. The modification shifts the alignment west to avoid impacts to the I-5 ramps. The Final EIS also includes an optional station south of 220th Street SW and a 200-car surface parking lot on the site of the former Melody High School.

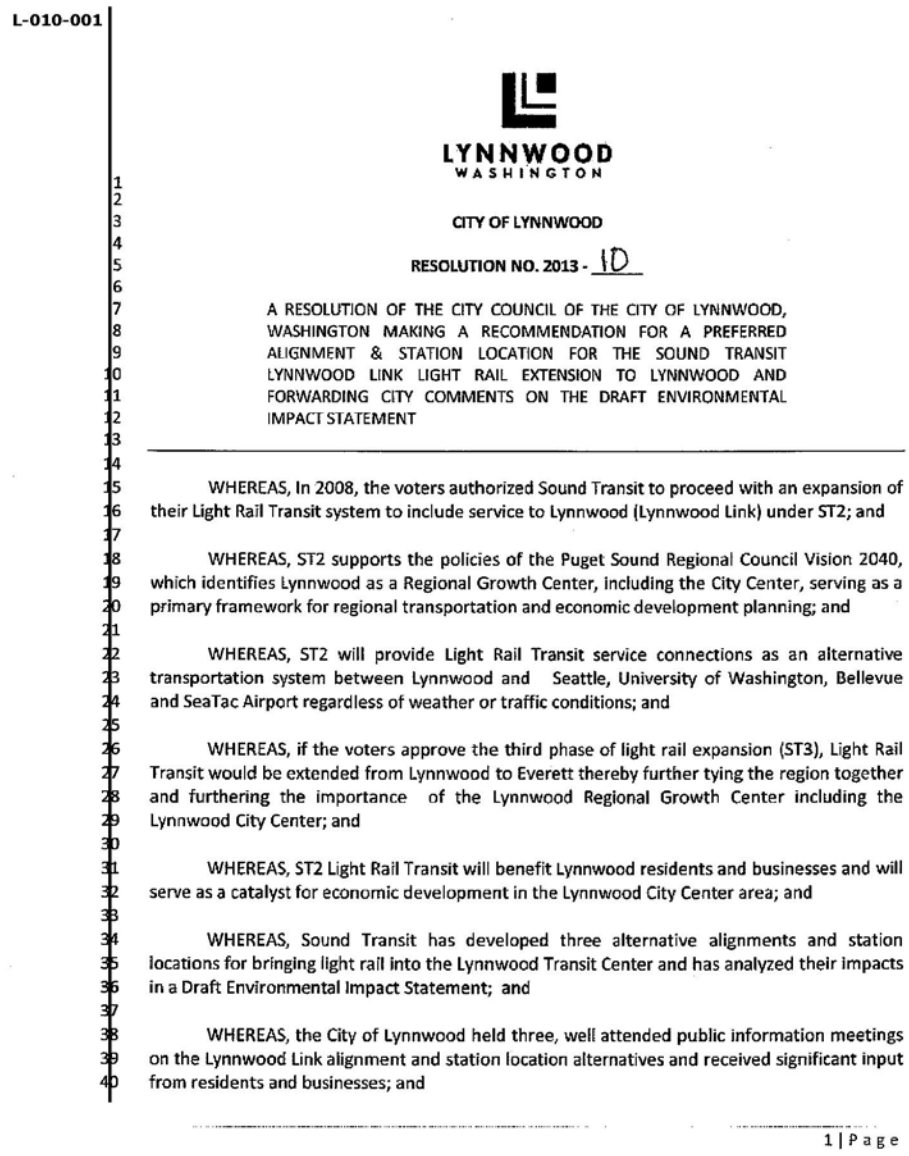
L-009-002

Thank you for stating your preferred alignment. See the response to comment L-009-001 describing the Sound Transit Board's Preferred Alternative.

L-009-003

Sound Transit appreciates the participation of the District in reviewing potential refinements in Segment C that would reduce potential impacts to the District's property. Sound Transit involved the Edmonds School District in meetings with the City of Lynnwood in the development of modified Alternative C3 that is evaluated in the Final EIS. The Final EIS also provides further detail on how Sound Transit would work with the City and the School District during final design and in construction planning to minimize impacts to the District's operations.

L-010-001



LYNNWOOD
WASHINGTON

CITY OF LYNNWOOD

RESOLUTION NO. 2013 - 10

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LYNNWOOD, WASHINGTON MAKING A RECOMMENDATION FOR A PREFERRED ALIGNMENT & STATION LOCATION FOR THE SOUND TRANSIT LYNNWOOD LINK LIGHT RAIL EXTENSION TO LYNNWOOD AND FORWARDING CITY COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

WHEREAS, In 2008, the voters authorized Sound Transit to proceed with an expansion of their Light Rail Transit system to include service to Lynnwood (Lynnwood Link) under ST2; and

WHEREAS, ST2 supports the policies of the Puget Sound Regional Council Vision 2040, which identifies Lynnwood as a Regional Growth Center, including the City Center, serving as a primary framework for regional transportation and economic development planning; and

WHEREAS, ST2 will provide Light Rail Transit service connections as an alternative transportation system between Lynnwood and Seattle, University of Washington, Bellevue and SeaTac Airport regardless of weather or traffic conditions; and

WHEREAS, if the voters approve the third phase of light rail expansion (ST3), Light Rail Transit would be extended from Lynnwood to Everett thereby further tying the region together and furthering the importance of the Lynnwood Regional Growth Center including the Lynnwood City Center; and

WHEREAS, ST2 Light Rail Transit will benefit Lynnwood residents and businesses and will serve as a catalyst for economic development in the Lynnwood City Center area; and

WHEREAS, Sound Transit has developed three alternative alignments and station locations for bringing light rail into the Lynnwood Transit Center and has analyzed their impacts in a Draft Environmental Impact Statement; and

WHEREAS, the City of Lynnwood held three, well attended public information meetings on the Lynnwood Link alignment and station location alternatives and received significant input from residents and businesses; and

1 | Page

L-010-001

Thank you for providing the City Council's recommendation for a preferred alignment and station location for the proposed Lynnwood Link Extension and providing comments on the Draft EIS. As you know, Sound Transit continued to work with the City and others to define a modification to Alternative C3 that incorporated this suggestion, and it has been analyzed in the Final EIS.

L-010-001

WHEREAS, the proposed C1 alignment is located directly across 52nd Ave. from a single family neighborhood containing hundreds of affordable homes, requires the removal of a condominium development and numerous businesses along 200th St., is across 200th St. from several affordable apartment and condominium complexes, all of which would be adversely impacted by noise, vibration, decline in property value, and other impacts from the elevated tracks; and

WHEREAS, the proposed C1 alignment is routed through a significant recreational resource in the form of the City's Scriber Creek Park that provides a place to experience nature in close proximity to Lynnwood's City Center; and

WHEREAS, Scriber Creek Park was acquired using Conservation Futures funding from Snohomish County, and WHEREAS, the proposed C2 alignment results in impacts similar to C1 to homes along 52nd Ave, impacts businesses along Cedar Valley Road, while not located within Scriber Creek Park and trail they are impacted due proximity, impacts Scriber Creek wetlands adjacent to the Park, and results in noise, vibration, and visual issues to these sensitive areas, and

WHEREAS, the proposed C3 alignment would result in significant property damage and loss of development potential on the City Center block located east of 44th and adjacent to I-5, would result in a station location remote from the bus transit center, existing residential development, public streets and City Center, would require reconstruction of the existing bus loading areas at great additional expense, would impact the City's ability to maintain and expand Sanitary Sewer Lift Station 10, and fails to address flooding and odor issues in the immediate area; and

WHEREAS, the City has developed a "C3 Modified" alignment and station location that offers the benefits of C3 in terms of avoiding impacts of C1 and C2 while also addressing the issues associated with C3; and

WHEREAS, the City of Lynnwood wishes to make Sound Transit aware of the City's preferences on potential alignments and station locations to insure they will be considered by the Sound Transit Board for their determination of a "Preferred Alternative".

THE CITY COUNCIL OF THE CITY OF LYNNWOOD, WASHINGTON, RESOLVES AS FOLLOWS:

1. That based upon a detailed analysis of the alternatives, review of the Draft Environmental Impact Statement and extensive public outreach efforts by the City, the Council is hereby expressing its preference for:

L-010-001

- "C3 Modified" that minimizes impacts to Lynnwood residents, businesses, development potential, parks and environment, while still offering the transportation benefits of Light Rail Transit service and the implementation of economic development planning policies.

2. That the City and Sound Transit will work directly together on "C3 Modified" as the preferred alternative Lynnwood Link Final Environmental Impact Statement to address mutual and respective goals for Sound Transit ST2 and the City of Lynnwood City Center Plan as part of the PSRC Regional Growth Center Strategy.

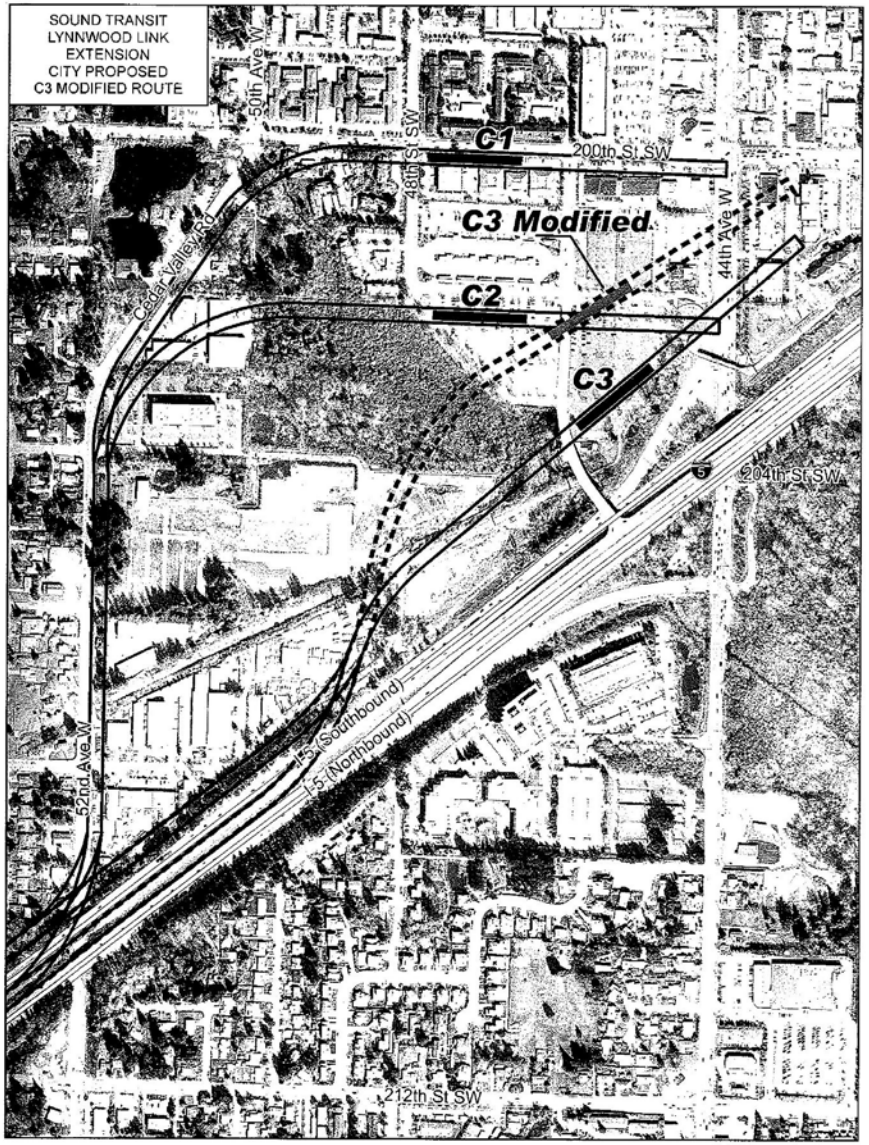
PASSED BY THE CITY COUNCIL the 23rd day of September, ~~2011~~ 2013

Don Gough
Mayor

ATTEST/AUTHENTICATE:

Lorenzo Hines
Finance Director, City Clerk
Resolution Number: 2013-10
Approved by Council: 6-0
Vote:

L-010-001


SOUND TRANSIT
LYNNWOOD LINK
EXTENSION
CITY PROPOSED
C3 MODIFIED ROUTE
50th Ave W
48th St SW
C1
200th St SW
C3 Modified
C2
C3
44th Ave W
Cedar Valley Rd
5
204th St SW
I-5 (Southbound)
I-5 (Northbound)
52nd Ave W
212th St SW

City of Seattle

Seattle Department of Transportation — Peter Hahn, Director
Seattle Department of Planning and Development — Diane Sugimura, Director

September 20, 2013

Joni M. Earl
Chief Executive Officer
Sound Transit
401 S. Jackson St.
Seattle, WA 981104-2826

RE: Lynnwood Link DEIS comments

Dear Ms. Earl:

The City of Seattle is excited about the expansion of the regional transit system with the Lynnwood Link Extension. We appreciate the opportunity to comment in more detail on the proposed alignment and station alternatives presented in the DEIS. This letter represents joint recommendations from the Seattle Department of Transportation (SDOT) and the Seattle Department of Planning and Development (DPD). In addition to the alignment and station recommendations in this letter, you will also find a listing of more detailed comments, including coordinated comments from other city departments.

L-011-001
- **Seattle supports the A1 alignment option through Seattle** (*this alignment recommendation does not include the proposed A1 station locations).* This alignment best supports Sound Transit's Sustainability Plan by reducing noise and long-term visual impacts of adjacent neighborhoods, reducing private property impacts, replacing the 117th bridge benefitting bike and pedestrian connections, and reconfiguring the NE 130th freeway off-ramp addressing a high accident location. The related recommendations below further support and enhance the A1 track plan through Seattle.

L-011-002
- Work closely with SDOT and the Latvian Evangelical Lutheran Church and Center at 11710 3rd Avenue NE to maintain Seattle right-of-way to the facility. It is a priority to maintain access to this cultural, religious, and education center at the current location.

L-011-003
- In the reconstruction of 1st Avenue NE, work with Seattle to retain the trees and green space on the east side of 1st between 113th and 115th Street, which serves as a buffer to the Northgate West Condominiums.

L-011-004
- In the reconstruction of 1st Avenue NE and the 117th Street bridge, provide a 14' shared use bike and pedestrian facility on the north side of the bridge and a 8' sidewalk on the south side of the bridge connecting into similar facilities on the relocated 1st Avenue NE. Ensure these facilities connect to the existing bicycle trail at NE 116th Street.

L-011-001

Thank you for your comment stating a preference for Alternative A1, including the features that the City finds most promising. The Sound Transit Board identified a Preferred Alternative based on Alternative A1, but modified some of the alternative's features.

L-011-002

Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the results of additional engineering Sound Transit undertook to avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall (also called the cultural center). Access to the property and its functions has been maintained, although a small portion of land on the property's edge would be acquired for the Preferred Alternative and other at-grade alternatives. Elevated alternatives would also require a portion of the church property.

Several sections in the Final EIS have been updated to address these changes: Section 2.5.1 describes the refined alternatives for Segment A; Section 4.1 describes the acquisition impacts; Section 4.4 describes impacts to community facilities and neighborhoods; Appendix F presents revised conceptual engineering plans for the refined Segment A alternatives; Appendix I-4.1 contains detailed maps and tables concerning acquisition, displacement, and relocation requirements for each Segment A alternative; and Appendix G has visual simulations.

As noted in Section 4.1, any acquisition of property would require compensation to the property owner in accordance with Sound Transit policy and with federal and state law.

L-011-004

- With the significant light rail construction adjacent to 5th Avenue NE between 130th Street and 145th Street, include a sidewalk and bicycle lane on the west side of 5th Avenue NE between 130th and 145th Street. The DEIS identifies a lack of adequate facilities and access, particularly during nighttime hours.

L-011-005

- **Seattle supports including the 130th Street Station in Segment A, as a station configuration constructed as shown on Alternative A5/A10 – Option 1** (*page 65 of 142 of the DEIS Conceptual Plans*)**, a retained cut, center platform station. This option does not include surface parking north of the station.** This neighborhood-oriented station expands access to the regional transit system for Seattle residents and provides a unique opportunity for bus, bike and pedestrian access to several adjacent neighborhoods and communities. Per the "*Lynnwood Link Extension Station Area Transit-Oriented Development Potential*" report prepared by Sound Transit and dated April 2013, the 130th Street Station ranked highest in the Station Access category of any of the stations in Segment A. Additional points below support this recommendation.

  - Within Segment A, the 130th Street Station provides Sound Transit and King County Metro the best opportunity to provide efficient and reliable bus to rail and rail to bus connections on adjacent roadways with less traffic congestion and good connections to the relatively dense residential areas in Seattle's Lake City and Bitter Lake neighborhoods.

  - After the 185th Street Station, the 130th Street Station offers Sound Transit the highest ridership of the stations studied in Segment A. The ridership scenario with both a 130th Street Station and a 145th Street station indicates 3,200 average weekday riders at 130th and 2,200 average weekday riders at the 145th Street station.

  - This 130th Street Station is supported as a bicycle hub with City-proposed cycle track facilities on 130th Street, Roosevelt Way, 125th Street, and 5th Avenue NE incorporated in the draft update of the City Bicycle Master Plan.

  - By including both the 130th and 145th Street stations, ridership in Segment A benefits by an additional 400 daily boardings, providing increased ridership to Sound Transit from both Seattle and Shoreline.

  - The 130th Street Station supports Sound Transit's sustainability objectives by reducing additional SOV and bus trips to the congested Northgate Urban Hub. DEIS modeling suggests that up to 3,200 average daily trips would be captured at the 130th Street Station. Without this station, a percentage of those trips would contribute to congestion on other streets or require additional travel time on buses connecting to the Northgate Station.

The City of Seattle will continue to partner with Sound Transit on the implementation of the Lynnwood Link Extension. We look forward to working with you to expand the regional transit system and

2

L-011-003

The recommended action is consistent with the mitigation measures on Draft EIS page 4-91. Section 4.5.6 of the Final EIS has further details on the mitigation approach, and identifies areas where tree retention may be a possibility.

L-011-004

Sections 3.15 and 2.5 of the Final EIS identified pedestrian and bicycle improvements on 5th Avenue between NE 130th Street and NE 145th Street, and also clarify how Sound Transit would work with the City regarding other improvements during final design. The Board's Preferred Alternative includes an alignment to the east of the 117th Street bridge, which avoids the need to replace the bridge.

L-011-005

Sound Transit appreciates the summary of the benefits the City sees with a station at NE 130th Street. The Final EIS includes an option for a station at NE 130th Street.

providing safe, efficient and sustainable transportation choices for our residents and regional riders. If you have any questions about these recommendations, please don't hesitate to contact either of us or Michael James at michael.james2@seattle.gov or (206) 386-4012.

Thank you again for the opportunity to comment.

Sincerely,

Peter Hahn
Director, Department of Transportation
City of Seattle

Diane M. Sugimura
Director, Department of Planning and Development
City of Seattle

Attachment: Seattle's Lynnwood Link Detailed Comment Listing

C: Tom Hauger
Michael James

Seattle's Lynnwood Link Detailed Comment Listing
September 20, 2013

In addition to the Lynnwood Link comment letter sent jointly from Peter Hahn, Director of the Seattle Department of Transportation (SDOT) and Diane Sugimura, Director of Seattle's Department of Planning and Development; the additional comments below are generally more detailed in nature and include additional comments from city departments that wished to incorporate their specific comments collectively.

L-011-006

1. To preserve existing in-city housing stock, the City of Seattle recommends that demolition of existing housing units be mitigated through production of an equivalent number of comparable housing units in the vicinity of any demolished unit. (Office of Housing)

2. The City further requests Sound Transit conduct a household income survey to determine the income levels of the households currently occupying the housing identified for demolition. This information is critical to develop a just and fair mitigation strategy for households at or below 50% of area median income. A mitigation strategy should include providing relocation expenses for low-income households and contributing to the replacement of units at or below the affordability levels of the demolished units. Contributions to the replacement of affordable housing could be in the form of direct subsidy to the production or preservation of affordable housing in the near vicinity or donation of Sound Transit surplus property for the development of affordable housing. (Office of Housing)

L-011-007

3. The Department of Planning and Development acknowledges the refinements suggested in the pre-DEIS review and included in the DEIS relating to the land use map and zoning maps, comprehensive plan and other plan documents. (DPD)

L-011-008

4. In section S.6.1 (Transportation) revise the last sentence to read, "…traffic management, or other strategies including bicycle, pedestrian and transit improvements." (SDOT)

L-011-009

5. In section S.6.3 (Environmental Justice), impacted populations (in Seattle) would only benefit from improved access to transit if there is a station that offers access that is convenient and reliable. The 130th St. Station best provides convenient access to members of impacted populations in Seattle. (SDOT)

L-011-010

6. In section S.7.1, SDOT disagrees that the 130th St. Station "would not notably increase system ridership because it would cause riders to shift from the Northgate Station." There are a few reasons for this.

   a. Ridership modeling assumed only one bus route feeding the 130th Station. By way of comparison, the 145th Station had four routes feeding it. In modeling the A10/A11 configuration (with stations at 130th and 145th), 130th had 1,000 more average weekday boardings than 145th with only one bus feeder route. With two or three buses feeding the 130th St. station, ridership would be noticeably more pronounced.

1

L-011-006

Sound Transit recognizes the City's concern for maintaining an adequate supply of affordable housing units within the city. Sound Transit's policy provides for a fair and equitable means of addressing real property impacts across its projects, and this includes a commitment to relocate displaced individuals in a manner consistent with state and federal law, as stated in Section 4.1. Sound Transit has successfully implemented this policy on several of the Link light rail projects developed within the City of Seattle, and which affected more properties than are potentially impacted by the Lynnwood Link Extension. While Sound Transit will endeavor to relocate displaced parties in the same neighborhood or area, the work is done in consultation with the displaced parties, who may or may not choose to stay in the same area. They will, however, be placed in housing that is affordable to them; this effort includes interviews with the affected parties to help determine affordability, as well as compensation and assistance programs that meet individualized needs and ensures safe and sanitary dwellings. Sound Transit generally does not enter into negotiations with affected parties until after the completion of the NEPA/SEPA process. Sound Transit may consider opportunities for making surplus property available for redevelopment, but this would not be considered as mitigation for displacements, which would be fully mitigated through the existing policy commitment defined in Section 4.1 of the Final EIS and compliance with state and federal requirements.

L-011-007

Sound Transit appreciated the City's review and suggestions leading up to the Draft EIS.

L-011-008

Sound Transit has revised the sentence generally as suggested for the Final EIS.

L-011-010

b. Metro and the DEIS have indicated that bus routes can be adjusted to better feed stations, increasing regional ridership and efficiency.

c. This assumes the same number of regional riders would endure congested drives or riding bus routes travelling into the much more congested Northgate Urban Hub as would bus, bike, walk or kiss and ride a shorter distance to a neighborhood station at 130th.

d. Regional rail modeling does a good job of capturing walk access, but it does not do an accurate job of capturing bicycle access to stations. With the proposed bicycle improvements in the 130th station area, we believe this market is being under reported for model year 2035.

e. This point is contrary to information in the Transportation Technical Report, page 5-9 (see comment 13 below).

7. Table 4-18 in the Transportation Technical Report supports routing more buses along 130th and 125th Streets to a station rather than along 145th Street based upon the reported Daily Traffic Volume and available lanes. (SDOT)

L-011-011

8. In section 4.5.1 of the Transportation Technical Report, SDOT concurs with the assessment of the lack of ADA sidewalks on the west side of 5th Avenue NE between NE 130th and NE145th and recommends installing ADA compliant curbs and sidewalks with the reconstruction of the street and freeway frontage.

L-011-012

9. Section 4.5.2 (Bicycle Facilities) of the Transportation Technical Report - In the FEIS, SDOT recommends inventorying all arterials within 3 (not 1) miles of each station. This is in alignment with new direction from the FTA relating to eligible bicycle infrastructure funding.

L-011-013

10. Table 4-34 in the Transportation Technical Report supports reconfiguring the NE 130th Street northbound off-ramp to 5th Avenue NE to improve safety as proposed in alignment A1.

L-011-014

11. Section 5.2 in the Transportation Technical Report supports the recommendation for Sound Transit to work closely with King County Metro and SDOT to develop an efficient bus restructure capitalizing on the opportunities of the 130th St. Station. (SDOT)

L-011-015

12. Table 5-8 in the Transportation Technical Report – SDOT disagrees with the assumptions in the assumed feeder bus service to light rail stations. In the preparation of the FEIS, work closely with SDOT and King County Metro to develop an updated feeder network to ensure the most efficient routing and understanding of bus facilities such as stops and speed and reliability improvements that can be coordinated with Seattle and Metro.

L-011-009

Sound Transit notes your comment. Thank you.

L-011-010

The conceptual service plans used for the Draft EIS analysis was based on assumptions developed in coordination with the transit service providers. Sound Transit has updated its ridership forecasts for all alternatives in the Final EIS to incorporate updated land use forecasts, although changes to the assumed service plan have been limited. This includes updated forecasts for the NE 103th Street Station, which is an option for the Preferred Alternative. While it is accurate that the regional rail transit model does not specify bicycle access shares, the modeling inherently includes all riders across modes. While this may slightly overstate the shares of the other access modes by not separating out bicycles, it is appropriate for the purposes of an EIS analysis and the conceptual level design efforts being conducted at this stage of the project.

L-011-011

Sound Transit will meet ADA standards for any facility that it constructs or modifies, and will work with the City of Seattle during final design to confirm the specific design approach for features such as sidewalks and curbs.

L-011-012

While Federal Register Vol 76, No. 161 identifies a bicycle catchment area of 3 miles to identify streets with a de facto physical and functional relationship to transit, and therefore eligible for FTA funding, it does not require high capacity transit projects to analyze the full area in an EIS or incorporate improvements covering that area. Pedestrian and bicycle facilities developed as part of the project, as well as other access features at Lynnwood Link Extension stations, will be developed

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L-011-016 13. Page 5-9, third bullet, in the Transportation Technical Report, is contrary to Section S.7.1 (discussed in comment 6 above). "Adding a third Segment A station would result in a net increase of 400 daily boardings in the segment because it would provide more access points to the transit market." Revise the summary language per this information. (SDOT)

L-011-017 14. Section 5.2.2. in the Transportation Technical Report, supports comment 12 (above), specifically, "Near the NE 145th Street Station, the impact of additional traffic associated with that station would contribute to already congested conditions (LOS E-F), which could impair the ability of local bus service to provide reliable access to the station." (SDOT)

L-011-018 15. Section 5.2.2., page 5-32 in the Transportation Technical Report – for alternatives A5 and A10, write out the alternatives specific to the correct streets, do not say that impacts would be the same as another alternative on a different street. (SDOT)

L-011-019 16. Section 5.5.1. in the Transportation Technical Report – Explain how bicycle trips and bicycle facilities influence this evaluation. Explain how bicycle trips are factored in Table 5-31. If not explained in this section, identify how and where they are considered for trip generation. (SDOT)

17. Page 5-96 of the Transportation Technical Report; clarify if the planned Jackson Park Perimeter Trail would meet any ADA requirements for a trail, sidewalk or shared use path. (SDOT)

L-011-020 18. The Transportation Technical Report, page 5-123 states, "If a station is selected for NE 145th Street, the station design and design of adjacent streets would need to address the current and expected increase in conflicts between vehicles and between travel modes near the station, as reflected in the existing High Accident Locations (HALs)." Define the alternatives for mitigating impacts. Is reduction of at station parking an alternative to reduce congestion impacts? (SDOT)

L-011-021 19. SDOT recommends the following refinements and/or revisions to sheet 65 of the DEIS Conceptual Plans:

a. Expand the pedestrian plaza at the northwest corner of NE 130th St and 5th Avenue NE to accommodate a bus shelter/weather protection

b. Design to the station and bus drop off to accommodate multiple routes and stop locations. For the FEIS, discuss alternative bus feeder alternatives and facility needs based upon meetings with King County Metro and SDOT.

c. Include 8 kiss-and-ride drop off spaces

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consistent with the Board-adopted System Access Policy (Resolution R2013-03), which provides criteria to be used in defining access features throughout the system. Many of these elements will be further defined during final design and permitting, as Sound Transit continues to coordinate with local agencies to determine station access features and to seek further opportunities to partner with the other agencies to maximize the benefits of this major transit investment.

L-011-013

An option with the reconfigured NE 130th Street northbound off-ramp is part of the Preferred Alternative for Segment A. As stated in Section 3.2.8 of the Final EIS and Section 5.8 of the Transportation Technical Report, this improvement is likely to improve safety at this location.

L-011-014

As noted in Chapter 3, Section 3.2.2 of the Final EIS, Sound Transit would coordinate with King County Metro and Community Transit on potential local bus service modifications as the project enters final planning leading to operation. However, the changes in services would be made by the local transit agencies, who have their own policies and processes for considering service revisions.

L-011-015

The assumptions used for the Draft EIS were developed in coordination with King County Metro and were intended to help develop ridership forecasts for each station. These draft transit integration plans were not intended to fully define the range of transit improvements that King County Metro or others might undertake in connecting corridors. Consistent with the approaches used for other projects that Sound Transit has implemented, including the light rail lines in place or in development in the city, this detailed integration planning would occur after the Final EIS is complete and the project is in preparation for

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September 20, 2013

L-011-021 d. Design multiple drop off parking spaces that do not require all trips to use 5th Avenue NE (locations may require use of existing signalized pedestrian crossings)

L-011-022 20. Suggest including an assessment of public places that are enhanced by light rail station access. A criteria that documents well established neighborhoods is also recommended. This should be a part of the transit supportive plan and policy documentation. (SDOT)

L-011-023 21. With construction impacting I-5, 1st Avenue NE, 5th Avenue NE, Roosevelt Way NE and NE 130th Street, protect and enhance drainage, including waters that may influence the Thornton Creek water course. (SPU)

22. Coordinate future design efforts impacting drainage, such as new curb, gutter and sidewalks with Seattle Public Utilities (SPU) and SDOT. (SPU)

4

operations. King County Metro has revised its service integration concepts for a 130th Street Station for the Final EIS to include additional service, and the results of those changes are reflected in the Final EIS forecasts and updated station design.

L-011-016
The summary text has been updated for the Final EIS.

L-011-017
For the Preferred Alternative, the Final EIS incorporates improvements to help minimize potential travel delays that could affect local bus service to the station. The other alternatives identify these potential improvements as mitigation.

L-011-018
Sound Transit has updated the Transportation Technical Report, and has revised text to clarify the locations identified in the comment.

L-011-019
Bicycle trips were not factored into the pedestrian LOS analysis, because detailed bicycle access projections were not available or necessary to support project planning at this stage of the project. While the Sound Transit model does not address bicycle access shares, the modeling inherently includes all riders. Pedestrians walking between rail and their parked bicycles are reflected in the overall numbers contained in Table 5-31 of the Transportation Technical Report.

Sound Transit is not proposing an alteration to the Jackson Park Perimeter Trail.

L-011-020
The Final EIS Chapter 3, Transportation, and the Transportation

Technical Report and Chapter 3 of the Final EIS have the results of an updated analysis of the NE 145th Street Station area using microsimulation software. The Preferred Alternative incorporates design measures for local street improvements that would address the added traffic related to the station and park-and-ride, and improved signalization and an added signalized intersection at the I-5 ramps also helps address a known accident location. The simulation software evaluates the effectiveness of transportation improvements incorporated within the design for the Preferred Alternative, as well as for other mitigation measures described in the Final EIS. The Final EIS also has additional language in mitigation explaining how Sound Transit will work with local agencies during final design to develop and implement mitigation details.

L-011-021

Sound Transit will refine details such as the plaza size, weather protection at the station and bus platforms, and further detail on bus transit service assumptions and requirements following the Final EIS, if this station is included as part of the project.

L-011-022

Section 4.4 and Appendix C now include a list of public places that would be near each station. Neighborhoods served are also described in Section 4.4, although Sound Transit did not attempt to characterize neighborhoods in qualitative terms. Many of the Draft EIS public comments served to inform the Sound Transit Board of how members of those neighborhoods perceived the project as either benefiting or impacting their communities. The Transit Oriented Development Assessment conducted for the project is not part of the EIS but was updated as part of other documentation for the project to reflect the Preferred Alternative.

L-011-023

As described in Section 4.9.6 of the Draft EIS, the project would comply with all federal, state, and local regulations protecting water quality. Approaches will include project planning, design, and the application of Best Management Practices (BMPs). Sound Transit will coordinate with Seattle Public Utilities regarding future design efforts for drainage where applicable.

communitytransit

Joyce Eleanor, Chief Executive Officer

September 23, 2013

Sound Transit, Draft EIS Comments
C/o Ms. Lauren Swift
401 S. Jackson St
Seattle, WA 98104

Dear Ms. Swift:

L-012-001 Community Transit strongly supports the Lynnwood Link Extension (Link). Once opened, it will significantly increase mobility options for Snohomish County residents by providing fast, frequent, and reliable service between Snohomish County and the greater Puget Sound Region. Community Transit will do our best to effectively serve Link stations in Snohomish County. Our comments in the current environmental review process focus on mitigation to preserve mobility during construction and system design elements that will enable effective bus-rail integration.

L-012-002 Surveys suggest 40 percent of all Snohomish County residents commuting to jobs in downtown Seattle use transit via Interstate-5 (I-5). Link construction impacts on general purpose traffic will further increase transit demand. Protection of this transit market needs to be a top priority in construction mitigation. Today's regional bus riders are the basis for the future light rail market.

Mitigation should provide service equal to or better than what is provided today. I-5 is already congested, in both general purpose and HOV lanes, impacting speed and reliability of transit. Where I-5 lane closures are called for, these should occur on nights and weekends when demand is reduced. Where HOV lane or direct access ramp impacts are unavoidable, an alternative priority path for transit should be implemented. Accommodating higher transit demand during construction will likely require mitigation in the form of funding for additional buses and service hours, as well as transportation demand management (TDM) strategies. With effective mitigation, transit demand will continue to grow, providing a strong, healthy market at the opening of Link light rail service to Snohomish County in 2023.

L-012-003 It is understood that most users of Link will access the system via walk or bus. The final system design should prioritize effective integration with the bus network, safe, convenient pedestrian access and potential for transit oriented development (TOD). The number and location of stations, should meet Sound Transit's Long Range Plan vision to provide reliable, rapid, and efficient service to meet the existing and projected demand for regional travel within the corridor and to other urban centers in the central Puget Sound. With this framework in mind, Community Transit's main input on design includes:

L-012-004
- Prefer Lynnwood Transit Center alternative C1, along 200th St SW, which provides effective pedestrian access, transit integration and TOD potential.

L-012-005
- Concern with Lynnwood Transit Center alternative C3 Option 1 (along I-5), which would be difficult for transit to serve, has poor pedestrian access and little TOD potential.
- Concern with Lynnwood Transit Center alternative C3 Option 2. It provides better transit integration, but still has long walks for pedestrians and little TOD potential.

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L-012-001

Thank you for your comment stating support for the Lynnwood Link Extension and for Community Transit's intent to effectively serve Link stations in Snohomish County.

L-012-002

Sound Transit recognizes the need to support and maintain transit markets during construction. However, the project does not anticipate that impacts to I-5 will occur throughout the construction period, and many of these impacts would be reduced by working closely with WSDOT, FHWA and the transit agencies operating along the corridor to develop a coordinated plan to maintain mobility during the shorter periods when traffic would be affected by construction affecting the freeway itself. This is consistent with the construction approach (Section 3.3) and the mitigation measures (Section 3.6) described in the Final EIS. Section 3.6 identifies potential mitigation to be developed with its partners, including service increases, service modifications, or temporary service improvements. The Final EIS also provides more definition of the location and duration of closures and their related impacts, as well as minimization measures such as timing closures to be in off-peak periods, evenings, or weekends where possible.

L-012-003

Comment noted. Sound Transit agrees with these observations.

L-012-004

Thank you for your comment stating a preference for Alternative C1.

L-012-005

The Final EIS includes a modified Alternative C3 as part of the Preferred Alternative. The modifications help address the access and TOD development issues that this comment raises.

L-012-006 • Note that the 220th Street SW station (B2A) is not a focus of existing or planned bus service, unlike the nearby hubs at both Lynnwood Transit Center and Mountlake Terrace Transit Center.

L-012-007 • Prefer the Mountlake Terrace elevated station crossing over NE 236th (B1, B2), which provides the best pedestrian access, transit integration and TOD potential.

L-012-008 • Concern with Mountlake Terrace alternative B4 (Freeway Station), which has compromised market potential and construction impacts that would be very costly to mitigate.

L-012-009 • Note that the assumption of *Swift* BRT service to the 185th St Station requires transit priority infrastructure along NE 185th between Aurora Avenue and I-5 to ensure speed and reliability.

Our detailed comments on construction impacts and system design are attached to this letter.

L-012-010 As stated above, Community Transit is a strong supporter of this light rail extension to Snohomish County. We appreciate the opportunity to comment on the DEIS and are hopeful that Sound Transit will be visionary in their selection of design alternatives that provide the most effective integrated transit system for the future mobility of the Puget Sound region.

We also look forward to coordinating with Sound Transit as they identify funding and strategies to mitigate impacts to existing transit markets during construction of Link.

Sincerely,

Joyce Eleanor
Chief Executive Officer

kegt
Enclosure
cc: Community Transit Board of Directors
Community Transit Corridor Working Group

Page 2

L-012-006

Sound Transit recognizes that the 220 Street SW Station is not the focus of Community Transit's existing or planned transit service, but the presence of a station at that location has been suggested by local jurisdictions and others because the arterial is a major corridor serving Edmonds and other communities. The Preferred Alternative includes an option for a station at that location, and its benefits would be higher with connecting transit service.

L-012-007

Thank you for your comment stating a preference for the elevated station featured in Alternatives B1 and B2.

L-012-008

Comment noted. Your observation of the transit impacts during construction for the freeway station being difficult or expensive to mitigate are consistent with the Draft EIS findings, although mitigation options would be available.

L-012-009

Although Sound Transit agrees that transit priority treatments might benefit a Swift extension from Aurora Village Transit Center to NE 185th Street Station, Sound Transit has not included the improvements as part of the Lynnwood Link Extension. Sound Transit supports transit improvements that would serve the station, and will continue to work with Community Transit, as stated in Section 3.2.2 of the Draft EIS.

L-012-010

Thank you for your comments and collaboration on the Lynnwood Link Extension.

Community Transit Comment Detail:
Sound Transit - Lynnwood Link Extension DEIS

Segment A (Seattle to Shoreline)

L-012-011 Station Alternatives:
If it is decided that Community Transit's *Swift* bus rapid transit (BRT) system is the appropriate fixed-route bus service to feed the 185th Street Station in Shoreline, BRT infrastructure needs to be provided. BRT infrastructure can include high occupancy vehicle (HOV) or Business and Transit (BAT) lanes, signal priority, and intersection improvements, such as queue jumps to maintain speed and reliability along NE 185th Street between the Link station and Highway 99.

L-012-012 Construction Impacts:
I-5 lane closures are possible within Segment A if Alternatives A1, A5, or A10 are chosen: one-lane in each direction on I-5 could be closed for up to 2 months. The possible 24-hour I-5 lane closures would occur at NE 117th Street, NE 185th Street, and NE 130th Street. The NE 130th Street northbound off-ramp might also be closed. I-5 lane closures would further increase congestion and delay. As noted in our letter, construction mitigation needs to provide transit with an ongoing priority path in this corridor.

Segment B (Shoreline to Mountlake Terrace)

L-012-013 Station Alternatives:
Alternatives B-1 and B-2 (elevated station crossing 236th St SW): Community Transit prefers these alternatives because the proposed station location provides for efficient transfers between Link light rail and fixed-route bus service. It has the greatest potential for transit oriented development (TOD) to occur around the facility, and provides for good pedestrian connectivity between the station, Mountlake Terrace Town Center, and the Freeway/Tourism sub-area just south of 236th St SW.

L-012-014 Alternative B-2A (station at 220th St SW): Community Transit's future network plans do not anticipate significantly increased bus service along 220th St SW. A station at this location is assumed to be primarily the focus of pedestrian access limited to the immediate vicinity.

L-012-015 Alternative B-4 (freeway station): Community Transit does not support this alternative because of the separation between the proposed Link station and fixed-route bus service, increasing the already long walk between the transit loop off 236th St. SW and the Freeway Station. The DEIS states this location will result in the loss 1,000 daily boardings. It has the least amount of potential to spur future TOD development and it would eliminate any future use of the existing freeway station for fixed-route bus service.

L-012-016 Construction Impacts:
I-5 lane closures within Segment B are possible for all proposed rail and station location alternatives during the construction activities to install support structures in the median, including the reconstruction of the NE 195th Street pedestrian/bike overcrossing, and reconstruction of 236th Street SW adjacent to the new station. As stated above, any short or long-term lane closures on I-5 will increase congestion causing additional delay. Construction of the elevated guideways could also impact signal operations on 236th Street SW. This could also add delay for vehicles, including buses, accessing I-5 to and from the Transit Center.

L-012-011

As the project progresses into final design, Sound Transit will continue to coordinate with Community Transit and the City to encourage Swift service from Aurora Village to the NE 185th Street light rail station. However, the Lynnwood Link Extension project does not include specific transit priority or BRT improvements between the corridors leading to the station.

L-012-012

Please see Sections 3.3 and 3.6.9 of the Final EIS for further detail on the project's potential construction activities, impacts, and the mitigation plan for construction, including the mitigation approach for transit. While the emphasis is on the Preferred Alternative for each section, a similar mitigation approach would apply to other alternatives. However, it is important to note that these are assumptions on construction approach for the purposes of an EIS analysis of potential impacts and mitigation. The level of impacts, including their duration, depends on issues that will be further developed during final design, subject to FHWA and WSDOT approval, and also influenced by a contractor's approach to construction. The mitigation in Section 3.6.9 therefore emphasizes detailed coordination with the transit agencies and WSDOT as mitigation details are further refined.

L-012-013

Thank you for your comment.

L-012-014

The project would not begin service until 2023. Sound Transit recognizes this is within the period covered by Community Transit's Long Range Plan (2030). However, as outlined in Community Transit's Long Range Plan: *Thinking Transit First* (pages 23-24), Community Transit plans to serve productive route segments to local activity

L-012-016

The greatest impacts to transit will occur if the direct access ramps to the Mountlake Terrace Freeway Station are closed as proposed with Alternative B-1 (for up to 2 months) and B-2/B-2A (for between 2 and 12 months). Alternative B-4 would permanently close the Mountlake Terrace Freeway station at the beginning of construction. Such closures would have a significant impact on transit, requiring reroutes through the City of Mountlake Terrace, causing significant increases in travel time, requiring temporary bus stops, and further compounding the traffic delays that would be caused by lane closures on I-5.

It is imperative that transit service between Snohomish County and King County be protected during construction. Therefore, mitigation is required to maintain and/or improve the existing service levels during the construction phase of the Lynnwood Link Extension project. As stated earlier, transit demand is anticipated to increase as additional congestion negatively impacts general purpose travel lanes on I-5.

Mitigation required for Community Transit to maintain existing inter-county transit service for the construction of the Lynnwood Link Extension includes, but is not limited to, financial assistance for operating and capital expenses to increase service and/or provide reroutes as suggested as a construction mitigation strategy in the DEIS, maintain ingress and egress to the Mountlake Terrace parking garage, maintain ingress and egress to the Mountlake Terrace Freeway Station, use the late night I-5 lane closures option instead of 24-hour lane closures, maintain or improve HOV lane operations, and deployment of a very proactive TDM program.

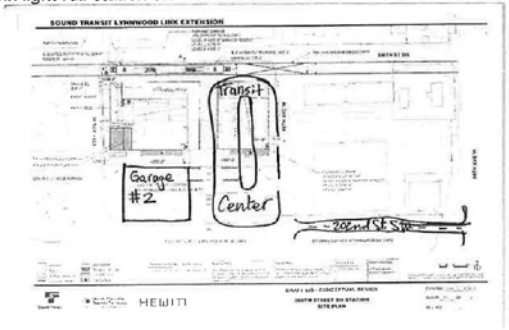
Segment C (Mountlake Terrace to Lynnwood)

L-012-017

Station Alternatives:
Alternatives C-1: With modifications, this is Community Transit preferred station location because it provides for efficient transfers between Link light rail and fixed-route bus service. It has the greatest potential for transit oriented development (TOD) to occur around the facility, further building the transit market and it provides the best pedestrian connections of all there alternatives between the facility, the 196th Street Corridor and Lynnwood's City Center.

The following modifications are suggested:

- Flip the east parking garage with the transit center to further reduce the distance to transfer between the Link light rail station and fixed-route transit center: see illustration below.



centers with an emphasis on transit centers and Link light rail stations. The plan also states that the local routes will be designed to coordinate with higher level of services, especially regional commuter express routes, Swift corridors, commuter rail, or light rail routes. The Long Range Plan specifically identifies 220th Street SW as a facility that provides a critical local link.

As stated in Section 3.2.2 of the Final EIS, Sound Transit anticipates partnering with Community Transit to consider local or regional service revisions integrated with light rail service for development as part of the Lynnwood Link Extension.

L-012-015

Sound Transit acknowledges Community Transit's concerns with Alternative B4, which include lower TOD potential, longer walks, and lower ridership.

L-012-016

Please see response to comment L-012-002.

L-012-017

Thank you for your comment stating a preference for Alternative C1 and providing reasons and proposed modifications for this alternative.

L-012-017

- Provide covered pedestrian pathways between Link, the parking garages, and the transit center.
- Provide an elevated and covered pedestrian bridge from the Link Station to the north side of 200th Street SW.
- Widen 200th Street SW to accommodate the additional traffic resulting from the construction of the Lynnwood Link Extension and additional parking garages, in addition to the transit center.
- Designate 46th Avenue W, south of 200th Street SW, HOV only.
- Open 202nd Street SW between 44th Avenue W and 46th Avenue W to create a secondary access point to the facilities at Lynnwood Transit Center.
- Retain or relocate Community Transit's Ride Store in close proximity to the transit center.

L-012-018

Alternative C-2: Community Transit could also support this alternative, with modifications. This location would still provide for a convenient transfer point between Link light rail and the fixed-route transit center. TOD opportunities are still available. However, the pedestrian connectivity is not as good as that provided the 200th Street SW location for pedestrians destined for businesses along the 196th Street Corridor and within City Center.

The modifications requested for consideration are:

- Retain Community Transit's Ride Store at its current location, in close proximity to the transit center.
- Provide covered pedestrian bridges between the Link station, transit center, and parking garage.
- Designate 46th Avenue W, south of 200th Street SW, HOV only.
- Open 202nd Street SW between 44th Avenue W and 46th Avenue W to create a secondary access point to the facilities at Lynnwood Transit Center.

L-012-019

Alternative C-3 Option1: Community Transit does not support this alternative because of the significant separation between the proposed Link station and fixed-route bus service. It has the least amount of potential to spur future TOD development that will increase the transit market and it has the worst pedestrian connections between the Link station, transit Center, parking garage and commercial developments along the 196th Street Corridor and City Center of all the alternatives.

L-012-020

Alternative C-3 Option 2: Community Transit has concerns with this alternative. Although it improves the transfer point between Link light rail and fixed-bus transit service, the remaining issues identified with Alternative C-3 Option 1 remain. Additionally, the relocated transit center would increase travel running times for buses serving the facility and increase operating costs.

L-012-021

Construction Impacts:
Mitigation required for Community Transit to maintain existing inter-county transit service for the construction of the Lynnwood Link Extension includes, but is not limited to, financial assistance for operating and capital expenses to increase service. The rest of the construction impacts are directly related to the station location for Lynnwood Transit Center.

L-012-022

Alternative C-1, with the modifications suggested by Community Transit, would require a temporary transit center while the facility is being constructed. This could occur in the existing park and ride facility. It would further reduce the number of parking stalls available. TDM measures and increase in local feeder service could mitigation these additional impacts.

L-012-018

Thank you for your comment stating support for Alternative C2 and providing reasons and proposed modifications for this alternative.

L-012-019

Community Transit's concerns with Alternative C3 Option 1 are noted. Please see response to comment L-012-005.

L-012-020

Community Transit's concerns with Alternative C3 Option 2 are noted; the range of alternatives in Lynnwood was developed to explore the differences that variations in sites and layouts might offer in terms of transportation performance, costs, and environmental impacts. The distance between the existing transit center and the new site is relatively small.

L-012-021

As described in Section 3.6.9 of the Final EIS, any plans involving transit service modifications would be coordinated with King County Metro, Community Transit, and private transit service providers to minimize construction impacts and disruptions to bus facilities and service.

Please see response to comment L-012-002 for a discussion of construction impacts and mitigation.

L-012-022

Sound Transit appreciates the suggestions for Alternative C1, but the transit center would not need to be closed during construction. The other detailed suggestions for facilities and amenities involve design definitions that would be determined at later stages of the project, and Sound Transit would involve Community Transit and others to participate in the development of such designs regardless of the alternative

L-012-023 Alternative C-2, with the modifications suggested by Community Transit, does not appear to impact transit operations in the area. However, if TDM were used to mitigate the reduction in parking available, funding would be needed to increase service.

L-012-024 Alternative C-3, Options 1 and 2, do not appear to impact Community Transit operations in and out of the Lynnwood Transit Center. As stated above, funding would be needed to provide additional local feeder service, as a mitigation measure for the loss of 560 parking stalls.

Additional Comments and Mitigation Suggestions
In addition to the specific comments provided above, Community Transit is providing the following general comments for future design consideration and additional mitigation measures.

L-012-025
- Where elevated tracks are constructed over local roads, a minimum height clearance of sixteen feet would be required to accommodate the Double Tall buses. This would allow maximum flexibility for Community Transit when developing future service in south Snohomish County.

L-012-026
- There are additional highway projects that would significantly enhance the transportation system, during and after the completion of the Link light rail extension to Lynnwood:
  - Direct access between the NB I-5 HOV lanes and SB Interstate 405 (I-405) HOV lanes
  - Direct access between NB I-405 HOV lanes and the SB I-5 HOV lanes
  - Direct access between SB State Route (SR) 525 and the SB I-5 HOV lanes
  - Direct access between the NB I-5 HOV lanes and NB SR 525

  By providing direct access points between the HOV lanes of different freeway systems, the potential for accidents would be reduced and traffic flow improved by eliminating the need for HOVs to cross into general purpose lanes to access the connecting route. These improved connections would also reduce travel times and the cost to provide bus service. The SR-525 to I-5 SB connection would enable Community Transit to remain on the freeway system, thus providing improved service between Mukilteo and destinations in King County.

L-012-027
- Sound Transit is encouraged to work with the Washington State Department of Transportation (WSDOT) to adjust the carpool policy from 2+ to 3+ as a construction mitigation measure.

selected. It is correct that any of the alternatives involving construction on existing park-and-ride facilities would reduce the available parking supply, and that transit and TDM measures could help address the impact.

Please see response to comment L-012-002 for a discussion of construction impacts and mitigation.

L-012-023
Sound Transit appreciates the suggestions for Alternative C2. As described in the previous response (L-012-022), such details will be determined later in the project by Sound Transit in collaboration with Community Transit and others.

L-012-024
The Final EIS Chapter 3, Section 3.6.9., includes further discussion of mitigation options for the loss of parking stalls during construction. Improvements in transit service are among the options identified.

L-012-025
Sound Transit's existing design standard for placing guideways over any roadway is a minimum 16.5-foot vertical clearance.

L-012-026
Sound Transit agrees that there are a number of other projects, including HOV direct access improvements, that could complement the Lynnwood Link Extension and address other transportation needs and problems. However, they are beyond the scope of the project being studied in the EIS.

L-012-027
Changes to the carpool policy from 2+ to 3+ will be discussed with

Community Transit Comment Detail:
Lynnwood Link Extension Transportation Technical Report

L-012-028

1. Pages 4-25 through 4-36, Section 4.2.2 (Regional Transit): it is not clear if LOS analysis is for Sound Transit only or includes all agencies. The information provided for transit frequency, hours of service, and passenger load read as if the analysis includes Community Transit, King County Metro, and Sound Transit; whereas, the data for reliability and on-time Performance only includes Sound Transit data.

L-012-029

2. Page 5-31, Local and Sub-Regional Bus Transit: thank you for including the last sentence for the NE 185th Street Station regarding transit priority treatments along NE 185th Street for *Swift* BRT service to the station.

3. Page 5-33: Community Transit concurs with the continued use of the Mountlake Terrace Freeway flyer station for Alternative B-1, B-2, and B-2A, as a connection point between bus transit and Link light rail service.

L-012-030

4. Page 6-1, Construction Impacts: the third bullet states the at-grade rail alignments and bridge reconstruction proposed with Alternatives A1, A5, and A10 could require lane closures on I-5, one in each direction, for up to one month.

   Any lane closures that increase traffic volumes on I-5 have a negative impact on transit operations, and must be mitigated. The existing transit riders making use of current inter-county bus service are future Lynnwood Link customers. This existing market needs to be protected during the construction of Link. It is also likely that demand for transit service will increase as I-5 conditions deteriorate in the general purpose lanes.

   To minimize these impacts, I-5 lane closures should be limited to late night and weekends, the HOV lanes should be increased from 2+ to 3+ passengers per vehicle to maintain speed and reliability for the existing inter-county bus service.

5. Page 6-1, Construction Impacts: the fourth bullet states elevated alignments will require night time closures. This should not impact Community Transit operations, but could impact Sound Transit's 500 series Express bus service between Snohomish and King Counties.

6. Page 6-1: the sixth bullet states Alternatives B1 and B2/A require construction in the median on I-5, adjacent to the transit center: construction activity will require the direct access ramps and freeway flyer station to close for 1 to 2 months.

   Sound Transit needs to work with WSDOT to find an alternative to closing the Mountlake Freeway Station: any closure of this facility will have significant negative impacts on Community Transit Commuter and Sound Transit Express Bus service. The most significant impact is, but not limited to, major reroutes for the existing eight commuter/express buses that stop at this facility. These reroutes will impact travel time, which will add to the operating and, possibly, capital costs to provide this service between Snohomish and King Counties during the construction phase of the Lynnwood Link Extension.

7. Page 6-1: the last bullet states construction of the light rail station will reduce the number of park & ride stalls. Mitigation could include TDM measures to encourage drivers to use local

WSDOT as the mitigation program continues to be developed and refined during final design. This measure could also be an element of the construction traffic management strategy for I-5 lane closures.

L-012-028

Section 3.2.2 of the Final EIS has been updated to clarify that the LOS analysis for transit frequency and hours of service included Sound Transit, King County Metro and Community Transit services, and that the reliability and on-time performance data are primarily from Sound Transit.

L-012-029

Thank you for your comment.

L-012-030

Please see response to comment L-012-002 for a discussion of construction impacts and mitigation.

L-012-030

transit options to access the Lynnwood Transit Center during construction; however, no specifics are provided for the TDM strategies. One suggestion is partnering with Community Transit to increase the coverage of the Curb the Congestion program. Additionally, if Community Transit is the provider of the "local transit option," financial assistance will be needed for operating and capital costs to provide such service.

8. Page 6-10, Segment A, General Purpose Traffic Impacts: confirms impacts to transit with I-5 lane closures for between 1 – 2 months as a result of bridge replacements. Same concern as stated above for item #4. Community Transit would prefer construction requiring I-5 lane closures to occur during late night hours and/or on weekends. If this is not possible, the same mitigation measures should be considered.

9. Page 6-10, Transit Impacts: there will also be negative impacts to Sound Transit Express Bus Route 512, which needs to cross from the left HOV lanes and to the NE 145th St. Freeway Flyer stop: if one-lane general purpose I-5 lane is closed in each direction, this movement will be more difficult affecting service speed and reliability.

10. Page 6-13, Transit Impacts: the narrative should include negative impacts to Community Transit's 400 and 800 series commute service and Sound Transit's 500 series Express Bus service, if the I-5 lane closures are on a 24-hour basis, as opposed to the late night closures. See comments for #4 and #9.

11. Page 6-14, Transit Impacts: see response for comment #10.

12. Page 6-15, General Purpose Traffic Impacts: if possible, Community Transit would prefer the late night and weekend I-5 lane closures as opposed to 24-hour lane closures. Otherwise comment #4 applies.

13. Page 6-15, Transit Impacts: should repeat the General Purpose Traffic Impacts relating to the I-5 closures. See response for comment #4. Again, Community Transit would prefer night time closures that do not disrupt I-5 during weekday AM and PM peak period commutes.

14. Page 6-22, Segment B, Transit Impacts (top of page): see comment #4 regarding I-5 lane closures. Additionally, see comment # 6 relating to the Mountlake Terrace Freeway Station.

15. Page 6-22, Alternative B-1, Transit Impacts (bottom of page): same comment as above #6.

    Reroutes for buses coming from the north to MLT and heading north after stopping at MLT from/to I-5 will have to exit/enter I-5 at 220th Street SW because there are no direct I-5 on or off-ramps on the north side of 236th St SW to the Mountlake Terrace Park and Ride. This will not only inconvenience riders, but increase the cost to provide the service for both Community Transit and Sound Transit. Both agencies may also have to work with the City of Mountlake Terrace to find an alternative bus stop to reduce the total time delay with the inability to use the freeway station.

    Additionally, the second paragraph states bus circulation may be constrained, but not restricting during Alternative B1 construction. Again, any change to stops, reroutes, or other operational changes will have negative impacts to current transit riders, by moving bus

L-012-030

stops, increase in travel time, possible decreases in reliability, and most likely increased costs to provide comparable service.

16. Page 6-23, Alternative B2, Transit Impacts: same comments as #6 relating to the Freeway Station. Additionally, the 1 month closure of 228th St SW will impact at least two Community Transit local bus routes that cross I-5 via the 228th/230th Street SW bridge. This will require significant reroutes because there are limited alternatives for crossing over I-5. Community Transit requests mitigation for this impact.

17. Page 6-24, Alternative B2A: Impacts to transit should be further described beyond, "during construction, transit would experience some delay and bus stops could be temporarily relocated."

18. Page 6-24, Alt 4, Transit Impacts: see comment #6.

19. Pages 6-25 and 6-26, Alt. C-1, Transit Impacts: increase in traffic congestion along 200th Street SW will negatively impact transit operations in and round the Lynnwood Transit Center: increase in delay, decrease in reliability, etc. Community Transit requests mitigation needed to compensate for these impacts to local service, which is also recommended as a mitigation measure for the loss of parking stalls at Lynnwood Transit Center during construction. Mitigation for the loss of parking stalls could also include coordination with Community Transit to enhance the existing Curb the Congestion TDM program.

20. Page 6-27, Alt C-3, Transit Impacts: thank you for minimizing transit impacts by limiting the 46th Avenue W I-5 direct access ramp closures to late nights and weekend. Sound Transit routes will be still be impacted by weekend closures.

21. Page 9-10 Construction Mitigation, Transit: Community Transit requests financial mitigation to provide additional in service, needed to off-set impacts resulting from the construction of the Lynnwood Link Extension to the Lynnwood Transit Center.

22. Page 9-10 Construction Mitigation, Transit: there is no mention of mitigation for the negative impacts to transit resulting from I-5 lane closures. This impacts all agencies currently providing service on I-5 corridor within the project area.

L-012-031

23. Page 9-11, 4th bullet: all communications regarding parking and transit service should be coordinated with Community Transit and King County Metro.

L-012-031

As described in Section 3.6.9 of the Final EIS, transit service modifications would be coordinated with King County Metro, Community Transit, and private transit service providers to minimize construction impacts and disruptions to bus facilities and service.

Swift, Lauren

From:	Roland Behee <Roland.Behee@commtrans.org>
Sent:	Tuesday, September 24, 2013 4:52 PM
To:	Lynnwood Link DEIS
Cc:	Carol Thompson; June DeVoll; Kate Tourtellot; Wade Mahala; Joy Munkers
Subject:	Community Transit - Station ADA Service Accessibility

L-013-001

Community Transit submitted a letter and supporting technical comments on the Lynnwood Link DEIS on 9/23. We would also like to offer additional input reinforcing comments provided by King County Metro in their comment letter regarding ADA paratransit service and accessibility of the Link system.

Link station design should maximize accessibility for all patrons such that Link serves as a viable alternative to expensive ADA paratransit service for the largest possible riding population.

It is also important that Link station design carefully consider proximity and connectivity between rail platforms and parking spaces for ADA paratransit vehicles for passengers that will transfer between light rail and ADA service.

Thank you for considering these additional comments.

Roland Behee
Strategic Planning Unit Manager
Community Transit
(425) 348-2368

1

L-013-001

ADA and paratransit accessibility are part of Sound Transit's commitments for the project, and details will continue to be addressed during further design. The project design will meet or exceed all applicable ADA requirements.

King County
Department of Transportation
Harold S. Taniguchi, *Director*
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September 20, 2013

Lauren Swift
Sound Transit Lynnwood Link Draft Environmental Impact Statement
401 S. Jackson Street
Seattle, WA 98104

Dear Ms. Swift:

L-014-001 The King County Department of Transportation (KCDOT) is pleased to submit comments on the Lynnwood Link Draft Environmental Impact Statement (DEIS). King County is a partner with Sound Transit in its mission to expand high capacity transportation across the region and attract more transit ridership. Providing reliable, frequent, rapid, and efficient all-day two-way transit service is an objective we share for the Lynnwood Link extension project.

Since Lynnwood Link light rail extension will affect King County Metro Transit's fixed bus routes, van pools and paratransit services, we have actively participated in this project since its inception and have served as a cooperating agency since September of 2011. King County has provided scoping comments as well as comments on transportation-related discipline reports and the preliminary DEIS. We appreciate that many of our previous comments have been addressed in this document and that our suggestions have helped shape the analysis.

The following comments are offered to support this project by improving the utility of the EIS as a decision-making tool. They focus primarily on segment A of the study area which roughly corresponds to Metro's service area, though our comments also address features of the project located in segments B and C. The following comments are listed under the appropriate section headings. In addition, we have attached technical comments to address more detailed concerns and suggestions.

COMMENT SUMMARY

To improve the value of the FEIS as a decision-making tool, we offer some additional considerations to address in the analysis such as alternatives which place greater emphasis on connecting transit service and non-motorized travel options as a means to access stations, as well as consideration of transit oriented development rather than park-and-ride garages. There should also be acknowledgement of the potential for future tolling and other transportation demand management strategies in the study corridor.

L-014-001

Thank you for your comments and efforts in working on the initial development of the Lynnwood Link Extension, and for the County's continued support for the project.

L-014-002 Regarding the preferred alternative, King County does not have a position on an elevated or at grade profile. King County does support alternatives A10 or A11. Locating a station at NE 130th Street would capitalize on this location's strong transit ridership projections, more efficient local bus connections and superior non-motorized access. King County also prefers a non-freeway median station location at Mountlake Terrace along with suggested design modifications to improve accessibility at the 220th Street SW and Lynnwood stations.

L-014-003 **PURPOSE AND NEED**

The project's Purpose and Need appears to have been revised to be more comprehensive subsequent to previous versions of the document. We suggest addressing frequency in the first bullet on page 1-4, as well as the need for more reliable reverse peak direction transit since reverse peak travel is one of the problems specifically addressed in the transportation analysis. Such a bullet could read:

> *Provide reliable, frequent, rapid, and efficient all-day two-way transit service of sufficient capacity to meet the existing and projected demand for travel to and from the corridor communities and other urban centers in the Central Puget Sound area.*

ALTERNATIVES CONSIDERED

L-014-004 **Link Station Access:**
The analysis should consider a broader set of alternatives with regard to station access. Nearly every alternative and option analyzed by the DEIS proposes a similarly-sized parking garage at most stations. The resulting analysis reduces the utility of the EIS as a decision-making tool, because alternative approaches to station access and their impacts are not measured. The FEIS should evaluate alternatives to large stand-alone park-and-ride garages including increased connecting bus service, enhanced bicycle and pedestrian facilities to improve the transfer experience and transit oriented development. The FEIS needs to measure the impacts of both providing commuter parking and of not providing commuter parking or at least reduced commuter parking.

A string of park-and-ride garages as addressed in the action alternatives would result in a largely automobile-dependent light rail corridor. As shown in the DEIS, these garages would exacerbate local traffic congestion and related impacts, including delays to local and connecting bus service. By contrast, comparably scaled investments in non-motorized access and transit connections would be more consistent with the project's vision, especially as expressed by the last two bullets under 1.2.2 *Need for the Project* on page 1-5. Consideration of this alternative approach to station access in the FEIS would result in a more informative and useful analysis by addressing how ridership and travel time would be affected if comparable investments were made in connecting bus service and non-motorized access to Link stations or additional Link stations (e.g., NE 130th Street and 220th Street SW in Mountlake Terrace).

Including alternatives to park-and-rides in the EIS would also be consistent with Sound Transit's 2012 Transit Oriented Development (TOD) policies. One important goal of the policy is to

L-014-002

The County's comments on Alternatives A10 and A11, which indicate a preference for the NE 130th Street Station, are noted. Sound Transit has continued to explore design modifications for the 220 Street SW and Lynnwood stations, with improved multimodal access being key considerations. The County's preference for a non-freeway station at Mountlake Terrace and suggested design modifications at 220th Street SW and Lynnwood stations are also noted.

L-014-003

The purpose and need statement in Section 1.2 of the Draft EIS was slightly modified based on public comments received during public scoping. FTA and Sound Transit made minor clarifying edits to help simplify the discussion. High frequency service was part of the definition of all alternatives under consideration.

L-014-004

Park-and-ride lots are one of many strategies to maximize transit accessibility, and the Final EIS explores additional parking options at several stations. However, the project already assumes that in many stations, the majority of patrons would be arriving by other modes, particularly transit. The Preferred Alternative also includes improvements in bicycle and pedestrian facilities in station areas and on the streets that would be modified by the project. Sound Transit will continue to explore other modal improvement options as the project advances, in coordination with its partner agencies.

The parking supply described for the alternatives was intended to define the likely upper range of parking that would be provided, which in turn helped estimate the upper range of related impacts such as parking (including potential "hide-and-ride" parking activity), noise, visual impacts, and property requirements. Other details such as the type and

L-014-004 "Encourage convenient, safe multi-modal access to the transit system, with an emphasis on non-motorized access." A focus on TOD rather than park-and-ride garages could provide more all-day ridership, an important question for the EIS to address.

The DEIS analysis predicts an increase of approximately 23,000 riders. The assumptions for this increase must include a significant proportion of transfers from connecting bus service or non-motorized access because the park-and-ride garages will provide access for only a small portion of that increase. The FEIS should provide detail about how that connecting bus service would be supported by Sound Transit's facilities, or provided by Metro and Community Transit.

Regarding pedestrian and bicycle access, the description of the alternatives should address how future light rail passengers will safely and conveniently access the stations on foot or by bicycle. Where will paths or ramps connect to adjacent streets? What kind of bike parking will be provided? How many bike lockers will be provided?

L-014-005 **Support for NE 130th and NE 145th Street Stations:**
King County recommends that the Lead Agency include a station at NE 130th Street in the Preferred Alternative as depicted in Alternative A10 or A11 in addition to the station at 145th. A NE 130th Street station would be approximately mid-way between the Bitter Lake and Lake City Urban Villages in the City of Seattle. A station at NE 130th street would have the advantage of less east-west traffic congestion facilitating reliable local and connecting bus service along with significantly more on and off-street parking capacity as well as fewer accidents.

King County supports a station at NE 145th Street. However, issues with congestion, transit access, and parking will require roadway and pedestrian improvements to the NE 145th street corridor. King County believes that the assumption that there should be 500 car garages at both NE 145th and NE 185th should be carefully analyzed to determine whether it might be better to provide more parking at 185th than congested 145th. King County does not support parking at a NE 130th Station.

L-014-006 **Mountlake Terrace Station:**
King County supports locating a light rail station elsewhere than the I-5 median in order to allow continued transit use of the existing freeway stop by Sound Transit and Community Transit during light rail construction. A non-freeway median station location closer to the Mountlake Terrace town center would also increase light rail ridership in the long run by reducing walking distance and by increasing opportunities for TOD. As documented in greater detail in our attached paratransit comments, riders with impaired mobility would especially benefit from improved proximity, while reducing reliance on costly Access paratransit service.

ADA Accessibility:
L-014-007 Many paratransit trips begin in Snohomish County and end in King County. Therefore, accessibility issues at stations outside Metro's service area can still impact the cost to provide Access paratransit service. This means that facilities not only in King County need to be accessible, but that the whole system is accessible. Building new public transportation infrastructure provides an opportunity to make the system as accessible as possible, while

amount of bicycle parking, and more detailed station access planning will be developed during further design of the stations.

L-014-005
Sound Transit acknowledges the County's preference for a station at NE 130th Street. The Preferred Alternative includes an at-grade and elevated alignment with stations at NE 145th and NE 185th Streets (Alternative A1 with modifications). The Draft EIS also evaluates options for a potential station at NE 130th Street.

L-014-006
The County's preference for the Mountlake Terrace Transit Center station is noted.

L-014-007
All Sound Transit facilities and projects will be designed to meet ADA requirements. Sound Transit will continue to work with King County and its other partner agencies to develop detailed station access plans as the project advances, and this will provide the opportunity to integrate King County's suggestions and further involve you in station design decisions. To address the larger questions regarding paratransit service at a system level, as well as other transit system integration matters, Sound Transit and King County are now collaborating on the Metro Long Range Plan and Sound Transit's Long Range Plan Update and ST3 planning.

L-014-007 employing more costly mitigation measures like paratransit to address the remaining gaps. In order to insure that the system is as accessible and as useful to as many customers as cost-effectively as possible, three key elements should be evaluated:

1. Accessibility of the service;
2. Accessibility of the connections; and
3. Accessibility to destinations served.

We have attached more detailed recommendations for ensuring system-wide accessibility including specific design suggestions for each station alternative to increase the independence of people with disabilities while also reducing the cost of providing paratransit services.

L-014-008 **Transportation Demand Management and Tolling:**
In the evaluation of long-term or cumulative impacts, the FEIS needs to provide a more accurate analysis of likely future conditions consistent with TDM and tolling for the I-5 corridor planned by PSRC and under consideration by WSDOT. PSRC'S adopted *Transportation 2040* plan includes a number of provisions to reduce future traffic congestion on key corridors in the study area and WSDOT is currently in the process of evaluating variable tolling of I-5. As these strategies will reduce traffic congestion and increase transit demand, they will directly affect the performance of all modes using the I-5 corridor, affecting the performance of each alternative and therefore need to be evaluated accordingly.

TRANSPORTATION IMPACTS AND MITIGATION

L-014-009 **Addressing impacts on people with disabilities now and in the future:**
The DEIS evaluates the impact of the project on culturally and linguistically diverse populations and low income populations but does not evaluate the impact on people with disabilities. The FEIS needs to evaluate the project's impact on people with disabilities in order to identify additional aspects of the project that could be altered to increase the benefit of the project to this population.

In addition, the DEIS does not consider the implications of upcoming demographic changes. As the population ages, the transportation needs and abilities of system users will also change. This change increases the need to ensure the new line is built to accommodate the widest variety of abilities and disabilities.

Construction Impacts

L-014-010 The Construction Impacts section (Section 3.3) needs to clarify how construction will impact local bus service and access to bus stops.

L-014-011 KCDOT and Metro will continue to be active partners in the Lynnwood Link project as it moves forward, participating in the SeaShore Transportation Forum and working directly with Sound Transit to optimize integration of our respective transit systems to improve regional mobility and accessibility for all.

L-014-008

The modeling assumptions used for the project were developed in consultation with WSDOT and other cooperating agencies as part of the initial methodology development and scoping phase of the Draft EIS, and the parties agreed that managed and tolled lanes on I-5 should not be assumed for several reasons.

First, the travel demand modeling performed for the Lynnwood Link Extension Final EIS is consistent with the fiscally constrained project list contained in PSRC's Transportation 2040 plan.

Second, there has been very limited development of concepts for I-5 tolling, and the lack of detailed data on the impacts of tolling on the I-5 corridor would make the analysis of impacts related to the light rail project very difficult to accurately assess. (By contrast, at a system level, a limited number of tolled facilities have been assumed outside of the corridor, including I-405 between downtown Bellevue and Lynnwood, SR 520 between I-5 and I-405, I-90 between I-5 and I-405, and the SR 99 tunnel in downtown Seattle, all of which have been or are being examined in other project-level analyses).

Third, future travel conditions without the unfunded managed toll-lane facilities would be a worst-case scenario because the traffic congestion would be worse and transit ridership likely lower than with managed and/or toll facilities. (Sound Transit's Long-Range Plan update and EIS, which is a plan-level document, does assume the regional tolling included in the current PSRC plan, but again its impact analysis and the PSRC plan's information is not location specific.) Appendix A in the Transportation Technical Report provides detailed information about the methodology for the travel demand forecasting analysis.

L-014-009

Sound Transit would not be permanently removing facilities serving

Lauren Swift
September 20, 2013
Page 5

L-014-011 We hope these comments prove helpful as the FEIS is developed. We have attached additional suggestions regarding specific detail on integration of paratransit into station alternatives. We look forward to continuing to work with Sound Transit to refine the project's design and improve its utility for optimizing regional mobility, especially the speed and reliability of public transportation.

Sincerely,

Harold S. Taniguchi, Director
King County Department of Transportation

Attachments

cc: Laurie Brown, Deputy Director, KCDOT
Kevin Desmond, General Manager, Metro Transit Division, KCDOT
Chris Arkills, Transportation Policy Advisor, King County Executive Office

people with disabilities, and the project will be built to meet ADA requirements, with operational and functional improvements in transit service as well as other local transportation facilities. Therefore, no adverse impacts to persons with disabilities has been identified. In many locations, non-ADA compliant facilities such as sidewalks and intersections would be improved, and the project would offer mobility benefits to disabled individuals as well as the general population. The EIS is intended to identify adverse impacts. Sound Transit recognizes that demographic trends indicate a continued increase in the percentage of the overall population that will be senior citizens who may have disabilities; this project would provide an alternative to driving, which would be a benefit.

L-014-010

Sound Transit recognizes the need to support and maintain transit markets during construction. The Draft EIS and the Final EIS both described mitigation measures including TDM/transit elements, with additional operational details to be prepared during final design to minimize impacts related to temporary closures. The Final EIS also provides more definition of the location and duration of closures and their related impacts, as well as minimization measures such as timing closures to be in off-peak periods, evenings, or weekends where possible.

L-014-011

Thank you for your comments and efforts in working on the initial development of the Lynnwood Link Extension.

Lynnwood Link Extension Draft EIS
Paratransit Comments

L-014-012

Background

Access paratransit service is provided to people when they are prevented from riding regular Metro and Sound Transit services by their disability. The service is required by the Americans with Disabilities Act of 1990 (ADA) within three quarters of a mile of all regular (non-commuter) bus services. In Snohomish County, Community Transit's paratransit service is called DART. Sound Transit also has ADA paratransit obligations along Link Light Rail lines. Sound Transit currently contracts with Metro to share the costs of Access service for trips originating and terminating in locations along light rail lines.

The Lynnwood Transit Center is a major paratransit transfer location. Customers traveling between King County and Snohomish County must transfer between Access and DART at this location. If adequate space is not provided at Lynnwood Station, another location would be needed. Any alternate location would need to have good access to I-5 in order to avoid significant impacts on Access's and DART's operational efficiency.

In addition to paratransit services, the ADA encourages transit agencies to enable as many people with disabilities to use their regular transit services as possible. Because of this and the expense of providing paratransit service, Metro works to find ways to move Access riders onto regular transit services. The main strategy used is Conditional Eligibility.

Currently 33 percent of Access customers are conditionally eligible for Access, meaning that they are able to use regular transit services under some conditions. These conditions relate to barriers that prevent them from traveling and can include things like the need for curb cuts and level sidewalks. Access reviews the trips made by conditionally eligible customers to determine whether there is an accessible pathway available on regular transit services. If a pathway is available, then the customer can no longer use Access for that trip.

The current trip review process requires that a trip be completely accessible to a customer from the origin to the destination. One barrier on a single section of a trip results in a customer receiving the entire trip on Access.

Feeder Service

Under ADA legislation, Access can to provide conditionally eligible customers with a ride to a bus stop or train station and then expect customers to complete the rest of their journey on the bus or train.

Sound Transit's Link Light Rail service has reliability and frequency necessary for providing feeder service. As the Sound Transit light rail network continues to expand, a feeder service program will be able to generate significant operational efficiencies. For example, customers traveling to Seattle from Snohomish County could be transported to the Lynnwood Station by DART and then use the light rail to get to the station closest to their destination. If needed, customers could either use bus services or Access for the final segment of their trip.

L-014-012

Sound Transit will design the project to meet ADA requirements, consistent with other federal Sound Transit projects in place or under design now. The station planning programs and Sound Transit design standards incorporate this commitment for effective ADA service, including connections between providers. Further details for each station will be developed during final design in coordination with ADA service providers. More detailed service planning and any service agreements will also be conducted in the later stages of project development as the system approaches operation. However, space for paratransit is generally included in the conceptual plans for the station areas assessed in the EIS. Sound Transit also considered these comments as it updated specific station designs as part of preliminary engineering for the Preferred Alternative, but the level of design used for the EIS remains conceptual to preliminary, and many of the comments involve final design decisions and operational planning, which occur later in the project.

Sound Transit also appreciates the comments regarding persons with disabilities as well as future demographic changes affecting mobility for the general population. Several areas of the EIS address factors that will be important to providing effective ADA access, including the transportation analysis of various modal connections, as well as Section 4.4 Social Impacts, Community Facilities, and Neighborhoods, and Appendix C Environmental Justice Analysis, which incorporate transit-dependent population information from the U.S. Census. More detailed analyses for the purposes of the EIS are not necessary, however, because the project is not removing transit connections without providing improvements in services and facilities that would benefit the general population as well as persons with disabilities. No adverse impacts to persons with disabilities have been identified. However, as Sound Transit initiates final design and conducts more detailed service planning in collaboration with Metro, there will be further

L-014-012

Locating both a feeder site and the transfer site at the Lynnwood Station could further increase operational efficiencies.

Accessible Transit Systems First

When it comes to accessibility, the focus is often on the required paratransit services and then on what changes can be made to improve accessibility to reduce the costs of paratransit. Building new public transportation infrastructure provides an opportunity to focus on making the system as accessible as possible first and then looking at mitigation measures like paratransit for the remaining gaps. In order to insure that the system is as accessible as possible there are three key elements that should be evaluated:

- Accessibility of the service – what can be done to insure that the new rail line is accessible? This includes elements like level boarding, stations layouts that are easy to understand and reliable facilities like elevators and toilets
- Accessibility of the connecting services – what can be done to insure that it is possible to get to and from connecting services at stations? This includes easy access to and between bus zones and paratransit zones as well as adequate facilities at the zones.
- Accessibility to destinations served – what can be done to insure that destinations served by the station are easy to get to? This is particularly important at locations that have or are expected to have transit oriented development. It includes minimizing the distance required to travel to access nearby destinations from the station and making that travel easy and pleasant.

Considering all three elements can help maximize the number of people able to use the new service. This increases the independence of people with disabilities and reduces the need for customers to ever utilize paratransit services, reducing the cost of such services.

Paratransit trips can begin in Snohomish County and end in King County. Accessibility issues at stations outside Metro's service area can still impact the cost of Access paratransit service. This means that it is important that not only facilities in King County be accessible, but that the whole system be accessible.

Please consider the following comments.

Overall:

1. The Lynnwood Link Extension Draft Environmental Impact Statement evaluates the impact of the project on culturally and linguistically diverse populations and low income populations but does not evaluate the impact on people with disabilities. An evaluation of the impact on people with disabilities could identify additional aspects of the project that could be altered to increase the benefit of the project to people with disabilities.
2. Additionally the DEIS does not consider the implications of upcoming demographic changes. As the population ages, the transportation needs and abilities of system users will also change. This change increases the need to insure that the new line is built to accommodate the widest variety of abilities and disabilities.

opportunities to discuss these issues; the Sound Transit System Planning program and the Metro Long Range Plan update also includes additional collaborative efforts to consider these suggestions.

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Page	Comment
Appendix F, Sheets 65-71	**N 130th St Station** Metro Accessible Services anticipates using this station as an Access feeder location but not as a major transfer location. For this reason the one paratransit bay provided is adequate. Options 1 & 2 - The elevators to the platform should be in close proximity to the paratransit zones and bus zones. The paratransit zone is currently too far from the bus zones. Having two elevators that provide access to the platform is good because it insures access for customers with disabilities in the event one elevator is not functioning.
Appendix F, Sheets 72-79	**N 145th St Station** Metro Accessible Services anticipates using this station as an Access feeder location but not as a major transfer location. For this reason the one paratransit bay provided is adequate. Option 1 & 2 - NB bus bay is far from station, making access difficult for some customers with disabilities. Having two elevators that provide access to the platform is good because it insures access for customers with disabilities in the event one elevator is not functioning. Option 2, Sheet 76 - If paratransit and SB bus zone could be co-located at the same location as the current paratransit zone it would improve access for customers with disabilities.
Appendix F, Sheets 80-83	**N 155th St** Metro Accessible Services anticipates using this station as an Access feeder location but not as a major transfer location. For this reason the one paratransit bay provided is adequate. However, the current location of paratransit zone is not suitable. The paratransit zone should be located in close proximity to both bus zones and the elevators to the platform. This design provides very easy access for customers with disabilities from bus zones to elevators to platform. Having three elevators that provide access to the platform insures excellent access for customers with disabilities in the event one is not functioning.
Appendix F, Sheets 84-94	**N 185th St** Metro Accessible Services anticipates using this station as an Access feeder location but not as a major transfer location. For this reason the one paratransit bay provided is adequate. Options 1 & 2 - The paratransit zone is well located. Having two elevators that provide access to the platform is good because it insures access for customers with disabilities in the event one elevator is not functioning. Option 3, Sheet 91 - This design appears to require customers to use an elevator when traveling between the paratransit bay and the bus bay in the transit roadway. This is

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	not as easy to use as Options 1 and 2. Having two elevators that provide access to each platform is good because it insures access for customers with disabilities in the event one elevator is not functioning. All Options (Sheets 84, 88 & 91) - It is unclear what the pathway is for passengers walking between station and EB bus zone on NE 185th. A N/S crosswalk needs to be provided near the intersection of NE 185th St and the reconstructed 5th Ave NE in order for the EB zone to be usable and safe. If the paratransit bay is moved to enable this crosswalk, it should still be located very close to its current position.
Appendix F, Sheets 95-98	**Mountlake Terrace/236th St SW Transit Center Station** Metro Accessible Services anticipates using this station as an Access feeder location but not as a major transfer location. Metro considered this station as a potential transfer point between Community Transit's DART service and Metro's Access service. However, this location lacks a southbound off ramp and a northbound on ramp to I-5. In addition, the site is space constrained, making it difficult to find enough space for the number of required paratransit zones. For this reason the one paratransit bay provided is adequate for Metro's needs. Sound Transit should also consult with Community Transit in regards to their paratransit needs at this location. The distance between the paratransit zone and the EB bus zone on 236th St SW is further than optimal. Having two elevators that provide access to each platform is good because it insures access for customers with disabilities in the event one elevator is not functioning.
Appendix F, Sheets 99-101	**Mountlake Terrace/236th St SW Freeway Station** The station design lacks a paratransit zone. The distance between the bus zones and the station platform is extremely large. If the station were modified to include a paratransit zone, it would also likely be extremely far from the station platform. This distance is likely to be beyond the capabilities of some customers with disabilities and would may result in additional paratransit usage. The distance may also be large enough that feeder service would not be possible at this station. The additional paratransit operations costs would impact the cost of providing Access and DART and would likely be shared with Sound Transit. Metro Accessible Services recommends that this station option not be selected.
Appendix F, Sheets 102-105	**Mountlake Terrace/220th St SW** Access does not anticipate using the paratransit bay at this station as it is in Snohomish County. However, this station might be an adequate alternate location for transfers between Community Transit's DART service and Metro's Access service. Conducting transfers at this location would reduce the distance that Access vehicles were required to travel in to Snohomish County. Further discussion would be needed between Community Transit, Metro and Sound Transit about whether this location would be a suitable alternative to the Lynnwood Transit Center for paratransit transfers between Access and DART. The station design is unclear about how customers could get from the paratransit bay

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	to the WB bus zone on 220th St SW other than via the station platform. Having two elevators that provide access to the platform is good because it insures access for customers with disabilities in the event one elevator is not functioning. Sound Transit should also consult with Community Transit in regards to their paratransit needs at this location.
Appendix F, Sheets 106-121	**Lynnwood Station** *General Comments* The Lynnwood Station is expected to be the most utilized station of the Lynnwood Link Light Rail Extension. This is because this station will be the main point of access to the planned Lynnwood downtown area and it will serve as a major interchange for bus services, with services from Everett expected to terminate here. In addition, the station will also have a large number of parking spaces for customers driving to the station. Each of these elements pulls the station design in a particular direction and balancing the needs of each type of access can be difficult. From an accessibility perspective, the two most important factors at this station are ease of access from the planned downtown and ease of transferring between the rail line and bus services. The 200th St SW option demonstrates prioritizing access to the planned downtown over ease of interchange. The Lynnwood Transit Center Option and the Lynnwood Park and Ride Option 2 both demonstrate the opposite. The Lynnwood Park and Ride Option 1 prioritizes access for car drivers over the other two objectives. In order to maximize accessibility at the Lynnwood Station, Metro Accessible Services requests that Sound Transit consider altering the 200th St SW Station to include a relocated transit center that is immediately adjacent to the station. This option could provide good access to both the planned downtown and to the connecting bus services. This would maximize the accessibility of the station and would help to increase the independence of people with disabilities while also reducing the cost of providing paratransit services. In addition to concerns about the accessibility of the station designs provided in the DEIS, Metro Accessible Services is also concerned about the number of paratransit bays provided in the Lynnwood Station drawings. The Lynnwood Transit Center is the current location of transfers between King County's Access service and Community Transit's DART service. Metro estimates that a total of four paratransit zones would are at this location. In addition, Metro is interested in pursuing feeder service to and from this station. Many paratransit customers may be able to complete much of their journey on light rail. A customer traveling from Snohomish county to a location in Seattle could be dropped off at the Lynnwood Station by DART and then picked up by Access at the Link station closest to their destination. This could result in a significant reduction in the cost of providing paratransit service. In order for this service to work, it is extremely important that paratransit bays be close to the to the Link Station so that

L-014-012	customers can easily get from DART to the light rail. Building a Lynnwood Station that has paratransit zones that can serve both as a feeder location and as a transfer location between paratransit services would allow for both Access and DART to maximize operational efficiencies. Paratransit shelter – Current transfer operations are conducted on a hand to hand basis. This means that no customers transferring between DART and Access are ever left alone. If the connecting vehicle is late, then the first vehicle must wait until it arrives to hand off the customer. This process adds an approximate 1,041 service hours annually to Access service, costing $58,608. This policy likely adds a similar amount to DART's costs. Metro Accessible Services is interested in examining solutions to allow the transfer of customers between services without requiring vans to wait for the connecting vehicle. In order for paratransit vehicles to be able to drop customers off to wait for their connection, two issues would need to be resolved: protection from the elements and hand to hand service. Some paratransit customers are particularly vulnerable to the elements. In order to be able to drop of customers, a shelter with radiant heating and wind protection on four sides would be required. This shelter could also be incorporated into shopping/commercial facilities at the station, similar to those in the 200th St SW Option. The facilities would need to be close to the paratransit zone and would also be useful for feeder trips if they were located close to the station platform and the bus zones. The current system of providing hand to hand service was originally set up because some paratransit customers cannot be left alone. Currently 8% of the customers switching between Access and DART at the Lynnwood Transit Center require hand to hand service. Hand to hand service is not something that is required by the ADA, and it may be possible to identify partner agencies that could assist with these trips. In addition to the estimated savings from not providing hand to hand transfer service, Access estimates that the number of paratransit bays at the Lynnwood Station could be reduced to two bays from the four that would otherwise be required. [this is subject to further consultation with Community Transit] *Lynnwood Station Option Specific Comments:* **200th St SW Option**, sheets 106-109 - The distance between the paratransit zone, the bus zones and the station are significant and could impact the ability of customers with disabilities to transfer between services. The proposed design appears to prioritize the access of drivers using the parking garage over other modes of transportation. Having two elevators that provide access to the platform is good because it insures access for customers with disabilities in the event one elevator is not functioning.

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	The number of paratransit zones provided is inadequate to maintain the current paratransit transfer operations. **Lynnwood Transit Center Option**, sheets 110-113 - The distance between the paratransit zone and the station and bus zones is adequate in this station design. Having two elevators that provide access to the platform is good because it insures access for customers with disabilities in the event one elevator is not functioning. The number of paratransit zones provided is inadequate to maintain the current paratransit transfer operations. **Lynnwood Park and Ride Option 1**, sheets 114-117 - The bus zones are far removed from the station and paratransit zone, making it difficult for customers with disabilities to transfer between Link and local bus service. This could increase the need for customers to use paratransit, increasing the operations costs for Sound Transit, Community Transit and Metro. Requiring customers to cross both 46th Ave SW and the Kiss and Ride access road may also discourage customers from making the required interchange, particularly those with disabilities. Having two elevators that provide access to the platform is good because it insures access for customers with disabilities in the event one elevator is not functioning. The number of paratransit zones provided is inadequate to maintain the current paratransit transfer operations. **Lynnwood Park and Ride Option 2**, sheets 118-121 – The paratransit zone is separated from the bus zones. Customers transferring from paratransit services to bus services would need to travel a significant distance, including taking an elevator to the platform, traveling to the other elevator and then taking that one to the bus bays. Paratransit to bus connections would therefore be reliant on both elevators being in working order. Additionally, the lack of a crosswalk between the station island and the paratransit bay/kiss and ride area means that if the elevator on the south end of the station is out of order, customers will be forced to cross the transit roadway in an area without a marked crosswalk. The number of paratransit zones provided is inadequate to maintain the current paratransit transfer operations.

Puget Sound Regional Council
PSRC

September 25, 2013

Lauren Swift
Sound Transit
401 South Jackson Street
Seattle, WA 98104

Subject: Lynnwood Link Extension *Draft Environmental Impact Statement*

Dear Ms. Swift,

L-015-001

The Puget Sound Regional Council (PSRC) appreciates the opportunity to comment on the Lynnwood Link Extension *Draft Environmental Impact Statement* (DEIS) documents. Implementation of high-capacity transit to support growing communities is fundamental to the success of VISION 2040, the region's integrated long-range strategy for growth management, transportation and economic development. In addition, the *Growing Transit Communities Partnership,* housed at PSRC, focuses on developing equitable transit communities at station areas within this, and other, corridors. Accordingly, the PSRC has an on-going interest in transit system planning for the Northgate-Lynnwood corridor and has been designated as a Participating Agency in the project.

We commend Sound Transit for their work on the Lynnwood Link Extension Project to date and specifically the DEIS effort. The scope of the Lynnwood Link Extension DEIS spans the many growth management, transportation and economic development arenas for which the Puget Sound Regional Council oversees long-range regional planning. The DEIS has therefore been reviewed by transit planning, transportation modeling, and growth management department staff. That review found consistency with long-range planning documents and general agreement with the specific methodologies used to evaluate the impacts and benefits of different stations.

We do wish to make two primary recommendations moving forward with the final Environmental Impact Statement, on which we elaborate later in this letter:

- Develop a finer-grained measure to differentiate TOD potential between station locations and provide greater transparency on how qualitative rankings were assigned.
- Provide station access data by mode and clearly define how those different modes feed into the potential ridership calculation.

We commend Sound Transit on the effort made in the Lynnwood Link DEIS to examine and qualify the varying levels of TOD potential that different station areas and specific station locations offer. This new effort acknowledges the critical link between land use and transit investments to support the region's growth strategy and support transit ridership. In addition, it sets an important precedent for Sound Transit's future system planning efforts.

L-015-001

The Draft EIS and Final EIS summarize Sound Transit's assessment of transit-oriented development (TOD) potential in Table 4.2-3; this is based on the *Station Area Transit-Oriented Development Potential Report* conducted to support station area and project planning. The report was updated as part of the continued planning for the project during preliminary engineering and environmental analysis. A copy of the *Station Area Transit-Oriented Development Potential Report* is available through on the Sound Transit Website for the project at http://www.soundtransit.org/Projects-and-Plans/Lynnwood-Link-Extension/Lynnwood-Link-Document-Archive.

Based on comments from the Sound Transit Board and other parties, the level of information and the methods used were effective in highlighting the relative differences between station choices. The level of detail on TOD potential is consistent with Sound Transit practices for other recent Sound Transit EISs and appropriate at the EIS phase for comparing alternatives. The assessment is summarized to help determine the likelihood that the project could indirectly impact land use and other environmental conditions, as well as to consider whether it helped support land use plans and policies.

The Transportation Technical Report for the Final EIS has additional discussion of mode choice for accessing station areas, as well as more information on parking and other station access factors, including the relative accessibility of various station alternatives by all modes. The model results do not lend themselves directly to detailed analysis by mode, and instead are provided as an indication of likely ridership levels given surrounding land use, including future population and employment levels, existing transit use, and connecting transportation facilities. Further calculations of access by mode would be done during final design.

L-015-002 In the PSRC's comments on the North Corridor Transit Project Alternatives Analysis (2011), we requested that the DEIS consider the following three points that relate directly to ridership from station access and station area TOD:

- *"Ridership Potential:* The Alternatives Analysis Report provides overall ridership numbers for considered alternatives. PSRC suggests that the EIS segregate the potential ridership data by access mode (pedestrian, bicycle, transit transfer, car) for each station and include estimates on potential ridership that future transit-oriented growth could generate.
- *Transit Service Accessibility:* The Alternatives Analysis Report assigned the same rating of "moderate" to all three light rail alternatives for all modes of access (pedestrian, bus, bicycle, and park and ride). The EIS should provide a finer-grained measure, defined by a scale of five or ten rather than three, or use a more nuanced metric, in order to better differentiate between the alternatives.
- *Station Siting Considered in Draft EIS:* PSRC suggests that station siting effects on local planning efforts be carefully considered in the EIS. For example, proposed station areas should be located proximate to areas designated for high intensity transit-oriented development wherever possible. In addition, the siting of the northern terminus of the North Corridor Transit Project in Lynnwood should support various alignment alternatives of the high capacity transit corridor between Lynnwood and Everett that Sound Transit will consider in the future."

L-015-003 These requests were further supported by the final recommendations that emerged from the *Growing Transit Communities Partnership* in July 2013. One of the 24 Strategies recommended by the GTC Partnership was "Locate, Design and Provide Access to Transit Stations to Support TOD." The Strategy specifically calls for the following actions from transit agencies:

- Action 8.2: Strengthen criteria for selecting transit alignments and station locations to include TOD potential alongside other criteria such as environmental impacts, costs, and ridership potential. TOD potential should reflect both existing and planned uses and densities within transit station areas.
- Action 8.4: Design stations to provide multimodal access to transit, including on foot, bicycle, and via connections with other transit services.
- Action 8.5: Implement transit access and parking management strategies that support and encourage access via multiple modes of travel to the transit system, and that provide alternatives to automobile travel through approaches, such as: transit service connections to surrounding neighborhoods, bicycle and pedestrian connections, and demand management strategies (e.g., parking fees).

We commend Sound Transit for the *Station Area Transit-Oriented Development Potential Report* (April 2013) that the agency completed to support the Land Use portion of the Lynnwood Link Extension DEIS. The TOD Potential Report considered many of the issues raised in the PSRC comments and GTC Partnership recommendations noted above, including an examination and comparison of station areas based on criteria such as existing station conditions, station area character, station access, and potential development opportunities. We feel that these are critically important criteria inform station location decisions that best support existing communities and future residential and employment growth. Together with the recently board-adopted TOD Policy, this work sets an important new precedent for the agency to strengthen their consideration of TOD Potential in system planning and development.

We do however feel that the final EIS, as well as future system planning and development processes, should do more to make clear and explicit the consideration of TOD development potential and multi-modal access in the final EIS and future system planning and development processes. We make the following

L-015-002

Sound Transit considered the suggestions of the PSRC as it developed the methods for the EIS, and Sound Transit circulated methodology reports for the EIS to participating agencies for comment following the project NEPA/SEPA scoping period. It is important to note that the tiered approach to the Alternatives Analysis was by nature better suited to the use of evaluation criteria and ratings because it was conducted to help identify, refine, and narrow a wider range of modal and corridor options, including station sites.

For the EIS, the definitions of alternatives and their features were better established from the outset. Measures such as ridership potential and access could be more directly defined as part of the alternative designs and also considered through the application of Sound Transit's forecasting model. The alternatives under consideration were also similar in their locations and the markets served, and primarily involved siting and design choices, so qualitative measures did not tend to markedly differentiate the alternatives. Therefore, the use of detailed ratings in the Final EIS was limited; instead, the analysis focused on identifying areas of impact and describing mitigation where appropriate.

The discussion of Land Use in Section 4.2 included an assessment of consistency with planning policies (Appendix I-4.2), which noted areas where stations were located near where local plans or policies anticipated high capacity transit (HCT) or they at least contemplated increased densities; however, most jurisdictions make HCT-oriented designations after HCT projects are in the planning and design stages rather than before.

Finally, Section 2.5 described the key factors considered in developing alignment and station combinations; while land use conditions were an important factor, so were the placement of an alignment relative to

L-015-003

recommendations, consistent with our comments on the North Corridor Transit Project Alternatives Analysis and the recommendations of the Growing Transit Communities Partnership.

Develop a finer-grained measure to differentiate TOD potential between station locations and provide greater transparency on how qualitative rankings were assigned. While the qualitative scales of "limited-moderate-strong" TOD potential have the potential to be useful, they do not seem to always accurately reflect the station conditions described in the DEIS. In many cases, station locations that seem to perform differently on sub-measures were assigned the same value on the scale. In one example of this, the three station locations proposed for the Lynnwood Transit Center performed identically for existing conditions (limited-moderate). However, for the factors that comprised existing conditions, the 200th Street SW station clearly outperformed the other two station locations on two factors (population and employment, and existing station area character) and performed equally on the third factor (balance of mix of uses). Because the TOD Potential Report does not provide a definition for what specifically constitute a score of "limited" versus "moderate" versus "strong," it is not possible to discern why these differing performances yielded the same designation. We recommend a more clearly defined and transparent methodology, as well as use of finer-grained measures that better differentiate between station locations. A forced ranking (e.g., 1st, 2nd, 3rd) of potential station locations for different measures would also provide a way to better compare relative performance.

Provide station access data by mode and clearly define how those different modes feed into the potential ridership calculation. The TOD Potential Report provides data on station access within the 15-minute walk and bicycle sheds. It is not clear how this information informs ridership projections. The detailed modal access data is not presented in the discussions of ridership in the main document of the DEIS. In order to be consistent with the intent of regional policy to promote multi-modal mobility and Sound Transit's recently adopted Station Access policy that strengthens non-vehicular station access, it is important that system planning and development analyses carefully examine and disclose the levels of multi-modal access that different station locations may provide. We recommend that this data be better called out in the final EIS and, similar to the previous comment, be explicitly used to differentiate among station locations or alignments. Without better disclosure of how these analyses are performed and function, the value of the information is significantly diminished.

The Lynnwood Link Extension is an important long-range investment for our region. We commend Sound Transit again for the DEIS effort, and especially for the strengthened consideration of TOD potential. We appreciate the opportunity to comment and participate. If you have any questions regarding our comments, please contact me at (206) 971-3288 or snikolic@psrc.org, or our SEPA Responsible Official, Ivan Miller, at (206) 464-7549 or imiller@psrc.org.

Sincerely,

Sara Schott Nikolic, Principal Planner
Puget Sound Regional Council

Ivan W. Miller, SEPA Responsible Official
Puget Sound Regional Council

CC: Matt Shelden, North Corridor Light Rail Development Manager
Gil Cerise, Senior Transit Planner

available rights-of-way, topographical challenges, and built and natural environmental features.

L-015-003

The *Station Area Transit-Oriented Development Potential Report* was prepared by Sound Transit to help differentiate station options with respect to future development potential and is primarily based on existing conditions. This work was conducted while PSRC's Growing Transit Communities Partnership (GTC) efforts were underway and Sound Transit reviewed and coordinated work accordingly. As noted in the comments above, the EIS is intended to disclose potential impacts that could occur with the development of the project alternatives, and to explore measures that would avoid, minimize, or mitigate impacts.

Sound Transit agrees that assessments of TOD as well as access are important elements of planning for stations, and the TOD report was available to the Board and the public prior to the identification of the Preferred Alternative. The updated report is similarly available along with the Final EIS; the EIS is not the only source of information that Board members consider in their decision-making. In addition, as described in Chapter 2 of the Draft EIS and the supporting Alternatives Analysis completed in 2011, Sound Transit considered TOD, access and other issues in detail along with a wide range of other factors as it defined the light rail alignment and station alternatives for the EIS.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

DD - original
JW

August 12, 2013

Mr. Kenneth Feldman
Deputy Regional Administrator
Federal Transit Administration
915 Second Ave., Suite 3142
Seattle, WA 98174-1002

In future correspondence please refer to:
Log: 100611-07-FTA
Property: Sound Transit's Lynnwood Link Extension Light Rail Project
Re: Receipt of Draft Environmental Impact Statement, No Adverse Effect

Dear Mr. Feldman:

Thank you for contacting the Washington State Department of Archaeology and Historic Preservation (DAHP). The Lynnwood Link Extension Light Rail project has been reviewed on behalf of the State Historic Preservation Officer under provisions of Section 106 of the National Historic Preservation Act of 1966 (as amended) and 36 CFR Part 800. My review is based upon documentation contained in your communication.

S-001-001 Thank you for submitting the draft Environmental Impact Statement Summary. We have reviewed the document and concur with your preliminary finding that the project, as described, will have no adverse effect on historic properties and/or archaeological sites within the area of potential effects identified for the project.

If additional information on the project becomes available, construction plans are altered, or if any archaeological resources are uncovered during construction, please halt work in the area of discovery and contact the appropriate Native American Tribes and DAHP for further consultation.

Thank you for the opportunity to review and comment. If you have any questions, please contact me.

Sincerely,

Matthew Sterner, M.A.
Transportation Archaeologist
(360) 586-3082
matthew.sterner@dahp.wa.gov

RECEIVED AUG 15 2013 @ 11:57

State of Washington • **Department of Archaeology & Historic Preservation**
P.O. Box 48343 • Olympia, Washington 98504-8343 • (360) 586-3065
www.dahp.wa.gov

S-001-001

Thank you for your letter. Sound Transit has appreciated the collaborative communication and coordination with DAHP during the Lynnwood Link Extension EIS and Section 106 reviews.

SCANDINAVIAN STUDIES
UNIVERSITY of WASHINGTON

September 10, 2013

Sound Transit
Draft EIS Comments, c/o Lauren Swift
401 S. Jackson St., Seattle, WA 98104

To the Sound Transit Board:

S-002-001

We are writing to express our concern for the future of the Latvian Community Center, located at 17710 - 3rd Avenue Northeast. As you know, the Center's activities will be affected by the light rail extension that is planned along Interstate 5.

The University of Washington's Department of Scandinavian Studies maintains close ties to Seattle's Latvian, Estonian, and Lithuanian communities, who all organize many events at the Latvian Center. Students and instructors in UW's international studies programs attend concerts, lectures, films, and theater performances, to learn about these countries and their people. Student tickets and parking are inexpensive (much cheaper than flying to the countries!), because the Center is owned by the Latvian community. The Scandinavian Department's Baltic Studies Program is the only program in the United States to teach Estonian, Latvian, and Lithuanian, three languages that are often spoken at Latvian Center events where UW's foreign language students can practice their language skills.

The UW Scandinavian Department also organizes events at the Latvian Center. The Center's central location, parking lot, and kitchen facilities make it an ideal place for community outreach activities such as our annual "Baltic Saint Martin's Day" celebration, lectures, and other events that UW co-hosts with community organizations.

For the next few years, construction of the light rail line will disrupt these educational events for our students and faculty, as well as UW community outreach opportunities at the Latvian Center. We hope that when construction is finished, the Latvian Center will be able to continue hosting the vibrant cultural life that enriches the education of our students and teachers and off-campus communities.

We hope that representatives of Sound Transit will be able to attend the UW Baltic Program's "Martin's Day" celebration on October 26, 2013, to see for themselves that the Latvian Center is an incredible gift to the Seattle community. We hope that Sound Transit will take every possible step to ensure that the Center can continue its activities during and after light rail construction.

Please contact the Department of Scandinavian Studies if further information is needed.

Sincerely,

Jan Sjåvik, Chair

Guntis Šmidchens, Associate Professor

UW Department of Scandinavian Studies, 206-543-0645; uwscand@uw.edu

318 Raitt Hall Box 353420 Seattle, WA 98195-3420
206.543.0645 fax 206.685.9173 uwscand@uw.edu https://scandinavian.washington.edu/

S-002-001

Thank you for describing the linkage between the University of Washington's Department of Scandinavian Studies and the Seattle Latvian Evangelical Lutheran Church. Following the Draft EIS, the Sound Transit Board directed Sound Transit to develop a Preferred Alternative that would avoid displacing the church. The Final EIS describes the additional engineering Sound Transit undertook to realign 3rd Avenue NE and avoid the potential displacement of the church. As a result, none of the Segment A alternatives evaluated in the Final EIS would displace the church or the church hall.

Although construction activities will be adjacent to the church, Sound Transit will work closely with the church to maintain access, minimize parking loss, and reduce other potential construction disruptions to ongoing church and center activities. The primary construction in the area would be ongoing for 1-2 years in the area, but major construction activities would be shorter duration. For temporary impacts such as truck traffic, detours, noise, dust, light and glare, Sound Transit proposes best management practices to avoid and minimize impacts in Sections 3.6, 4.5.7, 4.6.7, and 4.7.7. The construction area would also be fenced to protect public safety, and the church would have a direct contact at Sound Transit to discuss any issues of concern.

Washington State Department of Transportation

Lynn Peterson
Secretary of Transportation

Northwest Region
15700 Dayton Avenue North
P.O. Box 330310
Seattle, WA 98133-9710
206-440-4000
TTY: 1-800-833-6388
www.wsdot.wa.gov

September 23, 2013

Joni Earl
Sound Transit
Union Station
401 S. Jackson Street
Seattle, WA 98104-2826

Dear Joni:

S-003-001

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Lynnwood Link Extension we received on July 18, 2013. The Washington State Department of Transportation (WSDOT) strongly supports the extension of light rail to Lynnwood. As we work with our partners to develop an integrated transportation system for the 21st century, it is important to provide multiple mode choices to people trying to reach destinations in congested travel corridors like Interstate 5 (I-5). The Lynnwood Link Extension project will add much-needed capacity for moving people in the I-5 corridor and ultimately allow the entire transportation system to function better.

WSDOT has been working closely with Sound Transit on the development of the light rail extension to Lynnwood. As a result of our close coordination, we consider all of the alternatives being evaluated for this project to be viable choices and do not have a preference. We look forward to continuing to collaborate with Sound Transit on the design of the project after a Preferred Alternative is identified.

As we work together during final design, WSDOT will be focused on maintaining safety and also on ensuring that the project effectively blends into the overall transportation system. In particular, optimizing access to stations through improvements to non-motorized transportation modes is a high priority to us. We are confident that we will be able to work with Sound Transit and local jurisdictions to develop effective solutions.

Overall, we feel that the Draft EIS was thorough and well done. After conducting a review, we think there are a few areas that should be improved as the Final EIS is developed. The points we'd like to highlight are identified below. We will be sending detailed comments separately.

S-003-002

Transportation
Keeping WSDOT freeway management infrastructure on I-5 operational throughout construction is very important. This includes ensuring the closed-circuit television system, variable message signs, data stations, and ramp meters stay operational, with

S-003-001

Thank you for your efforts in working on the initial development of the Lynnwood Link Extension and for WSDOT's support for the project.

S-003-002

Sound Transit assumes that the I-5 freeway management systems will need to be operational through construction in order to help ease impacts of the construction. The Final EIS clarifies this assumption in Chapter 3, Transportation, Section 3.3. Sound Transit will continue to coordinate with WSDOT to develop a detailed approach.

S-003-002

reconfiguration as needed. A commitment to do this is in the Transportation Technical Report, but it should be among the mitigation commitments in the Final EIS and ultimately the Record of Decision.

S-003-003

Visual Resources

The analysis of visual and aesthetic resources is improved since our previous review, but we have identified further changes that should be made in the Final EIS to provide the robust analysis needed for the project. These changes are enumerated in the detailed comments we are providing. In general, we think that the degree of change to visual resources is understated for a number of locations and the analysis would benefit from greater clarity. However, this does not change the overall conclusion in the Draft EIS that virtually all of the alternative in each segment of the project will have some high impacts to visual resources.

Regarding mitigation for visual resources, we appreciate that Sound Transit acknowledges the need to mitigate for impacts to areas acquired under the Highway Beautification Act of 1965 with replacement land. However, the Final EIS should also note that Sound Transit will be required to mitigate for the loss of vegetation within WSDOT right of way per our roadside policies. We would like the loss of vegetation, particularly the large trees, minimized as much as practicable.

We look forward to working with Sound Transit on the final design and implementation of this important project. Thank you again for the opportunity to review and comment on the Draft EIS.

Sincerely,

Brian Lagerberg
Public Transportation Director

Lorena Eng, P.E.
Northwest Region Administrator
Washington State Department of Transportation

cc: Lauren Swift, Sound Transit

S-003-003

Section 4.5 of the Final EIS includes revisions and clarifications to the assessment of visual impacts based on specific comments by WSDOT.

The Final EIS also provides updated discussion about Sound Transit's approaches to minimize the loss of vegetation, particularly large trees, to the extent feasible, with details to be defined during final design in consultation with WSDOT. Sound Transit understands the necessity to mitigate loss of vegetation consistent with WSDOT roadside policies and to mitigate impacts to areas acquired under the Highway Beautification Act. Sound Transit will work with WSDOT to accomplish this.

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

September 23, 2013

Lauren Swift, Environmental Planner
Sound Transit
401 S. Jackson Street
Seattle, WA 98104

RE: Lynnwood Link Extension Draft Environmental Impact Statement

Sent via e-mail

Dear Ms. Swift:

I would like to thank you for providing the Department of Ecology (Ecology) an opportunity to comment on the Lynnwood Link Extension Draft Environmental Impact Statement (DEIS). The Lynnwood Link Extension would extend light rail service from north Seattle to Lynnwood in Snohomish County. Ecology offers the following comments for the record as Sound Transit moves forward with planning for this project, which has the potential to significantly reduce traffic congestion and improve options for commuters.

S-004-001 The DEIS is a well-written and comprehensive review of the potential environmental impacts of the project. For consistency with the State Environmental Policy Act implementing rules (WAC 197-11-768) and state and federal standards in reviewing potential wetland impacts, avoidance and minimization are the first two steps in assessing potential impacts. Therefore, Ecology supports the alternatives that avoid and minimize impacts to wetlands and streams in the project corridor. While we realize this is a linear transportation project in a densely urban area, the Scriber Creek wetland complex (Wetland WLY4), the largest and highest functioning wetland in the project corridor, still provides some important habitat and stream support. There are options described in the DEIS that reduce potential impacts to this ecologically valuable resource. Ecology supports Alternatives C1 or C3 due to the reduced impacts to Wetland WLY4.

S-004-002 As the project design progresses, the wetlands potentially impacted by project construction will need to be delineated and rated, consistent with the current state and federal delineation and rating standards. The wetland boundaries and ratings will need to be field verified by agency staff. As described in the DEIS, it appears that the proposed wetland fill will require and individual Water Quality Certification (WQC) from Ecology. To avoid delays in project review and approval, we would recommend that applications be submitted to Ecology and the U.S. Army Corps of Engineers early in design process once the final alignment is selected. Ecology

S-004-001

The Preferred Alternative is a modified C3, which has slightly more impacts to wetlands, but also better balances other impacts and benefits. This project will abide by all applicable federal, state, and local environmental laws and regulations. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources to the maximum extent practicable and to provide adequate mitigation to ensure no net loss of ecosystem function and acreage as a result of agency projects. The Lynnwood Link Extension would mitigate impacts on ecosystem resources in accordance with the mitigation sequencing requirements established by NEPA, SEPA, the Clean Water Act, and local critical areas ordinances. The Preferred Alternative design in the Final EIS has an alignment as well as structural and construction elements that help avoid and minimize impacts; the Final EIS also describes other mitigation that would be further defined during final design and permitting, including seeking mitigation opportunities within the Scriber Creek wetland complex.

S-004-002

All wetlands that may be affected by the Preferred Alternative will be delineated consistent with state and federal delineation standards, and wetland ratings will be updated as needed. Sound Transit will coordinate with regulatory agencies during permitting. Thank you for your offer of assistance during the application process.

S-004-002 staff would be happy to assist Sound Transit should you have any questions on the state application and approval process.

Specific comments on the DEIS include the following:

S-004-003 § 4.8.2, p. 4-135 The DEIS indicates that the Scriber Creek ordinary high water mark (OHWM) was not discernible within the Scriber Creek wetland complex. In these situations the OHWM is often located at the outer channels during ordinary high flow events. Ecology would be happy to assist Sound Transit in refining the OHWM for the final environmental impact statement (FEIS).

S-004-004 Also on p. 4-135, DEIS states that stormwater flow control and treatment will comply with all local stormwater standards but that project may result in increased flows or duration of stormwater input to receiving waters. As mentioned, the proposed wetland impacts listed in the DEIS will require state authorization and likely an individual WQC. As part of the WQC approval, the project will need to be designed to meet the current state stormwater manual and consistent with the stormwater treatment and flow control standards for discharges to waters of the state, including wetlands.

S-004-005 § 4.8.6, p. 4-146 The section discussing compensatory mitigation mentions the possible use of available approved mitigation banks as a mitigation option. There are currently no approved wetland mitigation banks within the project area.

S-004-006 § 4.8.6, p. 4-147 The possibility of onsite mitigation within the Scriber Creek wetland complex (Wetland WLY4) is mentioned. Ecology would support a consolidated mitigation approach at this site due to the potential benefit to Scriber Creek and salmonids. The mitigation site will need to have adequate buffers and long-term protection consistent with state and federal guidance.

S-004-007 § 4.9, p. 4-151 Relative to management under the state Shoreline Management Act (RCW 90.58; SMA), the DESI states that Ecology has delegated authority to regulate designated shorelines to the local jurisdictions. As a point of clarification, Ecology is the state agency that jointly administers the SMA along with the local jurisdictions. Ballinger Lake is apparently the only shoreline within the project area, but lakes are the only shoreline waters that need to be formally designated within the local jurisdiction's Shoreline Master Program. All other shoreline waters (tidal waters and streams with a mean annual flow greater than 20 cubic feet/second) and associated wetlands are under SMA jurisdiction whether or not they have been formally designated.

We look forward to continuing to work with Sound Transit on this important transportation project and to reviewing the FEIS. We would be happy to assist Sound Transit in any way that we can during the design and permitting of the Lynnwood Link Extension. If you have any questions or would like to discuss my comments, please give me a call at (425) 649 7148 or send an email to paan461@ecy.wa.gov.

S-004-003

Thank you for the offer to assist with the OHWM determination for Scriber Creek in the wetland complex.

S-004-004

Thank you for your comment. Sound Transit will comply with all applicable certifications and design standards, including Clean Water Act Section 401 Water Quality Certification and the Washington State Department of Ecology (Ecology) Stormwater Manual for Western Washington.

S-004-005

It is correct that there are no approved mitgation banks with service areas in the project area. The referenced statement is included to not preclude the opportunity to use any future mitigation banks that may have a service area within the project area.

S-004-006

If project-specific mitigation is developed for this project, site selection would emphasize a watershed approach to consolidate compensatory mitigation sites. Plans would be developed in cooperation with resource agencies.

S-004-007

Thank you for your comment. The text of the Final EIS has been updated to clarify the roles of Ecology and the City of Mountlake Terrace with regard to Lake Ballinger shoreline regulation.

Sincerely,

Paul S. Anderson, PWS
Wetland Specialist
Shorelands and Environmental Assistance Program

E-cc: Rebekah Padgett, Department of Ecology
Matthew Bennett, U.S. Army Corps of Engineers Seattle District Office

From: Karen Walter <KWalter@muckleshoot.nsn.us>
Sent: Monday, September 23, 2013 12:56 PM
To: Lynnwood Link DEIS
Subject: Lynnwood Link Extension DEIS

Lauren and Dan,
We have reviewed the Draft EIS and the associated appendices for the proposed Lynnwood Link Extension project proposed by Sound Transit and the Federal Transit Administration. In general, it appears that many of our previous comments on the Ecosystem Section analyses have been incorporated into the DEIS and the Ecosystems Technical Report.

We do have a couple of comments on these documents as noted below:

T-001-001 1. It appears that Alternative C1 would have the fewest impacts upon Scriber Creek, a Swamp Creek tributary, associated wetlands and its associated floodplain based on the information in the DEIS. As a result, this sub-alternative would likely have the fewest impacts to salmon and their habitat and would be preferred.

T-001-002 2. In Section 4.8.2, Cumulative Impacts, there is a sentence indicating that Sound Transit would work with WSDOT to coordinate any design work that may impact WSDOT/WDFW culvert replacement projects. Please note that these state-owned culverts are likely subject to the recent Federal Court decisions regarding state-owned culverts and at a minimum would need to also include the Muckleshoot Indian Tribe Fisheries Division on these coordination discussions and design considerations.

T-001-003 3. As there are some unavoidable impacts to streams, floodplains, wetlands and buffers, we request the opportunity to work closely with Sound Transit and FTA as the project undergoes further design and mitigation plan development.

T-001-004 4. For any pollution generated surfaces that require stormwater water quality treatment methods, we recommend that enhanced treatment methods be used to maximize the removal of heavy metals and oils from stormwater that may otherwise adversely affect salmon in the receiving water bodies.

We appreciate the opportunity to review this proposal. Please let me know if you have any questions.

Thank you,
Karen Walter
Watersheds and Land Use Team Leader

Muckleshoot Indian Tribe Fisheries Division Habitat Program
39015 172nd Ave SE
Auburn, WA 98092
253-876-3116

1

T-001-001
Thank you for your comment stating a preference for Alternative C1 and the reasons for your preference.

T-001-002
Sound Transit will coordinate with the Muckleshoot Indian Tribe Fisheries Division regarding final design work that may impact WSDOT/WDFW culvert replacement projects.

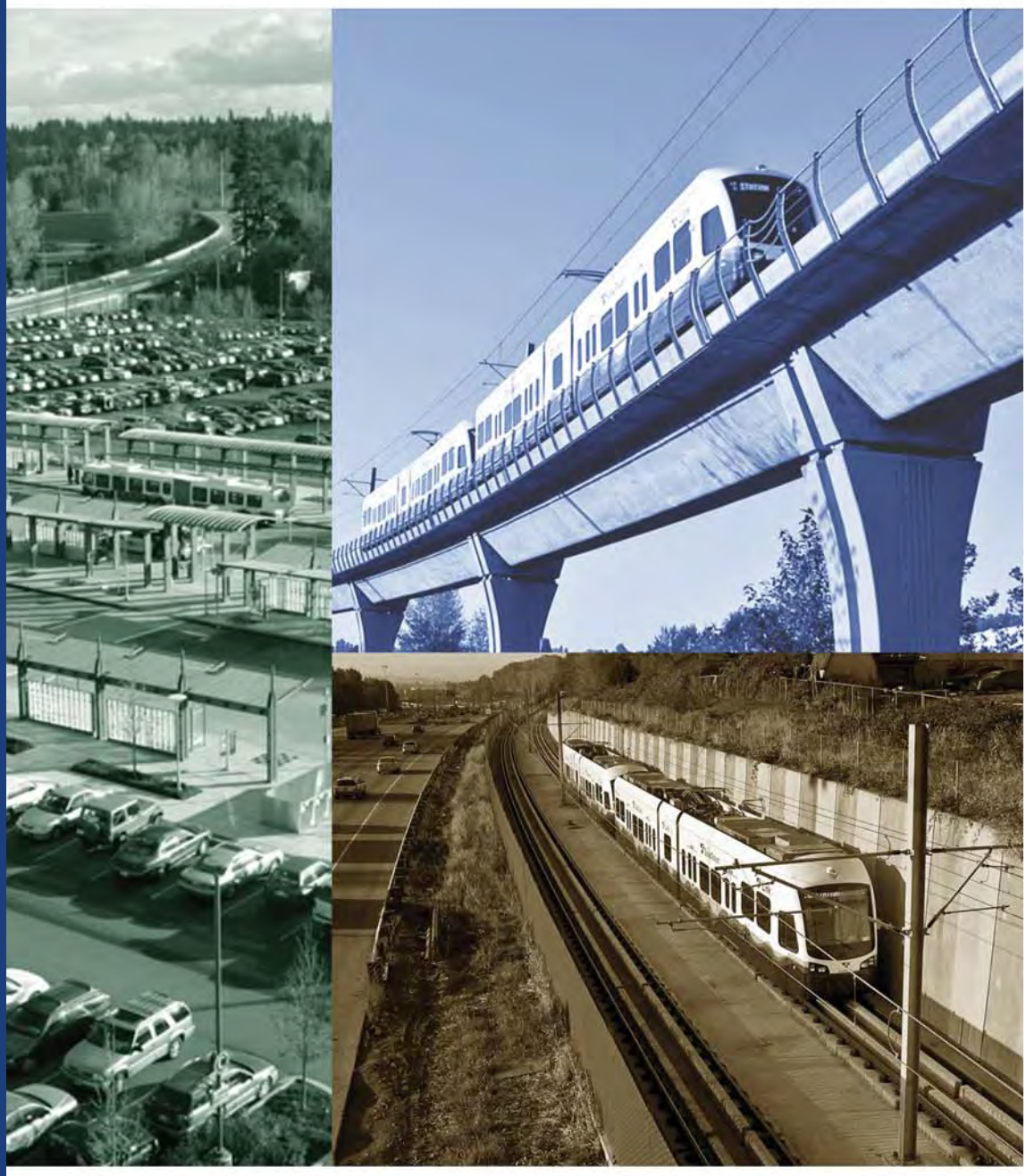
T-001-003
Sound Transit will coordinate with the Muckleshoot Indian Tribe Fisheries Division during final design, and the tribe will be invited to participate in the permitting process.

T-001-004
All Sound Transit projects must mitigate any unavoidable impacts to ensure that they do not reduce ecosystem function or acreage. (See Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit [2007]). In addition, all Sound Transit projects must consider low-impact development (LID) methods, which often include technologies that maximize the removal of heavy metals and oils from stormwater, as a first choice for stormwater treatment. The Lynnwood Link Extension design team will review the feasibility of LID strategies as the Preferred Alternative design advances and, if necessary, will use other methods to protect water quality.

LYNNWOOD LINK EXTENSION

FINAL ENVIRONMENTAL IMPACT STATEMENT

Cultural, Archaeological, and Historic Resources Technical Report



APRIL 2015

SOUNDTRANSIT

U.S. Department of Transportation
Federal Transit Administration

Lynnwood Link Extension

SOUNDTRANSIT
RIDE THE WAVE

Technical Report

Cultural, Archaeological, and Historic Resources

401 South Jackson Street
Seattle, WA 98104-2826

October 2014

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

Preface

Part 1 of this report was prepared by Historical Research Associates, Inc. (HRA) Project Archaeologist Shari Maria Silverman, M.A., M.S.; Research Archaeologist Jenny Dellert, M.A.; Archaeological Technician Anthony Cagle, PhD; and HRA Principal Investigator Brent A Hicks, M.A., R.P.A., who meet the Secretary of the Interior's professional qualifications standards for archaeology. This report is intended for the exclusive use of the client and its representatives. It contains professional conclusions and recommendations concerning the potential for project-related effects to archaeological resources based on the results of HRA's investigation. It should not be considered to constitute project clearance with regard to the treatment of cultural resources or permission to proceed with the project described in lieu of review by the appropriate reviewing or permitting agency. This report should be submitted to the appropriate state and local review agencies for their comments prior to the commencement of the project.

Part 2, the built environment, was prepared by Mimi Sheridan, AICP, who meets the Secretary of Interior's professional qualification standards for architectural history and history.

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B Shovel/Auger Probe Table
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D Section 106 Consultation Documentation
E Table of Surveyed Historic Resources

Acronyms and Abbreviations

APE	Area of Potential Effects
Ballard Locks	Hiram S. Chittenden Locks
CFR	Code of Federal Regulations
DAHP	Department of Archaeology and Historic Preservation
EIS	environmental impact statement
FTA	Federal Transit Administration
GLO	General Land Office
GPS	global positioning system
HPI	Historic Property Inventory
HRA	Historical Research Associates, Inc.
I-5	Interstate 5
MOA	Memorandum of Agreement
NADB	National Archaeological Database
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
RCW	Revised Code of Washington
SEPA	State Environmental Act
SHPO	State Historic Preservation Officer
SMC	Seattle Municipal Code
Sound Transit	Central Puget Sound Regional Transit Authority
TCPs	traditional cultural properties
SR	State Route
USC	United States Code
USGS	U.S. Geological Survey
USSG	United States Surveyor General
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation

Executive Summary

The Central Puget Sound Regional Transit Authority (Sound Transit) and the Federal Transit Administration (FTA) have prepared this technical report to support the environmental impact statement (EIS) for the Lynnwood Link Extension in compliance with the National Environmental Policy Act (NEPA) and the Washington State Environmental Policy Act (SEPA). FTA is the federal lead agency for the NEPA EIS process, and Sound Transit is the state lead agency for SEPA. This technical report is also designed to support the requirements of Section 106 of the National Historic Preservation Act (NHPA), which requires federal agencies to take into account the effect of their undertakings on historic properties.

Historic properties are defined in 36 Code of Federal Regulations (CFR) 800.16(l)(1) as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior," and can also include traditional cultural properties (TCPs). Historic properties are identified and evaluated in consultation with the State Historic Preservation Officer (SHPO) at the Washington State Department of Archaeology and Historic Preservation (DAHP), tribes with jurisdiction or interest, local jurisdictions—the Cities of Seattle, Shoreline, Mountlake Terrace and Lynnwood—and other consulting parties.

To be eligible for National Register of Historic Places (NRHP) listing, a historic resource must meet standards of integrity and at least one of the following criteria (36 Code of Federal Regulations [CFR] 60.4):

A. Is associated with an important event or series of events that have made a significant contribution to the broad patterns of American history;
B. Is associated with an important individual who was significant in our past;
C. Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master or possesses high artistic values; or represents a significant and distinguishable entity whose components lack individual distinction; or
D. Has yielded, or may be likely to yield, information important in history or prehistory.

Regulations in 36 CFR 800 outline the process for satisfying the Section 106 requirements. The process includes the following steps: (1) initiate consultation with regulatory agencies, tribes with jurisdiction or interest, local governments, and other interested parties; (2) define the Area of Potential Effects (APE); (3) identify, record, and evaluate resources for potential NRHP eligibility; (4) identify project effects; and (5) consult with affected parties to resolve adverse effects, if any, on historic properties.

This report has been prepared in two parts and presents the methods, results, conclusions, and recommendations for conducting an inventory and evaluation of historic properties within the project APE. Part 1 (Chapters 1 through 5) includes all work conducted to identify, evaluate, and assess potential archaeological resources and TCPs; Part 2 (Chapters 6 through 10) presents the

methods and results of the identification and evaluation process for historic built environment resources within the APE and also includes an effects assessment and potential mitigation measures.

Summary of Findings

Archaeological Resources and TCPs

No NRHP-eligible archaeological resources or TCPs have been identified within the project APE. Archaeologists conducted an initial archaeological field survey in 2012, targeting locations within the APE that had some potential for having intact archaeological deposits. Most of the APE has been highly disturbed in recent decades due to roadway construction and residential development; as a result, the overall APE has a low to moderate probability for intact archaeological remains.

Two historic-period archaeological sites (the Seattle–Everett Interurban Trail Segment site, 45SN531, and the Scriber Creek Park site, 45SN609) were identified during the archaeological investigation, but neither site retains integrity or is considered historically or prehistorically significant. In consultation with the SHPO and affected tribes, FTA and Sound Transit have determined these sites are not eligible for listing in the NRHP and SHPO concurred (Attachment D). These sites are described in Part 1 of this report.

Historic Built Environment Resources

All building resources within the APE that were constructed in or prior to 1970 were identified and recorded on the Washington State Historic Property Inventory (HPI) database. The survey included the identification and recordation of over 650 resources. In consultation with the SHPO, FTA and Sound Transit identified five historic resources determined to be eligible for listing in the NRHP. The SHPO concurred with these determinations (see Attachment E). None of these properties would be adversely affected by any of the project alternatives. In October 2013, subsequent to publication of the Draft EIS, one of the NRHP eligible resources, Melody Hill Elementary School, was demolished by its owner, Edmonds School District No. 15. Therefore, it is no longer included in this analysis, and only four NRHP-eligible properties remain within the APE.

Introduction

The Central Puget Sound Regional Transit Authority (Sound Transit) is proposing the Lynnwood Link Extension to expand the regional light rail system north from Seattle to Lynnwood, Washington. The transportation corridor of the proposed project, which was previously known as the North Corridor Transit Project, would travel through Seattle and Shoreline in King County, and Mountlake Terrace and Lynnwood in Snohomish County.

The proposed Lynnwood Link Extension would begin at Northgate in north Seattle and end at the Lynnwood Transit Center (Figure 1-1). The approximately 8.5-mile-long project corridor generally follows Interstate 5 (I-5), which is the major north-south route through the state and serves a large commuter market traveling between Snohomish and King counties. The project transportation corridor served by I-5 is bounded by Puget Sound to the west, and the southern half of the corridor is bounded by Lake Washington to the east.

Description of Alternatives

The environmental impact statement (EIS) is evaluating a set of ground level (at-grade) and elevated profile light rail alignment and station alternatives generally following I-5 from the Northgate Transit Center in Seattle to the Lynnwood Transit Center. The Preferred Alternative and the other light rail alternatives are arranged in three geographic segments:

- **Segment A: Northgate to Shoreline.** There are seven alternatives being considered for Segment A from Northgate in Seattle to NE 185th Street in Shoreline. All are on the east side of I-5, with parking on the west side for one of the alternatives. They feature at-grade and elevated profile alignments with two to three stations, including some with park-and-ride facilities. The potential station sites are at NE 130th Street, NE 145th Street, NE 155th Street, and NE 185th Street.
- **Segment B: Shoreline to Mountlake Terrace.** Four alternatives are being considered for Segment B from NE 185th Street in Shoreline to 212th Street SW in Mountlake Terrace. All alternatives begin on the east side of I-5 but end either in the freeway median or on the west side of I-5. The alternatives feature one to two stations with park-and-ride facilities, including a station serving the existing Mountlake Terrace Transit Center (NE 234th Street), and a potential alternative for an additional station at 220th Street SW. One alternative has an option for a 280-stall parking garage on the existing surface lot at the Mountlake Terrace Transit Center.
- **Segment C: Mountlake Terrace to Lynnwood.** Segment C has four route alternatives each departing from the median or west side of I-5 to end at a terminus station with park-and-ride facilities at or near the existing Lynnwood Transit Center.

The Preferred Alternative has a mix of at-grade and elevated sections that run generally along the east side of I-5 from the Northgate Transit Center to the Mountlake Terrace Transit Center. It then crosses to the west side of I-5, where it runs at-grade until 220th Street SW in Mountlake Terrace, and is then elevated along the west side of I-5 until it approaches the Lynnwood Transit Center and park-and-ride,

where it turns northeast to a station adjacent to the Lynnwood Transit Center. The four stations for the Preferred Alternative would be at NE 145th Street, NE 185th Street, at the Mountlake Terrace Transit Center, and at the Lynnwood Transit Center. NE 130th Street is an optional station location; it could be built with the project or partly built and then completed and opened for service later. The optional NE 130th Street station could also have approximately 100 leased parking spaces. About 1,500 new park-and-ride spaces are planned; about 500 spaces would be added at each of the stations except at the Mountlake Terrace Transit Center, which would maintain its current level of parking. For a Preferred Alternative option and Alternative B2A, a station is also considered at 220th Street SW in Mountlake Terrace, with either a 200-space parking garage or a surface lot.

Area of Potential Effects

The APE is the geographic area within which an undertaking may directly or indirectly cause alterations to the character or use of historic properties. For the Sound Transit Lynnwood Link Extension, FTA established the APE in consultation with affected tribes; the DAHP, which is the SHPO for Washington State; and other consulting parties. The APE extends 200 feet to either side of the center of at-grade and elevated profile sections of the alternative alignments and 200 feet from the boundaries of any station or other facility that is constructed as part of the project. The APE also would include an area 200 feet around any construction staging areas. The APE is shown on Figure 1-1.

Regulatory Environment

In April 2012, participating and cooperating agencies for the Lynnwood Link Extension EIS, including the DAHP, had the opportunity to review and comment on draft methodology reports covering a range of environmental topics—including historic and archaeological resources—for the EIS. The draft methodology reports were finalized for use in the Draft EIS in June 2012, after Sound Transit and FTA reviewed the comments received.

Federal Regulations

Sound Transit is conducting an environmental review for the Lynnwood Link Extension under the NEPA, which requires that the effects of federal projects on the environment (including historic resources) be identified and considered. The FTA must also comply with the following federal statutes relating to protection of historic resources.

Section 106 of the NHPA requires federal agencies to take into account the effect of their undertakings on historic properties. The NHPA also provides for consultation with American Indian groups when proposed projects might affect cultural or traditional places or resources (also known as traditional cultural properties) that have value to an Indian tribal group derived from the role the property plays in the community's historically rooted beliefs, customs, and practices.

Regulations in 36 Code of Federal Regulations (CFR) 800 outline the process for complying with Section 106 requirements. The process includes the following steps: (1) initiate consultation with regulatory agencies, concerned Indian tribes, and other interested parties; (2) define the APE;

(3) identify, record, and evaluate resources for potential eligibility in the NRHP; (4) identify project effects; and (5) consult with consulting parties—including affected tribes, SHPO, and other interested parties—to resolve adverse effects, if any, on historic properties. "Historic properties" are historic or archaeological resources that are listed in or eligible for listing in the NRHP. To be eligible for NRHP listing, a historic resource must meet standards of integrity and at least one of the following criteria (36 CFR 60.4):

A. Is associated with an important event or series of events that have made a significant contribution to the broad patterns of American history; or
B. Is associated with an important individual who was significant in our past; or
C. Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master or possesses high artistic values; or represents a significant and distinguishable entity whose components lack individual distinction.
D. Has yielded, or may be likely to yield, information important in history or prehistory.

To consider the potential concerns of Indian tribes, this environmental review also used:

- American Indian Religious Freedom Act of 1978
- Executive Order 13007 (access to and/or ceremonial use of sacred sites by Indian religious practitioners)

Section 4(f) of the Department of Transportation Act of 1966, as amended (49 United States Code [USC] 303), also provides protections for historic sites. Section 4.18, Section 4(f) and 6(f) Evaluations, of the EIS discusses the project's Section 4(f) uses and effects.

State Regulations

The SEPA and its implementing rules contained in Washington Administrative Code (WAC) 197-11 require the identification of historic, archaeological, and cultural resources listed in national, state, or local registers, and the identification of measures to reduce or control effects on these resources. For listing in the Washington Heritage Register (Revised Code of Washington [RCW] 27.34.200 and WAC 25-12), a property must typically be at least 50 years old, have a high-to-medium level of integrity, and have documented historic significance at the local, state, or federal level. Nine areas of significance are taken into consideration.

RCW 27.44 (Indian Graves and Records) protects Indian burials, while RCW 27.53 (Archaeological Sites and Resources) protects archaeological sites. RCW 76.09 (Confidentiality of Information) provides for the confidentiality of information on archaeological sites.

The Governor's Executive Order 05.05 addresses the need for state agencies to consult with Indian tribes in acquiring or developing land for capital improvements. This analysis follows guidance provided by DAHP's *Washington State Standards for Cultural Resources Reporting*.

Local Regulations

Three of the jurisdictions within the APE—the cities of Seattle, Shoreline, and Lynnwood—have a local preservation program with a board or commission that maintains a register of significant historic properties. The City of Shoreline's ordinance incorporates the King County preservation ordinance. The City of Mountlake Terrace has not adopted a preservation ordinance. The agency coordinated with these cities to review properties meeting their age criteria and to identify any properties that were potentially eligible for their historic registers.

The criteria for listing in local registers are generally similar to, but broader than, the NRHP criteria cited above. The criteria for each jurisdiction in the project area are discussed below.

City of Seattle

The City of Seattle's Landmarks Preservation Ordinance (Seattle Municipal Code [SMC] 25.12) provides that to be eligible for landmark designation a property must be at least 25 years old, possess integrity or the ability to convey its significance, and meet at least one of six criteria. Only the Seattle Landmarks Preservation Board can determine whether a property meets the criteria. A Certificate of Approval from the Board is required to alter or demolish a landmark. The six criteria (SMC 25.12.350) are:

A. It is the location of, or is associated in a significant way with, a historic event with a significant effect upon the community, City, state, or nation; or
B. It is associated in a significant way with the life of a person important in the history of the City, state, or nation; or
C. It is associated in a significant way with a significant aspect of the cultural, political, or economic heritage of the community, City, state, or nation; or
D. It embodies the distinctive visible characteristics of an architectural style, or period, or of a method of construction; or
E. It is an outstanding work of a designer or builder; or
F. Because of its prominence of spatial location, contrasts of siting, age, or scale, it is an easily identifiable visual feature of its neighborhood or the City and contributes to the distinctive quality or identity of such neighborhood or the City.

The City of Seattle Department of Neighborhoods and Department of Planning and Development have an Interdepartmental Agreement on Review of Historic Buildings during a SEPA review. This agreement requires that all buildings over 50 years old that are to be demolished or significantly altered must be reviewed by the City historic preservation program staff for potential landmark eligibility. If the staff determines that the building appears to meet the City's landmark criteria, a landmark nomination application must be prepared and reviewed by the Seattle Landmarks Preservation Board.

Seattle's SEPA policies also contain requirements for archaeological assessments in some circumstances, as explained in the Department of Planning and Development's Director's Rule 2-98.

City of Shoreline

The City of Shoreline has established a historic preservation program through an interlocal agreement with King County (Shoreline Municipal Code 15.20). The requirements and criteria are the same as those for King County's preservation program. Properties are eligible for designation if they are 40 years or older; possess integrity of location, design, setting, materials, workmanship, feeling, and association; and meet at least one of five criteria of significance. A Certificate of Appropriateness from the Landmarks Commission is required to alter or demolish a landmark. Shoreline also recognizes an honorary category of community landmarks. The criteria (King County Code 20.62.040) are generally the same as those for the NRHP:

A. Is associated with events that have made a significant contribution to the broad patterns of national, state, or local history; or
B. Is associated with the lives of persons significant in national, state, or local history; or
C. Embodies the distinctive characteristics of a type, period, style, or method of design or construction, or that represents a significant and distinguishable entity whose components may lack individual distinction; or
D. Have yielded or may be likely to yield information important in history or prehistory; or
E. Is an outstanding work of a designer or builder who has made a substantial contribution to the art.

City of Lynnwood

The City of Lynnwood's historic preservation program (Lynnwood City Code 21.80.400) provides that properties are eligible for designation if they are 50 years of age or older; have integrity of location, design, setting, materials, workmanship, feeling, species, age, and association; and are significant in the history, archaeology, engineering, or cultural heritage of America, Washington state, and/or the City of Lynnwood. The Lynnwood Historical Commission considers the following criteria:

A. Is associated with significant historic events; or
B. Is associated with a person or persons who significantly contributed to the culture and development of the City of Lynnwood; or
C. Embodies architectural characteristics of a type, period, style, or method of construction, architectural design, detail, material, craftsmanship, or that represents a work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction; or
D. Exemplifies the cultural, economic, social, or historic heritage of the City of Lynnwood; or
E. Embodies distinguishing characteristics of an architectural type or specimen; or
F. Embodies elements of architectural design, detail, materials, or craftsmanship that represent a significant architectural innovation; or
G. That have a relationship to other distinctive areas that are eligible for preservation according to a plan based on an historic, cultural, or architectural motif; or

H. That have a unique location or singular physical characteristic representing an established and familiar visual feature of a neighborhood, community, or the City of Lynnwood; or
I. Has yielded, or may be likely to yield, information important to prehistory or history; or
J. That by virtue of the species, age, scarcity, outstanding quality, location, or connection to an historic event or person such landscape trees or other plant material contribute significantly to the community or the city of Lynnwood.

Agency Consultation

State Historic Preservation Officer

FTA and Sound Transit consulted with SHPO on the methodology of the cultural resources surveys (historic and archaeological), on the definition of the APE and determination of effect, and received SHPO's concurrence on both.

Sound Transit and the FTA have produced the *Lynnwood Link Extension Environmental Impact Statement Technical Analysis Methodologies Report* (June 2012) describing the proposed methods to be used to analyze environmental impacts for the Lynnwood Link Extension EIS. Sound Transit continues to consult with SHPO regarding the NRHP eligibility of resources and potential effects on historic properties.

Tribes

FTA and Sound Transit also consulted with potentially affected Native American tribes regarding the proposed project and its cultural resources methodology, and invited the tribes to provide input on resources that might occur in the project study area. The affected federally recognized Native American tribes are the Muckleshoot Indian Tribe, Snoqualmie Tribe, Suquamish Tribe, Tulalip Tribes, and the Yakama Nation. Affected Native American tribes that are not federally recognized are the Duwamish Tribe and the Snohomish Tribe. The EIS *Technical Analysis Methodologies Report* was also provided to the tribes.

Other Consulting Parties

The Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood are additional consulting parties.

Part 1: Archaeological Resources

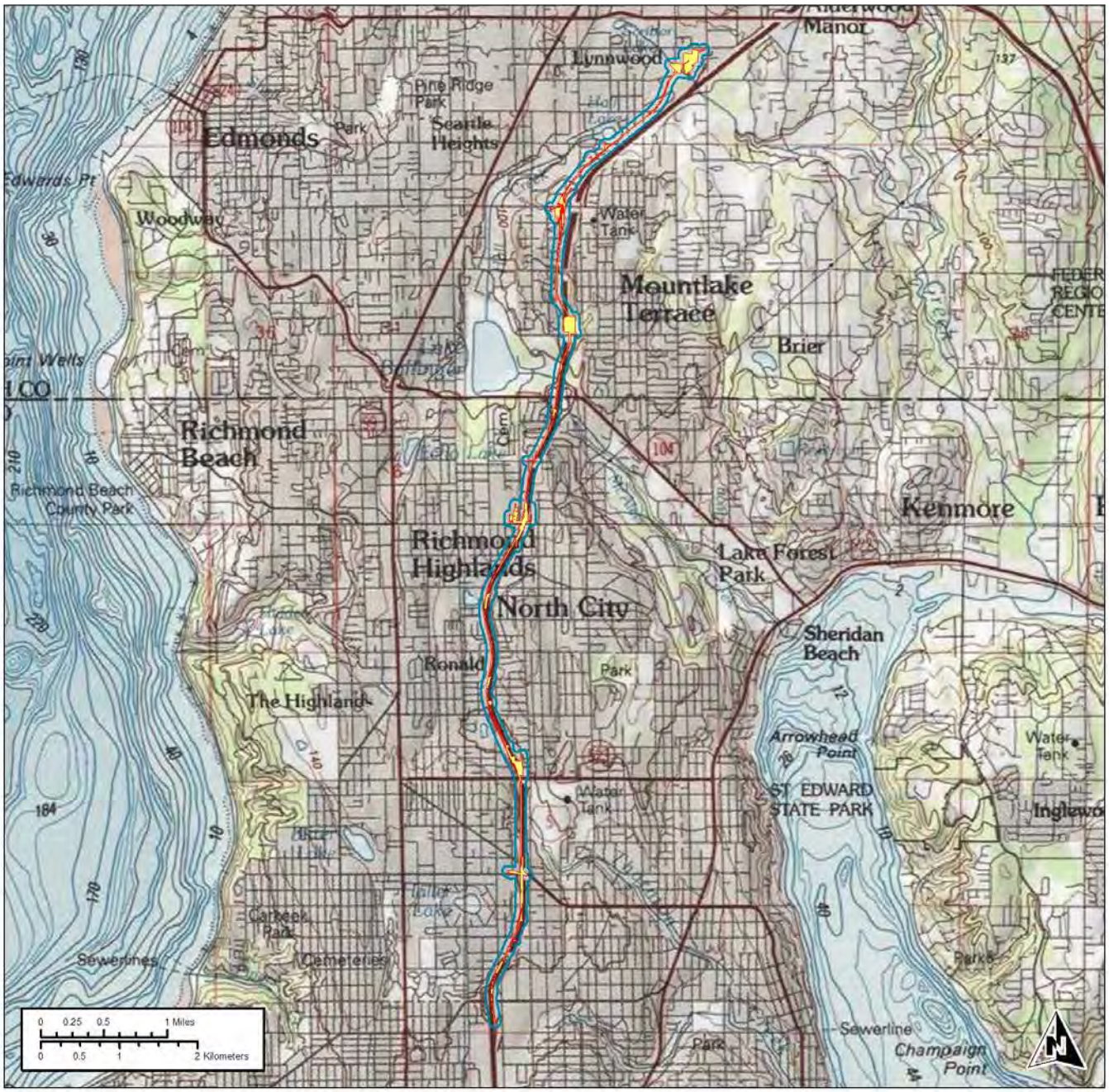
1 INTRODUCTION

The proposed project is located in Township 26 North, Range 4 East, Sections 5, 8, 17, 20, 29, and 32, and Township 27 North, Range 4 East, Sections 21, 28, 29, and 32, Willamette Meridian (Figures 1-1 through 1-4).

1.1 Area of Potential Effects

The APE for the Lynnwood Link Extension has been defined to include all areas within a 200-foot-wide buffer on either side of the center of the proposed light rail guideway alignments, including at-grade or elevated profile sections. The APE also includes areas within 200 feet of the boundaries of any station, parking structure, staging area, or other facility that is constructed as part of the proposed project. The light rail alternatives have been composited to create the currently defined APE. This APE threshold will account for all potential direct and indirect effects on historic properties.

The APE encompasses the areas where prehistoric and historic-period archaeological resources could be directly disturbed by construction of the proposed project. Although not precisely known at this stage, the APE is anticipated to be within the 200-foot-wide buffer around project elements described above (Figures 1-1 through 1-4). The vertical APE for archaeological resources includes areas of ground disturbance associated with project construction; however, details regarding the depth of construction vary by alternative and will continue to be developed as the project continues through environmental review and design.

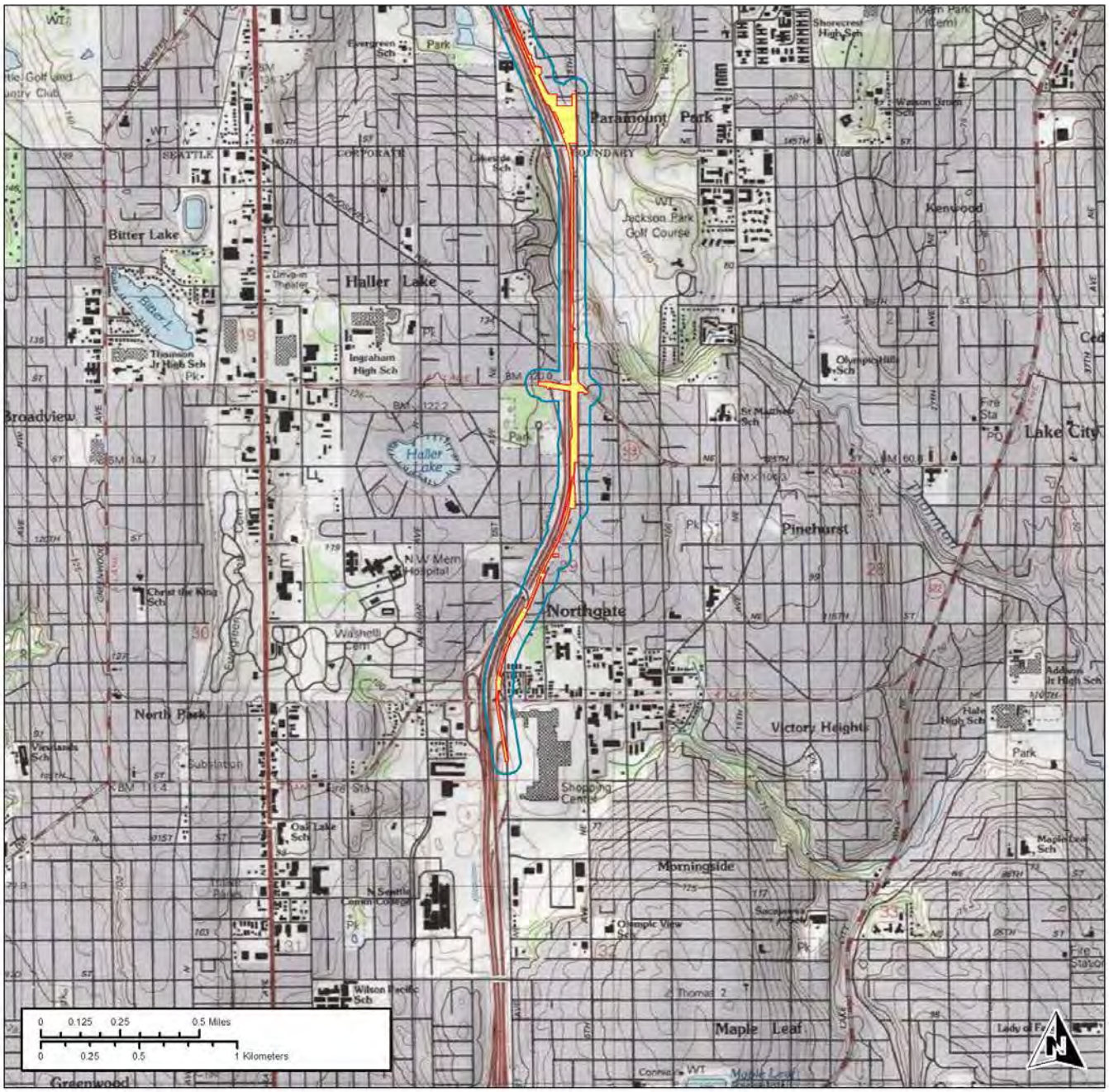


Legend

- Alignment Options
- Area of Potential Affects (APE)

Figure 1-1
Overview of Project APE and Vicinity

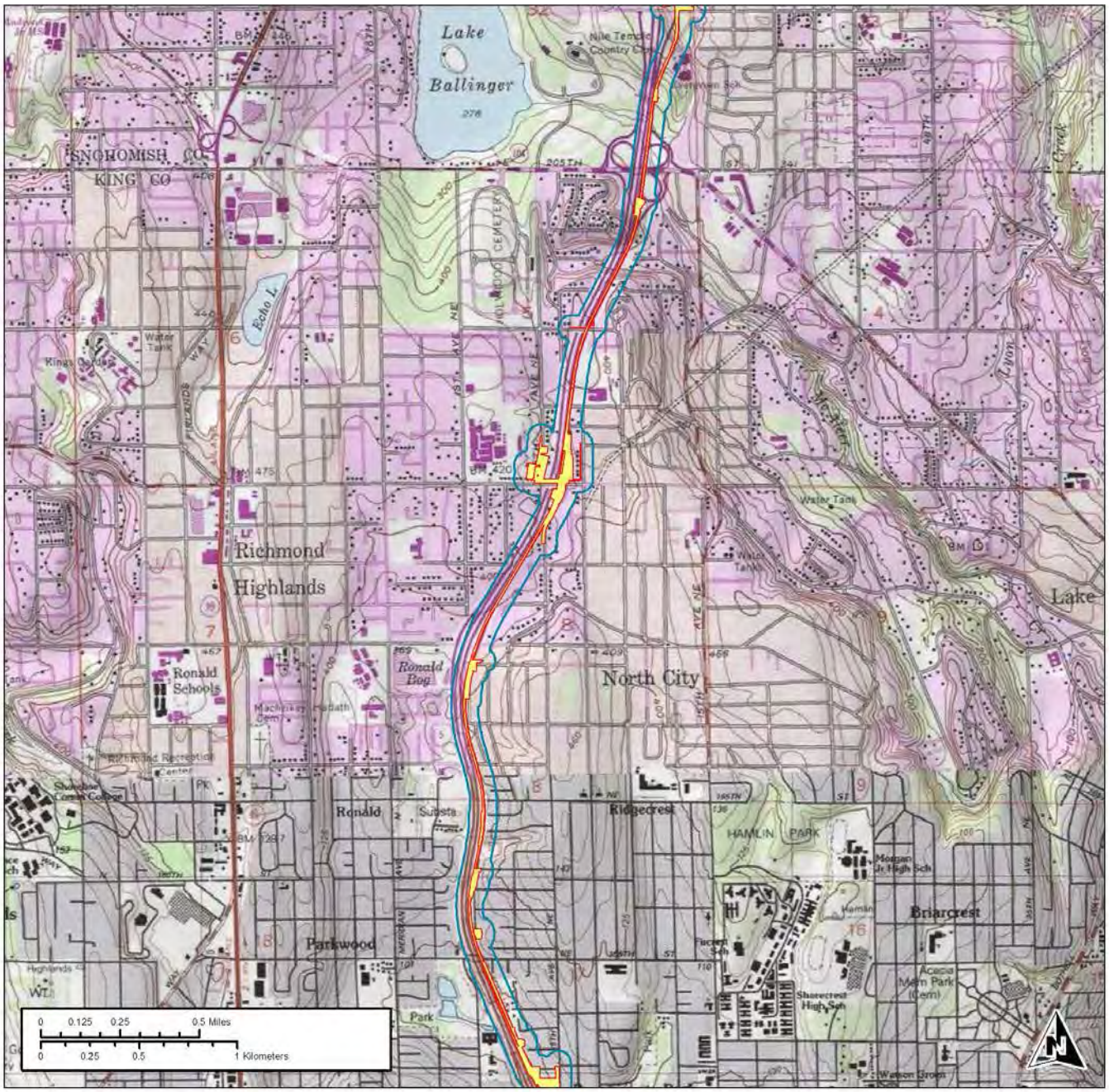
Lynnwood Link Extension



Legend

- Alignment Options
- Area of Potential Affects (APE)

Figure 1-2
Overview of Southern Portion of Project APE and Vicinity



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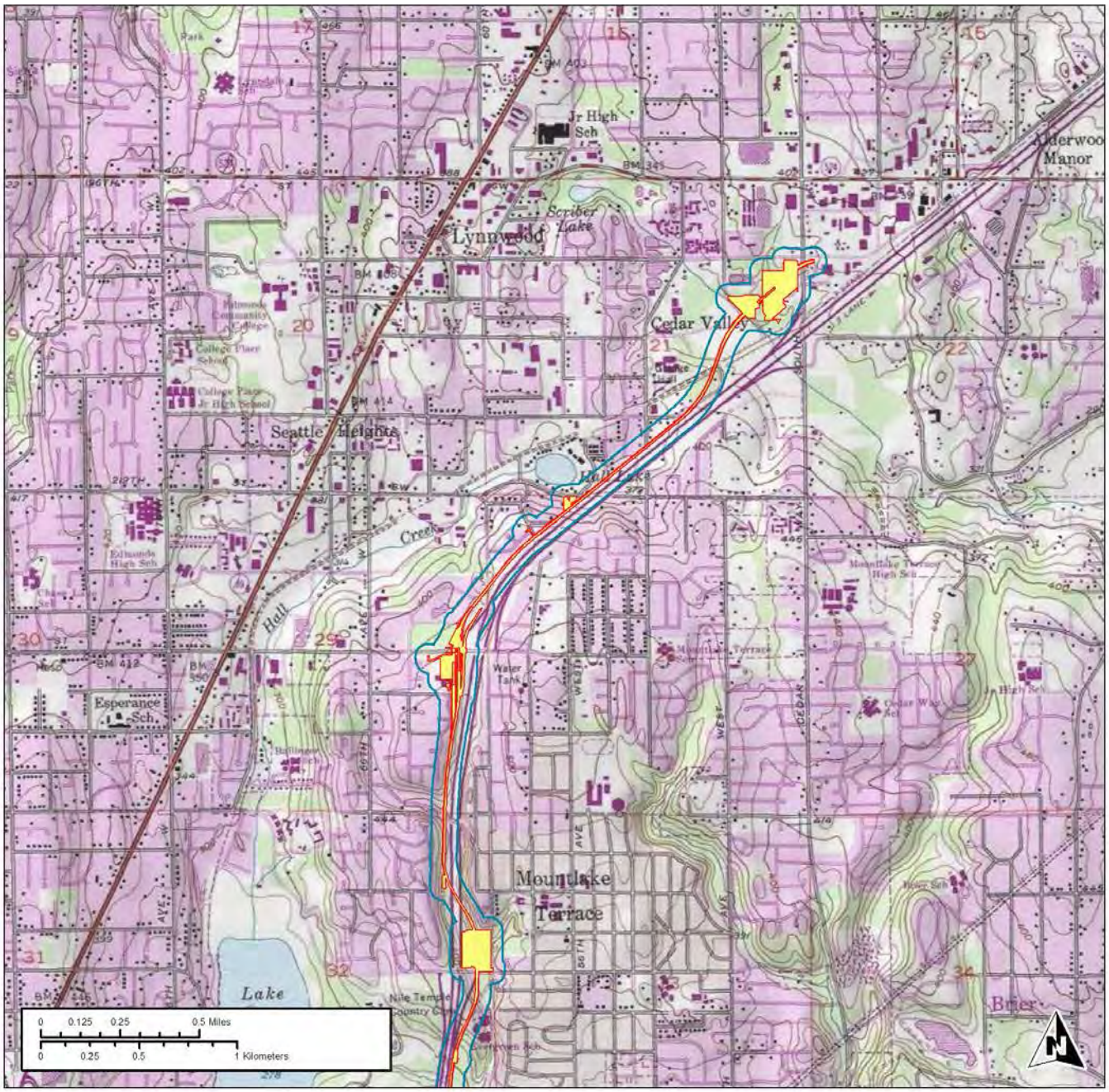
- Alignment Options
- Area of Potential Affects (APE)

Figure 1-3
Overview of Middle Portion of Project APE and Vicinity



Legend

- Alignment Options
- Area of Potential Affects (APE)

Figure 1-4
Overview of Northern Portion of Project APE and Vicinity

2 METHODS

2.1 Archaeological Study

Historical Research Associates, Inc. (HRA) conducted an archaeological field survey in 2012, targeting a representative sample of the project alternatives, which are generally close to one another rather than in distinct corridors. The survey concentrated on high probability areas and lower probability areas as identified through the DAHP predictive model, archival research, and field observations. The survey addressed open and undeveloped areas as well as more developed, urbanized areas (Hicks 2012).

The initial project survey focused on land that is currently within the Washington State Department of Transportation's (WSDOT) right-of-way and other public lands for which rights of entry could be readily obtained.

2.2 Archaeological Sensitivity Model

The DAHP's archaeological predictive model uses standardized and repeatable statistical methods (Bayesian and Kriging) with statewide environmental and cultural resources data to define areas as having varied probability of the presence of prehistoric (or precontact) archaeological resources. Data on geology, soils, landform, elevation, aspect, slope percent, and distance to water, as well as information gleaned from historic-period General Land Office (GLO) plats, were correlated with locations of known archaeological sites to "... determine the probability that, under a particular set of environmental conditions, another location would be expected to contain an archaeological site" (Kauhi and Markert 2009:2-3).

DAHP's model combines local information from field surveys to identify locations with five resulting sensitivity management groups: Very High Risk (5), High Risk (4), Moderate Risk (3), Low Risk (2), and Very Low Risk (1); each group represents the predicted risk of disturbing archaeological materials. These were refined for management purposes, with groups 1 and 2 representing DAHP's conclusion of "Archaeological Survey Contingent upon Project Parameters," group 3 indicating "Archaeological Survey Recommended;" and groups 4 and 5 representing "Archaeological Survey Required."

Because DAHP's probability model only addresses prehistoric archaeological materials, other records were reviewed in tandem with the project survey to help predict where historic-era archaeological materials might be present. The information reviewed included location and land use information gleaned from ethnohistoric information on Native American use of the area and historic-period maps. The resulting information was compared with DAHP's prehistoric archaeology sensitivity zones for the project APE. Areas deemed sensitive for historical archaeology have been included in the project survey record.

2.3 Archaeological Survey

Methods for Survey Tract Selection

HRA overlaid DAHP's sensitivity zones on the proposed project's APE maps to aid in the selection of archaeological survey tracts (Hicks 2012). Areas of known or demonstrated ground disturbance will be excluded if the extent of the disturbance exceeds the depth of anticipated construction impacts. As noted above, the project survey tracts are limited to areas within existing public rights-of-way or ownership.

Project Archaeological Survey Methods

The goal of the project survey was to provide additional information about areas of high archaeological sensitivity. Survey work was divided into two tasks. The first consisted of research into published literature, historical records, and maps to gather information on specific locations and land uses during the ethnographic period reflecting Native American use of the area (e.g., Hilbert et al. 2001) and historic-period maps (e.g., GLO plats, Sanborn Fire Insurance maps). The resulting information was compared with the historical and modern topographic features of the project APE to help verify sensitive landforms, such as stream terraces, and to identify areas where historical disturbance has altered the landform. Where appropriate, the results of this analysis were used, in tandem with DAHP's prehistoric archaeology sensitivity zones, to identify additional survey tracts that would be appropriate for further preconstruction surveys, based on further consultation with DAHP (Hicks 2012). The second task consisted of pedestrian survey and subsurface probes in areas described below.

Fourteen surface survey target areas were chosen prior to field reconnaissance and outlined in the work plan based on archaeological sensitivity overlain by the APE (Hicks 2012). The initial 10 areas overlap with locations selected for subsurface probes, and all occur in very high and high risk areas, according to the DAHP predictive model, while the remainder included some low and moderate risk locations. Although both lists are similar, the surface survey target areas are larger than the probe areas, which focus more intensely on areas with the highest potential for cultural materials according to DAHP's archaeological sensitivity model. During field reconnaissance, survey and subsurface investigation locations were refined based on conditions observed, such as topography, previous ground disturbance, dense vegetation, and rights of entry.

Archival Research Methods and Materials

HRA archaeologists conducted an archival record search for the proposed project. DAHP's online database (WISAARD) was searched for archaeological site records, cultural resource survey reports, historic register properties, and cemetery records. HRA staff used their in-house library to obtain information on the environmental, archaeological, and historical context of the APE. HRA reviewed historical 19th and 20th century maps from the United States Surveyor General (USSG) GLO and other historical maps for the presence of structures, sites, and features that might be extant within the APE. For ease of research and compilation, results were divided by county. A statewide

predictive model layer on DAHP's WISAARD was reviewed for probability estimates for archaeological resources and to aid in developing the field strategy.

Pedestrian Survey Areas

HRA archaeologists Shari Silverman, M.A., M.S.; Jenny Dellert, M.A.; Anthony Cagle, PhD; Angus Tierney, M.A.; and Colin Lothrop, B.A. conducted pedestrian survey and subsurface investigations of the APE between August 2 and 24, 2012 (Figures 2-1 through 2-8, Attachments A and B). HRA archaeologists conducted field reconnaissance in areas of proposed ground disturbance within the I-5 right-of-way and within parcels owned by public agencies along the project alternative alignments. Much of the APE is paved, covered in dense vegetation, or occurs in areas that are inaccessible due to fences and other barriers. Other locations had sparse to no vegetation or were groomed grass areas.

Pedestrian transects were spaced approximately 5 meters (approximately 16.4 feet) apart or closer, depending on available survey areas. HRA examined all soil exposures (non-paved areas such as lawn or ditches). Observations regarding vegetation, ground visibility, and disturbance were recorded in a field notebook and on shovel probe forms. Photographs were taken of the general APE and specific shovel probe areas. Shovel probe locations were recorded using a Trimble GeoXT global positioning system (GPS) unit.

Figure 2-1
Shari Silverman and Tony Cagle surveying along the east side of I-5 in Areas 3 and 4, view south

Figure 2-2
Overview of I-5 APE/right-of-way in Area 11, view north

Figure 2-3
Dense vegetation between fence and noise wall in Area 2, view southwest

Figure 2-4
Standing water and dense vegetation in Area 7, view north

Figure 2-5
Overview of APE and area with underground gas storage tanks in Area 7, view north

Figure 2-6
Underground gas storage tank in Area 7, view north

Figure 2-7
View of paved and fenced City of Lynnwood Pump Station No. 10 (Parcel 170 adjacent to park-and-ride), view south

Figure 2-8
Colin Lothrop surveying along Cedar Valley Road in Area 8, view northeast

Subsurface Survey Investigations

Thirty-two shovel probes were placed strategically, based on field observations, known locations of utilities and paved areas, and the locations of proposed ground disturbances associated with the project design (Figures 2-9 through 2-14, Attachments A and B). The shovel probe holes were augmented with an auger to increase the depth of the subsurface investigation. Soils typically consisted of modified fill; however, some alluvium was found in shovel probes directly adjacent to Scriber Creek, and glacial till was found in shovel probes east of I-5 between 220th and 221st Streets SW.

Excavated soils were screened through 0.25-inch hardware mesh. Sediments and depositional structure were recorded on standardized field forms, and the probe holes were then backfilled.

Figure 2-9
Overview of Shovel Probe 2-1 in Area 2, view west

Figure 2-10
Jenny Dellert at Shovel Probe 12-1 and utilities in Area 12, view south

Figure 2-11
Tony Cagle at Shovel Probe 7-2 in Area 7, view west

Figure 2-12
Tony Cagle excavating Shovel Probe 10-1 in Area 10, view southeast

Figure 2-13
Angus Tierney excavating Shovel Probe 9-5 within Scriber Creek Park in Area 9, view west

Figure 2-14
Overview of Shovel Probe 11-4 at Ridgecrest Park in Area 11, view north

2.4 Evaluation of National Register Eligibility

Prehistoric and historic-period archaeological sites, TCPs, and buildings and structures are called historic properties if they are listed in, or eligible for, the NRHP. To be eligible for inclusion in the NRHP, a property must be at least 50 years old or be exceptionally important and meet one or more of the criteria for evaluation, as outlined in 36 CFR 60.4:

> The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, or association; and
>
> A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B. That are associated with the lives of persons significant in our past; or
>
> C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D. That have yielded or may be likely to yield, information important in prehistory or history.

Certain properties are unlikely to qualify, including cemeteries, birthplaces, and graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; properties primarily commemorative in nature; and properties that have achieved significance within the past 50 years. Archaeological sites typically are assessed for NRHP eligibility related to Criterion D, but certain rare sites can be found eligible under Criterion A or B if they strongly convey an association with events or persons important to the historical record. Properties can be eligible for the NRHP at the national, regional, or local level. Local registers, such as the City of Seattle's Landmarks Register, generally apply to historic buildings and structures.

In addition to meeting one or more of the criteria, a cultural resource must also retain integrity. The integrity of a cultural resource is a measure of how well it conveys its significance. To retain integrity, a property—or in this case, an archaeological site—must retain the majority of, if not all of, the seven aspects of integrity, which are as follows:

- Location: the place where the property was constructed or the place where the historic event occurred
- Design: the combination of elements that create the form, plan, space, structure, and style of a property
- Setting: the physical environment of a historic property
- Materials: the physical elements that were combined or deposited during a particular period of time, and in a particular pattern or configuration, to form a historic property

- Workmanship: the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory
- Feeling: a property's expression of the aesthetic or historic sense of a particular period of time
- Association: the direct link between an important historic event or person and a historic property

2.5 Approach to Effects Analysis

The analysis for construction effects and operations effects follows the standard approach for historic properties, although this study limits consideration to prehistoric and historic-period archaeological sites and TCPs. The Advisory Council on Historic Preservation's regulations implementing Section 106 of the NHPA create a process by which federally assisted undertakings are reviewed for their effects on properties listed in, or eligible for listing in, the NRHP.

After the resource is identified and evaluated, the next step is to apply the Criteria of Adverse Effects, as outlined in 36 CFR 800.5. These criteria are used to determine whether the undertaking could change the characteristics that qualify the property for NRHP inclusion. If the undertaking could diminish the integrity of such characteristics, then it is considered to have an adverse effect. Adverse effects on archaeological sites and TCPs include, but are not limited to, the following:

- Alteration of the property's setting
- Introduction of visual, audible, or atmospheric elements that are out of character with the setting of the historic property
- Physical encroachment upon an archaeological site

Cumulative effects are discussed using readily available information on past, present, and foreseeable projects.

2.6 Potential Minimization and Mitigation Measures

When an undertaking is found to have an adverse effect, Section 106 requires consultation with the SHPO, affected Indian tribes, and other interested parties regarding appropriate avoidance or mitigation measures. Some typical mitigation measures applicable to archaeological sites include modifying the undertaking through redesign, reorientation, or other similar changes; relocating the historic properties; and implementing data recovery of archaeological information and materials.

The product of consultation, when there is a finding of adverse effect, is an agreement document (Memorandum of Agreement [MOA] in accordance with 36 CFR 800.6[c]) that contains stipulations specifying measures to be implemented that would avoid or mitigate the adverse effects.

3 AFFECTED ENVIRONMENT

3.1 Environmental Context

Over time, human land use patterns have changed with and adapted to the dynamic nature of environmental variables, such as topography, geology, and the availability of floral and faunal resources. Examining these key factors is necessary to understand the use of the environment by past human populations. The following information gives an overview of the resources potentially available to people occupying, traveling through, or seasonally frequenting the project APE.

Geomorphic Setting

Local topography is an important variable that has affected human land use patterns in western Washington throughout the past 14,000 years. The proposed project APE is located in a glacial outwash zone near the northern portion of the Lake Washington embayment (Figure 1-1). The glacial outwash zone includes a series of north-south trending ridges and drainages formed during the advance and retreat of the Puget lobe of the Cordilleran ice sheet, between approximately 18,000 and 15,500 years ago (Porter and Swanson 1998). Radiocarbon dates from Carpenter Lake indicate that Puget Sound near the APE was deglaciated by approximately 16,950 calibrated years before present (Porter and Swanson 1998:208-209). Additionally, the maximum interval of ice coverage at Carpenter Lake is approximately 1,230 years (Porter and Swanson 1998). Human occupation could have occurred in the project area after the retreat of the glaciers.

Small lakes within the glacial recessional outwash (Klisch and Einberger 2009) surround the APE, particularly to the west. They include Scriber Lake, Hall Lake, Lake Ballinger, Twin Ponds, Ronald Bog, Bitter Lake, and Haller Lake. Lake Washington, which fills a deep glacial groove (Chrzastowski 1983), is east of the APE. Streams within different watersheds link many of these lakes.

The project APE is located along the I-5 corridor, within three watersheds: Swamp Creek, Greater Lake Ballinger/McAleer Creek, and Thornton Creek. The northernmost portion is within the Scriber Creek Subbasin of the Swamp Creek watershed. Scriber Creek originates from drainage and groundwater at approximately Lynnwood's northeastern city limits. It flows south into Scriber Lake, then southeast from there through a wetland underneath I-5 into the Brier city limits (Leschine et al. 1997:30). Lake Ballinger is emptied by McAleer Creek into Lake Washington. Hall Creek, which drains into Lake Ballinger at its northern end, flows out of Hall Lake (Klisch and Einberger 2009:5; Simmler et al. 2009:6). Within the southern portion of the APE, historical studies indicate that a system of channels within the Thornton Creek watershed once linked several of the southern lakes in the study area. Thornton Creek may have previously originated from the Meridian Park wetland, but Thornton Creek was known to have originated out of Ronald Bog. Thornton Creek then flowed through Twin Ponds as the stream continued south through a system of wetlands (Tetra Tech/KCM, Inc. 2004:2-3). Thornton Creek slowly meandered southeast through the site of present-day Northgate Mall. It empties into Lake Washington (Nordstrand 2001).

All these watersheds empty into Lake Washington and have been affected by its alternating water surface level and water flow through time. Lake Washington was a marine embayment during the early postglacial period, approximately 15,000 years ago. The early postglacial surface elevations of Lake Washington, and the surrounding river and creek floodplains, were lower than they are today. This variable probably affected the drainage patterns of McAleer Creek and other tributaries; for their first few thousand years, these drainages were probably not deeply incised in glacial till and glacial outwash deposits and therefore likely did not support predictable salmon runs (Dragovich et al. 1994). By 14,000 years ago, areas outside of the riparian habitats in the Sammamish River and surrounding creek floodplains were a mosaic of forest-parkland (Brubaker 1991; Whitlock 1992). By 13,000 years ago, the Cedar River delta had advanced across the south end of the Lake Washington embayment, transforming the embayment from a marine fjord to a freshwater lake (Leopold et al. 1982).

After recession of the ice sheets, isostatic rebound occurred within Puget Sound from 8,000 to 5,000 years ago, which caused tributary stream gradients to fluctuate (Dragovich et al. 1994: Figure 7). The weight of the ice pushed the landscape into earth's mantle during the proglacial episodes, called isostatic depression. Isostatic rebound—upward movement of the earth's crust in order to achieve equilibrium—occurred following the recession of the ice sheets when the pressure or depression on the landscape relaxed, allowing the land to rise (Pidwirney and Jones 2010). Beginning in the late 1800s, humans altered gradients and the general topography of the area surrounding the project APE. Logging activity, which began during the early 1870s, depleted natural protections from stream erosion. Larger-scale changes began in 1916, when the Hiram S. Chittenden Locks (Ballard Locks) opened in Ballard. The locks linked Puget Sound with Lake Washington and resulted in lowering the lake level 9 feet. The change to the lake's water surface level altered the stream gradients that feed into the lake. These changes, combined with drainage alterations such as channelization, diminished the complexity of the streams and wetlands that fed the lake (Kerwin 2001:28). Agricultural use, such as farms, orchards, and dairies, dominated the landscape after logging (Hodges 2006:3), thus transforming the soils, streams, and wetlands. Post-World War II peat mining occurred in Ronald Bog and Twin Ponds and other areas of the region (Hodges 2006:3; Tetra Tech/KCM 2004:2-3). By 1953, this mining created a lake in Ronald Bog. Currently, the Thornton Creek watershed begins as a piped system from Ronald Bog (Tetra Tech/KCM 2004:2-3). The area has since been urbanized (Hodges 2006:3).

Natural Setting

Major climatic changes occurred in western Washington between 12,000 and 7,000 years ago. The climate changed to a warmer and drier regime, with less rainfall than today (Whitlock 1992). The surface elevation of Puget Sound reached a maximum low elevation approximately 8,000 years ago and then rose rapidly, affecting the elevation of Lake Washington and the gradient of the streams and rivers that flowed into the lake (Dragovich et al. 1994: Figure 7). The flow of drainages local to Lake Washington most likely slowed because of the lower gradients, and the lower reaches of some of the streams were able to absorb the decreased flow, thereby creating marshes and wetlands.

Pollen and spores also illustrate the warmer and drier climate before 7,000 years ago, when an open forest of Douglas fir (*Pseudotsuga menziesii*), red alder (*Alnus rubra*), or both grew along the margins of Lake Washington. Pollen directly overlying Mount Mazama ash deposits (6,700 years ago) implies that western redcedar (*Thuja plicata*) replaced the alder and some Douglas fir around 7,000 years ago. The change in dominant species points to a cooling climate. The abundance of western redcedar pollen continued to surface in the soil surrounding Lake Washington (Leopold et al. 1982:1306-1307), indicating its dominance until historical landscape changes in the late 19th and early 20th centuries.

Between 6,000 and 5,000 years ago, the climate became even cooler and wetter, thus causing the mosaic forest-parkland to be replaced by a closed canopy forest similar to that seen in contemporary western Washington, including western hemlock (*Tsuga heterophylla*), western redcedar, and Douglas fir (Barnosky et al. 1987; Brubaker 1991; Whitlock 1992). The wetter climate also caused higher groundwater levels and more surface runoff, which increased the flow of McAleer Creek and other tributary streams and lowered the overall water temperature. By 5,000 years ago, the surface elevation of Puget Sound was within 5 to 10 feet of its contemporary elevation, and sea level rise had begun to slow and stabilize (Dragovich et al. 1994). As a result, it was likely around this time that predictable salmon runs became established in Lake Washington and the Sammamish River system, along with their tributary streams. These runs included (and still consist of) Chinook (*Oncorhynchus tshawytscha*), coho (*O. kisutch*), and sockeye (*O. nerka*) salmon species (Williams et al. 1975:08-203).

The morphology of local drainages has changed within the historic period, notably through increased settlement and development (i.e., straightening and/or hardening of local stream beds). Before extensive Euroamerican influence in the area, the variety of regional vegetational environments provided fodder for an array of faunal resources. Larger terrestrial mammals in the area would have included elk (*Cervus canadensis*), deer (*Odocoileus hemionus*), black bear (*Ursus americanus*), coyote (*Canis latrans*), and mountain lion (i.e., cougar, *Felis concolor*). Smaller mammals would have included snowshoe hare (*Lepus americanus*), raccoon (*Procyon lotor*), red fox (*Vulpes vulpes*), porcupine (*Erethizon dorsatum*), and weasel (*Mustela frenata*) (Kruckeberg 1991; Larrison 1967). Lacustrian and riverine resources included species of waterfowl (*Aix* and *Anas* sp.), beaver (*Castor canadensis*), otter (*Lutra candensis*), muskrat (*Ondatra zibethica*), freshwater fish (such as trout [*Oncorhynchus* sp.], whitefish [*Coregonus* sp.], eels [*Anguillidae* sp.]), and salmon species (Kruckeberg 1991; Larrison 1967; Suttles and Lane 1990).

3.2 Cultural Context

Previous Cultural Resource Management Studies

King County

Background research revealed that there are no previously recorded archaeological sites or previously conducted cultural resource studies within the proposed project APE. Within an approximately 1 mile radius of the project corridor, the review documented one archaeological resources study (Table 3-1), but no professionally documented archaeological resources were found

within 1 mile of the APE. Reports noted the presence of intact glacial materials, alluvium, and heavy disturbance within the area (Dellert et al. 2012; Berger 2008; Berger et al. 2007; Dugas and Robbins 2001:1; Gillis and Larson 2006; Gillis et al. 2006; Hodges 2006:3-5).

Table 3-1. Previous Cultural Resource Studies within 1 Mile of the APE in King County

National Archaeological Database (NADB) Number	Reference	Title	Within APE	Identified Cultural Resources
1339816	Courtois et al. 1998	Sound Transit: Central Link Light Rail Draft EIS: Historical and Archaeological Resources Technical Report	No	None
1339836	Courtois et al. 1999	Sound Transit: Central Link Light Rail Final EIS: Historical and Archaeological Resources Final Technical Report	No	None
1347421	Hodges 2006	Technical Memorandum: Results of Geoarchaeological Monitoring of Geotechnical Boreholes for the 3rd Avenue NE Street Extension Project, Seattle, Washington	No	None
1349658	CH2M HILL 2007	Aurora Avenue North Avenue Transit, Pedestrian, and Safety Improvements, North 110th Street to North 145th Street: NEPA Documented Categorical Exclusion: Final Historical, Archaeological, and Cultural Resources Discipline Report	No	None
1339881	Dugas and Robbins 2001	1st Avenue NE and NE 130th Street Signal Improvements Project, Seattle, King County, Washington, Cultural Resource Assessment	No	None
1350170	Berger et al. 2007	Cultural Resources Assessment for the Aurora Avenue North Multimodal Corridor Project: North 165th Street to North 205th Street, City of Shoreline, Washington	No	None
1351688	Berger 2008	Cultural Resources Assessment for the City of Shoreline's 15th Avenue NE/NE 170th Street Signal Project, Shoreline, Washington	No	None
1348255	Gillis and Larson 2006	Final Brightwater Conveyance Final Design Portals Field Reconnaissance, King and Snohomish Counties, Washington	No	None
1348253	Gillis et al. 2006	Final Brightwater Conveyance Final Design, King and Snohomish Counties, Washington: Archaeological Resources Monitoring and Review of Geotechnical Borings and Test Pit Monitoring	No	None
1684269	Dellert et al. 2012	Final Archaeological and Architectural Inventory for the Knickerbocker Floodplain Reconnection Project, City of Seattle, King County, Washington	No	None

Snohomish County

Nineteen previous cultural resource studies have been conducted within 1 mile of the APE in Snohomish County (Table 3-2). Most of these studies were completed for transportation-related projects (Chidley 2008; Hartmann 2008a; Juell et al. 2000; Lorenz 1977; Mighetto et al. 1992; Robbins 1999; Robinson 1981a, 1981b; Stone 2001; McWilliams and Cooper 2012). Three reports were completed for commercial development projects (Dellert and Butler 2010; Gillespie 2009; Silverman and Dellert 2010). Two projects were conducted for trail and bridge improvements for

the Interurban Trail (Dampf and Gilpin 2008; Gilpin and Gillespie 2009). Two series of documents were compiled for the Brightwater Regional Wastewater Treatment System Project (LAAS 2004, 2006). One project was for construction of a cellular tower (Hartman 2008b), and one project documented the history of Alderwood Manor (Mighetto 1992).

Table 3-2. Previous Cultural Resource Studies within 1 Mile of the APE in Snohomish County

National Archaeological Database (NADB) Number	Reference	Title	Within APE	Identified Cultural Resources
1330584	Lorenz 1977	Archaeological and Historic Sites Reconnaissance of Proposed Park and Ride Lots; Snohomish and King Counties, Washington	No	None
1331992	Robinson 1981a	An Archaeological Reconnaissance of SR5: Edmonds Park and Ride Lot (Preliminary Sites #19, 15, 17)	No	None
1332807	Robinson 1981b	An Archaeological Reconnaissance of SR5: 220th St SW Interchange Ramp Revision	Yes	None
1340278	Juell et al. 2000	Cultural Resources Inventory of the Proposed Washington Light Lanes Project Route 2 Backbone: Downtown Seattle to Interstate-5 (MP 164), Interstate-5 Seattle to Blaine (MP 164 to MP 276), and Blaine to the Canadian Border	Yes	Twelve potentially historic buildings near urban Seattle (not within the Lynnwood Link Extension APE)
1342623	Robbins 1999	Proposed Regional Express Lynnwood Project Cultural Resource Assessment	Yes	None
1343348	Stone 2001	A Cultural Resources Investigation of the Proposed Larch Way-Poplar Way Intersection Improvement Project, Snohomish County, Washington	No	None
1343407	Mighetto et al. 1992	I-5/196th Street SW Interchange Project Environmental Impact Statement Alderwood Manor, Archaeological and Historical Resources	No	Historic buildings associated with Alderwood Manor (not within the Lynnwood Link Extension APE)
1344008	LAAS 2004	Cultural Resources Documents Prepared for the Brightwater Regional Wastewater Treatment System	Yes	Several historic buildings (not within the Lynnwood Link Extension APE)
1348241	LAAS 2006	Cultural Resources Documents Prepared for the Brightwater Regional Wastewater Treatment System, Volume 1 of 2	Yes	Several historic buildings(not within the Lynnwood Link Extension APE)

Table 3-2. Previous Cultural Resource Studies within 1 Mile of the APE in Snohomish County

National Archaeological Database (NADB) Number	Reference	Title	Within APE	Identified Cultural Resources
1350195	Mighetto 1992	History of Alderwood Manor	No	None; no fieldwork
1351380	Hartmann 2008a	Cultural Resources Assessment for the Swift Bus Rapid Transit Project, Technical Memo 0711A-3, Snohomish County, Washington	No	None
1351904	Dampf and Gilpin 2008	Cultural Resources Assessment for the 44th Avenue West Interurban Trail and Trail Bridge Project, Snohomish County, Washington	Yes	None
1352059	Hartmann 2008b	Cultural Resources Assessment for the Lynnwood Cell Tower Project, Lynnwood, Snohomish County, Washington	No	None
13521118	Chidley 2008	Request for Determination of Effects Concurrence I5-196th Street (SR524) Interchange Project, Snohomish County, WA	No	None
1353293	Gillespie 2009	A Historical Resources Assessment of the Hall Lake East Project, Lynnwood, Snohomish County, Washington	Yes	Six historic buildings (not within the Lynnwood Link APE)
1353787	Gilpin and Gillespie 2009	Cultural Resources Assessment for the Edmonds Interurban Trail Project, Snohomish County, Washington	No	Interurban Trail
1354531	Dellert and Butler 2010	Cultural Resources Assessment for the Gorman Hotel & Storage/Retail Project, Snohomish County, Washington	No	Historic-period site (45SN559)
1354532	Silverman and Dellert 2010	Cultural Resources Assessment for the Hall Lake East Project, Snohomish County, Washington	Yes	Two historic-period sites (45SN552 and 45SN553) and one isolate (45SN564)
1682996	McWilliams and Cooper 2012	Cultural Resources Assessment for the 228th Street SW Corridor Improvement Project, Snohomish County, Washington	No	None

Prehistory

Human occupation of the Puget Sound region became possible soon after the retreat of the Vashon stade of the Fraser glaciation, which was the last glaciation episode that occurred 14,000 years ago. The oldest prehistoric sites in the region date to this time period and are primarily lithic scatters. Lack of faunal and organic remains is probably related to the highly acidic soils in the region, which produce a high decomposition rate (Nelson 1990:481). Lithic artifacts would still be preserved in such conditions.

However, new radiocarbon information and DNA analysis from the Manis Mastodon Site (45CA218) indicates that humans were in the Puget Sound region prior to approximately 13,800 years ago. This site, located near Sequim on the Olympic Peninsula, is one of the oldest archaeological sites in North America. This is a unique site because a bone point fragment was identified in the faunal remains (Waters et al. 2011:351).

The development of a cultural timeline extending back to the earliest times is difficult because of the paucity of artifacts and features. Although several cultural chronologies have been proposed, Ames and Maschner (1999) provided perhaps the most comprehensive chronology for the Puget Sound region (Table 3-3). The chronology is listed as five distinct time periods (Paleo-Indian, Archaic, Early Pacific, Middle Pacific, and Late Pacific), divided by changes in technology and increased sedentism.

Table 3-3. Model of Prehistoric Change in the Puget Basin

Dates	Period	Land Use	Settlement	Subsistence	Technology
~13,800 B.C. to 10,500 B.C.	Paleo-Indian	Generalized marine, littoral, and/or terrestrial	Short-term use pit houses and shelters	Generalized marine, littoral, and/or terrestrial	Stone; bone, antler, and perishable materials likely
10,500 B.C. to 4,400 B.C.	Archaic	Generalized littoral, neritic, and terrestrial	Short-term use pit houses and shelters	Generalized littoral, neritic, and terrestrial	Stone; some bone and antler; other perishable materials likely
4,400 B.C. to 1,800 B.C.	Pacific (Early Phase)	Littoral, neritic, and terrestrial	Increased sedentism in seasonal villages	Increased focus on littoral resources and expanded use of neritic resources	Increase in ground stone, bone, antler, and perishable materials
1,800 B.C. to A.D. 200/500	Pacific (Middle Phase)	Neritic, littoral, and terrestrial	Winter villages of plank houses and seasonal camps	Increased focus on marine and riverine resources. Food storage technologies developed	A decrease in stone and diversification of tools and tackle of bone, antler, and perishable materials
A.D. 200/500 to A.D. 1775	Pacific (Late Phase)	Neritic, littoral, and terrestrial	Large permanent villages and special use sites	Specialized marine, riverine, littoral, and terrestrial resource use and management. Extensive food storage	Tools and tackle of bone, antler, and perishable materials; very little stone

Sources: Ames and Maschner 1999:66; Waters et al. 2011
B.C. = Before the Common Era

Paleo-Indian (~13,800 B.C. to 10,500 B.C.)

The earliest phase of human occupation in the Puget Sound region is evidenced by scarce lithic sites, which were most likely temporary campsites or foraging locations. One of the earliest diagnostic tool assemblages in North America is the Clovis tradition (Ames and Maschner 1999:65). Clovis tools are found throughout the continent south of the glacial front but are relatively rare in the Pacific Northwest. A cache of Clovis tools was found at the Richey-Roberts site near Wenatchee; this was a rare find because Clovis tools usually are found as isolates (one or two artifacts occurring by themselves and not associated with an archaeological site) in the Northwest (Ames and Maschner 1999:66). The Clovis toolkit is defined by large, fluted lanceolate points; bone shafts; bone points with beveled bases; blades; blade cores; scrapers; retouched flakes; and hammerstones (Ames and Maschner 1999:65). Other tools representative of the Paleo-Indian phase include basalt cobble choppers and flaked scrapers. The sites are thought to represent small, highly mobile groups, with a general foraging subsistence pattern (Ames and Maschner 1999:24).

Archaic (10,500 B.C. to 4,400 B.C.)

Archaeological sites attributed to this time period are relatively scarce. Postglacial environmental changes were occurring in western Washington, such as fluctuations in sea level and isostatic rebound. These dynamic changes would have affected the way humans occupied and used the landscape as well as how well and where evidence of human use persisted (Ames and Maschner 1999:50, 53). Representative artifacts are largely lithic in nature, such as large projectile points for hunting large game, including the locally diagnostic Olcott point. The Olcott tradition consists of leaf-shaped projectile points and cobble tools (Nelson 1990:483). Some sites dating to the Archaic Period also include bone and antler tools. Olcott assemblages are typically found on older river terraces, primarily within the Snohomish River basin. The nearest recorded site to the APE dating to the Archaic period is 45SN72, near the town of Sultan.

Changes in settlement patterns are first noted in Archaic sites, with an increase in evidence of sedentism. Semi-subterranean pithouses are seen in semi-permanent and permanent villages (Ames and Maschner 1999:66). The seasonal round developed, with more focus on fishing, hunting, and gathering plants as they reached harvestable condition throughout the year in different microenvironments. As Ames and Maschner (1999:25) suggest, this indicates the beginning of a complex hunter-gatherer economy—a transitional time from the foraging economy in the Paleo-Indian phase.

Pacific (4,400 B.C. to A.D. 1775)

Ames and Maschner (1999) divided the Pacific Period into three phases: Early, Middle, and Late. The Pacific Period spans from prehistoric to the beginning of the ethnographic period, when native populations were first introduced to European influences, such as the smallpox epidemic of 1775.

Early Pacific (4,400 B.C. to 1,800 B.C.)

Littoral, estuarine, and riverine environments were affected by the stabilization of sea levels and draining of rivers approximately 5,000 to 3,000 years ago. As a result, resources flourished in these areas, which promoted more intensification of the use of these resources, as well as settlement. The use of specialized resources is first seen during the Early Pacific phase, including camas (*Camassia quamash*) and shellfish. This phase is characterized by an overall increase in food production, with a focus on intertidal resources, as illustrated by numerous thick shell midden sites, which indicates increased sedentism. Bone tools, while present during the Archaic Period, begin to dominate coastal assemblages during the Early Pacific phase, possibly due to better preservation in shell midden sites. However, many new forms of bone and antler tools were also identified in Early Pacific sites (Ames and Maschner 1990:91). Evidence of groundstone use and human burials are also seen as significant events in the Early Pacific Period (Ames and Maschner 1999:90-92).

Middle Pacific (1,800 B.C. to A.D. 200/500)

The stabilization of sea levels encouraged marine environments to flourish. Evidence of shell middens and the remnants of large rectangular cedar plank houses, villages, and large canoes indicate greater sedentism during the Middle Pacific phase. Intensification of marine resources, such as salmon fishing, is also indicated by the diversification and innovations of bone tools, such as toggling harpoons (Ames and Maschner 1999:93). Groundstone tools, such as net weights, further indicate an expansion in fishing (Ames and Maschner 1999:94). The emphasis on a storage-based economy, social inequality, warfare, and the development of coastal art and wooden boxes are seen for the first time as well (Ames and Maschner 1999:93).

Late Pacific (A.D. 200/500 to A.D. 1775)

Archaeological evidence shows cultural continuity between populations at the beginning of the Late Pacific phase and groups in ethnographic times; thus, Late Pacific peoples are the "direct biological and cultural ancestors to the coast's modern Native peoples" (Ames and Maschner 1999:95). Although there is evidence of continuity, there is also evidence of change. An increase in warfare and population changes caused dramatic shifts in demographics (Ames and Maschner 1999:95). Major points in the Late Pacific Period include increasing mortuary rituals; decrease in shell midden burials for the most part, except for large sites such as the Tse-whit-zen Village Site (45CA523) in Port Angeles; decline in the use of chipped stone; changes in subsistence and settlement; and an escalation in warfare. Additionally, heavy-duty woodworking tools are seen for the first time in this period, indicating intensification in this skill (Ames and Maschner 1999:96).

Ethnography

The proposed project APE is in the aboriginal territory of the Duwamish, Sammamish, Snohomish, and Suquamish. These peoples are part of the Southern Coast Salish cultural group, which is composed of two language groupings, Twana and Lushootseed (further subdivided into Northern and Southern). The Duwamish, Sammamish, and Suquamish were part of the Southern Lushootseed

dialect group (Suttles and Lane 1990:486). The Snohomish were part of the Northern Lushootseed language group, although the Snohomish dialect was seen as distinct from other Coast Salish languages (Tweddell 1974:515). These groups followed the general Southern Coast Salish subsistence and settlement pattern.

Territories and Settlement Information

Duwamish

The Duwamish had villages along Lake Washington and the Duwamish, Cedar, and Black rivers (Suttles and Lane 1990:488). Duwamish territory extended along the length of the river of the same name to the confluence of the White and Green rivers (Swanton 1952:26). Duwamish territory also extended from the Muckleshoot lands in the south (around Auburn) to the Suquamish lands in the north (around Seattle), and were often referred to as the Renton Indians (Curtis 1913:174; Gibbs 1877:179; Haeberlin and Gunther 1930:8, 10; Spier 1936:34). The Duwamish had strong ties with other local groups such as the Sammamish and Snohomish, which often included marriage (Ruby and Brown 1992:72).

Duwamish winter village dwellings were constructed of cedar planks and typically had a single-pitch, shed-roof style and were used to house multiple families (Suttles and Lane 1990:491, 493-494). Seasonal campsite dwellings were smaller, single-family style with pole frames covered in mats (Haeberlin and Gunther 1930; Suttles 1990; Suttles and Lane 1990:491, 493-494).

Sammamish

Sammamish peoples inhabited the Sammamish River Valley, the shores of Lake Sammamish, and the eastern shoreline of Lake Washington (Curtis 1913:174; Spier 1936:34). The Sammamish had strong affiliations with the Duwamish to the west, as well as the Snoqualmie to the east.

The Sammamish winter villages had multiple family dwellings consisting of cedar planks attached to heavy wooden frames. Temporary, seasonal dwellings were made of a light pole framework covered with cattail mats that were easily transportable (Lane 1975a:24).

Snohomish

The Snohomish lived in the Snohomish River Valley and had four main villages: just south of Tulalip, at Priest Point, at Sandy Point, and at the southern tip of Whidbey Island. Other settlement locations were along the banks of major rivers, such as the Snohomish River, and along tributaries and at confluences (Gibbs 1877:179; Haeberlin and Gunther 1930:7; Swanton 1952:46). The hunting and fishing territory of the Snohomish extended east of the villages (Haeberlin and Gunther 1930:7). As was the norm with Southern Coast Salish groups, the Snohomish centered life on semi-permanent to permanent winter villages and temporary spring, summer, and fall campsites based on seasonally available resources. Dwellings consisted of cedar plank houses with cedar log poles and plank walls. Three types of roofs were used in the Puget Sound region: shed, gable, and gambrel. The Snohomish commonly had shed-roof dwellings in permanent villages (Waterman and Greiner

1921 in Suttles and Lane 1990:491). Occasionally, the shed-roof houses were also used for potlatches (Suttles and Lane 1990:491). The largest Snohomish potlatch house was located at Tulalip (Haeberlin and Gunther 1930:17). The Snohomish also incorporated stockades into some of their villages—a feature that was not typical for the region. The stockade around one Snohomish village included ditches and sharpened stakes (Gibbs 1877:223). Haeberlin and Gunther (1930:15) note that the village of Hebolb had a palisade, while the village at Priest Point stood unprotected.

The yearly migration from the winter village did not occur in one event for the Snohomish—younger, more energetic groups were the first to leave, followed later by more elderly groups (Haeberlin and Gunther 1930:10). Seasonal campsites were situated by resource locations, such as areas for hunting game and gathering berries. Summer dwellings housed from 2 to 10 families and were portable gable-roofed shelters with pole frames covered in mats or brush (Suttles and Lane 1990:491). The Snohomish summer house was similar to the square house used by the Nisqually, not the "tipi-like" house used by other Puget Sound groups (Haeberlin and Gunther 1930:19).

Suquamish

Suquamish territory included the west side of Puget Sound, from Apple Tree Cove in Kingston to Gig Harbor, including Bainbridge Island (Swanton 1952:48). On the east side of the Sound, the Suquamish inhabited the areas around Seattle and are associated with the Duwamish (Curtis 1913:174; Gibbs 1877:179; Spier 1936:34; Swanton 1952:48). The Suquamish also had marital, economic, and ceremonial ties with the Clallam and Twana (Suttles and Lane 1990:488).

Suquamish cedar plank dwellings were built in the winter villages and were large enough to house multiple families. Most cedar plank dwellings were used as houses, although occasionally they were constructed for potlatch events. The largest known potlatch house was Old Man House at the Suquamish village at Agate Pass (Suttles and Lane 1990:491). Built in the early 19th century, Old Man House was approximately 500 feet long and up to 60 feet wide. The house posts of Old Man House were "carved with grotesque figures of men, naked and about half size" (Gibbs 1877:215 in Suttles and Lane 1990:491). Seasonal campsite dwellings were typically gable-roofed structures with pole frames covered in housemats (Suttles and Lane 1990:491).

Subsistence

Subsistence for Southern Coast Salish groups such as the Duwamish, Sammamish, Snohomish, and Suquamish was based on a system of procuring seasonally available resources. Task groups set out to seasonal camps to hunt, fish, and gather plants, although during ethnographic times, the Snohomish did not hunt deer or elk. The Snohomish bought dressed deer and elk skins and mountain goat wool from the Snoqualmie, paid for with shell money (Haeberlin and Gunther 1930:7, 10). The principal diet of the Snohomish was seafood, not terrestrial game animals (Haeberlin and Gunther 1930:20).

Dietary staples included terrestrial game such as deer (*Odocoileus hemionus*), elk (*Cervus elephas*), and bear (*Ursus americanus*). Waterfowl and other birds were also used. Additionally, all five species of salmon were used, as well as other fish such as kokanee in the Sammamish River drainage (Suttles and Lane 1990:489; Williams et al. 1975:08-203). The Southern Coast Salish people caught salmon

during the spring and fall runs; some was processed for winter storage (Ballard 1957:41-2; Gibbs 1877:194). Weirs, traps, gaff hooks, harpoons, dip nets, leisters, traps, spears, gill nets, and trawl nets were used for fishing (Lane 1975a:24; Suttles and Lane 1990:489). They consumed salmon and other fish fresh, while they smoked and dried surplus for winter storage or trade. Commonly used shellfish species consisted of butter clam (*Saxidomus giganteus*), littleneck clam (*Protothaca staminea*), horse clam (*Schizotherus nuttalli, S. capax*), geoduck (*Panopea generosa*), thin-shelled clam (*Protothaca tenerrima*), razor clam (*Siliqua patula*), and bay mussel (*Mytilus edulis*) (Belcher 1985; Suttles 1990:28; Suttles and Lane 1990:489). The Sammamish also caught eels in the Sammamish River (Lane 1975a:24). Marine resources such as oysters, bottom fish, and marine mammals were procured in Puget Sound as well (Harrington ca. 1909:Frame 314).

Plants gathered for food and medicinal purposes included cattails, roots, sprouts, bulbs, and camas (Gibbs 1877:194; Gunther 1945; Lane 1975a:24; Suttles and Lane 1990:489). Additionally, a variety of berries, including blackberry, elderberry, salmonberry, thimbleberry, blackcap, salal berry, huckleberry, and blueberry, were noted by Gunther (1945). Plant resources were used not only for food, but also as material for such items as dwellings, mats, clothing, and baskets.

Ethnographic Place Names

Several ethnographic place names are in the vicinity of the APE. Figure 3-1 shows GLO maps from the USSG, with ethnographic place name information documented by T. T. Waterman in 1920 and enhanced by Hilbert et al. (2001:82-83, 343-346) and Thrush (2007:220-221, 250-254), in relation to the APE.

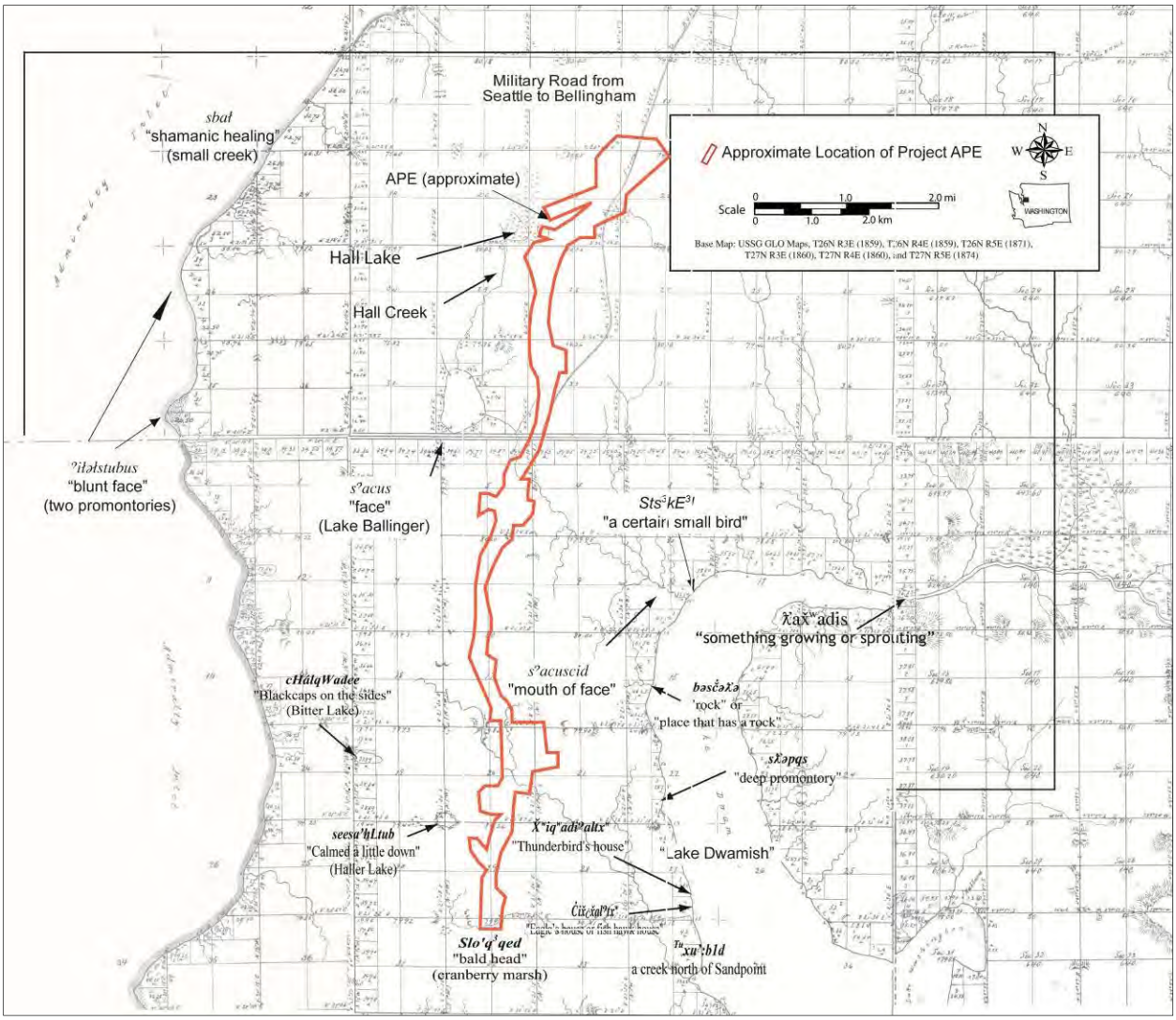


Figure 3-1
Ethnographic place names in the APE vicinity

Lynnwood Link Extension

Beginning at the northern end of the APE, the nearest ethnographic place name is "***s?acus****"* (Lake Ballinger, formerly Lake McAleer), meaning "face," approximately 0.75 mile to the west (Hilbert et al. 2001:82-83; Waterman 1922:179, 190). Approximately 1 mile southwest of Lake Ballinger is Bitter Lake, which was called "***cHaÉlqWadee****,*" meaning "blackcaps on the sides," and referred to the native blackcap (*Rubus leucodermis*) berries and shoots harvested around the lake (Thrush 2007:220-221). A half mile southeast of Bitter Lake is Haller Lake, called "***seesaÉhLtub****,*" meaning "calmed down a little," and is a possible former hunting location (Thrush 2007:220-221). Both Bitter and Haller lakes have also been noted to be refuge areas during slave raids (Thrush 2007:220). At the far southern end of the APE is "***bLooQWqeed****,*" meaning "bald (or peeled) head," which refers to the bowl-shaped topography where North Seattle Community College and Northgate Mall are currently situated. Formerly, this area held an upland marsh/wetland that provided a source for Thornton Creek and would have been ideal for gathering highbush cranberries, marsh tea (*Ledum groenlandicum*), and other plants (Hilbert et al. 2001:82; Thrush 2007:254; Waterman 1922:179, 190).

In the general vicinity, the shorelines of water bodies were attractive locations for native groups during prehistoric and ethnographic times. "Lake Dwamish" to the south and east of the project study area includes eight ethnographic place names near the APE. The first place name is "***Sts^{3}kE^{3}l****,*" meaning "a certain small bird," which refers to a small creek, and is approximately 2 miles east of the APE (Hilbert et al. 2001:82-83). Just southwest of "***Sts^{3}kE^{3}l***" is "***s?acuscid***," or "mouth of face," referring to the creek that feeds Lake Ballinger (Hilbert et al. 2001:82-83). Approximately 1.5 miles farther south is *"**bəsc̓əx̌ə?***," meaning "rock or a place that has a rock," which refers to a boulder on the shore of Lake Washington near Lake Forest Park (Hilbert et al. 2001:82, 83, 86; Waterman 1922:179, 190). Almost 2 miles farther south again is ***ésx̌əpqs****,"* meaning "deep promontory," which refers to a place on the edge of Lake Washington (this is also approximately 2.5 miles east of Haller Lake) (Hilbert et al. 2001:82, 83, 86; Waterman 1922:179, 190). Approximately 0.75 mile south of ***ésx̌əpqs****"* is a cluster of three ethnographic place names. "***X̌^{w}iq^{w}adiʔaltx^{w}****,*" meaning "Thunderbird's house," refers to a place on the shore of Lake Washington at the edge of a bluff. The mythical birds, who were believed to cause thunderstorms by flapping their wings and winking their eyes, were thought to nest in this location (Hilbert et al. 2001:82, 86; Waterman 1922:179, 190). "***Ċiǩc̓ǩalʔtx^{w}****,*" meaning "Eagle's house or fish hawk house," is a little promontory on Lake Washington where an eagle's nest was located (Hilbert et al. 2001:82, 86; Waterman 1922:179, 190). *"^{ɑ}^{ɪ}^{u}xu':b1d"* (Waterman orthography) does not have a specific meaning, but refers to a creek north of Sand Point (Hilbert et al. 2001:82, 85; Waterman 1922:179, 190).

To the west of the project study area, on the shoreline of Admiralty Inlet, there are two other ethnographic place names. "***Sbał***," meaning "the supernatural power which makes one able to be a sucking doctor" or "shamanic healing," is approximately 3.5 miles northwest of the APE and refers to a small creek north of Edmonds (Hilbert et al. 2001:343, 346). "Blunt face," known as "***stubus***"

and ***éʔiłəł stubus,"*** refers to a set of two promontories (Point Edwards and Point Wells) on the shoreline of Admiralty Inlet (Hilbert et al. 2001:343, 346). The two promontories are approximately a mile apart from each other and approximately 4 to 5 miles west of the APE.

History

Puget Sound was first explored by Europeans in 1792, with the expedition led by British Royal Navy Captain George Vancouver, who named the large water body in honor of Lieutenant Peter Puget. Vancouver's expedition landed in Possession Sound, the large sea water inlet around Mukilteo, Everett, and Tulalip Bay. This area was so named because Vancouver officially docked there and claimed it for England in honor of the King's birthday. However, this was not the first contact Northwest Native Americans had with Europeans. By the time of Vancouver's exploration, at least one smallpox epidemic had swept through the groups in western Washington because of direct native/Euroamerican contact (Newcombe 1923; Suttles and Lane 1990).

Contact

King and Snohomish Counties

Euroamerican settlement did not begin in earnest in the Puget Sound region until the mid-19th century, when Great Britain ceded the area to the United States. In 1848, Congress created the Oregon Territory, which included what are now Washington and Idaho. King County was formed by the Oregon Territorial Legislature on December 22, 1852 (Riddle 2006). The passage of the Donation Land Act of 1850 and the establishment of the Washington Territory by Congress in 1853 also prompted increased settlement by Euroamericans (Long 2006). At that time, the area now known as Snohomish County only had three white male citizens (Broom 1990:1). Within half a century, the population was sufficient for Washington to become a state (Schwantes 1996:95-106).

The large influx of Euroamerican settlers caused issues with native groups and led to numerous conflicts. As a result, Washington's first territorial governor, Isaac Stevens, was tasked with making agreements with native groups for land cessions. The goal was relocation of natives to reservations and continued settlement of the land by Euroamericans. More than 64 million acres of land were ceded in exchange for retention of fishing rights, title to circumscribed lands, and annuities. Many treaties were signed as a result. The Treaty of Point Elliott was signed in 1855, and the Sammamish, Suquamish, and Snohomish tribes were among the signatories. The Treaty of Point Elliott stipulated that native groups that traded lands to the United States would in return receive payment, services, and rights to traditional fishing and hunting grounds (Lane 1975b:3; Riddle 2006). As part of the treaty terms, native groups were to relocate to the Tulalip Indian Reservation or the Port Madison Indian Reservation (Ruby and Brown 1992:72-72). While many groups relocated, some resisted and stayed in their traditional lands. Tensions and conflicts surrounding the treaty terms led to resentment and warfare throughout the Puget Sound, known as the Indian Wars of 1855–1856 (Schwantes 1996:104-106). In response to the hostilities, by 1859 the army constructed a "Military

Road" on a former wagon route from Fort Steilacoom in Tacoma to Bellingham near the Canadian border. The Military Road ran roughly north-south along the present-day I-5 corridor (USSG 1860).

The region experienced population growth in the mid-to-late 19th century, with the influx of Euroamerican settlers caused by timber, agricultural, coal, fishing, and homesteading pursuits (Long 2006; Riddle 2006). With the arrival of the railroad, the population in Snohomish and King counties increased. Snohomish County, originally part of Island County, was officially established on January 14, 1861 (Riddle 2006).

Euroamerican settlement came to the Seattle vicinity with the arrival of the Denny Party on Alki Point in 1851. The following spring, three members of the group, Arthur Denny, Carson Boren, and William Bell, filed Donation Land Claims in a more sheltered area, including the most level section on the south part of Elliott Bay, and termed the settlement Duwamps (or Dewamps)(Crowley 2003a; Kirk and Alexander 1995:282). In the fall of 1852, Henry Yesler built the first steam-powered sawmill in the region, significantly raising the timber industry as an economic driver in the Puget Sound area. By December 1852, the Oregon Territorial Legislature approved the establishment of King County and Seattle was named the governmental seat (Crowley 1999, 2006). When the Washington Territory separated from the Oregon Territory in 1853, Seattle lost its claim as the governmental capital, to be replaced by Olympia. The first plats for the town of Seattle were filed on May 23, 1853 by Denny, Boren, and Dr. David Maynard in what is now Pioneer Square (Crowley 2000). Disagreements over the platting process resulted when Maynard platted his streets by compass cardinal points while Denny and Boren laid out streets parallel to the Elliott Bay shoreline. Subsequently, the streets around Yesler Way (formerly Skid Row or Mill Street) do not match up (Crowley 2000).

The following decade led to population and economic growth for Seattle. Citizens lobbied for a territorial university, which was granted in 1861 (the forerunner to the University of Washington) (Crowley 1999; Kirk and Alexander 1995:283). In 1864 and 1866, Asa Mercer traveled to the East Coast, with a letter of introduction from the territorial governor, to bring young ladies to serve as school teachers and as brides for the large population of bachelors, to increase the number of marriageable women in the territory (Kirk and Alexander 1995:284; Muhich 1999). Mercer brought a total of 57 ladies (termed the Mercer Girls) to Puget Sound, many of whom were part of founding families in Puget Sound (Muhich 1999).

On January 14, 1865, the Territory of Washington incorporated Seattle and provided a charter that the city appoint a town clerk, marshal, and magistrate (Lange and Tate 2004). Several ordinances were passed, but some of the leading citizens filed a petition for dissolution. Within 3 years, Seattle reverted to a precinct of King County again. Two years later, citizens petitioned the Legislature for another municipal government and on December 2, 1869, Seattle was reincorporated, with a new town charter (Lange and Tate 2004).

For additional information about the historic period context in these areas, including information on the Seattle-Everett Interurban Railway, please see Part II, Section 8.1 of this report.

3.3 Archaeological Context

Archaeological Properties

Isolated archaeological items, collections of artifacts (e.g., scatters), and buried archaeological deposits all might occur within the project study area. Environmental variables (e.g., flat terrain, proximity to fresh water, and availability of favored floral and faunal resources), ethnographic records, and the documentation of several sites on similar landforms in the vicinity suggest a moderate probability for intact archaeological remains in the APE. Hunter-fisher-gatherer and ethnographic period archaeological resources that may be identified within the project study area include low-density lithic scatters and isolated lithics, such as flakes of stone from tool-making; cores and core fragments; and projectile points. Archaeological resources from ethnographic period sites would be similar to those associated with prehistoric sites, with the addition of Euroamerican goods, such as beads, and a more diverse assemblage of artifacts. Early historic-period archaeological resources would most likely be isolated artifacts related to logging, such as sawdust, nails, stumps with springboard scars, or logging tools; homesteading, such as nails, canning jars, dishes, and other early domestic use items; and farming, such as agricultural equipment, seeds, and feed containers. Later historic-period, non-Indian archaeological resources are likely to be structure foundations and window pane fragments, and domestic and camp-related refuse, such as bottles, cups, other dishes, cans, and toys.

Previously Recorded Archaeological Sites

King County

No professionally documented archaeological sites have been found within 1 mile of the King County portion of the APE. Approximately 0.25 mile east of the APE, along Haller Lake's shoreline, at least four projectile points might have been found by property owners during the 1950s. However, these artifacts' evidence and provenience are not confirmed (Dugas and Robbins 2001:6). The closest confirmed site to the southern portion of the APE within King County is a submerged World War II-era aircraft (45KI424) in Lake Washington, over 2 miles east of the APE (Mester and Historic Aircraft Preservations, Inc. 1990). The closest documented sites in the northern portion of the APE within King County are two sites northwest of Lake Washington within an old delta, over 4 miles east of the APE: a precontact isolate (45KI1098) consisting of a cryptocrystalline piece of lithic debitage (Gilpin 2012a) and a historic-period dump dating from the 1900s to 1970s (45KI1096) (Gilpin 2012b).

Snohomish County

Three previously recorded archaeological sites and one isolate are within 1 mile of the APE in Snohomish County (Table 3-4). None of the previously recorded archaeological resources are within the APE; site 45SN552, site 45SN553, and isolate 45SN564 are approximately 200 to 500 feet to the west, and site 45SN559 is approximately 0.25 mile east of the APE. All of the sites date to the historic

period and are associated with development at Hall Lake (Silverman 2010a, 2010b, 2010c). The isolate consists of window pane glass fragments and could be related to a building constructed between 1945 and 1950 that was approximately 5 to 10 meters west of the identified area (Gilpin 2010).

Table 3-4. Previously Recorded Archaeological Sites and Isolate within 1 Mile of the APE in Snohomish County

Site Name and Number	Site/Isolate Type	Distance From APE	NRHP Status[a]	Reference
45SN552	Historic Structure-Unknown	~200 feet	Potentially Eligible	Silverman 2010a
45SN553	Historic Structure-Unknown	~225 feet	Potentially Eligible	Silverman 2010b
Gorman Property Notched Tree Stumps Site (45SN559)	Historic Logging Property/Historic Culturally Modified Trees	~0.25 mile	Potentially Eligible	Gilpin 2010
Isolate 45SN564	Historic Object	~500 feet	Not Evaluated	Silverman 2010c

[a]National Register of Historic Places status as listed on Washington State Department of Archaeology and Historic Preservation's WISAARD database

Results of Archaeological Sensitivity Mapping and Implications for Archaeological Resources

The DAHP predictive model for archaeological resources is based on statewide information, using large-scale factors. Information on geology, soils, site types, and landforms and from GLO maps was used to establish or predict probabilities for precontact archaeological resources throughout the state. The DAHP model uses five categories of prediction: Low Risk, Moderately Low Risk, Moderate Risk, High Risk, and Very High Risk. The DAHP predictive model map indicated a Low to Very High Risk for cultural resources within the APE. Most of the APE falls within Low, High, and Very High risks; almost none of it is of Moderate Risk. However, the disturbance to the APE during the historic period due to roadway construction and residential development could have affected resources; thus, the overall APE has a low-to-moderate probability for intact archaeological remains.

As Appendix B of the Work Plan shows, the probability areas assigned by DAHP vary along the alignment. The discussion below describes the probability per map, with the maps organized by county and going from south to north.

King County

Map 1—high probability

Map 2—high probability until approximately NE 120th Street, then low probability

Map 3—low probability until approximately NE 130th Street, then high probability

Map 4—high probability

Map 5—high probability until approximately Ridgecrest area, then moderate to low probability

Map 6—low probability with a sliver of high probability on west side of highway, then low probability until approximately NE 170th Street, then resumes to high probability

Map 7—high probability until approximately NE 175th Street, then low probability

Map 8—low probability

Map 9—low probability until approximately NE 195th Street

Map 10—high probability to county line

Snohomish County

Map 10—high probability from county line to approximately 230th Street SW, then moderate to low probability

Map 11—low probability with scattered moderate probability

Map 12—low probability with scattered moderate probability

Map 13—low probability to high probability

Map 14—high probability near Hall Lake, then moderate to low probability as alignment splits

Map 15—moderate to low probability as alignment splits, then high probability near Scriber Creek Park and Scriber Lake area

Map 16—high probability near Scriber Creek Park and Scriber Lake area to low probability at northern end of alignment

On a larger scale, when viewing the DAHP model maps, the high probability locations surround water bodies, such as Hall Lake and Lake Ballinger, and are along water course drainages, such as Scriber Creek, then taper off and sometimes are interspersed with moderate and low probability areas. Modifications to the APE vicinity during the historic period could have affected intact archaeological resources; as a result, the areas around such disturbances would have a decreased probability of such resources. Given the heavy disturbance of I-5, other roadways, and residential and commercial construction, the APE probability for intact archaeological resources would be moderate.

Historic-Period Maps

HRA consulted historic maps and atlases to locate historic-period properties or features within the APE (Table 3-5). No historic-period features or structures were documented on the 1859 GLO map (USSG 1859); the Military Road running from Seattle to Bellingham was constructed soon thereafter (USSG 1900). At the turn of the 20th century, Lake Ballinger, then known as Lake McAleer, was owned by Ira Bartholamue and included structures such as a house, barn, boat landing, and chicken yard documented on the island in the lake (USSG 1900). By 1927, the island was owned by R.A. Ballinger (Metsker 1927).

By the mid-20th century, several housing tract areas, developments, and parcels were platted on atlases in the APE (Anderson 1907, 1910; Kroll 1926, 1934, 1943 [revised 1952]; Metsker 1927, 1936, 1960; Sanborn 1930; USGS 1942, 1953) (Table 3-5).

Table 3-5. Features Documented on Historic-Period Maps in the APE

TRS Location	Reference	Comment
T27N R4E S21	USSG 1860	Military Road from Seattle to Bellingham bearing roughly north-south crosses APE in SE quadrant of section.
	Anderson 1910	Hall's Lake Tracts and parcels owned by Erick A. Wallene, H. W. Treat, A. C. Yost, W. B. Heworth, H. H. Burleson, D. C. Burleson, H. M. Andrews, W. Million and Geo. J. Nichols, and Puget Mill Company, also APE crosses the Seattle-Everett Interurban Line.
	Metsker 1927	Hall's Lake Tracts, Wallene Interurban Tracts, Scriber's Lake Tracts, Cedar Valley Tracts, and parcels owned by M. Callendar, R. Abbott, J. Kunst, J. A. Crookham, Larson, and other unnamed/illegible parcels.
	Kroll 1934	Hall's Lake Tracts, A. C. Yost's 5 Acre Tracts, Hall Lake Townsite, Scribner Lake Home Tracts, Wallene Interurban Tracts, Alderwood Manor Tracts, PMW Trac. Co. RY, and parcels owned by E. J. Landgren, F. Eagen, M. Beattie, O. Boyd, C. Boyd, Jacob Hill, Mary Danson, R. Abbott, Christensen, and B. Eckerson.
	USGS 1942	Structure documented in area of Scriber Creek Park.
	Kroll 1943 (revised 1952)	Hall Lake Townsite, A. C. Yost's 5 Acre Tracts, Scriber Lake Homes, Wallene Interurban Tracts, and parcels owned by B. Welon, Johnson, Bartle, Christensen, Agnes Arentsen, Harold Arentsen, Frank Lukas, Campbell, and other unnamed/illegible parcels; also the vacated PMC Trac. Co. RY.
	USGS 1953	Structures documented in area of Scriber Creek Park.
	Metsker 1960	Hall Lake Townsite, Grange Hall, A. C. Yost's 5 Acre Tracts, Caperton Homes, Lynnwood Evergreen Tracts, Met. Fed. Sav and Ln, and parcels owned by Church of Nazarene, A. I. Ensen, W. Axelson, M. Monk, C. Johnson, F. Bartele, B. Welch, I. Miller, R.E. Woodley, A. Arentsen, R. Bell, F. Lucus, Christensen, L. Aichlmey, P. Campbell, R. Ellis, Lee Park, R. Lockwood, Nettleton, C. Williams, H. Polker, and E. Vicklund.
T27N R4E S28	USSG 1860	Military Road from Seattle to Bellingham bearing roughly north-south in eastern half of section.
	Anderson 1910	Parcel owned by Carrie R. Orton.
	Metsker 1927	Seattle Heights Gardens Tracts and parcels owned by Orton Inv. Co., Mary E. Shore, J. Fleagle, C. Pearse, P. Van Arsdale, and C & H Rice.
	Kroll 1934	Seattle Heights Gardens Tracts and parcels owned by Orton Inv. Co., Schelda J. Leibley, C. Hansen, and other unnamed/illegible parcels.
	Kroll 1943 (revised 1952)	Zattu Hall Lake Tracts and Seattle Heights Gardens Tracts.
	Metsker 1960	Morrison's Tracts, Seattle Heights Gardens Tracts, Mount Lake Terrace Tracts, and parcels owned by Seat. Fed. Savings, Lyen White, Oscar Anderson, A. E. Crust, C. Singhts, Price, Jas. F. Ward, and W. S. Gibb.
T27N R4E S29	Anderson 1910	Appleton Acre Tracts and parcel owned by J. A. L. Crookham.
	Metsker 1927	Appleton Acre Tracts and parcel owned by J. A. L. Crookham.
	Kroll 1934	Appleton Acre Tracts and parcel owned by J. A. L. Crookham.
	Kroll 1943 (revised 1952)	Appleton Acre Tracts and parcel owned by Leslie Securities Inc.

Table 3-5. Features Documented on Historic-Period Maps in the APE

TRS Location	Reference	Comment
	Metsker 1960	House-o-Rama, Mount Lake Terrace Tracts, and parcels owned by B. R. McCormick, Jovanovich, Josie Perch, R. Stromberg, R. K. Slaughter, T. Norgson, Jos. H. Fleogle, Scott, Albert Gaiger, R. Michelton, M. M. Willough, and Corp. of Cath. Archbishop.
T27N R4E S32	USSG 1900	Homestead of Ira Bartholamue on island within Lake McAleer (now Lake Ballinger) that included a house, barn, chicken yard, and raft or float for a boat landing area.
	Anderson 1910	Parcels owned by W. W. Rinehart, Edw. J. Gould, Harry White, James B. Taylor, and L.E. Grant.
	Metsker 1927	Parcels owned by Nile Temple of Seattle, R. Ballinger, A & A Weage, C. Melburn, and H.K. Sander.
	Kroll 1934	Parcels owned by Nile Temple of Seattle, A & A Weage, C. Melburn, and Erma G. Preston.
	Kroll 1943 (revised 1952)	Mount Lake Terrace Tracts, island in Lake Ballinger owned by J. J. Hands, and parcels owned by Nile Temple of Seattle, C. Melburn, and W. H. Lilly and H. Schroeppel.
	Metsker 1960	Island in Lake Ballinger (McAleer) owned by Holland & Manos, Mount Lake Terrace Div. Tracts, and parcels owned by Nile Temple of Seattle, W. H. Lilly and H. F. Schroeppel, and Albert Pierce.
T26N R4E S5	Anderson 1907	Parcels owned by Frank J. Henson, Crowford & Co., and August A. Ernest.
	Kroll 1926	Echo Lake Garden Tracts 5th Division, Lake Ballinger Garden Tracts, and parcels owned by R. C. Baldwin, Ida M. McCrary, Eliz. Davis, A. G. Glass et al., and other unnamed/illegible parcels.
	Metsker 1936	Lake Ballinger Garden Tracts, Lago Vista Tracts, Whitman Home Tracts, and parcels owned by Crawford & Conover, I. B. McCrory, M. W. Salisbury, H. H. Brown, and Geo. B. Glass et al.
T26N R4E S8	Anderson 1907	Parcels owned by W. B. Wilson, H. H. Hamlin, R. M. Smith, NJNO, ACS, R. L. Graham, F. Munday, N. Boyle, and N. L. Woodring.
	Kroll 1926	Interurban Tracts and parcels owned by H. H. Hamlin, D. M. Stone, J. A. Haiferdam, Geo. Hill, J. M. Harmon, and F. Munday et al.
	Metsker 1936	Maywood Ac. Tracts, Hansbury's Country Club 5 Acre Tracts, Ronald Home Tracts, Brinker Hendrickson Hom Tracts, and parcels owned by Geo. Hill, L. R. Dumas, Fk. K. Munday et al. and other unnamed parcels.
T26N R4E S17	Anderson 1907	Green Lake 5 Acre Tracts and Marshall Blinn Est.
	Kroll 1926	Green Lake 5 Acre Tracts and parcel owned by George B. Saulsberry.
	Metsker 1936	Green Lake 5 Acre Tracts, A. B. Lord's County Club 0.25-Acre Tracts, Mitchell & Bronson 0.25-Acre Tracts, Powell's 0.25-Acre Tracts, and parcels owned by H. H. Hamlin, E. H. Wilson, and West & Wheeler.
T26N R4E S20	Anderson 1907	Parcels owned by H. H. Hamlin, C. C. Chittenden, and M. A. Jones.
	Kroll 1926	Country Home Plat, Jones Est., and parcel owned by National City Bank.
	Sanborn 1930	Platted streets .
	Metsker 1936	H. E. Orr Park Div., County Home Plat Div., and Golfcrest Div.
T26N R4E S29	Anderson 1907	Parcels owned by JM, JAM, MS, AA, MF, DNS, JCS, ECG, A. O. Lindsey, A. A. Aiken, and H. H. Hamlin.
	Kroll 1926	H. E. Orr Park and parcels owned by D. H. Griffith, H. C. Peter, M. P. Madsen, GL St. Bk., and other unnamed/illegible parcels.

Table 3-5. Features Documented on Historic-Period Maps in the APE

TRS Location	Reference	Comment
	Metsker 1936	H. E. Orr Park Div. and parcels owned by Owen-Farlin Co. Corp., E. Smith, M. Rothstein, J. H. Henry, R. H. Ellis, A. C. Yolkher, and other unnamed/illegible parcels.
T26N R4E S32	Anderson 1907	Parcels owned by J. W. Denny, A. Edwards, JNO Bruno, H. G. Niblet, W. R. Tompkins, RLM, JS, and S. C. Orton.
	Kroll 1926	Denny's 5th Ave, and parcels owned by Fred McCoy, J. J. Kointz, J. B. Carey, J. Carver, John Bruno, Alvin Heinrich, Frank Saloco, J. Stratham, Orton Inv. Co. Inc. and other unnamed/illegible parcels.
	Metsker 1936	Morrisette 1st Add., J. W. Denny's 5th Ave Add., Burke & Carrarslicton Springs Gardens, and parcels owned by Pac. Natl. Bank, J. J. Kunz, G. Nord, and other unnamed/illegible parcels.

TRS =Township, Range, Section

Archaeological Survey Results

Two archaeological sites (45SN531 and 45SN609) and one foundation that will be over 50 years old by 2020 were identified during the archaeological investigation. Additionally, areas with modern debris were also noted.

Interurban Trail (45SN531)

East of 52nd Avenue, the Interurban Trail consists of a paved bicycle and pedestrian trail (see Figures 3-2 and 3-3 and Attachment C). This area is a section of Interurban Trail, which has been previously recorded as archaeological site 45SN531. As such, an updated site form was prepared to document this portion although no remnants of railroad, including rails, ties, or associated facilities or equipment, are visible in the trail segment within the project APE. The railroad grade has been capped with asphalt, which is patched in places with concrete. Mowed grass lines both sides of the trail within its right-of-way. Power lines, which were constructed after the Interurban Railway's abandonment in 1939, parallel the right-of-way on both sides of the trail.

As noted in Section 8 of this report, the Interurban Railway operated between 1910 and 1939. It connected Seattle with the growing residential areas to the north, eventually transporting people between Seattle and Everett. The power lines were installed by Puget Power (now Puget Sound Energy) after the railroad's abandonment.

Figure 3-2
Overview of the Interurban Trail (45SN531) in Area 10, view east

Figure 3-3
Overview of the Interurban Trail (45SN531) in Area 10, view south-southeast

Scriber Creek Park Site (45SN609)

The Scriber Creek Park site (45SN609) was identified during the excavation of Shovel Probe 9-2 when carpet remnants and a concrete slab were found. Additional investigation of the area and some vegetation clearing revealed the remnants of concrete foundation walls, steps, a possible copper pipe handrail, an intersecting rock wall, and a rock-lined pathway. The site is covered with dense vegetation, and it is possible that the boundaries could be expanded if the area was cleared. A scatter of domestic items included window glass fragments, a composite roof shingle fragment, a 2-gallon Red Eagle gas can, a men's shoe sole, a clear glass bottle, a fragment of red rubber, and a Royal Crystal glass-top, Edison screw-base fuse (see Figures 3-4 through 3-6 and Attachment C).

Figure 3-4
Overview of remnant concrete foundation, view north

Figure 3-5
Overview of concrete steps, handrail, and intersecting rock wall, view west

Figure 3-6
Historic-period artifacts identified at the Scriber Creek Park Site

Landowner documentation shows that Finnish settler Alexander Brunnell filed a land patent (BLM Serial No. WASAA 072207) for the site vicinity on November 23, 1891 (GLO 2012a). Brunnell was on the land for approximately 6 to 7 years, after which he lived at the county poor farm until his death in 1899 (Polk Directory 1894; *Snohomish County Tribune* 1899). An 1895 topographic map shows two structures and a roadway/pathway that correspond with the Scriber Creek Park site area (USGS 1895). The roadway/pathway appears to be the same alignment as the current Cedar Valley Road and was most likely a precursor to the road. Other notable settlers in the area include Peter Schreiber (for whom Scriber Lake, Scriber Creek, and the associated parks are named); Pope, Talbot, and Walker (of Pope and Talbot Mill fame); and William Loughridge (GLO 2012b, 2012c, 2012d).

The property was owned by Erick A. Wallene in the early 20th century (Anderson 1910). The area became more populated, and several housing tract developments were established. The site area became part of the Wallene Interurban Tracts (Metsker 1927; Kroll 1934, 1943 [revised 1952]; Metsker 1960). A few dwellings were also documented on 20th century topographic maps at the site location, one of which appears to coincide with a structure seen on the 1895 map (USGS 1895, 1942, 1953). By the late 1960s to early 1970s, the property was owned by Walter W. Sprague (Snohomish County Assessor 2012). In 1986, Mr. Sprague deeded a strip of land to the City of Lynnwood, and by 1991 the City had purchased the entire parcel, turning it into a passive park (Scriber Creek Park) (Snohomish County Assessor 2012). In 1995, the City added a paved parking lot near the site (City of Lynnwood 2012; Snohomish County Assessor 2012).

The foundation, wall segments, steps, and pathway could be associated with structures seen on the various topographic maps or a combination thereof. The scattering of historic-period artifacts appears to date to the 1940s and 1950s (Attachment C).

There are also two additional segments of aggregate concrete wall/foundation in the southern part of the park that may or may not be associated with the site location. The age of the concrete remnants is undetermined, and no additional artifacts were associated in conjunction with the location (near Shovel Probe 9-5); therefore, it was not recorded.

Foundation at Edmonds School District Parcel

An outbuilding foundation was found in parcel number 00619500000102, which is owned by Edmonds School District 15 (Figure 3-7). The foundation measures 78 feet (north to south) by 45 feet (east to west) and is composed of concrete aggregate reinforced with rebar. Aerial photographs show that construction began on the structure in 1970 (H. G. Chickering, Jr., Consulting Photogrammetrist, Inc. 1965; Washington State Department of Natural Resources 1970); therefore, it was not old enough to qualify as a historic property at the time of this recording. Because the foundation is not old enough to be a historic property, it was not formally recorded and thus does not have an archaeological site number.

Figure 3-7
Overview of foundation area with covered basketball court in background in Area 8, view north

Traditional Cultural Properties

For the Lynnwood Link Extension, The FTA and Sound Transit sought government-to-government consultation with potentially affected Native American tribes, and initially provided project information by mail and followed up by telephone.

Consultation with the tribes has identified no information regarding TCPs that would be affected by the project.

Evaluation of Archaeological Sites

Sound Transit recorded two archaeological sites and a concrete foundation within the project APE during the current study.

Interurban Trail (45SN531)

Archaeological Site 45SN531 (Seattle-Everett Interurban Trail Segment) dates to at least 1910 and was in operation from at least then until 1939. Thus, the resource is older than 50 years and was assessed for its eligibility for listing in the NRHP. FTA determined and the SHPO concurred that this portion of 45SN531 is not eligible for inclusion in the NRHP, based on the following assessment of criteria applicability and integrity:

- *Criterion A*: Broadly speaking, a resource such as the Interurban Trail could be considered eligible for the NRHP under Criterion A at a state or local level, due to its association with the longest-running electric railroad in Washington State (Bird 2000:1). The Interurban Railway is associated with the expansion of railroads across western Washington, and the subsequent suburban development that the transportation route entailed. The electric railroad was an early form of public transportation at a time when workers were increasingly moving into the suburbs and other communities surrounding Seattle, Everett, Tacoma, and other centers of business. At the inception of the Interurban, it was difficult to impossible for these outlying settlements to reach the urban centers by car (Crowley 2003b). However, the relatively small portion of the Interurban Trail that is present within the project APE (recorded as 45SN531) does not by itself present this association to a transportation trend of regional importance. Therefore, the site is not recommended eligible under Criterion A.
- *Criterion B*: This segment of the Interurban Trail cannot be ascribed to, or associated with, persons significant in our past, outside of the tangential connection to the founders of the Interurban Railroad. Therefore, the site is not recommended eligible under Criterion B.
- *Criterion C*: There are no original features or materials visible in this section of the Interurban Trail; any original grade sediments that remain below the currently paved surface are not distinctive. As a result, this segment of the Interurban Trail is not recommended eligible under Criterion C.

- *Criterion D*: This segment of the Interurban Trail does not contribute to understanding of the operation of the Interurban Railway or its subsequent uses. Therefore, the site is not recommended eligible under Criterion D.
- *Integrity*: Overall, the condition of this small portion of the Interurban Railway grade is poor. The remaining section of railroad grade within the project APE remains in its former alignment; however, it has been altered to beyond recognition of the railroad's presence. No rails, wooden ties, or additional equipment associated with its use as a specific form of transportation were observed during surface or subsurface survey, so little in the way of workmanship remains (besides the grade itself). The railroad's setting has become increasingly urbanized, and there are no associated buildings (e.g., stations) present within or adjacent to the project APE, thus diminishing its integrity of association and setting.

Scriber Creek Park Site (45SN609)

The Scriber Creek Park Site (45SN609) consists of remnants of a historic-period structure, steps, walls, and pathway. Associated artifacts include a scatter of historic-period glass, concrete, shoe sole, rubber fragment, gas can, and glass fuse. While the structure location appears to coincide with a structure shown on the 1895 U.S. Geological Survey (USGS) map, it is unclear whether this is the same structure or one built later, such as those seen on the 1942 and 1953 USGS maps. The site has been overgrown by dense vegetation and offers limited visibility.

FTA determined and the SHPO concurred that Site 45SN609 is not eligible for listing in the NRHP. This recommendation is based on the following assessment of criteria applicability and integrity observations:

- *Criterion A*: It is unlikely that the site is associated with historical events that made a contribution to the broad patterns of our history, as its apparent use has been as a private residence of relatively short period of occupation compared with residential development patterns in the region and local area. As a result, Site 45SN609 is not recommended eligible under Criterion A.
- *Criterion B*: The records reviewed for the location of the building remnant at Site 45SN609 find the property is not ascribed to, or associated with, persons significant in our past, so the site is not recommended eligible under Criterion B.
- *Criterion C*: The foundation remnants and associated rock wall and steps, or any other archaeological materials observed in the project APE, do not embody the distinctive characteristics of a type, period, or method of construction; nor do they represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction. As a result, Site 45SN609 is not recommended eligible under Criterion C.
- *Criterion D*: Site 45SN609 is not recommended eligible for listing in the NRHP under Criterion D. In the observed assemblage, few artifacts were found to be diagnostic, and

those that were diagnostic are more than likely too recent to be considered a contributing element to the historic-period scatter. It is unlikely that further investigation will produce materials that would greatly contribute to our understanding of the residential living patterns in the area. As a result, further study would not contribute significant understanding to the history of the local, regional, or national area.

- *Integrity*: Site 45SN609 retains few aspects of integrity. Only portions of the foundation and walls are present as a result of the building having been demolished, rather than having fallen into ruin by deterioration from abandonment, which would have preserved more of its context. The subsurface disturbance evident in test probes conducted in the area reflects the large-scale destructive force used in the demolition of the building, thereby offering little hope for intact, significant deposits. The foundation, steps, walls, pathway, and scatter of historic artifacts contain no unique features. In addition, the setting has been altered by the dense vegetation that has overtaken the area as well as its conversion to a public park, so the site no longer reflects a setting as a private residence.

Foundation at Edmonds School District Parcel

The concrete foundation recorded on Edmonds School District property in the APE does not meet the definition of a historic property under the NHPA because it was not yet 50 years old at the time of this inventory. Therefore, for it to be eligible for inclusion in the NRHP, it would need to be considered exceptionally important (Criterion G). It is unlikely that additional research into its function and chain of ownership would reveal such an exception for this resource, and no additional consideration will be given to it in project planning.

However, the concrete foundation will be 50 years old or older when the project is scheduled for construction; therefore, the foundation is evaluated here against the NRHP criteria for future use.

The foundation is associated with an outbuilding on the Edmonds School District property, which was built in 1970. The foundation consists of remnant aggregated concrete with evidence of doorways, walls, paint, drains, and pipes. The building has been demolished and is not extant.

FTA determined and the SHPO concurred that the concrete foundation is not eligible for listing in the NRHP. This recommendation is based on the following assessment of criteria applicability and integrity observations:

- *Criterion A*: It is unlikely that the foundation is associated with historical events that made a contribution to the broad patterns of our history. As a result, the foundation is not recommended eligible under Criterion A.

- *Criterion B*: The records reviewed for the location of the building remnant at the Edmonds School District parcel find the property is not ascribed to, or associated with, persons significant in the past, so the foundation is not recommended eligible under Criterion B.

- *Criterion C*: The foundation remnants observed in the project APE do not embody the distinctive characteristics of a type, period, or method of construction, nor do they represent

the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction. As a result, the foundation is not recommended eligible under Criterion C.

- *Criterion D*: The concrete foundation is not recommended eligible for listing in the NRHP under Criterion D. No diagnostic artifacts or features were observed associated with the foundation; furthermore, the foundation is the remnant of a building. It is unlikely that further investigation will produce materials that would greatly contribute to an understanding of the history of the education system in the area. As a result, further study would not contribute significant understanding to the history of the local, regional, or national area.
- *Integrity*: The concrete foundation retains few aspects of integrity. Only portions of the foundation are present as a result of the building having been demolished, rather than having fallen into ruin by deterioration from abandonment, which would have preserved more of its context. In addition, some research shows that the building may have caught fire. The foundation does not contain any unique features. Moreover, the setting has been altered by the overgrown vegetation adjacent to the area, as well as its apparent use as bus storage or a drop-off location by the school district. The foundation no longer reflects a setting as part of a school or related school building.

4 EFFECTS ON HISTORIC PROPERTIES (ARCHAEOLOGICAL RESOURCES)

The project survey recorded several historic-period archaeological resources that were observed on the ground surface; no unique resources were found through subsurface testing. However, many areas could not be tested because of paved or otherwise hardened surfaces, and developments and additional areas that may be affected by construction effects are outside of existing public rights-of-way and were not surveyed. It is possible that one or more archaeological sites may still exist beneath the ground surface in areas where project excavation would take place. This potential is heightened in parts of Segment C that were not affected by the construction of I-5.

The project analysis has not found archaeological resources within the APE that are listed in, or eligible for listing in, the NRHP. Project operation and construction could affect historic properties that have yet to be identified within the APE. Further study of the full APE might reveal unrecorded archaeological resources. In addition, continuing consultation with tribes and other interested or affected parties may result in the identification of TCPs within the APE. If so, assessment of effects on those historic properties would be conducted at that time.

There would be no effects on known archaeological resources with any of the project alternatives.

4.1 Long-Term Impacts

No effects on archaeological sites from operation of the proposed project are anticipated.

No Build Alternative

The No Build Alternative would not affect any known archaeological historic properties.

Light Rail Alternatives

None of the alternatives proposed within Segments A, B, and C would affect known archaeological properties, and SHPO has concurred.

4.2 Construction Impacts

No unique effects on archaeological sites from construction of the proposed project are known or anticipated based on this study. The location of many portions of the project alternatives within areas not considered sensitive for the occurrence of archaeological sites, or in high-sensitivity areas that have received previous disturbance, makes it unlikely, although not impossible, that the project would affect NRHP-eligible archaeological sites. Much of the APE has seen ground disturbance, fill, and development, particularly within the I-5 alignment of Segments A and B. In recent decades, roadway construction and residential or other urban development has disturbed much of the study area, and the overall APE has a low-to-moderate probability for intact archaeological remains.

No Build Alternative

The No Build Alternative would not affect any known archaeological historic properties.

Light Rail Alternatives

None of the alternatives proposed within Segments A, B, and C would affect known archaeological properties during project construction, and SHPO has concurred.

4.3 Cumulative Impacts

No NRHP-eligible archaeological resources have been recorded within the project APE to date. Therefore, no effects of this project in combination with other built or proposed projects would have cumulative effects on archaeological historic properties.

5 MINIMIZATION AND MITIGATION MEASURES

Although much of the project APE has seen ground disturbance, fill, and development, it is possible that one or more archaeological sites might exist beneath the ground surface in areas where project excavation would take place. Based on information gathered during the project's surveys to date, archaeological materials may be present in high probability areas that were not available for survey to date, such as under paved surfaces and/or on private property outside of the current I-5 right-of-way. In recent decades, roadway construction and residential or other urban development has disturbed much of the study area, and the overall APE has a low-to-moderate probability for intact archaeological remains. The following protocols for inadvertent discoveries of archaeological deposits will be implemented.

5.1 Inadvertent Discovery of Archaeological Resources

If potentially significant archaeological materials or sites (or evidence thereof) are discovered during the construction of the Lynnwood Link Extension, activities would be halted near the find. All reasonable measures would be taken to avoid or minimize harm to the property until such time as FTA and Sound Transit, in consultation with DAHP and the tribes, determine that appropriate measures have been taken to ensure that the project is in compliance with Section 106 of the NHPA, as outlined in 36 CFR 800 and RCW 27.53.

5.2 Inadvertent Discovery of Human Remains

Any human remains discovered during project construction would be treated with dignity and respect. If ground-disturbing activities were to encounter human skeletal remains during the course of construction, then all activity that may cause further disturbance to those remains must cease and the area of the find must be secured and protected from further disturbance. In addition, the finding of human skeletal remains must be reported to the King County or Snohomish County Medical Examiners and local law enforcement in the most expeditious manner possible. The remains should not be touched, moved, or further disturbed.

The applicable medical examiner would assume jurisdiction over the human skeletal remains, and make a determination of whether those remains are forensic or non-forensic. If the medical examiner determined the remains are non-forensic, that finding would be reported to the DAHP, which would then take jurisdiction over those remains and report them to the appropriate cemeteries and affected tribes. The State Physical Anthropologist would make a determination of whether the remains are Indian or non-Indian, and report that finding to any appropriate cemeteries and the affected tribes. The FTA and DAHP would conduct consultation with the affected parties as to the future preservation, excavation, and disposition of the remains.

Part 2: Historic Resources

6 INTRODUCTION

This part of the Cultural, Archaeological, and Historic Resources Technical Report describes the historic resources in the Lynnwood Link Extension study area and the effects that project alternatives could potentially have on historic resources. It also describes the methodology that Sound Transit used to identify and evaluate historic resources and possible measures to minimize or mitigate the potential effects. A brief history of local development is included to provide a historic context for understanding the buildings evaluated in the historic resources survey.

6.1 Summary of Findings

The historic resources survey conducted in 2012 identified five properties that are eligible for listing in the National Register of Historic Places (NRHP: the Northgate Plaza Apartments in Seattle, Seattle's Northgate Elementary School, a residence in Seattle, a residence in Shoreline, and the former Melody Hill School in Mountlake Terrace. In October 2013, subsequent to publication of the *Lynnwood Link Extension Draft Environmental Impact Statement* (Draft EIS, July 2013), one of the NRHP-eligible resources, Melody Hill Elementary School, was demolished by its owner, Edmonds School District No. 15. The four remaining properties are listed later in this report in Table 8-1 and their locations are shown on Figure 8-1 in Chapter 8, Affected Environment. None of these properties would be adversely affected by any of the light rail alternatives. The State Historic Preservation Officer (SHPO) concurred with the Federal Transit Administration's (FTA) preliminary determination of No Adverse Effect to historic properties on August 12, 2013 (Attachment D).

6.2 Area of Potential Effects for Historic Resources

The area of potential effects (APE) for historic resources includes all areas where one or more of the project alternatives could affect an NRHP-eligible historic resource. The APE was determined by the FTA in consultation with the Washington State Department of Archaeology and Historic Preservation (DAHP). The APE extends 200 feet to either side of the center of at-grade and elevated guideway light rail sections, and 200 feet from the boundaries of any station or other facility constructed as part of the Lynnwood Link Extension. The APE would also include an area 200 feet around any construction staging areas. The APE is shown on Figure 1-1 in Part 1 of this report.

7 METHODOLOGY

The methodology for this study was initially described in the *Lynnwood Link Extension Technical Methodology Report*, which described the APE; the federal, state, and local regulations regarding historic resources in the APE; and the research and field methods used to identify and evaluate these resources (Sound Transit 2012). Chapter 2 of the methodology report describes the research and field methods used to identify and evaluate historic built environment properties for the Lynnwood Link Extension. The objective of the investigations was to identify previously recorded historic properties located in the APE, assess the significance of resources in the APE, and identify additional historic properties in the APE through an intensive-level field survey. This chapter describes where and how the information was gathered and how it informs the results of the archival research and field survey.

7.1 Historic Resources Survey

The first step in identifying historically significant properties was to review lists of resources that have already been listed in a national, state, or local register. This review was supplemented by information from the Shoreline Historical Society, local history books, and archival records. To identify properties that are potentially eligible for listing, Sound Transit conducted a historic resources field survey. Every property within the APE that was built in or before 1970 was surveyed at an intensive level. While the standard NRHP age threshold is 50 years, Sound Transit used 1970 as the threshold year based on a conservative estimate of 2020 as the start of construction. More than 600 properties were surveyed.

For each surveyed property, a Historic Property Inventory (HPI) form was prepared and entered into DAHP's database. The forms contain a photograph; information on the property's location, characteristics, history, and significance; and a recommendation regarding NRHP eligibility. County tax assessor records and photographs, construction records, and other archival information were used to assess the historical integrity and significance of the properties. All the properties surveyed are listed in Attachment E to this report. The inventory form for each property is available electronically in DAHP's WISAARD database (available at http://www.dahp.wa.gov).

7.2 Identification of Historic Properties (Built Environment)

Section 106 of the National Historic Preservation Act (NHPA) requires the identification of all historic properties listed or eligible for listing in the NRHP that are located in the APE. Historians completed the identification of historic properties by evaluating properties within the APE in accordance with NRHP evaluation criteria and made recommendations for eligibility for listing in the NRHP on each property surveyed. The FTA then made determinations of eligibility and submitted the determinations to DAHP for concurrence. The DAHP concurred on the eligibility findings of all properties within the APE. The correspondence in Attachment D documents this concurrence.

7.3 Determination of Adverse Effects on Historic Properties

Section 106 of the NHPA and the implementing regulations require federal agencies to take into account the effects that a proposed undertaking may have on historic properties in the APE. This analysis includes applying the criteria of adverse effect as outlined in 36 Code of Federal Regulations (CFR) 800.5.

The first step in this effects analysis was to determine if any of the alternatives would have any effect on a property, either while in operation (permanently) or during construction (temporarily). In accordance with 36 CFR 800.5(a)(1), an adverse effect is found when an undertaking alters, directly or indirectly, any of the characteristics of a historic property that qualify the property for listing in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Direct effects are generally defined as the physical destruction or modification of all or part of a resource. Indirect effects vary but are typically characterized as the introduction of audible, visual, and atmospheric elements that alter the qualities that make a property eligible for listing in the NRHP. Indirect effects, in the context of historic properties, are primarily defined as effects that are not caused by a physical impact on the property.

Adverse effects may also include reasonably foreseeable effects caused by the undertaking that may occur later in time or be farther removed in distance, or may be cumulative.

Potential adverse effects on cultural resources include, but are not limited to, the following (36 CFR 800.5):

- Physical destruction of or damage to all or part of the property
- Alteration of a property (including restoration, rehabilitation, or repair that is not consistent with the Secretary of the Interior's standards for the treatment of historic properties)
- Removal of the property from its historic location
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features

Sound Transit reviewed the project alternatives to determine if aspects of the Lynnwood Link Extension would affect historic properties through construction or operation.

Direct Effects

To determine the direct effects on historic resources, the following information was used:

- The location of project elements and their proximity to historic properties
- Potential partial or complete acquisition of historic properties
- Construction methods and location
- Potential for vibration (short or long term) that could damage historic properties

The extent to which these effects may alter the integrity of the historic properties was analyzed based on experience with previous similar projects and activities, including analyses completed for other environmental impact statements. If the project could diminish the integrity of the historic properties, then it is considered to have an adverse effect.

Indirect Effects

For indirect effects, Sound Transit identified and analyzed qualitatively any broader changes (such as changes in land use) that the proposed project could cause, based primarily on the effects seen from previous similar light rail projects. This analysis could include activities related to the project but not directly part of the project or known at the time of the analysis. Examples include transit-oriented development projects; mitigation or permit compliance activities needed to respond to other kinds of environmental impacts or permitting requirements, such as for stormwater management; or complementary activities that might be taken by others, such as street or trail improvement projects to enhance connections or access to the light rail project. Analyses of potential effects for other relevant elements of the environment are discussed in the Final EIS sections on Land Use, Visual and Aesthetic Resources, and Noise and Vibration.

Cumulative Effects

Cumulative effects are effects that result from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions. The cumulative effects analysis focuses on the combined effects of the light rail alternatives with other projects that are anticipated to add to the effects on historic resources in the study area.

8 AFFECTED ENVIRONMENT

Northwest King County and the adjoining portion of Snohomish County have become intensively suburbanized since World War II. By 1910, settlers had established communities on Puget Sound and Lake Washington, with small groups of houses and farm plots covering the area in between. This scattered settlement pattern made the land very suitable for the large-scale subdivisions that were built in the 1940s to 1960s to meet the pent-up demand for single-family residences. The area has continued to grow into the 21st century, primarily with single-family residential areas with large-scale multifamily and commercial uses at each end.

8.1 Historic Context

Northwest King County

Early Settlement

At the beginning of the 20th century, when Seattle was already a bustling city, north King County remained heavily forested and sparsely populated. Although homesteaders filed scattered claims in the 1860s and 1870s, by the latter part of the 19th century the Puget Mill Company had acquired much of the area. The company logged the land over the subsequent decades, selling the cleared property for agricultural uses and residential plats (Bender 1989: 13). Small farm plots, dairies, and chicken farms were common, interspersed with scattered housing.

Early transportation was limited to travel by water or on horseback over rough trails. The first road north from Seattle was the Military-Telegraph Road, which had two branches through northern King County. One went directly north to what is now Mountlake Terrace in Snohomish County. The other went eastward around the north end of Lake Washington, past Bothell. It was scarcely a road, but rather a rough trail with telegraph lines strung from the trees (Bender 1989: 160).

The first rail service, limited in scope, was the Seattle, Lake Shore, and Eastern Railway that began service in 1888. This railway ran from Lake Union around the north end of Lake Washington and south to Issaquah. Its primary purpose was to carry logs and coal to Seattle for shipment. Passenger service was a secondary consideration, and the railway line seems to have had relatively little influence on surrounding development. Bothell was a significant port at the north end of Lake Washington because steamboats carried passengers and farm goods from eastern King County down the Sammamish River to the lake. The opening of the Ballard Locks in 1916 lowered the water level so that the river was no longer navigable, ending its function as a port.

On the east side of the project study area, near Lake Washington, the major settlement was Lake Forest Park, which was platted in 1909 and promoted heavily by its developers. The wagon road was graded by that time and was later paved farther north to Bothell and eventually to Everett. By the early 1920s this road (called Bothell Way or Victory Way and later, Lake City Way) became the major route to Everett and Snohomish County. Because of its importance to regional transportation,

it was designated as Primary State Highway 2 in 1951 and later as Secondary State Highway No. 1-J in 1961. It is now designated as State Route (SR) 522 (Wilma 2008).

The Seattle-Everett Interurban Railway

The area's earliest waterfront settlement was Richmond Beach, which was established in 1889 and served by Puget Sound steamers and, after 1890, by the Northern Pacific Railroad. However, the area's major transportation facility during this period was the Seattle-Everett interurban railway. The line was completed from Ballard to Hall's Lake-Richmond Highlands in 1907. The alignment ran just west of Fremont Avenue North up to North 85th Street, where it turned slightly west to run along Evanston Avenue North. At North 100th Street, it turned east in a sweeping curve to 103rd Street, and continued north along the western border of Evergreen Cemetery. In 1908, the line was acquired by Stone & Webster, owner of the Seattle Electric Company, which ran the streetcars within the city. The company extended service to Everett and laid tracks into downtown Seattle using a route down Greenwood Avenue and Phinney Avenue, through Fremont, and on to downtown along Westlake Avenue North and 5th Avenue. In 1910, through-service between Everett and downtown Seattle began, with a train every hour from 6 am to 8 pm (Wing 1988).

Completion of the interurban rail line encouraged growth, including for small farms that took advantage of the convenient transport of produce and eggs to markets. The line enabled people to buy homes away from the city yet get to downtown easily for work or shopping. Groups of houses and small commercial buildings clustered near the stops. Some early plats, such as Echo Lake Garden Tracts (1905), Murphy's Interurban Acres (1908), and Green Lake Five-Acre Tracts (1904), offered large lots particularly suitable for farm plots.

The Seattle Municipal Railway was used in conjunction with the interurban railway to provide service to metropolitan Seattle and to help defray the maintenance costs to city lines (Bird 2000). Ridership declined with the use of automobiles and buses for more flexible routes (Bird 2000; Long 2006). By 1936, the Seattle Municipal Railway converted from streetcars to electric buses, which increased maintenance costs for the Interurban.

With the increased costs and the general economic effects of the Great Depression, the interurban service was abandoned on February 20, 1939. The right-of-way was retained and converted to a power line corridor by Puget Power, with segments passed to Seattle City Light and Snohomish County Public Utility District No. 1. In the mid-1990s, Snohomish County and the Cities of Everett and Lynnwood opened the Interurban Trail, a pedestrian and bicycle trail, along 11.8 miles of the original railway alignment (Bird 2000). The City of Shoreline completed its section of the Interurban Trail by 2008.

Early Highway Development

The interurban railway era was relatively short. Completion of the Aurora Bridge in 1932 gave buses a considerable speed advantage over the trains. In 1936, the Seattle Municipal Railway began converting its streetcars to trolley buses, which did not run on rails and were more maneuverable in traffic. After train service on the interurban rail line ended in February 1939, Seattle City Light

acquired the right-of-way within King County. This right-of-way is now used partially as a transmission corridor and, in Shoreline, as the Interurban Trail. The right-of-way in Snohomish County has also been improved to form the Interurban Trail.

Aurora Avenue, in the same vicinity as the interurban line, began as a rough wagon road through the forest. In 1912, the route (then known as the Grand Trunk Road) was completed from Seattle to the Snohomish County line. In its early years, some observers considered the road pointless because of the low density of development. The establishment in 1911 of Firlands Sanatorium for tuberculosis patients at Fremont Avenue North and North 193rd Street provided an important destination, and an improved road was needed for staff and visitors. In 1927, the road was extended to Everett, thus making a more direct route to Everett than the old Bothell-Everett Highway (SR 522).

In the 1920s and 1930s, Aurora Avenue was part of a national phenomenon of highway building to accommodate the growing popularity of the automobile. It was one segment of the Pacific Highway, which was intended to stretch from Canada to Mexico. The most important improvement was the construction of the "speedway" section, which ran without intersections or traffic signals from Green Lake past the east side of Queen Anne Hill and on a high bridge over the Lake Washington Ship Canal. This section of highway opened in 1932 and offered a quick, direct automobile route from north Seattle to downtown Seattle. By this time, the state had identified this road as Pacific Highway 1; later, until 1969, it had a federal designation of U.S. Highway 99.

Suburban Growth

There was little development in northwest King County during World War II, even though Puget Sound was a national leader in defense production and troop support. The scarcity of building materials limited construction to projects related to the war effort. Some residential construction took place in northeast Seattle, near Sand Point Naval Air Station. However, most wartime residential construction was closer to defense plants in south Seattle. Gasoline rationing limited long commutes.

However, the post-war years ushered in tremendous residential growth throughout north Seattle. The prolonged period of limited construction during the Great Depression and World War II years (1930–1945) resulted in pent-up demand for family housing. Liberal federal loan programs encouraged development, and the large amount of available land in north King County brought construction on a scale never before seen in the Puget Sound region. Major subdivisions such as Ridgecrest (272 lots) included homes built by the block in the 1945–1950 period. These were typically minimal one-story homes with two or three bedrooms and a single garage (usually attached), located on small lots. Few of the vernacular or Craftsman houses from the pre-war, farming era were left standing.

In 1953, residents of north Seattle approved annexation by the City of Seattle. Voters were attracted by the City's larger tax base, which would increase its ability to accommodate rapid growth and needed infrastructure improvements with lower taxes and utility fees. In January 1954, the entire area from Puget Sound eastward to Lake Washington up to NE 145th Street became part of Seattle

(Phelps 1978: 221–223). The area between NE 145th Street and the county line at North 205th Street, known as Shoreline, remained unincorporated until 1995.

As prosperity increased in the 1950s to 1960s, the typical house in the area became larger, usually split-level or single-level ranch houses with an attached single- or double-car garage. Homes were often sited on larger lots on cul-de-sacs, sometimes set among second-growth trees to provide a more rural atmosphere.

One of the first major events of the early post-war era was the 1947 announcement of a new shopping center to serve this bourgeoning population. The location was between the two existing major highways, SR 99 (Aurora Avenue North) and the Bothell-Everett Highway (SR 522) and close to the planned Seattle Freeway corridor (the future Interstate 5 [I-5]), making it ideal for shoppers in automobiles. The new development was hailed as "America's First Regional Shopping Center: Northgate Shopping City" when it opened in 1950. It initially occupied 50 acres, with a $3 million Bon Marche as its anchor store and 77 specialty shops arranged around an open-air pedestrian mall. Nearby were a movie theater, a hospital with medical and dental offices, and large parking lots. After I-5 was completed, the center was expanded to 125 acres. In keeping with modern mall design, the shopping center was remodeled into a covered mall in December 1974. Over the next decades, the surrounding area attracted large numbers of additional stores and multifamily housing.

In 1970, North Seattle Community College opened just west of Northgate Mall and I-5. The 66-acre site was a swampy area that had originally been part of an 85-acre cranberry bog; fill dirt was obtained from the adjacent freeway construction. The campus opened in 1970 with five buildings; by 1972, it had an enrollment of 5,000 people.

The major change in the post-war years was the construction of the I-5 freeway. The state legislature authorized development of limited-access highways in 1947, envisioning that there would be a toll road between Everett and Tacoma. When the Federal Highway Act of 1956 made federal funds available, this route was the state's highest transportation priority, and toll revenue was no longer needed. The freeway between Everett and Seattle opened in February 1965. The property acquisition process began in April 1957, with construction beginning in 1958 (Washington State Highway Commission 1962). The freeway alignment was located roughly equidistant between Puget Sound and Lake Washington, at some distance from the other north-south routes. Much of the land was vacant, used for small farms, or was wetlands. Some of the homes were moved to other nearby sites to escape demolition.

The opening of I-5 encouraged further development because people could easily commute longer distances to jobs in downtown Seattle. Commercial growth also occurred. The Northgate Mall expanded, with numerous retail businesses in the surrounding area. Because of the freeway and transit access, Northgate also became a job center, with several large office buildings. Multifamily development, which had started just after World War II, increased as residents sought affordable housing with easy transportation access.

Southwest Snohomish County

Early Settlement

The first major settlement in southwest Snohomish County was Edmonds, which was settled by George Brackett in 1876. By 1890, enough people had arrived to allow the settlement to be incorporated as a town, with Brackett as mayor. The town thrived with the coming of the Great Northern Railway in 1890 and as a major stop for the Mosquito Fleet steamers that connected settlements throughout Puget Sound. In 1923, Edmonds secured a more permanent position in maritime transportation as the terminus of the ferry between Snohomish County and the Kitsap Peninsula. Several shingle and sawmills provided employment through the Great Depression (LeWarne 2008). Like north King County, Edmonds saw significant population growth after World War II. Aurora Avenue (SR 99) was located toward the eastern edge of the city and its presence encouraged development away from central Edmonds, leading to the development of subdivisions and commercial centers farther east.

Lynnwood

Lynnwood, which is located east of Edmonds, benefited from the development impetus of both SR 99 and I-5. It was settled in 1889 by several homesteaders who found the heavily wooded land was not particularly good for agriculture. The Puget Mill Company, a subsidiary of Pope & Talbot from San Francisco, acquired 6,000 acres for logging. In 1917, rather than selling the property to developers, the company divided the logged-off land into 5- and 10-acre "ranchettes" suitable for small farms and sold them for $200 an acre. The company named the new community Alderwood Manor. To promote sales, they sponsored a 30-acre demonstration farm to teach city dwellers how to raise crops and chickens, with all the supplies sold by Puget Mill. The interurban rail line was completed through the area in 1910 with seven stops that provided convenient access. By 1922, the Lynnwood area population had risen to nearly 1,500, along with 200,000 hens. The egg market dropped during the Great Depression, and most farmers had to diversify. Following World War II, Alderwood Manor experienced the residential growth seen throughout the Puget Sound region, and it incorporated as the City of Lynnwood in 1959. The completion of I-5 through the heart of the city in the 1960s led to the development of Alderwood Mall in 1979 (Wilma 2007).

Mountlake Terrace

Mountlake Terrace was developed by Albert LaPierre and Jack Peterson, who bought an abandoned airstrip in 1949 to build a new subdivision. The first development consisted of small (640-square-foot) cinder-block houses that sold for $4,999 to returning soldiers. Peterson, a bricklayer, used an efficient construction model, with one crew laying foundations, a second crew erecting concrete-block exterior walls, and a third crew installing the roof and interior walls. LaPierre and Peterson had previously built the Ridgecrest Homes subdivision in Shoreline, but they moved to Snohomish County because land prices were lower (Tate 2008). Mountlake Terrace continued to grow, with the construction of more than 2,300 homes announced in 1951 (Cloud 1983: 222). It incorporated as a

city in 1954. The completion of I-5 in the 1960s encouraged further automobile-oriented commercial and residential development.

Recent Development

In the past two decades, the commercial area around Alderwood Mall has expanded with substantial retail and office buildings as well as large multifamily complexes. The opening of a major Boeing plant in Everett in 1968 provided a major job center north of Seattle, which resulted in an increased demand for housing in Snohomish County. The construction of subdivisions has continued. However, as the population and the cost of land have increased, a larger percentage of residential development has been in multifamily complexes, both condominiums and apartments.

8.2 Historic Properties (Built Environment) in the Area of Potential Effect

Only one historic property was previously identified within the APE: a house at 727 NE 189th Street, which was identified in King County's Historic Resources Survey of Shoreline (Copass 1996) as meeting King County's and Shoreline's criteria for landmark designation. This house has been determined to not have sufficient integrity to be eligible for NRHP listing. The DAHP correspondence in Attachment D documents their concurrence with this finding and with the findings for the properties in Table 8-1. The project would not affect this property.

Historic Resources Survey Results

The historic resources survey evaluated more than 650 properties. Four of these, as listed below in Table 8-1, shown on Figure 8-1, and described in the subsequent text, were determined to be eligible for the NRHP and SHPO concurred (Attachment D).

Table 8-1. NRHP-Eligible Resources within the Area of Potential Effect [1]

Number	Address	Description	Construction Date	Historic Status Eligibility
1074	11207 1st Avenue NE, Seattle	Northgate Plaza Apartments	1951	Eligible for NRHP Criterion C
1033	11725 1st Avenue NE, Seattle	Northgate Elementary School	1956	Eligible for NRHP Criterion C
912	13130 5th Avenue NE, Seattle	Parsonage	1928	Eligible for NRHP Criterion C
819	132 NE 155th Street, Shoreline	Log house	1920	Eligible for NRHP Criterion C

[1] As described in Section 6.1, the former Melody Hill School was demolished in October 2013 by its owner, Edmonds School District No. 15. It is no longer included in this analysis.

Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_LandUse\LL_FEIS_Lynnwood_HistoricListings.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Roadway
- Local Street
- City Boundary
- County Boundary
- Park
- Waterbody
- Area of Potential Effect

Figure 8-1
Map of Historic Properties

Lynnwood Link Extension

The four NRHP-eligible properties represent two of the area's developmental periods. Both residences date from the early 20th century, when north King County was lightly settled with scattered houses, individually and in small groups. The other properties are a large apartment complex and a school dating from the mid-20th century—a period of intensive development. All four properties are eligible for the NRHP under Criterion C as embodying "the distinctive characteristics of a type, period, or method of construction."

In addition to being NRHP-eligible, these properties are also eligible for listing in the Washington Heritage Register and for landmark designation in the Cities of Seattle and Shoreline. Mountlake Terrace does not have a local historic preservation program. The historic resources survey preliminarily identified one other property that appears likely to meet the Seattle landmark designation standards: the Seattle Latvian Evangelical Lutheran Church (11710 3rd Avenue NE, Seattle). The property, built in 1971, does not meet the 50-year age threshold for the NRHP, but does meet Seattle's 25-year age threshold for eligibility. Only the Seattle Landmarks Preservation Board can determine if the property is eligible for designation. No other properties in the survey appear likely to meet local landmark criteria.

Sound Transit consulted with the Cities of Seattle, Shoreline, and Lynnwood regarding resources that may meet the criteria for designation under local historic preservation ordinances. The City of Seattle agreed with the assessment of potential eligibility for the Church Parsonage, Northgate Elementary School, Northgate Apartments, and the Seattle Latvian Evangelical Lutheran Church.

The City of Shoreline reviewed the list of historic resources and concurred that only one property in the APE is in the Shoreline Historic Property Inventory, the house at 727 NE 189th Street, which would not be affected by the project because of its distance from the light rail guideway. The City of Shoreline updated its Historic Resources Inventory in 2013. The NRHP-eligible Log House at 132 NE 155th Street was added to the inventory, but no additional buildings within the APE were added.

The City of Lynnwood noted two buildings that have been altered and lack integrity but have some historical importance to the City. The Cedar Valley Grange played an important role in the history of Lynnwood, serving as a community fixture. None of the project alternatives would remove this structure, and light rail located across 52nd Avenue West would not affect it. The City also noted that Hall's Lake is important to local history as the location of one of the area's first sawmills and an early church camp. None of the project alternatives would remove structures adjacent to Hall's Lake. The guideway would be located near the adjacent freeway and would not affect the lake. The City also noted the Interurban Trail, which has been built on the former Interurban line right-of-way. The importance of the Interurban is discussed in this report, but no visible evidence of the rail line remains.

Northgate Plaza Apartments is a garden apartment complex with 207 units in 34 buildings (see Figure 8-2). The complex was designed in 1950–51 by John Graham, Jr., the architect of nearby Northgate Mall, to help address the critical need for housing after World War II. jill

Figure 8-2
Northgate Plaza Apartments,
11207 1st Avenue NE, Seattle

Northgate Elementary School was built in 1956 to accommodate post-war population growth in North Seattle (see Figure 8-3). It was designed by Paul Thiry, one of Seattle's premier Modernist architects.

Figure 8-3
Northgate Elementary School,
11725 1st Avenue NE, Seattle

The large residence shown in Figure 8-4, currently used as a parsonage by the North Seattle Church of the Nazarene, is a very good example of the Georgian Revival style, exhibiting an Italian Renaissance influence and an extensive use of terra cotta ornament.

Figure 8-4
Parsonage, 13130 5th Avenue NE, Seattle

The house shown in Figure 8-5 is not only one of the oldest buildings in the vicinity but is an example of a log house, which is very unusual in north King County.

Figure 8-5
Log house, 132 NE 155th Street, Shoreline

9 EFFECTS ON HISTORIC PROPERTIES (BUILT ENVIRONMENT)

None of the light rail alternatives would adversely affect any of the historic properties within the APE; SHPO has concurred with this finding.

9.1 Long-Term Impacts

Long-term effects are those effects considered permanent, including impacts that would occur or continue to occur while the proposed project is in operation. The effect would be adverse if it diminishes a historic property's (NRHP-eligible) integrity of location, design, setting, materials, workmanship, feeling, or association, and thus alters any of the characteristics that qualify the property for inclusion in the NRHP.

None of the light rail alternatives would have permanent effects on any of the historic properties within the APE.

No Build Alternative

The No Build Alternative would have no effect on historic properties because it would involve no construction.

Light Rail Alternatives

Segment A: Seattle to Shoreline

Neither the Preferred Alternative nor the other Segment A alternatives would affect historic properties during operation of the Lynnwood Link Extension. All of the historic properties located within Segment A are far enough from the transportation facility so that vicinity impacts, such as noise, vibration, or visual effects, would be extremely minor. The introduction of the new transportation facility would not alter or diminish the buildings' integrity of setting because the guideway would be constructed adjacent to I-5. None of the Segment A alternatives would alter or diminish the historic properties' remaining aspects of integrity: location, design, workmanship, feeling, or association.

The **Northgate Plaza Apartments** are located across the street from the potential Lynnwood Link Extension alignment; all of the Segment A alternatives would involve light rail guideway construction between the 1st Avenue NE and I-5, west of the Northgate Plaza Apartments. This would cause a minor alteration of the apartments' integrity of setting, but because the new guideway would be adjacent to I-5, the effect would not be adverse. There would be no other long-term alteration of the apartments' integrity of location, design, materials, workmanship, feeling, or association.

Northgate Elementary School is located west of I-5 and adjacent to the 117th Street overpass, which would be rebuilt under Alternative A1. However, there would be no effect on the historic property because the overpass is being replaced, not newly located to the site. There would be no other long-term alteration to the building's integrity of location, design, setting, materials, workmanship, feeling, or association. Other Segment A alternatives, including the Preferred Alternative, would be west of I-5 and not affect this resource.

The **Parsonage** is located east of 5th Avenue NE, where all Segment A alternatives would include a guideway west of the Parsonage. Alternatives A5, A7, A10, and A11 would include a station at NE 130th Street; the Preferred Alternative also includes an option for a station at this location Any of these would cause a minor alteration to the Parsonage's integrity of setting and feeling, but because the new guideway and station would be adjacent to I-5, these effects are not considered adverse. No other aspect of integrity (location, design, materials, workmanship, or association) would be altered as a result of the station operation. No other Segment A alternative would affect this resource.

The **Log House** is located across the street from the proposed parking facility that would be constructed under Alternatives A5 and A7. The parking facility would be across NE 155th Street and on the far side of the fire station next to I-5, causing a minor alteration of the building's integrity of setting and feeling. These effects are not considered adverse. No other aspect of integrity (location, design, materials, workmanship, or association) would be altered as a result of light rail operation. All of the Segment A alternatives would include a guideway west of the Log House adjacent to I-5.

The Lynnwood Link Extension could affect property owned by the **Seattle Latvian Evangelical Lutheran Church**, which is not NRHP-eligible, but may meet Seattle Landmarks eligibility criteria. The Preferred Alternative and Alternatives A1, A5, and A10 would displace the residence (caretaker's house) on the property, which has been determined not to be NRHP-eligible. None of the alternatives would result in loss of access or displacement of the church.

If the Seattle Landmarks Preservation Board were to designate the property as a Seattle Landmark, Sound Transit would seek a Certificate of Approval from the Board, if required, to undertake the necessary work on the site and would comply with the Board's requirements.

Segment B: Shoreline to Mountlake Terrace

None of the Segment B alternatives would affect historic properties because there are no historic properties within this segment of the APE. The house at 727 NE 189th Street is not NRHP-eligible but is on the City of Shoreline's Historic Property Inventory; the Lynnwood Link Extension would also not affect this property. It is located about one block east of the guideway, which would run along the east side of I-5.

Segment C: Mountlake Terrace to Lynnwood

None of the Segment C alternatives would affect historic properties because there are no historic properties within this segment of the APE.

During consultation, the City of Lynnwood noted two properties that have been altered and lack integrity, but continue to have some historical importance to the City. The Cedar Valley Grange played an important role in Lynnwood's development, becoming a community fixture. None of the project alternatives would alter or remove this structure and light rail located across 52nd Avenue West would not affect it. The City also noted that Hall's Lake is important to local history as the location of one of the area's first sawmills (no longer extant) and an early church camp. None of the project alternatives would remove structures near the lake. The guideway would be located adjacent to the freeway and would not affect the lake. The City also noted that the Interurban Trail has been built on the former Interurban rail line right-of-way. The Interurban is discussed above in section 3.3, but no visible evidence of the rail line remains.

9.2 Construction Impacts

Construction effects are those effects that would be temporary and occur only during project construction, such as noise, dust, or reduced access. While these may disturb occupants, they would be an adverse effect only if they diminished the qualities that make the property eligible for NRHP listing—integrity of location, design, setting, materials, workmanship, feeling, or association. An example would be vibration during construction that would cause substantial damage to the property.

In order to reduce construction-related effects, such as fugitive dust, noise, vibration, and other impacts, Sound Transit will implement standard BMPs throughout the entire Lynnwood Link Extension construction period. Construction noise and vibration impacts can be reduced with operational methods and scheduling, equipment choice, and acoustical treatments. Noise and vibration control will meet local regulatory requirements, ordinances, and permit or variance conditions.[2]

Potential construction-related effects on historic built environment properties are described below.

Segment A: Seattle to Shoreline

The **Northgate Plaza Apartments** are located across the street from the potential alignment. All of the Segment A alternatives would involve light rail guideway construction between the Northgate Plaza Apartments and I-5, which would have temporary minor effects, including noise, changed visual quality, and reduced access. These effects may temporarily alter the integrity of setting, but they would not permanently diminish any of the seven aspects of integrity; therefore, these effects are not considered adverse.

Northgate Elementary School would experience temporary, minor proximity effects from Alternative A1 during the rebuilding of the NE 117th Street overpass. These effects may include noise and visual intrusions. Integrity of setting may potentially be temporarily altered, but not

[2] For specific noise and vibration control measures during construction, please see Section 4.7, Noise and Vibration, of the Final EIS. For information on air quality, see Section 4.6, Air Quality and Greenhouse Gases.

diminished. These alternatives do not have the potential to alter or diminish the building's integrity of location, design, materials, workmanship, feeling, or association; therefore, the effects are not considered adverse.

The **Parsonage** would experience temporary, minor proximity effects from Alternatives A5, A7, A10, and A11 during construction of the NE 130th Street Station. Construction impacts, such as noise, vibration, reduced access, or visual intrusions, could temporarily alter the integrity of setting and feeling of this historic resource. However, setting and feeling would not be permanently diminished; therefore, these effects are not considered adverse. No other aspect of integrity (location, design, materials, workmanship, or association) would be altered.

The **Log House** would experience temporary, minor proximity effects from Alternatives A5 and A7 during construction of a parking facility across the street. Construction impacts, such as noise, vibration, reduced access, or visual intrusions, could temporarily alter the integrity of setting and feeling of this historic resource. However, setting and feeling would not be permanently diminished, and these effects are not considered adverse. No other aspect of integrity (location, design, materials, workmanship, or association) would be altered. No other Segment A alternative would affect this resource.

The **Seattle Latvian Evangelical Lutheran Church,** which is not NRHP-eligible but may meet Seattle Landmarks eligibility criteria, could have short-term restricted access during construction for all alternatives. Other construction impacts, such as construction traffic, visual changes and intrusions, noise and vibration, would also occur but would be temporary and minor.

Segment B: Shoreline to Mountlake Terrace

None of the Segment B alternatives would affect historic properties during construction because no historic properties are located within or adjacent to the proposed construction area.

Segment C: Mountlake Terrace to Lynnwood

None of the Segment C alternatives, including the Preferred Alternative, would affect historic properties during construction because no historic properties are located within or adjacent to the proposed construction area. None of the Segment C alternatives would affect landmarks or locally significant resources in Lynnwood.

9.3 Indirect Effects

Indirect or secondary effects would be limited because there are so few historic properties in the Lynnwood Link Extension corridor.

9.4 Cumulative Impacts

Cumulative impacts would be limited because few historic properties exist in the project corridor. Moreover, few pending projects have been identified that involve construction or other activities that would affect historic resources in the area.

10 MINIMIZATION AND MITIGATION MEASURES

Section 106 of the NHPA stipulates that the agency official, in consultation with the SHPO and other consulting parties, must "develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties (36 CFR 800.6(a))." Where adverse effects cannot be avoided or minimized, they would be resolved through mitigation measures and memorialized in a Memorandum of Agreement (MOA), pursuant to 36 CFR 800.14(b).

10.1 Minimization

The proposed Lynnwood Link Extension alternatives would avoid and minimize effects on historic properties. None of the alternatives would involve demolition or direct alteration of an NRHP-eligible property.

10.2 Mitigation

Because there would be no adverse effects on NRHP-eligible historic properties, no MOA is anticipated for the Lynnwood Link Extension.

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ATTACHMENT A

Maps of Pedestrian Survey and Subsurface Investigation Areas

MAPS OF PEDESTRIAN SURVEY AND SUBSURFACE INVESTIGATION AREAS

13-2
13-1
HRA Survey Results
Shovel Probe- Negative
Survey Transects
Lynnwoood Link Preferred Alts Options
200ft Options APE Buffer
HRA Project
Survey Results Map
Date: 5/20/2014
Historical Research Associates, Inc.
Coord./Project.
NAD 1983 UTM Zone 10N Transverse Mercator
Datum
NAD83
Township/Range/Section
T27N-R04E
Quadrangle
EDMONDS EAST
Scale
1:10,000
Source Info
Service Layer Credits: Source: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community
0 115 230 460 Meters
0 325 650 1,300 Feet
Historical Research Associates, Inc., Seattle, WA
Page 2 of 9

HRA Survey Results
Shovel Probe- Negative
Survey Transects
Lynnwoood Link Preferred Alts Options
200ft Options APE Buffer
HRA Project
Survey Results Map
Date: 5/20/2014
Historical Research Associates, Inc.
Coord./Project.
NAD 1983 UTM Zone 10N Transverse Mercator
Datum
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Service Layer Credits: Source: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community
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Historical Research Associates, Inc., Seattle, WA
Page 3 of 9

HRA Survey Results
Shovel Probe- Negative
Survey Transects
Lynnwoood Link Preferred Alts Options
200ft Options APE Buffer
HRA Project
Survey Results Map
Date: 5/20/2014
Historical Research Associates, Inc.
Coord./Project.
NAD 1983 UTM Zone 10N Transverse Mercator
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Service Layer Credits: Source: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community
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Historical Research Associates, Inc., Seattle, WA
Page 4 of 9

12-1
HRA Survey Results
Shovel Probe- Negative
Survey Transects
Lynnwoood Link Preferred Alts Options
200ft Options APE Buffer
HRA Project
Survey Results Map
Date: 5/20/2014
Historical Research Associates, Inc.
Coord./Project.
NAD 1983 UTM Zone 10N Transverse Mercator
Datum
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Historical Research Associates, Inc., Seattle, WA
Page 5 of 9

11-5
11-4
11-3
11-2
11-1
3-4
3-5
3-6
HRA Survey Results
Shovel Probe- Negative
Survey Transects
Lynnwoood Link Preferred Alts Options
200ft Options APE Buffer
HRA Project
Survey Results Map
Date: 5/20/2014
Historical Research Associates, Inc.
Coord./Project.
NAD 1983 UTM Zone 10N Transverse Mercator
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Historical Research Associates, Inc., Seattle, WA
Page 6 of 9

3-6
3-7
3-8
3-9
3-10
3-11
3-1
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HRA Survey Results
Shovel Probe- Negative
Survey Transects
Lynnwoood Link Preferred Alts Options
200ft Options APE Buffer
HRA Project
Survey Results Map
Date: 5/20/2014
Historical Research Associates, Inc.
Coord./Project.
NAD 1983 UTM Zone 10N Transverse Mercator
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SEATTLE NORTH
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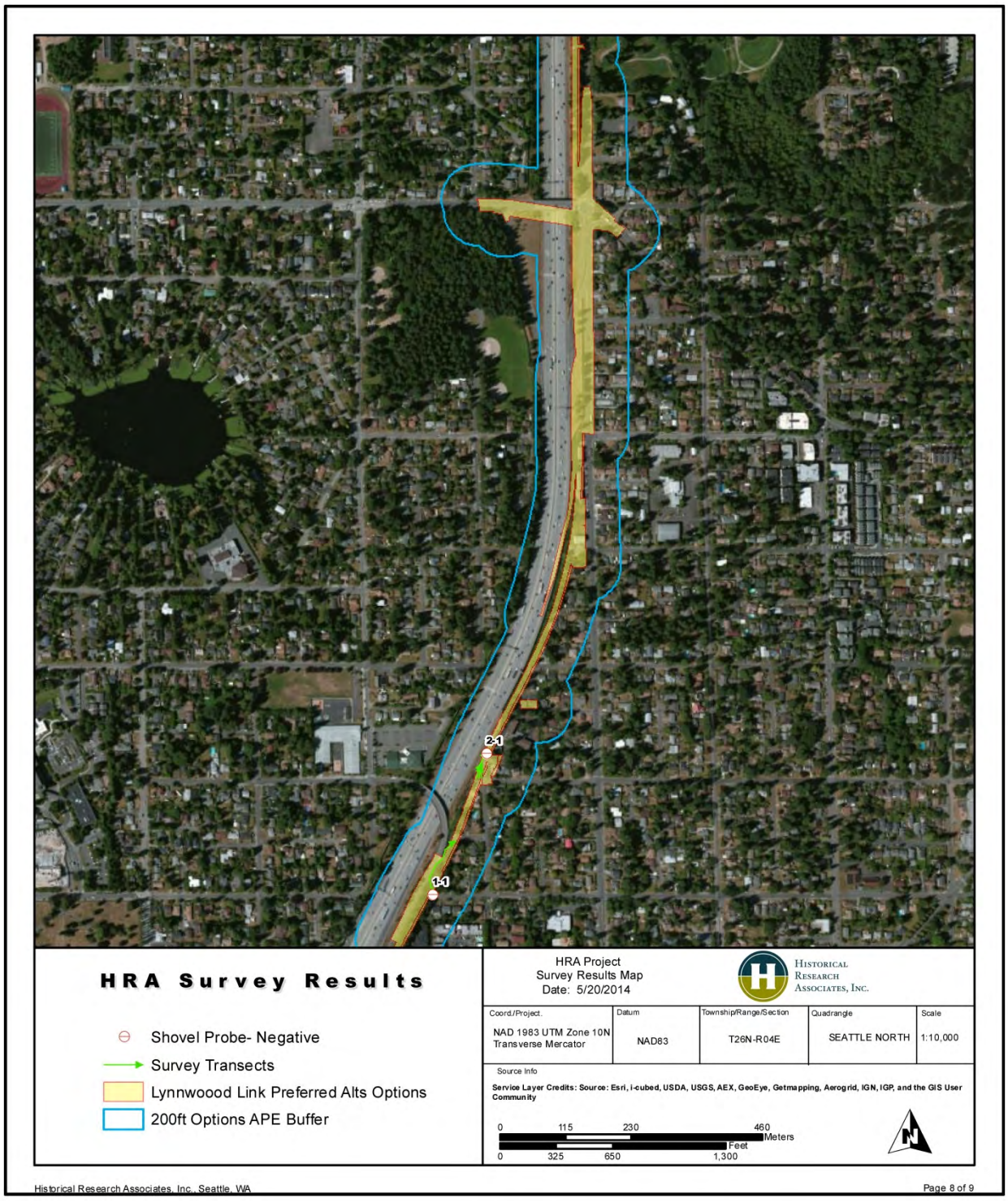
Historical Research Associates, Inc., Seattle, WA
Page 7 of 9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HRA Survey Results
Shovel Probe- Negative
Survey Transects
Lynnwoood Link Preferred Alts Options
200ft Options APE Buffer
HRA Project
Survey Results Map
Date: 5/20/2014
Historical Research Associates, Inc.
Coord./Project.
NAD 1983 UTM Zone 10N Transverse Mercator
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Historical Research Associates, Inc., Seattle, WA
Page 8 of 9

2-1
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HRA Survey Results
Shovel Probe- Negative
Survey Transects
Lynnwoood Link Preferred Alts Options
200ft Options APE Buffer
HRA Project
Survey Results Map
Date: 5/20/2014
Historical Research Associates, Inc.
Coord./Project
NAD 1983 UTM Zone 10N Transverse Mercator
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Township/Range/Section
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SEATTLE NORTH
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Source Info
Service Layer Credits: Source: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community
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Historical Research Associates, Inc., Seattle, WA
Page 9 of 9

ATTACHMENT B

Shovel/Auger Probe Table

SHOVEL/AUGER PROBE TABLE

Table B-1. Results of Shovel Test Probes in the APE

Shovel Probe Number	Survey Area	Maximum Depth Below Surface	Description	Cultural Materials Identified
1-1	1	132 cm Augered 94 cm+	0–94 cm: Medium-brown very compact silty sand with 30% rounded to subangular gravel and cobbles to 15 cm diameter 94–132 cm: Light-brown very compact sand, no gravel	Broken bottle glass in top 20 cm (modern)
2-1	2	137 cm	0–28 cm: Light-gray to brown loose sand, 30% gravel road fill 28–83 cm: Fabric covering orangish-brown sand, 10% gravel fill 83–137 cm: Loose gray sand, 30% gravel fill	Landscape fabric at 28 cm (modern)
3-1	3	100 cm	0–80 cm: Compact sand & gravel (30%) road fill, chunks of asphalt 80–100 cm: Continued road fill, gray, strong hydrocarbon smell, probably crushed asphalt fill	None
3-2	3	120 cm Auger 100+ cm	0–50 cm: Grayish-brown fine sandy silt, 30% very small to large subrounded–subangular pebbles, 15% small-medium roots, gradual smooth boundary 50–88 cm: Light-brown slightly fine sandy silt, 25% very small–large subangular pebbles, diffuse, smooth boundary 88–120 cm: Brown slightly fine sandy silt, 25% very small–medium pebbles, 5–10% charcoal	None
3-3	3	110 cm	0–110 cm: Variously colored (gray, tan, brown) compact sand and gravel road fill, 20–30% rounded gravel, root obstructing @110 cm	None
3-4	3	58 cm	0–58 cm: Brownish-gray compact sandy silt road fill, 40% pebbles and gravel and 10% cobbles Terminated at old concrete	None
3-5	3	100 cm	0–24 cm: Brown slightly fine sandy silt (Fill) 20–25% small–large subrounded and subangular pebbles, 20% fine roots. Abrupt smooth boundary 24–60 cm: Gray and brown fine/medium sandy silt (disturbed with fill material), 35% small–large subangular pebbles, compact clear smooth boundary 60–79 cm: Reddish-brown clayey fine sandy silt, 15% small–medium subangular and angular pebbles abrupt smooth boundary 79–100 cm: Dark-brown clayey fine sandy silt (damp), 15% medium–large subrounded to angular pebbles	Ceramic and clear glass (modern) Plastic and green glass (modern) 3 shards clear glass, 1 thin copper metal strip (modern)
3-6	3	90 cm	0–25 cm: Grayish-brown fine sandy silt, 20% small–medium subrounded pebbles, 20% fine roots, abrupt smooth boundary 25–90 cm: Yellowish-brown fine/medium sandy silt fill material, 35% small–large subangular pebbles. At 90 cm, gravels increase to 90%, obstructing further excavation	None

Table B-1. Results of Shovel Test Probes in the APE

Shovel Probe Number	Survey Area	Maximum Depth Below Surface	Description	Cultural Materials Identified
3-7	3	100 cm	0–42 cm: Road fill with brownish-gray moderately compact sandy silt with 40% gravel, 10% cobbles. Ashy burned wood in east and south walls at 42 cm 42–100 cm: Black sandy silt with high organic content	None
3-8	3	100 cm	0–75 cm: Grayish-brown fine sandy silt fill material, 30% small–large subrounded to subangular pebbles, 20% rootlets first 30 cm only, abrupt smooth boundary 75–100 cm: Dark-brown slightly clayey silty fine sand, 15% small and medium subrounded pebbles, 15% charcoal, moderate amount of decaying organic material	Pieces of modern trash
3-9	3	110 cm	0–58 cm: Dark-gray semi-compact road fill, 40% rounded gravel 58–76 cm: Soft, loosely consolidated sandy silt, chunks of charcoal, <5% gravel 76–110 cm: Dark-gray with orangish-brown mottled clayey silt, <10% gravel 110+ cm: Dark-gray gravelly sand, possibly more road fill	None
3-10	3	100 cm	0–100 cm: Disturbed road fill with black sandy silt, 40% subrounded pebbles & cobbles, gravels	Worn, twisted metal fragments (20–30cm) in south wall, safety glass, metal fragments throughout but decreasing with depth (modern)
3-11	3	120 cm (Auger after 90 cm)	0–21 cm: Brown slightly sandy silt, 10% small subrounded pebbles, 5% rootlets, abrupt smooth boundary 21–53 cm: Gray to light-gray silty coarse sand fill, 35% small–large subangular pebbles, very compact, abrupt smooth boundary 53–80 cm: Black clayey silt or silty clay, 5% small pebbles, rounded, clear smooth boundary 80–120 cm: Grayish-brown coarse sand fill with 40% small–medium subangular pebbles, water at 120 cm	None
7-1	7	104 cm	0–5 cm: Forest duff 5–53 cm: Light-brown silty loam with roots/rootlets and few pebbles 53–104 cm: Moist dark-brown to reddish-brown silty clay	Cellophane and partial plastic bottle cap near surface (modern)
7-2	7	44 cm	0–12 cm: Cedar bark mulch, brown 12–32 cm: Road gravel with fill, brown, heavily compacted 32-44 cm: Cedar bark mulch	None

Table B-1. Results of Shovel Test Probes in the APE

Shovel Probe Number	Survey Area	Maximum Depth Below Surface	Description	Cultural Materials Identified
8-1	8	100 cm	0–19 cm: Brownish-tan compact sand with ~50% rounded to subrounded gravel, poorly developed A Horizon 19–100 cm: Orangish-tan sand with ~50% round to subrounded gravel, more loosely consolidated with depth (probable B Horizon)	None
8-2	8	75 cm	0–2 cm: Duff 2–15 cm: O Horizon, Blackish-gray silt with 30% subrounded gravel and pebbles 15–75 cm: Tan loose silt with 30% subrounded gravel and pebbles, a few cobbles increasing with depth Terminated due to cobble density	None
9-1	9	44 cm	0–44 cm: Brown silty sand, disturbed fill, <20% gravel. Large root obstruction @44 cm	Brown bottle glass fragments and Pay-Less Drug Store plastic bag (modern)
9-2	9	15 cm	0–15 cm: Duff with ivy roots and brown silt, lots of modern debris. Terminated at asphalt surface	Asphalt/concrete flooring, glass fragments, asphalt shingle fragments, and red carpeting (Site 45SN609)
9-3	9	15 cm	0–15 cm: Brown and gray moderately dense silty duff with 25% gravel. Terminated at thin, plastic-coated wires (green and black) at 10 cm	Clear and green glass fragments (modern)
9-4	9	100 cm	0–100 cm: Brown sandy silt, 20% subrounded to subangular gravel, disturbed/redeposited fill	Asphalt and charcoal chunks (<=1 cm) throughout (modern)
9-5	9	100 cm	0–20 cm: Brown sandy silt, moderately loose with 5% gravel & pebbles 20–100 cm: Brown sandy silt, moderately loose	Glass sherds (modern)
10-1	10	77 cm	0–77 cm: Dark-black organic silt, little or no gravel, dry for top ~20cm, progressively wetter with depth. Standing water at 48 cm	Modern (<20 years) trash through upper 30–40 cm
10-2	10	60 cm	0–25 cm: Organic-rich peat with brown silt 5% gravel and many roots 25–60 cm: Grayish-blue sand with pockets of clay. Terminated due to root obstruction	None
11-1	11	75 cm	0–75 cm: Road fill, grayish-brown compact silt with 80% pebbles and gravels. Terminated due to compact gravel density	None
11-2	11	80 cm	0–80 cm: Brown fill material. Coarse sand, 50% medium angular pebbles	None
11-3	11	135 cm (auger @35 cm)	0–24 cm: Compact gray sand with 20% subrounded gravel and pebbles 24–135 cm: Loose dark gray sand with <5% subrounded gravel	34–42 cm, white plastic utility pipe in south wall running east–west

Table B-1. Results of Shovel Test Probes in the APE

Shovel Probe Number	Survey Area	Maximum Depth Below Surface	Description	Cultural Materials Identified
11-4	11	132 cm (auger @34 cm)	0–21 cm: Grass cover over very compact, very dry silty sand, 25-50% subrounded gravel and cobbles 21–132 cm: Large cobbles in sidewall to 34 cm, slightly moist sand, 25% subrounded gravel and cobbles. Terminated due to cobble obstructions	None
11-5	11	137 cm (auger @77 cm)	0–137 cm: Brown loosely consolidated sand and 20% rounded gravel becoming more compact and gray with depth. Possibly redeposited plus in situ glacial till, same as observed in cut slope northeast corner of park	None
12-1	12	82 cm	0–60 cm: Brown silty sand with subangular to subrounded pebbles and gravels 60–82 cm: Light-brown silty sand with subrounded pebbles and gravels	1 white glazed earthenware rim fragment, possibly plate or insulator (modern)
13-1	13	40 cm	0–40 cm: Extremely compact, dry brown silt loam with ~25% subrounded pebbles, gravels, and cobbles (glacial till)	None
13-2	13	30 cm	0–30 cm: Extremely compact, dry brown silt loam with ~25% subrounded pebbles, gravels, and cobbles (glacial till)	None

cm-centimeters

ATTACHMENT C

Archaeological Site Forms

STATE OF WASHINGTON
ARCHAEOLOGICAL SITE INVENTORY FORM

Smithsonian Number:
45SN531 Addendum
***County:** Snohomish

***Date:** 8/26/2012 ***Compiler:** Shari Maria Silverman

Location Information Restrictions *(Yes/No/Unknown)*: No **Human Remains?** ☐

SITE DESIGNATION

Site Name: Interurban Trail – Scriber Creek Segment

Field/ Temporary ID: 1792-2

***Site Type(s)** *(Refer to the DAHP Survey and Inventory Guidelines Page 19)*: Historic Railroad

SITE LOCATION

***USGS Quad Map Name(s):** Edmonds East, WA

***Legal Description: T**27N **R** 4 **E:** **Section(s):21**

Quarter Section(s): SE 1/4

UTM: Zone 10 **Easting** 552566 **Northing** 5295708

Latitude: **Longitude:** **Elevation (ft/m):**

Other Maps: **Type:**

Scale: **Source:**

Drainage, Major: Swamp Creek **Drainage, Minor:** Scriber Creek **River Mile:**

Aspect: SE **Slope:** 0

***Location Description** *(General to Specific)*: This section of the Interurban Trail/Railway alignment is located between Cedar Valley Road and 48th Street. It is north of I-5 and 212th Street, and south of 200th Street. The closest east-west oriented street is 206th Street, which is just north of the trail at its intersection with Cedar Valley Road.

***Directions** *(For Relocation Purposes)*: From the intersection of 212th Street SW and 52nd Avenue, drive north on 52nd Avenue for .25 mile (mi). Turn right (east) onto 208th Street SW. Proceed for .35 mi until the end of 208th Street SW. The Interurban Railroad is the bike trail that you cross to reach the parking area.

SITE DESCRIPTION

***Narrative Description:** East of 52nd Avenue, the Interurban Trail consists of a paved trail (Sketch Maps 1 and 2; Photos 1 and 2). No remnants of railroad (e.g., rails or ties) are visible at this location. The railroad grade has been capped with asphalt and concrete. A mowed grass lawn lines both sides of the trail within its right of way (ROW). Power lines, constructed after the Interurban's abandonment in 1939, line both sides of the ROW.

The following description of the Interurban Trail History is taken from the original Interurban Trail Site Form (Gilpin 2012):

"The electric railway line known throughout the region as the Seattle-Everett Interurban was initially conceived in 1900 by Fred Sander, the man responsible for both the Yesler Way cable car line and the Grant Street Electric Railway from Seattle to Georgetown (Bird 2000:2; Crowley 2003). Such electric rail lines were popular across the country in the early 20th century, as a fast and reliable form of commuter transportation between urban and suburban areas (Wing 1988:13-14). By 1906, the line extended from Ballard (a Seattle suburb located a few miles north of downtown) to Hall's Lake" (approximately .2 mile southeast of this segment of trail). This was described as 'a forested semi-wilderness'. "The railroad transported both passengers and lumber (Wing 1988:14). Sander installed trolley wire support poles on the east side of the tracks – this practice was followed through the life of the railway (Wing 1988:21 [Gilpin 2012])."

"A subsidiary of the Stone & Webster firm – who were already managing the Seattle – Tacoma Interurban electric railway (renamed the Puget Sound Electric Railway) – purchased Sanders' company in 1908, renaming it the Seattle – Everett Traction Company. In 1912, the company was reorganized as the Pacific Northwest Traction company, and Stone & Webster set about expanding the line north to Everett (an additional 14 mi) and rerouting the southern end of the line, in Seattle (Bird 2000:3; Crowley 2003, Wing 1988:15, 19 [Gilpin 2012])."

The line operated in this area from 1910 to 1939 (Bird 2000:3).

*

Site Dimensions:

*__Length:__ 910 feet **(ft)** *__Direction: NW-SE__ x *__Width:__ 23 ft *__Direction: N__E-SW

*__Method of Horizontal Measurement: Length:__ Map measurement on computer; Width: Measuring tape

*__Depth:__ Unknown * __Method of Vertical Measurement:__ N/A

***Vegetation** *(On Site)*__:__ lawn grasses within ROW

Local: Armenian blackberries, trailing blackberries, lady fern, sword fern, big-headed sedge, ocean spray, creeping buttercup, golden rod, willow, red alder, dogwood, and cottonwood

Regional: *Tsuga heterophylla* zone (Puget Sound area) (Franklin and Dyrness 1973:44-45)

Landforms *(On Site)*__:__ creek and wetlands floodplain

Local: creek and wetlands floodplain

Water Resources *(Type)*__:__ Scriber Creek **Distance:** 650 ft

Permanence: Permanent

CULTURAL MATERIALS AND FEATURES

***Narrative Description:** On the surface, the Interurban Railway has been completely replaced by a trail paved with asphalt and concrete. No ties or other railroad components were visible on the grade within the study area. However, utility poles line both sides (north and south) of the trail.

Grade Components:

The grade is flush with the ground surface ROW. A small ditch lines the ROW. The trail is paved with asphalt. However, west of the its intersection with the 48th Avenue, a scored, concrete rectangle replaces the asphalt (Photo Concrete). It extends the width of the pavement, measuring 12 ft, 4 in wide (NW-SE). Its length measures 5 ft, 8 in (NE-SW). On each side of the intersection with 48th Avenue are upright wooden poles separating the trail from the road. A mowed grass ROW lines both the southern and northern edges of the paved grade. The total N-S width from grass edge to grass edge is 23 ft.

Utility Poles:

Utility poles stand along the grade's ROW on both the north and south side of the Interurban Trail (Sketch Maps 1 and 2). They are constructed of straight wooden poles hewn at the top. The poles

vary in age, style, and size. Some are short with metal arms extending from the central shaft or multi-tiered, horizontal bars (Photo 5). Others are taller. Outside of the recorded area, but still within the Interurban ROW, are double poles connected by horizontal bars (Photo 4). After the Interurban line was abandoned in 1939, Puget Power converted the railway to a power line corridor. Snohomish County Public Utility District No. 1 continues the operation of the utility line in this segment (Bird 2000:5).

***Method of Collection:** No collection

Location of Artifacts** *(Temporary/Permanent):** N/A

SITE AGE

***Component:** Historic *__*Dates:__* 1910 to Present ***Dating Method:** Literature Review (see Site Description)

Phase: N/A **Basis for Phase Designation:** N/A

SITE RECORDERS

Observed by: Shari Silverman, Tony Cagle, and Angus Tierney **Address:** 1904 Third Ave., Suite 240; Seattle, WA 98101

***Date Recorded:** August 24, 2012

Recorded by** *(Professional Archaeologist):** Shari Maria Silverman

***Organization:** Historical Research Associates, Inc. **Organization Phone Number:** (206) 343-0226

***Organization Address:** 1904 Third Ave., Suite 240, Seattle, WA 98101 ***Organization E-mail:** ssilverman@hrassoc.com

Date Revisited: N/A **Revisited By:** N/A

SITE HISTORY

Previous Archaeological Work** *(Done at Site):** A segment of 45SN531 was recorded near Lake Ballinger approximately 1.5 mi to the SE of this segment (e.g., Gilpin 2012). The current segment has not been previously recorded.

LAND OWNERSHIP

***Owner: Public Utility District No. 1 Snohomish County**

***Address:** No address, but; Owner's address: 2320 California, Everett, WA 98504-7014

***Tax Lot/ Parcel No:** 27042100403700

RESEARCH REFERENCES

***Items/Documents Used In Research** *(Specify)*:** N/A

Bird, Frederick

2000 29 Miles of 29 Years, the Seattle – Everett Interurban Railway, 1910 – 1939. Snohomish County History Series. Electronic document, http://www.co.snohomish.wa.us/documents/County_Information/interurbmap.pdf, accessed August 29, 2012.

Crowley, Walt

2003 Interurban Rail Service Between Everett and Seattle Begins on April 30, 1910, HistoryLink. Electronic document, http://www.historylink.org/_content/printer_friendly/pf_output.cfm?file_id=2669, accessed August 29, 2012.

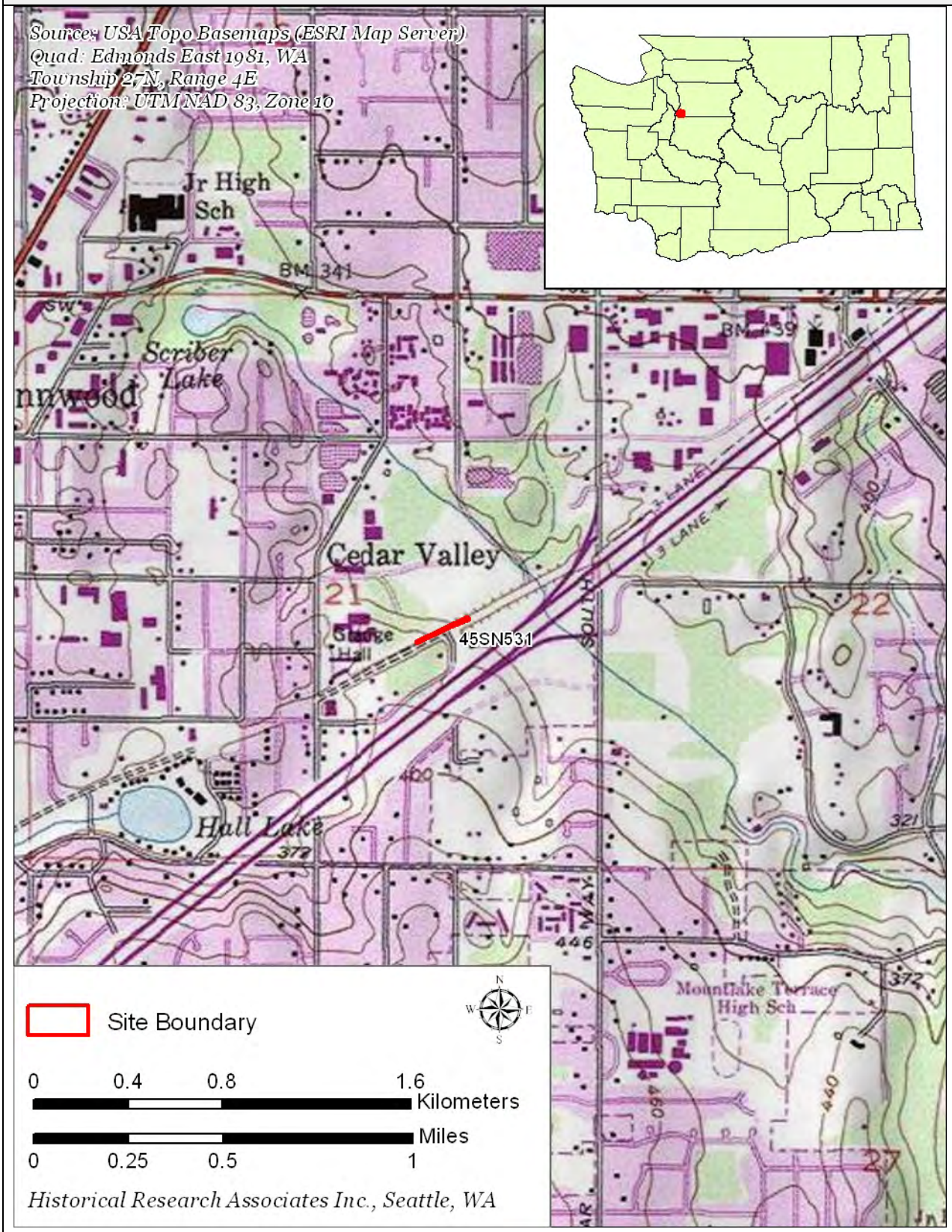
Gilpin, Jennifer

2009 Washington State Department of Archaeology and Historic Preservation (DAHP) Site Inventory Form 45SN531: Seattle – Everett Interurban Lake Ballinger Segment. Form on file at DAHP, Olympia, Washington

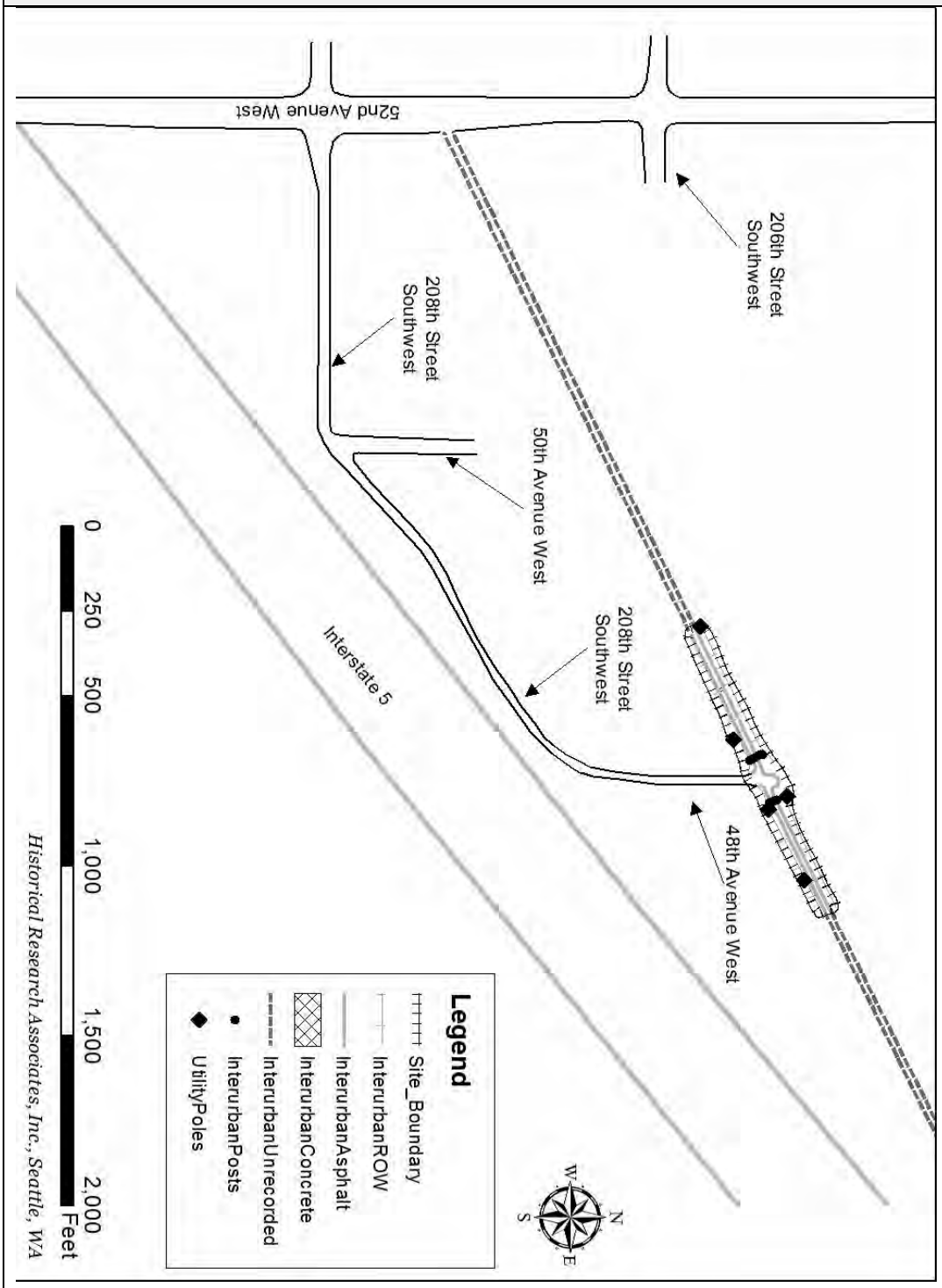
Wing, Warren W.

1988 To Seattle by Trolley: the Story of the Seattle – Everett Interurban and the "Trolley that Went to Sea". Pacific Fast Mail Box 57, Edmonds, Washington.

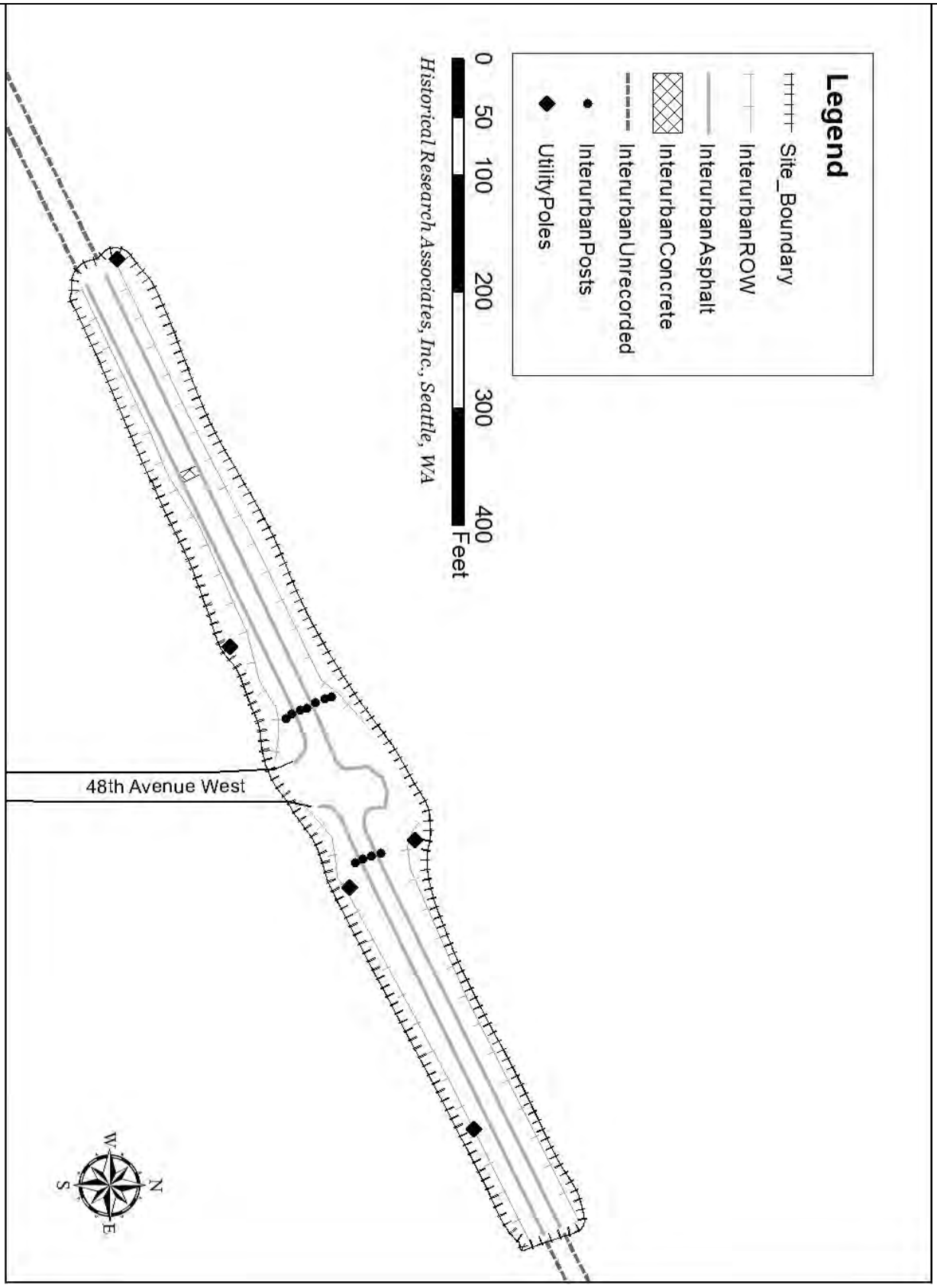
USGS MAP


Source: USA Topo Basemaps (ESRI Map Server)
Quad: Edmonds East 1981, WA
Township 27 N, Range 4E
Projection: UTM NAD 83, Zone 10
Jr High Sch
BM 341
Scriber Lake
Cedar Valley
21
22
45SN531
Hall Lake
372
400
446
321
Mountlake Terrace High Sch
27
Site Boundary
N
W
E
S
0 0.4 0.8 1.6
Kilometers
0 0.25 0.5 1
Miles
Historical Research Associates Inc., Seattle, WA

SKETCH MAP (1)


52nd Avenue West
206th Street Southwest
208th Street Southwest
50th Avenue West
208th Street Southwest
Interstate 5
48th Avenue West
Legend
Site_Boundary
InterurbanROW
InterurbanAsphalt
InterurbanConcrete
InterurbanUnrecorded
InterurbanPosts
UtilityPoles
0 250 500 1,000 1,500 2,000
Feet
W
N
S
E
Historical Research Associates, Inc., Seattle, WA

SKETCH MAP (2)


Legend
Site_Boundary
InterurbanROW
InterurbanAsphalt
InterurbanConcrete
InterurbanUnrecorded
InterurbanPosts
UtilityPoles
0 50 100 200 300 400
Feet
Historical Research Associates, Inc., Seattle, WA
48th Avenue West
W
N
S
E

PHOTOGRAPH(1 of 5)

***Photograph Description(s):** Overview of Scriber Creek Segment of Interurban Trail from south. This portion is east of its intersection with 208th Street SW. Photo faces SW.

PHOTOGRAPH(2 of 5)

***Photograph Description(s):** Overview of Interurban east of its intersection with 208th Street SW. Photo faces S-SE.

PHOTOGRAPH(3 of 5)

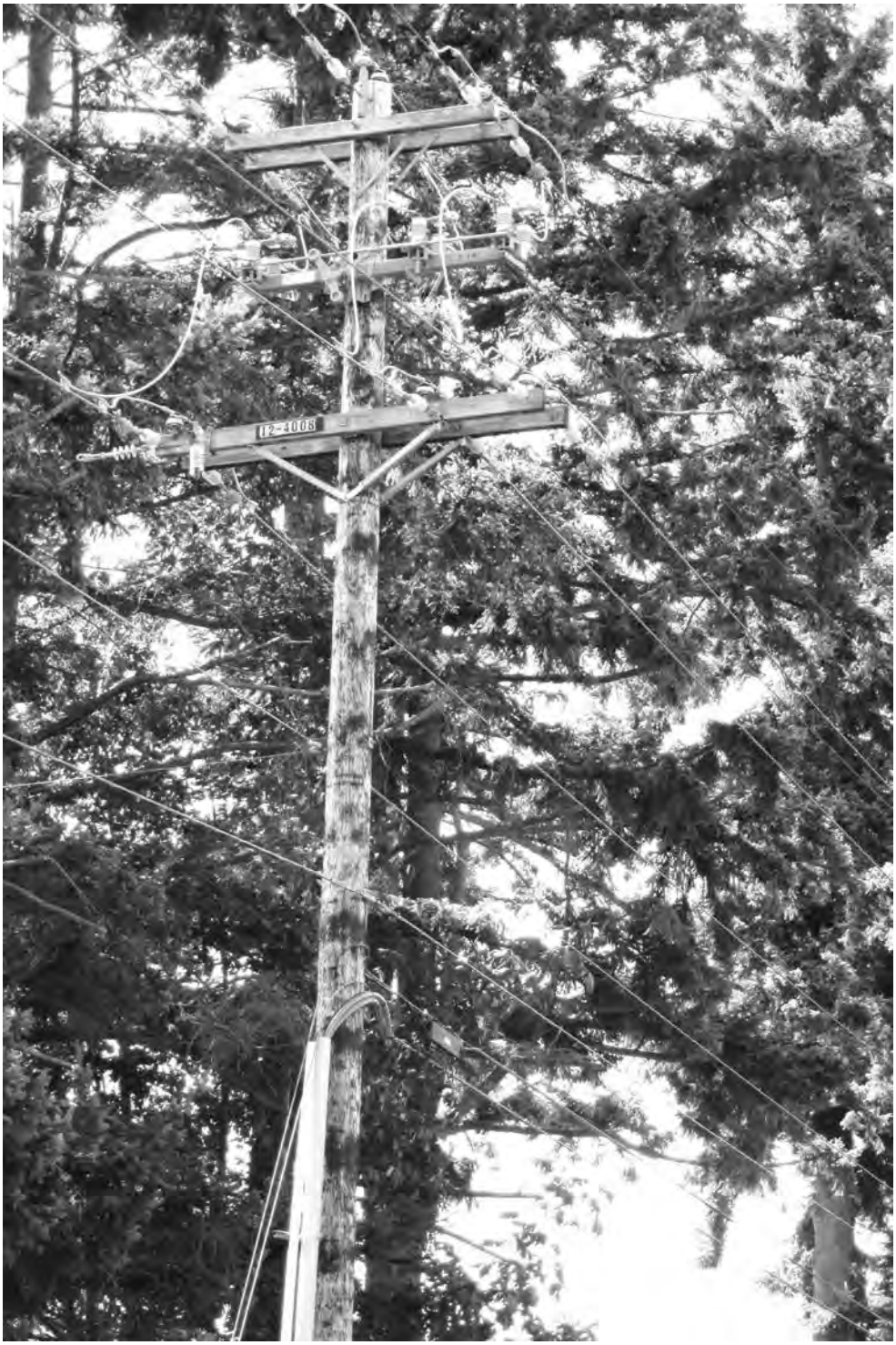
***Photograph Description(s):** Scored concrete west of Interurban's intersection with 208th Street SW. Photo faces E-NE.

PHOTOGRAPH(4 of 5)

***Photograph Description(s):** Utility poles of different styles east of Interurban's intersection with 208th Street SW. Photo faces W-NW.

PHOTOGRAPH(5 of 5)

***Photograph Description(s):** Short utility pole with three horizontal tiers. This pole stands near the SW corner of the Interurban's intersection with 208th Street SW. Photo faces S.



STATE OF WASHINGTON
ARCHAEOLOGICAL SITE INVENTORY FORM

Smithsonian Number:
45SN609
***County:** Snohomish

***Date:** 8-28-2012 ***Compiler:** Jenny Dellert, Angus Tierney, Anthony Cagle

Location Information Restrictions *(Yes/No/Unknown)***:** Yes

SITE DESIGNATION

Site Name: Scriber Creek Park Site

Field/ Temporary ID: 1792-1

Site Type** *(Refer to the DAHP Survey and Inventory Guidelines Page 19):** Historic Structure-Unknown

SITE LOCATION

***USGS Quad Map Name:** Edmonds East

***Legal Description: T**27N **R** 4E **Section(s):** 21

Quarter Section(s): SW ¼ of NE ¼

***UTM: Zone** 10 **Easting** 552380.96 **Northing** 5296188.27

Latitude: 47° 49' 0.880" N **Longitude:** 122° 18' 1.020" W **Elevation (ft/m):** 337

Other Maps: **Type:**

Scale: **Source:**

Drainage, Major: Swamp Creek **Drainage, Minor:** Scriber Creek **River Mile:**

Aspect: 180° **Slope:** <5%

Location Description** *(General to Specific):** The concrete foundation and wall structure and debris are located in the Cedar Valley area of Lynnwood, Washington (Figure 1). The site is within the City of Lynnwood's Scriber Creek Park, at 20015 Cedar Valley Road, Parcel Number 00608400300101, just south of the intersection of Cedar Valley Road and 200th Street SW. Remnants of a concrete walkway within a dirt path can be seen in the grass-covered picnic area adjacent to the parking lot. The pathway leads to the densely vegetated area where the concrete structure and debris are located, slightly downhill from the picnic area (Figure 2).

Approach *(For Relocation Purposes)***:** From Seattle take Interstate-5 (I-5) North to Exit 181B (for 44th Ave W toward Lynnwood/WA-524). In approximately 0.3 miles, turn left onto 44th Avenue W, travel approximately 0.3 miles until 200th Street SW and turn left. Travel down 200th Street SW for approximately 0.4 miles and turn left onto Cedar Valley Road. Scriber Creek Park is approximately 279 feet south of the intersection of Cedar Valley Road and 200th Street SW.

SITE DESCRIPTION

***Narrative Description:** The site consists of historic aggregate concrete foundation wall segments and asphalt or concrete floor covered with deteriorating red carpet. The floor was identified during excavation of a shovel probe. From the foundation/floor area a pathway leads to aggregate concrete steps, an intersecting rock-lined wall, and a possible copper pipe handrail. To the south of the step area is a rock-lined dirt pathway (Figure 2). A scatter of domestic items was also observed, including: window glass fragments, composite roof shingle fragment, a 2-gallon Red Eagle gas can, a men's shoe sole, a clear glass bottle, a fragment of red rubber, and a Royal Crystal glass top, Edison screw-base fuse.

Site Type** *(Refer to the DAHP Survey and Inventory Guidelines Page 19):** Historic Structure-Unknown

***Site Dimensions** *__Length:__* 25 m *__Direction: N-S__* x *__Width:__* 10 m *__Direction:__* E-W

__Method of Horizontal Measurement:__ Roll tape

__Depth:__ Unknown * __Method of Vertical Measurement:__* N/A

*Vegetation ***(On Site)***: Himalayan blackberry (*Rubus discolor*), reed canary grass (*Phalaris arundinacea)***,*** ornamental trees (plum, dogwood, poplar, laurel), Douglas fir (*Pseduotsuga menziesii*), mountain ash, holly, ivy

Local: *Tsuga heterophylla* Zone, Puget Sound Area (Franklin and Dyrness 1973:44, 45, Figure 27)

Regional: *Tsuga heterophylla* Zone, Puget Sound Area (Franklin and Dyrness 1973:44, 45, Figure 27)

Landforms *(On Site)***:** Gently sloping hill **Local:**

Water Resources *(Type)***:** Scriber Creek, marsh/pond **Distance:** 10 m East

Permanence: Permanent

CULTURAL MATERIALS AND FEATURES

***Narrative Description:** Historic aggregate concrete foundation walls and segments, w/ path leading to aggregate concrete stairs to the south and intersecting cobble & concrete walls. Possible copper pipe handrails by stairs, one section still set in concrete block. ~10 m south of stairs is a cobble-lined dirt path leading from parking area. Artifacts on site include window glass fragments; composite roof shingle fragments; red rug portion over aggregate concrete floor; red Eagle 2-gallon fuel can; Royal Crystal screw-in fuse; shoe sole; brown glass bottle fragments; red rubber fragment; section of PVC pipe; various dissociated chunks of aggregate concrete; 2 sections of aggregate concrete with a tall edge on one side and 3" tall base on raised side; clear glass bottle with screw-type cap with ABM underlined "6" on base; 30 cm high and 7 cm diameter.

There are also two additional segments of aggregate concrete wall/foundation in the southern part of the park that may or may not be associated with the site location. The age of the concrete remnants is undetermined and no additional artifacts were associated in conjunction with the location (near Shovel Probe 9-5), therefore, it was not included in this site form.

***Method of Collection(s):** Not collected

Location of Artifacts** *(Temporary/Permanent):** Not collected

SITE AGE

***Component:** Historic *__Dates:__** Possibly late 19th to early 20th Century

***Dating Method:** Historic maps (USGS 1895, 1942, 1953), visual inspection of artifacts

Phase: **Basis for Phase Designation:** Visual

SITE RECORDERS

Observed by: Jenny Dellert, Anthony Cagle, and Angus Tierney **Address:**

***Date Recorded:** August 16, 2012

*__Recorded by__ *(Professional Archaeologist)***:** Jenny Dellert, Anthony Cagle, and Angus Tierney

*__Affiliation:__** Historical Research Associates (HRA) *__Affiliation Phone Number:__** (206) 343-0226

***Affiliation Address:** 1904 Third Ave., Ste. 240 Seattle, WA 98101

***Affiliation E-mail:** jdellert@hrassoc.com

Date Revisited: **Revisited By:**

SITE HISTORY

Previous Work *(Done on Archaeological Site)***:** None

Site History

The first record of Euroamerican landownership for the Scriber Creek Park Site was from the late nineteenth century. According to Bureau of Land Management General Land Office (GLO) documentation, the area was part of a land patent record for Alexander Brunnell, a Finnish settler who was one of the original settlers in the Cedar Valley area (GLO 2012a). Two structures are shown on the 1895 topographic map at the end of a pathway/roadway at the site area (USGS 1895). The pathway/roadway appears to be the same alignment as the current Cedar Valley Road. The land patent was for 80 acres and was issued on November 32, 1891 (BLM Serial No. WASAA 072207). Brunnell only lived on the land for approximately 6-7 years (Polk Directory 1894). His obituary, dated August 24, 1899, indicates that he lived on the county poor farm for two years (Snohomish County Tribune 1899). Other notable settlers in the area include Peter Schreiber (for whom Scriber Lake, Scriber Creek, and the associated parks are named), Pope, Talbot, and Walker (of Pope and Talbot Mill fame), and William Loughridge (GLO 2012b-d).

By 1910, the site area was owned by Erick A. Wallene (Anderson Map Company 1910). Historic maps from the early 20th century show the area became more popular and several housing developments were established. The land owned by Wallene was later divided into the Wallene Interurban Tracts (Metsker 1927; Kroll Map Company 1934; Kroll Map Company 1943 revised 1952; Metsker 1960). A few dwellings were also documented on topographic maps at the site location; one of which appears to coincide with a structure seen on the 1895 map (USGS 1895, 1942, and 1953). Detailed landowner documentation is scarce for the time between Wallene's ownership and the late 1960s-early 1970s. By 1971, the parcel was owned by Walter W. Sprague (Snohomish County Assessor 2012). Mr. Sprague deeded a strip of land to the City of Lynnwood in 1986 and by 1991 the City had purchased the entire parcel (Snohomish County Assessor 2012). The parcel became a passive park (Scriber Creek Park) in 1991 and in 1995 the City added a paved parking lot near the site location (City of Lynnwood 2012; Snohomish County Assessor 2012).

LAND OWNERSHIP

***Owner:** City of Lynnwood

***Address:** PO Box 5008, Lynnwood, WA 98046 ***Tax Lot/ Parcel No:** 00608400300101

RESEARCH REFERENCES

*Items/Documents Used In Research *(Specify)*:

Anderson Map Company

1910 *Snohomish County 1910 Atlas.* Anderson Map Company, Seattle, Washington. Electronic document, http://www.historicmapworks.com, accessed August 14, 2012.

City of Lynnwood

2012 *Scriber Creek Park.* City of Lynnwood Parks, Recreation, and Cultural Arts website. Electronic document http://www.ci.lynnwood.wa.us

Franklin, Jerry, and C.T. Dyrness

1973 *Natural Vegetation of Oregon and Washington.* USDA Forest Service General Technical Report PNW-8, Portland, Oregon.

General Land Office (GLO)

2012a *Land Patent Record-Alexander Brunnell. BLM Serial Nr. WASAA 072207.* Bureau of Land Management, General Land Office Records. Electronic document http://www.glorecords.blm.gov/details/patent/default.aspx?accession=WASAA 072207&docClass=SER&sid=bvisr0o1.nml#patentDetailsTabIndex=0

2012b *Land Patent Record-Peter Schreiber. BLM Serial Nr. WASAA 072182.* Bureau of Land Management, General Land Office Records. Electronic document http://www.glorecords.blm.gov/details/patent/default.aspx?accession=WASAA 072182&docClass=SER&sid=bvisr0o1.nml#patentDetailsTabIndex=0

2012c *Land Patent Record-A.J. Pope, W.C. Talbot, and Cyrus Walker. BLM Serial Nr. WASAA 072037.* Bureau of Land Management, General Land Office Records. Electronic document http://www.glorecords.blm.gov/details/patent/default.aspx?accession=WASAA 072037&docClass=SER&sid=bvisr0o1.nml#patentDetailsTabIndex=0

2012d *Land Patent Record-William Loughridge. BLM Serial Nr. WASAA 072073.* Bureau of Land Management, General Land Office Records. Electronic document http://www.glorecords.blm.gov/details/patent/default.aspx?accession=WASAA 072073&docClass=SER&sid=bvisr0o1.nml#patentDetailsTabIndex=0

Kroll Map Company

1934 *Snohomish County 1934 Atlas.* Kroll Map Company, Seattle, Washington. Electronic document, http://www.historicmapworks.com, accessed August 14, 2012.

1943 *Snohomish County 1934 Atlas-Revised 1952.* Kroll Map Company, Seattle, Washington. Electronic document, http://www.historicmapworks.com, accessed August 14, 2012.

Metsker, Chas. F (Metsker)

1927 *Snohomish County 1927 Atlas.* Metsker Maps, Seattle, Washington. Electronic document, http://www.historicmapworks.com, accessed August 14, 2012.

1960 *Snohomish County 1960 Atlas.* Metsker Maps, Seattle, Washington. Electronic document, http://www.historicmapworks.com, accessed August 14, 2012.

Polk Directory

1894 *Polk Directory for Everett and Snohomish County.* Electronic document from Snohomish County, WA USGenWeb Project Page This page is part of the site located at http://www.rootsweb.com/~wasnohom/

Snohomish County Assessor

2012 *Property Account Summary-Parcel 00608400300101.* Snohomish County Assessor website. Electronic document https://www.snoco.org/proptax/(f2m4xxnxgu12vy34txrm3k45)/search.aspx

Snohomish County Tribune

1899 Obituary for Alexander Brunnell. *Snohomish County Tribune*, September 1, 1899. Electronic document from Ancestry.com website. http://boards.ancestry.com/localities.northam.usa.states.washington.counties.snohomish/2492/mb.ashx?pnt=1

United States Geological Survey (USGS)

1895 *Snohomish Quadrangle, Washington, 1:125,000 Series (Topographic)*. United States Geological Survey, Denver, Colorado.

1942 *Edmonds East Quadrangle, Washington, 7.5 Minute Series (Topographic)*. United States Geological Survey, Denver, Colorado.

1953 *Edmonds East Quadrangle, Washington, 7.5 Minute Series (Topographic)*. United States Geological Survey, Denver, Colorado.

USGS MAP

Figure 1. Location map for the Scriber Creek Park Site.

SKETCH MAP

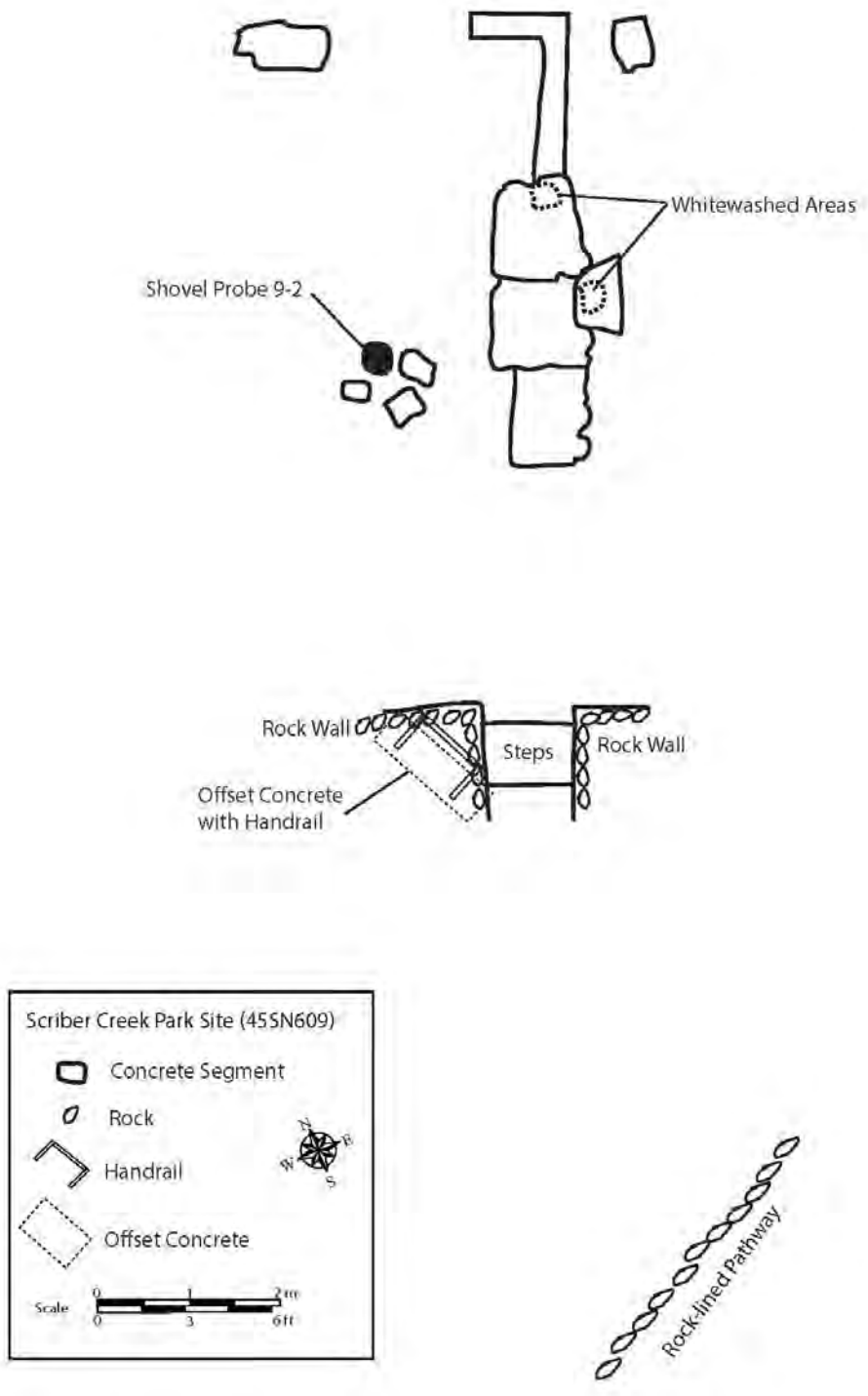


Figure 2. Sketch map of Scriber Creek Park Site.

PHOTOGRAPH(S)

Figure 3. Remnant of red carpet, concrete/asphalt flooring, and concrete wall remnant identified at Shovel Probe 9-2, view west.

PHOTOGRAPH(S)

Figure 4. Remnant of concrete walls in dense vegetation, view north.

Figure 5. Remnant of concrete walls in dense vegetation, view south.

Figure 6. Remnant of concrete steps, handrail, and intersecting rock wall in dense vegetation, view west.

Figure 7. Rock-lined dirt pathway, view south.

Figure 8. Historic-period artifacts identified at the Scriber Creek Park Site, view down.

Figure 9. Close-up of Royal Crystal fuse, view down.

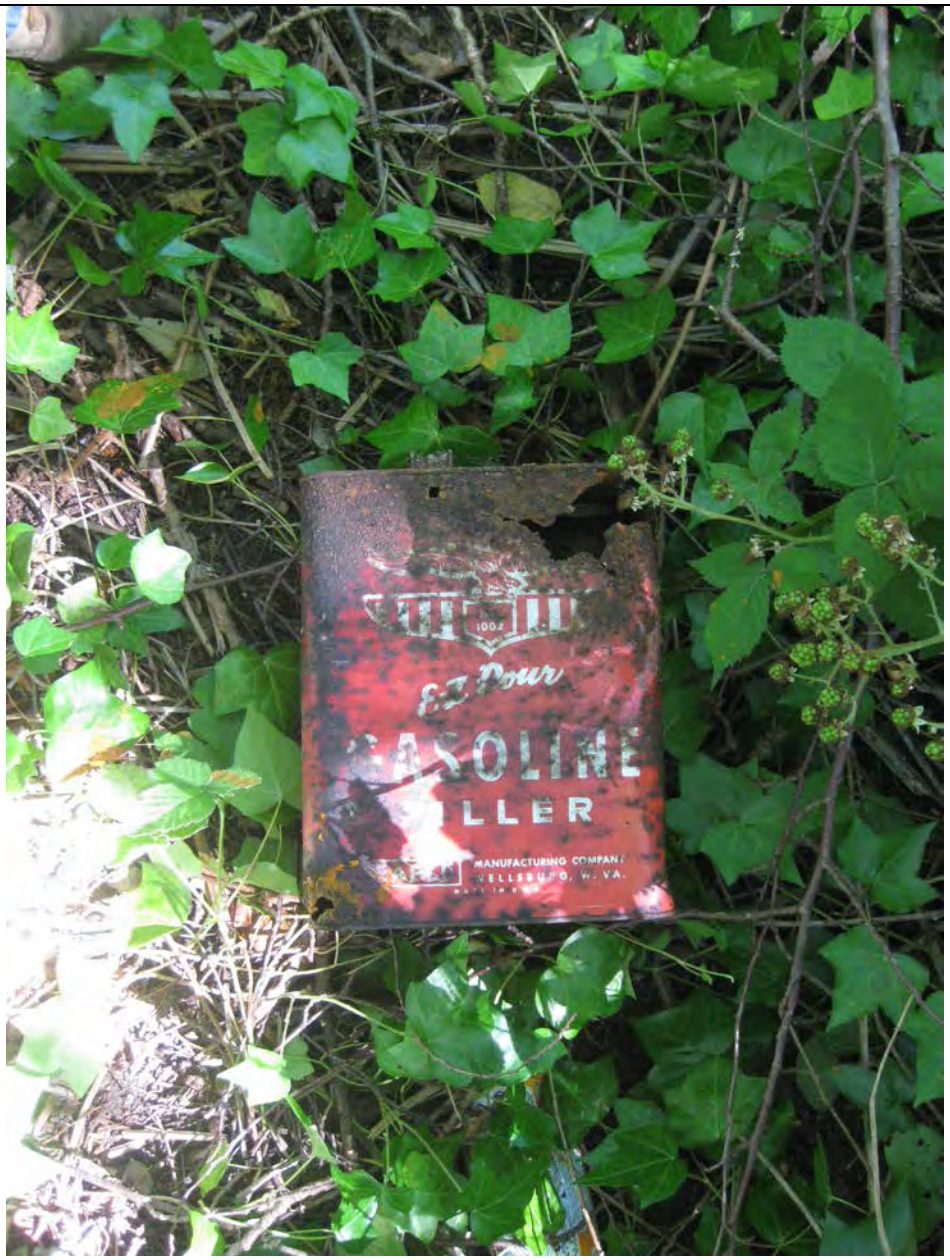


Figure 10. Gas can in dense vegetation, view down.

ATTACHMENT D

Section 106 Consultation Documentation

DEPARTMENT OF
ARCHAEOLOGY &
HISTORIC PRESERVATION
Protect the Past Shape the Future

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

DD - original
JW

August 12, 2013

Mr. Kenneth Feldman
Deputy Regional Administrator
Federal Transit Administration
915 Second Ave., Suite 3142
Seattle, WA 98174-1002

In future correspondence please refer to:
Log: 100611-07-FTA
Property: Sound Transit's Lynnwood Link Extension Light Rail Project
Re: Receipt of Draft Environmental Impact Statement, No Adverse Effect

Dear Mr. Feldman:

Thank you for contacting the Washington State Department of Archaeology and Historic Preservation (DAHP). The Lynnwood Link Extension Light Rail project has been reviewed on behalf of the State Historic Preservation Officer under provisions of Section 106 of the National Historic Preservation Act of 1966 (as amended) and 36 CFR Part 800. My review is based upon documentation contained in your communication.

Thank you for submitting the draft Environmental Impact Statement Summary. We have reviewed the document and concur with your preliminary finding that the project, as described, will have no adverse effect on historic properties and/or archaeological sites within the area of potential effects identified for the project.

If additional information on the project becomes available, construction plans are altered, or if any archaeological resources are uncovered during construction, please halt work in the area of discovery and contact the appropriate Native American Tribes and DAHP for further consultation.

Thank you for the opportunity to review and comment. If you have any questions, please contact me.

Sincerely,

Matthew Sterner

AUG 15 2013 AM 11:57

Matthew Sterner, M.A.
Transportation Archaeologist
(360) 586-3082
matthew.sterner@dahp.wa.gov

DEPARTMENT OF
ARCHAEOLOGY &
HISTORIC PRESERVATION
Protect the Past, Shape the Future

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

April 15, 2013

Mr. Dan Drais
Federal Transit Administration
915 2nd Avenue
Federal Building, Suite 3142
Seattle, WA 98174-1002

In future correspondence please refer to:
Log: 100611-07-FTA
Property: Sound Transit's Lynnwood Link Extension Light Rail Project – Batch 4
Re: NOT Eligible

Dear Mr. Drais:

Thank you for contacting the Washington State Department of Archaeology and Historic Preservation (DAHP). The above referenced property has been reviewed on behalf of the State Historic Preservation Officer under provisions of Section 106 of the National Historic Preservation Act of 1966 (as amended) and 36 CFR Part 800. My review is based upon documentation contained in your communication dated April 3, 2013. This is in regard to additional inventory forms (Batch 4) for the Lynnwood Link Extension.

Our understanding is that refined alternatives for the project necessitate an adjustment of the APE and we concur with this revision. Such revisions included an additional 12 historic resources found at the proposed 220th Street location.

I have reviewed the following properties:

15408 2nd Ave NE
15414 2nd Ave NE
15450 4th Ave NE
15451 4th Ave NE
15455 4th Ave NE
15459 4th Ave NE
302 NE 155th St
303 NE 155th St
308 NE 155th St
309 NE 155th St
314 NE 155th St
315 NE 155th St

Based on the low level of architectural integrity of these properties, I concur with your assessment that they are NOT ELIGIBLE for the National Register of Historic Places. As a result of this finding, further contact with DAHP is not necessary regarding any alterations to these structures. However, if additional information on the property becomes available, or if any archaeological resources are uncovered during construction, please halt work in the area of

discovery and contact the appropriate Native American Tribes and DAHP for further consultation.

Thank you for the opportunity to review and comment. Should you have any questions, please contact me.

Sincerely,

Michael Houser
State Architectural Historian
(360) 586-3076
michael.houser@dahp.wa.gov

CC: Mathew Sterner, DAHP

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

December 20, 2012

Mr. David Powell
Federal Transit Administration
915 2nd Avenue
Federal Building, Suite 3142
Seattle, WA 98174-1002

In future correspondence please refer to:
Log: 100611-07-FTA
Property: Sound Transit's Lynnwood Link Extension Light Rail Project
Re: NOT Eligible

Dear Mr. Powell:

Thank you for contacting the Washington State Department of Archaeology and Historic Preservation (DAHP). Per your request, I have reviewed the last group of historic property inventory forms (HPIF's) for the **Lynnwood Link light rail extension project** on behalf of the State Historic Preservation Officer under provisions of Section 106 of the National Historic Preservation Act of 1966 (as amended) and 36 CFR Part 800. This group of inventory forms roughly covers the area between 238th St SW and 200th St SW. My review is based upon documentation contained in your communication.

Research indicates that none of the inventoried properties are currently listed in the Washington Heritage Register or National Register of Historic Places. After careful evaluation I have determined that none of the inventoried properties in Batch 3 rise to the level of eligible for listing on the National Register of Historic Places. I have attached a matrix which outlines these determinations for your files.

Overall the project has generated 646 HPIF's of which DAHP has determined 5 resources Eligible for listing on the NRHP. As a reminder these are as follows:

- 13130 5th Ave. NE (Church Parsonage),
- 11725 1st Ave NE (Northgate Elementary),
- 132 NE 155th St (Toyonaga property),
- 6205 222nd St SW (Melody Hill School).
- 11200 1st Ave NE (Northgate Plaza)

We look forward to working with you in the coming months as you determine if the project will have any effect on these eligible resources, and if so determining what mitigation might be. Thank you for the opportunity to review and comment. Should you have any questions, please contact me.

Sincerely,

Michael Houser
State Architectural Historian
(360) 586-3076
michael.houser@dahp.wa.gov

LYNNWOOD EXTENSION - GROUP 3 HPIF'S

Parcel_ID	Owner	Address	City	Year Built	ID #	Recommended NR Eligible?	SHPO Determination
00372600601404	YOURIST HARRY Shell station	19930 44TH AVE W	Lynnwood	1968	5	NO	Not Eligible
00608400300104	JEDI PROP LLC	20006 CEDAR VALLEY RD	Lynnwood	1961	9	NO	Not Eligible
00608400300203	TSUBOTA REIKO Stone Way Electric Supply	20121 CEDAR VALLEY RD	Lynnwood	1966	140	NO	Not Eligible
00401200000100	GRIFFITH TROY & KAREN	20302 52ND AVE W	Lynnwood	1960	161	NO	Not Eligible
00401200000200	WALKER JAMES	20306 52ND AVE W	Lynnwood	1959	163	NO	Not Eligible
00401200000300	BARTHOLET DAVID A	20316 52ND AVE W	Lynnwood	1959	164	NO	Not Eligible
27042100305400	GILLEN MARGARET	20400 54TH AVE W	Lynnwood	1930	231	NO	Not Eligible
00462600400800	WINGSNESS DAVID R	20430 52ND AVE W	Lynnwood	1942	175	NO	Not Eligible
00619500000900	MARTIN LLC R& R Towing	20610 48TH AVE W	Lynnwood	1956	179	NO	Not Eligible
00462600900400	HARRIS TIM & KATHY	20618 52ND AVE W	Lynnwood	1950	185	NO	Not Eligible
00462500800000	SORENSEN TERECA MAE AND MI	20706 52ND AVE W	Lynnwood	1951	190	NO	Not Eligible
00619500001000	TRI PAC	20715 50TH AVE W	Lynnwood	1966	191	NO	Not Eligible
00462601200100	ESCAMILLA ALMADERICA	20806 52ND AVE W	Lynnwood	1960	196	NO	Not Eligible
00462601200400	CHEN SAM & HUA LAI	20812 52ND AVE W	Lynnwood	1960	200	NO	Not Eligible
00462601200500	LIDDELL PAULETTE F	20818 52ND AVE W	Lynnwood	1960	203	NO	Not Eligible
00462601200800	ST MARYS COPTIC ORTHODOX CH	20830 52ND AVE W	Lynnwood	1959	208	NO	Not Eligible
27042100403800	BALDWIN DOUGLAS N	20909 52ND AVE W	Lynnwood	1930	213	NO	Not Eligible
00462601300400	MILLER SU JA Lee Manor	20918 52ND AVE W	Lynnwood	1968	215	NO	Not Eligible
00516600000702	ECKERSON RICHARD L	20924 49TH AVE W	Lynnwood	1956	221	NO	Not Eligible
00462601500200	PULIDO JUVENAL & NELHYDA/VA	21007 54TH AVE W	Lynnwood	1925	226	NO	Not Eligible
00462601500600	BURTIS JAMES D & TAMARA R	21019 54TH AVE W	Lynnwood	1933	232	NO	Not Eligible
00462601500700	SURFACE NICOLE STACIA	21031 54TH AVE W	Lynnwood	1952	233	NO	Not Eligible
00525100002200	MELCHOR LUIS	21307 59TH PL W	Mountlake T	1955	268	NO	Not Eligible
00619900001702	CARSWELL JOLI	21404 56TH AVE W	Mountlake T	1969	277	NO	Not Eligible
00619900004700	SCHAFER DAYLEN L & TINA A	21528 58TH AVE W	Mountlake T	1944	286	NO	Not Eligible
00525400000100	FERGUSON ANN L	22001 64TH AVE W	Mountlake T	1961	296	NO	Not Eligible
00525400000800	QUACKENBUSH JUDY	22005 64TH AVE W	Mountlake T	1961	300	NO	Not Eligible
00524000005700	CARLSON PAUL & LAURA	22201 62ND AVE W	Mountlake T	1954	307	NO	Not Eligible
00523000100100	PERRINE RALPH E	22202 60TH AVE W	Mountlake T	1953	306	NO	Not Eligible
00524000009401	CASTILLO LIBBY D	22202 62ND AVE W	Mountlake T	1954	311	NO	Not Eligible
00524000005600	KHA STANLEY J & LIA C	22203 62ND AVE W	Mountlake T	1954	310	NO	Not Eligible
00523000100200	COOPER MARGARET	22204 60TH AVE W	Mountlake T	1953	309	NO	Not Eligible
00524000009301	MERRIAM KAREN	22204 62ND AVE W	Mountlake T	1954	314	NO	Not Eligible
00524000005500	PERINGER F M & S A / PERINGER	22205 62ND AVE W	Mountlake T	1954	313	NO	Not Eligible
00523000100300	DAVIS THOMAS M	22206 60TH AVE W	Mountlake T	1953	312	NO	Not Eligible
00524000009200	WHALEN MARY C	22206 62ND AVE W	Mountlake T	1954	319	NO	Not Eligible
00524000005400	CLARK JOHN	22207 62ND AVE W	Mountlake T	1954	316	NO	Not Eligible
00523000100400	SAETEURN SAENG & MUANG CH	22208 60TH AVE W	Mountlake T	1953	315	NO	Not Eligible
00524000005100	MARTIN ROBERT M	22209 62ND AVE W	Mountlake T	1960	320	NO	Not Eligible
00523000100500	ABILLE FELICITO & SUSAN	22210 60TH AVE W	Mountlake T	1953	317	NO	Not Eligible
00523000100600	KING WILLIAM H	22302 60TH AVE W	Mountlake T	1953	321	NO	Not Eligible
00524000008500	DIAZ PEDRO R	22302 62ND AVE W	Mountlake T	1954	326	NO	Not Eligible
00523000100700	LEASK PAUL H	22304 60TH AVE W	Mountlake T	1953	322	NO	Not Eligible
00524000004900	MACKAY JOHN	22305 63RD AVE W	Mountlake T	1954	328	NO	Not Eligible
00523000100800	EARLY MARK E & TERI	22306 60TH AVE W	Mountlake T	1953	324	NO	Not Eligible
00524000004800	KEMPF JANET I	22307 62ND AVE W	Mountlake T	1954	329	NO	Not Eligible
00524000004700	MARK JOHN P	22309 62ND AVE W	Mountlake T	1960	330	NO	Not Eligible
00524000004600	HORD KELLI K/HUGHES D STONEY	22403 62ND AVE W	Mountlake T	1955	332	NO	Not Eligible
00524000004500	RADCLIFF BRYAN	22405 62ND AVE W	Mountlake T	1954	333	NO	Not Eligible
00524000004400	WILLIAMS MELVIN D	22407 62ND AVE W	Mountlake T	1954	334	NO	Not Eligible
00524000004300	MILLER JERRY F	22501 62ND AVE W	Mountlake T	1954	335	NO	Not Eligible
00524000004200	KIMMET AMANDA EVE	22503 62ND AVE W	Mountlake T	1954	336	NO	Not Eligible
00524000004100	FITZGERALD RICHARD W	22505 62ND AVE W	Mountlake T	1954	337	NO	Not Eligible
00524000004000	LACHNER GREGORY L & JODI R	22601 62ND AVE W	Mountlake T	1954	338	NO	Not Eligible
00524000003400	CHAPPELL BRADLEY	22610 62ND AVE W	Mountlake T	1954	341	NO	Not Eligible

LYNNWOOD EXTENSION - GROUP 3 HPIF'S

Parcel_ID	Owner	Address	City	Year Built	ID #	Recommended NR Eligible?	SHPO Determination
00524000003501	HARBAUGH ALLEN G	22611 62ND AVE W	Mountlake T	1954	342	NO	Not Eligible
00522400007400	CASE WILLIAM D	22901 63RD AVE W	Mountlake T	1954	350	NO	Not Eligible
00522400007300	METZER DEREK L & BECKY J	22903 63RD AVE W	Mountlake T	1954	352	NO	Not Eligible
00522300307200	SERRANO JUAN C	23001 63RD AVE W	Mountlake T	1954	355	NO	Not Eligible
00522300307100	SCOTT ROBERT P & CLARK CAROL	23003 63RD AVE W	Mountlake T	1954	356	NO	Not Eligible
00522300307000	MEYERS RICHARD & CARMEN	23005 63RD AVE W	Mountlake T	1954	357	NO	Not Eligible
00522300306900	WHITTAKER BLAINE	23007 63RD AVE W	Mountlake T	1954	358	NO	Not Eligible
00522000302900	ERSPAMER JEFFREY S	23008 61ST AVE W	Mountlake T	1951	362	NO	Not Eligible
00522300306800	MILLER JENNIFER M	23009 63RD AVE W	Mountlake T	1954	359	NO	Not Eligible
00522300306700	HIGBY MARJORIE J	23011 63RD PL W	Mountlake T	1954	360	NO	Not Eligible
00522300306600	KIRK ANDREA D	23013 63RD PL W	Mountlake T	1954	361	NO	Not Eligible
00522300306400	EYRISH BARBARA L	23014 63RD PL W	Mountlake T	1954	364	NO	Not Eligible
00522300306500	WOOLSEY ERIC & DOYLE MANDI	23015 63RD PL W	Mountlake T	1954	363	NO	Not Eligible
00522000302700	CRAIN DEREK A	23102 61ST AVE W	Mountlake T	1951	365	NO	Not Eligible
00522000302500	ERAL LLC	23106 61ST AVE W	Mountlake T	1951	366	NO	Not Eligible
00522000600600	CHARTRAND KURT W & SANDRA	23109 61ST AVE W	Mountlake T	1951	368	NO	Not Eligible
00522000302400	ROBLES RONALD & MICHELLE	23110 61ST AVE W	Mountlake T	1951	369	NO	Not Eligible
00522000302300	DAVIES ALLEN L & KRYSTYNA	23112 61ST AVE W	Mountlake T	1951	373	NO	Not Eligible
00522300305400	RUTHFORD LESLIE L	23113 63RD AVE W	Mountlake T	1954	367	NO	Not Eligible
00522300305300	LAUNDERS DAVID K	23115 63RD AVE W	Mountlake T	1954	370	NO	Not Eligible
00524700000200	HAWES JAESON & SHAUNA	23203 63RD AVE W	Mountlake T	1953	378	NO	Not Eligible
00524700000300	BUCHANAN BENJAMIN	23205 63RD AVE W	Mountlake T	1955	381	NO	Not Eligible
00524700000400	HAUGEN CHAD D & LARA C	23207 63RD AVE W	Mountlake T	1953	383	NO	Not Eligible
00524700002600	ADOLPHSON JANET L	23210 63RD AVE W	Mountlake T	1955	389	NO	Not Eligible
00524700002700	SLY RUSSELL W	23212 63RD AVE W	Mountlake T	1955	391	NO	Not Eligible
00524700002800	MCANALLY KELLY	23300 63RD AVE W	Mountlake T	1955	393	NO	Not Eligible
00524700002900	MACMULLEN DAVID R	23302 63RD AVE W	Mountlake T	1953	397	NO	Not Eligible
00524700003000	NGUYEN VIEN & VU TAM	23304 63RD AVE W	Mountlake T	1955	398	NO	Not Eligible
00524100001200	VIERRA KANOE C	23501 59TH PL W	Mountlake T	1954	400	NO	Not Eligible
00524100001300	BELAIR RONALD H & SHANNON L	23502 59TH PL W	Mountlake T	1954	401	NO	Not Eligible
00524100001400	TAYLOR JAMES L	23504 59TH PL W	Mountlake T	1954	402	NO	Not Eligible
00524100001500	FLEMING FAMILY LOVING TRUST	23506 59TH PL W	Mountlake T	1954	403	NO	Not Eligible
00372600600600	4711 200TH STREET LLC Cambridge Square	4727 200TH ST SW	Lynnwood	1969	1	NO	Not Eligible
00608400200401	OXFORD SQUARE LTD PRTNSHP	4807 200TH ST SW	Lynnwood	1968	3	NO	Not Eligible
27042100403400	CLOCKSIN DUANE B JR & SANDRA	5016 208TH ST SW	Lynnwood	1968	198	NO	Not Eligible
00401200000400	LONG VIRGINIA	5207 204TH ST SW	Lynnwood	1959	168	NO	Not Eligible
00401200000500	SHARMA SANJEEV & MANSI	5215 204TH ST SW	Lynnwood	1959	169	NO	Not Eligible
27042800201600	5302 212TH ST LLC	5302 212TH ST SW	Mountlake T	1937	250	NO	Not Eligible
27042800202200	LEWIS CRAIG A	5522 212TH ST SW	Mountlake T	1948	246	NO	Not Eligible
27042100310500	GILLEN MARGARET	5525 212TH ST SW	Lynnwood	1960	242	NO	Not Eligible
00619900002700	FARRAR TYLER	5602 212TH ST SW	Mountlake T	1941	247	NO	Not Eligible
00619900002000	ZHANG AIZHONG	5604 212TH ST SW	Mountlake T	1956	253	NO	Not Eligible
27042100307700	GILLEN MARGARET	5605 212TH ST SW	Lynnwood	1936	241	NO	Not Eligible
00619900002102	DAVIS HOLLY L	5610 212TH ST SW	Mountlake T	1945	248	NO	Not Eligible
27042100306900	TODD RUSSELL	5615 212TH ST SW	Lynnwood	1947	239	NO	Not Eligible
00619900002202	WICK LOUIS A	5625 213TH ST SW	Mountlake T	1951	257	NO	Not Eligible
00619900002303	SPICUZZA ROBIN L	5627 213TH ST SW	Mountlake T	1958	255	NO	Not Eligible
00404100000100	MATTOX TERESA	5632 213TH ST SW	Mountlake T	1962	259	NO	Not Eligible
00404100000200	AMOS-PITTS SANDI	5710 213TH ST SW	Mountlake T	1962	260	NO	Not Eligible
00619900002402	SPICUZZA ROBIN L	5711 213TH ST SW	Mountlake T	1953	256	NO	Not Eligible
00404100000300	JACOBS RAYMOND	5720 213TH ST SW	Mountlake T	1962	261	NO	Not Eligible
00525100002400	PLANTE J J	5801 214TH ST SW	Mountlake T	1955	264	NO	Not Eligible
00525100002300	RAUCH TERRY	5803 214TH ST SW	Mountlake T	1955	266	NO	Not Eligible
00525100000200	ERICKSON PHILIP	5804 214TH ST SW	Mountlake T	1955	269	NO	Not Eligible
00525100000300	STRASBURG GERALD L	5806 214TH ST SW	Mountlake T	1955	271	NO	Not Eligible

LYNNWOOD EXTENSION - GROUP 3 HPIF'S

Parcel_ID	Owner	Address	City	Year Built	ID #	Recommended NR Eligible?	SHPO Determination
00525100000500	BAXTER SANDRA	5810 214TH ST SW	Mountlake T	1955	276	NO	Not Eligible
00525100001602	WAYT/FRANK	5901 214TH ST SW	Mountlake T	1955	272	NO	Not Eligible
00525100000600	SANCHEZ RENE	5902 214TH ST SW	Mountlake T	1955	278	NO	Not Eligible
00525100001500	VAN HAL FRED	5903 214TH ST SW	Mountlake T	1955	275	NO	Not Eligible
00525100000700	GALLAGHER GERALD F JR	5904 214TH ST SW	Mountlake T	1955	279	NO	Not Eligible
00525100000800	HERRMANN BRENT & JENNIFER	5906 214TH ST SW	Mountlake T	1955	283	NO	Not Eligible
00525100000900	HAARSTAD RODNEY	5908 214TH ST SW	Mountlake T	1955	281	NO	Not Eligible
00525100001000	RICHARDSON LYNN M	5910 214TH ST SW	Mountlake T	1955	280	NO	Not Eligible
00525100001100	RUELAS JOSE R & FRANCESCA	5912 214TH ST SW	Mountlake T	1955	282	NO	Not Eligible
00524800001100	HEINZ DANA L	6001 233RD PL SW	Mountlake T	1960	388	NO	Not Eligible
00524800001502	DRESSER FRED & ALICIA	6002 233RD PL SW	Mountlake T	1960	394	NO	Not Eligible
00520900200600	JENSEN RICHARD	6002 237TH ST SW	Mountlake T	1959	407	NO	Not Eligible
00523000100900	LOES MARY L	6003 224TH ST SW	Mountlake T	1955	327	NO	Not Eligible
00524800000600	CARBARY LESLIANNE	6003 232ND PL SW	Mountlake T	1960	379	NO	Not Eligible
00522000600900	JEFFERS JAY D & EMILY S	6003 232ND ST SW	Mountlake T	1951	372	NO	Not Eligible
00524800001200	GILBERT DAVID	6003 233RD PL SW	Mountlake T	1960	387	NO	Not Eligible
00524800000900	FORSYTHE STEVEN J	6004 232ND PL SW	Mountlake T	1960	384	NO	Not Eligible
00524800000300	BURNS MARY A	6004 232ND ST SW	Mountlake T	1960	376	NO	Not Eligible
00524800001400	DANIELSON ROBERT & HOLLY	6004 233RD PL SW	Mountlake T	1960	396	NO	Not Eligible
00524800000700	TRIEMSTRA DONNA MARIE	6005 232ND PL SW	Mountlake T	1960	380	NO	Not Eligible
00524800001300	OSTBY DONALD A	6005 233RD PL SW	Mountlake T	1960	390	NO	Not Eligible
00524800000800	CARTER NINA E	6006 232ND PL SW	Mountlake T	1960	382	NO	Not Eligible
00524800000200	JONES RICHARD	6006 232ND ST SW	Mountlake T	1960	375	NO	Not Eligible
00522000600800	DAVIES ADAM L	6007 232ND ST SW	Mountlake T	1951	371	NO	Not Eligible
00524800000100	DAVIDSON DAVID A JR	6102 232ND ST SW	Mountlake T	1960	374	NO	Not Eligible
27042900100800	RED MORTGAGE CAPITAL - Lakeside Apartments	6102 ST ALBION WAY	Mountlake T	1969	304	NO	Not Eligible
00524000000600	LAYNE JEFFREY A	6103 227TH ST SW	Mountlake T	1954	347	NO	Not Eligible
00524000009100	LOBB HOWARD J	6201 223RD PL SW	Mountlake T	1954	318	NO	Not Eligible
00524000000700	CARIKER DEAN A	6201 227TH ST SW	Mountlake T	1954	346	NO	Not Eligible
00524000009500	BAKER HENRY	6202 222ND ST SW	Mountlake T	1954	308	NO	Not Eligible
00524000008600	NGUYEN THANH HIEP	6202 223RD PL SW	Mountlake T	1954	323	NO	Not Eligible
00524000000800	KINTZ SCOTT J	6203 227TH ST SW	Mountlake T	1954	345	NO	Not Eligible
00524000000900	ASBURY LARRY R	6205 227TH ST SW	Mountlake T	1954	344	NO	Not Eligible
00525400000500	LOISEAU LOREN	6302 220TH PL SW	Mountlake T	1961	299	NO	Not Eligible
00525400000400	HAILU DAWIT	6303 220TH PL SW	Mountlake T	1961	298	NO	Not Eligible
00525400001200	WEBBER LORETTA T	6303 221ST PL SW	Mountlake T	1961	305	NO	Not Eligible
00525400000600	MUELLER GEORGE J	6304 220TH PL SW	Mountlake T	1961	302	NO	Not Eligible
00525400000300	SHEEHY EJ	6305 220TH PL SW	Mountlake T	1961	295	NO	Not Eligible
00525400001100	DIAZ NINO	6305 221ST PL SW	Mountlake T	1961	303	NO	Not Eligible
00525400000700	LIBERTY RYAN T	6306 220TH PL SW	Mountlake T	1961	301	NO	Not Eligible
00525400000200	KIM CHU S	6307 220TH PL SW	Mountlake T	1961	297	NO	Not Eligible

Allyson Brooks, Director
State Historic Preservation Officer

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

Protect the Past. Shape the Future

December 4, 2012

Mr. Dan Drais
Federal Transit Administration
915 2nd Avenue
Federal Building, Suite 3142
Seattle, WA 98174-1002

In future correspondence please refer to:
Log: 100611-07-FTA
Property: Sound Transit's Lynnwood Link Extension Light Rail Project
Re: Concur on Five Eligible Properties

Dear Mr. Drais:

Thank you for contacting our office. Mr. Michael Houser and I have reviewed the materials you provided to our office. Our review comments are as follows:

- We concur that the four built environment properties identified by your consultant are eligible for listing in the National Register of Historic Places (NRHP). These include the properties at 13130 5th Ave. NE (Church Parsonage), 11725 1st Ave NE (Northgate Elementary), 132 NE 155th St (Toyonaga property), and 6205 222nd St SW (Melody Hill School).
- Mr. Houser also identified an additional property that he believes is eligible for listing in the NRHP, the Northgate Plaza property at 11200 1st Ave NE. Unless you have objections, DAHP would like to list this property in our Historic Property Inventory database as *eligible* for listing in the NRHP.
- After reviewing the archaeological site forms submitted for a segment of the former Interurban Railway alignment and the Scriber Creek Park site (please have a Smithsonian trinomial assigned at your earliest convenience), I concur with your determination that the Scriber Creek Park site is not eligible for listing in the NRHP. I do appreciate your determination that the remnant of the Interurban alignment is a continuation of a previously identified resource (45SN531) and appending that site form with the newly discovered segment of that resource. Since this is a small fraction of the resource known as the Interurban Railroad, and the objective of this undertaking was not to evaluate the entire resource, I will concur that the segment defined within your area of potential effect can be considered a 'non-contributing segment' to the larger resource known as the Interurban Railway alignment.

We look forward to further consultation regarding your determination of effect to those resources that are eligible for listing in the NRHP.

I would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4) and the survey report when it is available.

State of Washington
Department of Archaeology & Historic Preservation
P.O. Box 48343 • Olympia, Washington 98504-8343
360.586.3065
www.dahp.wa.gov

DEC 10 2012 PM 1:37

These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800.

Thank you for the opportunity to review and comment. If you have any questions, please feel free to contact me.

Sincerely,

Matthew Sterner, M.A.
Transportation Archaeologist
(360) 586-3082
matthew.sterner@dahp.wa.gov

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

October 24, 2012

Mr. Ron Krochalis
Federal Transit Administration
915 2nd Avenue
Federal Building, Suite 3142
Seattle, WA 98174-1002

In future correspondence please refer to:
Log: 100611-07-FTA
Property: Sound Transit's Lynnwood Link Extension Light Rail Project
Re: NOT Eligible

Dear Mr. Krochalis:

Thank you for contacting the Washington State Department of Archaeology and Historic Preservation (DAHP). Per your request, I have reviewed the first group of historic property inventory forms (HPIF's) for the **Lynnwood Link light rail extension project** on behalf of the State Historic Preservation Officer under provisions of Section 106 of the National Historic Preservation Act of 1966 (as amended) and 36 CFR Part 800. This group of inventory forms roughly covers the area between NE 170th St and the Snohomish County line at NE 205th Street. My review is based upon documentation contained in your communication.

Research indicates that none of the inventoried properties are currently listed in the Washington Heritage Register or National Register of Historic Places. After careful evaluation I have determined that none of the inventoried properties rise to the level of eligible for listing on the National Register of Historic Places. I have attached a matrix which outlines these determinations for your files. Please note that this differs slightly from your consultant's determination which believed that two properties were eligible for listing. While these two resource have a moderate level of architectural integrity, they do not rise to the level of individual listing on the National Register.

I look forward to a second group of inventoried properties within the APE for this project in the coming weeks. Thank you for the opportunity to review and comment. Should you have any questions, please contact me.

Sincerely,

Michael Houser
State Architectural Historian
(360) 586-3076
michael.houser@dahp.wa.gov

	A	B	C	D	E	F	G	H
1	**LYNNWOOD LINK EXTENSION - GROUP 1 HPIF'S**							
2	**Unique ID #**	**Parcel #**	**Owner**	**Address**	**City**	**Year Built**	**Recommended NRHP eligible?**	**SHPO Determination**
3	435	3971700705	MCCAFFERTY MATT J+MCCAFFERTY	1002 NE 198TH ST	Shoreline	1950	no	NOT ELIGIBLE
4	518	2555300091	GUTSCH DOROTHY M+KLUESS AND	1005 NE 188TH ST	Shoreline	1951	no	NOT ELIGIBLE
5	441	7805300160	FILE THOMAS+KIM SALDIN	1010 NE 197TH ST	Shoreline	1953	no	NOT ELIGIBLE
6	432	3971700700	JAEGER D M	1010 NE 198TH ST	Shoreline	1962	no	NOT ELIGIBLE
7	517	2555300090	FERREIRA MONICA	1011 NE 188TH ST	Shoreline	1950	no	NOT ELIGIBLE
8	521	2555900070	MENNING SHAWN+KERRY ENGLISH	1017 NE 188TH ST	Shoreline	1951	no	NOT ELIGIBLE
9	704	7305300205	ALFI ELIASS & LISA F	104 NE 170TH ST	Shoreline	1948	no	NOT ELIGIBLE
10	673	7305300275	LOWE WILLIAM G+RUTH ELLEN	105 NE 174TH ST	Shoreline	1948	no	NOT ELIGIBLE
11	709	5727500120	GREEN TERRY L	109 NE 170TH ST	Shoreline	1951	no	NOT ELIGIBLE
12	705	7305300280	DUNSTAN JAMIE	110 NE 170TH ST	Shoreline	1948	no	NOT ELIGIBLE
13	670	7305300010	HAYWORTH DANNY L	110 NE 174TH ST	Shoreline	1948	no	NOT ELIGIBLE
14	428	3971700560	PHILLIPS TRACIE E+JONATHAN	1103 NE 200TH ST	Shoreline	1942	no	NOT ELIGIBLE
15	674	7305300350	JOHNSTON JOSEPH M	111 NE 174TH ST	Shoreline	1948	no	NOT ELIGIBLE
16	666	7305300015	WANG PHILIP FUEN+ESTHER ZAI	116 NE 174TH ST	Shoreline	1948	no	NOT ELIGIBLE
17	708	7305900115	ALCANTARA KENNETH L II	119 NE 170TH ST	Shoreline	1948	no	NOT ELIGIBLE
18	707	5727500130	STRATTON DENIESE C	121 NE 170TH ST	Shoreline	1952	no	NOT ELIGIBLE
19	667	7305300020	HOMAN ANTHONY D	122 NE 174TH ST	Shoreline	1948	no	NOT ELIGIBLE
20	668	7305300025	JACOBSEN PATRICIA A	128 NE 174TH ST	Shoreline	1948	no	NOT ELIGIBLE
21	706	5727500131	GIORDANO GEORGE	16761 3RD AVE NE	Shoreline	1952	no	NOT ELIGIBLE
22	702	7305300210	ORTEGA JOEL+DIANA K	17010 1ST AVE NE	Shoreline	1948	no	NOT ELIGIBLE
23	703	7305300285	METCALF NADIA C	17011 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
24	700	7305300215	BROCKMAN JAMES C	17016 1ST AVE NE	Shoreline	1948	no	NOT ELIGIBLE
25	701	7305300290	LIAO AMY+HENZMAN BRIAN+LIAO	17017 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
26	698	7305300220	MARTINEZ GEORGE L JR	17022 1ST AVE NE	Shoreline	1948	no	NOT ELIGIBLE
27	699	7305300295	ELLIS DARREL D+PATRICIA	17023 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
28	696	7305300225	TURNBOUGH CLAY G	17028 1ST AVE NE	Shoreline	1948	no	NOT ELIGIBLE
29	697	7305300300	HOWSON WILLIAM P	17029 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
30	694	7305300230	MCMAHON JOANNA	17034 1ST AVE NE	Shoreline	1948	no	NOT ELIGIBLE
31	695	7305300305	TEODORO ROLAND	17035 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
32	692	7305300235	GUZMAN INEZ+CASTELLON JOSE	17040 1ST AVE NE	Shoreline	1948	no	NOT ELIGIBLE
33	693	7305300310	CHURCH VIRGIL E	17041 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
34	690	7305300240	MYERS DENNIS	17046 1ST AVE NE	Shoreline	1948	no	NOT ELIGIBLE
35	691	7305300315	BEHRMAN JEFFREY H+LISA M	17047 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
36	688	7305300245	ELMORE MICHAEL A	17052 1ST AVE NE	Shoreline	1948	no	NOT ELIGIBLE

	A	B	C	D	E	F	G	H
37	689	7305300320	FANG HAO QIANG+LI QING PENG	17053 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
38	686	7305300250	POTESTIVO DEBERA D+MADDOX J	17058 1ST AVE NE	Shoreline	1948	no	NOT ELIGIBLE
39	687	7305300325	GROUT JONATHAN M+STRAHAN AN	17059 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
40	684	7305300255	GRIFFIN THOMAS M	17204 1ST AVE NE	Shoreline	1948	no	NOT ELIGIBLE
41	685	7305300330	HAYNES GARRET	17205 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
42	682	7305300260	KUBICKA MARIAN	17210 1ST AVE NE	Shoreline	1948	no	NOT ELIGIBLE
43	683	7305300335	BAINBRIDGE JAMES R+LIU STARRY J	17211 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
44	679	7305300265	HERNANDEZ GUILLERMO+JUANA M	17216 1ST AVE NE	Shoreline	1948	no	NOT ELIGIBLE
45	681	7305300415	CALMA ILUMINADO Y	17216 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
46	680	7305300340	HAGER SARAH L	17217 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
47	676	7305300270	MIRANDA BERNARD C	17222 1ST AVE NE	Shoreline	1948	no	NOT ELIGIBLE
48	678	7305300420	PARR ARNOLD	17222 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
49	677	7305300345	MAEHL DAVE	17223 2ND AVE NE	Shoreline	1948	no	NOT ELIGIBLE
50	653	7772400150	MCCUE PATRICK J	17733 2ND PL NE	Shoreline	1966	no	NOT ELIGIBLE
51	654	7772400140	FLOREZ JORGE+HAZEL	17734 2ND PL NE	Shoreline	1966	no	NOT ELIGIBLE
52	651	7772400160	SALVATION ARMY	17737 2ND PL NE	Shoreline	1965	no	NOT ELIGIBLE
53	652	7772400130	MENTELE CHRISTOPHER C+CYNTH	17738 2ND PL NE	Shoreline	1966	no	NOT ELIGIBLE
54	649	7772400170	LOI HOA TANG & HONG DIEP	17741 2ND PL NE	Shoreline	1965	no	NOT ELIGIBLE
55	646	7772400180	JONES NIKO	17747 2ND PL NE	Shoreline	1967	no	NOT ELIGIBLE
56	648	7772400120	BINGE DWIGHT E+MARY LOUISE	17748 2ND PL NE	Shoreline	1966	no	NOT ELIGIBLE
57	**644**	**7772400190**	**ROGERS MARK A+JACQUIE D**	**17753 2ND PL NE**	**Shoreline**	**1966**	**yes**	**NOT ELIGIBLE**
58	641	7772400010	HO ANH-TUAN+QUYNH-UYEN+QUYN	17803 3RD AVE NE	Shoreline	1966	no	NOT ELIGIBLE
59	643	7772400090	WHITEHILL LEROY L	17804 3RD AVE NE	Shoreline	1963	no	NOT ELIGIBLE
60	638	7772400020	RIZVI SYED ALI ABBAS+SYEDA	17809 3RD AVE NE	Shoreline	1965	no	NOT ELIGIBLE
61	639	7772400080	DAILEY DAVID E H	17810 3RD AVE NE	Shoreline	1964	no	NOT ELIGIBLE
62	636	7772400030	VALENZUELA OSCAR J	17815 3RD AVE NE	Shoreline	1965	no	NOT ELIGIBLE
63	637	7772400070	BORNONG WALLACE L	17816 3RD AVE NE	Shoreline	1966	no	NOT ELIGIBLE
64	633	7772400040	STEVENS TAMARA	17821 3RD AVE NE	Shoreline	1965	no	NOT ELIGIBLE
65	635	7772400060	LEE ALYSSA	17822 3RD AVE NE	Shoreline	1966	no	NOT ELIGIBLE
66	632	7772400050	GREEN LARRY J	17825 3RD AVE NE	Shoreline	1963	no	NOT ELIGIBLE
67	627	1115100137	NOYES JAMES A & MARGARET A	17861 5TH AVE NE	Shoreline	1955	no	NOT ELIGIBLE
68	620	0927100070	NIEVES RODRIGO	18016 5TH AVE NE	Shoreline	1956	no	NOT ELIGIBLE
69	619	6084100110	COSS GUY O	18017 5TH AVE NE	Shoreline	1913	no	NOT ELIGIBLE
70	614	6084100100	DALE ERIC C	18027 5TH AVE NE	Shoreline	1941	no	NOT ELIGIBLE
71	615	0927100076	WILLITS RALPH	18032 5TH AVE NE	Shoreline	1942	no	NOT ELIGIBLE
72	609	0927100082	URDAHL RANCE & KELLY	18036 5TH AVE NE	Shoreline	1942	no	NOT ELIGIBLE
73	601	5662100050	COOK KATHERINE ANN	18057 7TH AVE NE	Shoreline	1954	no	NOT ELIGIBLE
74	599	5662100055	PAINTER BRUCE	18063 7TH AVE NE	Shoreline	1954	no	NOT ELIGIBLE

	A	B	C	D	E	F	G	H
75	595	5662100060	HANSEN KARI L+ALBERTA J	18069 7TH AVE NE	Shoreline	1954	no	NOT ELIGIBLE
76	592	5662100065	DORGAN RICHARD A	18301 7TH AVE NE	Shoreline	1954	no	NOT ELIGIBLE
77	590	5662100070	FULENWIDER WANDA JANEESE	18307 7TH AVE NE	Shoreline	1954	no	NOT ELIGIBLE
78	589	5662100090	HALL DANIEL C	18308 7TH AVE NE	Shoreline	1954	no	NOT ELIGIBLE
79	598	0927100094	MCCAHILL FRANCIS D+MARY JO	18310 5TH AVE NE	Shoreline	1951	no	NOT ELIGIBLE
80	587	5662100075	RALSTON KENNETH R+CHRISTINE	18313 7TH AVE NE	Shoreline	1954	no	NOT ELIGIBLE
81	586	5662100080	JOHNSTON ROBERT ALLAN JR	18316 7TH AVE NE	Shoreline	1954	no	NOT ELIGIBLE
82	585	5662100085	FURNEY THOMAS R	18317 8TH AVE NE	Shoreline	1954	no	NOT ELIGIBLE
83	594	0927100098	LOPEZ RICARDO	18320 5TH AVE NE	Shoreline	1968	no	NOT ELIGIBLE
84	584	0927100016	SANCHEZ MIKE G	18323 8TH AVE NE	Shoreline	1952	no	NOT ELIGIBLE
85	581	0927100015	BALTAZAR-LUNA ARCADIO+EUGEN	18329 8TH AVE NE	Shoreline	1953	no	NOT ELIGIBLE
86	574	6163900092	BOYLE CHRISTINE M & SEARLE	18342 8TH AVE NE	Shoreline	1951	no	NOT ELIGIBLE
87	583	6163900121	JOHNSEN LAUREN M	18342 9TH AVE NE	Shoreline	1947	no	NOT ELIGIBLE
88	582	6163900091	MCDERMOTT JOANN S	18343 9TH AVE NE	Shoreline	1947	no	NOT ELIGIBLE
89	578	6163900110	HOULTON DENNIS W+LISA M	18348 9TH AVE NE	Shoreline	1950	no	NOT ELIGIBLE
90	579	6163900093	RAMOS ALBERTO D	18349 9TH AVE NE	Shoreline	1947	no	NOT ELIGIBLE
91	569	6163900094	VALERA JANET B	18353 9TH AVE NE	Shoreline	1950	no	NOT ELIGIBLE
92	571	6163900112	CHU CHIH HUNG+QING CAO	18354 9TH AVE NE	Shoreline	1950	no	NOT ELIGIBLE
93	566	2555300055	BAIL SHELLY J #18622	18504 10TH AVE NE	Shoreline	1949	no	NOT ELIGIBLE
94	564	3235100270	LAMA NYIMA C+DOLKAR TSERING	18504 8TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
95	563	0526049030	WHITMORE KAREN M+WILLIAM N	18509 8TH AVE NE	Shoreline	1955	no	NOT ELIGIBLE
96	561	2555300060	KATZENMAIER GARY L	18510 10TH AVE NE	Shoreline	1949	no	NOT ELIGIBLE
97	555	3235100265	MORI ELLEN C	18510 8TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
98	554	2555300065	BLUE MARK & JONITA	18516 10TH AVE NE	Shoreline	1949	no	NOT ELIGIBLE
99	550	3235100260	MEARNS J S	18516 8TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
100	553	0526049028	O'NEAL ALETTA	18517 8TH AVE NE	Shoreline	1949	no	NOT ELIGIBLE
101	547	2555300070	COLBERG STEPHEN R+JANET O	18522 10TH AVE NE	Shoreline	1949	no	NOT ELIGIBLE
102	544	3235100255	PEHRSON JEAN I	18522 8TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
103	546	0526049040	ETELAMAKI CYNTHIA R	18523 8TH AVE NE	Shoreline	1951	no	NOT ELIGIBLE
104	548	3235100295	MARTIN-VEGUE DOUGLAS	18525 10TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
105	542	2555300075	RAMSTEAD ARNE L	18528 10TH AVE NE	Shoreline	1949	no	NOT ELIGIBLE
106	538	0526049044	PHILLIPS MICHAEL A	18528 7TH AVE NE	Shoreline	1953	no	NOT ELIGIBLE
107	537	3235100249	MORGAN ALLAN R	18528 8TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
108	540	0526049054	GOMEZ NELSON E+VIVIAN L	18529 8TH AVE NE	Shoreline	1937	no	NOT ELIGIBLE
109	543	3235100300	DEANGELO DEAN A+DAVID A	18531 10TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
110	534	0526049055	MURPHY FRANK A+MIA L	18533 8TH AVE NE	Shoreline	1966	no	NOT ELIGIBLE
111	536	2555300080	MCDOWELL SCOTT+HEATHER	18534 10TH AVE NE	Shoreline	1949	no	NOT ELIGIBLE
112	533	0526049015	WICKERSHAM JOHN & LYNNETTE	18534 7TH AVE NE	Shoreline	1965	no	NOT ELIGIBLE

	A	B	C	D	E	F	G	H
113	532	3235100244	MORGAN ALLAN R+HOPE A	18534 8TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
114	535	3235100305	RICE RICHARD STANLEY	18537 10TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
115	528	0526049050	BURNS KARIE L+MARK J	18539 8TH AVE NE	Shoreline	1955	no	NOT ELIGIBLE
116	531	2555300085	GOLOB RICHARD+ANNA	18540 10TH AVE NE	Shoreline	1949	no	NOT ELIGIBLE
117	526	3235100240	LEDBETTER ELI J+ANNIKA BRIT	18540 8TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
118	524	0526049025	PRANGER STEPHEN W+CATHERINE	18547 8TH AVE NE	Shoreline	1943	no	NOT ELIGIBLE
119	525	2555300092	BURKE MILISSA E	18548 10TH AVE NE	Shoreline	1949	no	NOT ELIGIBLE
120	509	0526049032	MCCOY GEORGE JR+THERESA M	18552 7TH AVE NE	Shoreline	1951	no	NOT ELIGIBLE
121	510	0526049024	EDWARDS CHRISTOPHER+DANELLE	18553 8TH AVE NE	Shoreline	1949	no	NOT ELIGIBLE
122	514	3235100205	PHILLIPS WARREN B	18554 8TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
123	513	0526049022	GROHS HARLAN C+IDA M TRUST	18556 5TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
124	507	0526049011	SHIRLEY JUDY L	18559 8TH AVE NE	Shoreline	1941	no	NOT ELIGIBLE
125	504	0526049051	CHOUN RURT	18560 5TH AVE NE	Shoreline	1954	no	NOT ELIGIBLE
126	491	2555300005	SIN HENRY H & LEE BO KWUN	18804 10TH AVE NE	Shoreline	1949	no	NOT ELIGIBLE
127	499	3971702311	MARTINEZ CAMILO+RENEE	18807 8TH AVE NE	Shoreline	1956	no	NOT ELIGIBLE
128	492	3971702354	ZENG HUI+RU	18808 5TH AVE NE	Shoreline	1952	no	NOT ELIGIBLE
129	503	3235100155	SCOTT IAN+SABINA BURD	18809 10TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
130	490	3971702353	VICENCIO HUMBERTO+ADELINA	18814 5TH AVE NE	Shoreline	1952	no	NOT ELIGIBLE
131	489	3235100150	HOWE KATHLEEN R+NIELSEN SHAWI	18819 10TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
132	482	3971702355	SCHWEGEL KATHLEEN+JOSHUA A	18820 5TH AVE NE	Shoreline	1951	no	NOT ELIGIBLE
133	486	3235100105	ALMAJANO PIA L	18820 8TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
134	481	3235100100	OLEGARIO MARCEO	18910 8TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
135	478	3971702210	CRISP MARSHALL S+TIMOTHY C	18915 8TH AVE NE	Shoreline	1957	no	NOT ELIGIBLE
136	477	3235100005	ARAGON FRAULEIN+HECTOR	18920 8TH AVE NE	Shoreline	1948	no	NOT ELIGIBLE
137	476	3971702215	ARAGON HECTOR+FRAULEIN	18921 8TH AVE NE	Shoreline	1943	no	NOT ELIGIBLE
138	461	9373300015	BENTZ ESSUKO SUZUKI	19160 7TH AVE NE	Shoreline	1939	no	NOT ELIGIBLE
139	454	9373300020	PURSE ELVIRA V	19164 7TH AVE NE	Shoreline	1966	no	NOT ELIGIBLE
140	445	3985300320	MICIANO DINO S+MARIA NEOAMI	19520 7TH AVE NE	Shoreline	1928	no	NOT ELIGIBLE
141	446	7805300020	CIRVES LAURA J	19605 10TH AVE NE	Shoreline	1954	no	NOT ELIGIBLE
142	442	7805300030	WALLER JAMES A+STRAUSS,MAID	19705 10TH AVE NE	Shoreline	1953	no	NOT ELIGIBLE
143	439	7805300170	ROCK DENNIS W+COLLEEN M	19728 10TH AVE NE	Shoreline	1953	no	NOT ELIGIBLE
144	437	7805300060	HAMMON PAUL C III	19731 10TH AVE NE	Shoreline	1953	no	NOT ELIGIBLE
145	436	7805300070	MACCULLY WILLIAM BARTON+JUD	19741 10TH AVE NE	Shoreline	1956	no	NOT ELIGIBLE
146	422	3985300268	TORRES LUIS+MARTA RIVERA	20017 12TH AVE NE	Shoreline	1962	no	NOT ELIGIBLE
147	421	3985300261	CAMERON MICHAEL F	20035 12TH AVE NE	Shoreline	1937	no	NOT ELIGIBLE
148	420	3985300263	THAETE GERALD A	20039 12TH AVE NE	Shoreline	1962	no	NOT ELIGIBLE
149	419	3985300262	BOLIN RICHARD N J	20041 12TH AVE NE	Shoreline	1962	no	NOT ELIGIBLE
150	417	0308000070	HARBIN TAMMY L	20101 12TH AVE NE	Shoreline	1949	no	NOT ELIGIBLE

	A	B	C	D	E	F	G	H
151	669	7305300030	JOHNSON JENNIFER H	204 NE 174TH ST	Shoreline	1948	no	NOT ELIGIBLE
152	675	7305300425	ZIELKE CAROL ANN	205 NE 174TH ST	Shoreline	1948	no	NOT ELIGIBLE
153	662	1115100230	KOZOREZOVA LARISA V+KOZOREZOV	208 NE 175TH ST	Shoreline	1926	no	NOT ELIGIBLE
154	672	7305300035	KNOX MICHAEL J	210 NE 174TH ST	Shoreline	1948	no	NOT ELIGIBLE
155	663	7305300085	DEHAVEN WILLIAM S+KATHY	211 NE 175TH ST	Shoreline	1948	no	NOT ELIGIBLE
156	671	7305300040	TINDAL ROBERT A+SWAILS JESS	216 NE 174TH ST	Shoreline	1948	no	NOT ELIGIBLE
157	645	7772400110	ALCANTARA RODIL	239 NE 178TH ST	Shoreline	1968	no	NOT ELIGIBLE
158	647	1115100181	KAJA JEAN	311 NE 178TH ST	Shoreline	1962	no	NOT ELIGIBLE
159	570	6084100020	BLANCHARD MICHELLE A	327 NE 185TH ST	Shoreline	1965	no	NOT ELIGIBLE
160	557	2225300440	JS PROPERTIES	328 NE 185TH ST	Shoreline	1947	no	NOT ELIGIBLE
161	558	2225300445	YOUSUF MURAD M+NASREEN	330 NE 185TH ST	Shoreline	1943	no	NOT ELIGIBLE
162	626	1115100110	HEADINGS ALICE E	331 NE 180TH ST	Shoreline	1967	no	NOT ELIGIBLE
163	625	6084100118	KLEIN ADAM R+STEPHANIE L	332 NE 180TH ST	Shoreline	1925	no	NOT ELIGIBLE
164	628	1115100112	COLELLO DOUGLAS F	333 NE 180TH ST	Shoreline	1964	no	NOT ELIGIBLE
165	630	1115100113	DEPANO DANILO+NORMITA B	335 NE 180TH ST	Shoreline	1966	no	NOT ELIGIBLE
166	567	6084100025	COOK KAREN WILLIVER	335 NE 185TH ST	Shoreline	1939	no	NOT ELIGIBLE
167	631	1115100111	KNIGHT DENNIS W+GLORIANNE	337 NE 180TH ST	Shoreline	1965	no	NOT ELIGIBLE
168	621	6084100117	EVANS HOWARD E JR	338 NE 180TH ST	Shoreline	1925	no	NOT ELIGIBLE
169	572	6084100030	BARCEGA RUBY R	341 NE 185TH ST	Shoreline	1957	no	NOT ELIGIBLE
170	634	1115100121	TILLMAN CHARLIE+LOPEZ MARGIE	344 NE 178TH ST	Shoreline	1936	no	NOT ELIGIBLE
171	622	6084100114	BUTERBAUGH WILLIAM K	344 NE 180TH ST	Shoreline	1925	no	NOT ELIGIBLE
172	623	6084100116	GUMBEL BILLIE K	350 NE 180TH ST	Shoreline	1930	no	NOT ELIGIBLE
173	573	6084100035	QUINBY ROBERT HOWARD	351 NE 185TH ST	Shoreline	1942	no	NOT ELIGIBLE
174	624	6084100115	MORGAN JOHN P+ANITA	356 NE 180TH ST	Shoreline	1925	no	NOT ELIGIBLE
175	483	3971702351	BRIGGS LARRY A+CAROLYN S	511 NE 189TH ST	Shoreline	1928	no	NOT ELIGIBLE
176	448	6135300035	HAAS C MICHELLE	524 NE 195TH ST	Shoreline	1953	no	NOT ELIGIBLE
177	455	9373300130	WU RICHARD+ JOYLEE	525 NE 195TH ST	Shoreline	1952	no	NOT ELIGIBLE
178	449	3985300326	SERKA BRADLEY P+MARIA E GUE	702 NE 195TH ST	Shoreline	1952	no	NOT ELIGIBLE
179	450	3985300325	HINES SHAWN	706 NE 195TH ST	Shoreline	1928	no	NOT ELIGIBLE
180	485	3971702320	HERMANN JANELLE	715 NE 189TH ST	Shoreline	1931	no	NOT ELIGIBLE
181	480	3971702295	GEBERESLASSIE ALEMESEGED G	718 NE 189TH ST	Shoreline	1930	no	NOT ELIGIBLE
182	576	0927100011	BLOWER JOHN K	721 NE 185TH ST	Shoreline	1946	no	NOT ELIGIBLE
183	**485**	**3971702310**	**PATTERSON GERALDINE A**	**727 NE 189TH ST**	**Shoreline**	**1929**	**yes**	**NOT ELIGIBLE**
184	479	3971702305	NAVARRO GIL A JR+DOMINGA A	728 NE 189TH ST	Shoreline	1963	no	NOT ELIGIBLE
185	575	0927100008	PETERSEN JOAN MARIE	731 NE 185TH ST	Shoreline	1947	no	NOT ELIGIBLE
186	468	5490700080	MERRYMAN CARRIE A	805 NE 194TH ST	Shoreline	1956	no	NOT ELIGIBLE
187	515	3235100210	WILSON TRACY LAVONNE	811 NE 188TH ST	Shoreline	1948	no	NOT ELIGIBLE
188	462	5490700070	WHITNALL DAVID+GERALDINE B	812 NE 194TH ST	Shoreline	1956	no	NOT ELIGIBLE

Lynnwood Link Extension
Forms to DAHP - Batch 1

	A	B	C	D	E	F	G	H
189	456	5490700010	LAZARO LUIS L JR	815 NE 195TH ST	Shoreline	1956	no	NOT ELIGIBLE
190	474	0526049007	SHORELINE SCHOOL DIST 412	816 NE 190TH ST	Shoreline	1957	no	NOT ELIGIBLE
191	516	3235100215	VOLKMAN MELVIN R	817 NE 188TH ST	Shoreline	1948	no	NOT ELIGIBLE
192	470	5490700085	HOXTER PHILLIP R	817 NE 194TH ST	Shoreline	1956	no	NOT ELIGIBLE
193	463	5490700065	MILNES THOMAS J+NORMA	818 NE 194TH ST	Shoreline	1956	no	NOT ELIGIBLE
194	457	5490700015	MANFRED PHILIP+NAOMI P	821 NE 195TH ST	Shoreline	1956	no	NOT ELIGIBLE
195	519	3235100220	MERDANOVIC EMIR	823 NE 188TH ST	Shoreline	1948	no	NOT ELIGIBLE
196	469	5490700090	FUNK ONE LLC	823 NE 194TH ST	Shoreline	1956	no	NOT ELIGIBLE
197	464	5490700060	LELAND B L	824 NE 194TH ST	Shoreline	1956	no	NOT ELIGIBLE
198	458	5490700020	GLOBSTAD RANDY S+LINDA K	827 NE 195TH ST	Shoreline	1956	no	NOT ELIGIBLE
199	494	3235100180	BIDDLE CAROLE	828 NE 188TH ST	Shoreline	1948	no	NOT ELIGIBLE
200	522	3235100224	JORGENSEN SCOTT G	829 NE 188TH ST	Shoreline	1948	no	NOT ELIGIBLE
201	465	5490700051	DELISANTI DEANNA M	830 NE 194TH ST	Shoreline	1956	no	NOT ELIGIBLE
202	496	3235100175	FLEMING PERRY	834 NE 188TH ST	Shoreline	1948	no	NOT ELIGIBLE
203	452	7805300180	RUIZ CESAR	834 NE 195TH ST	Shoreline	1957	no	NOT ELIGIBLE
204	520	3235100230	ORMSBY VICTORIA V	835 NE 188TH ST	Shoreline	1948	no	NOT ELIGIBLE
205	498	3235100170	GRAYBILL R	840 NE 188TH ST	Shoreline	1948	no	NOT ELIGIBLE
206	453	7805300010	HAUSMAN DERIK	840 NE 195TH ST	Shoreline	1956	no	NOT ELIGIBLE
207	512	3235100235	PHAMBOTA RAJIV K	841 NE 188TH ST	Shoreline	1948	no	NOT ELIGIBLE
208	500	3235100165	ROQUE REYNALDO R	846 NE 188TH ST	Shoreline	1948	no	NOT ELIGIBLE
209	487	3235100140	ANDREASEN ADAM R	847 NE 189TH ST	Shoreline	1948	no	NOT ELIGIBLE
210	501	3235100160	OWENS SUSAN	852 NE 188TH ST	Shoreline	1948	no	NOT ELIGIBLE
211	488	3235100145	DUNCAN JOHN H+DENICE	853 NE 189TH ST	Shoreline	1948	no	NOT ELIGIBLE
212	559	3235100285	SEATTLE CITY OF SCL	910 NE 185TH ST	Shoreline	1967	no	NOT ELIGIBLE
213	451		195th St. Pedestrian Bridge			1964	no	NOT ELIGIBLE
214								
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ATTACHMENT E

Table of Surveyed Historic Resources

Attachment E - Surveyed Buildings and Structures

Parcel Number	Name	Address	City	Year	NRHP Eligible
00372600600600	Cambridge Square North	4727 200TH ST SW	Lynnwood	1969	no
00608400200401	Oxford Square Apartments	4807 200TH ST SW	Lynnwood	1968	no
00372600601404	Lynnwood Shell station	19930 44TH AVE W	Lynnwood	1968	no
00608400300104	Cedar Valley Office Park	20006 CEDAR VALLEY RD	Lynnwood	1961	no
00608400300203	Stone Way Electric Supply	20121 CEDAR VALLEY RD	Lynnwood	1966	no
00401200000100	residence	20302 52ND AVE W	Lynnwood	1960	no
00401200000200	residence	20306 52ND AVE W	Lynnwood	1959	no
00401200000300	residence	20316 52ND AVE W	Lynnwood	1959	no
00401200000400	residence	5207 204TH ST SW	Lynnwood	1959	no
00401200000500	residence	5215 204TH ST SW	Lynnwood	1959	no
00462600400800	residence	20430 52ND AVE W	Lynnwood	1942	no
00619500000900	R & R Star Towing	20610 48TH AVE W	Lynnwood	1956	no
00462600900400	residence	20618 52ND AVE W	Lynnwood	1950	no
00462600800400	Cedar Valley Grange	20526 52ND AVE SW	Lynnwood	1926	no
00462500800000	residence	20706 52ND AVE W	Lynnwood	1951	no
00619500001000	Proctor Sales	20715 50TH AVE W	Lynnwood	1966	no
00462601200100	residence	20806 52ND AVE W	Lynnwood	1960	no
27042100403400	Active Engineering	5016 208TH ST SW	Lynnwood	1968	no
00462601200400	residence	20812 52ND AVE W	Lynnwood	1960	no
00462601200500	residence	20818 52ND AVE W	Lynnwood	1960	no
00462601200800	St. Mary's Coptic Orthodox Church	20830 52ND AVE W	Lynnwood	1959	no
27042100403800	residence	20909 52ND AVE W	Lynnwood	1930	no
00462601300400	Lee Manor	20918 52ND AVE W	Lynnwood	1968	no
00516600000702	residence	20924 49TH AVE W	Lynnwood	1956	no
00462601500200	residence	21007 54TH AVE W	Lynnwood	1925	no
27042100305400	residence	20400 54TH AVE W	Lynnwood	1930	no
00462601500600	residence	21019 54TH AVE W	Lynnwood	1933	no
00462601500700	residence	21031 54TH AVE W	Lynnwood	1952	no
27042100306900	residence	5615 212TH ST SW	Lynnwood	1947	no
27042100307700	residence	5605 212TH ST SW	Lynnwood	1936	no
27042100310500	residence	5525 212TH ST SW	Lynnwood	1960	no
27042800202200	residence	5522 212TH ST SW	Mountlake Terrace	1948	no
00619900002700	residence	5602 212TH ST SW	Mountlake Terrace	1941	no
00619900002102	residence	5610 212TH ST SW	Mountlake Terrace	1945	no
27042800201600	residence	5302 212TH ST SW	Mountlake Terrace	1937	no
00619900002000	residence	5604 212TH ST SW	Mountlake Terrace	1956	no
00619900002303	residence	5627 213TH ST SW	Mountlake Terrace	1958	no
00619900002402	residence	5711 213TH ST SW	Mountlake Terrace	1953	no
00619900002202	residence	5625 213TH ST SW	Mountlake Terrace	1951	no
00404100000100	residence	5632 213TH ST SW	Mountlake Terrace	1962	no
00404100000200	residence	5710 213TH ST SW	Mountlake Terrace	1962	no
00404100000300	residence	5720 213TH ST SW	Mountlake Terrace	1962	no
00525100002400	residence	5801 214TH ST SW	Mountlake Terrace	1955	no
00525100002300	residence	5803 214TH ST SW	Mountlake Terrace	1955	no
00525100002200	residence	21307 59TH PL W	Mountlake Terrace	1955	no
00525100000200	residence	5804 214TH ST SW	Mountlake Terrace	1955	no
00525100000300	residence	5806 214TH ST SW	Mountlake Terrace	1955	no
00525100001602	residence	5901 214TH ST SW	Mountlake Terrace	1955	no
00525100001500	residence	5903 214TH ST SW	Mountlake Terrace	1955	no
00525100000500	residence	5810 214TH ST SW	Mountlake Terrace	1955	no
00619900001702	residence	21404 56TH AVE W	Mountlake Terrace	1969	no
00525100000600	residence	5902 214TH ST SW	Mountlake Terrace	1955	no
00525100000700	residence	5904 214TH ST SW	Mountlake Terrace	1955	no
00525100001000	residence	5910 214TH ST SW	Mountlake Terrace	1955	no
00525100000900	residence	5908 214TH ST SW	Mountlake Terrace	1955	no
00525100001100	residence	5912 214TH ST SW	Mountlake Terrace	1955	no
00525100000800	residence	5906 214TH ST SW	Mountlake Terrace	1955	no
00619900004700	residence	21528 58TH AVE W	Mountlake Terrace	1944	no
00378200300600	Melody Hill Elementary School	6205 222ND ST SW	Mountlake Terrace	1959	yes
00525400000300	residence	6305 220TH PL SW	Mountlake Terrace	1961	no
00525400000100	residence	22001 64TH AVE W	Mountlake Terrace	1961	no
00525400000200	residence	6307 220TH PL SW	Mountlake Terrace	1961	no
00525400000400	residence	6303 220TH PL SW	Mountlake Terrace	1961	no
00525400000500	residence	6302 220TH PL SW	Mountlake Terrace	1961	no
00525400000800	residence	22005 64TH AVE W	Mountlake Terrace	1961	no
00525400000700	residence	6306 220TH PL SW	Mountlake Terrace	1961	no
00525400000600	residence	6304 220TH PL SW	Mountlake Terrace	1961	no
00525400001100	residence	6305 221ST PL SW	Mountlake Terrace	1961	no
27042900100800	Lakeside Apartments	6102 ST ALBION WAY	Mountlake Terrace	1969	no

Attachment E - Surveyed Buildings and Structures

Parcel Number	Name	Address	City	Year	NRHP Eligible
00525400001200	residence	6303 221ST PL SW	Mountlake Terrace	1961	no
00523000100100	residence	22202 60TH AVE W	Mountlake Terrace	1953	no
00524000005700	residence	22201 62ND AVE W	Mountlake Terrace	1954	no
00524000009500	residence	6202 222ND ST SW	Mountlake Terrace	1954	no
00523000100200	residence	22204 60TH AVE W	Mountlake Terrace	1953	no
00524000005600	residence	22203 62ND AVE W	Mountlake Terrace	1954	no
00524000009401	residence	22202 62ND AVE W	Mountlake Terrace	1954	no
00523000100300	residence	22206 60TH AVE W	Mountlake Terrace	1953	no
00524000005500	residence	22205 62ND AVE W	Mountlake Terrace	1954	no
00524000009301	residence	22204 62ND AVE W	Mountlake Terrace	1954	no
00523000100400	residence	22208 60TH AVE W	Mountlake Terrace	1953	no
00524000005400	residence	22207 62ND AVE W	Mountlake Terrace	1954	no
00523000100500	residence	22210 60TH AVE W	Mountlake Terrace	1953	no
00524000009100	residence	6201 223RD PL SW	Mountlake Terrace	1954	no
00524000009200	residence	22206 62ND AVE W	Mountlake Terrace	1954	no
00524000005100	residence	22209 62ND AVE W	Mountlake Terrace	1960	no
00523000100600	residence	22302 60TH AVE W	Mountlake Terrace	1953	no
00523000100700	residence	22304 60TH AVE W	Mountlake Terrace	1953	no
00524000008600	residence	6202 223RD PL SW	Mountlake Terrace	1954	no
00523000100800	residence	22306 60TH AVE W	Mountlake Terrace	1953	no
00524000008500	residence	22302 62ND AVE W	Mountlake Terrace	1954	no
00523000100900	residence	6003 224TH ST SW	Mountlake Terrace	1955	no
00524000004900	residence	22305 63RD AVE W	Mountlake Terrace	1954	no
00524000004800	residence	22307 62ND AVE W	Mountlake Terrace	1954	no
00524000004700	residence	22309 62ND AVE W	Mountlake Terrace	1960	no
00524000004600	residence	22403 62ND AVE W	Mountlake Terrace	1955	no
00524000004500	residence	22405 62ND AVE W	Mountlake Terrace	1954	no
00524000004400	residence	22407 62ND AVE W	Mountlake Terrace	1954	no
00524000004300	residence	22501 62ND AVE W	Mountlake Terrace	1954	no
00524000004200	residence	22503 62ND AVE W	Mountlake Terrace	1954	no
00524000004100	residence	22505 62ND AVE W	Mountlake Terrace	1954	no
00524000004000	residence	22601 62ND AVE W	Mountlake Terrace	1954	no
00524000003400	residence	22610 62ND AVE W	Mountlake Terrace	1954	no
00524000003501	residence	22611 62ND AVE W	Mountlake Terrace	1954	no
00524000000900	residence	6205 227TH ST SW	Mountlake Terrace	1954	no
00524000000800	residence	6203 227TH ST SW	Mountlake Terrace	1954	no
00524000000700	residence	6201 227TH ST SW	Mountlake Terrace	1954	no
00524000000600	residence	6103 227TH ST SW	Mountlake Terrace	1954	no
00522400007400	residence	22901 63RD AVE W	Mountlake Terrace	1954	no
00522400007300	residence	22903 63RD AVE W	Mountlake Terrace	1954	no
00522300307200	residence	23001 63RD AVE W	Mountlake Terrace	1954	no
00522300307100	residence	23003 63RD AVE W	Mountlake Terrace	1954	no
00522300307000	residence	23005 63RD AVE W	Mountlake Terrace	1954	no
00522300306900	residence	23007 63RD AVE W	Mountlake Terrace	1954	no
00522300306800	residence	23009 63RD AVE W	Mountlake Terrace	1954	no
00522300306700	residence	23011 63RD PL W	Mountlake Terrace	1954	no
00522300306600	residence	23013 63RD PL W	Mountlake Terrace	1954	no
00522000302900	residence	23008 61ST AVE W	Mountlake Terrace	1951	no
00522300306500	residence	23015 63RD PL W	Mountlake Terrace	1954	no
00522300306400	residence	23014 63RD PL W	Mountlake Terrace	1954	no
00522000302700	residence	23102 61ST AVE W	Mountlake Terrace	1951	no
00522000302500	residence	23106 61ST AVE W	Mountlake Terrace	1951	no
00522300305400	residence	23113 63RD AVE W	Mountlake Terrace	1954	no
00522000600600	residence	23109 61ST AVE W	Mountlake Terrace	1951	no
00522000302400	residence	23110 61ST AVE W	Mountlake Terrace	1951	no
00522300305300	residence	23115 63RD AVE W	Mountlake Terrace	1954	no
00522000600800	residence	6007 232ND ST SW	Mountlake Terrace	1951	no
00522000600900	residence	6003 232ND ST SW	Mountlake Terrace	1951	no
00522000302300	residence	23112 61ST AVE W	Mountlake Terrace	1951	no
00524800000100	residence	6102 232ND ST SW	Mountlake Terrace	1960	no
00524800000200	residence	6006 232ND ST SW	Mountlake Terrace	1960	no
00524800000300	residence	6004 232ND ST SW	Mountlake Terrace	1960	no
00524700000200	residence	23203 63RD AVE W	Mountlake Terrace	1953	no
00524800000600	residence	6003 232ND PL SW	Mountlake Terrace	1960	no
00524800000700	residence	6005 232ND PL SW	Mountlake Terrace	1960	no
00524700000300	residence	23205 63RD AVE W	Mountlake Terrace	1955	no
00524800000800	residence	6006 232ND PL SW	Mountlake Terrace	1960	no
00524700000400	residence	23207 63RD AVE W	Mountlake Terrace	1953	no
00524800000900	residence	6004 232ND PL SW	Mountlake Terrace	1960	no

Attachment E - Surveyed Buildings and Structures

Parcel Number	Name	Address	City	Year	NRHP Eligible
00524800001200	residence	6003 233RD PL SW	Mountlake Terrace	1960	no
00524800001100	residence	6001 233RD PL SW	Mountlake Terrace	1960	no
00524700002600	residence	23210 63RD AVE W	Mountlake Terrace	1955	no
00524800001300	residence	6005 233RD PL SW	Mountlake Terrace	1960	no
00524700002700	residence	23212 63RD AVE W	Mountlake Terrace	1955	no
00524700002800	residence	23300 63RD AVE W	Mountlake Terrace	1955	no
00524800001502	residence	6002 233RD PL SW	Mountlake Terrace	1960	no
00524800001400	residence	6004 233RD PL SW	Mountlake Terrace	1960	no
00524700002900	residence	23302 63RD AVE W	Mountlake Terrace	1953	no
00524700003000	residence	23304 63RD AVE W	Mountlake Terrace	1955	no
00524100001200	residence	23501 59TH PL W	Mountlake Terrace	1954	no
00524100001300	residence	23502 59TH PL W	Mountlake Terrace	1954	no
00524100001400	residence	23504 59TH PL W	Mountlake Terrace	1954	no
00524100001500	residence	23506 59TH PL W	Mountlake Terrace	1954	no
00520900200600	residence	6002 237TH ST SW	Mountlake Terrace	1959	no
0308000070	residence	20101 12TH AVE NE	Shoreline	1949	no
3985300262	residence	20041 12TH AVE NE	Shoreline	1962	no
3985300263	residence	20039 12TH AVE NE	Shoreline	1962	no
3985300261	residence	20035 12TH AVE NE	Shoreline	1937	no
3985300268	residence	20017 12TH AVE NE	Shoreline	1962	no
3971700560	residence	1103 NE 200TH ST	Shoreline	1942	no
3971700700	residence	1010 NE 198TH ST	Shoreline	1962	no
3971700705	residence	1002 NE 198TH ST	Shoreline	1950	no
7805300070	residence	19741 10TH AVE NE	Shoreline	1956	no
7805300060	residence	19731 10TH AVE NE	Shoreline	1953	no
7805300170	residence	19728 10TH AVE NE	Shoreline	1953	no
7805300160	residence	1010 NE 197TH ST	Shoreline	1953	no
7805300030	residence	19705 10TH AVE NE	Shoreline	1953	no
3985300320	residence	19520 7TH AVE NE	Shoreline	1928	no
7805300020	residence	19605 10TH AVE NE	Shoreline	1954	no
6135300035	residence	524 NE 195TH ST	Shoreline	1953	no
3985300326	residence	702 NE 195TH ST	Shoreline	1952	no
3985300325	residence	706 NE 195TH ST	Shoreline	1928	no
	195th St. Pedestrian Bridge			1964	no
7805300180	residence	834 NE 195TH ST	Shoreline	1957	no
7805300010	residence	840 NE 195TH ST	Shoreline	1956	no
9373300020	residence	19164 7TH AVE NE	Shoreline	1966	no
9373300130	residence	525 NE 195TH ST	Shoreline	1952	no
5490700010	residence	815 NE 195TH ST	Shoreline	1956	no
5490700015	residence	821 NE 195TH ST	Shoreline	1956	no
5490700020	residence	827 NE 195TH ST	Shoreline	1956	no
9373300015	residence	19160 7TH AVE NE	Shoreline	1939	no
5490700070	residence	812 NE 194TH ST	Shoreline	1956	no
5490700065	residence	818 NE 194TH ST	Shoreline	1956	no
5490700060	residence	824 NE 194TH ST	Shoreline	1956	no
5490700051	residence	830 NE 194TH ST	Shoreline	1956	no
5490700080	residence	805 NE 194TH ST	Shoreline	1956	no
5490700090	residence	823 NE 194TH ST	Shoreline	1956	no
5490700085	residence	817 NE 194TH ST	Shoreline	1956	no
0526049007	North City Elementary School	816 NE 190TH ST	Shoreline	1957	no
3971702215	residence	18921 8TH AVE NE	Shoreline	1943	no
3235100005	residence	18920 8TH AVE NE	Shoreline	1948	no
3971702210	residence	18915 8TH AVE NE	Shoreline	1957	no
3971702305	residence	728 NE 189TH ST	Shoreline	1963	no
3971702295	residence	718 NE 189TH ST	Shoreline	1930	no
3235100100	residence	18910 8TH AVE NE	Shoreline	1948	no
3971702355	residence	18820 5TH AVE NE	Shoreline	1951	no
3971702351	residence	511 NE 189TH ST	Shoreline	1928	no
3971702310	residence	727 NE 189TH ST	Shoreline	1929	no
3971702320	residence	715 NE 189TH ST	Shoreline	1931	no
3235100105	residence	18820 8TH AVE NE	Shoreline	1948	no
3235100140	residence	847 NE 189TH ST	Shoreline	1948	no
3235100145	residence	853 NE 189TH ST	Shoreline	1948	no
3235100150	residence	18819 10TH AVE NE	Shoreline	1948	no
3971702353	residence	18814 5TH AVE NE	Shoreline	1952	no
2555300005	residence	18804 10TH AVE NE	Shoreline	1949	no
3971702354	residence	18808 5TH AVE NE	Shoreline	1952	no
3235100180	residence	828 NE 188TH ST	Shoreline	1948	no
3235100175	residence	834 NE 188TH ST	Shoreline	1948	no

Attachment E - Surveyed Buildings and Structures

Parcel Number	Name	Address	City	Year	NRHP Eligible
3235100170	residence	840 NE 188TH ST	Shoreline	1948	no
3971702311	residence	18807 8TH AVE NE	Shoreline	1956	no
3235100165	residence	846 NE 188TH ST	Shoreline	1948	no
3235100160	residence	852 NE 188TH ST	Shoreline	1948	no
3235100155	residence	18809 10TH AVE NE	Shoreline	1948	no
0526049051	residence	18560 5TH AVE NE	Shoreline	1954	no
0526049011	residence	18559 8TH AVE NE	Shoreline	1941	no
0526049032	residence	18552 7TH AVE NE	Shoreline	1951	no
0526049024	residence	18553 8TH AVE NE	Shoreline	1949	no
3235100235	residence	841 NE 188TH ST	Shoreline	1948	no
0526049022	residence	18556 5TH AVE NE	Shoreline	1948	no
3235100205	residence	18554 8TH AVE NE	Shoreline	1948	no
3235100210	residence	811 NE 188TH ST	Shoreline	1948	no
3235100215	residence	817 NE 188TH ST	Shoreline	1948	no
2555300090	residence	1011 NE 188TH ST	Shoreline	1950	no
2555300091	residence	1005 NE 188TH ST	Shoreline	1951	no
3235100220	residence	823 NE 188TH ST	Shoreline	1948	no
3235100230	residence	835 NE 188TH ST	Shoreline	1948	no
2555900070	residence	1017 NE 188TH ST	Shoreline	1951	no
3235100224	residence	829 NE 188TH ST	Shoreline	1948	no
0526049025	residence	18547 8TH AVE NE	Shoreline	1943	no
2555300092	residence	18548 10TH AVE NE	Shoreline	1949	no
3235100240	residence	18540 8TH AVE NE	Shoreline	1948	no
0526049050	residence	18539 8TH AVE NE	Shoreline	1955	no
2555300085	residence	18540 10TH AVE NE	Shoreline	1949	no
3235100244	residence	18534 8TH AVE NE	Shoreline	1948	no
0526049015	residence	18534 7TH AVE NE	Shoreline	1965	no
0526049055	residence	18533 8TH AVE NE	Shoreline	1966	no
3235100305	residence	18537 10TH AVE NE	Shoreline	1948	no
2555300080	residence	18534 10TH AVE NE	Shoreline	1949	no
3235100249	residence	18528 8TH AVE NE	Shoreline	1948	no
0526049044	residence	18528 7TH AVE NE	Shoreline	1953	no
0526049054	residence	18529 8TH AVE NE	Shoreline	1937	no
2555300075	residence	18528 10TH AVE NE	Shoreline	1949	no
3235100300	residence	18531 10TH AVE NE	Shoreline	1948	no
3235100255	residence	18522 8TH AVE NE	Shoreline	1948	no
0526049040	residence	18523 8TH AVE NE	Shoreline	1951	no
2555300070	residence	18522 10TH AVE NE	Shoreline	1949	no
3235100295	residence	18525 10TH AVE NE	Shoreline	1948	no
3235100260	residence	18516 8TH AVE NE	Shoreline	1948	no
0526049028	residence	18517 8TH AVE NE	Shoreline	1949	no
2555300065	residence	18516 10TH AVE NE	Shoreline	1949	no
3235100265	residence	18510 8TH AVE NE	Shoreline	1948	no
2225300440	residence	328 NE 185TH ST	Shoreline	1947	no
2225300445	residence	330 NE 185TH ST	Shoreline	1943	no
3235100285	North City Mower and Saw	910 NE 185TH ST	Shoreline	1967	no
2555300060	residence	18510 10TH AVE NE	Shoreline	1949	no
0526049030	residence	18509 8TH AVE NE	Shoreline	1955	no
3235100270	residence	18504 8TH AVE NE	Shoreline	1948	no
2555300055	residence	18504 10TH AVE NE	Shoreline	1949	no
6084100025	residence	335 NE 185TH ST	Shoreline	1939	no
6163900094	residence	18353 9TH AVE NE	Shoreline	1950	no
6084100020	residence	327 NE 185TH ST	Shoreline	1965	no
6163900112	residence	18354 9TH AVE NE	Shoreline	1950	no
6084100030	residence	341 NE 185TH ST	Shoreline	1957	no
6084100035	residence	351 NE 185TH ST	Shoreline	1942	no
6163900092	residence	18342 8TH AVE NE	Shoreline	1951	no
0927100008	residence	731 NE 185TH ST	Shoreline	1947	no
0927100011	residence	721 NE 185TH ST	Shoreline	1946	no
6163900110	residence	18348 9TH AVE NE	Shoreline	1950	no
6163900093	residence	18349 9TH AVE NE	Shoreline	1947	no
0927100015	residence	18329 8TH AVE NE	Shoreline	1953	no
6163900091	residence	18343 9TH AVE NE	Shoreline	1947	no
6163900121	residence	18342 9TH AVE NE	Shoreline	1947	no
0927100016	residence	18323 8TH AVE NE	Shoreline	1952	no
5662100085	residence	18317 8TH AVE NE	Shoreline	1954	no
5662100080	residence	18316 7TH AVE NE	Shoreline	1954	no
5662100075	residence	18313 7TH AVE NE	Shoreline	1954	no
5662100090	residence	18308 7TH AVE NE	Shoreline	1954	no

Attachment E - Surveyed Buildings and Structures

Parcel Number	Name	Address	City	Year	NRHP Eligible
5662100070	residence	18307 7TH AVE NE	Shoreline	1954	no
5662100065	residence	18301 7TH AVE NE	Shoreline	1954	no
0927100098	residence	18320 5TH AVE NE	Shoreline	1968	no
5662100060	residence	18069 7TH AVE NE	Shoreline	1954	no
0927100094	residence	18310 5TH AVE NE	Shoreline	1951	no
5662100055	residence	18063 7TH AVE NE	Shoreline	1954	no
5662100050	residence	18057 7TH AVE NE	Shoreline	1954	no
0927100082	residence	18036 5TH AVE NE	Shoreline	1942	no
6084100100	residence	18027 5TH AVE NE	Shoreline	1941	no
0927100076	residence	18032 5TH AVE NE	Shoreline	1942	no
6084100110	residence	18017 5TH AVE NE	Shoreline	1913	no
0927100070	residence	18016 5TH AVE NE	Shoreline	1956	no
6084100117	residence	338 NE 180TH ST	Shoreline	1925	no
6084100114	residence	344 NE 180TH ST	Shoreline	1925	no
6084100116	residence	350 NE 180TH ST	Shoreline	1930	no
6084100115	residence	356 NE 180TH ST	Shoreline	1925	no
6084100118	residence	332 NE 180TH ST	Shoreline	1925	no
1115100110	residence	331 NE 180TH ST	Shoreline	1967	no
1115100137	residence	17861 5TH AVE NE	Shoreline	1955	no
1115100112	residence	333 NE 180TH ST	Shoreline	1964	no
1115100113	residence	335 NE 180TH ST	Shoreline	1966	no
1115100111	residence	337 NE 180TH ST	Shoreline	1965	no
7772400050	residence	17825 3RD AVE NE	Shoreline	1963	no
7772400040	residence	17821 3RD AVE NE	Shoreline	1965	no
1115100121	residence	344 NE 178TH ST	Shoreline	1936	no
7772400060	residence	17822 3RD AVE NE	Shoreline	1966	no
7772400030	residence	17815 3RD AVE NE	Shoreline	1965	no
7772400070	residence	17816 3RD AVE NE	Shoreline	1966	no
7772400020	residence	17809 3RD AVE NE	Shoreline	1965	no
7772400080	residence	17810 3RD AVE NE	Shoreline	1964	no
7772400010	residence	17803 3RD AVE NE	Shoreline	1966	no
7772400090	residence	17804 3RD AVE NE	Shoreline	1963	no
7772400190	residence	17753 2ND PL NE	Shoreline	1966	no
7772400110	residence	239 NE 178TH ST	Shoreline	1968	no
7772400180	residence	17747 2ND PL NE	Shoreline	1967	no
1115100181	residence	311 NE 178TH ST	Shoreline	1962	no
7772400120	residence	17748 2ND PL NE	Shoreline	1966	no
7772400170	residence	17741 2ND PL NE	Shoreline	1965	no
7772400160	residence	17737 2ND PL NE	Shoreline	1965	no
7772400130	residence	17738 2ND PL NE	Shoreline	1966	no
7772400150	residence	17733 2ND PL NE	Shoreline	1966	no
7772400140	residence	17734 2ND PL NE	Shoreline	1966	no
1115100230	residence	208 NE 175TH ST	Shoreline	1926	no
7305300085	residence	211 NE 175TH ST	Shoreline	1948	no
7305300015	residence	116 NE 174TH ST	Shoreline	1948	no
7305300020	residence	122 NE 174TH ST	Shoreline	1948	no
7305300025	residence	128 NE 174TH ST	Shoreline	1948	no
7305300030	residence	204 NE 174TH ST	Shoreline	1948	no
7305300010	residence	110 NE 174TH ST	Shoreline	1948	no
7305300040	residence	216 NE 174TH ST	Shoreline	1948	no
7305300035	residence	210 NE 174TH ST	Shoreline	1948	no
7305300275	residence	105 NE 174TH ST	Shoreline	1948	no
7305300350	residence	111 NE 174TH ST	Shoreline	1948	no
7305300425	residence	205 NE 174TH ST	Shoreline	1948	no
7305300270	residence	17222 1ST AVE NE	Shoreline	1948	no
7305300345	residence	17223 2ND AVE NE	Shoreline	1948	no
7305300420	residence	17222 2ND AVE NE	Shoreline	1948	no
7305300265	residence	17216 1ST AVE NE	Shoreline	1948	no
7305300340	residence	17217 2ND AVE NE	Shoreline	1948	no
7305300415	residence	17216 2ND AVE NE	Shoreline	1948	no
7305300260	residence	17210 1ST AVE NE	Shoreline	1948	no
7305300335	residence	17211 2ND AVE NE	Shoreline	1948	no
7305300255	residence	17204 1ST AVE NE	Shoreline	1948	no
7305300330	residence	17205 2ND AVE NE	Shoreline	1948	no
7305300250	residence	17058 1ST AVE NE	Shoreline	1948	no
7305300325	residence	17059 2ND AVE NE	Shoreline	1948	no
7305300245	residence	17052 1ST AVE NE	Shoreline	1948	no
7305300320	residence	17053 2ND AVE NE	Shoreline	1948	no
7305300240	residence	17046 1ST AVE NE	Shoreline	1948	no

Attachment E - Surveyed Buildings and Structures

Parcel Number	Name	Address	City	Year	NRHP Eligible
7305300315	residence	17047 2ND AVE NE	Shoreline	1948	no
7305300235	residence	17040 1ST AVE NE	Shoreline	1948	no
7305300310	residence	17041 2ND AVE NE	Shoreline	1948	no
7305300230	residence	17034 1ST AVE NE	Shoreline	1948	no
7305300305	residence	17035 2ND AVE NE	Shoreline	1948	no
7305300225	residence	17028 1ST AVE NE	Shoreline	1948	no
7305300300	residence	17029 2ND AVE NE	Shoreline	1948	no
7305300220	residence	17022 1ST AVE NE	Shoreline	1948	no
7305300295	residence	17023 2ND AVE NE	Shoreline	1948	no
7305300215	residence	17016 1ST AVE NE	Shoreline	1948	no
7305300290	residence	17017 2ND AVE NE	Shoreline	1948	no
7305300210	residence	17010 1ST AVE NE	Shoreline	1948	no
7305300285	residence	17011 2ND AVE NE	Shoreline	1948	no
7305300205	residence	104 NE 170TH ST	Shoreline	1948	no
7305300280	residence	110 NE 170TH ST	Shoreline	1948	no
5727500131	residence	16761 3RD AVE NE	Shoreline	1952	no
5727500130	residence	121 NE 170TH ST	Shoreline	1952	no
7305900115	residence	119 NE 170TH ST	Shoreline	1948	no
5727500120	residence	109 NE 170TH ST	Shoreline	1951	no
5727500138	residence	16753 3RD AVE NE	Shoreline	1952	no
5727500136	residence	16747 3RD AVE NE	Shoreline	1952	no
5727500139	residence	16742 2ND AVE NE	Shoreline	1953	no
5727500113	residence	16741 2ND AVE NE	Shoreline	1951	no
5727500110	residence	16735 2ND AVE NE	Shoreline	1952	no
5727500137	residence	16738 2ND AVE NE	Shoreline	1960	no
5727500111	residence	16731 2ND AVE NE	Shoreline	1952	no
5727500148	residence	16728 2ND AVE NE	Shoreline	1953	no
5727500102	residence	16729 2ND AVE NE	Shoreline	1949	no
5727500149	residence	16722 2ND AVE NE	Shoreline	1953	no
5727500100	residence	16723 2ND AVE NE	Shoreline	1949	no
5727500150	residence	16716 2ND AVE NE	Shoreline	1953	no
5727500103	residence	16719 2ND AVE NE	Shoreline	1949	no
5727500155	residence	126 NE 167TH ST	Shoreline	1949	no
5727500087	residence	118 NE 167TH ST	Shoreline	1950	no
5727500086	residence	114 NE 167TH ST	Shoreline	1950	no
9235900015	residence	111 NE 167TH ST	Shoreline	1948	no
9235900025	residence	123 NE 167TH ST	Shoreline	1948	no
9235900030	residence	133 NE 167TH ST	Shoreline	1948	no
5727500363	residence	120 NE 166TH ST	Shoreline	1960	no
5727500361	residence	124 NE 166TH ST	Shoreline	1953	no
9235900040	residence	130 NE 166TH ST	Shoreline	1950	no
5727500355	residence	119 NE 166TH ST	Shoreline	1968	no
5727500350	residence	123 NE 166TH ST	Shoreline	1968	no
5727500300	residence	131 NE 166TH ST	Shoreline	1955	no
5727500303	residence	137 NE 166TH ST	Shoreline	1955	no
7307000040	residence	134 NE 165TH PL	Shoreline	1964	no
7307000030	residence	140 NE 165TH PL	Shoreline	1964	no
7307000050	residence	124 NE 165TH PL	Shoreline	1964	no
7301500010	residence	132 NE 165TH ST	Shoreline	1962	no
7301500020	residence	140 NE 165TH ST	Shoreline	1962	no
7301400050	residence	127 NE 165TH ST	Shoreline	1962	no
7301300035	residence	135 NE 165TH ST	Shoreline	1962	no
7301300030	residence	141 NE 165TH ST	Shoreline	1962	no
7301400060	residence	132 NE 164TH ST	Shoreline	1961	no
7301300040	residence	134 NE 164TH ST	Shoreline	1961	no
7301300046	residence	140 NE 164TH ST	Shoreline	1961	no
7301400200	residence	127 NE 164TH ST	Shoreline	1962	no
7301300125	residence	135 NE 164TH ST	Shoreline	1962	no
7301300120	residence	139 NE 164TH ST	Shoreline	1962	no
7301400211	residence	124 NE 163RD ST	Shoreline	1968	no
7301300130	residence	304 NE 163RD ST	Shoreline	1955	no
7301300135	residence	310 NE 163RD ST	Shoreline	1955	no
7301400220	residence	128 NE 163RD ST	Shoreline	1962	no
7301400120	residence	121 NE 163RD ST	Shoreline	1962	no
7301400110	residence	129 NE 163RD ST	Shoreline	1962	no
7301300295	residence	303 NE 163RD ST	Shoreline	1955	no
7301300290	residence	309 NE 163RD ST	Shoreline	1955	no
2111600040	residence	114 NE 161ST ST	Shoreline	1961	no
2111600035	residence	122 NE 161ST ST	Shoreline	1959	no

Attachment E - Surveyed Buildings and Structures

Parcel Number	Name	Address	City	Year	NRHP Eligible
2111600030	residence	128 NE 161ST ST	Shoreline	1960	no
2111600025	residence	134 NE 161ST ST	Shoreline	1959	no
2111600095	residence	15924 1ST AVE NE	Shoreline	1966	no
2111600090	residence	115 NE 161ST ST	Shoreline	1961	no
2111600085	residence	123 NE 161ST ST	Shoreline	1960	no
2111600080	residence	129 NE 161ST ST	Shoreline	1960	no
2111600075	residence	139 NE 161ST ST	Shoreline	1952	no
2111600100	residence	15918 1ST AVE NE	Shoreline	1966	no
6159400045	residence	104 NE 159TH ST	Shoreline	1964	no
6159400037	residence	114 NE 159TH ST	Shoreline	1966	no
6159400035	residence	118 NE 159TH ST	Shoreline	1966	no
6159400030	residence	124 NE 159TH ST	Shoreline	1960	no
6159400025	residence	130 NE 159TH ST	Shoreline	1958	no
6159400090	residence	105 NE 159TH ST	Shoreline	1964	no
6159400085	residence	113 NE 159TH ST	Shoreline	1960	no
6159400080	residence	117 NE 159TH ST	Shoreline	1960	no
8142000090	residence	104 NE 158TH ST	Shoreline	1960	no
8142000080	residence	110 NE 158TH ST	Shoreline	1960	no
8142000070	residence	116 NE 158TH ST	Shoreline	1960	no
8142000180	residence	105 NE 158TH ST	Shoreline	1960	no
8142000170	residence	111 NE 158TH ST	Shoreline	1960	no
8142000160	residence	117 NE 158TH ST	Shoreline	1960	no
2881700227	residence	108 NE 157TH ST	Shoreline	1940	no
2881700232	residence	15625 3RD AVE NE	Shoreline	1953	no
2881700229	residence	235 NE 157TH ST	Shoreline	1942	no
2881700239	residence	241 NE 157TH ST	Shoreline	1953	no
2881700234	residence	15621 3RD AVE NE	Shoreline	1953	no
2881700233	residence	15615 3RD AVE NE	Shoreline	1953	no
2241700035	residence	108 NE 156TH ST	Shoreline	1942	no
2241700030	residence	122 NE 156TH ST	Shoreline	1969	no
2241700025	residence	130 NE 156TH ST	Shoreline	1969	no
2241700020	residence	136 NE 156TH ST	Shoreline	1956	no
2241700015	residence	142 NE 156TH ST	Shoreline	1955	no
2241700010	residence	148 NE 156TH ST	Shoreline	1955	no
2241700005	residence	156 NE 156TH ST	Shoreline	1955	no
2241700040	residence	104 NE 156TH ST	Shoreline	1942	no
2241700050	residence	125 NE 156TH ST	Shoreline	1942	no
2241700055	residence (log house)	132 NE 155TH ST	Shoreline	1920	yes
2241700060	residence	137 NE 156TH ST	Shoreline	1956	no
2241700065	residence	143 NE 156TH ST	Shoreline	1956	no
2241700070	residence	151 NE 156TH ST	Shoreline	1961	no
2241700075	residence	157 NE 156TH ST	Shoreline	1956	no
0411100050	residence	165 NE 155TH ST	Shoreline	1950	no
0411100005	residence	301 NE 155TH ST	Shoreline	1950	no
0411100045	residence	15425 2ND AVE NE	Shoreline	1950	no
0411100010	residence	15420 2ND AVE NE	Shoreline	1950	no
0411100040	residence	15419 2ND AVE NE	Shoreline	1950	no
0411100035	residence	15407 2ND AVE NE	Shoreline	1950	no
0411100030	residence	15401 2ND AVE NE	Shoreline	1950	no
0411100025	residence	15404 2ND AVE NE	Shoreline	1950	no
2881700300	residence	15240 3RD AVE NE	Shoreline	1917	no
2634500050	residence	305 NE 152ND ST	Shoreline	1949	no
2634500045	residence	311 NE 152ND ST	Shoreline	1949	no
2881700311	residence	15121 3RD AVE NE	Shoreline	1970	no
3222200010	residence	15112 3RD AVE NE	Shoreline	1967	no
8022900035	residence	316 NE 151ST ST	Shoreline	1957	no
8022900030	residence	324 NE 151ST ST	Shoreline	1956	no
3222200020	residence	306 NE 151ST ST	Shoreline	1967	no
8022900040	residence	321 NE 151ST ST	Shoreline	1957	no
3222200050	residence	313 NE 151ST ST	Shoreline	1967	no
8022900041	residence	327 NE 151ST ST	Shoreline	1956	no
3222200030	residence	301 NE 151ST ST	Shoreline	1967	no
3222200040	residence	307 NE 151ST ST	Shoreline	1967	no
2004100040	residence	314 NE 149TH ST	Shoreline	1955	no
2004100045	residence	308 NE 149TH ST	Shoreline	1967	no
2004100035	residence	320 NE 149TH ST	Shoreline	1954	no
2004100030	residence	326 NE 149TH ST	Shoreline	1954	no
2004100055	residence	321 NE 149TH ST	Shoreline	1954	no
2004100060	residence	327 NE 149TH ST	Shoreline	1954	no

Attachment E - Surveyed Buildings and Structures

Parcel Number	Name	Address	City	Year	NRHP Eligible
2004100050	residence	309 NE 149TH ST	Shoreline	1967	no
2004100065	residence	333 NE 149TH ST	Shoreline	1953	no
2004100075	residence	339 NE 149TH ST	Shoreline	1954	no
2004100080	residence	345 NE 149TH ST	Shoreline	1953	no
2004100085	residence	351 NE 149TH ST	Shoreline	1955	no
2004100090	residence	357 NE 149TH ST	Shoreline	1955	no
7568700360	residence	14808 5TH AVE NE	Shoreline	1939	no
8680300005	residence	14807 5TH AVE NE	Shoreline	1952	no
8680300040	residence	316 NE 148TH ST	Shoreline	1967	no
8680300035	residence	324 NE 148TH ST	Shoreline	1952	no
8680300030	residence	330 NE 148TH ST	Shoreline	1952	no
7568700355	residence	14802 5TH AVE NE	Shoreline	1939	no
8680300025	residence	336 NE 148TH ST	Shoreline	1952	no
8680300020	residence	342 NE 148TH ST	Shoreline	1952	no
8680300015	residence	348 NE 148TH ST	Shoreline	1952	no
8680300010	residence	358 NE 148TH ST	Shoreline	1952	no
7568700836	residence	14578 5TH AVE NE	Shoreline	1940	no
7568700710	residence	515 NE 148TH ST	Shoreline	1932	no
2881700402	residence	14727 5TH AVE NE	Shoreline	1950	no
8680300045	residence	327 NE 148TH ST	Shoreline	1952	no
8680300050	residence	333 NE 148TH ST	Shoreline	1952	no
8680300055	residence	339 NE 148TH ST	Shoreline	1952	no
8680300060	residence	345 NE 148TH ST	Shoreline	1952	no
7568700830	residence	14570 5TH AVE NE	Shoreline	1937	no
7568700715	residence	14567 6TH AVE NE	Shoreline	1939	no
7568700825	residence	14560 5TH AVE NE	Shoreline	1948	no
7568700720	residence	14565 6TH AVE NE	Shoreline	1944	no
7568700820	residence	14556 5TH AVE NE	Shoreline	1963	no
7568700725	residence	14555 6TH AVE NE	Shoreline	1948	no
7568700815	residence	14552 5TH AVE NE	Shoreline	1946	no
7568700810	residence	14544 5TH AVE NE	Shoreline	1948	no
7568700734	residence	14541 6TH AVE NE	Shoreline	1968	no
7568700805	residence	14540 5TH AVE NE	Shoreline	1947	no
7568700800	residence	14532 5TH AVE NE	Shoreline	1948	no
7568700745	residence	14525 6TH AVE NE	Shoreline	1939	no
7568700795	residence	14526 5TH AVE NE	Shoreline	1939	no
7568700755	residence	14521 6TH AVE NE	Shoreline	1960	no
7568700785	residence	14512 5TH AVE NE	Shoreline	1948	no
7568700760	residence	14515 6TH AVE NE	Shoreline	1947	no
7568700780	Seattle Public Utilities	501 NE 145TH ST	Shoreline	1937	no
7568700770	residence	516 NE 145TH ST	Shoreline	1948	no
2026049004	Jackson Park Golf Course Clubhouse	1000 NE 145TH ST	Seattle	1933	no
2470900035	residence	13080 8TH CT NE	Seattle	1954	no
2470900040	residence	13085 8TH CT NE	Seattle	1954	no
2470900030	residence	13078 8TH CT NE	Seattle	1954	no
1787600085	N. Seattle Church of the Nazarene parsonage	13130 5th AVE NE	Seattle	1938	yes
2470900015	residence	13071 8TH CT NE	Seattle	1954	no
2470900010	residence	13037 8TH CT NE	Seattle	1954	no
1787600094	residence	510 131ST PL NE	Seattle	1953	no
1787600093	residence	520 NE 131ST PL	Seattle	1953	no
1787600092	residence	526 NE 131ST PL	Seattle	1953	no
1787600066	residence	530 131ST PL NE	Seattle	1953	no
1787600178	residence	13047 ROOSEVELT WAY NE	Seattle	1950	no
1787600185	residence	13020 3RD AVE NE	Seattle	1950	no
1787600200	residence	13017 3RD AVE NE	Seattle	1918	no
1787600201	residence	13015 3RD AVE NE	Seattle	1959	no
1787600202	residence	13013 3RD AVE NE	Seattle	1959	no
1787600098	residence	505 131ST PL NE	Seattle	1952	no
1787600095	residence	511 NE 131ST PL	Seattle	1952	no
1787600096	residence	519 NE 131ST PL	Seattle	1952	no
1787600097	residence	525 NE 131ST PL	Seattle	1952	no
1787600062	residence	527 131ST AVE NE	Seattle	1964	no
1787600186	residence	13014 3RD AVE NE	Seattle	1950	no
1787600060	residence	529 NE 131ST PL	Seattle	1935	no
1787600190	residence	13008 3RD AVE NE	Seattle	1951	no
1787600197	residence	138 NE 130TH ST	Seattle	1957	no
1787600198	residence	144 NE 130TH ST	Seattle	1957	no
1787600199	residence	150 NE 130TH ST	Seattle	1957	no
1854700015	residence	516 NE 130TH ST	Seattle	1957	no

Attachment E - Surveyed Buildings and Structures

Parcel Number	Name	Address	City	Year	NRHP Eligible
1854700020	residence	520 NE 130TH ST	Seattle	1955	no
1854700025	residence	526 NE 130TH ST	Seattle	1954	no
1854700030	residence	534 NE 130TH ST	Seattle	1951	no
1854700035	residence	540 NE 130TH ST	Seattle	1951	no
1854700080	residence	523 NE 130TH ST	Seattle	1952	no
1854700075	residence	529 NE 130TH ST	Seattle	1950	no
1854700070	residence	535 NE 130TH ST	Seattle	1951	no
1854700095	residence	12752 ROOSEVELT WAY NE	Seattle	1954	no
1854700100	residence	12742 ROOSEVELT WAY NE	Seattle	1951	no
6414100750	residence	12732 5TH AVE NE	Seattle	1951	no
6414100752	residence	12749 ROOSEVELT WAY NE	Seattle	1951	no
6414100751	residence	12726 5TH AVE NE	Seattle	1951	no
6414100740	residence	12718 5TH AVE NE	Seattle	1946	no
6414100730	residence	12708 5TH AVE NE	Seattle	1945	no
6414100731	residence	514 NE 127TH ST	Seattle	1945	no
6414100733	residence	522 NE 127TH ST	Seattle	1950	no
6414100732	residence	502 NE 127TH ST	Seattle	1951	no
6414100035	residence	503 NE 127TH ST	Seattle	1949	no
6414100036	residence	509 NE 127TH ST	Seattle	1949	no
6414100037	residence	515 NE 127TH ST	Seattle	1949	no
6414100038	residence	521 NE 127TH ST	Seattle	1949	no
6414100030	residence	12542 5TH AVE NE	Seattle	1936	no
6414100032	residence	12546B 5TH AVE NE	Seattle	1965	no
6414100027	residence	12534 5TH AVE NE	Seattle	1961	no
6414100026	residence	12532 5TH AVE NE	Seattle	1961	no
6414100020	residence	12520 5TH AVE NE	Seattle	1949	no
6414100024	residence	12512 5TH AVE NE	Seattle	1939	no
6414100023	residence	12514 5TH AVE NE	Seattle	1962	no
6414100021	residence	12518 5TH AVE NE	Seattle	1967	no
6414100010	residence	502 NE 125TH ST	Seattle	1952	no
6414100013	residence	510 NE 125TH ST	Seattle	1952	no
6414100012	residence	514 NE 125TH ST	Seattle	1952	no
6414100011	residence	516 NE 125TH ST	Seattle	1947	no
6413600375	residence	505 NE 125TH ST	Seattle	1947	no
6413600376	residence	513 NE 125TH ST	Seattle	1947	no
6413600377	residence	523 NE 125TH ST	Seattle	1947	no
9509900005	residence	500 NE 124TH ST	Seattle	1958	no
9509900010	residence	508 NE 124TH ST	Seattle	1958	no
9509900015	residence	514 NE 124TH ST	Seattle	1958	no
9509900030	residence	503 NE 124TH ST	Seattle	1958	no
9509900035	residence	509 NE 124TH ST	Seattle	1958	no
6413600345	residence	12316 5TH AVE NE	Seattle	1946	no
6413600337	residence	12308 5TH AVE NE	Seattle	1947	no
6413600339	residence	12302 5TH AVE NE	Seattle	1947	no
6412100084	residence	12051 5TH AVE NE	Seattle	1941	no
6413600050	residence	12054 5TH AVE NE	Seattle	1941	no
6412100081	residence	12049 5TH AVE NE	Seattle	1950	no
6413600045	residence	12048 5TH AVE NE	Seattle	1941	no
6412100082	residence	12045 5TH AVE NE	Seattle	1951	no
6413600040	residence	12042 5TH AVE NE	Seattle	1941	no
6413600035	residence	12036 5TH AVE NE	Seattle	1941	no
6412100080	residence	12035 5TH AVE NE	Seattle	1951	no
6412100094	residence	12025 5TH AVE NE	Seattle	1940	no
6412100093	residence	12021 5TH AVE NE	Seattle	1954	no
6412100090	residence	12015 5TH AVE NE	Seattle	1954	no
6412100092	residence	344 NE 120TH ST	Seattle	1954	no
6412100097	residence	338 NE 120TH ST	Seattle	1954	no
6412100091	residence	332 NE 120TH ST	Seattle	1940	no
6412100095	residence	348 NE 120TH ST	Seattle	1954	no
6412100096	residence	12001 5TH AVE NE	Seattle	1954	no
2238000050	residence	331 NE 120TH ST	Seattle	1949	no
2238000045	residence	337 NE 120TH ST	Seattle	1949	no
2238000040	residence	343 NE 120TH ST	Seattle	1949	no
6411600312	Northgate Elementary	11725 1ST AVE NE	Seattle	1956	yes
6411600450	residence	11725 5TH AVE NE	Seattle	1958	no
6411600464	residence	11723 5TH AVE NE	Seattle	1958	no
6411600420	residence		Seattle	1930	no
6411600413	residence	11708 3RD AVE NE	Seattle	1947	no
6411600410	residence	322 NE 117TH ST	Seattle	1949	no

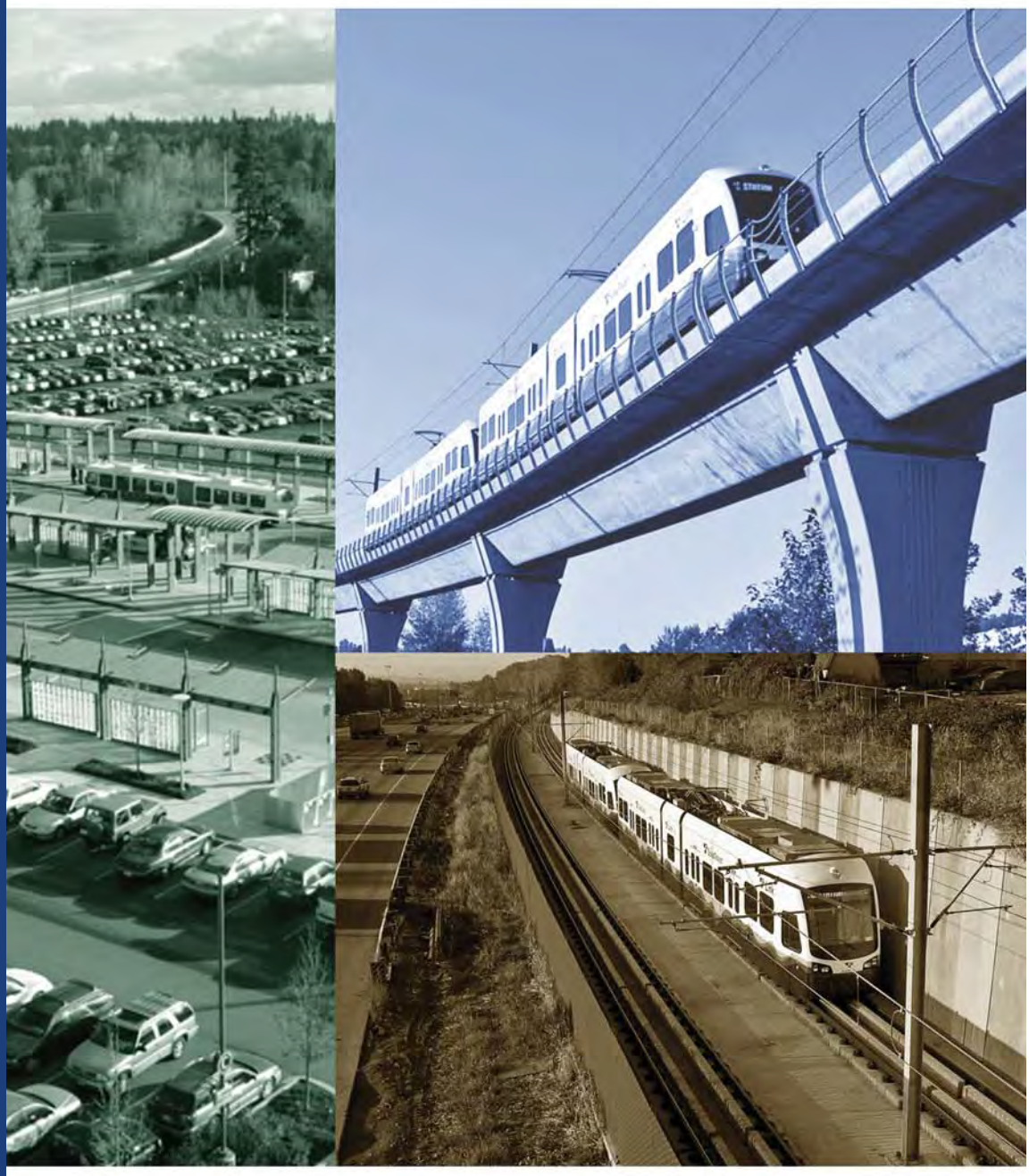
Attachment E - Surveyed Buildings and Structures

Parcel Number	Name	Address	City	Year	NRHP Eligible
6411600414	residence	308 NE 117TH ST	Seattle	1947	no
6411600099	residence	2355 N 117TH ST	Seattle	1953	no
6411600095	residence	2341 N 117TH ST	Seattle	1940	no
6411600132	residence	11550 1ST AVE NE	Seattle	1950	no
6411600186	residence	11622 3RD AVE NE	Seattle	1934	no
6411600187	residence	321 NE 117TH ST	Seattle	1949	no
6411600100	residence	11551 1ST AVE NE	Seattle	1953	no
6411600146	residence	157 NE 117TH ST	Seattle	1949	no
6411600098	residence	11545 1ST AVE NE	Seattle	1953	no
6411600185	residence	11610 3RD AVE NE	Seattle	1955	no
6411600133	residence	11542 1ST AVE NE	Seattle	1950	no
7810300005	residence	150 NE 116TH ST	Seattle	1950	no
6411600147	residence	156 NE 116TH ST	Seattle	1949	no
6411600182	residence	11606 3RD AVE NE	Seattle	1947	no
6411600097	residence	11537 1ST AVE NE	Seattle	1953	no
6411600188	residence	11600 3RD AVE NE	Seattle	1953	no
6411600172	residence	11526 3RD AVE NE	Seattle	1916	no
7810300025	residence	11523 3RD AVE NE	Seattle	1949	no
6411600170	residence	11522 3RD AVE NE	Seattle	1944	no
7810300030	residence	11519 3RD AVE NE	Seattle	1949	no
6411600162	residence	142 NE 115TH ST	Seattle	1947	no
6411600163	residence	148 NE 115TH ST	Seattle	1947	no
6411600164	residence	154 NE 115TH ST	Seattle	1947	no
6411600161	residence	136 NE 115TH ST	Seattle	1930	no
2926049011	Northgate Plaza Apartments	11200 1ST AVE NE	Seattle	1951	yes
0411100015	residence	15414 2nd Avenue NE	Shoreline	1950	no
0411100020	residence	15408 2nd Avenue NE	Shoreline	1950	no
2610100100	residence	302 NE 155th Street	Shoreline	1947	no
2881700454	residence	303 NE 155th Street	Shoreline	1942	no
2610100095	residence	308 NE 155th Street	Shoreline	1947	no
2881700456	residence	309 NE 155th Street	Shoreline	1942	no
2610100090	residence	314 NE 155th Street	Shoreline	1947	no
2881700457	residence	315 NE 155th Street	Shoreline	1947	no
2807600040	residence	15450 4th Avenue NE	Shoreline	1969	no
2807600030	residence	15451 4th Avenue NE	Shoreline	1970	no
2807600020	residence	15455 4th Avenue NE	Shoreline	1969	no
2807600010	residence	15459 4th Avenue NE	Shoreline	1941	no

LYNNWOOD LINK EXTENSION

FINAL ENVIRONMENTAL IMPACT STATEMENT

Ecosystem Resources Technical Report



APRIL 2015

SOUNDTRANSIT

U.S. Department of Transportation
Federal Transit Administration

SOUNDTRANSIT
RIDE THE WAVE

Lynnwood Link Extension

Technical Report

Ecosystem Resources

401 South Jackson Street
Seattle, WA 98104-2826

February 2015

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

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ACRONYMS AND ABBREVIATIONS

BMP	best management practice
CFR	Code of Federal Regulations
CWA	Clean Water Act
DNR	Washington State Department of Natural Resources
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
ESA	Endangered Species Act
GIS	geographic information system
GPS	global positioning system
HGM	hydrogeomorphic
HPA	Hydraulic Project Approval
I-5	Interstate 5
NEPA	National Environmental Policy Act
NOAA Fisheries	National Oceanic and Atmospheric Administration, National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	ordinary high water mark
PCB	polychlorinated biphenyl
PEM	palustrine emergent
PFO	palustrine forested
PGIS	pollution-generating impervious surfaces
PHS	Priority Habitats and Species
PSS	palustrine scrub-shrub
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
Sound Transit	Central Puget Sound Regional Transit Authority
SR	State Route
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation

1 INTRODUCTION

An ecosystem is defined by the interaction between plants, animals, microorganisms, and the physical environment in which they live. Ecosystems consist of living organisms, including humans, and the environment they inhabit. Understanding this relationship is basic to the environmental review process and the assessment of impacts on ecosystems.

This technical report addresses the ecosystem components—aquatic species and habitat; vegetation, terrestrial wildlife, and wildlife habitat; and wetlands—in the vicinity of the Lynnwood Link Extension alternatives. The report describes the affected environment as well as the expected long-term and construction-related impacts on these ecosystem resources for each of the project alternatives. It also discusses measures intended to avoid and minimize impacts, including compensatory mitigation for unavoidable impacts.

This report is organized into four main parts, beginning with a summary of data-gathering activities, identification of related laws and regulations, definition of the study area, and assumptions (Chapter 1); followed by Chapter 2, Study Objectives and Methods; Chapter 3, Affected Environment; and Chapter 4, Environmental Consequences. Appendices A through D provide additional project-related information and site photographs.

1.1 Data Gathered

The Central Puget Sound Regional Transit Authority (Sound Transit) performed a literature and data review to identify and characterize potentially affected resources in and near the project area. Before the field reconnaissance, existing documentation and information were compiled and reviewed so that the reconnaissance effort could focus on verifying data and filling information gaps. Existing ecosystem resource information was gathered from many local, state, and federal agencies. These information sources included published and unpublished reports, maps, Web sites, aerial photographs, and communication with agency staff familiar with resources within the project vicinity. The data sources are listed in the following subsections.

1.1.1 Agency and Public Contacts

Sound Transit contacted the following agencies and local jurisdictions:

- Washington State Department of Transportation (WSDOT)
- City of Seattle
- City of Shoreline
- City of Mountlake Terrace
- City of Lynnwood

1.1.2 Maps and Existing Documentation

Maps and other existing documents were an important resource used to identify ecosystem features within the project vicinity. The following resources were reviewed:

- National Wetlands Inventory (NWI) data (U.S. Fish and Wildlife Service [USFWS])
- Natural Resources Conservation Service (NRCS) Soil Survey maps
- Priority Habitats and Species (PHS) data (Washington Department of Fish and Wildlife [WDFW])
- SalmonScape fish data and maps (WDFW)
- StreamNet data and maps (StreamNet)
- City of Seattle *State of the Waters 2007* report (City of Seattle 2007)
- Basin characterization reports of Thornton Creek/West Lake Washington (Tetra Tech/KCM 2004a) and McAleer Creek/Lyon Creek (Tetra Tech/KCM 2004b)
- Stream habitat analysis for the City of Lynnwood (Jones and Stokes 2000)
- Swamp Creek Urban Growth Area Drainage Needs Report, including Scriber Creek Subbasin (Snohomish County 2002)
- *Salmon and Steelhead Habitat Limiting Factors Report for the Cedar-Sammamish Basin* (Kerwin 2001)
- Washington State Department of Natural Resources (DNR) Natural Heritage Program database
- *A Catalog of Washington Streams and Salmon Utilization, Volume 1, Puget Sound Region* (Williams et al. 1975)
- Critical area maps from local jurisdictions (Cities of Seattle, Shoreline, Mountlake Terrace, Lynnwood, King County, and Snohomish County)
- *Sound Transit 2 Mitigation: Impact Summary and Analysis Memorandum*, as well as geographic information system (GIS) data (ESA Adolfson 2010)
- Aerial photography of the project corridor (including the King County aerial photography database or Google Earth database)
- Regulatory compliance documents, such as the *North Link Light Rail Transit Project Final Supplemental Environmental Impact Statement* (Sound Transit 2006), critical area studies, wetland delineation reports, and stream studies by other agencies or consulting firms, as available
- Lists of listed and proposed endangered and threatened species and critical habitat, candidate species, and species of concern in King and Snohomish counties (USFWS)
- Endangered Species Act Status of West Coast Salmon and Steelhead List (National Oceanic and Atmospheric Administration, National Marine Fisheries Service [NOAA Fisheries])
- Salmon Critical Habitat Designation Maps (NOAA Fisheries)
- USFWS Critical Habitat Maps for Threatened and Endangered Species
- List of Migratory Birds Protected by the Migratory Bird Treaty Act

1.2 Guiding Regulations, Plans, and/or Policies

Wetlands, vegetation, aquatic species and their habitat, wildlife and their habitat, and threatened and endangered species that may be affected by project activities are subject to the following regulations, plans, and policies:

Federal

- National Environmental Policy Act (NEPA)
- Sections 404, 402, and 401 of the Clean Water Act (CWA)
- Section 7 of the Endangered Species Act (ESA)
- Magnuson-Stevens Fishery Conservation and Management Act
- Bald and Golden Eagle Protection Act
- Migratory Bird Treaty Act
- Protection of Wetlands, Presidential Executive Order 11990
- Final Rule on Compensatory Mitigation for Losses of Aquatic Resources (2008)
- U.S. Army Corps of Engineers (Corps) Wetland Delineation Manual (1987)
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region, Version 2.0* (Corps 2010)
- Coastal Zone Management Act

State

- Washington State Environmental Policy Act (SEPA)
- Hydraulic code (Washington Administrative Code [WAC] Chapter 220-110)
- Shoreline Management Act
- Washington State Growth Management Act
- Protection of Wetlands, Governor's Executive Order 89-10
- Protection of Wetlands, Governor's Executive Order 90-04
- Water Pollution Control Act 90.48 Revised Code of Washington (RCW)
- Wetland Mitigation in Washington State (Ecology et al. 2006)

Local

- Critical Area Ordinances for local jurisdictions (Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood)

Miscellaneous

- *Thornton Creek Draft Watershed Action Plan* (Thornton Creek WMC 2001)
- *Greater Lake Ballinger/McAleer Creek Watershed Study Draft Strategic Action Plan* (Otak et al. 2009)
- Sound Transit Environmental Policy (April 2004)
- Sound Transit Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)
- Sound Transit Sustainability Plan (June 2011)

1.3 Study Area

1.3.1 Aquatic Species and Habitat

The study area for aquatic species and habitat includes all streams within 200 feet of the project alternatives or features; however, the description of the affected environment will acknowledge ecosystem features such as streams or natural corridors that are partly within or cross through the field reconnaissance survey area. For example, for streams, the study area will extend up to 100 feet upstream to 300 feet downstream (in accordance with WAC 73-201A-400) from where project limits cross the stream, as well as the entire stretch of any stream paralleling the project within 200 feet of the edge of the alternative. A wetland and stream ordinary high water mark (OHWM) delineation was performed along the Preferred Alternative alignment (approximately 100 feet on each side beyond the construction limits for the Preferred Alternative; this area is referred to as the delineation area). The purpose of the OHWM delineations was to refine resource boundaries and update information for the Final Environmental Impact Statement (Final EIS).

1.3.2 Vegetation, Terrestrial Wildlife, and Wildlife Habitat

The study area for vegetation and wildlife habitat includes the project alignment or related facility footprint (i.e., the area in which clearing, grading, and the operation of construction machinery would disturb existing habitat) plus all areas within 200 feet of the project alternatives. This is the area in which project construction could affect vegetation cover and habitat quality for terrestrial wildlife species that may occur in the area. To evaluate wildlife potentially affected by project-related noise and human activity, project biologists also reviewed documented occurrences of sensitive wildlife species within 0.25 mile of the project alternatives.

1.3.3 Wetlands

The study area for wetlands encompasses the area within 200 feet of either side of the project alternatives or features. Within this area, a field reconnaissance survey was conducted during the Draft EIS phase to identify, map, and describe wetlands. The field reconnaissance survey area consisted of public rights-of-way administered by WSDOT or other public agencies within the study

area. Portions of wetlands that extended beyond the field reconnaissance survey area and other potential wetlands outside of this survey area were identified based on visual observation from public areas during the field survey; current local, state, and federal wetland maps; critical area reports; and aerial photographs. A wetland and stream OHWM delineation was performed along the Preferred Alternative alignment (approximately 100 feet on each side beyond the construction limits for the Preferred Alternative). The purpose was to refine resource boundaries and update information for the Final EIS. Wetland descriptions in this assessment include those wetlands that are partly within or cross through the study area.

1.4 Assumptions

1.4.1 Impact Assessment

This ecosystems impact assessment is based on examining the data from overlaying the conceptual designs for the light rail alternatives onto ecosystem resource base maps and applying an additional buffer (10 to 12 feet) to account for other features such as noise walls and retaining walls. The project footprint includes the guideway, station footprints (including parking), roadway improvements, storm drainage ponds, and ancillary features. Not all areas within the 10- to 12-foot analytical buffer on the project footprint would be subject to long-term impacts; some areas would be unaffected under the light rail alternatives or would be subject only to temporary impacts during construction. The acreage values resulting from this analytical approach provide a reasonable indication of the nature and magnitude of potential impacts and reflect differences among alternatives. To provide a conservatively high estimate of impacts, all impacts within these areas are considered long-term effects for this analysis. Although these analytical buffers represent a conservative estimate of the areas where long-term effects may occur, some impacts could take place outside of these areas. For example, some trees in areas adjacent to the analytical buffer may need to be removed to protect light rail safety and reliability. Removal of such hazard trees may accompany construction of any of the light rail alternatives, and it may continue as a maintenance activity during the operational life of project facilities.

Sound Transit will identify detailed temporary construction limits during the permitting phase to distinguish which ecosystem resources could be restored. Although detailed construction limits are not defined at this phase in the project design, potential construction limits have been estimated in the vicinity of streams, stream buffers, wetlands, and wetland buffers. These consist of areas where temporary impacts could extend beyond the analytical buffer defined for the analysis of long-term impacts. For the analyses of temporary construction impacts on vegetation in this technical report and the EIS, it is assumed that the level of temporary construction impacts would be commensurate with the level of long-term impacts.

The elevated guideway may create a rain shadow effect and in some cases would have a low clearance that could limit sunlight to vegetation underneath. This analysis conservatively assumes that the area under the elevated guideway would be a long-term impact on wetlands, wetland buffers, riparian buffers, and vegetation because of shading and precipitation interception from the

structure. However, shrubs and herbaceous plants may be able to grow in some areas where the guideway is high enough above the ground and where stormwater runoff from the guideway can be directed to underlying plants. Sound Transit will re-evaluate this assumption during the permitting phase to identify specific situations where ecosystem resources under the elevated guideway do not have a long-term impact and could be restored. Estimating this impact is complicated and depends on multiple variables, such as slope, aspect, soil conditions, and stormwater dispersion from the elevated guideway. All these variables make for a complicated impact analysis that exceeds the site and design information available during EIS development. It is assumed that permanent impacts on wetlands associated with elevated sections of the alternatives can be avoided or further minimized during final design and construction.

1.4.2 Site Restoration

For purposes of analysis and discussion of temporary construction impacts, Sound Transit assumes that areas supporting native upland or wetland vegetation and riparian corridors located outside of the project limits would be restored after construction is completed. Site restoration features would be installed immediately following construction in each project segment. The length of time that would be required for site restoration to effectively replace pre-project wetland functions would vary.

1.4.3 Avoiding and Minimizing Impacts on Sensitive Ecosystem Resources

Sound Transit assumes that best management practices (BMPs) would be implemented at appropriate locations and that they would perform as intended to avoid or minimize impacts. Also, where possible, project features would be designed and located to avoid or minimize impacts on sensitive resources. For example, support columns and fill slopes would be situated outside of sensitive areas to the maximum extent practicable. Appendix A provides a compilation of BMPs that could be used to avoid or minimize project construction and operational impacts on sensitive ecosystem resources, including state and federal protected species and their habitats, wetlands, and aquatic resources. These BMPs are either required by state or federal agencies to obtain the permits that would be necessary for the project or may be required to comply with permit conditions.

2 STUDY OBJECTIVES AND METHODS

This chapter describes the objectives and methods used to study the aquatic species and habitat; vegetation, terrestrial wildlife, and wildlife habitat; and wetland resources. Sound Transit and the Federal Transit Administration (FTA) also prepared and circulated the *Lynnwood Link Technical Methodologies Report* in April 2012, and invited cooperating and participating agencies to review and comment. The following discussion summarizes the approach defined in the original methodologies report but also incorporates further detail that became available after field surveys and other reconnaissance were complete.

2.1 Aquatic Species and Habitat

2.1.1 Study Objectives

This technical report is intended to provide information in support of Sound Transit's NEPA and SEPA analyses, assist project planning, and facilitate permitting. Discussions in this report identify and describe aquatic habitats and species in the study area, evaluate the potential impacts of each alternative within each segment, and describe measures to avoid, minimize, or compensate for impacts.

2.1.2 Methods

Aquatic species and habitat (streams) were identified through existing maps and documents, communication with local municipality staff, a field reconnaissance, and OHWM delineation. State and local regulations and guidance were reviewed to assist in identifying stream types and to confirm project compliance with existing laws.

Review of Existing Information

Sound Transit reviewed existing information to identify and characterize aquatic species and habitats that would be potentially affected by the project (see Section 1.1.2). Sources were reviewed to collect information regarding the presence of resident and anadromous fish species and habitat (streams) near the study area. For this analysis, fish species with the potential to be present in a particular stream segment (based on the species' range, habitat associations, and expected upstream extent of use in the stream in question) were assumed to be present, unless their absence was documented. Existing maps and documentation were gathered, reviewed in the office, and then evaluated in the field within the reconnaissance survey area. Existing digital GIS data were gathered from the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood. GIS data from previous reconnaissance work performed for the Sound Transit 2 light rail projects (ESA Adolfson 2010) were also reviewed.

Agency Coordination

Staff members from the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood were contacted regarding their critical area maps and any other resources that may have been identified

subsequent to finalization of these maps. Staff members from WSDOT were contacted regarding plans for potential future fish passage improvement projects.

Identification of Threatened, Endangered, and Candidate Species

Sound Transit reviewed several data sources to determine the known or expected presence of ESA-listed threatened or endangered species in study area streams, or of species that are proposed for listing. Sources included online data from SalmonScape (WDFW 2014a) and PHS (WDFW 2014b), as well as reports prepared by the City of Seattle (2007), Tetra Tech/KCM (2004a, 2004b), Jones and Stokes (2000), and Kerwin (2001). The potential for individual species to use habitats in the Lynnwood Link Extension study area was evaluated based on documented observations and the known or expected upstream extent of each species' use of each stream.

Stream Classifications and Buffer Width Designations

Streams in the study area were assigned preliminary classifications based on the systems used by the Cities of Seattle[1], Shoreline, Mountlake Terrace, and Lynnwood, respectively. Each of these stream classification systems classifies and assigns protective buffers to streams based on the presence of fish and whether water flow is perennial or seasonal. Each system is hierarchical; that is, a stream is assigned to a particular category only if it does not meet the criteria of any higher ranking categories.

Identification and classification of streams in this report represent conservative estimates, based on available information and the provisions of local critical areas rules. The purpose of the preliminary assignments in this document was to identify stream buffer areas that could be affected under the light rail alternatives to allow a comparison of the potential effects of the alternatives. For stream segments that may be affected by project construction, stream classification determinations will be made in accordance with the applicable local jurisdiction's critical areas ordinance during the permitting phase of this project. These determinations will also be informed by determinations of presumed fish use according to WAC 222-16-031. Some of the watercourses identified in this analysis may not actually be defined as streams by the local jurisdictions, or they may be assigned smaller buffers.

The categories of the City of Seattle classification system (Seattle Municipal Code 25.09.020) are as follows:

- **Type 1:** Waters inventoried as "shorelines of the state" under RCW Chapter 90.58, but not including periodically inundated areas of their associated wetlands
- **Type 2:** Segments of natural waters that have high value to fish for spawning, rearing, or migration (i.e., having a defined channel width of at least 20 feet and a gradient less than 4 percent), or that are used for off-channel habitat
- **Type 3:** Segments of natural waters that have moderate to slight value to fish for spawning, rearing, or migration (i.e., having a defined channel width of at least 2 feet and a gradient less than 16 percent)

[1] Only applicable to development on publicly or privately owned parcels.

- **Type 4:** Segments of natural waters with perennial flow, lacking fish habitat
- **Type 5:** Segments of natural waters with seasonal flow only, lacking fish habitat

The categories of the City of Shoreline classification system (Shoreline Municipal Code 20.80.470) are as follows:

- **Type I:** Streams identified as "shorelines of the state" under the City's Shoreline Master Program
- **Type II:** Streams that are used by or that have habitat value for salmonids
- **Type III:** Streams with a channel width of at least 2 feet that are not used by salmonids
- **Type IV:** Streams with a channel width less than 2 feet that are not used by salmonids
- **Piped stream segments:** Segments of streams, regardless of their type, that are fully enclosed in an underground pipe or culvert

The categories of the City of Mountlake Terrace classification system (Mountlake Terrace Municipal Code 16.15.080) are as follows:

- **Class I:** Natural streams identified as "shorelines of the state" under the City's Shoreline Master Program
- **Class II:** Natural streams that have documented or significant potential for anadromous fish use
- **Class III:** Natural streams that are not used by anadromous fish
- **Class IV:** Natural streams with a channel width less than 2 feet that are not used by salmonid fish
- **Class V:** Natural streams that are seasonal and do not contain fish

The categories of the City of Lynnwood classification system (Lynnwood Municipal Code 17.10.060) are as follows:

- **Category I:** Scriber Creek, Swamp Creek, Lunds Creek, and Halls Creek
- **Category II:** Streams that flow year-round or that are used by salmonids
- **Category III:** Streams that are naturally intermittent and are not used by salmonids

Cities have jurisdiction over stream buffers, which are regulated through each City's Critical Areas Ordinance. Table 2-1 lists the stream buffer widths for the various stream classifications. The distances presented below are minimum requirements; wider buffers may be required in response to site-specific conditions (e.g., the presence of ESA-listed fish species) or the type and intensity of proposed uses.

Table 2-1. Minimum Buffer Requirements for Streams in the Study Area by Local Jurisdiction

Jurisdiction	Stream Classification	Buffer Requirement (feet)
City of Seattle[a]	Type 1	100 feet
	Type 2/3 – anadromous fish	75 feet
	Type 2/3 – no anadromous fish	50 feet
	Type 4	50 feet
	Type 5	50 feet
City of Shoreline[b]	Type I	115 feet
	Type II	75 feet
	Type III	35 feet
	Type IV	25 feet
	Piped	10 feet
City of Mountlake Terrace[c]	Class I	150 feet
	Class II	100 feet
	Class III	65 feet
	Class IV	50 feet
	Class V	Based on review
City of Lynnwood[d]	Category I	100 feet
	Category II	60 feet
	Category III	35 feet

[a] Seattle Municipal Code 25.09.020 (D5) and 25.09.200.A.3.d.1. Only applicable to development on publicly or privately owned parcels.

[b] Shoreline Municipal Code 20.80.470 and 20.80.480

[c] Mountlake Terrace Municipal Code 16.15.080 and 16.15.090

[d] Lynnwood Municipal Code 17.10.060 and 17.10.061

Stream Determination and Field Investigations

A detailed field reconnaissance survey was conducted in the study area to identify, map, and describe aquatic species (fish) and habitat (streams) within public rights-of-way (i.e., the field reconnaissance survey area; see Section 1.3) during the Draft EIS phase. General information was collected in the field at that time and stream courses were estimated and mapped using global positioning system (GPS). These documented streams were included in the aquatic species and habitat findings in the Draft EIS. During the Final EIS phase, biologists performed a wetland and stream OHWM delineation in areas approximately 100 feet on each side beyond the construction limits for the Preferred Alternative (i.e., the delineation area; see Section 1.3). The purpose of the OHWM delineations was to refine resource boundaries and update information for the Final EIS. Data from the delineation field work amends those previously collected during the field reconnaissance survey.

Segments of streams or potential streams beyond the delineation area and outside of the WSDOT or other public rights-of-way were identified based on field reconnaissance from public areas; current local, state, and federal habitat maps and reports; and aerial photographs. These areas outside of the WSDOT or other public rights-of-way that appear to be streams were included in the EIS stream findings to provide a conservative estimate of the alternatives' impacts.

Reconnaissance-level aquatic habitat surveys were conducted 300 feet downstream and 100 feet upstream of each proposed stream crossing, and along the entire stretch of any stream paralleling the project within 200 feet from the edge of an alternative. Aquatic habitat suitability (functional

status) was evaluated based on fish life histories, spawning and rearing habitat requirements, seasonal use, and field observations. The following stream habitat information was obtained during a pre-field review of existing literature, supplemented by qualitative observations gathered during the field reconnaissance: overall rating, water quality, in-stream habitat, riparian habitat, and anthropogenic factors. Additionally, aquatic species habitat was described, when possible and applicable, in a subbasin context. Habitat was assessed with the assumption that anadromous fish may one day be able to access the area even if they cannot under present conditions. To the extent information was currently available or could be readily ascertained in the field, downstream impediments to fish passage were identified for each stream reach.

Mapping

Each stream identified in the study area received a unique identifier that was tracked in a GIS database. Within the delineation area, biologists flagged the OHWM of streams, which professional land surveyors then surveyed. For segments of streams identified during the field reconnaissance that are beyond the delineation area, the OHWM was estimated and mapped using GPS. All data were incorporated into the project GIS. Streams that extend beyond the field reconnaissance survey area and other previously mapped streams outside of the WSDOT or other public rights-of-way were also incorporated into the GIS database. The OHWMs of all streams that may be affected by construction of the Preferred Alternative have been delineated. Final stream classification determinations, in accordance with local jurisdictions' critical areas ordinances, will be made during the permitting phase of this project.

Impact Assessment

To evaluate the impacts on aquatic resources, the project and construction limits were overlain onto ecosystem resource base maps. The project limits include the guideway, station footprints (including parking), roadway improvements, storm drainage ponds, ancillary features, and analytical buffer (Section 1.4.1, Impact Assessment). Impact areas were determined as the area of intersection between the project and construction limits and the stream and/or buffers. This assessment also considered loss of riparian function (based on the amount of clearing, filling, and/or excavation as a result of the project) and other direct and indirect impacts on streams. The impacts assessment for aquatic resources also considered differences in the amount of impervious surface under the alternatives, as well as impacts related to changes in water quality.

2.2 Vegetation, Terrestrial Wildlife, and Wildlife Habitat

2.2.1 Study Objectives

This technical report is intended to provide information in support of Sound Transit's NEPA and SEPA analyses, assist project planning, and facilitate permitting. Discussions in this report identify and describe vegetation and wildlife resources in the study area, evaluate the potential impacts of each alternative within each segment, and describe measures to avoid, minimize, or compensate for impacts.

2.2.2 Methods

To establish the basis for analyzing the effects on vegetation, terrestrial wildlife, and wildlife habitat, Sound Transit delineated and classified land cover on aerial photographs and visited a sample of these areas during the field reconnaissance survey. Major plant communities and habitat types were identified and classified based on the structural categories defined in *Wildlife-Habitat Relationships in Oregon and Washington* (Johnson and O'Neil 2001).

To support the analysis of effects on wildlife, Sound Transit identified wildlife species that are associated with the land cover types in the study area, and with specific habitat elements within each cover type. Sound Transit also assessed locations of known ecologically sensitive areas and important wildlife occurrences that may be sensitive to disturbance from noise or human presence. This information was supplemented with data gathered during the field reconnaissance and delineation visits.

Sound Transit reviewed Natural Heritage Program data from DNR for known locations of rare plant species or rare plant communities within the study area. They also studied PHS data for known locations of wildlife species that are listed or proposed for listing under ESA or that are a management concern for WDFW, as well as habitats with unique or significant value. Each major plant community and habitat type that exists in the study area is described in this report. The relative function of each plant community in providing habitat for wildlife is described based on reconnaissance-level field observations, literature review (including *Wildlife-Habitat Relationships in Oregon and Washington* [Johnson and O'Neil 2001]), professional opinion, and agency consultation. Sensitive information regarding the locations of proposed, candidate, and listed species and habitats is not mapped to protect the integrity of this information.

Biologists conducted a limited field reconnaissance to verify habitat mapping and to observe wildlife species in the vicinity of the study area. A wildlife biologist conducted a site visit on March 30, 2012. Biologists conducting site visits to gather data on wetlands and streams also collected data on wildlife use of the area between March and July 2012 and between July 2013 and July 2014. No formal surveys were conducted for any wildlife species. However, if the project alternative site were located within the known or expected range of a particular species, and if habitat for that species were present within the study area, then the species was assumed to be present.

Sound Transit evaluated the potential effects of the proposed action on vegetation and wildlife using a variety of methods and resources, including the following:

- GIS analysis to determine the acreage, type, and location of affected cover types
- Review of existing literature on the effects of project construction, use, and maintenance on vegetation and wildlife
- Review of WDFW management recommendations for priority habitats and species

To evaluate the impacts to vegetation and wildlife resources, project limits were overlain onto ecosystem resource base maps in GIS. The project limits include the guideway, station footprints (including parking), roadway improvements, storm drainage ponds, ancillary features, and analytical

buffer (Section 1.4.1, Impact Assessment). Impact areas were determined as the area of intersection between the project limits and land cover.

2.3 Wetlands

This section describes the study objectives and methods used to characterize wetlands within the study area and to identify potential impacts.

2.3.1 Study Objectives

This technical report is intended to provide information in support of Sound Transit's Lynnwood Link Extension NEPA and SEPA analyses, assist project planning, and facilitate permitting. Discussions in this report identify and describe wetland resources in the study area, evaluate the potential impacts of each alternative within each segment, and describe measures to avoid, minimize, or compensate for impacts.

Existing data and previous reconnaissance surveys show that wetlands are located within the project limits for all project alternatives. As a result, specific objectives of this study include the following:

- Identify, map, and describe the existing conditions of the wetlands and wetland buffers located within 200 feet of either side of the proposed project alternatives
- Delineate wetlands within approximately 100 feet on each side of the Preferred Alternative
- Determine each project alternative's impacts on wetlands
- Describe measures to avoid, minimize, or compensate for impacts

2.3.2 Methods

Wetlands were identified through existing maps and documents, communication with local municipality staff, a field reconnaissance, and a delineation. Federal, state, and local regulations and guidance were consulted to assist in classifying and rating wetlands and to confirm project compliance with existing laws.

Review of Existing Maps and Documentation

Existing maps and documentation were gathered from a variety of sources (see Section 1.1.2), reviewed in the office, and then evaluated in the field within the field reconnaissance survey area. Existing digital GIS data were gathered from the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood; the USFWS NWI; and Sound Transit (previous reconnaissance performed for the Sound Transit 2 light rail projects [ESA Adolfson 2010]).

Agency Coordination

Sound Transit contacted staff from the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood for their critical area maps and any wetlands that may have been identified subsequent to finalization of these maps. This search included documentation associated with recent permit applications or code violations.

Wetland Determination and Field Investigations

Wetlands were identified in the field reconnaissance survey area (defined as the area within 200 feet of either side of the project alternatives or features within public rights-of-way) during the Draft EIS phase. During the Final EIS phase, biologists delineated wetlands on parcels where rights of entry could be obtained within approximately 100 feet of the construction limits for the Preferred Alternative (i.e., the delineation area; see Section 1.3). The criteria used for wetland delineations were those provided in the *Corps of Engineers Wetland Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0* (2010). Within the delineation area on properties where rights of entry were obtained, biologists flagged wetland boundaries. Within portions of the field reconnaissance areas outside of the delineation area, boundaries were estimated and mapped using GPS. All data were incorporated into the project GIS.

Wetlands that extend beyond the field reconnaissance survey area and other potential wetlands outside of the WSDOT or other public rights-of-way that appear to meet the wetland criteria were also incorporated into the GIS database. Ground-truthing and data collection were not possible for these areas because no rights of entry were obtained for properties outside of the field reconnaissance survey area. Potential wetlands were identified by visual observation from public areas during the field reconnaissance; current local, state, and federal wetland maps; and critical area report figures or plans. Boundaries of potential wetlands were added to the project GIS database by incorporating GIS layers prepared by others or estimating and digitizing boundaries over aerial photographs. All wetlands on properties where rights of entry were obtained within 100 feet of the alignment of the Preferred Alternative have been delineated and rated to support permitting with state and local agencies. Some wetlands could not be accessed because right of entry was not granted.

Identified wetlands were classified according to the USFWS *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979) and *A Hydrogeomorphic Classification for Wetlands* (Brinson 1993). The Washington State Department of Ecology's (Ecology) *Washington State Wetland Rating System for Western Washington – Revised* (Hruby 2004) was used to rate wetlands. Wetlands were also rated according to local regulations. The Cities of Seattle, Mountlake Terrace, and Lynnwood use the Ecology rating system (Seattle Municipal Code 25.09.160A, Mountlake Terrace Municipal Code 16.15.080, and Lynnwood Municipal Code 17.10.050), while the City of Shoreline uses its own rating system (Shoreline Municipal Code 20.80.320). Wetland ratings are used to determine required buffer widths and compensatory mitigation ratios. Generally, the required buffer width and compensatory mitigation ratio increase in conjunction with higher wetland ratings. Functions of delineated wetlands were assessed using the WSDOT *Wetland Functions Characterization Tool for Linear Projects* (Null et al. 2000).

Additional information on methods used for wetland identification, delineation, classification, rating, and buffer width designation is provided in the Wetland and Stream Delineation Report (Appendix B).

Mapping

Each wetland identified in the study area received a unique identifier that was tracked in a GIS database. Wetlands were named based on whether they were field-identified wetlands ("W") or not field-identified/potential wetlands ("PW"), the city they are located in (Seattle = SE, Shoreline = SH, Mountlake Terrace = MT, or Lynnwood = LY), and the order they were encountered in the field (1,2,3, etc.). For example, Wetland WSE5 is the fifth field-identified wetland in Seattle. The field reconnaissance was conducted moving generally from south to north through the study area.

Within the delineation area, biologists flagged wetland boundaries, which professional land surveyors then surveyed. For wetlands identified during the field reconnaissance that are beyond the delineation area, the boundaries were estimated and mapped using GPS. Wetlands that extend beyond the field reconnaissance survey area and other potential wetlands outside of the WSDOT or other public rights-of-way were also incorporated into the GIS database. These included wetlands identified by visual observation from public areas during the field reconnaissance; current local, state, and federal wetland maps; and critical area report figures or plans. These wetland boundaries were added to the project GIS database by adding existing GIS layers or estimating and digitizing boundaries. All wetlands within 100 feet of the Preferred Alternative have been delineated and rated to support permitting with state and local agencies.

Impact Assessment

To evaluate wetland impacts, the project and construction limits were overlain onto ecosystem resource base maps. The project limits include the guideway, station footprints (including parking), roadway improvements, storm drainage ponds, ancillary features, and analytical buffer (Section 1.4.1, Impact Assessment). Impact areas were determined as the area of intersection between the project and construction limits and the wetland and/or buffers. This assessment also considered loss of wetland function (based on the amount of clearing, filling, and/or excavation as a result of the project) and other direct and indirect impacts on wetlands.

3 AFFECTED ENVIRONMENT

3.1 Aquatic Species and Habitat

The Lynnwood Link Extension would be constructed in an urban area where aquatic habitats have already been subjected to a moderate to high degree of alteration. The degree of alteration varies from stream to stream, with the greatest alteration occurring where urban development is the greatest. Some of the smaller streams and headwater reaches have been placed in conveyance systems consisting of pipes and ditches, interfering with natural flow patterns and processes such as groundwater recharge.

3.1.1 Drainage Basin

The study area for the Lynnwood Link Extension is drained by three stream systems: Thornton Creek, McAleer Creek, and Scriber Creek (Figures 3-1a through 3-1c). This map also shows the locations of fish passage barriers within and near the study area, as well as the locations of proposed stream crossings under the light rail alternatives. Salmonid species that are known or expected to occur at locations where project alternatives cross streams are identified in text boxes at those locations on the map. All three streams drain to Lake Washington. These waterways also provide essential fish habitat for federally managed species; such habitat is protected under the Magnuson-Stevens Fishery Conservation and Management Act. Thornton and McAleer creeks drain directly to the lake, while water from Scriber Creek flows to the lake via Swamp Creek and the Sammamish Slough. Lake Washington is the second-largest natural lake in Washington, with a surface area of 22,138 acres. The lake lies at an elevation of 22 feet and has a maximum depth of 214 feet. The major sources of water that enter the lake are the Cedar River (55 percent of the average inflow) and the Sammamish River (27 percent of the average inflow). The remainder of inflow comes from May Creek, Coal Creek, Lyon Creek, McAleer Creek, Thornton Creek, and other smaller streams. The lake drains to Puget Sound through the Lake Washington Ship Canal—an artificial waterway constructed in 1916.

Many species of fish, both native and introduced, inhabit Lake Washington. Discussions in this document focus on salmonids—anadromous[2] salmonids in particular—because these species are a management concern due to habitat degradation and population declines. Salmonids in the Lake Washington watershed are a mix of native and introduced stocks. For example, sockeye salmon (*Oncorhynchus nerka*) that spawn in some areas appear to be descendants of introduced fish, while those in other areas may be native fish (Hendry et al. 1996). Chinook salmon (*O. tshawytscha*) naturally reproduce in many of the watershed streams and are supplemented by hatchery production of fish originally from the Green River (Weitkamp and Ruggerone 2000). Coho salmon (*O. kisutch*) in the watershed also appear to be a mix of naturally produced and hatchery fish (Walter 2013). Chum salmon (*O. keta*) and pink salmon (*O. gorbuscha*) have also been observed. Rainbow trout

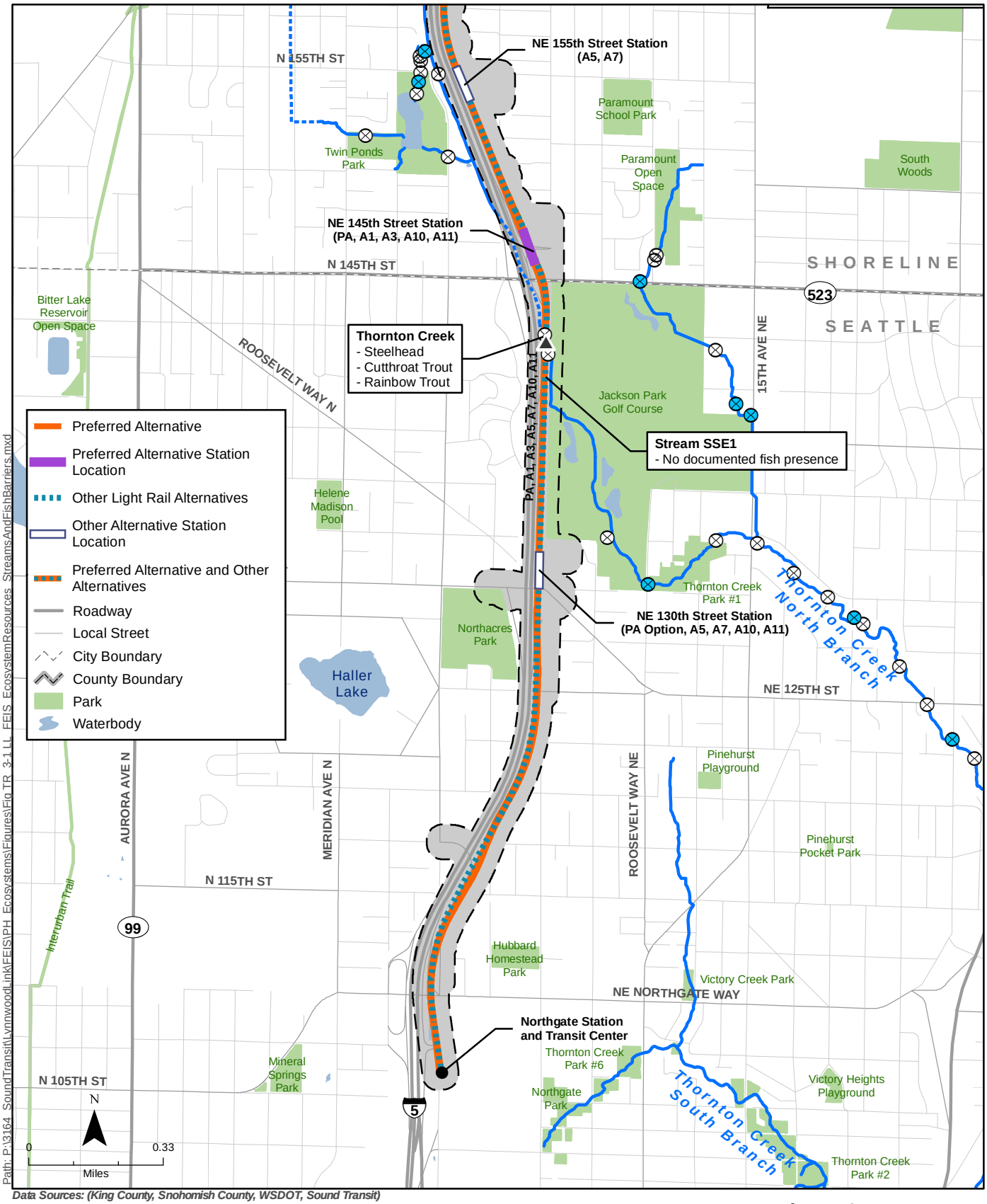
[2] Anadromous fish begin their life in fresh water, migrate to marine waters to reach maturity, and then return to fresh water as adults to spawn.

(*O. mykiss*) and steelhead trout (the anadromous life form of *O. mykiss)* are a mix of introduced hatchery and native stocks. Cutthroat trout (*O. clarkii*), in both resident and anadromous (i.e., sea-run) forms, are also present in the watershed. Kokanee salmon (a form of sockeye that remains in freshwater habitats throughout its life cycle) are also found in the lake and some of its tributary streams. Several species of introduced fish, such as yellow perch (*Perca flavescens*) and smallmouth bass (*Micropterus dolomeiui*), are very abundant. Other introduced species include tench (*Tinca tinca*) and common carp (*Cyprinus carpio*), both native to Europe. The following paragraphs provide additional information about native salmonids.

Adult Chinook salmon in the study area belong to the Sammamish stock (WDFW 2013). Most spawning takes place in North, Swamp, Bear, Little Bear, Thornton, McAleer, Cottage Lake, and Issaquah creeks, as well as in the Sammamish River (WDFW 2012). Run sizes fluctuate considerably; between 2001 and 2012, escapement estimates based on counts of live Chinook in Bear Creek and Cottage Lake Creek ranged between 74 and 531 (WDFW 2013). Spawning in Lake Washington tributary streams generally occurs from mid-September through October (WDFW 2012). Fry emerge from redds during January, February, and March (Celedonia et al. 2008). These juveniles appear to have two rearing strategies: (1) rear in streams until May and then emigrate downstream to lake habitat during May or June; or (2) emigrate shortly after emergence and rear in the lake as fry for 3 to 5 months (Celedonia et al. 2008). Most juvenile Chinook salmon leave Lake Washington and enter Puget Sound in June and July (DeVries et al. 2004).

Steelhead, as well as their resident life form (rainbow trout), are present in the Lake Washington system but are not abundant. Based on chronically low redd counts in Cedar River, Issaquah Creek, and Bear Creek, as well as severe declines in 2000 and 2001, the status of the Lake Washington winter steelhead stock is rated as critical (WDFW 2012). Steelhead spawn in rivers and tributaries throughout the Lake Washington basin, including Thornton Creek and McAleer Creek, generally between mid-December and early June (WDFW 2012). Naturally produced juvenile steelhead either migrate to sea or remain in freshwater as resident rainbow trout (Kerwin 2001). Most juvenile steelhead in the Lake Washington basin remain in streams for 1 to 3 years (Kerwin 2001). Steelhead smolts move into Lake Washington from tributary streams in April on their way out of the system. They stay in the lake for a month or two, migrating out before mid-June (Kerwin 2001). Resident rainbow trout are present in some streams all year long.

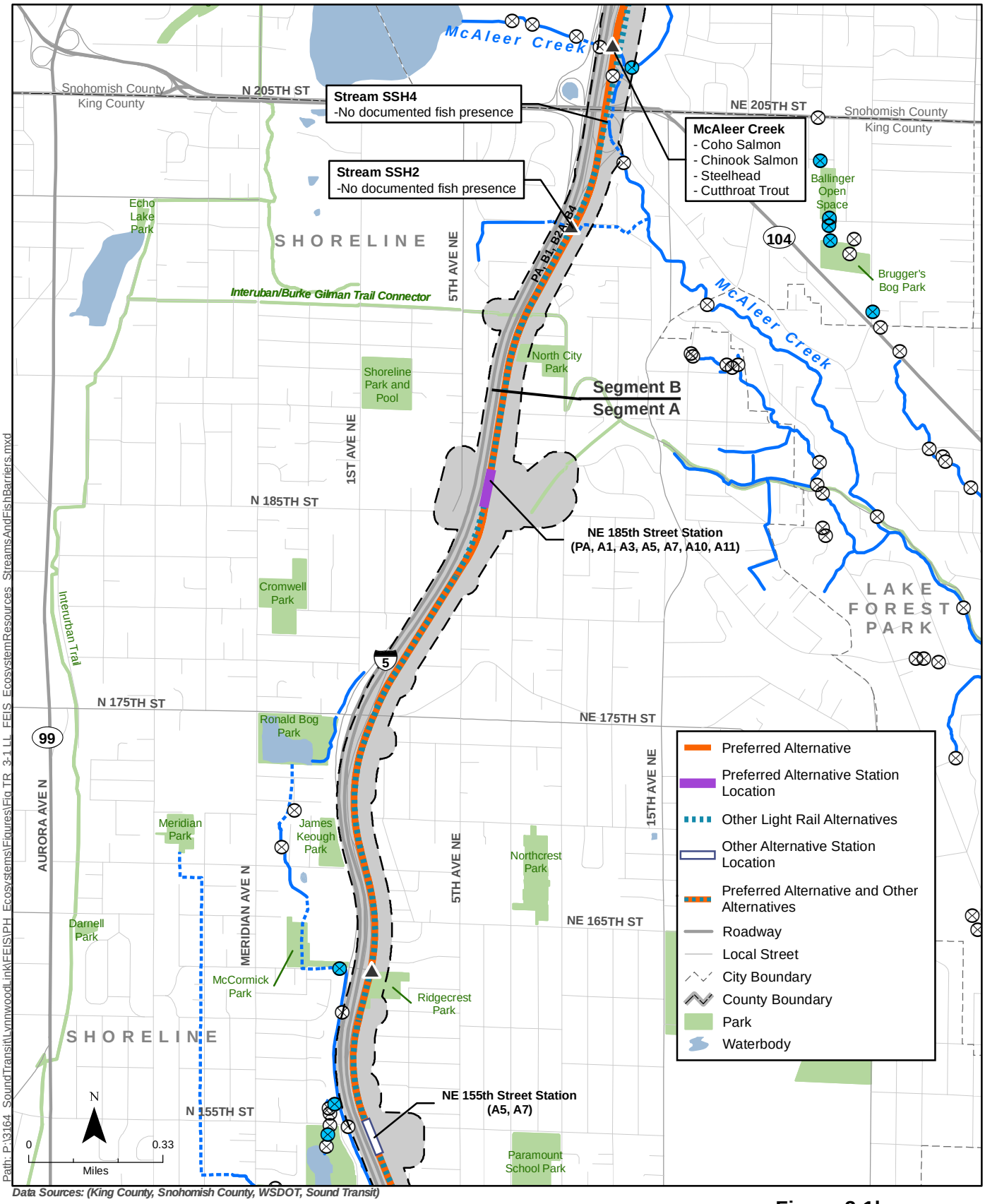
Coho salmon in the study area belong to the Lake Washington/Sammamish Tribs stock (WDFW 2012). Based on low escapement values and a long-term negative trend, the stock is rated as depressed (WDFW 2012). Spawning occurs in nearly all tributaries, including Thornton Creek, McAleer Creek, and Scriber Creek, generally from late October to mid-December (WDFW 2012). Fry emerge in late winter and rear in freshwater habitats for 12 to 14 months before migrating through Lake Washington to marine habitats in April and May (Kerwin 2001).



Note:
Text boxes where the project alternatives cross or pass near streams identify the salmonid species known or expected to occur at those specific locations, and are not intended to depict upstream limits of fish distribution.

Figure 3-1a
Streams and
Fish Passage Barriers

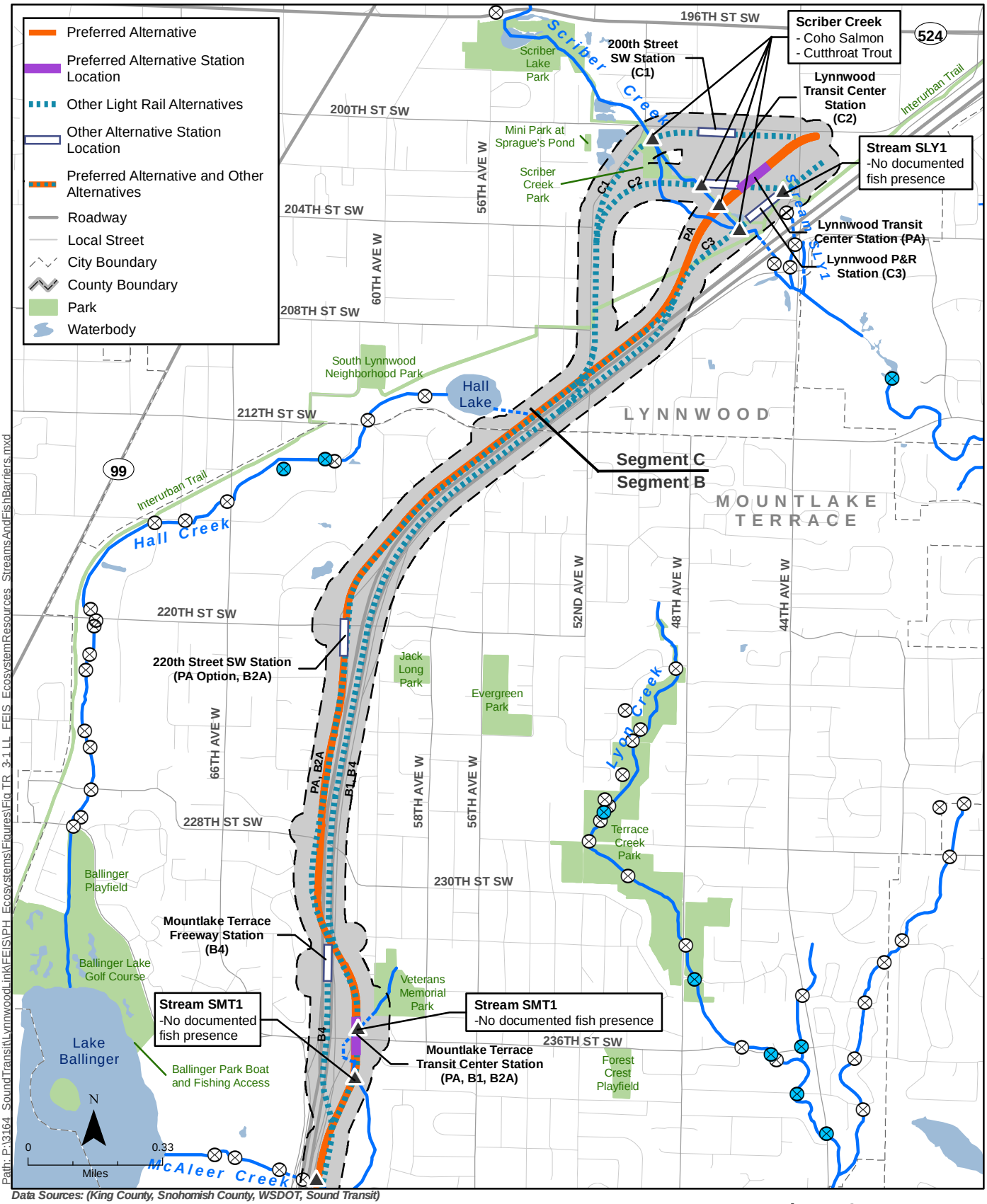
Lynnwood Link Extension



Note:
Text boxes where the project alternatives cross or pass near streams identify the salmonid species known or expected to occur at those specific locations, and are not intended to depict upstream limits of fish distribution.

Figure 3-1b
Streams and
Fish Passage Barriers

Lynnwood Link Extension



Note:
Text boxes where the project alternatives cross or pass near streams identify the salmonid species known or expected to occur at those specific locations, and are not intended to depict upstream limits of fish distribution.

Figure 3-1c
Streams and
Fish Passage Barriers

Lynnwood Link Extension

Sockeye salmon that use habitats in the study area belong to the Lake Washington/Sammamish Tribs stock (WDFW 2012). The primary spawning areas for this stock are in the Big Bear Creek system and Issaquah Creek (WDFW 2012), but sockeye also use nearly all of the larger tributary streams, including Thornton Creek and McAleer Creek. WDFW (2012) rates the stock as healthy. Between 1991 and 2008, escapement values from Big Bear Creek averaged around 7,400 spawning adults in odd-numbered years and 40,000 adults in even-numbered years (WDFW 2013). Spawning for this stock generally occurs from early September through late December (WDFW 2012). After emerging from spawning gravel in winter and early spring, juvenile sockeye migrate to Lake Washington, where they rear for 1 to 3 years (Kerwin 2001). Juveniles enter the lake as fry during late winter and early spring, and most rear in the lake for 1 year.

Coastal cutthroat trout in both resident and anadromous forms are present in the Lake Washington basin in moderate abundance. Resident fish are present all year long. Sea-run cutthroat spawn over a long period, from winter through May (WDFW 2013). They seek smaller streams with minimal flow and small substrates; cutthroat trout are commonly found in the uppermost reaches of streams, in areas that are too shallow for other salmonids (WDFW 2013). Most sea-run cutthroat rear in stream habitats for 2 to 3 years before migrating to salt water (WDFW 2013).

Bull trout (*Salvelinus confluentus*) have been observed entering Lake Washington through the fish ladder viewing area at the Ballard Locks, where every year, one or two fish are seen traveling into the lake. Many researchers believe that these fish are seasonal transient strays rather than fish produced within the system. Surveys to date have not produced conclusive evidence for the presence or absence of bull trout in the Lake Washington system, outside of a self-sustaining population in the Cedar River drainage above Lower Cedar Falls (King County Department of Natural Resources 2000). For regulatory purposes, USFWS assumes that natural production is possible in the system.

3.1.2 Streams in the Study Area

Discussions in this subsection describe the streams that are present in the study area and provide information about fish use, fish habitat quality, and riparian habitat conditions in the streams and their tributaries. Anthropogenic factors that influence habitat quality for each stream are also identified. Information is organized by the three major stream systems in the study area, progressing from south to north. Table 3-1 summarizes the stream information in the study area. Appendix C includes photographs of the streams.

Thornton Creek

The 7,200-acre Thornton Creek basin drains a substantial portion of northeastern Seattle and most of Shoreline. The stream flows generally south and east before discharging to Lake Washington. Land elevations range from 18 feet at the stream's mouth in Lake Washington to more than 500 feet in the northwestern portions of the basin.

Table 3-1. Summary of Streams in the Lynnwood Link Extension Study Area

Stream Name[a]	Stream Index No.[b]	Fish Habitat Status[c]	Local Jurisdiction	Local Jurisdiction Stream Classification[d]	Local Jurisdiction Buffer Width (feet)
Thornton Creek, North Branch	08.0030	Documented	Seattle	Type 3[e]	75[e]
Thornton Creek Tributary (SSE1)	NA	Potential	Seattle	Type 3[e]	75[e]
McAleer Creek Tributary (SSH2)	NA	Unknown (Presumed Potential)	Shoreline	Piped	10
McAleer Creek Tributary (SSH4)	NA	Unknown	Shoreline	Type III	65
McAleer Creek	08.0049	Documented	Shoreline	Type II	115
McAleer Creek	08.0049	Documented	Mountlake Terrace	Class II	100
McAleer Creek Tributary (SMT1)	08.0050	Potential	Mountlake Terrace	Class III/Class V[f]	65/0[f]
Scriber Creek	08.0061	Documented	Lynnwood	Category I	100
Scriber Creek Tributary (SLY1)	08.0064	Potential	Lynnwood	Category III	35

[a] Streams other than Thornton Creek, McAleer Creek, and Scriber Creek are identified with alphanumeric codes: SYYn. S = stream; YY = two-letter code for local jurisdiction (SE = Seattle, SH = Shoreline, MT = Mountlake Terrace, LY = Lynnwood); n = sequential identification number

[b] Water Resource Inventory Area (WRIA) identification numbers according to Williams et al. (1975). 'NA' indicates watercourses that are not identified in that inventory.

[c] Documented = Fish have been observed in the study area; Potential = Potential fish habitat is present, based on field assessment of stream width and gradient, but stream segments in the study area are upstream of human-caused fish passage barriers; Unknown = No fish presence data are available and stream segments are contained within culverts in the study area.

[d] Identification and classification of streams in this analysis represent conservative estimates, based on available information and the provisions of local critical areas rules. Some of the watercourses identified in this analysis may not actually be defined as streams by the local jurisdictions, or they may be assigned smaller buffers than indicated here. Actual impacts would be analyzed and mitigated as appropriate through local permitting processes.

[e] The Seattle Municipal Code applies development restrictions and specifies mitigation requirements only within environmentally critical areas or buffers on publicly or privately held parcels. The locations where the proposed alignments would pass near Thornton Creek and Stream SSE1 are within the right-of-way for I-5 or other roads and are therefore not subject to City of Seattle buffer requirements. Regulatory buffer widths are used in this analysis to identify areas where construction of the light rail alternatives could affect the condition of riparian buffers. Mitigation requirements would be developed through local permitting processes.

[f] See McAleer Creek discussion below.

Thornton Creek drains the southern half of the study area (south of NE 185th Street, approximately). Segments of the North Branch of Thornton Creek (Water Resources Inventory Area [WRIA] No. 08.0030) within and immediately upstream of the Jackson Park Golf Course fall within the study area. The South Branch of Thornton Creek, also known as Maple Leaf Creek, originates in wetlands near Northgate, North Seattle Community College, and Interstate 5 (I-5) (City of Seattle 2007). The stream drains the southernmost portion of the study area. The two branches join to form the 1.4-mile-long main stream near the Meadowbrook stormwater detention pond in northeast Seattle. The study area does not include any portions of the South Branch or the main stem of Thornton Creek.

The North Branch of Thornton Creek (hereafter referred to as Thornton Creek in this report) originates near Ronald Bog in Shoreline and flows 5 miles before joining the South Branch.

Portions of the stream above and within the study area are as follows, progressing from upstream to downstream:

- After exiting the piped segment immediately south of Ronald Bog, Thornton Creek passes through backyards, roadside ditches, and culverts along and through the I-5 corridor. The stream flows at the surface from approximately North 167th Street through most of the solid waste transfer station, re-enters pipes under the King County Metro bus facility, then flows at the surface most of the way to Twin Ponds (Tetra Tech/KCM 2004a).
- Downstream from Twin Ponds, the creek passes through a small wetland called Peverly Pond and eventually through a concrete-lined channel into a pair of 1,500-foot-long, 72-inch-wide culverts under I-5.
- Downstream of the I-5 culverts, the stream enters the study area, emerging from the I-5 culverts south of North 145th Street and west of 5th Avenue NE, passing through a pair of 48-foot-long, 40-inch-diameter culverts under 5th Avenue NE, and then flowing in a ditch between 5th Avenue NE and the Jackson Park Golf Course for approximately 700 feet before veering east into the golf course (Tetra Tech/KCM 2004a).

Approximately 300 feet south of Thornton Creek's crossing under 5th Avenue NE, a watercourse emerges from a culvert in the I-5 right-of-way, flows southward in the ditch on the west side of 5th Avenue NE, and then drains to Thornton Creek via a culvert under 5th Avenue NE. The watercourse was not catalogued by Williams et al. (1975); the source of the water in the ditch is not known; and historic maps of the area do not indicate the presence of a tributary to Thornton Creek at this location. However, field observations of flowing water during the summer months suggest the possibility that some flow may be derived from groundwater. For this analysis, this watercourse is provisionally identified as a stream (SSE1) and classified as Type 3, based on the presence of a 2-foot-wide channel and a gradient less than 16 percent. A formal determination of whether the watercourse is a stream (and if so, how it is classified) will occur through the process of project permitting with the City of Seattle.

Anthropogenic Factors

Overall, approximately 59 percent of the Thornton Creek basin is covered by impervious surfaces such as roads, buildings, and parking lots (City of Seattle 2007). In portions of the basin north of the Seattle city limits, the City of Shoreline calculated existing impervious area values ranging between 45 and 48 percent (Tetra Tech/KCM 2004a). Kerwin (2001) estimated the effective impervious area in the basin at 31.9 percent. The City of Seattle (2007) identified the following problematic conditions in the system, due primarily to urban development in the basin:

- Altered hydrology, with high and flashy flows
- Degraded water quality, with temperatures and fecal coliform bacteria frequently at levels above state standards
- Excess nutrients under non-storm flow conditions

- Channel incision and degraded in-stream habitat, due to restricted channel width and loss of hydrologic connectivity to the floodplain
- Depressed levels of coarse sediment, in-stream wood, and riparian forest
- Fish passage barriers that limit anadromous fish to 30 percent of the watercourse length
- High pre-spawn mortality rates of coho salmon

Fish Use

The lower reaches of Thornton Creek support spawning anadromous salmonids. Chinook, coho, and sockeye salmon redds have been observed in the North Branch as far upstream as 35th Avenue NE and NE 115th Street, approximately 2.5 miles downstream of the study area (City of Seattle 2007; WDFW 2014a). Individual chum salmon (likely strays from other basins [Kerwin 2001]) have also been sighted in the lower portions of the stream (McMillan 2007 *in* City of Seattle 2007), and steelhead have been observed throughout much of the system (WDFW 2014a).

The City of Seattle (2007) identified at least 4 total barriers and 10 partial barriers to fish passage between the study area and the downstream reaches that support anadromous spawning. However, the observation in 2004 of an adult steelhead trout upstream of Twin Ponds suggests that none of these structures, including the culvert under I-5, may present an absolute barrier to fish passage (Tetra Tech/KCM 2004a). Notably, steelhead are renowned for their ability to negotiate what would be considered barriers for most other salmonids (Tetra Tech/KCM 2004a). Moving upstream from the study area, WDFW (2014c) characterized the culvert under I-5 as a partial barrier to fish passage.

Resident salmonids are also present in the system, including reaches that are within or upstream of the study area. Cutthroat trout have been observed as far upstream as the Jackson Park Golf Course, and rainbow trout have been observed another mile upstream, near Twin Ponds (City of Seattle 2007). According to WDFW (2014b), resident cutthroat trout are expected to be present in Thornton Creek all the way up to Ronald Bog. Native non-salmonid species that use Thornton Creek include threespine stickleback (*Gasterosteus aculeatus*), prickly sculpin (*Cottus asper*), coast-range sculpin (*Cottus aleuticus*), and lamprey (*Lampetra* sp.) (Tabor et al. 2010). Non-native fish species that have been introduced to Thornton Creek, either intentionally or unintentionally, include rock bass (*Ambloplites rupestris*), pumpkinseed (*Lepomis gibbosus*), largemouth bass (*Micropterus salmoides*), and oriental weatherfish (*Misgurnus anguillicaudatus*) (Tabor et al. 2010).

Migratory cutthroat trout are the most abundant salmonid in Thornton Creek, with an average annual adult count of more than 200 live fish on spawning grounds (City of Seattle 2007). Based on carcass counts from 1999 through 2005, the average annual anadromous run size in Thornton Creek is 33 coho, 7 sockeye, and 4 Chinook salmon (City of Seattle 2007). No fish are known or expected to use the watercourse (SSE1) along 5th Avenue NE south of Thornton Creek (WDFW 2014a, 2014b). That watercourse has not been identified as a stream (fish-bearing or otherwise) by WDFW (2014a) or Washington DNR (2014).

Water Quality

No portions of Thornton Creek within the study area are listed as impaired water bodies under CWA Section 303(d) (Ecology 2012a). The main stem and the lower portions of the North and South Branches are listed as impaired, based on demonstrated exceedances of state water quality standards for temperature and dissolved oxygen (Ecology 2012a). The lowest reaches of the main stem are also listed for fecal coliform bacteria. In addition, Ecology (2012a) has identified portions of Thornton Creek as a water of concern for both pH and mercury.

Since 1971, King County has monitored water quality in Thornton Creek at a station located near the stream's mouth. Results from a trend analysis of water quality data from 1971 to 2007 indicated that water quality might have declined during that 37-year analysis period, with statistically significant increases in water temperatures, total phosphorus, turbidity, and conductivity, as well as decreased concentrations dissolved oxygen (King County 2014a). Decreased levels of ortho-phosphorus, nitrate-nitrogen, and total nitrogen indicate some improvements in water quality during that period. In its most recent (2013) water quality report for Thornton Creek, King County assigned the stream a water quality index score of 45, indicating a moderate level of concern for water quality (King County 2014b). In general, scores between 40 and 80 indicate a moderate level of concern and scores below 40 indicate a high level of concern. The water quality index score for Thornton Creek was greater than 40 in only 2 of the 14 years from 2000 to 2013 (King County 2014b).

In-stream Habitat

In-stream habitat quality of Thornton Creek within the study area is rated as low, based on channel morphology, sediment regime, and existing physical habitat conditions (City of Seattle 2007). The stream valley in most of this reach has been modified by grading, fill, and excavation, particularly near I-5, where the stream has been straightened and confined. The channel has more sinuosity within the golf course (downstream of the study area), but the banks in many areas are hardened by riprap and the stream cannot migrate. Note that this description is based on surveys that were completed between 1999 and 2004, before stream restoration work was completed within the Jackson Park Golf Course. The habitat benefits of that effort are not reflected in this description (City of Seattle 2007).

Throughout this segment, the channel is mostly eroding and degrading or has been locked into place through bank armoring. Gradients range between 1 and 2 percent. Gravel and sand are the dominant sediment types, and riffles and glides are the dominant habitat types; little in-stream structure is present to contribute to pool formation. This dearth of in-stream structure also reduces the channel's capacity to trap and store sediment (City of Seattle 2007). Based on the predominance of fine sediments, spawning habitat quality is considered poor. Because of the presence of overhanging vegetation and relatively deep water, portions of the stream within the study area likely provide suitable rearing habitat for juvenile fish (Tetra Tech/KCM 2004a).

Upstream of the I-5 culvert, Thornton Creek runs alongside the western boundary of the study area. The stream is outside of the study area and on the opposite side of I-5 from the proposed

alignments, however, and therefore does not have the potential to be affected by construction of any of the light rail alternatives.

Riparian Habitat

Riparian habitat quality of Thornton Creek within the study area is rated low, based on riparian area width, connectivity, understory and canopy composition, canopy density, and the percentage of the stream shaded by vegetation (City of Seattle 2007). Stream banks in most portions of the study area are dominated by Himalayan blackberry (*Rubus armeniacus*), particularly along the segment that parallels 5th Avenue NE.

On the opposite side of 5th Avenue NE from the alternative light rail alignments, there is a 50- to 70-foot-wide strip of vegetation beside the stream. Vegetation in this strip includes red alder (*Alnus rubra*), black cottonwood (*Populus balsamifera*), and scattered patches of immature western redcedar (*Thuja plicata*). This overstory canopy provides shade for the stream during spring and summer (when the trees have leaves), as well as the potential for contributing some woody debris. Within the golf course, the dominant riparian vegetation in the study area consists of non-native plants, turf, and landscaping.

Riparian habitat for the surface-flowing segment of the watercourse (SSE1) along 5th Avenue NE south of Thornton Creek consists of a strip of red alder and Himalayan blackberry in the I-5 right-of-way between 5th Avenue NE and the off-ramp from I-5 northbound to NE 145th Street.

McAleer Creek

McAleer Creek (WRIA No. 08.0049) originates at Lake Ballinger and flows roughly 6 miles to the northeast corner of Lake Washington. The 5,300-acre drainage basin includes portions of Lynnwood, Edmonds, Mountlake Terrace, Shoreline, and Lake Forest Park. Land elevations range from 18 feet at the stream's mouth in Lake Washington to more than 500 feet north of the Mountlake Terrace Transit Center. Most of the northern portion of the study area (from NE 185th Street in Shoreline, north to about 208th Street SW in Lynnwood) drains to the McAleer Creek system. Areas north of 224th Street SW drain to Lake Ballinger, which empties to McAleer Creek.

Much of McAleer Creek and its tributaries within the study area are contained within culverts. The main stem enters the study area from an open channel through the Nile Golf Course west of I-5. The main stem stream segments in the study area are as follows, progressing from upstream to downstream:

- Culvert under I-5 (440 feet)
- Open channel adjacent to the on-ramp from State Route (SR) 104 westbound to I-5 northbound (240 feet)
- Culvert under the cloverleaf interchange between I-5 northbound and SR 104 westbound (280 feet)
- Open channel in the area enclosed by the cloverleaf off-ramp from I-5 northbound to SR 104 westbound (200 feet)
- 4-foot by 6-foot box culvert under SR 104 (320 feet)

- Channelized open water course in the area enclosed by the cloverleaf on-ramp from SR 104 eastbound to I-5 northbound (200 feet)
- 66-inch-diameter culvert beneath the off-ramp from I-5 northbound to SR 104 (280 feet)

The stream is within the culvert as it exits the study area, briefly resurfacing before entering a 72-inch culvert under Forest Park Drive NE shortly thereafter.

Approximately 1,800 feet south of the I-5/SR 104 interchange, a tributary to McAleer Creek (Stream SSH2) has been identified as passing under I-5 (Tetra Tech/KCM 2004b). This tributary was not catalogued by Williams et al. (1975). After entering a culvert just west of I-5, the stream remains piped for approximately 1,500 feet, resurfacing shortly before its confluence with the main stem near a wastewater pumping station upstream of 15th Avenue NE (Tetra Tech/KCM 2004b). The open-water portions of the stream within the study area, west of I-5, are within concrete-lined ditches along NE 200th Street. During site visits conducted for this analysis, flowing water was observed in this watercourse only during and immediately after rainfall.

Within the cloverleaf interchange between eastbound SR 104 and northbound I-5, a watercourse emerges from a culvert under the roadway, flows approximately 30 feet, and then joins McAleer Creek. The watercourse was not catalogued as a stream by Williams et al. (1975), the source of the water is not known, and historical maps of the area do not indicate the presence of a tributary to McAleer Creek at this location. However, field observations of flowing water during the summer months suggest the possibility that some flow may be derived from groundwater. For this analysis, this watercourse is provisionally identified as a stream (SSH4) and classified as Type III, based on the presence of a 2-foot-wide channel and a gradient less than 16 percent. A formal determination of whether the watercourse is a stream (and if so, how it is classified) will occur through the process of project permitting with the City of Shoreline. If the watercourse is classified as a Type III stream, its regulatory buffer will be contained entirely within the larger regulatory buffer for McAleer Creek. Riparian habitat conditions for Stream SSH4 are therefore as described for McAleer Creek, above.

North of the I-5/SR 104 interchange, a tributary (WRIA No. 08.0050; Stream SMT1) joins McAleer Creek in the wooded area adjacent to the on-ramp from SR 104 westbound to I-5 northbound. The tributary originates in Veterans Memorial Park northeast of the Mountlake Terrace Transit Center, then flows south through a series of open watercourses and culverts east of I-5. During site visits conducted for this analysis, flowing water was observed in this watercourse only during and immediately after rainfall. Farther downstream, along the eastern border of the Edmonds School District property south of 236th Street SW, water from a culvert under the school property contributes flow on a more regular basis. The City of Mountlake Terrace has identified the uppermost reaches of this watercourse in the study area as a Class V (seasonal, non-fish-bearing) stream that does not require a regulatory buffer. It is possible that the City may determine that the downstream reaches meet the criteria for a Class IV (requiring a 50-foot buffer) or Class III stream (requiring a 65-foot buffer). The segment that is crossed by the proposed light rail alignments is upstream of the water source in the Edmonds School District property and is therefore likely to be considered a Class V stream.

Anthropogenic Factors

In addition to the extensive portions of the stream that are contained within culverts, McAleer Creek has been affected by urban development throughout its basin. Kerwin (2001) estimated the effective impervious area in the basin at 30.5 percent. Tetra Tech/KCM (2004b) calculated the total impervious area for portions of the McAleer Creek basin within the city of Shoreline to be 46 percent. Forested areas provide shade and other vital functions in some areas; in most of the basin, however, riparian habitat includes single-family homes, apartments, and lawns.

Fish Use

McAleer Creek supports anadromous fish as far upstream as Lake Ballinger. Within the study area, portions of McAleer Creek downstream of the confluence with Stream SMT1 provide spawning habitat for coho salmon, while those upstream of that point provide rearing habitat (WDFW 2014a). WDFW (2014a) has documented the presence of steelhead as far upstream as the mouth of Stream SMT1. Tetra Tech/KCM (2004b) reported observations of steelhead spawning in McAleer Creek approximately 200 feet downstream of the study area, although WDFW (2014a) does not identify any parts of McAleer Creek as spawning habitat for steelhead. Resident cutthroat trout are present throughout the stream, even upstream of Lake Ballinger (WDFW 2014b), and have been observed spawning in McAleer Creek immediately outside of the study area (Tetra Tech/KCM 2004b).

The presence of Chinook salmon has been documented approximately 1,000 feet downstream of the study area, and spawning has been documented approximately 4,800 feet farther downstream (Tetra Tech/KCM 2004b; WDFW 2014a). King County (2014a) reported that volunteers with the Salmon Watcher Program have consistently seen Chinook, coho, and sockeye salmon in the stream but did not specify the upstream extent of observations or whether any spawning activity was observed. Kokanee salmon and rainbow trout have also been observed in McAleer Creek, but locations for those observations have not been specified (Kerwin 2001).

WDFW (2014c) classified four culverts in McAleer Creek downstream of the study area as partial barriers to fish passage, and one culvert as a possible barrier. Within the study area, the culverts under I-5 and under the off-ramp from I-5 northbound to SR 104 westbound are also partial barriers (WDFW 2014c). The culvert under I-5 may be a migration barrier to juvenile salmonids, thus preventing the use of Lake Ballinger for rearing (Kerwin 2001; WDFW 2014c).

Based on intermittent flows and the presence of human-created barriers to fish passage, neither SSH2 nor SMT1 is known or expected to support fish under current conditions (WDFW 2014a, 2014b). However, the basin sizes, channel widths, and stream gradients of both tributaries indicate the potential to support fish in the future. The surface-flowing segment of SSH4 is connected to McAleer Creek and is accessible to fish that use habitats in McAleer Creek in the study area.

Water Quality

No portions of McAleer Creek within the study area are listed as impaired or waters of concern under CWA Section 303(d). The lower portions of McAleer Creek are listed as impaired water bodies, based on demonstrated exceedances of state water quality standards for fecal coliform and dissolved

oxygen (Ecology 2012a). Lake Ballinger, upstream of the study area, is on the list for contaminants, including polychlorinated biphenyls (PCBs), dieldrin, and 2,3,7,8-TCDD in tissue samples (Ecology 2012a).

Sediment samples collected at a site approximately 1 mile upstream of the study area had chemical compounds at concentrations likely to cause adverse effects in aquatic animals living in the sediments (King County 2014a). Sediment samples from a site approximately 0.25 mile downstream of the study area contained pyrene and nickel, but the potential for chemical effects is uncertain due to the contaminant levels (King County 2014a).

Since 1976, King County has monitored water quality in McAleer Creek at a station located near the stream's mouth. Results from a trend analysis of water quality data from 1979 to 2004 did not indicate any significant changes in temperature, concentration of dissolved oxygen, or levels of bacteria, nitrogen, and total phosphorus (King County 2014a). However, conductivity increased significantly during the analysis period, suggesting the presence of dissolved charged substances in the water, possibly related to metal concentrations in sediments (King County 2014a). Decreasing levels of total suspended solids and decreased concentrations of ortho-phosphorus indicate some improvements in water quality during that 25-year period. In its most recent (2008) water quality report for McAleer Creek, King County assigned the stream a water quality index score of 74, indicating a moderate level of concern for water quality (King County 2014c). In general, scores between 40 and 80 indicate a moderate level of concern and scores above 80 indicate a low level of concern. Water quality index scores for McAleer Creek generally ranged between 50 and 60 from 2000 to 2008, dropping below 40 in 2 years (King County 2014c).

In-stream Habitat

Immediately downstream of the study area, the in-stream habitat of McAleer Creek has been rated as poor, based on the preponderance of fine sediments, as well as scouring and incision resulting from bank hardening (Tetra Tech/KCM 2004b). The channel provides poorly defined pool-riffle complexes; the only pool habitat consists of step-pools formed by weirs. The gravel/cobble stream substrate is heavily cemented with sediment, reducing its spawning suitability (Tetra Tech/KCM 2004b). Based on benthic invertebrate samples collected in 2002 and 2003, King County (2014a) rated conditions in McAleer Creek as poor for benthic invertebrates.

The tributary (Stream SSH2) that passes under I-5 south of SR 104 is entirely within culverts in the study area. In addition, the tributary originating in Veterans Memorial Park (Stream SMT1) is partially piped in the study area. The quality of habitat in portions of the stream that are not contained in culverts is generally low. The reach of Stream SMT1 that is crossed by the proposed light rail alignments is contained within an ill-defined channel that shows minimal traces of surface flow. As noted above, however, the basin sizes, channel widths, and stream gradients of both tributaries indicate the potential to support fish in the future.

Riparian Habitat

Riparian habitat quality along the open-channel segments of McAleer Creek, Stream SSH4, and Stream SMT1 in the study area is generally good, dominated by forest canopy that provides shade and the potential for recruitment of woody debris that contributes to channel complexity. The value of the riparian habitat is limited, however, by a lack of connectivity. The open-channel habitat and associated riparian areas of McAleer Creek occur in four discrete segments in the study area, separated by segments that are contained within culverts. If Stream SSH4 is classified as a Type III stream by the City of Shoreline, its regulatory buffer will be contained entirely within the larger regulatory buffer for McAleer Creek. Riparian habitat conditions for Stream SSH4 are therefore as described for McAleer Creek.

Scriber Creek

Scriber Creek (WRIA No. 08.0061) drains an area of approximately 4,250 acres, including the extreme northern portion of the study area. Land elevations range from approximately 200 feet at the stream's confluence with Swamp Creek to more than 600 feet at the northwestern watershed divide. The stream flows southeast, joining Swamp Creek approximately 2.5 miles downstream of the study area. Swamp Creek flows into the Sammamish River, which empties into the northern end of Lake Washington.

The study area includes approximately 2,000 feet of the main stem of Scriber Creek. For much of its length in the study area, the stream channel is braided and indistinct as it flows through the large wetland complex (Wetland WLY4) south and west of the Lynnwood Transit Center. The stream forms a defined channel as it exits the study area, flowing southeast and under I-5. Based on input provided by Ecology staff who collaborated on field delineations in July 2014, the OHWM of Scriber Creek through the wetland complex is defined as encompassing the entire breadth of the complex. At most times of year, flowing water is confined to a few channels that make up a small portion of the total wetland complex area. The locations of these channels likely change from year to year.

Also present in the study area is an unnamed, intermittent tributary (WRIA No. 08.0064; Stream SLY1) that flows southward along the eastern edge of the Lynnwood Transit Center. The channel flows through a small patch of forest vegetation (the upper part has been recently planted) before it enters a culvert under the I-5 on-ramp and joins Scriber Creek southeast of I-5.

Anthropogenic Factors

Scriber Creek subbasin is the most highly developed of the Swamp Creek subbasins. Commercial development and transportation corridors account for approximately 40 percent of the subbasin, and medium-density single-family development covers another approximately 30 percent (Snohomish County 2002). The effective impervious area in the subbasin is approximately 40 percent (Snohomish County 2002). Jones and Stokes (2000) identified untreated runoff from roads and new construction as a likely source of excessive fine sediment in the portion of Scriber

Creek that falls within the study area. Street runoff from roads upstream of the study area also conveys oil and other pollutants to the stream system.

Fish Use

Anadromous salmonids have been observed in Scriber Creek, but sources differ about their habitat use as far upstream as the study area. WDFW (2014a) reported that coho salmon occur in Scriber Creek approximately 500 feet downstream of the study area, below the culvert under I-5. Access by other salmonid species to reaches of Scriber Creek in the study area is impeded by the I-5 culvert (which is characterized as a partial barrier to fish passage) and by a beaver dam approximately 0.5 mile downstream of the study area. WDFW (2014c) classifies the dam as a total barrier to fish passage but also indicates that coho salmon have been observed approximately 2,000 feet upstream of the dam, at the outlet of the I-5 culvert. The picture is further complicated by reports from the City of Lynnwood (2004) of adult coho salmon in Scriber Creek as far upstream as Highway 99, approximately 1 mile above the study area.

Stream reaches approximately 1,500 feet downstream of the study area provide spawning habitat for coho salmon (WDFW 2014a). Chinook salmon have been observed approximately 3,000 feet downstream of the study area; the nearest stream reaches that provide spawning habitat for Chinook salmon are in Swamp Creek, approximately 2.5 miles downstream. Winter-run steelhead have been observed in Swamp Creek but not in Scriber Creek (Snohomish County 2002; WDFW 2014a). There are no reports of kokanee above the mouth of Swamp Creek and no recent validated reports of bull trout in the Swamp Creek subbasins (Snohomish County 2002).

Resident fish species in Scriber Creek include cutthroat trout, which have been documented throughout the study area, as far upstream as Scriber Lake Park (WDFW 2014b). Largemouth bass and yellow perch have been observed in Scriber Lake upstream of the study area (Jones and Stokes 2000).

The tributary east of the Lynnwood Transit Center (Stream SLY1) is non-fish-bearing (Snohomish County 2002; WDFW 2014a, 2014b).

Water Quality

Scriber Creek is not on the 303(d) list of impaired waters in the State of Washington. Possible water quality problems may be indicated, however, by evidence of hydrocarbon pollution (oily sheen and odor) and the abundance of pollutant-tolerant stream invertebrates (Jones and Stokes 2000). Stream temperatures measured in the study area fall within the acceptable range for salmonid fish use, but the lack of shade-producing vegetation increases the risk of elevated temperatures (Jones and Stokes 2000).

In-stream Habitat

The main stem reach in the study area is dominated by the large scrub/shrub wetland adjacent to the park-and-ride lot. Salmon spawning habitat conditions within this reach are poor due to limited canopy and vegetative cover, the presence of bank armoring, and the abundance of silt and other fine

substrates (Jones and Stokes 2000). Side channels and other low-velocity areas may provide good rearing habitat, however (City of Lynnwood 2004).

The tributary east of the Lynnwood Transit Center (Stream SLY1) is highly channelized and does not flow at the surface for most of its length. The surface-flowing sections are the short segments within and downstream of the study area, and a segment on the Lynnwood Civic Center campus approximately 0.6 mile north of the study area. The primary source of flow in the tributary is urban runoff, and habitat quality is generally poor. Stormwater runoff from impervious surfaces likely contributes to a flashy flow regime (i.e., peaking abruptly and falling off rapidly after rain events) during fall and winter (City of Lynnwood 2004).

The portion of Stream SLY1 in the study area is separated from known fish-bearing waters by culverts under the off-ramp from I-5 northbound to 44th Avenue W, I-5 itself, and the on-ramp from 44th Avenue W to I-5 southbound. WDFW (2014c) has not evaluated the fish passage potential of these culverts because Stream SLY1 is considered a non-fish-bearing stream. Based on the presence of human-created barriers to fish passage, Stream SLY1 is not currently known or expected to support fish. Based on its basin size, channel width, and stream gradient, however, Stream SLY1 may have the potential to support fish in the future.

Riparian Habitat

Riparian vegetation for Scriber Creek in the study area generally consists of the surrounding wetland complex (Wetland WLY4). Vegetation in Wetland WLY4 is dominated by black cottonwood, Pacific willow (*Salix lucida*), red-osier dogwood (*Cornus sericea*), and reed canarygrass (*Phalaris arundinacea*). Areas with dense growth of salmonberry (*Rubus spectabilis*) and Himalayan blackberry are also present, along with red alder, western redcedar, bigleaf maple (*Acer macrophyllum*), and Pacific flowering dogwood (*Cornus nuttallii*). Jones and Stokes (2000) found little to no large woody debris in the stream and determined that the potential for large woody debris recruitment is low.

3.1.3 Threatened, Endangered, and Candidate Species

Four aquatic species that have federal or state listing status, or that are candidates for listing, may use habitats in the study area. In accord with the ESA, the FTA (as the federal lead agency) must ensure that any actions it approves will not jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of their designated critical habitat. To meet this requirement, FTA initiated consultation with USFWS and NOAA Fisheries concerning the potential effects of the Preferred Alternative on ESA-listed species and critical habitat. Sound Transit prepared a Biological Assessment to serve as the basis for the consultation (Sound Transit 2014). Based on the analysis in that document, and on the implementation of proposed mitigation measures, FTA determined that construction of the Lynnwood Link Extension may affect, but is not likely to adversely affect, ESA-listed species and critical habitat. The Biological Assessment also included a proposed determination of "no adverse effect" on essential fish habitat protected under the Magnuson-Stevens Fishery Conservation and Management Act. NOAA Fisheries concurred with these determinations on January 27, 2015, and USFWS concurred on ___, 2015. The

discussions below summarize information from that document about the presence of ESA-listed species in the study area.

Puget Sound Chinook Salmon

The Puget Sound evolutionarily significant unit of Chinook salmon is listed as threatened under the ESA and is a State Candidate species. Chinook salmon are present in the lower reaches of Thornton, McAleer, and Scriber creeks. In all three streams, the reaches where Chinook salmon have been observed are separated from the study area by total or partial fish passage barriers. It is possible, however, that Chinook salmon may use habitat in McAleer Creek within the study area. The known distribution of Puget Sound Chinook salmon in the project vicinity is as follows:

- Thornton Creek: Chinook salmon have been documented approximately 2.5 miles downstream of the study area and observed spawning approximately 3 miles downstream of the study area (City of Seattle 2007; WDFW 2014a); there are at least 3 total barriers and 15 partial barriers to fish passage between the study area and the downstream reaches where the presence of Chinook salmon has been documented (WDFW 2014c).
- McAleer Creek: Chinook salmon are present up to 1,000 feet downstream of the study area, and spawning habitat is present approximately 1.1 miles downstream (WDFW 2014a). Partial barriers to fish passage at I-5 (within the study area) and Forest Park Drive NE (immediately downstream of the study area) likely impede access into the study area by Chinook salmon, but they cannot be considered absolute barriers.
- Scriber Creek: Chinook salmon are present up to 3,000 feet downstream of the study area, and spawning habitat is present in in Swamp Creek, approximately 2.5 miles downstream (WDFW 2014a). A total barrier to anadromous fish passage approximately 0.5 mile downstream of the study area likely prevents Chinook access to the study area.

Based on the lack of suitable habitat and the presence of fish passage barriers downstream of the study area, Chinook salmon are not expected to use habitat in Thornton Creek or Scriber Creek in the study area. Although habitat conditions in McAleer Creek are unfavorable for Chinook salmon, and none have been documented in the study area, their presence in the lower reaches of the stream suggests the possibility that Chinook salmon could use McAleer Creek in the study area (Sound Transit 2014). None of the tributaries to Thornton, McAleer, and Scriber creeks in the study area are known or expected to support use by any fish species, including Chinook salmon. No designated critical habitat for Chinook salmon is present in the study area.

Puget Sound Steelhead

The Puget Sound evolutionarily significant unit of steelhead trout is listed as threatened under the ESA, but has no listing status at the state level. Winter-run steelhead trout are present in Thornton and McAleer creeks, but they have not been observed in Scriber Creek. Compared to other salmonids, steelhead appear to have a greater ability to pass features and structures that are partial fish passage barriers. Therefore, steelhead have a greater likelihood than Chinook salmon of using

stream habitat in the study area. The known distribution of Puget Sound steelhead in the project vicinity is as follows:

- Thornton Creek: Steelhead are present in the North Branch of Thornton Creek as far upstream as the Jackson Park Golf Course, approximately 2,100 feet downstream of the study area (WDFW 2014a). Based on the observation of an adult steelhead near Twin Ponds upstream of the study area (Tetra Tech/KCM 2004a), however, it is possible that steelhead may use stream habitats in the study area.
- McAleer Creek: Steelhead are present in McAleer Creek as far upstream as the mouth of the Stream SMT1 (WDFW 2014a). Tetra Tech/KCM (2004b) reported observations of steelhead spawning in McAleer Creek approximately 200 feet downstream of the study area, below a partial barrier to fish passage
- Scriber Creek: Present in Swamp Creek (approximately 2.5 miles downstream of the study area) but not in Scriber Creek (Snohomish County 2002; WDFW 2014a). A total barrier to anadromous fish passage approximately 0.5 mile downstream of the study area likely prevents access to the study area (WDFW 2014c).

Based on this information, adult steelhead spawning in downstream reaches of Thornton Creek and McAleer Creek may venture upstream into the study area in both streams. No other stream reaches in the study area are accessible to steelhead. Designation of critical habitat for steelhead has been proposed, but no proposed critical habitat is present in the study area.

Bull Trout

All bull trout in the coterminous United States, including the Coastal-Puget Sound distinct population segment, are listed as threatened under the ESA. Bull trout is also a State Candidate species. Bull trout have been observed entering Lake Washington in small numbers. None of the streams in the study area has been documented as supporting spawning or early rearing. Water temperatures in the study area streams are likely too high to support bull trout spawning or rearing. WDFW (1999) determined that successful spawning by bull trout occurs only upstream of the winter snow line (i.e., the elevation at which snow is present on the ground for much of the winter). Such areas are not found in the Thornton Creek, McAleer Creek, and Scriber Creek basins but may be present in other tributaries to Lake Washington. No designated critical habitat for bull trout is present in the study area.

River Lamprey

The river lamprey (*Lampetra ayresii*) has no listing status at the federal level but is a State Candidate species. Although there are no direct observations of river lamprey in the study area, their presence is likely. They are known to exist in tributaries to Lake Washington and Lake Sammamish, such as the Cedar River and Issaquah Creek.

3.1.4 Tribal Fishing

Judicial decisions have affirmed that federally recognized tribes have treaty rights which include, but are not limited to, the rights to harvest fish free of state interference (subject to conservation principles) and to co-manage the fishery resource. Lake Washington is among the usual and accustomed fishing areas of the federally recognized Muckleshoot Indian Tribe. Project impacts to Lake Washington's tributaries could affect the productivity of tribal fisheries, and thereby harm the fishing interests of the Muckleshoot and other tribes. Sound Transit is therefore addressing potential effects on fish and fish habitat in this report and coordinating with the Muckleshoot Indian Tribe Fisheries Division regarding these potential effects.

3.2 Vegetation, Terrestrial Wildlife, and Wildlife Habitat

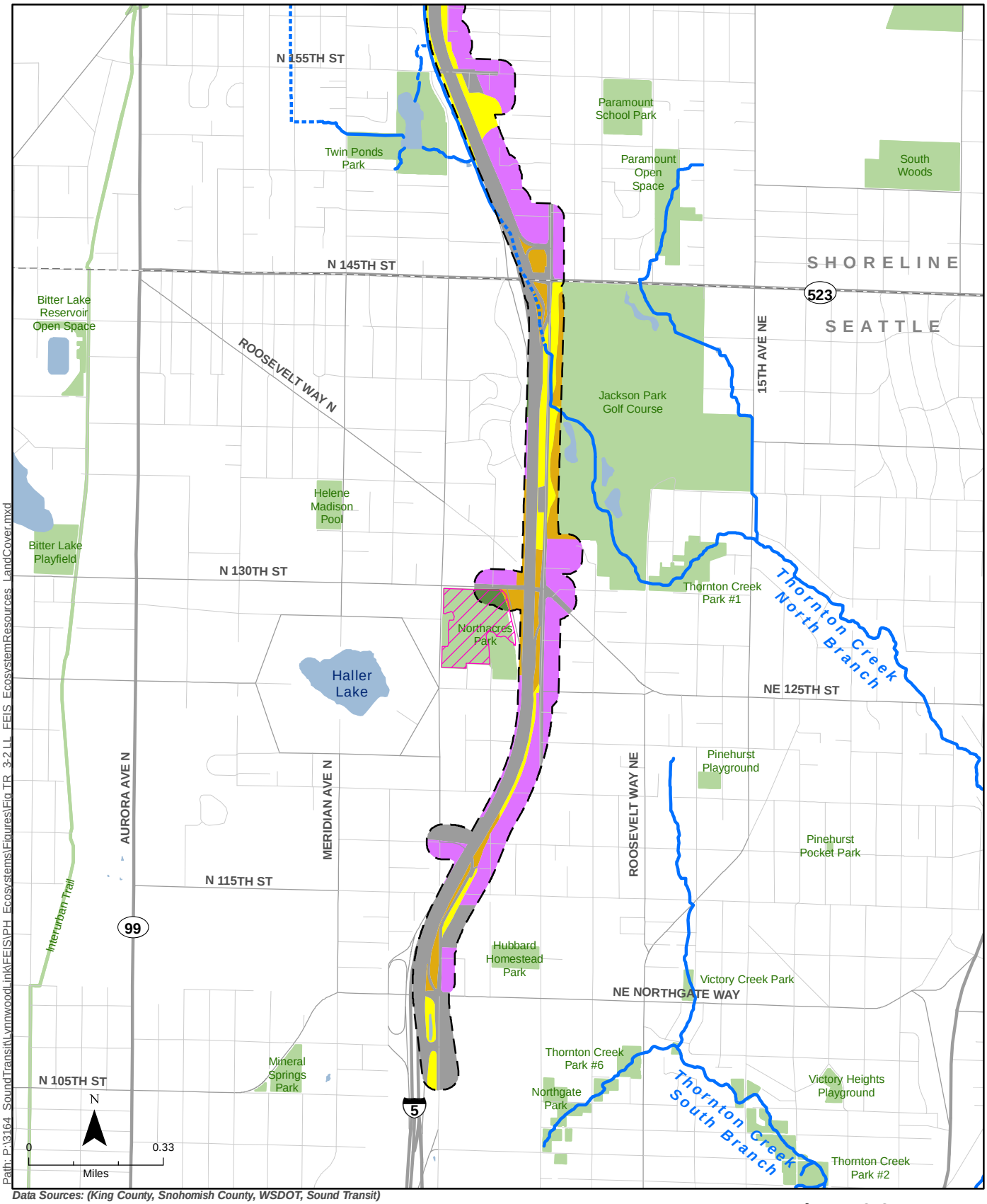
The Lynnwood Link Extension would be constructed in an urban area where terrestrial habitats have already been subjected to a moderate to high degree of alteration. The degree of alteration varies from site to site, with the greatest alteration occurring where urban development is the greatest. Most of the study area is within or immediately adjacent to the I-5 corridor and, as such, has been substantially modified from pre-settlement conditions. Some areas of less-developed habitat remain, however, most notably near the Mountlake Terrace Transit Center and in the Scriber Creek wetland complex near the northern extreme of the study area.

3.2.1 Land Cover Types

Based on the structural categories defined by Johnson and O'Neil (2001) and on observations during field reconnaissance, six land cover types have been identified in the study area: Forest, Shrub, Maintained Vegetation, Residential Areas, Urban Areas, and Open Water. Table 3-2 provides brief descriptions of these cover types, with examples of where they occur in the study area. Figure 3-2a through Figure 3-2c show the mapped locations of the cover types within the study area.

Most of the study area is dominated by land cover types (Urban Areas, Residential Areas, Maintained Vegetation) where reduced structural complexity and high levels of human activity result in low habitat quality for wildlife. More than 70 percent of the study area consists of the Urban and Residential Areas cover types, which cover approximately 476 acres combined (Table 3-2). Forest is the next most common cover type (13 percent of the study area), with 88 acres. Shrub and Maintained Vegetation cover roughly equivalent amounts of area, with 58 and 61 acres, respectively. Less than 0.5 acre of the study area consists of the Open Water cover type.

The area of Forest habitat east of I-5 near the Mountlake Terrace Transit Center has been identified by WDFW (2014b) as a priority habitat area based on the presence of high-quality habitat features. In addition, the study area includes a portion of Northacres Park in Seattle. Stands of coniferous and deciduous trees in that park have been identified as priority habitats, as these stands have snags and downed logs (WDFW 2014b).



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Figure 3-2a
Land Cover Types

- Study Area
- City Boundary
- County Boundary
- Park
- Open Stream
- Piped Stream
- Waterbody
- WDFW Priority Habitat Area

Land Cover Types in the Study Area

- Forest
- Shrub
- Maintained Vegetation
- Residential
- Urban
- Open Water

Lynnwood Link Extension

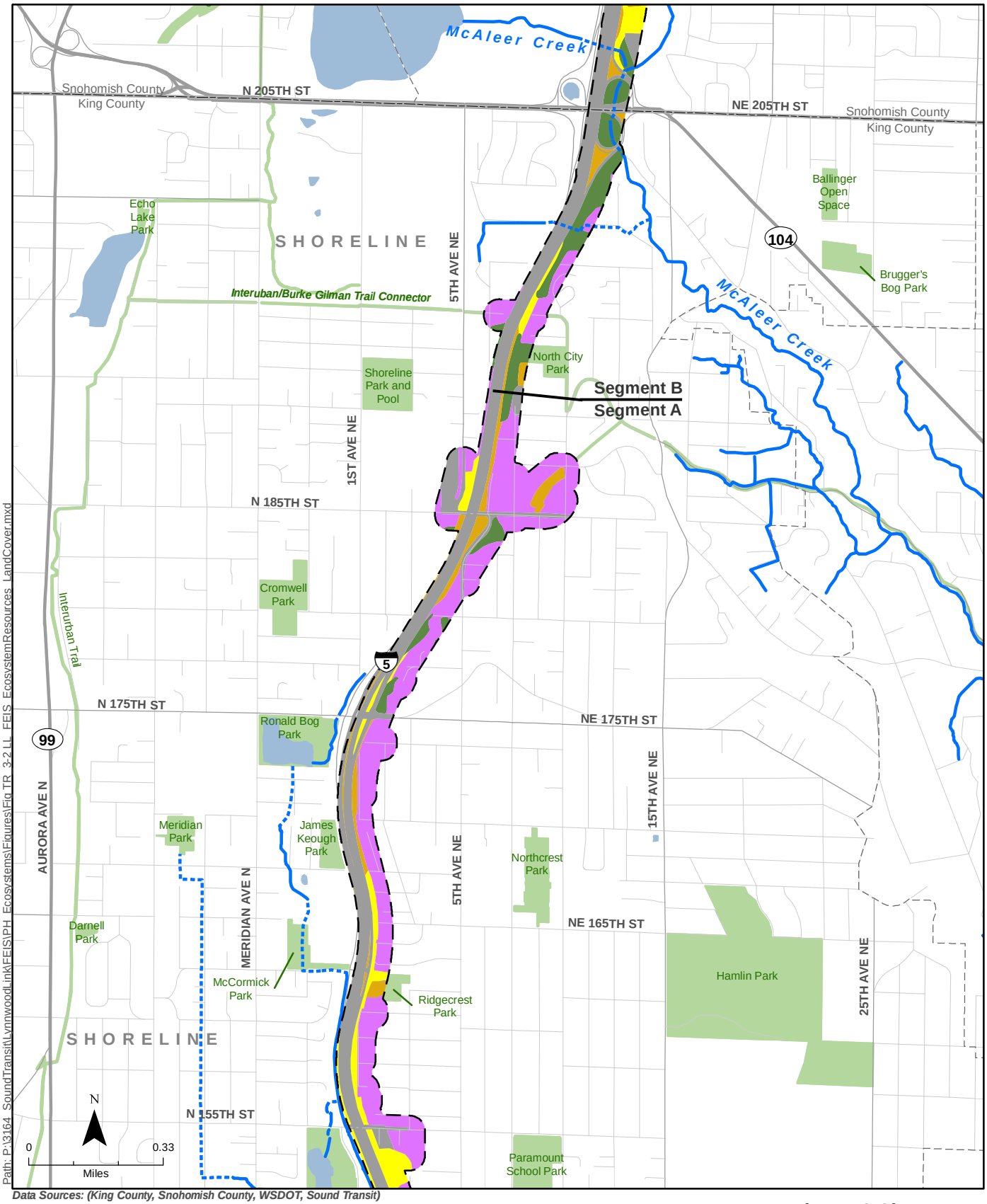


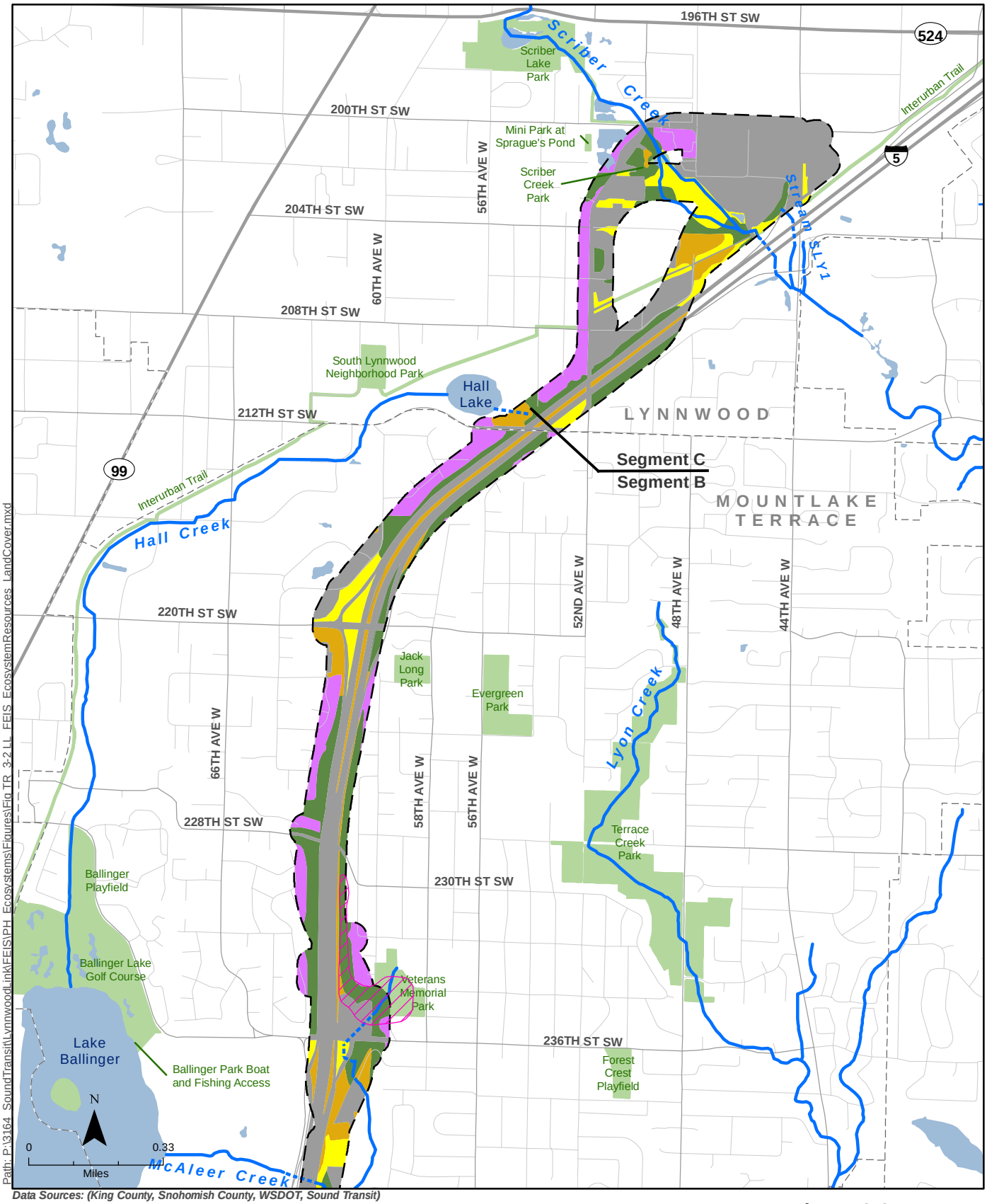
Figure 3-2b
Land Cover Types

- Study Area
- City Boundary
- County Boundary
- Park
- Open Stream
- Piped Stream
- Waterbody
- WDFW Priority Habitat Area

Land Cover Types in the Study Area

- Forest
- Shrub
- Maintained Vegetation
- Residential
- Urban
- Open Water

Lynnwood Link Extension



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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Figure 3-2c
Land Cover Types

- Study Area
- City Boundary
- County Boundary
- Park
- Open Stream
- Piped Stream
- Waterbody
- WDFW Priority Habitat Area

Land Cover Types in the Study Area

- Forest
- Shrub
- Maintained Vegetation
- Residential
- Urban
- Open Water

Lynnwood Link Extension

3.2.2 Terrestrial Wildlife Species

Wildlife use of habitats in urban landscapes depends on the general location of the habitat, the size and type of undisturbed habitats, the degree of connectivity and extent of travel corridors between and among these habitats, and the types and levels of human activity. Much of the Lynnwood Link Extension study area falls within commercial, industrial, and residential areas that provide habitat only for adaptable species such as sparrows, starlings, doves, rats, mice, raccoons, opossums, and squirrels. Birds such as common pigeons (*Columba livia*) and cliff swallows (*Petrochelidon pyrrhonota*) commonly build nests on bridges and road overpasses, and many bat species use such structures as temporary roosting sites. Animals that use habitats in the study area are also exposed to high noise levels associated with traffic on I-5 and major arterial roadways.

Table 3-2. Land Cover Types in the Lynnwood Link Extension Study Area

Land Cover Type	Description	Examples of Occurrence	Acres in Study Area
Forest	Areas dominated by evergreen conifers, deciduous broadleaf trees, or a mixture of both, generally greater than 20 feet tall. Canopy cover variable but typically greater than 40 percent. Typical tree species include Douglas fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), madrone (*Arbutus menziesii*), red alder, black cottonwood, and bigleaf maple. Understories include shrubs, forbs, and/or grasses.	Northacres Park Veterans Memorial Park Scriber Creek wetland complex	89
Shrub	Areas dominated by native or non-native shrubs. May include trees (particularly red alder) singly or in patches. Common shrub species within the study area include salmonberry, salal (*Gaultheria shallon*), Himalayan blackberry, and snowberry (*Symphoricarpos albus*).	Slopes adjacent to I-5 Scriber Creek wetland complex	59
Maintained Vegetation	Typically, exotic grasses or annuals, such as mown grasses and other low vegetation, most of which are rarely allowed to go to seed. Includes stormwater detention areas.	I-5 median	62
Residential Areas	Houses and yards, including lawns, ornamental plantings, and pruned trees. Tree and shrub canopy cover generally less than 30 percent. Moderate to high levels of human disturbance. Snags, woody debris, and other natural structures are essentially non-existent.	South Lynnwood Pinehurst	171
Urban Areas	Roadways, parking lots, and other areas dominated by impervious surfaces. Little or no vegetation present.	I-5, parking lots, commercial developments	309
Open Water	Areas of ponding, including natural lakes, streams, and stormwater ponds. All open water in the study area is fresh water.	Ponds near Scriber Creek	<1

Larger habitat patches and those connected to other natural areas or heavily vegetated residential neighborhoods support a larger variety of species, such as songbirds, raptors, small mammals, coyotes, and black-tailed deer (*Odocoileus hemionus columbianus*). Songbird species commonly found in habitats similar to those found in the study area include American robin (*Turdus migratorius*), song sparrow (*Melospiza melodia*), Steller's jay (*Cyanocitta stelleri*), American crow (*Corvus brachyrhynchos*), spotted towhee (*Pipilo maculates*), black-capped chickadee (*Poecile atricapillus*), white-crowned sparrow (*Zonotrichia leucophrys*), northern flicker (*Colaptes auratus*), Bewick's wren (*Thryomanes bewickii*), and red-

breasted nuthatches (*Sitta canadensis*). Raptors include American kestrel (*Falco sparverius*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*A. cooperii*), red-tailed hawk (*Buteo jamaicensis*), and great horned owl (*Bubo virginianus*). Red-tailed hawks and other raptors prey on voles (*Microtus* spp.) that are found in abundance in the grassy vegetation in the I-5 right-of-way.

The largest area of native habitat in the study area is the Scriber Creek wetland complex. Waterfowl use areas of slow-moving water, and snags throughout the complex show evidence of recent excavation by woodpeckers. Biologists conducting field visits in 2014 observed an osprey nest on a power pole near the southern edge of the wetland complex. Vegetation and other features in the complex provide habitat for songbirds, small mammals, and amphibians. Mammals identified in nearby Scriber Creek Park included black-tailed deer, Eastern gray squirrel (*Scirurus carolinensis*), and river otter (*Lontra canadensis*). Evidence of beavers (*Castor canadensis*), including dams and lodges, has been observed nearby. The complex is surrounded on all sides, however, by residential and commercial developments, roads, and highways, limiting its value for wildlife species that require large, undisturbed areas and undeveloped travel corridors. The presence of invasive plant species, including Himalayan blackberry and reed canarygrass (*Phalaris arundinacea*), diminishes the value of habitats in the wetland complex.

Most patches of forest cover in the study area are fragmented and separated from surrounding habitat areas by commercial, urban, and residential developments and roads. Despite their isolation, these areas still provide habitat for forest-associated resident and migratory songbirds, as well as for hawks, owls, woodpeckers, and small mammals.

Based on breeding bird survey reports (Opperman et al. 2006), 26 bird species are known or expected to nest in the 9-square-mile survey block located near the southern terminus of the project (Northgate). Based on data from the Audubon Society (2011), additional species commonly seen in the area outside of the breeding season include American wigeon (*Anas americana*), northern pintail (*Anas acuta*), bufflehead (*Bucephala albeola*), western grebe (*Aechmophorus occidentalis*), and glaucous-winged gull (*Larus glaucescens*).

Rivers and streams are used as travel corridors by many wildlife species, including semi-aquatic species such as muskrat, mink, otter, frogs, stream salamanders, turtles, and snakes (Jackson 2003). Despite the widespread urbanization of the I-5 corridor, riparian areas along the streams may serve as a connective corridor between pockets of wildlife habitat. In general, however, patches of forest and other native habitat types in the study area are isolated from other areas of similar habitat and do not serve as connective corridors to other areas of habitat outside of the study area.

3.2.3 Threatened, Endangered, and Candidate Species

Based on reviews of Natural Heritage Program data from DNR and PHS data from WDFW, no terrestrial ESA-listed or state-listed threatened or endangered plant or wildlife species are known or expected to occur in the study area. The USFWS species lists for King County and Snohomish County identify five ESA-listed wildlife species (Canada lynx [*Lynx canadensis*], gray wolf [*Canis lupus*], grizzly bear [*Ursus arctos horribilis*], marbled murrelet [*Brachyramphus marmoratus*], and northern spotted owl [*Strix occidentalis caurina*]), two species that are proposed for listing (North American wolverine

[*Gulo gulo luscus*] and Oregon spotted frog [*Rana pretiosa*]), and two candidates for listing (Pacific fisher [*Martes pennanti pacifica*] and yellow-billed cuckoo [*Coccycus americanus*]) that may occur in the two counties (USFWS 2014). Based on their habitat requirements and known distribution, none of these species is known or expected to use habitats in the study area. These species will not be addressed further in this document.

Several species that are state-listed as sensitive species, or that are candidates for state listing, are known or likely to be present in the study (Table 3-3). For this analysis, these species are referred to as species of concern. Site-specific distribution data are available for only a few of these species, and no species-specific surveys or habitat assessments were conducted for this project. The known or expected occurrence of these species in the study area is based on observations and the presence of potentially suitable habitat (Table 3-3).

The Migratory Bird Treaty Act, administered by USFWS, makes it unlawful to take, import, export, possess, sell, purchase, or barter any migratory bird, with the exception of the taking of game birds during established hunting seasons. The law also applies to feathers, eggs, nests, and products made from migratory birds. Nearly all bird species that may occur in the study area are protected under the Migratory Bird Treaty Act. All habitats in the study area support migratory birds of some type at some time in their life cycle; therefore, all habitats identified above would be considered habitat for migratory birds.

Table 3-3. Species of Concern That May Occur in the Lynnwood Link Extension Study Area

Common Name	Scientific Name	Federal Status[a]	State Status[b]	Expected Occurrence in Study Area		Preferred Habitat
				Likely Present	Possibly Present	
Townsend's Big-eared Bat	*Corynorhinus townsendii*	FCo	SC		X	Forages over and near forested habitat; bridge abutments occasionally used by individual male bats as day roosts.
Western Toad	*Anaxyrus boreas*	FCo	SC	X		Breeds and develops in wetland habitats. Adult toads regularly use forested upland habitat.
Bald Eagle	*Haliaeetus leucocephalus*	FCo	SS		X	Nests in wooded areas with larger trees within 0.5 mile of large bodies of water. May forage near the study area.
Peregrine Falcon	*Falco peregrinus*	FCo	SS		X	Typically nests in cliffs that are at least 150 feet high; may also use buildings and bridges. Open habitats, including wetland areas, provide foraging habitat.
Pileated Woodpecker	*Dryocopus pileatus*	None	SC	X		Mature and old-growth forests, second-growth forests with large snags and fallen trees. Evidence of recent excavations observed in Nile Golf Course, near study area.
Vaux's Swift	*Chaetura vauxi*	None	SC		X	Breeds in mountains and foothills. Forages over wooded areas and open habitats, including towns.

[a] FCo = Federal species of concern

[b] SC = State Candidate; SS = State Sensitive species

3.3 Wetlands

Sound Transit identified 37 wetlands in the study area. On public rights-of-way and parcels where rights of entry were available, wetlands within 100 feet of the footprint of the Preferred Alternative were formally delineated and rated according to local regulations and the *Washington State Wetland Rating System for Western Washington*. Other wetlands, including those within public rights-of-way near any of the light rail alternatives, were mapped and rated as well. Table 3-4 summarizes classification and rating information for the delineated and other field-identified wetlands in the study area.

Table 3-4. Summary of Field-Identified Wetlands within the Lynnwood Link Extension Study Area

Wetland[a]	Size (acres)	USFWS Class[b]	HGM Class[c]	Ecology Rating[d]	Local Rating[e]	Buffer Width[f] (feet)
WSE1	0.42	PFO	Riv	III	III	60
WSE3	0.05	PEM	Dep	III	III	60
WSE4	0.12	PFO	Dep	III	III	60
WSE5	0.26	PFO	Dep	III	III	60
WSE6	0.08	PSS	Dep	III	III	60
WSE7	0.19	PSS, PEM	Dep	III	III	60
WSE8	0.66	PFO, PSS	Dep	III	III	60
WSH1	0.06	PEM	Dep	IV	III	65
WSH2	0.37	PFO, PEM	Dep	III	III	65
WSH3	0.09	PEM	Dep	III	III	65
WSH4	0.10	PFO, PEM	Dep	III	III	65
WSH5	0.48	PFO	Dep	III	III	65
WMT1	0.49	PFO	Dep	III	III	65
WMT2	0.17	PFO	Riv, Slope	III	III	65
WMT3	0.07	PFO	Dep	III	III	65
WMT4	0.43	PSS	Dep	III	III	65
WMT5	0.34	PFO, PEM	Dep	III	III	65
WMT6	1.12	PFO	Dep	III	III	65
WMT7	0.42	PFO	Dep	III	III	65
WMT8	0.01	PFO	Slope	IV	IV	50
WMT9	0.03	PEM	Dep	IV	IV	50
WMT10	0.03	PSS	Dep	IV	IV	50
WMT11	0.07	PSS	Dep	III	III	65
WLY3	0.26	PSS, PEM, PUB	Dep	III	III	75
WLY4	16.54	PFO, PSS, PEM	Riv, Dep	II	II	110
WLY6	0.04	PFO	Dep	III	III	75
WLY7	0.15	PSS	Dep	III	III	75
WLY8	0.08	PEM	Dep	III	III	75

[a] Wetlands are identified with alphanumeric codes: WYYn. W = wetland; YY = two-letter code for local jurisdiction (SE = Seattle, SH = Shoreline, MT = Mountlake Terrace, LY = Lynnwood); n = sequential identification number.

[b] Cowardin et al. (1979). USFWS = U.S. Fish and Wildlife Service. PEM = palustrine emergent; PFO = palustrine forested; PSS = palustrine scrub-shrub

[c] Brinson (1993). HGM = Hydrogeomorphic; Dep = Depressional; Riv = Riverine; Slope = Slope

[d] Hruby (2004)

[e] Seattle Municipal Code 25.09.160.A , only applicable to development on publicly or privately owned parcels (Wetlands WSE1, and WSE3-WSE8), Shoreline Municipal Code 20.80.320 (Wetlands WSH1-WSH5), Mountlake Terrace Municipal Code 16.15.080 (Wetlands WMT1-WMT8), Lynnwood Municipal Code 17.10.050 (WLY3, WLY4, and WLY6-WLY8)

[f] Seattle Municipal Code 25.09.160.C, only applicable to development on publicly or privately owned parcels (Wetlands WSE1, and WSE3-WSE8), Shoreline Municipal Code 20.80.330 (Wetlands WSH1-WSH5), Mountlake Terrace Municipal Code 16.15.090 (Wetlands WMT1-WMT8), Lynnwood Municipal Code 17.10.051 (WLY3, WLY4, and WLY6-WLY8)

Wetlands outside of public rights-of-way and more than 100 feet from the footprint of the Preferred Alternative were identified via existing documentation and public vantage points (Table 3-5).

Table 3-5. Summary of Potential Wetlands within the Lynnwood Link Extension Study Area

Wetland[a]	Size (acres)	USFWS Class[b]	HGM Class[c]	Ecology Rating[d]	Local Rating[e]	Buffer Width[f] (feet)
PWSH3	0.10	PFO,PEM	Dep	unknown	III	65
PWSH4	0.19	PFO	Slope	unknown	III	65
PWSH5	0.07	PEM	Slope	unknown	III	65
PWMT2	0.02	PFO	Dep	III	III	65
PWLY1	0.07	PSS	Dep	III	III	75
PWLY2	0.26	PFO	Dep	III	III	75
PWLY3	0.07	PEM	Dep	III	III	75
PWLY4	0.03	PFO	Dep	III	III	75
PWLY5	0.03	PUB	Dep	III	III	75

[a] Potential wetlands are identified with alphanumeric codes: PWYYn. PW = potential wetland; YY = two-letter code for local jurisdiction (SE = Seattle, SH = Shoreline, MT = Mountlake Terrace, LY = Lynnwood); n = sequential identification number.

[b] Cowardin et al. (1979). USFWS = U.S. Fish and Wildlife Service. PEM = palustrine emergent; PFO = palustrine forested; PSS = palustrine scrub-shrub; PUB = palustrine unconsolidated bottom

[c] Brinson (1993). HGM = Hydrogeomorphic; Dep = Depressional; Riv = Riverine; Slope = Slope

[d] Hruby (2004)

[e] Shoreline Municipal Code 20.80.320 (Wetlands PWSH3-PWSH5), Mountlake Terrace Municipal Code 16.15.080 (Wetland PWMT2), Lynnwood Municipal Code 17.10.050 (PWLY1-PWLY5)

[f] Shoreline Municipal Code 20.80.330 (Wetlands PWSH3-PWSH5), Mountlake Terrace Municipal Code 16.15.090 (Wetland PWMT2), Lynnwood Municipal Code 17.10.051 (PWLY1-PWLY5)

Detailed wetland descriptions, wetland determination data forms, wetland rating forms, and photographs are provided in the Wetland and Stream Delineation Report (Appendix B). Figure 3-1 in Appendix B presents an overview of mapped locations of field-identified and potential wetlands within the study area. Potential wetlands include portions of field-identified wetlands that extend beyond the field reconnaissance survey area, as well as areas that appear to meet the wetland criteria that fall entirely outside of this survey area, but could not be ground-truthed. Appendix D presents detailed locations of individual wetlands and buffers. One of the field-identified wetlands (Wetland WSH1) contains a ditched swale. Of the field-identified wetlands, 1 is rated as Category II according to the Ecology rating system, 23 are rated as Category III, and 4 are rated as Category IV. The majority of wetlands are smaller than 0.5 acre, except Wetlands WSE8 (0.66 acre), WMT6 (1.12 acres), and WLY4 (16.59 acres). All wetlands in the study area are in areas characterized by urban and residential land use where the natural environment has been altered.

3.3.1 Hydrology

Signs of altered hydrology were evident in most wetlands, due to the urbanization and development throughout the study area. Historically, wetlands have been altered in several ways, such as filling, ditching, bisecting, and clearing. Human alterations, such as excavation and stormwater runoff, have also created or enlarged wetlands. Many study area wetlands are within maintained rights-of-way where they receive stormwater runoff from pipes, ditches, or overland flow. Other sources of hydrology include a shallow groundwater table, precipitation, and overbank flow from adjacent streams.

3.3.2 Soils

Soil survey data from the NRCS Web site are not available for the portions of the study area within King County (cities of Seattle and Shoreline). Because of urbanization and development, most of the study area in Snohomish County (cities of Mountlake Terrace and Lynnwood) is mapped as Urban land.

3.3.3 Vegetation

Most wetlands in the study area contain forested, scrub-shrub, or emergent habitat (see USFWS classes for each wetland in Tables 3-4 and 3-5). One wetland (Wetland PWLY5) lacks vegetation (i.e., unconsolidated bottom). Vegetation in the study area wetlands is a mix of native and non-native species, many of which are disturbance-tolerant. Surrounding buffers range from forested to herbaceous cover; disturbance-tolerant species are common.

3.3.4 Jurisdictional Determination

Sound Transit will request jurisdictional determinations of those wetlands that are likely to be affected along the Preferred Alternative during the permitting phase of this project.

4 ENVIRONMENTAL CONSEQUENCES

This chapter describes the potential impacts of the Lynnwood Link Extension on aquatic species and habitat; vegetation, terrestrial wildlife, and wildlife habitat; and wetlands. The discussion of project impacts assumes that the BMPs described in Appendix A would be implemented and performed as expected to avoid and minimize certain impacts during construction.

Sound Transit prepared a Biological Assessment to serve as the basis for consultation with USFWS and NOAA Fisheries concerning the potential effects of the Preferred Alternative on ESA-listed species and critical habitat (Sound Transit 2014). Based on the analysis in that document, and on the implementation of proposed mitigation measures, FTA determined that construction of the Lynnwood Link Extension may affect, but is not likely to adversely affect, ESA-listed species and critical habitat. The Biological Assessment also included a proposed determination of "no adverse effect" on essential fish habitat protected under the Magnuson-Stevens Fishery Conservation and Management Act.

4.1 Aquatic Species and Habitat

Construction of the Lynnwood Link Extension could affect aquatic species and habitat in the study area. Analyses in this subsection address the potential long-term, construction-related, and indirect impacts of each alternative. These impacts are defined as follows:

- Long-term impacts include permanent loss or degradation of in-stream or riparian habitat, altered hydrology, degradation of water quality, or changes in habitat connectivity (e.g., fish passage).
- Construction-related impacts include temporary loss or degradation of in-stream or riparian habitat (including hydrology or water quality), or disturbance from in-water work.
- Indirect and secondary impacts include those related to residential and commercial development near stations, or impacts on other resources from mitigation measures.

Analyses in this subsection focus on salmonid fish species and their habitat because salmonids include the species of greatest concern in Pacific Northwest freshwater environments. Because the habitat requirements and mode of potential impacts are so similar for the salmonid species present, the analysis is combined for all salmonid species; however, species-specific impacts are identified where appropriate. All federally listed threatened and endangered aquatic species that may occur in the study area are all salmonids and are, therefore, addressed in the combined analysis. The discussion herein is thus limited to the potential for project impacts on all species based on the proximity of their known habitat in the project vicinity. Impacts on essential fish habitat are similarly included in the generic analysis and are not discussed separately.

Discussions of long-term and construction-related impacts include assessing the range of impacts that could occur for each project segment and alternative. Actual impacts would depend on final alternative selection and design, construction footprint and methods, BMPs implemented during

construction, and performance of post-construction restoration, including revegetation of disturbed areas and mitigation for impacts on areas protected under local Critical Areas Ordinances.

4.1.1 Long-Term Impacts

Direct long-term impacts could occur where the project limits cross streams or stream buffers. The project limits include the guideway, station footprints (including parking), roadway improvements, storm drainage ponds, ancillary features, and analytical buffer (Section 1.4.1, Impact Assessment). In addition, a 15-foot clear zone would be maintained on either side of the guideway to prevent damage to catenary wires from falling vegetation. Existing trees in this zone would be cleared and no trees would be planted. For this analysis, all impacts within these areas are considered long-term (see explanation in Section 1.4, Assumptions). Sound Transit will re-evaluate this assumption and identify temporary construction limits during the permitting phase. As noted in Section 1.4, Assumptions, some trees in areas adjacent to the analytical buffer may need to be removed to protect light rail safety and reliability. Removal of such hazard trees may accompany construction of any of the light rail alternatives, and it may continue as a maintenance activity during the operational life of project facilities.

Under the Preferred Alternative or any of the other light rail alternatives, construction and operation of guideways, stations, and ancillary features would not directly affect in-stream habitat in most streams in the study area because all streams would be spanned by elevated structures. No structures would be placed below the OHWM of any streams except for Stream SMT1 in Mountlake Terrace and Scriber Creek in Lynnwood. Construction of elevated crossings at Stream SMT1 and Scriber Creek would entail the placement of support columns in areas that receive seasonal or intermittent flow, thus reducing the availability of aquatic habitat and potentially modifying channel morphology and flow dynamics. Conversely, the presence of elevated guideways over stream habitat could have a beneficial effect, creating shade that helps keep water temperatures low. Additional information about the potential long-term impacts of structures below the OHWM of these streams is provided in the discussions of Segment B (Stream SMT1) and Segment C (Scriber Creek), below. Any work below the OHWM of any streams in the study area would be conducted in accordance with the terms of the Hydraulic Project Approval (HPA) and other applicable permits obtained for this project.

Operation of the light rail system would not be expected to result in any increases in nighttime illumination of fish-bearing waters (which could increase the risk of predation on juvenile salmonids) because the tracks would have no overhead lighting and the train headlights would be directed parallel to the tracks. Under the Preferred Alternative, lighting at light rail stations would not result in any adverse effects because no stations would be located within 200 feet of any fish-bearing streams. The same would be true of all other light rail alternatives with the possible exception of Alternative C2, under which the Lynnwood Transit Center Station would be approximately 100 feet from the northeastern margin of the Scriber Creek wetland complex. If that alternative were to be selected, light from the station could reach fish-bearing waters in Scriber Creek, although the dense wetland vegetation would provide substantial screening.

No impacts on fish passage are anticipated under any of the alternatives because the construction of elevated structures at all surface-flowing stream crossings would preclude the need to add new culverts or extend existing culverts. Construction of at-grade or elevated guideways, stations, and ancillary features above piped streams (e.g., Stream SSH2, a tributary to McAleer Creek in Shoreline) would not affect stream habitat. The potential for the construction of guideways, stations, and other facilities to interfere with possible future fish habitat restoration projects is addressed in Section 4.4, Indirect and Secondary Impacts.

No construction of at-grade guideways, stations, or ancillary features would occur within the regulatory buffers of any surface-flowing streams in the study area. This would not necessarily preclude all potential adverse effects on stream habitat, however. The loss of forest habitat at considerable distances from streams—even up to 200 feet—can reduce the amount of wood available for recruitment to those streams (Knutson and Naef 1997). Notably, studies conducted in western Washington, western Oregon, and southeast Alaska indicate that more than 90 percent of large woody debris input to streams from riparian areas is recruited from the areas within one-half of a site potential tree height[3] (Murphy and Koski 1989; McDade et al. 1990; McKinley 1997; Martin et al. 1998). Based on an estimated site potential tree height of 200 feet, most potential recruitment of large woody debris to study area streams would be expected to come from the areas within regulatory buffers, and nearly all recruitment would come from within 100 feet. Construction of at-grade facilities outside of regulatory buffers, therefore, would likely result in minimal reductions in wood recruitment to study area streams.

Permanent impacts on riparian habitat may also occur where elevated guideways span areas of riparian vegetation. Construction of elevated guideways above vegetation would reduce the amount of water the vegetation receives from precipitation. In addition, guideways with low clearance (generally, less than 15 feet) would also limit sunlight. In some areas, vegetation cleared from beneath elevated guideways may not grow back. The presence of elevated guideways would preclude the development of mature forest habitat in such areas, reducing the potential for the recruitment of large woody debris to nearby streams. Because the elevated guideway structures would be relatively narrow (31 feet wide) and generally more than 15 feet above the ground surface, shading impacts on riparian vegetation would be limited in most areas, although some impacts would result from shading and water interception. As observed on the Sound Transit Central Link project, herbaceous plants and shrubs are generally able to grow beneath narrow guideways that are at least 15 feet above the ground (Sound Transit 2011) as long as there is a source of water.

Based on the nature and location of buffer impacts, as well as the current condition of the buffers themselves, no substantial degradation of riparian functions (e.g., fish and wildlife habitat, food chain support, or water temperature maintenance) or processes would likely result from project-related clearing under any of the alternatives. The riparian processes that would likely not be affected include water flow; erosion and accretion; infiltration; groundwater recharge and discharge;

[3] Site potential tree height is the average maximum height of the tallest dominant trees (200 years or older) at a given location, based on the soil and climatic conditions at that site. Site potential tree heights of 200 feet are not uncommon in the Puget Sound lowlands.

sediment delivery, transport, and storage; organic matter input; nutrient and pathogen removal; and stream channel formation and maintenance. Under the Preferred Alternative or any of the other light rail alternatives, Sound Transit would use native vegetation when replanting areas disturbed by construction. At sites where riparian zones are currently dominated by non-native species, the reintroduction of native vegetation could lead to long-term improvements in riparian habitat conditions.

Long-term impacts could be caused by increases in the amount of impervious surface in the study area, which can increase stormwater runoff rates, volumes, and pollutant loads. These, in turn, can lead to higher peak flows and degrade water quality in streams. New impervious areas would include new tracks and guideways, stations, park-and-ride lots, and roads. In general, elevated segments would result in less new impervious area than at-grade segments because the pervious ground would be retained underneath elevated segments in most areas. Project features that do not receive motor vehicle traffic, such as guideways (both elevated and at-grade) and stations, would not be pollution-generating impervious surfaces (PGIS). Project-related parking lots (including new park-and-ride facilities) and road realignments would receive motor vehicle traffic and would, therefore, be PGIS.

Conceptual engineering has been completed for the major stormwater detention and treatment facilities necessary for the Preferred Alternative. Sound Transit used a conservative approach in developing drainage concepts. Sound Transit applied the Western Washington Hydrology Model, Version 3.0, to analyze project hydrology and to determine sizing of the facilities. Detention facilities were designed to achieve post-project stormwater flows equivalent to forested conditions, as required by Ecology. Most stormwater is expected to be discharged to existing city drainage facilities that discharge to water bodies from existing permitted municipal discharge locations. The amount of area detained would be sufficient to offset any increase in impervious surface area under any of the alternatives. Based on the implementation of these BMPs, peak flows would not be expected to increase in any of the streams in the study area as a result of the project; moreover, base flows would be expected to remain similar to current conditions. Stormwater from all project-related impervious surfaces would receive appropriate flow control. In addition, stormwater from PGIS associated with the project would also receive water quality treatment.

In some areas, especially in Segment C, existing pollution-generating segments of I-5 and commercial parking areas would be spanned by elevated portions of light rail. In these areas, precipitation that might otherwise have fallen on pollution-generating surfaces would fall instead on the non-pollution-generating surface of the elevated guideway. The result would, in effect, be a conversion from pollution-generating to non-pollution-generating impervious surface, potentially reducing the overall amount of PGIS in the study area. Based on the water resources impact analysis, none of the alternatives would degrade existing water quality. In addition, the light rail system could reduce future increases in traffic volume in the study area, which would indicate the likelihood of lower levels of pollutant increases associated with motor vehicle traffic.

The light rail alternatives would be designed to comply with the following local design manuals:

- WSDOT 2014 *Highway Runoff Manual*
- City of Seattle: *City of Seattle Flow Control and Water Quality Treatment Technical Requirements Manual*, Volume 3
- City of Shoreline: *Stormwater Management Manual for Western Washington* (Ecology 2012b); *City of Shoreline 2012 Engineering Development Manual*; *Low Impact Development, Technical Guidance for Puget Sound* (Hinman 2012)
- City of Mountlake Terrace: *Stormwater Management Manual for Western Washington* (Ecology 2012b)
- City of Lynnwood: *Stormwater Management Manual for Western Washington* (the City currently uses the 2005 manual but is expected to adopt the 2012 manual by the time project design is underway.)

The light rail alternatives would be designed to meet standards of the applicable jurisdiction and Ecology's *Stormwater Management Manual for Western Washington*. If a local jurisdiction has more stringent design requirements than those in the Stormwater Management Manual, then Sound Transit would apply the local requirements in the applicable areas.

Sound Transit's preliminary engineering for the Lynnwood Link Extension includes development of a conceptual layout for major stormwater facilities that are sized to comply with Sound Transit's *Design Criteria Manual* (Sound Transit 2012), which requires stormwater facilities for its projects to conform to the requirements of local jurisdictions. These facilities include stormwater ponds and underground vaults. Additional measures to reduce stormwater runoff, such as low-impact development or other on-site measures, would be considered at a more advanced phase of project development. Given Sound Transit's commitment to design the project to meet the stormwater management requirements of each jurisdiction, the light rail alternatives are not expected to adversely affect surface waters.

Peak stream flows in the study area would not be expected to increase substantially under any of the alternatives because the stormwater systems built for the project would be designed to simulate pre-development hydrology. As stated in the *Stormwater Management Manual for Western Washington,* "The Manual is intended to provide project proponents, regulatory agencies and others with technically sound stormwater management practices which are presumed to protect water quality and in-stream habitat – and meet the stated environmental objectives of the regulations described in this chapter." It is possible, however, that discharges from stormwater detention facilities could result in increased water velocities and durations in receiving waters, potentially reducing the availability of prey and displacing juvenile salmonids from cover (Tschaplinski and Hartman 1983).

In addition, impervious surfaces preclude natural infiltration of precipitation into the ground, decreasing groundwater recharge. Less precipitation entering groundwater aquifers might decrease dry-season base flows by decreasing water inputs to streams from groundwater sources such as springs. Dry-season base flows have been identified as one of the most important natural limiting factors controlling salmonid production in lowland Puget Sound streams.

Where low-impact development measures are implemented, some stormwater runoff from project-related impervious surfaces would be collected and infiltrated into the ground. In some areas, this could result in increased groundwater recharge compared to existing conditions (under which stormwater runoff is managed mainly through vaults and ponds that do not infiltrate). However, some soil types in the project area are not conducive to infiltration of precipitation into the ground.

It is assumed for this analysis that the risk of adverse effects on peak and base flows would correspond with the amount of proposed new impervious surface. The less impervious surface in an alternative, the lower the potential for adverse effects in a given basin. Alternatives with longer elevated guideways or more elevated stations would likely have less impact on base flows compared to alternatives with more at-grade guideway and/or road widening. Even the alternative with the highest increase in impervious surface would only have a minor impact at a basin-wide level because the light rail alternatives would affect a small proportion of the basin relative to the existing impervious surfaces within the basin. Additional analysis of potential stormwater-related effects can be found in the Biological Assessment for this project (Sound Transit 2014).

No Build Alternative

The No Build Alternative would not have any direct long-term impacts on aquatic species or habitat. Conversely, implementing the No Build Alternative would not have potential beneficial environmental effects over the long term, such as reducing increases in motor vehicle traffic in the region, facilitating the concentration of residential and commercial growth in planned growth centers, or implementing compensatory mitigation for impacts on wetlands, streams, and their required buffers.

Segment A: Seattle to Shoreline

Table 4-1 summarizes the amount of stream (in linear feet of open [i.e., not piped] stream channel) and stream buffer area (in acres, based on the width of the regulatory stream buffer in the local jurisdiction) that would be affected by each alternative in each segment. The Preferred Alternative and all other Segment A alternatives would cross Thornton Creek at the same location and would, therefore, affect equal amounts of Thornton Creek and its regulatory buffer[4]. Similarly, all of the alternatives would follow the same route in the vicinity of the watercourse (SSE1) along 5th Avenue NE south of Thornton Creek, affecting equal amounts of the regulatory buffer for that watercourse[5]. Based on the condition of the riparian habitat in the analysis buffers for both watercourses, the potential for adverse effects would be minimal.

Segment B: Shoreline to Mountlake Terrace

Elevated portions of the guideway of the Preferred Alternative would cross a piped portion of the main stem of McAleer Creek immediately east of I-5 and would pass through the regulatory buffers

[4] The segments of Thornton Creek and SSE1 that would be affected are in the Seattle city limits within the road right-of-way (not on a publicly or privately owned parcel) and may not be subject to the City of Seattle Critical Areas Ordinance (Seattle Municipal Code 25.09).

of surface-flowing segments of that stream at the I 5/SR 104 interchange, affecting approximately 0.5 acre of regulatory buffer. In addition, an elevated portion of the Preferred Alternative would pass over a segment of Stream SMT1 south of the Mountlake Terrace Transit Center, affecting approximately 0.5 acre of that stream's regulatory buffer.

Table 4-1. Long-Term Impacts on Streams and Buffers by Project Alternative

Segment/Alternative	Stream Channel Affected (linear feet)	Stream Buffer Area Affected[a] (acres)
Segment A: Seattle to Shoreline		
Preferred Alternative: At-grade/elevated with NE 145th and NE 185th Stations	All Alternatives: Thornton Creek (94)	All Alternatives: Thornton Creek (0.5)[b] SSE1 (0.2)[b]
A1: At-grade/Elevated with NE 145th and NE 185th Stations		
A3: Mostly Elevated with NE 145th and NE 185th Stations		
A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Stations		
A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Stations		
A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Stations		
A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Stations		
Segment B: Shoreline to Mountlake Terrace		
Preferred Alternative (B2 Modified): East Side to Mountlake Terrace Transit Center to West Side (with or without 220th Street SW Station option)	SMT1 (208)	McAleer Creek (0.5) SMT1 (0.5) SSH2 (<0.1) SSH4 (<0.1)
B1: East Side to Mountlake Terrace Transit Center to Median	SMT1 (231)	McAleer Creek (0.5) SMT1 (0.5) SSH2 (<0.1) SSH4 (<0.1)
B2A: East Side to Mountlake Terrace Transit Center to West Side with Optional 220th Street SW Station	SMT1 (231)	McAleer Creek (0.5) SMT1 (0.5) SSH2 (<0.1) SSH4 (<0.1)
B4: East Side to Mountlake Terrace Freeway Station to Median	McAleer Creek (40)	McAleer Creek (0.7) SSH2 (<0.1) SSH4 (<0.1)
Segment C: Mountlake Terrace to Lynnwood		
Preferred Alternative (C3 Modified): Along I-5 to Lynnwood Park-and-Ride Station	Scriber Creek (147)	Scriber Creek (0.5)[c]
C1: 52nd Avenue West to 200th Street SW	Scriber Creek (51)	Scriber Creek (0.2)
C2: 52nd Avenue West to Lynnwood Transit Center	Scriber Creek (143) SLY1 (58)	Scriber Creek (0.9)[c] SLY1 (0.1)
C3: Along I-5 to Lynnwood Park-and-Ride	Scriber Creek (131) SLY1 (81)	Scriber Creek (0.1)[c] SLY1 (0.1)

[a] Values presented in this table represent all affected areas inside the regulatory stream buffers within each local jurisdiction, including areas that overlap with wetlands or wetland buffers. Note that all values are preliminary estimates and most impacts would likely be temporary; see discussion in Section 1.4, Assumptions.

[b] Buffer impacts are not on publicly or privately owned parcels and may not be subject to the City of Seattle Critical Areas Ordinance (Seattle Municipal Code 25.09).

[c] The portions of Scriber Creek that would be crossed by the Preferred Alternative and Alternatives C2 and C3 are within the Scriber Creek wetland complex. Based on the preliminary determination that the OHWM of the stream coincides with the outer boundary of the wetland complex, potential impacts to aquatic resources under those alternatives in Scriber Creek are calculated as the area of the project footprint overlapping the wetland complex. Stream buffer impacts are described qualitatively in the accompanying text.

At the elevated crossing of the Preferred Alternative over Stream SMT1, a portion of one guideway support column would be below the OHWM of that watercourse. Stream SMT1 at that location flows intermittently and is not known or expected to support fish. Therefore, the presence of a guideway support column in a portion of the stream channel would not be expected to affect the amount or quality of fish habitat in Stream SMT1. However, the design of any future stream habitat restoration projects could be complicated by the presence of the structure.

The Preferred Alternative would also affect less than 0.1 acre apiece of the regulatory buffers for Streams SSH2 and SSH4. No streams are present in the study area near 220th Street SW, so the design options for the 220th Street SW Station would not be expected to differ in their impacts on stream buffers.

Alternatives B1 and B2A would cross a piped portion of the main stem of McAleer Creek at the same location as the Preferred Alternative, immediately east of I-5. Both alternatives would pass through regulatory buffers surrounding open segments of McAleer Creek and Stream SSH4 in the cities of Mountlake Terrace and Shoreline, affecting equal amounts of those buffer areas (Table 4-1).

Alternative B4 would cross an open segment of McAleer Creek where it exits the culvert under I-5, spanning approximately 39 linear feet of the stream (Table 4-1). Also, because it would pass closer to the stream, this alternative would affect more of the stream buffer than Alternatives B1 and B2A. Alternative B4 would also pass closer to Stream SSH4, but would still affect a similarly small portion of that stream's regulatory buffer.

Alternatives B1 and B2A would cross Stream SMT1 at or near the same location as the Preferred Alternative and would affect approximately equal amounts of the stream and its regulatory buffer. The designs of the Alternatives B1 and B2A have not been developed to the same level of detail as for the Preferred Alternative, and the locations of guideway support columns have not been established. However, based on the similarities in the alignments, it is probable that a support column could be placed below the OHWM for Stream SMT1 under Alternative B1 or Alternative B2A, with effects similar to those described for the Preferred Alternative. Alternative B4 would enter the I-5 median south of the Mountlake Terrace Park-and-Ride facility and would not affect Stream SMT1 or any of its buffer areas.

All alternatives for Segment B would cross a piped segment of the southern tributary to McAleer Creek (Stream SSH2) at the same location and would, therefore, affect equal amounts of its regulatory buffer (Table 4-1).

Segment C: Mountlake Terrace to Lynnwood

Each of the Segment C alternatives includes one option that begins in the I-5 median before crossing north to the west side of the freeway near 52nd Avenue West (Option 1) and another option that begins on the west side of the freeway (Option 2). Neither of these options would cross streams or pass through stream buffers, so comparisons of the alternatives do not distinguish between the options.

Under all of the Segment C alternatives, habitats in Scriber Creek and the associated wetland complex would be spanned by elevated guideways, minimizing the potential for direct adverse effects. Each alternative would cross Scriber Creek at a different location, with the elevated guideway passing over slightly different lengths of the stream and affecting slightly different areas of stream buffer (Table 4-1). The amount of Scriber Creek's regulatory buffer affected by the Preferred Alternative would be approximately 0.5 acre. Among the other light rail alternatives, Alternatives C1 and C3 would have the least impact (ranging from 0.1 to 0.2 acre) because they would cross small portions along either the northern (Alternative C1) or southern (Alternative C3) edges of the wetland complex. Alternative C2 (both Options 1 and 2) would have the greatest impact, crossing through the middle of the wetland complex and affecting approximately 0.9 acre of Scriber Creek's regulatory buffer.

Although the amount of area affected by the Segment C alternatives would differ, the overall effects (described under Long-term Impacts, above) would be essentially the same. The guideway would be more than 15 feet above the ground surface in this area, and shading and other impacts on vegetation would likely be minimal. Direct impacts would be limited to the areas occupied by support columns for the guideway.

The construction of support columns for the elevated guideway in the Scriber Creek wetland complex could affect aquatic habitat within Scriber Creek and would result in the permanent loss of some riparian habitat for that stream. In addition to potential direct impacts on the stream, impacts to the wetland complex could adversely affect juvenile salmonids that rear and overwinter in wetland habitats adjacent to Scriber Creek. None of the other wetlands identified in the study area is accessible to juvenile fish. The potential for project construction and operation to adversely affect aquatic species or habitats would be avoided or minimized through the implementation of conservation measures necessary for permit compliance.

Under the Preferred Alternative, the guideway would require 3 pairs of columns to cross the Scriber Creek wetland complex. The designs of the other light rail alternatives have not been developed to the same level of detail as for the Preferred Alternative. However, based on the length of elevated guideway that would pass over the Scriber Creek wetland complex, it is probable that Alternative C2 would require the placement of more than 3 pairs of columns below the OHWM of Scriber Creek, and that Alternative C3 may require as few as 1. It is possible that Alternative C1 could be built without placing any columns below the OHWM of Scriber Creek. Under any of the light rail alternatives, the placement of any structures below the OHWM of any streams in the study area would be done in accordance with the terms of the HPA and other applicable permits obtained for this project.

Under Alternative C2, the tail track of the elevated guideway would extend over a portion of the northern tributary to Scriber Creek (Stream SLY1), crossing both the stream and its regulatory buffer. The Alternative C3 tail track would cross the same stream in a slightly different location and at an oblique angle, and would thus affect slightly more of the stream (Table 4-1). The Preferred Alternative and Alternative C1 would not cross Stream SLY1 or affect any of the stream's regulatory buffer area.

4.1.2 Construction Impacts

Similar to long-term impacts, construction-related impacts would occur where the project limits cross streams or stream buffers. Construction impacts would be temporary, however, and would be limited to the period during and immediately following project construction. The construction period would last 6 years (from beginning of construction to beginning of operation). At most locations, ground-disturbing activities would be expected to last a year or two. Temporarily disturbed sites would be replanted immediately following construction in each project segment, and vegetation would likely become reestablished within a year or two at most sites.

Under the Preferred Alternative or any of the other light rail alternatives, construction of guideways, stations, and ancillary features would take place above the OHWM of all but two streams in the study area. As such, project construction would not cause disturbance of in-stream habitat in most streams. Construction of elevated crossings at SMT1 and Scriber Creek would entail some work below the OHWM of those two streams. Additional information about the potential impacts of project construction below the OHWM of these streams is provided in the discussions of Segment B (Stream SMT1) and Segment C (Scriber Creek), below. Any work below the OHWM of any streams in the study area would be conducted in accordance with the terms of the HPA and other applicable permits obtained for this project.

The use of artificial lighting in association with nighttime construction could affect fish in study area streams. Research suggests that changes in ambient light may alter migratory behavior or affect predation rates on juvenile salmonids (Tabor et al. 2004).

Any earthwork conducted within a basin has the potential to cause sedimentation that would adversely affect the streams in the basin downstream of the work activity. The most obvious situation in which sedimentation could occur is where earthwork construction occurs in or next to a stream channel. However, any earthwork in a basin might contribute to the already serious sedimentation problems that exist in the streams in the project vicinity. This is because most stormwater in urban settings is collected in a system of pipes or ditches and conveyed directly to the nearest stream. An exception to this practice is in newer developments, where stormwater detention facilities trap much of the sediment carried by upstream sources before discharging into streams. But even in these developments, some of the finer sediments might be discharged to streams as the ponds fill with stormwater and overflow.

The types of adverse impacts from excessive sediment in streams are well documented, and salmonid ecosystems experience a wide range of adverse impacts. For example, excessive sediment might preclude salmonid spawning or successful egg incubation, or it might lower egg survival. The production and diversity of benthic invertebrates—the primary food source of juvenile salmon and resident trout—are reduced as sediment loading increases. Shelter for juvenile salmonids is decreased as the voids between rocks are filled with sediment. Pools may also become full of sediment if loading is high.

Erosion control BMPs are designed to avoid or minimize sediment delivery to streams (Appendix A). The degree to which they are effective depends on correct installation but also on

unpredictable circumstances. For instance, conventional BMPs may fail when subjected to extreme rainfall or rain-on-snow events.

Any time heavy equipment is fueled or hydraulic systems are used during construction, fuel or hydraulic fluid has the potential to be spilled. Even though a Spill Prevention, Control, and Countermeasures Plan would be implemented, there is still a possibility that some of this material could be carried by stormwater and enter a stream. Because stormwater throughout a basin ends up in a stream, stormwater entering a storm drain far from a stream is eventually carried to it. Spill prevention BMPs are designed to avoid or minimize construction-related pollutants from entering streams; however, despite precautions, a low risk still exists for release of pollutants to streams in the study area.

Within each project segment, the risk of construction impacts would be a product of the total amount of ground-disturbing activity within each basin. Construction adjacent to or within streams, wetlands, or their buffers, including work on elevated guideways that pass over these features, would have the highest risk of delivering sediment and pollutants to downstream waters. As noted in Section 1.4, Assumptions, detailed construction limits are not defined at this phase in the project design. For this analysis, potential construction limits have been estimated, identifying areas where temporary impacts on streams and stream buffers could extend beyond the analytical buffer defined for the analysis of long-term impacts.

No Build Alternative

The No Build Alternative would not have any temporary, construction-related impacts on aquatic species or habitat.

Segment A: Seattle to Shoreline

The Preferred Alternative and all other light rail alternatives in Segment A would cross Thornton Creek at the same location and would, therefore, pose equal risks of construction-related impacts to the stream. The analysis of potential construction impacts did not identify any areas where temporary impacts on Thornton Creek or its buffer could extend beyond the analytical buffer defined for the analysis of long-term impacts.

Segment B: Shoreline to Mountlake Terrace

At the elevated crossing of the Preferred Alternative over Stream SMT1, a portion of one guideway support column would be below the OHWM of that watercourse. Based on the similarities in the alignments, Alternatives B1 and B2A would likely require support columns at the same location. Stream SMT1 at that location flows intermittently and is neither known nor expected to support fish. In addition, work below the OHWM would take place in accordance with federal and state permits, which typically limit such work to periods when water levels are lowest. During such periods, water is present in the SMT1 stream channel at that location only during and immediately following measurable rainfall. It is unlikely, therefore, that any construction work would take place within the channel of SMT1 when water is present, largely eliminating the potential for sediment or

pollutants from construction areas to be carried downstream to fish-bearing waters. This potential would be further reduced by the implementation of BMPs that impose requirements for the stabilization of disturbed soil and that restrict machinery use below the OHWM. Lastly, Sound Transit would comply with water quality mixing zone requirements established by Ecology. For streams with flows of 10 cubic feet per second or less during construction, the water quality mixing zone is 100 feet downstream of project activities (WAC 173-201A-200-1[e]). Summer-season flows at the mouth of perennially flowing McAleer Creek (several miles downstream of the study area) are consistently less than 10 cubic feet per second (Sound Transit 2014), meaning any flows in Stream SMT1—an intermittently flowing tributary to McAleer Creek—would remain well below that rate. The nearest fish-bearing waters are more than 2,000 feet downstream from the proposed crossing location, well beyond the water quality mixing zone. For all of the reasons listed above, construction activities below the OHWM of Stream SMT1 would not be expected to result in elevated levels of sediment or pollutants in fish-bearing waters downstream.

Based on the amount of stream buffer area affected, the Preferred Alternative and Alternatives B1 and B2A would pose equal risks of delivering sediment or pollutants to the main stem of McAleer Creek and to the surface-flowing tributaries in the study area (Streams SSH4 and SMT1) (Table 4-1). In addition to the areas subject to long-term effects, 0.4 acre of the stream buffer for McAleer Creek could be subject to temporary, construction-related impacts under those three alternatives, as would 0.2 acre of the buffer for Stream SMT1. The buffer for Stream SSH4 would not be subject to temporary, construction-related impacts under any of the Segment B alternatives.

Although a larger area of the McAleer Creek buffer would be subject to potential long-term impacts under Alternative B4 compared to the other Segment B alternatives (Table 4-1), the analysis of potential construction impacts did not identify any areas where the temporary impacts of Alternative B4 on the McAleer Creek buffer would extend beyond the analytical buffer defined for the analysis of long-term impacts. Similarly, Alternative B4 would subject a smaller portion of the buffer on Stream SMT1 to potential long-term impacts, compared to the other Segment B alternatives (Table 4-1), and none of that buffer would be subject to potential additional construction impacts. As a result, the risk of construction-related impacts to McAleer Creek, Stream SSH4, and Stream SMT1 would likely be less under Alternative B4 than under the other alternatives. Because the southern tributary to McAleer Creek (Stream SSH2) is entirely within culverts in the study area, none of the alternatives would have the potential to deliver sediment or pollutants to that watercourse.

Segment C: Mountlake Terrace to Lynnwood

Based on the amount of wetlands, wetland buffers, and stream buffers that would fall within the project footprint along the northern tributary to Scriber Creek (Stream SLY1) and in the Scriber Creek wetland complex, Alternatives C1 and C3 would have the lowest risk of construction-related impacts. The risk for the Preferred Alternative would be slightly higher, and that for Alternative C2 would be highest.

To minimize the potential for impacts on ecosystem resources in Scriber Creek and the associated wetland complex, temporary work trestles would be used for equipment access during construction of

the elevated guideway for the light rail alternatives that cross substantial portions of the Scriber Creek wetland complex (i.e., the Preferred Alternative and Alternative C2; it is unlikely that a temporary work trestle would be needed under Alternative C1 and a trestle may be needed under Alternative C3). The trestles would be supported by steel piles and would remain in position only as long as needed for the completion of project construction. Any in-water work for trestle construction (including pile driving and pile removal) would be conducted in accordance with the terms of the HPA and other applicable permits obtained for the project. Such permits typically place restrictions on the time of year when work can be conducted below the OHWM of any streams. These permits also typically include numerous provisions aimed at avoiding or minimizing the potential for adverse effects on fish and aquatic habitat (discussed in Section 4.6, Potential Mitigation Measures).

The temporary work trestles would consist of pile-supported platforms, about 30 feet wide, with heavy timber decking supported by steel beams. Pile bents (lateral rows of three to four piles) would be spaced at 30- to 50-foot intervals, with each pile driven below the mudline to a depth sufficient to support the large cranes and other equipment needed for construction of the elevated guideway. The spacing of the pile bents will be optimized to reduce the number of piles needed while providing sufficient structural support. A vibratory hammer would be used for initial installation of most piles. If substrates preclude the use of a vibratory hammer, an impact hammer would be used. For all piles, an impact hammer would be used to complete the installation and to confirm the load-bearing capacity of each pile.

Work below the OHWM would take place in accordance with federal and state permits that typically limit such work to periods when water levels are lowest. During these periods, surface water in the wetland complex is generally found only in the actively flowing stream channels of Scriber Creek, which make up only a small portion of total wetland complex area. Most work below the OHWM would take place in areas where no standing or flowing water is present. Any work areas where surface water is present would be isolated from other surface waters with a coffer dam or similar system to prevent suspended sediment or pollutants from leaving the work area. For these reasons, in-water work in Scriber Creek, if it occurs, would not be expected to contribute to elevated levels of sediment or pollutants in fish-bearing waters.

4.2 Vegetation, Terrestrial Wildlife, and Wildlife Habitat

Construction of the Lynnwood Link Extension could affect vegetation in the study area, including terrestrial wildlife species associated with those habitats. Analyses in this subsection address the potential long-term, construction-related, and indirect impacts of each alternative on vegetation and wildlife. These impacts are defined as follows:

- Long-term impacts include permanent loss or degradation of terrestrial habitat (including habitat connectivity); disturbance due to increased human access, noise, and light; impacts on rare plant populations; or contributions to the spread of noxious or invasive plant species.

- Construction-related impacts include temporary loss or degradation of terrestrial habitat, or disturbance due to construction-related noise and light.
- Indirect and secondary impacts include those related to residential and commercial development near stations, or mitigation measures for other resources.

As noted in Section 3.2.3, no terrestrial ESA-listed or state-listed threatened or endangered plant or wildlife species are known or expected to occur in the study area. Analyses in this section, therefore, address plant and wildlife species collectively, basing the anticipated impacts on the relationships between habitats and individual species or species groups. The following subsections describe the potential impacts on vegetation and wildlife that could result from construction and operation of the Preferred Alternative or any of the other light rail alternatives. Discussions of long-term and construction-related impacts include assessments of the range of impacts that could occur for each segment and alternative. Actual impacts would depend on final alternative selection and design, construction footprint and methods, BMPs implemented during construction, and performance of post-construction restoration, including revegetation of disturbed areas and mitigation measures for areas protected under local Critical Areas Ordinances.

4.2.1 Long-Term Impacts

Direct long-term impacts would occur where the project limits cross land cover types that support vegetation or other wildlife habitat features. Clearing for project construction would also increase the risk of contributing to the spread of noxious or invasive weed species. Noise and human activity associated with operation of the light rail system may also result in long-term impacts. The project limits include the guideway, station footprints (including parking), roadway improvements, storm drainage ponds, ancillary features, and analytical buffer (Section 1.4.1, Impact Assessment). For this analysis, all impacts within these areas are considered long-term. As explained in Section 1.4 (Assumptions), analyses in this report treat the construction of both at-grade and elevated guideways and other structures as long-term impacts on vegetation and other resources within the structure's footprint. Sound Transit will re-evaluate this assumption and identify temporary construction limits during the permitting phase.

Vegetation and Wildlife Habitat Loss

Under the Preferred Alternative or any of the other light rail alternatives, the effects of project construction on vegetation and wildlife habitat would depend on the land cover type within the project clearing limits. The effects on the Urban cover type, for example, would be minimal. Little or no vegetation is present in areas classified as Urban; therefore, the replacement of existing cover with guideways or other facilities would constitute a minimal change in the characteristics of such areas or their ability to support wildlife. Similarly, areas classified as Residential or Maintained Vegetation are highly modified from pre-development conditions and typically occur alongside roads and other areas with low habitat value. In addition, invasive species are common in such areas. Although project construction in most Residential or Maintained Vegetation areas would constitute a change from a vegetated area to impervious surface, the effects of such construction on

vegetation and wildlife would, therefore, be minimal. (The effects of increases in impervious surface are discussed in Section 4.1.1). No areas classified as Open Water fall within the footprint of any of the project alternatives.

Although the potential for adverse effects would be low, operation of any of the light rail alternatives could result in some adverse effects on vegetation and wildlife over the long term. For example, maintenance activities that involve the removal of vegetation or structures that support bird nests (e.g., bridges, overpasses) during the breeding season could destroy nests, eggs, or birds protected under the Migratory Bird Treaty Act. At-grade guideways and other facilities in grassy areas (e.g., along the margins of I-5) would reduce the amount of habitat for voles and other species that are prey for raptors. In addition, disturbance of comparatively natural land cover types in the study area could have some adverse effects, as discussed below.

The two cover types in which project construction could cause changes in habitat quality are Shrub and Forest. The following subsections focus on assessing the range of impacts that could occur on these two land cover types for each segment and alternative. In both cover types, replacement of existing vegetation with project features would represent a loss of structural and biotic diversity associated with the variety of plant and wildlife species previously present in the cleared areas. In areas classified as Shrub, the potential for adverse effects would vary with site-specific conditions. For example, areas dominated by dense growth of invasive species (e.g., Himalayan blackberry, Japanese knotweed [*Polygonum cuspidatum*]) typically do not support diverse and abundant communities of vegetation and wildlife. Conversely, areas with more native species (e.g., salal, salmonberry, or red alder) typically support a greater number and variety of species.

For this analysis, the amount of Forest cover affected by each alternative is used to indicate the potential for long-term adverse effects on vegetation and wildlife. Construction of project features would have a greater likelihood of reducing the habitat quality of forested areas than other cover types. The removal of trees, snags, and understory vegetation would remove potential nesting sites, foraging sites, and hiding cover for many species of birds and small mammals. The introduction of cleared areas through patches of contiguous forest cover would result in the fragmentation of the forested habitat. By increasing the amount of edge habitat (where sensitive wildlife species are less protected from weather extremes and are more susceptible to predation from species that are adapted to open habitats), fragmentation compounds the effects of habitat loss by reducing the quality of the remaining habitat. Vegetation clearing would contribute to habitat fragmentation within the study area. However, because the Preferred Alternative or other light rail alternatives would be built alongside the I-5 corridor (an existing impediment to migration by terrestrial species), they would not affect areas that serve as connective corridors to other areas of habitat outside of the study area.

Noxious Weeds

Noxious weeds and exotic plants rapidly colonize disturbed sites such as construction areas. They prevent native species from becoming re-established following ground disturbance, spread into undisturbed areas where they can affect habitat value on additional lands, and provide very poor

wildlife habitat or forage. Several of the BMPs that would be implemented during project construction are intended to avoid, reduce, and control new infestations of noxious weeds (see Appendix A). Consistent and successful application of these measures would reduce potential habitat disturbance and improve existing habitats that are already disturbed.

Despite the implementation of BMPs, it is likely that some especially invasive weeds such as Himalayan blackberry could become established in some areas disturbed during construction. However, the Lynnwood Link Extension could also improve conditions where existing noxious weeds such as Himalayan blackberry, reed canarygrass, or Japanese knotweed dominate vegetated areas within the study area. Because of project construction, such areas would either be replaced with project features or disturbed and replanted with native species, increasing the potential for re-establishment of native vegetation.

Noise and Human Activity

Both noise and human activity have been demonstrated to displace wildlife from occupied habitats, interfere with the ability to hear territorial songs in birds, interfere with mating and alarm calls of amphibians and small mammals, and interfere with raptor foraging activities. Numerous studies document the avoidance of roads and similar facilities by wildlife and the disturbance of wildlife by human activity at varying distances. However, most of these studies have considered the impacts of new construction or facilities and human activities in areas where none or few of these facilities or human activities previously existed. This is not the case in the Lynnwood Link Extension study area, which is within or immediately adjacent to the I-5 corridor for nearly its entire length. In addition to the noise and vehicle traffic on the highway, regular human activity associated with residential and commercial development is a common feature of the landscape throughout the study area. Wildlife that use habitats adjacent to the project alternatives are more or less accustomed to some level of human activity and noise. Impacts would be related to changes in noise levels and the types of human activities.

In areas where the project alternatives pass through areas outside of the I-5 corridor, the construction of guideways, stations, or other facilities could constitute the introduction of a new source of disturbance in areas where wildlife species are less accustomed to noise and human activity. Animals that are sensitive to noise, light, or other human-related disturbance may be displaced from otherwise suitable habitat, potentially leading to competition with animals that occupy suitable habitat at other, less developed sites. Such competition may produce increased stress and decreased reproductive success for affected individuals. Animals displaced from areas of suitable habitat may also be exposed to an elevated risk of predation or vehicle collisions while they are seeking new areas of suitable habitat. The degree of displacement would generally be proportionate to the change in noise levels over background conditions (which would be a product of the distance between noise sources and areas of occupied habitat), as well as the frequency, duration, and types of noise and human activity. Based on the limited amount of area that would be affected under any of the alternatives, such effects would not be expected to cause changes in the regional populations of any wildlife species.

No Build Alternative

The No Build Alternative would not have any direct long-term impacts on vegetation or wildlife. Conversely, implementing the No Build Alternative would not have potential beneficial environmental effects over the long term, such as concentrating residential and commercial development in planned growth centers. Land development in areas away from such centers could result in the degradation or loss of high-value habitat in outlying and rural areas.

Segment A: Seattle to Shoreline

As a result of the construction of guideways and stations in areas of Shrub along I-5, more of this cover type would be affected by project construction in Segment A than in either of the other two segments (Table 4-2). All six alternatives would affect approximately 10 to 11 acres of this cover type. The alternatives would also affect similar amounts of Forest cover, ranging between 1 and 2 acres. All affected areas of these two cover types would be immediately adjacent to the I-5 corridor. Impacts on these areas, therefore, are not expected to have substantial adverse effects on vegetation or wildlife resources in the study area. Most of the affected area in Segment A would consist of the Residential, Maintained Vegetation, and Urban cover types. None of the Segment A alternatives would affect any forested habitat within the priority habitat area at Northacres Park.

Segment B: Shoreline to Mountlake Terrace

Elevated portions of the guideway for the Preferred Alternative and Alternatives B1 and B2A would pass through the patch of Forest cover (which WDFW [2014b] has identified as a priority habitat area) immediately north of the Mountlake Terrace Transit Center. Construction of a stormwater detention facility on the west side of I-5 near the Mountlake Terrace Station under the Preferred Alternative and Alternative B2A would affect additional Forest cover. As a result of construction in these and other portions of Segment B, the Preferred Alternative and Alternative B2A would each affect approximately 11 acres of Forest, compared to 5 acres under Alternative B1 (Table 4-2). Potential adverse effects of alignment construction in forested areas under these alternatives would include habitat fragmentation and loss and an elevated risk of introducing invasive species, as well as disturbance of sensitive species, as described above. Less Forest cover would be affected under Alternative B4, which would enter the I-5 median south of the Mountlake Terrace Transit Center, thereby avoiding the patch of forested habitat north of the facility (Table 4-2). The design options for the 220th Street SW Station would not differ in their impacts on Forest cover.

A portion of the 11 acres of Forest habitat that would be affected by the Preferred Alternative and Alternative B2A consists of a strip of Forest cover along I-5 in south Lynnwood, north of 220th Street SW. Construction of at-grade portions of the guideway in this area would remove the existing cover altogether. The current habitat value of this strip is limited by its narrow, linear shape and by its location between I-5 and adjacent residential development.

Table 4-2. Long-Term Impacts on Land Cover Types by Project Alternative

	Acres within Project Footprint, by Land Cover Type				
Segment/Alternative	**Forest**	**Shrub**	**Residential**	**Maintained Vegetation**	**Urban**
Segment A: Seattle to Shoreline					
Preferred Alternative: At-grade/elevated with NE 145th and NE 185th Stations	2	10	15	8	13
A1: At-grade/Elevated with NE 145th and NE 185th Street Stations	2	10	13	9	11
A3: Mostly Elevated with NE 145th and NE 185th Street Stations	1	10	13	7	4
A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations	2	11	14	9	7
A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations	1	11	13	6	3
A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations	2	10	15	10	8
A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations	2	10	13	7	4
Segment B: Shoreline to Mountlake Terrace					
Preferred Alternative (B2 Modified): East Side to Mountlake Terrace Transit Center to West Side	11	3	1	2	8
Preferred Alternative (B2 Modified): East Side to Mountlake Terrace Transit Center to West Side with 220th Street SW Station option	11	4	2	4	9
B1: East Side to Mountlake Terrace Transit Center to Median	5	1	<1	6	7
B2A: East Side to Mountlake Terrace Transit Center to West Side with Optional 220th Street SW Station	11	7	1	3	7
B4: East Side to Mountlake Terrace Freeway Station to Median	3	1	<1	6	5
Segment C: Mountlake Terrace to Lynnwood					
Preferred Alternative (C3 Modified): Along I-5 to Lynnwood Park-and-Ride Station	2	1	<1	1	14
C1: 52nd Avenue West to 200th Street SW, Option 1 (Median)	1	<1	1	1	9
C1: 52nd Avenue West to 200th Street SW, Option 2 (West of I-5)	1	<1	1	0	8

Table 4-2. Long-Term Impacts on Land Cover Types by Project Alternative

Segment/Alternative	Acres within Project Footprint, by Land Cover Type				
	Forest	Shrub	Residential	Maintained Vegetation	Urban
C2: 52nd Avenue West to Lynnwood Transit Center, Option 1 (Median)	<1	2	<1	1	8
C2: 52nd Avenue West to Lynnwood Transit Center, Option 2 (West of I-5)	1	2	<1	0	8
C3: Along I-5 to Lynnwood Park-and-Ride, Option 1 (Median)	1	1	0	2	16
C3: Along I-5 to Lynnwood Park-and-Ride, Option 2 (West of I-5)	2	1	<1	<1	15

The Preferred Alternative and Alternatives B1 and B4 would affect similar amounts of Shrub cover, ranging from 1 to 4 acres. Construction of the 220th Street SW Station and associated parking lot under Alternative B2A would affect a patch of Shrub habitat north of 220th, with a total of 7 acres of this habitat type in the project footprint. Under the Preferred Alternative, the station option would affect slightly greater amounts of Shrub, Residential, Maintained, and Urban cover types than the option with no station (Table 4-2).

Segment C: Mountlake Terrace to Lynnwood

Although the Preferred Alternative and the other Segment C alternatives and options would cross the Scriber Creek wetland complex at different locations, they would not differ substantially in the amounts of Forest and Shrub they would affect (Table 4-2). The west of I-5 option (Option 2) of Alternative C3 would affect more Forest cover than the other alternatives and options. Most of the affected area would consist of a strip of Forest and Shrub along I-5 east of 52nd Avenue West. The guideway would be elevated in this area, limiting the potential for adverse effects on vegetation and wildlife in the area. In addition, the current habitat value of this strip is limited by its narrow, linear shape and its location between I-5 and adjacent commercial development. The two options of Alternative C2, which would pass through the center of the wetland complex, would affect more Shrub than the other alternatives (Table 4-2).

Notably, under all three alternatives, habitats in the Scriber Creek wetland complex would be spanned by elevated guideways. No construction of at-grade facilities would occur in the complex. Construction of elevated guideways can reduce the amount of water and sunlight reaching the vegetation underneath. Because the guideway structure would be relatively narrow (31 feet wide) and generally more than 15 feet above the ground surface, shading impacts on vegetation would be minimal. Constructing any of the Segment C alternatives would not substantially modify the vegetation types beneath the elevated facilities or adversely affect the wildlife communities that use those habitats.

4.2.2 Construction Impacts

Similar to long-term impacts, construction-related impacts would occur where the project limits cross land cover types that support vegetation or other wildlife habitat features. Construction impacts would be temporary, however, and would be limited to the period during and immediately following project construction. The construction period would last 6 years (from beginning of construction to beginning of operation). At most locations, ground-disturbing activities would be expected to last a year or two. Temporarily disturbed sites would be replanted immediately following construction in each project segment, and vegetation would likely become reestablished within a year or two at most sites.

Construction activities under the light rail alternatives would temporarily affect vegetation and wildlife in the study area. Vegetation and wildlife habitat would be temporarily affected by clearing beyond the boundaries of the project footprint (e.g., for access roads or equipment storage areas), as well as clearing beneath elevated structures. Impacts would include the loss of vegetation and habitat, disturbance by noise and construction activity, and displacement of wildlife into potentially less suitable habitats. Construction activities involving the removal of vegetation or structures that support bird nests (e.g., bridges, overpasses) during the breeding season could destroy nests, eggs, or birds protected under the Migratory Bird Treaty Act.

Under any of the light rail alternatives, noise from construction equipment would exceed background noise levels, even in areas where the acoustic environment is currently dominated by traffic noise from I-5. Noise sources would include trucks, cranes, backhoes, loaders, compactors, excavators, grading and paving equipment, vibratory equipment, drilling rigs, forklifts, jackhammers, pumps, compressors, generators, welding equipment, and demolition equipment. The loudest noise levels would result from pile driving required for the construction of temporary work trestles across the Scriber Creek wetland complex under the Preferred Alternative and Alternative C2 (and possibly Alternative C3). Most construction-related noise would be audible up to 650 feet from the project footprint, and pile driving noise would be audible up to 3,100 feet away (Sound Transit 2014).

Wildlife would likely be displaced when construction begins. In areas of temporary vegetation clearance, wildlife species displaced by construction noise would likely return after construction is complete, provided human activity levels return to pre-construction levels. Any such return to pre-construction conditions would depend in part on the re-establishment of vegetation, however, and would not occur immediately. Herbaceous vegetation and some fast-growing shrubs would require 2 to 5 years to return to pre-project conditions. Areas of mature forest would require several decades. Species that forage on or near the ground, such as urban-dwelling small mammals or birds such as juncos and song sparrows, could return to their preferred habitats first. Species that require mature vegetation—especially those that use large shrubs and trees (e.g., wrens, chickadees, and woodpeckers)—would recolonize their preferred habitats last.

Although detailed construction limits are not defined at this phase in the project design, potential construction limits have been estimated near streams, stream buffers, wetlands, and wetland buffers. These consist of areas where temporary impacts could extend beyond the analytical buffer defined

for the analysis of long-term impacts. Additional staging areas could be identified later by the contractor, if needed. Direct construction impacts will be identified during and permitting phase. For the analyses in this document, it is assumed that the level of temporary construction impacts would be commensurate with the level of long-term impacts for each alternative. As with those analyses, the impact assessments focus on the Forest and Shrub land cover types, which would have the greatest potential to be adversely affected by construction of light rail facilities.

No Build Alternative

Implementation of the No Build Alternative would not have any temporary, construction-related impacts on vegetation or wildlife.

Segment A: Seattle to Shoreline

Because of the scarcity of the Forest and Shrub cover types in this portion of the study area, the alternatives would not differ substantially in their construction-related effects on vegetation and wildlife in Segment A.

Segment B: Shoreline to Mountlake Terrace

Based on the amount of Forest and Shrub cover that would fall within the project footprint, construction of the Preferred Alternative and Alternative B2A would have the greatest potential for construction-related impacts on vegetation and wildlife in the study area, followed by Alternative B1. Alternative B4 would enter the I-5 median south of the Mountlake Terrace Transit Center and would, therefore, avoid impacts on most existing vegetated land cover, resulting in a lower potential for construction-related impacts than the other light rail alternatives.

Segment C: Mountlake Terrace to Lynnwood

Based on the amount of the Scriber Creek wetland complex that would fall within the project footprint, construction of Alternative C2 would have the greatest potential for construction-related impacts on vegetation and wildlife in the study area. Alternative C3, which would cross near the southern end of the wetland complex, would affect slightly more of that area than Alternative C1. The effects of the Preferred Alternative would be intermediate between those of Alternative C2 and those of Alternatives C3 and C1. Based on the current habitat value of the strip of Forest and Shrub along I-5 east of 52nd Avenue West, the potential for the west of I-5 option (Option 2) of Alternative C3 to cause substantial construction-related effects on that patch of habitat would be minimal. Pile driving required for the construction of temporary work trestles across the Scriber Creek wetland complex under the Preferred Alternative and Alternative C2 (and possibly Alternative C3) could cause disturbance of wildlife up to 3,100 feet away from work areas.

4.3 Wetlands

Construction of the Lynnwood Link Extension could have impacts on wetlands in the study area. These impacts can be direct (long term), indirect (long term), and temporary (construction):

- Long-term, direct impacts occur when all or a portion of a wetland is filled or excavated so that it becomes a non-wetland.
- Long-term, indirect impacts are typically disturbances that reduce or eliminate wetland functions without directly filling or excavating wetland soils. Indirect impacts occur when permanent wetland impacts result in reduction or elimination of wetland functions in the remaining wetland area, or when alterations to surface water flows separates the remnant wetland from its hydrologic source and prevents it from maintaining wetland hydrology. Reduction of wetland functions occurs when the wetland area is reduced to an extent that it is unable to provide some or all of its pre-disturbance functions. A wetland may become a complete loss when the majority of a wetland is directly affected, leaving the remaining wetland area with altered hydrologic sources and/or reduced pre-project functions.
- Impacts are considered temporary when wetland area and functions are lost for a period of time but are subsequently restored to existing conditions or better.

The following subsections describe the potential impacts on wetlands that could result from the light rail alternatives. The potential for wetland-related impacts to affect fish species is addressed in Section 4.1, Aquatic Species and Habitat. Notably, only one wetland in the study area is accessible to fish. That is Wetland WLY4, the Scriber Creek wetland complex. Discussions of long-term and construction-related impacts include assessing the range of impacts that could occur for each segment and alternative. Actual impacts would depend on the final alternative selection and design, construction footprint and methods, BMPs implemented during construction, performance of post-construction restoration of temporarily disturbed wetlands and buffers, and performance of compensatory mitigation for impacts on areas protected under local Critical Areas Ordinances.

If the impact to any individual wetland or interconnected wetlands exceeds 0.5 acre (i.e., the maximum impact that can be permitted through a Clean Water Act Section 404 Nationwide Permit 14), a Section 404 Individual Permit would be required, likely necessitating the consideration of reasonable avoidance measures to reduce the impacts to less than 0.5 acre. If an Individual Permit applies, the necessary analyses would be conducted as part of project permitting with the U.S. Army Corps of Engineers. Determination of permitting requirements would be based in part on whether a particular wetland would be affected by elevated or at-grade features. Although the analyses in this document conservatively assume all areas underneath the guideway to be affected, the wetland permit process may not necessarily consider these areas as temporary or permanent fill.

4.3.1 Long-Term Impacts

Direct long-term (i.e., permanent) impacts would occur where the project limits cross wetlands or buffers. The project limits include the guideway, station footprints (including parking), roadway improvements, storm drainage ponds, ancillary features, and analytical buffer (Section 1.4.1, Impact

Assessment). For this analysis, all impacts within these areas are considered long term. As explained in Section 1.4 (Assumptions), analyses in this document treat the construction of both at-grade and elevated guideways (including the area underneath) and other structures as long-term impacts on wetlands and other resources within the structure's footprint. However, based on factors such as the width and height of the elevated guideway, some of these areas may not experience long-term impacts. During the permitting phase, Sound Transit will re-evaluate these assumptions to provide a more detailed assessment of long-term impacts and identify detailed temporary construction limits to distinguish which wetlands and buffers could be restored.

Indirect long-term impacts might also occur due to construction and operation activities. Potential indirect long-term impacts for each project alternative include the following:

- Modification of wetland and wetland buffer vegetation (e.g., conversion of forest-dominated areas to shrub-dominated area due to vegetation maintenance intended to prevent trees and branches from interfering with operation of the light rail)
- Partial shading of wetlands and buffers from shadows cast beyond the elevated structure footprint
- Water quality degradation due to runoff from paved areas to surface waters or wetlands
- Alteration of wetland hydrology (disconnection, disruption, or change in water quantity)

Potential long-term impacts on wetlands and buffers for each segment and project alternative are summarized in Table 4-3 and shown on figures in Appendix D. Tables D-1, D-2, and D-3 in Appendix D present estimates of the area of individual wetlands and wetland buffers that would be subjected to long-term impacts each project alternative.

No Build Alternative

The No Build Alternative would not have any long-term impacts on wetlands or buffers in the study area. Conversely, implementing the No Build Alternative would not have potential beneficial environmental effects over the long term, such as implementing compensatory mitigation for impacts to wetlands, streams, and the regulatory buffers, or concentrating residential and commercial development in planned growth centers. Potential improvements in water quality would not be realized because stormwater runoff that would receive water quality treatment under the light rail alternatives would not receive water quality treatment under the No Build Alternative. Land development in areas away from such centers could cause degradation or loss of wetlands in outlying and rural areas.

Under the No Build Alternative, as well as all light rail alternatives, public agencies would continue current management practices within rights-of-way such as clearing for maintenance of vegetation and stormwater conveyance. Management activities would include periodic mowing, removal of dead or dying trees and tree limbs that could fall on the roadway, and clearing of brush that encroaches on the roadway. These activities would affect wetland vegetation and habitat by preventing trees and shrubs from becoming established in mowed areas, and preventing forested areas in the proposed right-of-way from developing natural features such as snags and downed wood.

Segment A: Seattle to Shoreline

The Preferred Alternative and all other light rail alternatives in Segment A are all located on the east side of I-5 from Northgate in Seattle to NE 185th Street in Shoreline, with the potential to affect seven wetlands totaling 0.9 acre (Table 4-3). Buffer impacts would range from 0.3 to 0.8 acre; the alternatives that include a station at NE 155th Street (Alternatives A5 and A7) would affect more wetland buffer area than the other alternatives. Impact quantities show slight variations based on the rail alignment and location of stations and detention ponds. Most affected wetland and buffer areas are within the WSDOT right-of-way; they are degraded, vegetated by invasive species, and disconnected from other habitats by roadways and development.

Table 4-3. Long-Term Impacts on Wetlands and Buffers by Project Alternative

Segment/Alternative	Wetland Area Affected (acres)	Wetland Buffer Area Affected[a] (acres)
Segment A: Seattle to Shoreline		
Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Street Stations A1: At-grade/Elevated with NE 145th and NE 185th Street Stations A3: Mostly Elevated with NE 145th and NE 185th Street Stations A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations	0.9[b]	0.3[b]
A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations	0.9[b]	0.8[b]
Segment B: Shoreline to Mountlake Terrace		
Preferred Alternative (B2 Modified): East Side to Mountlake Terrace Transit Center to West Side	0.8	1.6
Preferred Alternative (B2 Modified): East Side to Mountlake Terrace Transit Center to West Side with 220th Street SW Station option	0.5	1.6
B1: East Side to Mountlake Terrace Transit Center to Median	<0.1	0.9
B2A: East Side to Mountlake Terrace Transit Center to West Side with Optional 220th Street SW Station	1.6	1.3
B4: East Side to Mountlake Terrace Freeway Station to Median	0.2	0.7
Segment C: Mountlake Terrace to Lynnwood		
Preferred Alternative (C3 Modified): Along I-5 to Lynnwood Park-and-Ride Station	0.7	1.0
C1: 52nd Avenue West to 200th Street SW, Option 1 (Median) and Option 2 (West of I-5)	<0.1 / 0.2	0.7 / 1.1
C2: 52nd Avenue West to Lynnwood Transit Center, Option 1 (Median) and Option 2 (West of I-5)	0.9 / 1.1	0.6 / 1.1
C3: Along I-5 to Lynnwood Park-and-Ride, Option 1 (Median) and Option 2 (West of I-5)	0.2 / 0.3	1.0 / 1.7

[a] Wetland buffer impacts are based on local jurisdiction regulatory buffer widths (Seattle Municipal Code 25.09.160.C, Shoreline Municipal Code 20.80.330, Mountlake Terrace Municipal Code 16.15.090, and Lynnwood Municipal Code 17.10.051). Note that some impacts on wetlands and wetland buffers classified as long term would likely be temporary; see discussion in Section 1.4, Assumptions.

[b] The Seattle Municipal Code applies development restrictions and specifies mitigation requirements only within environmentally critical areas or buffers on publicly or privately held parcels. Five of the wetlands potentially affected by the proposed alignments (Wetlands WSE1, WSE3, WSE5, WSE6, and WSE7) are within the right- of- way for I-5 and are therefore not subject to City of Seattle buffer requirements. Actual wetland and wetland buffer impacts would be identified and mitigation requirements would be developed through local and other permitting processes.

Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Street Stations

The Preferred Alternative would result in 0.9 acre of wetland impact. Six wetlands would be considered a complete loss. The majority of each of these wetlands would be directly affected, leaving the remaining wetland area with altered hydrologic sources and/or reduced pre-project functions (although this could be considered an indirect impact, this analysis considers it likely to be concurrent with the project and therefore would be a direct impact). Four of these wetlands are located where the guideway is elevated (Wetlands WSE3, WSE5, WSE6, and WSH3), one occurs where the guideway is at-grade (Wetland WSH2), and one is at the NE 145th Street Station (Wetland WSH1). The NE 185th Street Station would not affect any wetlands. A portion of one potential wetland (PWSH4) would be affected by at-grade guideway.

The buffers of four wetlands (Wetlands WSE1, WSE4, WSE7, and WSE8) and one potential wetland (Wetland PWSH4) would be affected, totaling 0.3 acre[5]. Impacts to buffers of other wetlands mentioned above were not included in this calculation because those wetlands were considered to be complete losses. The guideway over the buffers of Wetlands WSE1, WSE4, WSE7, and WSE8 would be elevated, and the guideway would be at-grade through the buffer of Wetland PWSH4.

A1: At-grade/Elevated with NE 145th and NE 185th Street Stations

The wetland and wetland buffer impacts of Alternative A1 would be as described for the Preferred Alternative.

A3: Mostly Elevated with NE 145th and NE 185th Street Stations

The project limits and guideway alignment of Alternative A3 would be similar to the Preferred Alternative using the same station locations; however, most of the guideway would be elevated.

Alternative A3 would result in 0.9 acre of wetland impact. Similar to the Preferred Alternative, six wetlands would be considered a complete loss. Five of these wetlands are located where the guideway would be elevated (Wetlands WSE3, WSE5, WSE6, WSH2, and WSH3) and one (Wetland WSH1) is where the NE 145th Street Station and associated detention ponds would be located. The NE 185th Street Station would not affect any wetlands. A portion of one potential wetland (Wetland PWSH4) would be affected by the elevated guideway.

This alternative would affect the same wetland buffers as described for the Preferred Alternative. The amount of area affected in some individual buffers would differ slightly from that alternative (on the scale of 0.01 to 0.02 acre), but not enough to affect the total area of wetland buffer impacts. In contrast to the Preferred Alternative, the guideway would be elevated where it intersects all wetland buffers.

[5] The impacted buffers of Wetlands WSE1, WSE4, WSE7, and WSE8 (totaling 0.2 acre) are within road rights-of-way (i.e., not on publicly or privately owned parcels) in the city of Seattle and may not be subject to the City of Seattle Critical Areas Ordinance (Seattle Municipal Code 25.09).

A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations

The alignment for Alternative A5 would be similar to that of the Preferred Alternative, but Alternative A5 would include stations at NE 130th Street and NE 155th Street instead of at NE 145th Street. Alternative A5 would result in 0.9 acre of wetland impact. Five wetlands would be considered a complete loss with four of these located where the guideway is elevated (Wetlands WSE3, WSE5, WSE6, and WSH3) and one where the guideway is at-grade (Wetland WSH2). The 130th Street, NE 155th Street, and NE 185th Street Stations would not affect any additional wetlands. Wetland WSH1 would not be a complete loss because no station is proposed at NE 145th Street. Only a small portion of the wetland would be crossed by elevated guideway. A portion of one potential wetland would be affected by elevated guideway (Wetland PWSH4).

This alternative (similar to Alternative A7) would affect buffers the most. The buffers of five wetlands (Wetlands WSE1, WSE4, WSE7, WSE8, and WSH1) and two potential wetlands (Wetlands PWSH4 and PWSH5) would be affected, totaling 0.8 acre[6]. The majority (0.6 acre) of buffer impacts would be associated with the elevated guideway. The other 0.2 acre of impacts would occur at the NE 155th Street Station.

A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Alternative A7 has a mostly elevated guideway similar to A3, but similar station choices as Alternative A5. As such, Alternative A7 would affect the same amount of wetland and wetland buffer area as Alternative A5, with impacts to the same wetlands and wetland buffers. In addition, as under Alternative A5, the only wetland affected by at-grade guideway would be Wetland WSH2.

A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations

The project limits and guideway alignment of Alternative A10 would combine elements from Alternatives A1 and A5. Similar to those two alternatives, Alternative A10 would result in 0.9 acre of wetland impact. Six wetlands would be considered a complete loss with four of these located where the guideway is elevated (Wetlands WSE3, WSE5, WSE6, and WSH3), one where the guideway is at-grade (Wetland WSH2), and one at the NE 145th Street Station (Wetland WSH1). The NE 130th Street and NE 185th Street Stations would not affect any additional wetlands. A portion of one potential wetland would also be affected by elevated guideway (Wetland PWSH4).

This alternative would affect the same wetland buffers as described for the Preferred Alternative. The amount of area affected in some individual buffers would differ slightly from that alternative (on the scale of 0.01 to 0.02 acre), but not enough to affect the total area of wetland buffer impacts. In contrast to the Preferred Alternative, the guideway would be elevated where it intersects all wetland buffers.

A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations

The project limits and guideway alignment of Alternative A11 would be similar to A7 except that a station is proposed at NE 145th Street instead of at NE 155th Street (similar to Alternative A3).

Alternative A11 would result in 0.9 acre of wetland impact. Similar to the Preferred Alternative, six wetlands would be considered a complete loss. Five of these are located where the guideway would be elevated (Wetlands WSE3, WSE5, WSE6, WSH2, and WSH3) and one (Wetland WSH1) is where the NE 145th Street Station and associated detention ponds would be located. The NE 130th Street and NE 185th Street Stations would not affect any additional wetlands. A portion of one potential wetland would be affected by elevated guideway (Wetland PWSH4).

This alternative would affect the same wetland buffers as described for the Preferred Alternative. The amount of area affected in some individual buffers would differ slightly from that alternative (on the scale of 0.01 to 0.02 acre), but not enough to affect the total area of wetland buffer impacts. In contrast to the Preferred Alternative, the guideway would be elevated where it intersects all wetland buffers.

Segment B: Shoreline to Mountlake Terrace

Wetland impacts in Segment B would range from less than 0.1 acre (Alternative B1) to 1.6 acres (Alternative B2A). Buffer impacts would range from 0.7 acre (Alternative B4) to 1.6 acres (Preferred Alternative) (Table 4-3). All of the wetlands affected by the Segment B alternatives have relatively low quality ratings, based on habitat degradation, the presence of invasive species, and lack of connectivity with other wetlands.

Preferred Alternative (B2 Modified): East Side to Mountlake Terrace Transit Center to West Side with 220th Street SW Station option

The Preferred Alternative would result in 0.8 acre of wetland impact. Portions of four wetlands would be affected by elevated guideway (Wetlands WSH5, WMT5, WMT6, and WMT7). Reconstruction of the interchange ramps between I-5 southbound and 220th Street SW would result in the total loss of one wetland (WMT5). Implementation of the 220th Street SW Station Option under the Preferred Alternative would eliminate the need for reconstructing the interchange ramps between I-5 southbound and 220th Street SW, thereby avoiding Wetland WMT5 and reducing total wetland impacts to 0.5 acre (Table 4-3).

The buffers of eight wetlands (Wetlands WSH5, WMT1, WMT2, WMT3, WMT6, WMT7, WMT10, and WMT11) and one potential wetland (Wetland PWLY3) would be affected, totaling 1.6 acres. All buffer impacts would be associated with elevated guideway. In addition, a portion of the buffer associated with Wetland WMT3 would be affected by the construction of stairs associated with the Mountlake Terrace Transit Center Station.

B1: East Side to Mountlake Terrace Transit Center to Median

Among the Segment B alternatives, Alternative B1 would affect wetlands the least (less than 0.1 acre). Buffer impacts would total 0.9 acre. The elevated guideway would pass over a small portion of Wetland WSH5. The buffers of six wetlands (Wetlands WSH5, WMT1, WMT2, WMT3, WMT10, and WMT11) would be affected by elevated guideway and a portion of the buffer associated with Wetland WMT3 would be affected by the construction of stairs associated with the Mountlake Terrace Transit Center Station.

B2A: East Side to Mountlake Terrace Transit Center to West Side with Optional 220th Street SW Station

Alternative B2A would result in the greatest amount of wetland impacts among the Segment B alternatives (1.6 acres). Construction of the 220th Street SW Station, I-5 ramp relocations, and associated stormwater ponds would affect Wetlands WMT5 and WMT6 in their entirety. Similar to the Preferred Alternative, the Alternative B2A elevated guideway would also affect portions of Wetlands WSH5 and WMT7.

The buffers of seven wetlands (Wetlands WSH5, WMT1, WMT2, WMT3, WMT7, WMT10, and WMT11) and one potential wetland (Wetland PWLY3) would be affected, totaling 1.3 acres. All buffer impacts would be associated with elevated guideway. In addition, a portion of the buffer associated with Wetland WMT3 would be affected by the construction of stairs associated with the Mountlake Terrace Transit Center Station.

B4: East Side to Mountlake Terrace Freeway Station to Median

Alternative B4 would affect four wetlands (Wetlands WSH5, WMT1, WMT2, and WMT10), totaling 0.2 acre. Alternative B4 would affect a total of 0.7 acre of wetland buffers, associated with three of these four wetlands (Wetlands WSH5, WMT1, and WMT2). All wetland and buffer impacts would be associated with elevated guideway.

Segment C: Mountlake Terrace to Lynnwood

The Segment C alternatives include the Preferred Alternative and three other light rail alternatives. The Preferred Alternative would follow a route along the west side of I-5 before crossing over the Scriber Creek wetland complex to the Lynnwood Transit Center. Each of the other alternatives includes an option to start in the median (Option 1), or west of I-5 (Option 2), depending on the Segment B alternative. Wetland impacts range from less than 0.1 to 1.1 acres and buffer impacts range from 0.6 to 1.7 acres (Table 4-3). For each alternative, Option 1 would have less impact than Option 2 because Option 2 would affect a small (0.1 to 0.2 acre) portion of Wetland WLY3 that would not be affected by Option 1.

All Segment C wetland and buffer impacts are associated with elevated guideway. As a result, the amount of wetland and wetland buffer subject to long-term ground alteration would be less than reported in Table 4-3 because the alignment would be elevated through all areas where wetlands are present. The elevated guideway would span the smaller wetlands; in Wetland WLY4, only guideway support columns would be constructed in the wetland.

Preferred Alternative (C3 Modified): Along I-5 to Lynnwood Park-and-Ride Station

The Preferred Alternative would affect the wetland and buffer of three wetlands (Wetlands WLY3, WLY4, and WLY7), resulting in 0.7 acre of wetland impact and 1.0 acre of buffer impact. Most of the affected area would be associated with Wetlands WLY4 and WLY3.

C1: 52nd Avenue West to 200th Street SW

Among the light rail alternatives, Alternative C1 would affect the wetlands the least. Alternative C1 (Option 1) would result in less than 0.1 acre of impact to a single wetland (Wetland WLY4), affecting only a small area along the northern edge of the wetland complex. Alternative C1 (Option 1) would impact the buffers of two wetlands (Wetlands WLY3 and WLY4) and one potential wetland (Wetland PWLY5), for a total of 0.7 acre of buffer impact.

Alternative C1 (Option 2) would affect the same area of Wetland WLY4 as Option 1, and it would also affect approximately 0.1 acre of Wetland WLY3, totaling less than 0.2 acre of wetland impact. The buffers of these wetlands would be affected along with the buffers of Wetlands PWLY3 and PWLY5, resulting in 1.1 acre of wetland buffer impacts.

C2: 52nd Avenue West to Lynnwood Transit Center

Alternative C2 (both Options 1 and 2) would have the greatest wetland impacts among the Segment C alternatives, primarily because it would cross through the middle of Wetland WLY4. Similar to Alternative C1 (Option 1), Alternative C2 (Option 1) would affect only wetland (Wetland WLY4), resulting in 0.9 acre of wetland impact. Alternative C2 (Option 1) would impact the buffers of two wetlands (Wetlands WLY3 and WLY4), for a total of 0.6 acre of buffer impact.

Alternative C2 (Option 2) would affect the same area of Wetland WLY4 as Option 1, in addition to a small portion of Wetland WLY3, totaling 1.1 acres of impact. Buffers of these two wetlands along with the buffer of Wetland PWLY3 would be affected, resulting in 1.1 acre of wetland buffer impacts.

C3: Along I-5 to Lynnwood Park-and-Ride

Alternative C3 (Option 1) would affect one wetland (Wetland WLY4) and one potential wetland (Wetland PWLY1) resulting in 0.2 acre of wetland impact. Alternative C3 would cross a small portion along the southern edge of Wetland WLY4, affecting only slightly more area than Alternative C1. Alternative C3 (Option 1) would impact the buffers of three wetlands (Wetlands WLY4, WLY7, and WLY8) and one potential wetland (Wetland PWLY1), for a total of 1.0 acre of buffer impact.

Alternative C3 (Option 2) would affect the same areas of Wetlands WLY4 and PWLY1 as Option 1, in addition to a small portion of Wetland WLY3, totaling 0.3 acre of impact. Buffers of these three wetlands, along with the buffers of Wetlands WLY7, WLY8, and PWLY3 would be affected, resulting in 1.7 acres of wetland buffer impacts.

4.3.2 Construction Impacts

Similar to long-term impacts, construction-related impacts would occur where the project limits cross project limits cross wetlands or buffers. Construction impacts would be temporary, however, and would be limited to the period during and immediately following project construction. The construction period would last 6 years (from beginning of construction to beginning of operation). At most locations, ground-disturbing activities would be expected to last a year or two. Temporarily

disturbed sites would be replanted immediately following construction in each project segment, and vegetation would likely become reestablished within a year or two at most sites.

Wetlands could incur long-term temporary and short-term temporary impacts associated with construction:

- Long-term temporary impacts on wetlands occur when functions are affected in such a way that they can be restored to pre-impact performance, or will eventually be restored over time, but not within a year or so.
- Short-term temporary impacts last for a limited time, and functions return to pre-impact performance fairly soon (about 1 year or within one growing season of the impact).

The duration of construction impacts on emergent wetlands is generally short term while the impact duration on forested and scrub-shrub wetlands is typically long term. The amount of area that would be subject to long-term temporary versus short-term temporary impacts was not determined for this analysis because the boundaries of wetland vegetation types (emergent, scrub-shrub, and forested) have not yet been delineated. Such delineations would occur during the permitting phase of this project. It is assumed that areas temporarily affected during construction (access roads, staging areas, etc.) would be restored to pre-project conditions after construction.

Potential construction impacts include vegetation clearing and temporary site grading and filling for site access. Although detailed construction limits are not defined at this phase in the project design, potential construction limits have been estimated near streams, stream buffers, wetlands, and wetland buffers. Temporary impacts on wetlands and wetland buffers are summarized in Table 4-4. Tables D-4 and D-5 in Appendix D present estimates of the area of individual wetlands and wetland buffers that would be subjected to temporary, construction-related impacts under the project alternatives. In addition, some impacts on wetlands and wetland buffers that are categorized as long term would likely be temporary; see the discussion in Section 1.4, Assumptions. Construction impacts would be re-evaluated during the permitting phase.

Table 4-4. Construction Impacts on Wetlands and Buffers by Project Alternative

Segment/Alternative	Wetland Area Affected (acres)	Wetland Buffer Area Affected[a] (acres)
Segment A: Seattle to Shoreline		
All alternatives, including the Preferred Alternative[b]	0.0	0.0
Segment B: Shoreline to Mountlake Terrace		
Preferred Alternative	0.1	0.4
Preferred Alternative with 220th Street SW Station Option	0.1	0.4
B1: East Side to Mountlake Terrace Transit Center to Median	0.0	0.1
B2A: East Side to Mountlake Terrace Transit Center to West Side with Optional 220th Street SW Station	0.0	0.1
B4: East Side to Mountlake Terrace Freeway Station to Median	0.0	0.1

Table 4-4. Construction Impacts on Wetlands and Buffers by Project Alternative

Segment/Alternative	Wetland Area Affected (acres)	Wetland Buffer Area Affected[a] (acres)
Segment C: Mountlake Terrace to Lynnwood		
Preferred Alternative	0.3	0.2
C1: 52nd Avenue West to 200th Street SW, Option 1 (Median) and Option 2 (West of I-5)	0.0 / 0.0	<0.1 / <0.1
C2: 52nd Avenue West to Lynnwood Transit Center, Option 1 (Median) and Option 2 (West of I-5)	0.0 / <0.1	0.2 / 0.3
C3: Along I-5 to Lynnwood Park-and-Ride Option 1 (Median) and Option 2 (West of I-5)	0.0 / <0.1	<0.1 / 0.1

[a] Based on local jurisdiction regulatory buffer widths (Seattle Municipal Code 25.09.160.C, Shoreline Municipal Code 20.80.330, Mountlake Terrace Municipal Code 16.15.090, and Lynnwood Municipal Code 17.10.051).

[b] See Table 4-3 for permanent impacts, which include construction.

Temporary construction impacts could affect the functioning of wetlands within or adjacent to the construction limits for all light rail alternatives. Such impacts would be qualitative in nature and cannot be quantified. Potential adverse effects on wetlands and their functions would be minimized by the installation, monitoring, and maintenance of appropriate BMPs for the duration of construction. Wetland functions could be affected by soil compaction, accidental spills, noise and anthropogenic disturbance, potential increase of sediment input, and introduction of invasive species.

No Build Alternative

The No Build Alternative would not have any construction impacts on wetlands or buffers in the project vicinity. However, under the No Build Alternative as well as all light rail alternatives, public agencies would continue current management practices within rights-of-way such as clearing associated with maintenance of vegetation and stormwater conveyance (see long-term impacts discussion).

Segment A: Seattle to Shoreline

General construction limits beyond the project footprint were not identified for Segment A due to the alignment's location. It is assumed that because most of the alignment and associated features for the Segment A alternatives are situated on or adjacent to currently developed areas, no additional construction areas in wetlands or buffers would be required outside of the analytical buffer that was used to estimate long-term impacts. As noted in Section 1.4, Assumptions, not all areas within that analytical buffer would be subject to long-term impacts; some areas would be subject only to temporary impacts during construction. It was assumed for this analysis that the level of temporary construction impacts on vegetation would be commensurate with the level of long-term impacts. A similar assumption applies to impacts to wetlands and wetland buffers in Segment A. Based on that assumption, the construction-related effects of all Segment A alternatives, including the Preferred

Alternative, on wetlands would likely be the same, given that the long-term impacts would be the same for all six alternatives (Table 4-3). As for effects on wetland buffers, the long-term impacts of Alternatives A5 and A7 on buffers would be greater than those of the other alternatives, so the construction-related effects of those two alternatives would similarly be greater than those of the other alternatives. The impacts of the Preferred Alternative and Alternatives A1, A3, A10, and A11 on wetland buffers would all be similar (Table 4-3).

Segment B: Shoreline to Mountlake Terrace

The temporary, construction-related impacts of the Preferred Alternative on wetlands and wetland buffers would be greater than those of the other Segment B alternatives (Table 4-4). Alternatives B1, B2A, and B4 would all have no construction impacts on wetlands and similar acreages of construction impacts on buffers.

Segment C: Mountlake Terrace to Lynnwood

Alternative C1 would likely affect the wetlands the least during construction and the Preferred Alternative would have the most impact. This is due, in large part, to the construction of a temporary roadway or placement of fill in the wetland area for the alternative, which could increase the impacts beyond the levels assumed for the permanent facility. Options 1 and 2 for the Segment C alternatives would have similar construction-related impacts on wetlands and buffers.

To minimize the potential for impacts on ecosystem resources at the Scriber Creek wetland complex (Wetland WLY4) under the Preferred Alternative and Alternatives C2 and C3, temporary work trestles would be used for equipment access during construction of the elevated guideway across the wetland complex. The trestles would be supported by steel piles and would remain in position only as long as needed for the completion of projection construction. Any in-water work for trestle construction (including pile driving and pile removal) would be conducted in accordance with the terms of the HPA and other applicable permits obtained for the project.

4.4 Indirect and Secondary Impacts

Indirect and secondary impacts include those related to residential and commercial development near stations, or impacts on other resources from mitigation measures. Indirect impacts also include potential interference with possible future habitat restoration projects. For example, the presence of guideways, stations, or other facilities near streams could affect the potential replacement of existing fish passage barriers by limiting options for locations and types of fish-passable crossing structures.

Under any of the light rail alternatives, several factors would limit the potential for development near stations to adversely affect ecosystem resources. First, all proposed stations would be located in areas that are already densely developed. Second, any new development in these areas would be subject to review under local Critical Areas Ordinances, which would trigger the implementation of mitigation measures and practices aimed at avoiding or minimizing the potential for adverse effects on wetlands, aquatic species and habitat, and other natural resources such as fish and wildlife habitat conservation areas.

In most locations, the potential for construction of the light rail alternatives to interfere with possible future fish habitat restoration projects would be minimal because project features would be designed and located to avoid streams. Construction would occur above stream OHWMs and the guideways would be elevated at open stream crossings. As noted in Section 4.1.1, Long-Term Impacts, no culverts would be added or extended in any streams. Moreover, construction and operation of any of the light rail alternatives would not interfere with any anticipated culvert replacement projects in the I-5 right-of-way.

Exceptions could occur at two stream crossings. First, as discussed in Section 4.1.1, Long-Term Impacts, the construction of an elevated crossing of Scriber Creek under any of the light rail alternatives would entail the placement of support columns in areas that receive seasonal or intermittent flow. Based on the absence of human-made fish passage barriers within the wetland complex, however, it is unlikely that any fish passage improvement projects would be planned in that area.

The other location where construction of the light rail alternatives could interfere with possible future fish habitat restoration projects is at the crossing of Stream SMT1. The stream at this location is currently categorized as non-fish-bearing and is approximately 2,000 feet upstream of a culvert identified as a fish passage barrier in the I-5 right-of-way. . The alternatives that cross SMT1 (the Preferred Alternative and Alternatives B1 and B2A) would be elevated at this location. If the barrier culvert is removed and fish access to SMT1 is restored in the future, and if fish habitat improvement projects are subsequently planned for the stream reach crossed by the elevated guideway, it is possible that a guideway support column at this location could complicate the design of such habitat restoration projects. Such interference is unlikely to occur, however, because the stream channel at this location is poorly defined and the local topography offers ample opportunities for the creation of a channel that would avoid support columns or other structures..

During the permitting phase, Sound Transit will review available GIS data from local municipalities and identify culverts along documented and potential fish-bearing streams in the study area. That assessment will be used to further inventory locations where fish access improvement projects may occur in the future.

Actions taken to mitigate for impacts on other resources may have beneficial impacts on wetlands and aquatic species and habitats. For example, many jurisdictional wetlands in the study area are surrounded by heavily developed areas or are otherwise isolated from stream networks. Some mitigation measures for these wetlands could take the form of wetland habitat improvement or restoration in areas that contribute more directly to the functioning of stream systems, including those that support fish. To the extent that this occurs, such mitigation efforts could have a beneficial effect on aquatic species and habitats.

Additional long-term environmental benefits may result from the conversion of existing PGIS to non-PGIS (e.g., where elevated guideways intercept precipitation that would otherwise fall on high-traffic roadways). Such conversions would reduce the amount of untreated stormwater that drains from PGIS to watercourses in the study area, thereby decreasing pollutant loadings in receiving

waters. In addition, use of the Lynnwood Link Extension light rail system would be expected to reduce vehicle miles traveled by approximately 270,000 to 290,000 miles per day by 2035, with corresponding reductions in energy use, emissions, and related pollutants from vehicular traffic.

4.5 Cumulative Impacts

NEPA defines cumulative effects as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions" (40 CFR 1508.7). Past actions and development have greatly changed the landscape in the study area and surrounding vicinity. Present and reasonably foreseeable future actions, including other transportation or infrastructure projects and other planned or pending land use actions or developments in the project vicinity could contribute to cumulative impacts on ecosystem resources in the study area. Impacts could include habitat loss, filling or clearing, altering hydrologic sources, or increasing pollutants and sedimentation in wetlands and streams. Not all reasonably foreseeable actions have the potential to result in adverse effects on the environment. For example, WSDOT and WDFW formed a cooperative program in 1991 to inventory and assess fish passage barriers on WSDOT facilities statewide. Culvert replacement and retrofitting projects through that program may improve fish access to streams in study area.

Several proposed site development projects could have some effect on ecosystem resources in the study area. These include a site in Mountlake Terrace, across 236th Street SW from the Mountlake Terrace Transit Center, that is envisioned by the City of Mountlake Terrace to accommodate higher-density development. The Edmonds School District master plan includes developing a bus base and administration center north of I-5 and east of 52nd Avenue West in Lynnwood. Construction of this facility could affect ecosystem resources such the Scriber Creek wetland complex. Sound Transit is considering a Link Operations and Maintenance Satellite Facility alternative in the same area, although a Bellevue site was identified as the Preferred Alternative. The Lynnwood site alternative would largely be built on previously developed parcels but a portion would extend into the Scriber Creek wetland complex. The impacts of these projects may include loss or degradation of vegetation, wildlife habitat, streams, wetlands, and associated buffer areas. These impacts would be both short term (e.g., temporary disturbance during construction) and long term (e.g., conversion of vegetated areas to impervious surface).

Future projects would generally have limited potential to adversely affect ecosystem resources. Any projects or land use actions would be subject to regulatory review and/or permitting under federal, state, and local regulations. The review and permitting processes would trigger implementation of measures to avoid or minimize impacts on ecosystem resources. Such processes would also result in compensatory mitigation for any unavoidable impacts to streams or stream buffers, wetlands, or wetland buffers. If combined with the effects of the Lynnwood Link Extension, there would be higher cumulative effects on ecosystem resources than if the impacts of each project were considered on its own. However, if avoidance and mitigation measures such as those described

below are applied for all projects, the effects would be reduced. Coordination among the project proponents could also help reduce impacts.

4.6 Potential Mitigation Measures

Sound Transit's policy [Executive Order No. 1, Establishing a Sustainability Initiative for Sound Transit (2007)] on ecosystem mitigation is to avoid impacts on environmentally sensitive resources as much as possible, and to provide adequate mitigation for unavoidable impacts to ensure no net loss of ecosystem function and acreage as a result of agency projects. The Lynnwood Link Extension would mitigate impacts on ecosystem resources in accordance with the mitigation sequencing requirements established by NEPA, the CWA, and local Critical Areas Ordinances.

According to NEPA (40 Code of Federal Regulations [CFR] paragraphs 1508.20), the sequence of mitigation is as follows:

a) Avoiding the impact altogether by not taking a certain action or parts of an action

b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation

c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment

d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action

e) Compensating for the impact by replacing or providing substitute resources or environments

Avoidance and Minimization

The avoidance and minimization of impacts was a guiding principle in the preliminary design of project alternatives; further avoidance and minimization measures would continue to be pursued as the project enters final design and permitting stages. Under any of the light rail alternatives, Sound Transit would comply with standard specifications, BMPs, and applicable federal, state, and local mitigation requirements during design, construction, and post-construction activities. A summary of BMPs that would be implemented to avoid and minimize impacts on ecosystem resources is provided in Appendix A.

Restoration of Construction Impacts

Immediately following construction in each project segment, Sound Transit would begin restoring temporarily disturbed wetlands, streams (if any work occurs below the OHWM of any streams), and buffer areas. The length of time that would be required for site restoration to effectively replace habitat functions would vary. Temporarily disturbed wetlands, streams, and their buffers would be restored to pre-construction conditions where feasible and planted with appropriate native species when construction activities are finished.

Compensatory Mitigation

For any wetland, stream, and buffer impacts that could not be avoided or adequately minimized, Sound Transit would replace the area and functions lost through compensatory mitigation. As appropriate, Sound Transit would apply the federal Final Compensatory Mitigation Rule (40 CFR Part 230); appropriate current available agency regulations; guidelines established jointly by Ecology, the U.S. Army Corps of Engineers, and U.S. Environmental Protection Agency in *Wetland Mitigation in Washington State* (Ecology et al. 2006); and local Critical Areas Ordinances for the cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood.

Mitigation for unavoidable impacts to streams, stream buffers, and wildlife habitat would be provided in accordance with the requirements of local critical areas ordinances. In general, those ordinances state that mitigation should prevent the net loss of ecological function; the means of achieving that goal are determined through individual permitting processes. Sound Transit's actions to mitigate for impacts on wetlands and wetland buffers (e.g., planting native trees and shrubs near wetland areas) would help offset the loss of some habitat for wildlife and contribute to improved ecological function of nearby streams and stream buffers. Tree planting required for compliance with WSDOT's and local jurisdictions' tree protection rules would also help mitigate impacts to streams, stream buffers, and wildlife habitat. Lastly, planting of trees and shrubs to mitigate visual impacts (including in replacement lands for affected WSDOT beautification areas along I-5) would also provide ecological benefits.

Sound Transit has committed to achieving no net loss of ecosystem function and acreage on a project-wide basis. This includes a commitment to no net loss of wetland functions and wetland areas. Long-term impacts on wetlands and buffers could be mitigated by one or more of the following approaches:

- Approved mitigation bank
- King County in-lieu fee program
- Project-specific mitigation developed by Sound Transit

Also, Sound Transit would consider opportunities to establish mitigation in advance of the impacts from future construction of the Lynnwood Link Extension.

Approved Mitigation Bank

Currently, there are no existing approved mitigation banks in the project area basins. Although it is possible that a bank could become certified with service in the project area in the future, mitigation banking projects take considerable lead time for planning and approval.

King County In-Lieu Fee Program (Mitigation Reserves Program)

King County has developed an in-lieu fee program called the Mitigation Reserves Program, which was approved by the U.S. Army Corps of Engineers in March 2012 (King County 2012). The program includes service areas within King County for the Thornton Creek basin and McAleer Creek basin in the Cedar River/Lake Washington watershed. Sound Transit would discuss this

program with the Cities of Seattle and Shoreline to determine whether this program could be applicable to the Lynnwood Link Extension.

Project-specific Mitigation Developed by Sound Transit

Both the *Wetland Mitigation in Washington State* guidance and local codes require that wetland mitigation be completed at specific replacement ratios relative to the category of the wetland affected and the type of mitigation proposed (i.e., wetland creation, restoration, enhancement, or preservation) (Tables 4-5 through 4-9). These replacement ratios are guidelines from which case-by-case consideration start. To determine the appropriate mitigation ratios for this project, the project team may propose adjustments to these guidelines to consider unique project circumstances.

Table 4-5. Recommended Wetland Mitigation Ratios for Projects in Western Washington [a]

Category of Wetland Impacts	Re-establishment or Creation	Rehabilitation Only	Re-establishment or Creation (R/C) and Rehabilitation (RH)	Re-establishment or Creation (R/C) and Enhancement (E)	Enhancement Only
Category II	3:1	6:1	1:1 R/C and 4:1 RH	1:1 R/C and 8:1 E	12:1
Category III	2:1	4:1	1:1 R/C and 2:1 RH	1:1 R/C and 4:1 E	8:1
Category IV	1.5:1	3:1	1:1 R/C and 1:1 RH	1:1 R/C and 2:1 E	6:1

[a] Ecology et al. (2006)

Table 4-6. City of Seattle Wetland Mitigation Ratios[a]

Category of Wetland Impacts	Restoration or Creation	Enhancement
Category II	3:1	16:1
Category III	2:1	8:1
Category IV	1.5:1	6:1

[a] Seattle Municipal Code 25.09.160.E.5. Only applicable to development on publicly or privately owned parcels.

Table 4-7. City of Shoreline Wetland Mitigation Ratios[a]

Category of Wetland Impacts	Creation	Enhancement
Type II	3:1	12:1
Type III	2:1	8:1
Type IV	1.5:1	6:1

[a] Shoreline Municipal Code, Table 20.80.350D

Table 4-8. City of Mountlake Terrace Wetland Mitigation Ratios[a]

Category of Wetland Impacts	Creation	Enhancement
Category II	Forested 3:1	6:1
	Scrub/Shrub 2:1	4:1
	Emergent 2:1	4:1
Category III	Forested 3:1	6:1
	Scrub/Shrub 2:1	4:1
	Emergent 2:1	4:1
Category IV	1.25:1	2.5:1

[a] Mountlake Terrace Municipal Code 16.15.110.C.2

Table 4-9. City of Lynnwood Wetland Mitigation Ratios[a]

Category of Wetland Impacts	Creation or Restoration	Enhancement[b]
Category II	3:1	-
Category III	2:1	-
Category IV	1.5:1	-

[a] Lynnwood Municipal Code 17.10.055
[b] Ratios not specified for enhancement

Compensatory mitigation would also be provided for long-term temporary impacts and conversion of wetlands from one type to another (e.g., forested wetland to emergent or scrub-shrub wetland). Generally, compensation for long-term temporary impacts is one-quarter of the typical ratios for long-term (permanent) impacts and one-half for conversion of wetlands. Impacts on buffers would generally be replaced at a minimum ratio of 1:1 using buffer enhancement.

The mitigation approach to compensate for unavoidable impacts caused by the project may consist of on-site mitigation, off-site mitigation, or a combination of the two. Opportunities for wetland mitigation occur in the study area and within the greater project vicinity.

In cooperation with resource agencies, Sound Transit would develop plans to mitigate the effects of the project on wetlands and buffers. Site selection would emphasize a watershed approach. To the extent possible, compensatory mitigation sites would be identified and compensate for lost values in-kind. It is environmentally and economically desirable to maximize the ecological functions at sites by consolidating as many mitigation requirements as possible at the least number of mitigation sites. It may be necessary to use several sites and approaches to mitigation given the size of this light rail project, the variety of impacts, complexity of identifying mitigation opportunities, and satisfying mitigation requirements.

Potential project-specific mitigation sites would be selected according to the federal Final Compensatory Mitigation Rule (40 CFR Part 230) and joint guidance developed by Ecology, the U.S. Army Corps of Engineers, and the U.S. Environmental Protection Agency (Hruby et al. 2009), which discuss the implementation of a watershed approach to selecting mitigation sites. This approach allows for a greater degree of flexibility in selecting mitigation sites and potentially greater value created for the watershed than the previous regulatory focus on on-site mitigation. Potential sites currently under consideration for project-specific mitigation for impacts on wetlands and wetland buffers are described below.

North Seattle Community College Campus

Various opportunities for wetland restoration and enhancement may be present on the North Seattle Community College Campus, although other projects proposed in the vicinity may reduce the area available.

Jackson Park Golf Course/5th Avenue NE

Potential wetland and riparian mitigation could be accomplished along the east side of the 5th Avenue NE right-of-way and the Jackson Park Golf Course, particularly along Thornton Creek.

NE 145th Street Vicinity

Two potentially available parcels near Paramount Park in Shoreline may provide opportunities for wetland protection and restoration.

NE 155th Street Station Vicinity

Wetland creation may be possible south of the NE 155th Street Station (proposed under Alternatives A5 and A7) near the locations of Wetlands PWSH4 and PWSH5.

Ballinger Lake Golf Course

The City of Mountlake Terrace will be transitioning the Ballinger Lake Golf Course to a passive park/open space, which could create wetland restoration opportunities.

Scriber Creek Wetland Complex (Wetland WLY4)

Wetland and stream mitigation opportunities are present in the Scriber Creek vicinity near the Lynnwood Transit Center. These parcels are under both public and private ownership, including parcels that could be acquired by Sound Transit because they intersect with areas needed for the light rail right-of-way. A private parcel on Cedar Valley Road, along the western edge of the wetland complex, could also provide an opportunity for mitigation. These mitigation opportunities may include wetland creation, restoration, or enhancement.

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APPENDIX A

Best Management Practices for Ecosystem Resources

APPENDIX A – BEST MANAGEMENT PRACTICES FOR ECOSYSTEM RESOURCES

This description of measures is a compilation of best management practices (BMPs) that can be used to avoid and minimize temporary construction and long-term impacts of the Lynnwood Link Extension on sensitive ecosystem resources. These BMPs are either required by state or federal agencies to obtain permits required for the project or may be required to comply with typical permit conditions. They are based on Sound Transit's knowledge of permit requirements and experience with conducting environmental compliance and permitting for numerous other projects in the Puget Sound area.

Construction Best Management Practices

General Best Management Practices for All Sensitive Areas

Sound Transit's construction contractor would implement construction BMPs that would apply to all work in or around sensitive areas. The construction contractor would work within construction limits marked with fencing and signage to prevent unintended impacts on riparian vegetation, wetlands, woodlands, and other sensitive sites outside of the construction limits. The construction limits would be clearly marked with high-visibility construction fencing and signage prior to any ground-disturbing or construction-related activities. There would be no direct site disturbance outside of the construction limits.

Soil or rock stockpiles, excavated materials, or excess soil materials would be prevented from eroding into sensitive habitats, including stream channels, wetlands, and riparian areas outside of the construction limits by high water or storm runoff. Before discharging or allowing runoff from the project site, the construction contractor would be required to develop, implement, and monitor a Temporary Erosion and Sediment Control (TESC) plan to address potential erosion for the duration of construction. The contractor would implement the plan before discharging or allowing runoff from the site. Monitoring requirements specified in the TESC would provide feedback to ensure that the erosion control practices are operating properly and effectively. BMPs would limit soil compaction in sensitive areas. For example, tracked equipment rather than tire-based equipment may be used in areas that are sensitive to adverse effects from soil compaction. Temporary work trestles or other measures that minimize impacts would be used where practical, such as the Scriber Creek wetland complex.

Other measures to reduce the risk of erosion and sedimentation may include the following:

- Installing erosion control blankets or an equally effective BMP on steep slopes that are susceptible to erosion and where ground-disturbing activities have occurred, in order to prevent erosion and assist with establishment of native vegetation.
- Covering material temporarily stored for use in project activities with plastic or other impervious material during rain events to prevent sediments from being washed from the storage area to surface waters

- Inspecting temporary and permanent erosion and sedimentation control measures on a regular basis and maintaining and repairing the measures to ensure continued performance of their intended function
- Inspecting silt fences after each rainfall, and at least daily during periods of prolonged rainfall.

Fish and Aquatic Habitat Protection

All work below the OHWM of streams in the study area would comply with the terms and conditions set forth in the Hydraulic Project Approval (HPA) issued for the project by the Washington Department of Fish and Wildlife (WDFW). The HPA program is the vehicle through which WDFW regulates activities that affect the bed or flow of waters of the state for the protection of fish life. An HPA is required for construction or structural work associated with any bridge structure or culvert construction within or below the ordinary high water mark (OHWM) of waters of the state. HPAs typically specify provisions designed to avoid or minimize the potential for adverse effects on habitat in receiving waters. Provisions required for the Lynnwood Link Extension could include restrictions on construction periods below the OHWM and/or other measures designed to avoid or minimize the potential for construction activities to deliver sediment or pollutants to streams.

In accordance with typical requirements of an HPA, when large woody debris must be moved to allow the reasonable use of an over-water or in-water facility, the large woody debris would be returned to the water downstream, where it would continue to provide aquatic habitat function. To reduce the risk of adverse effects on migrating salmonids during project construction, Sound Transit would require construction contractors to direct lighting away from fish-bearing waters and to place hoods or shields on lights, as needed, to minimize the amount of backlight or dispersed light cast toward the water's surface.

Any affected streambeds and stream banks would be permanently restored after in-water work with plantings of native or approved woody and herbaceous species within 1 year of completion of each phase of construction. Bank protection would follow the guidelines set forth in WDFW's *Integrated Streambank Protection Guidelines* (http://wdfw.wa.gov/hab/ahg/ispgdoc.htm).

Water Quality Protection

The federal Clean Water Act (CWA) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the CWA is the National Pollutant Discharge Elimination System (NPDES) permit program, which is administered by the U.S. Environmental Protection Agency (EPA). EPA has delegated responsibility to administer the NPDES permit program to the State of Washington on the basis of Chapter 90.48 of the Revised Code of Washington, which defines the authority and obligations of the Washington State Department of Ecology (Ecology) in administering the wastewater discharge permit program. The project would obtain and adhere to a NPDES construction stormwater general permit to reduce or eliminate stormwater pollution and other impacts on surface waters. The construction contractor

would be required to adhere to water quality standards as stated in the 401 Water Quality Certificate and NPDES permit issued for the project.

Ecology's construction stormwater general permit is required for certain construction activities. The goal of the permit program is to reduce or eliminate stormwater pollution and other impacts on surface waters.

The project must complete a Notice of Intent (NOI) for coverage under the permit. A construction stormwater pollution prevention plan, approved by Ecology, would also be implemented before the start of construction. The plan would include BMPs to (1) prevent erosion; (2) prevent sedimentation; and (3) identify, reduce, eliminate, or prevent stormwater contamination and water pollution from construction activity. The Construction Stormwater Pollution Prevention Plan would include a TESC plan that includes BMPs such as silt fences; protective ground covers, such as straw, plastic sheeting, or jute mats; straw bales in drainage features; a Spill Prevention, Control, and Countermeasures Plan; a Concrete Containment and Disposal Plan; Dewatering Plan; and a Fugitive Dust Plan.

Turbid water produced (including untreated water from dewatering activities) would be prevented from discharging to fish-bearing waters or wetlands. Turbid wastewater may be routed to temporary or permanent detention facilities, or to upland areas that provide adequate rates of infiltration.

In accordance with conditions of a typical HPA, heavy equipment used during the course of in-water work would operate from above the OHWM wherever possible. Use of equipment below the OHWM would be limited to that necessary to gain position for work. Drive mechanisms would not enter or operate below the OHWM, except under the terms of the HPA issued by WDFW. Work areas below the OHWM would be isolated from other surface waters with a coffer dam or similar system to prevent suspended sediment or pollutants from leaving the work area.

Uncured concrete and/or concrete byproducts would be prevented from coming in contact with streams or water conveyed directly to streams during construction. A concrete truck chute cleanout area or equally effective BMP would be established to properly contain wet concrete. Any water having direct contact with uncured concrete would be contained and treated or removed from the site (as appropriate) to prevent discharge to streams or wetlands.

If any permanent footings or drilled or pile-driven shafts are installed below the OHWM, installation would be conducted in a manner consistent with Section 404 and other permits issued for the project by the Corps and other parties (as applicable). When constructing drilled shafts, the contractor would ensure that all drilling equipment, drill recovery and recycling pits, and any waste or spoil produced are properly contained to prevent discharge of drill wastes or fluids to any surface water or wetlands.

Equipment (excluding track-mounted equipment, large cranes, and other relatively immobile equipment) would be refueled and maintenance activities conducted at a distance from the nearest wetlands, ditches, and flowing or standing water approved by regulatory permits. Appropriate spill prevention measures and fuel containment systems would be designed and implemented to completely contain a potential spill as specified in the Spill Prevention, Control, and

Countermeasures Plan. As appropriate, equipment used for construction activities would be cleaned before arriving at the project site to ensure no potentially hazardous materials are exposed, no leaks are present, and the equipment is functioning properly. Wash water would not be discharged directly into any water body without pretreatment. Construction equipment and vehicles would be maintained to prevent them from leaking fuel or lubricants. Should a leak be detected on heavy equipment used for the project, the equipment would be repaired before use.

Vegetation and Wildlife Protection

The measures listed below would be implemented before and during project construction to avoid or minimize effects on vegetation and wildlife resources. These measures would be implemented along with others designed to avoid or minimize effects on other resources, such as streams, wetlands, and soils. The additional measures would be expected to provide more protection to vegetation and wildlife resources within and adjacent to streams and wetlands.

- Limit construction activity to a relatively small area immediately adjacent to the existing cleared area to minimize vegetation clearing and leave as much vegetation undisturbed as possible.
- As appropriate, restore areas temporarily affected by construction to pre-construction conditions or better through replanting or reseeding.
- Prepare and implement a revegetation plan that emphasizes the use of native species as appropriate.
- In accordance with the Migratory Bird Treaty Act, consult with USFWS on methods to implement during construction to avoid impacts on migratory birds. Such methods could include conducting pre-construction surveys for migratory birds and/or placing restrictions on vegetation clearing during the breeding season for migratory birds.
- To minimize the extent of habitat disturbance associated with the removal of potential hazard trees, Sound Transit would identify and remove such trees on an individual basis, based on tree species, tree health, and distance from the alignment.

In addition to the measures identified above, a monitoring plan and adaptive management plan would be implemented, as directed by permit requirements, for revegetated sensitive areas or buffers. The plans would generally require verification of 100 percent survival of all installed native trees and shrubs 1 year after installation. The performance criteria would be met if all dead plants are replaced at the end of the first year. Native woody species (planted and volunteer) must generally maintain a density of four plants per 100 square feet in each plant community by the end of the 3-year period. Plant communities would be identified in the mitigation plan.

Control of Noxious and Invasive Species

The most effective means of reducing the introduction and spread of noxious and invasive species are weed control and restoration of disturbed construction sites with native plant species suitable for the type of site disturbed. Weed control is important before and during construction. Per federal,

state, and local requirements and guidance, Sound Transit would implement appropriate measures to minimize risk of introduction and spread of noxious and invasive species, including restoring temporarily disturbed areas immediately following construction in each project segment. To minimize use of herbicides and fertilizers, restoration of disturbed areas would include the use of mulching, ground cover, and other planting strategies that discourage growth of undesirable species.

Design and Operation Best Management Practices

The project would install permanent stormwater runoff treatment and flow control facilities where needed to comply with Sound Transit's *Design Criteria Manual* (Sound Transit 2012).

The project would incorporate stormwater conveyance and flow control facilities that promote infiltration where applicable and permittable.

The project would select, design, and install runoff treatment BMPs that are best suited to the site conditions and best capable of achieving the required levels of treatment (subject to negotiation with the local jurisdiction and/or Ecology). These could include natural or engineered dispersion BMPs; biofiltration BMPs such as vegetated filter strips, biofiltration swales, or ecology embankments; wet-pool BMPs; and infiltration BMPs.

The project would route drainage to maintain existing stream basin contributing areas.

Sound Transit would coordinate with WSDOT, local jurisdictions, and resource agencies conducting restoration projects in the area to minimize the potential for light rail facilities to interfere with future restoration projects.

Except in cases where hazard trees pose an immediate threat to light rail safety or reliability, vegetation maintenance and hazard tree removal would be conducted outside of the breeding season for migratory birds.

The project would implement pesticide application techniques, in accordance with current Ecology water quality agreements, to minimize the impact on aquatic and terrestrial environments.

APPENDIX B

Wetland and Stream Delineation Report

SOUNDTRANSIT
RIDE THE WAVE

Lynnwood Link Extension

Technical Report

Wetland and Stream Delineation

401 South Jackson Street
Seattle, WA 98104-2826

February 2015

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

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ACRONYMS AND ABBREVIATIONS

Corps	U.S. Army Corps of Engineers
Dep	Depressional
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
GIS	geographic information system
GPS	global positioning system
HGM	hydrogeomorphic
I-5	Interstate 5
NEPA	National Environmental Policy Act
NGPA	Native Growth Protection Area
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	ordinary high water mark
PEM	palustrine emergent
PFO	palustrine forested
PHS	Priority Habitats and Species
PSS	palustrine scrub-shrub
PUB	palustrine unconsolidated bottom
RCW	Revised Code of Washington
Riv	Riverine
Sound Transit	Central Puget Sound Regional Transit Authority
SR	State Route
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation

1 INTRODUCTION

1.1 Project Overview

The proposed Lynnwood Link Extension would begin at Northgate in north Seattle and end at the Lynnwood Transit Center. The 8.5-mile project corridor generally follows Interstate 5 (I-5), the major north-south freeway through the state, and the primary route serving a large commuter market traveling between Snohomish and King counties. The corridor travels through the cities of Seattle and Shoreline in King County and Mountlake Terrace and Lynnwood in Snohomish County. The project area lies between Puget Sound to the west and Lake Washington to the east.

The Lynnwood Link Extension alternatives would extend light rail from the planned northern terminus of the Link light rail system at Northgate, continuing north along I-5 to Lynnwood. In 2010, the Central Puget Sound Regional Transit Authority (Sound Transit) started a project-level planning process and developed a set of alternatives that were studied in a Draft Environmental Impact Statement (EIS) (Sound Transit and Federal Transit Administration 2013). Through that analysis process, Sound Transit identified a Preferred Alternative, which is evaluated in this document and in the Final EIS.

1.2 Purpose of Report

This wetland and stream delineation report was prepared to describe the wetlands and streams within the Lynnwood Link Extension corridor to support the National Environmental Policy Act (NEPA) review process. This report will help facilitate agency review by providing detailed descriptions of study area wetlands and streams, including classifications, ratings, and buffers. Wetland and stream data gathered were used to assist the design of the project alternatives and would serve as the basis for determining and mitigating the impacts of the Preferred Alternative or any of the other light rail alternatives.

1.3 Study Area

The study area for this report encompasses the area within 200 feet of either side of the project alternatives or features. Wetlands and streams described in this report include those that fall entirely or partly within the study area. To encompass the maximum possible extent of water quality mixing zones set by the Washington State Department of Ecology (Ecology), the study area also includes stream segments extending up to 100 feet upstream and 300 feet downstream of locations where the project boundaries cross streams (Washington Administrative Code [WAC] 73-201A-400).

2 METHODS

The process of identifying and describing wetlands and streams in the study area involved agency coordination and review of existing information, as well as on-site field surveys. The following subsections describe the methods used for gathering existing information and field data.

2.1 Data Gathered

Sound Transit conducted a review of existing literature and data to identify and characterize potentially affected wetlands and streams in and near the study area. Existing documentation and information were compiled and reviewed first so that the field survey efforts could focus on verifying data and filling information gaps. This information included published and unpublished reports, maps, Web sites, aerial photographs, and communication with local municipality staff familiar with wetlands and streams within the project vicinity. In addition, state and local regulations and guidance were reviewed to assist in identifying stream types and to confirm project compliance with existing laws. The data sources are listed below.

2.1.1 Agency Coordination

Sound Transit contacted the following agencies and local jurisdictions:

- Washington State Department of Transportation (WSDOT)
- Ecology
- City of Seattle
- City of Shoreline
- City of Mountlake Terrace
- City of Lynnwood

2.1.2 Maps and Existing Documentation

Sound Transit reviewed the following resources:

- National Wetlands Inventory (NWI) data (U.S. Fish and Wildlife Service [USFWS])
- Natural Resources Conservation Service (NRCS) Soil Survey maps
- Priority Habitats and Species (PHS) data (Washington Department of Fish and Wildlife [WDFW])
- SalmonScape fish data and maps (WDFW)
- StreamNet data and maps (StreamNet 2012)
- City of Seattle *State of the Waters 2007* report (City of Seattle 2007)
- Basin characterization reports of Thornton Creek and West Lake Washington (Tetra Tech/KCM 2004a) and McAleer Creek and Lyon Creek (Tetra Tech/KCM 2004b)

- Stream habitat analysis for the City of Lynnwood (Jones and Stokes 2000)
- *Swamp Creek Drainage Needs Report*, including Scriber Creek Subbasin (Snohomish County 2002)
- *Salmon and Steelhead Habitat Limiting Factors Report for the Cedar-Sammamish Basin* (Kerwin 2001)
- Washington State Department of Natural Resources (DNR) Natural Heritage Program database
- *A Catalog of Washington Streams and Salmon Utilization, Volume 1, Puget Sound Region* (Williams et al. 1975)
- Critical area maps from local jurisdictions (Cities of Seattle, Shoreline, Mountlake Terrace, Lynnwood, King County, and Snohomish County)
- Existing digital geographic information system (GIS) data from the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood.
- *Sound Transit 2 Mitigation: Impact Summary and Analysis Memorandum* (ESA Adolfson 2010) and associated GIS data
- Aerial photography of the project corridor (including the King County aerial photography database or Google Earth database)
- Regulatory compliance documents, such as the *North Link Light Rail Transit Project Final Supplemental Environmental Impact Statement* (Sound Transit 2006), critical area studies, wetland delineation reports, and stream studies by other agencies or consulting firms, as available

2.2 Field Surveys

Following the review of existing documentation and information, Sound Transit conducted detailed field surveys to identify wetlands and streams that could be affected by any of the project alternatives. Surveys were conducted in two phases. During the Draft EIS phase, surveys were conducted to identify, map, and describe wetlands and streams within the field reconnaissance survey area, defined as public rights-of-way within the study area administered by the WSDOT or other public agencies. In preparation for the field reconnaissance surveys, a set of maps was developed showing data from local jurisdiction critical area maps, the NWI, and the *Sound Transit 2 Mitigation: Impact Summary and Analysis Memorandum* (ESA Adolfson 2010). Existing data and the study area boundary were overlain on aerial photographs at a scale of 1:24,000 (1 inch = 200 feet). Field reconnaissance surveys were performed between March 9 and July 23, 2012 (Attachment A) but wetland boundary delineations were not conducted during this phase. Instead, wetland boundaries were estimated in the field and mapped using a global positioning system (GPS); GPS data were then incorporated into the project GIS. Additional information about field reconnaissance surveys is provided in the *Lynnwood Link Extension Wetland Identification and Survey Technical Report* prepared for the Draft EIS (Sound Transit 2013).

During the Final EIS phase, wetland delineations and delineations of stream ordinary high water mark (OHWM) were performed in all properties for which rights of entry could be obtained along the Preferred Alternative alignment (approximately 100 feet on each side beyond the construction

limits for the Preferred Alternative; this area is referred to as the delineation survey area in this report). Some wetlands could not be accessed because right of entry was not granted. Delineation surveys were conducted between July 2013 and July 2014 (Attachment A). The purpose of the delineation surveys was to refine resource boundaries and update information for the Final EIS. Data from the delineation surveys were used to amend the data collected during the 2012 field reconnaissance surveys.

Wetlands, streams, and portions of these features where rights of entry could not be obtained within the study area were identified based on visual observation from public areas during field surveys; current local, state, and federal wetland maps; critical area reports; and aerial photographs. These features were identified as potential wetlands or potential streams and incorporated into the GIS database. Ground-truthing and field data collection were not conducted on properties where no rights of entry could be obtained.

Photographs of wetlands visited during the field reconnaissance or delineation surveys are presented in Attachment B.

2.3 Wetland Identification and Classification

2.3.1 Wetland Identification

Vegetation, soil, and hydrology conditions within the field reconnaissance and delineation survey areas were documented as necessary at representative locations (sample plots) using methods outlined in the U.S. Army Corps of Engineers (Corps) *Wetland Delineation Manual* (Corps 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0* (Corps 2010). These sample plots were identified in the field with labeled flagging and locations were recorded with a GPS unit or professional survey equipment. Both wetland and upland sample plots were documented. Wetland determination data forms were developed for all wetlands within the WSDOT, other public rights-of-way, and on properties where rights of entry were obtained. Observations of existing conditions and characteristics were recorded for each wetland and associated buffer. Data were collected at representative sample plots within each USFWS class, with a paired upland sample plot (except for Wetland WSE6 where the adjacent upland consisted of roadway and compacted fill).

During the reconnaissance phase for the Draft EIS, wetland boundaries were estimated and mapped using GPS. Wetlands that extend beyond the field reconnaissance survey area and other potential wetlands outside of the WSDOT or other public rights-of-way were also incorporated into the GIS database for analysis in the EIS. These wetland boundaries were added to the project GIS database by adding existing GIS layers or estimating and digitizing boundaries.

During the delineation phase for the Preferred Alternative, project biologists flagged wetland boundaries within the delineation survey area where rights of entry were obtained, which professional land surveyors then surveyed. Within portions of the field reconnaissance areas outside of the delineation area, boundaries were estimated and mapped using GPS. All wetlands on

properties where rights of entry were obtained within 100 feet of the Preferred Alternative were delineated and rated to support permitting with federal, state, and local agencies.

Each wetland identified in the study area received a unique identifier that is tracked in the project GIS database. Wetlands were named based on whether they were field-identified wetlands (W) or not field-identified/potential wetlands (PW); the city in which they are located (Seattle = SE, Shoreline = SH, Mountlake Terrace = MT, Lynnwood = LY); and the order they were encountered in the field (1, 2, 3, etc.). For example, Wetland WSE2 is the second field-identified wetland in Seattle. The field reconnaissance was conducted generally from south to north through the study area.

2.3.1.1 Hydrology

The project area was examined for evidence of hydrology. An area is considered to have wetland hydrology when soils are ponded or saturated consecutively 12.5 percent of the growing season. In King County (Seattle and Shoreline), the growing season generally lasts from the beginning of February (February 7) to the beginning of December (December 8) for a total of 304 days (USDA NRCS 2012a), so ponding or saturation must be present for approximately 38 consecutive days. Primary indicators of hydrology include surface inundation and saturated soils. Secondary indicators of hydrology include drainage patterns, watermarks on vegetation, water-stained leaves, and oxidized root channels.

2.3.1.2 Soils

Generally, an area must have hydric soils to be considered a wetland. Hydric soil forms when soils are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper portion. Biological activities in saturated soil result in reduced concentrations of oxygen that in turn result in a preponderance of organisms that use anaerobic processes for metabolism. Over time, anaerobic biological processes result in certain soil color patterns, which are used as indicators of hydric soil. Typically, low-chroma colors are formed in the matrix of hydric soil. Bright-colored redoximorphic features form within the matrix under a fluctuating water table. Other important hydric soil indicators include organic matter accumulations in the surface horizon, reduced sulfur odors, and organic-matter staining in the subsurface. Soils were examined by excavating sample pits to a depth of 18 inches or more to observe the soil profiles, colors, and textures. Munsell color charts (Gretag Macbeth 2000) were used to describe the soil colors.

2.3.1.3 Vegetation

The dominant plants and their wetland indicator status were evaluated to determine whether the vegetation is hydrophytic. Hydrophytic vegetation is generally defined as vegetation adapted to prolonged saturated soil conditions. To meet the hydrophytic vegetation criterion, more than 50 percent of the dominant plants must be facultative, facultative wetland, or obligate, according to the plant indicator status category assigned to each plant species by the USFWS (Reed 1988, 1993). Table 2-1 provides the definitions of the indicator status categories for identifying the plant species.

Table 2-1. Key to Plant Indicator Status Categories

Plant Indicator Status Category	Symbol	Definition
Obligate Wetland Plants	OBL	Plants that almost always (>99% of the time) occur in wetlands but may rarely (<1% of the time) occur in non-wetlands
Facultative Wetland Plants	FACW	Plants that often (67% to 99% of the time) occur in wetlands but sometimes (1% to 33% of the time) occur in non-wetlands
Facultative Plants	FAC	Plants with a similar likelihood (33% to 66% of the time) of occurring in both wetlands and non-wetlands
Facultative Upland Plants	FACU	Plants that sometimes (1% to 33% of the time) occur in wetlands but occur more often (67% to 99% of the time) in non-wetlands
Upland Plants	UPL	Plants that rarely (<1% of the time) occur in wetlands and almost always (> 99% of the time) occur in non-wetlands

Source: Corps (1987).

The scientific and common names for plants follow the currently accepted nomenclature. Most of the names are consistent with *Plants of the Pacific Northwest Coast* (Pojar and MacKinnon 1994) and the PLANTS Database (USDA NRCS 2012b). During the field investigations by project biologists, dominant plant species were observed and recorded on field data sheets for each data plot (Attachment C).

2.3.2 Wetland Classification and Rating

Wetlands were classified according to the USFWS *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). Hydrogeomorphic classifications were assigned to wetlands using the Corps methods established in *A Hydrogeomorphic Classification System for Wetlands* (Brinson 1993). Wetlands were rated according to critical areas ordinances of local jurisdictions and the *Washington State Wetland Rating System for Western Washington – Revised* (Hruby 2004) (Attachment D). Buffer widths were assigned to wetlands based on local jurisdiction requirements (Table 2-2).

2.3.3 Wetland Functional Assessment

Functions of delineated wetlands were assessed using the Washington State Department of Transportation (WSDOT) *Wetland Functions Characterization Tool for Linear Projects* (Null et al. 2000). This is a qualitative tool designed for linear projects to enable the rapid documentation and characterization of functions and values of a particular wetland. This method allows evaluation of wetland functions using best professional judgment and readily observed environmental characteristics. For example, an area of permanent open water is characteristic of a wetland that provides habitat for waterfowl or aquatic animals. The upland habitats and buffers surrounding wetlands were also considered in the evaluation because adjacent land uses affect the performance of wetland functions. Biologists reviewed the indicator characteristics present for each affected wetland and assigned a summary rating of low, moderate, or high for each wetland function (Attachment E). Table 2-3 lists the wetland functions and values evaluated.

Table 2-2. Wetland Categories and Buffer Requirements for Wetlands Located in the Lynnwood Link Extension Study Area

Local Rating System	Wetland Category/Type	Required Buffer Width (feet)
City of Seattle[a]	I	100-200
	II	100-200
	III	60-85
	IV	No buffer-50
City of Shoreline[b]	I	150
	II	115
	III	65
	IV	35
City of Mountlake Terrace[c]	I	300
	II	100
	III	65
	IV	50
City of Lynnwood[d]	I	110
	II	110
	III	75
	IV	40

[a] Based on Seattle Municipal Code 25.09.160.A and 25.09.160.C (buffer widths determined by habitat function scores). Only applicable to development on publicly or privately owned parcels.

[b] Based on Shoreline Municipal Code 20.80.320 and 20.80.330 (standard buffer widths shown)

[c] Based on Mountlake Terrace Municipal Code 16.15.080 and 16.15.090

[d] Based on Lynnwood Municipal Code 17.10.050 and 17.10.051 (standard buffer widths shown)

Table 2-3. Wetland Functions and Values Assessed

Flood Flow Alteration	Habitat for Amphibians
Sediment Removal	Habitat for Wetland-Associated Mammals
Nutrient and Toxicant Removal	Habitat for Wetland-Associated Birds
Erosion Control and Shoreline Stabilization	General Fish Habitat
Production of Organic Matter and its Export	Native Plant Richness
General Habitat Suitability	Educational or Scientific Value
Habitat for Aquatic Invertebrates	Uniqueness and Heritage

2.4 Stream Identification and Classification

2.4.1 Stream Identification

Streams were identified through existing maps and documents, communication with local municipality staff, and field surveys. State and local regulations and guidance were reviewed to assist in identifying stream types and to confirm project compliance with existing laws.

During the reconnaissance phase for the Draft EIS, stream OHWMs were estimated and mapped using GPS. Streams that extend beyond the field reconnaissance survey area and other previously mapped streams outside of the WSDOT or other public rights-of-way were also incorporated into the GIS database.

During the delineation phase for the Preferred Alternative, project biologists flagged stream OHWMs within the delineation survey area, which professional land surveyors then surveyed. Segments of streams outside the delineation survey area but within the field reconnaissance survey area were estimated and mapped using GPS. Rights of entry were obtained for all stream segments in the delineation survey area, so the OHWMs of all streams that may be affected by construction of the Preferred Alternative were delineated. Final stream classification determinations, in accordance with local jurisdictions' critical areas ordinances, will be made during the permitting phase of this project.

Each stream identified in the study area received a unique identifier that is tracked in the project GIS database. Each stream without a formal name was assigned an alphanumeric code based on the city in which it is located (Seattle = SE, Shoreline = SH, Mountlake Terrace = MT, Lynnwood = LY) and the order in which it was encountered in the field (1, 2, 3, etc.). For example, Stream SSH2 is the second field-identified stream in Shoreline.

2.4.2 Stream Classification

Streams in the study area were assigned preliminary classifications based on the systems used by the Cities of Seattle[1], Shoreline, Mountlake Terrace, and Lynnwood, respectively. Each of these stream classification systems classifies and assigns protective buffers to streams based on the presence of fish and whether water flow is perennial or seasonal. Each system is hierarchical; that is, a stream is assigned to a particular category only if it does not meet the criteria of any higher ranking categories.

Identification and classification of streams in this report represent conservative estimates, based on available information and the regulations governing local critical areas. Some of the watercourses identified in this analysis may not actually be defined as streams by the local jurisdictions, or they may be assigned smaller buffers.

The categories of the City of Seattle classification system (Seattle Municipal Code 25.09.020) are as follows:

- **Type 1:** Waters inventoried as "shorelines of the state" under Revised Code of Washington (RCW) Chapter 90.58, but not including periodically inundated areas of their associated wetlands
- **Type 2:** Segments of natural waters that have high value to fish for spawning, rearing, or migration (i.e., having a defined channel width of at least 20 feet and a gradient less than 4 percent), or that are used for off-channel habitat
- **Type 3:** Segments of natural waters that have moderate to slight value to fish for spawning, rearing, or migration (i.e., having a defined channel width of at least 2 feet and a gradient less than 16 percent)
- **Type 4:** Segments of natural waters with perennial flow, lacking fish habitat
- **Type 5:** Segments of natural waters with seasonal flow only, lacking fish habitat

[1] Only applicable to development on publicly or privately owned parcels.

The categories of the City of Shoreline classification system (Shoreline Municipal Code 20.80.470) are as follows:

- **Type I:** Streams identified as "shorelines of the state" under the City's Shoreline Master Program
- **Type II:** Streams that are used by or that have habitat value for salmonids
- **Type III:** Streams with a channel width of at least 2 feet that are not used by salmonids
- **Type IV:** Streams with a channel width less than 2 feet that are not used by salmonids
- **Piped stream segments:** Segments of streams, regardless of their type, that are fully enclosed in an underground pipe or culvert

The categories of the City of Mountlake Terrace classification system (Mountlake Terrace Municipal Code 16.15.080) are as follows:

- **Class I:** Natural streams identified as "shorelines of the state" under the City's Shoreline Master Program
- **Class II:** Natural streams that have documented or significant potential for anadromous fish use
- **Class III:** Natural streams that are not used by anadromous fish
- **Class IV:** Natural streams with a channel width less than 2 feet that are not used by salmonid fish
- **Class V:** Natural streams that are seasonal and do not contain fish

The categories of the City of Lynnwood classification system (Lynnwood Municipal Code 17.10.060) are as follows:

- **Category I:** Scriber Creek, Swamp Creek, Lunds Creek, and Halls Creek
- **Category II:** Streams that flow year-round or that are used by salmonids
- **Category III:** Streams that are naturally intermittent and are not used by salmonids

Cities have jurisdiction over stream buffers, which are regulated through each City's Critical Areas Ordinance. Table 2-4 lists the stream buffer widths for the various stream classifications. The distances presented below are minimum requirements; wider buffers may be required in response to site-specific conditions (e.g., the presence of fish species listed as endangered or threatened under the Endangered Species Act) or the type and intensity of proposed uses.

Table 2-4. Minimum Buffer Requirements for Streams in the Study Area by Local Jurisdiction

Jurisdiction	Stream Classification	Buffer Requirement (feet)
City of Seattle[a]	Type 1	100 feet
	Type 2/3 – anadromous fish	75 feet
	Type 2/3 – no anadromous fish	50 feet
	Type 4	50 feet
	Type 5	50 feet
City of Shoreline[b]	Type I	115 feet
	Type II	75 feet
	Type III	35 feet
	Type IV	25 feet
	Piped	10 feet
City of Mountlake Terrace[c]	Class I	150 feet
	Class II	100 feet
	Class III	65 feet
	Class IV	50 feet
	Class V	Based on review
City of Lynnwood[d]	Category I	100 feet
	Category II	60 feet
	Category III	35 feet

[a] Seattle Municipal Code 25.09.020 (D5) and 25.09.200.A.3.d.1. Only applicable to development on publicly or privately owned parcels.

[b] Shoreline Municipal Code 20.80.470 and 20.80.480

[c] Mountlake Terrace Municipal Code 16.15.080 and 16.15.090

[d] Lynnwood Municipal Code 17.10.060 and 17.10.061

3 RESULTS

3.1 Wetlands

Sound Transit identified 37 wetlands in the study area (Figures 3-1a, 3-1b, and 3-1c; Attachment F). Table 3-1 summarizes classification and rating information for the delineated and other field-identified wetlands in the study area. Potential wetlands outside of public rights-of-way and more than 100 feet from the footprint of the Preferred Alternative were identified via existing documentation and public vantage points (Table 3-2). These potential wetlands include portions of field-identified wetlands that extend beyond the field reconnaissance survey area, as well as areas that appear to meet the wetland criteria that fall entirely outside of this survey area, but could not be ground-truthed. One of the field-identified wetlands (Wetland WSH1) is associated with a ditched swale. Additional sites were investigated but were dropped from analysis after determining that they were constructed stormwater ponds, not wetlands. Of the field-identified wetlands, 1 is rated as Category II according to the Ecology rating system, 23 are rated as Category III, and 4 are rated as Category IV according to the *Washington State Wetland Rating System for Western Washington – Revised* (Hruby 2004). The majority of wetlands are smaller than 0.5 acre, except Wetlands WSE8 (0.66 acre), WMT6 (1.12 acres), and WLY4 (16.54 acres). Existing conditions of field-identified wetlands are described below, organized by local jurisdiction.

Table 3-1. Summary of Field-Identified Wetlands within the Lynnwood Link Extension Study Area

Wetland[a]	Size (acres)	USFWS Class[b]	HGM Class[c]	Ecology Rating[d]	Local Rating[e]	Buffer Width[f] (feet)
WSE1	0.42	PFO	Riv	III	III	60
WSE3	0.05	PEM	Dep	III	III	60
WSE4	0.12	PFO	Dep	III	III	60
WSE5	0.26	PFO	Dep	III	III	60
WSE6	0.08	PSS	Dep	III	III	60
WSE7	0.19	PSS, PEM	Dep	III	III	60
WSE8	0.66	PFO, PSS	Dep	III	III	60
WSH1	0.06	PEM	Dep	IV	III	65
WSH2	0.37	PFO, PEM	Dep	III	III	65
WSH3	0.09	PEM	Dep	III	III	65
WSH4	0.10	PFO, PEM	Dep	III	III	65
WSH5	0.48	PFO	Dep	III	III	65
WMT1	0.49	PFO	Dep	III	III	65
WMT2	0.17	PFO	Riv, Slope	III	III	65
WMT3	0.07	PFO	Dep	III	III	65
WMT4	0.43	PSS	Dep	III	III	65
WMT5	0.34	PFO, PEM	Dep	III	III	65
WMT6	1.12	PFO	Dep	III	III	65
WMT7	0.42	PFO	Dep	III	III	65

Table 3-1. Summary of Field-Identified Wetlands within the Lynnwood Link Extension Study Area

Wetland[a]	Size (acres)	USFWS Class[b]	HGM Class[c]	Ecology Rating[d]	Local Rating[e]	Buffer Width[f] (feet)
WMT8	0.01	PFO	Slope	IV	IV	50
WMT9	0.03	PEM	Dep	IV	IV	50
WMT10	0.03	PSS	Dep	IV	IV	50
WMT11	0.07	PSS	Dep	III	III	65
WLY3	0.26	PSS, PEM, PUB	Dep	III	III	75
WLY4	16.54	PFO, PSS, PEM	Riv, Dep	II	II	110
WLY6	0.04	PFO	Dep	III	III	75
WLY7	0.15	PSS	Dep	III	III	75
WLY8	0.08	PEM	Dep	III	III	75

[a] Wetlands are identified with alphanumeric codes: WYYn. W stands for wetland; YY = two-letter code for local jurisdiction (SE = Seattle, SH = Shoreline, MT = Mountlake Terrace, LY = Lynnwood); n = sequential identification number.

[b] Cowardin et al. (1979). USFWS = U.S. Fish and Wildlife Service. PEM = palustrine emergent; PFO = palustrine forested; PSS = palustrine scrub-shrub

[c] Brinson (1993). HGM = Hydrogeomorphic; Dep = Depressional; Riv = Riverine

[d] Hruby (2004)

[e] Seattle Municipal Code 25.09.160.A, only applicable to development on publicly or privately owned parcels (Wetlands WSE1, WSE3-WSE8), Shoreline Municipal Code 20.80.320 (Wetlands WSH1-WSH5), Mountlake Terrace Municipal Code 16.15.080 (Wetlands WMT1-WMT8), Lynnwood Municipal Code 17.10.050 (WLY3, WLY4, and WLY6-WLY8)

[f] Seattle Municipal Code 25.09.160.C, only applicable to development on publicly or privately owned parcels (Wetlands WSE1, WSE3-WSE8), Shoreline Municipal Code 20.80.330 (Wetlands WSH1-WSH5), Mountlake Terrace Municipal Code 16.15.090 (Wetlands WMT1-WMT8), Lynnwood Municipal Code 17.10.051 (WLY3, WLY4, and WLY6-WLY8)

Table 3-2. Summary of Potential Wetlands within the Lynnwood Link Extension Study Area

Wetland[a]	Size (acres)	USFWS Class[b]	HGM Class[c]	Ecology Rating[d]	Local Rating[e]	Buffer Width[f] (feet)
PWSH3	0.10	PFO, PEM	Dep	Unknown	III	65
PWSH4	0.19	PFO	Slope	Unknown	III	65
PWSH5	0.07	PEM	Slope	Unknown	III	65
PWMT2	0.02	PFO	Dep	III	III	65
PWLY1	0.07	PSS	Dep	III	III	75
PWLY2	0.26	PFO	Dep	III	III	75
PWLY3	0.07	PEM	Dep	III	III	75
PWLY4	0.03	PFO	Dep	III	III	75
PWLY5	0.03	PUB	Dep	III	III	75

[a] Potential wetlands are identified with alphanumeric codes: PWYYn. PW stands for potential wetland; YY = two-letter code for local jurisdiction (SE = Seattle, SH = Shoreline, MT = Mountlake Terrace, LY = Lynnwood); n = sequential identification number.

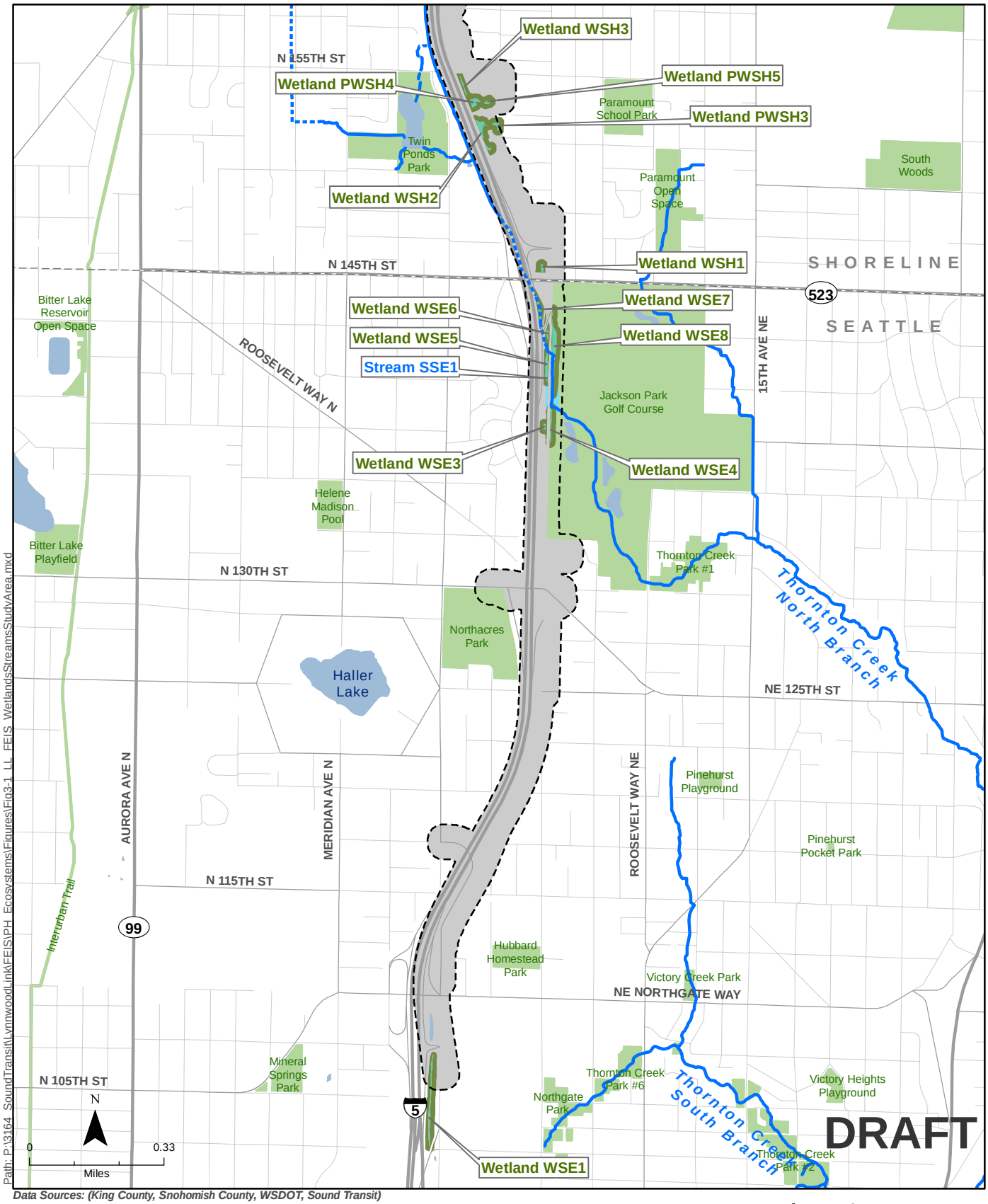
[b] Cowardin et al. (1979). USFWS = U.S. Fish and Wildlife Service. PEM = palustrine emergent; PFO = palustrine forested; PSS = palustrine scrub-shrub; PUB = palustrine unconsolidated bottom

[c] Brinson (1993). HGM = Hydrogeomorphic; Dep = Depressional; Riv = Riverine

[d] Hruby (2004). Sound Transit did not rate wetlands because they are outside of the field reconnaissance area. Ratings are based on ratings provided in existing documentation. If existing documentation did not provide a rating, then it was listed as unknown.

[e] Shoreline Municipal Code 20.80.320 (Wetlands PWSH3-PWSH5), Mountlake Terrace Municipal Code 16.15.080 (Wetland PWMT2), Lynnwood Municipal Code 17.10.050 (PWLY1-PWLY5)

[f] Shoreline Municipal Code 20.80.330 (Wetlands PWSH3-PWSH5), Mountlake Terrace Municipal Code 16.15.090 (Wetland PWMT2), Lynnwood Municipal Code 17.10.051 (PWLY1-PWLY5)



Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_Ecosystems\Figures\Fig3-1_LL_FEIS_WetlandsStreamsStudyArea.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

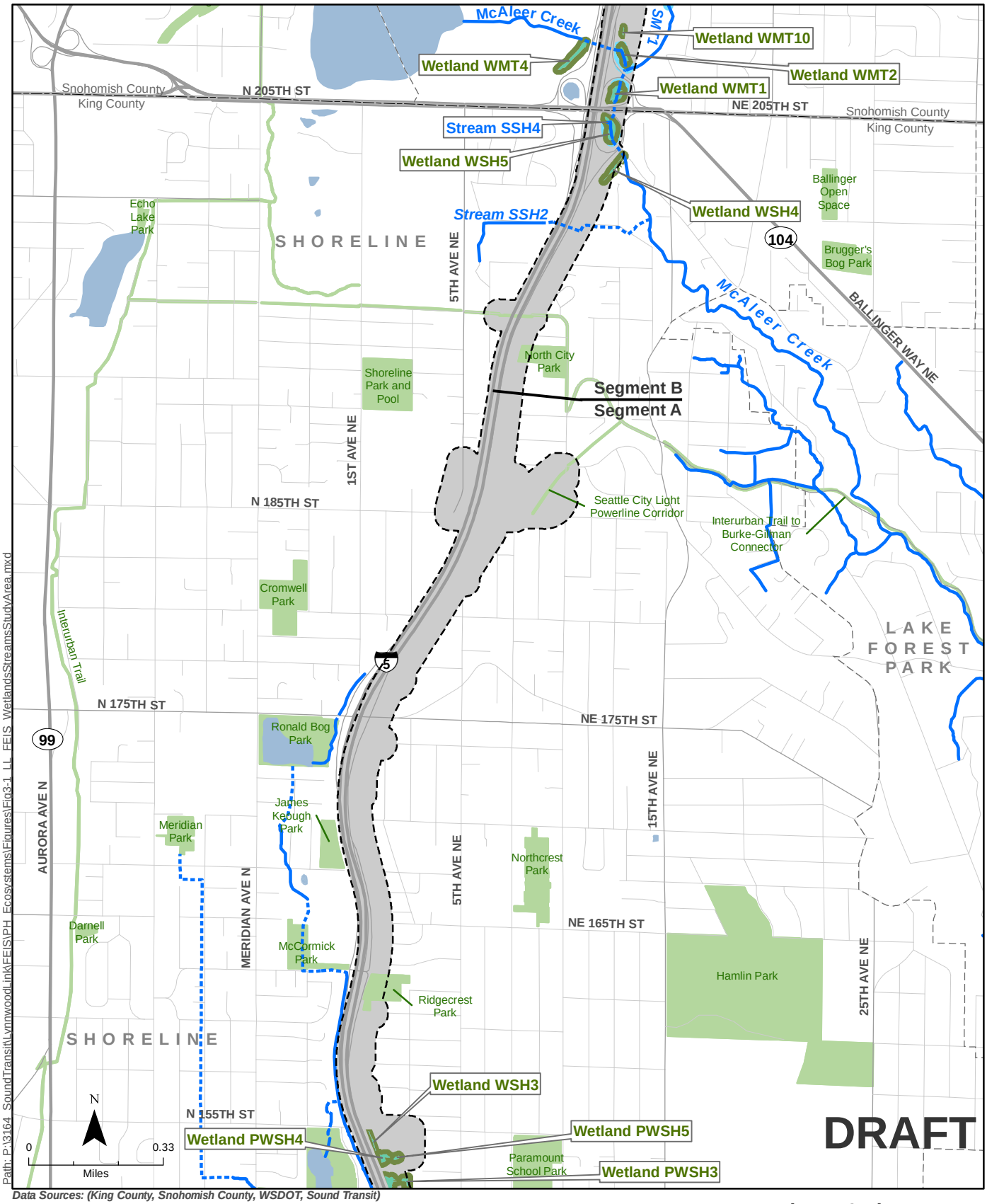
Study Area
City Boundary
County Boundary
Park

Open Stream
Piped Stream
Waterbody

Stream
Stream Buffer
Wetland
Wetland Buffer

Figure 3-1a
Wetlands and Streams
In the Study Area

Lynnwood Link Extension



Study Area
City Boundary
County Boundary
Park

Open Stream
Piped Stream
Waterbody

Stream
Stream Buffer
Wetland
Wetland Buffer

Figure 3-1b
Wetlands and Streams
In the Study Area

Lynnwood Link Extension

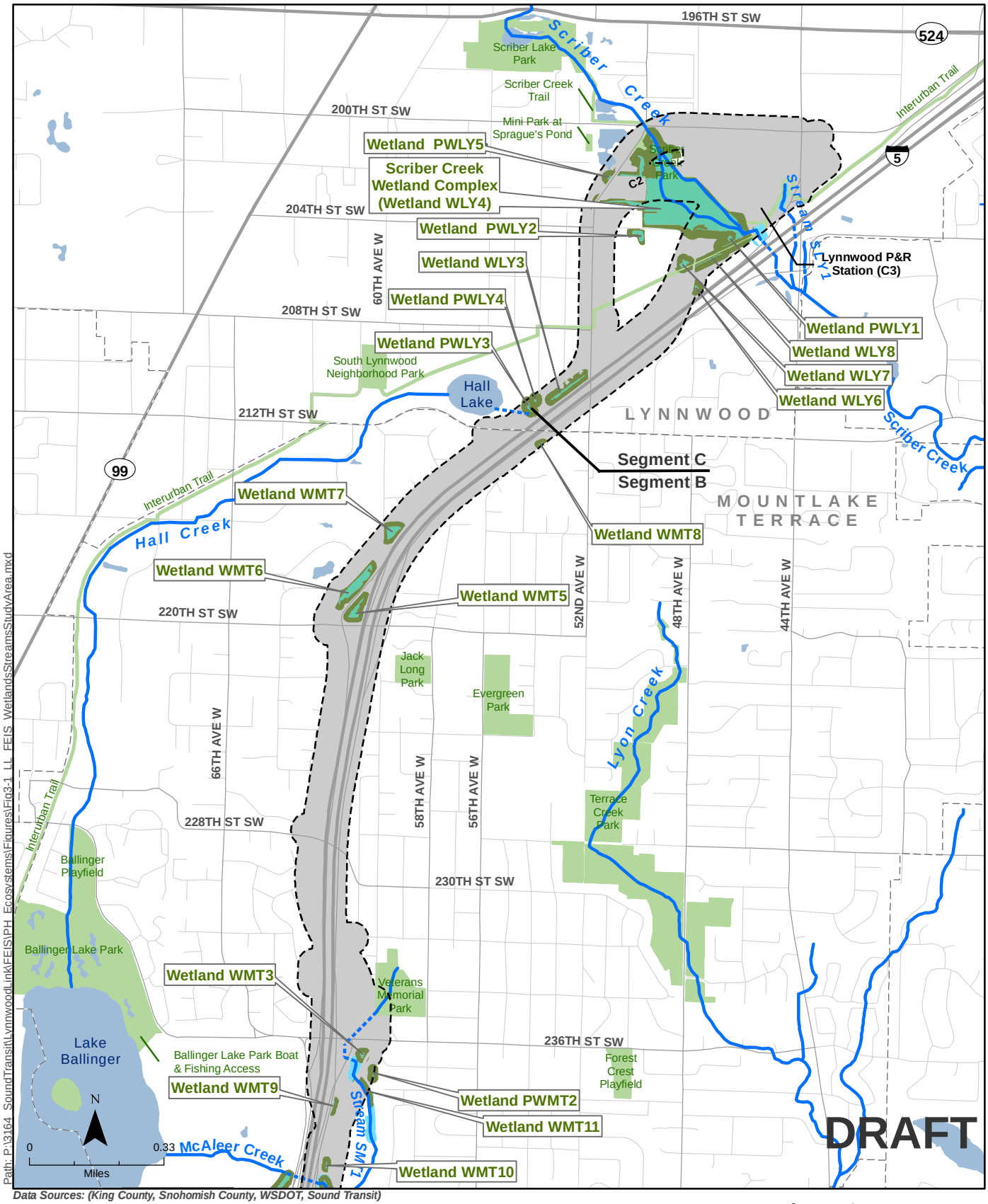


Figure 3-1c
Wetlands and Streams
In the Study Area

Lynnwood Link Extension

3.1.1 Seattle

Wetland WSE1[2]

Size: Approximately 0.42 acre

City of Seattle and Ecology Rating: Category III

USFWS Classification: Palustrine Forested

HGM Classification: Riverine

Sample Plots: WSE1-SP1 and WSE1-SP2

Wetland WSE1 is located in a linear depression east of the I-5 off-ramp, west of 1st Avenue NE, and south of NE 107th Street at Northgate, extending south of the field reconnaissance and delineation survey areas (Figure 3-1a). This wetland is part of the headwaters of the South Branch of Thornton Creek (City of Seattle 2007). Wetland WSE1 was identified as Wetland A for the Northgate Link Extension (North Link) project. Sample Plot WSE1-SP1 characterizes the wetland and Sample Plot WSE1-SP2 characterizes the adjacent upland.

Wetland hydrology is supported primarily by surface water from a stormwater pond to the north, which is conveyed via a pipe under the I-5 on-ramp and off-ramp. Two additional pipes also convey stormwater runoff from local roadways, although no water was present in these pipes during the field investigations. Saturation at the surface was observed along the perimeter of the wetland with channelized flowing water through the center. The channel is well-defined throughout the length of the wetland continuing south out of the study area. Water from this wetland flows south, then continues in stormwater pipes under NE 100th Street to the east, and ultimately into the South Branch of Thornton Creek. Water depth likely varies significantly and can change quickly.

Wetland WSE1 contains a forested community. Vegetation within the wetland is dominated by Pacific willow (*Salix lucida*), Sitka willow (*Salix sitchensis*), red-osier dogwood (*Cornus sericea*), and Himalayan blackberry (*Rubus armeniacus*). Red alder (*Alnus rubra*), watercress (*Nasturtium officinale*), climbing nightshade (*Solanum dulcamara*), giant horsetail (*Equisetum telmateia*), and bluegrass (*Poa* spp.) were also observed.

Soil was examined to a depth of 26 inches and consists of two layers. The top layer is a 5-inch very dark brown (10YR 2/2) gravelly silt loam. The lower layer is a greenish-gray (5GY 5/1) sand. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WSE1 consists of roadways and steep vegetated fill slopes. The upper slopes are generally maintained grasses and disturbance-tolerant forbs. Invasive species such as poison hemlock (*Conium maculatum*), Canadian thistle (*Cirsium arvense*), and Scotch broom (*Cytisus scoparius*) were also present. The lower slopes consist of western redcedar (*Thuja plicata*), big-leaf maple (*Acer macrophyllum),* pine (*Pinus* spp.), cascara (*Frangula purshiana*), tall Oregon grape (*Mahonia aquifolium*), western swordfern (*Polystichum munitum*), red-osier dogwood, Indian plum (*Oemleria*

[2] This wetland is in the city of Seattle within the road right-of-way (not on a publicly or privately owned parcel) and may not be subject to the City of Seattle Critical Areas Ordinance (Seattle Municipal Code 25.09).

cerasiformis), common hawthorn (*Crataegus monogyna*), red elderberry (*Sambucus racemosa*), and Himalayan blackberry. Many of these native plants may have been planted.

Wetland WSE1 is classified as palustrine forested under the USFWS system, and riverine under the hydrogeomorphic (HGM) system. Wetland WSE1 is rated Category III according to the City of Seattle (Seattle Municipal Code 25.09.160.A) and Ecology. The wetland scored 42 points on Ecology's rating form (16 points for water quality, 16 points for hydrologic functions, and 10 points for habitat functions) (Attachment D). The City of Seattle requires a standard 60-foot buffer for Category III wetlands with lower levels of habitat function (Seattle Municipal Code 25.09.160.C).

Wetland WSE3[3]

Size: Approximately 0.05 acre

City of Seattle and Ecology Rating: Category III

USFWS Classification: Palustrine Emergent

HGM Classification: Depressional

Sample Plots: WSE3-SP1, WSE3-SP2, WSE3-SP3, and WSE3-SP4

Wetland WSE3 is located east of I-5 and west of 5th Avenue NE, west of the Jackson Park Golf Course (see Figure 3-1a). The wetland is located entirely within the delineation survey area near the I-5 right-of-way fence and toe of the I-5 fill slope. Sample Plot WSE3-SP1 characterizes the wetland and Sample Plots WSE3-SP2, WSE3-SP3, and WSE3-SP4 characterize the adjacent upland.

Wetland hydrology is primarily supported by stormwater runoff from I-5. A concrete-lined ditch, situated along the east side of the wetland and adjacent to 5th Avenue NE, conveys water to Wetland WSE3 and provides an outlet where water is eventually piped under 5th Avenue NE to the North Branch of Thornton Creek. Wetland WSE3 likely also has a high groundwater table. Small areas of inundation in micro-depressions were observed, as well as saturation of soils.

Wetland WSE3 contains an emergent community dominated by reed canarygrass (*Phalaris arundinacea*). Some Himalayan blackberry and one cascara were also present.

Soil was examined to a depth of 18 inches and consists of two layers. The top layer is a 10-inch black (10YR 2/1) silt loam. The lower layer is a very dark gray (10YR 3/1) gravelly sandy loam with grayish brown (10YR 5/2) gravelly sandy loam inclusions that have yellowish brown (10YR 5/8) redoximorphic features. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The vegetated buffer surrounding Wetland WSE3 consists of a relatively narrow band between the wetland and roadways (I-5 and 5th Avenue NE). Maintained grasses and shrubs (primarily Himalayan blackberry) cover most of the buffer, with a forested area to the north. Species include red alder, ornamental maples (*Acer* sp.), western redcedar, birch (*Betula* spp.), Himalayan blackberry, common hawthorn, Scotch broom, reed canarygrass, western swordfern, and maintained grasses and forbs.

[3] This wetland is in the city of Seattle within road right-of-way (not on a publicly or privately owned parcel) and may not be subject to the City of Seattle Critical Areas Ordinance (Seattle Municipal Code 25.09).

Wetland WSE3 is classified as palustrine emergent under the USFWS system, and is a depressional wetland under the HGM system. Wetland WSE3 is rated a Category III according to the City of Seattle (Seattle Municipal Code 25.09.160.A) and Ecology. The wetland scored 32 points on Ecology's rating form (14 points for water quality, 10 points for hydrologic functions, and 8 points for habitat functions) (Attachment D). The City of Seattle requires a standard 60-foot buffer for Category III wetlands with a lower level of habitat function (Seattle Municipal Code 25.09.160.C).

Wetland WSE4[4]

Size: Approximately 0.12 acre

City of Seattle and Ecology Rating: Category III

USFWS Classification: Palustrine Forested

HGM Classification: Depressional

Sample Plots: WSE4-SP1 and WSE4-SP2

Wetland WSE4 is located in a ditch east of 5th Avenue NE and west of the Jackson Park Golf Course (see Figure 3-1a). The wetland is located entirely within the delineation survey area. Sample Plot WSE4-SP1 characterizes the wetland and Sample Plot WSE4-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by stormwater runoff and a high groundwater table. Saturation and inundation were observed in the wetland, and drainage patterns have formed as well. The wetland drains north to the North Branch of Thornton Creek.

Wetland WSE4 contains a forested community. Vegetation within the wetland includes western redcedar, Pacific willow, red alder, salmonberry (*Rubus spectabilis*), water parsley (*Oenanthe sarmentosa*), giant horsetail, and common ladyfern (*Athyrium filix-femina*). Himalayan blackberry and English ivy (*Hedera helix*) occur along the edge.

Soil was examined to a depth of 18 inches and consists of three layers. The top layer is a 5-inch black (10YR 2/1) mucky loam. The middle layer is a dark greenish gray (10Y 4/1) fine sandy loam with brown (10YR 4/3) redoximorphic features. The lower layer is a very dark gray (5Y 3/1) gravelly sandy loam. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WSE4 consists of a thin strip of shrubs immediately adjacent to the wetland, maintained road right-of-way farther to the west, Jackson Park Golf Course and Trail to the east, and shrubs with few trees to the north and south. Species include salmonberry, Himalayan blackberry, laurel (*Laurus nobilis*), and western redcedar.

Wetland WSE4 is classified as palustrine forested under the USFWS system and depressional under the HGM system. Wetland WSE4 is rated a Category III according to the City of Seattle (Seattle Municipal Code 25.09.160.A) and Ecology. The wetland scored 40 points on Ecology's rating form (14 points for water quality, 16 points for hydrologic functions, and 10 points for habitat functions)

[4] This wetland is in the city of Seattle within road right-of-way (not on a publicly or privately owned parcel) and may not be subject to the City of Seattle Critical Areas Ordinance (Seattle Municipal Code 25.09).

(Attachment D). The City of Seattle requires a standard 60-foot buffer for Category III wetlands with a lower level of habitat function (Seattle Municipal Code 25.09.160.C).

Wetland WSE5[5]

Size: Approximately 0.26 acre

City of Seattle and Ecology Rating: Category III

USFWS Classification: Palustrine Forested

HGM Classification: Depressional

Sample Plots: WSE5-SP1 and WSE5-SP2

Wetland WSE5 is located east of I-5 and west of 5th Avenue NE, west of the Jackson Park Golf Course (see Figure 3-1a). The wetland crosses the I-5 right-of-way fence, ranging from the lower portion of the I-5 fill slope down to the toe. Wetland WSE5 is located entirely within the delineation survey area. Sample Plot WSE5-SP1 characterizes the wetland and Sample Plot WSE5-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by a high groundwater table, precipitation, and occasional overbank flow from Thornton Creek. Saturation and inundation were observed in the wetland. No inlet was observed. The northern portion of the wetland drains to the North Branch of Thornton Creek and the southern portion drains to Stream SSE1, which flows to the North Branch of Thornton Creek under 5th Avenue SE.

Wetland WSE5 contains a forested community. Species within the wetland includes red alder, salmonberry, giant horsetail, common ladyfern, reed canarygrass, common rush (*Juncus effusus*), small-fruited bulrush (*Scirpus microcarpus*), climbing nightshade, bitter dock (*Rumex obtusifolius*), and Himalayan blackberry. A ponded area near the road contained American speedwell (*Veronica americana*), broadleaf cattail (*Typha latifolia*), small-fruited bulrush, northwest territory sedge (*Carex utriculata*), creeping buttercup (*Ranunculus repens*), water parsley, and twoheaded water-starwort (*Callitriche heterophylla*). A patch of Japanese knotweed (*Polygonum cuspidatum*) occurs at the south end, extending into the buffer.

Soil was examined to a depth of 19 inches and consists of one layer. The soil is a black (10YR 2/1) gravelly sandy loam with cobbles. The soil has a high concentration of organics and partially decomposed debris throughout the profile. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer is narrow, composed of vegetated fill slopes for I-5 and 5th Avenue NE. Species include red alder, Himalayan blackberry, English ivy, English holly (*Ilex aquifolium*), Douglas fir (*Pseudotsuga menziesii*), and maintained disturbance-tolerant grasses and forbs. There is no functioning buffer to the east (roadway).

Wetland WSE5 is classified as palustrine forested under the USFWS system and depressional under the HGM system. Wetland WSE5 is rated a Category III according to the City of Seattle (Seattle

[5] This wetland is in the city of Seattle within road right-of-way (not on a publicly or privately owned parcel) and may not be subject to the City of Seattle Critical Areas Ordinance (Seattle Municipal Code 25.09).

Municipal Code 25.09.160.A) and Ecology. The wetland scored 36 points on Ecology's rating form (14 points for water quality, 10 points for hydrologic functions, and 12 points for habitat functions) (Attachment D). The City of Seattle requires a standard 60-foot buffer for Category III wetlands with a lower level of habitat function (Seattle Municipal Code 25.09.160.C).

Wetland WSE6[6]

Size: Approximately 0.08 acre

City of Seattle and Ecology Rating: Category III

USFWS Classification: Palustrine Scrub-Shrub

HGM Classification: Depressional

Sample Plot: WSE6-SP1

Wetland WSE6 is a shallow, linear depression located east of the northbound I-5 off-ramp for NE 145th Street and west of 5th Avenue NE, west of the Jackson Park Golf Course (see Figure 3-1a). The wetland is located entirely within the delineation survey area. Sample Plot WSE6-SP1 characterizes the wetland.

Wetland hydrology is supported by precipitation, stormwater runoff, and a high groundwater table. There are no inlets or outlets to Wetland WSE6. Small pockets of inundation in micro-depressions and saturated soils were observed.

Wetland WSE6 contains a scrub-shrub community. Vegetation within the wetland is dominated by rose spirea (*Spiraea douglasii*) and reed canarygrass. Common ladyfern, Himalayan blackberry, red alder, and one birch are also present.

Soil was examined to a depth of 18 inches and consists of two layers. The top layer is a 9-inch black (10YR 2/1) gravelly silt loam. The lower layer is a dark grayish brown (10YR 4/2) gravelly sandy loam. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffers are narrow and composed of vegetation on the shoulders of I-5 and 5th Avenue NE. The vegetation surrounding Wetland WSE6 consists primarily of maintained disturbance-tolerant species of grasses and forbs within the I-5 right-of-way along with Himalayan blackberry and rose spirea. A small area to the south contains red alder, Douglas fir, and Himalayan blackberry.

Wetland WSE6 is classified as palustrine scrub-shrub under the USFWS system and depressional under the HGM system. Wetland WSE6 is rated a Category III according to the City of Seattle (Seattle Municipal Code 25.09.160.A) and Ecology. The wetland scored 38 points on Ecology's rating form (12 points for water quality, 18 points for hydrologic functions, and 8 points for habitat functions) (Attachment D). The City of Seattle requires a standard 60-foot buffer for Category III wetlands with a lower level of habitat function (Seattle Municipal Code 25.09.160.C).

[6] This wetland is in the city of Seattle within road right-of-way (not on a publicly or privately owned parcel) and may not be subject to the City of Seattle Critical Areas Ordinance (Seattle Municipal Code 25.09).

Wetland WSE7[7]

Size: Approximately 0.19 acre

City of Seattle and Ecology Rating: Category III

USFWS Classification: Palustrine Scrub-Shrub/Palustrine Emergent

HGM Classification: Depressional

Sample Plots: WSE7-SP1 and WSE7-SP2

Wetland WSE7 is a shallow, linear depression located east of the I-5 mainline and west of a transit off-ramp, just south of NE 145th Street (see Figure 3-1a). The wetland is located entirely within the delineation survey area. Sample Plot WSE7-SP1 characterizes the wetland and Sample Plot WSE7-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by precipitation, stormwater runoff, and a high groundwater table. There are no inlets to Wetland WSE7. A catch basin is located at the south end of the wetland providing an outlet. Areas of inundation and saturated soils were observed in the wetland.

Wetland WSE7 contains scrub-shrub and emergent communities. Vegetation within the scrub-shrub community is dominated by Himalayan blackberry with some broadleaf cattail and climbing nightshade intermixed. Vegetation within the emergent community is mostly broadleaf cattail, stalk-grain sedge (Carex stipata), common rush, and common duckweed (*Lemna minor*). Some maintained grasses and forbs, along with reed canarygrass, are also present in the emergent community.

Soil was examined to a depth of 20 inches and consists of two layers. The top layer is a 6-inch black (10YR 2/1) silt loam. The lower layer is a black (10YR 2/1) gravelly sandy loam. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WSE7 is mowed right-of-way dominated by disturbance-tolerant grasses and forbs. Some Himalayan blackberry is also growing within the buffer.

Wetland WSE7 is classified as palustrine scrub-shrub/palustrine emergent under the USFWS system and depressional under the HGM system (Brinson 1993). Wetland WSE7 is rated a Category III according to the City of Seattle (Seattle Municipal Code 25.09.160.A) and Ecology. The wetland scored 35 points on Ecology's rating form (14 points for water quality, 10 points for hydrologic functions, and 11 points for habitat functions) (Attachment D). The City of Seattle requires a standard 60-foot buffer for Category III wetlands with a lower level of habitat function (Seattle Municipal Code 25.09.160.C).

[7] This wetland is in the city of Seattle within road right-of-way (not on a publicly or privately owned parcel) and may not be subject to the City of Seattle Critical Areas Ordinance (Seattle Municipal Code 25.09).

Wetland WSE8[8]

Size: Approximately 0.66 acre

City of Seattle and Ecology Rating: Category III

USFWS Classification: Palustrine Forested/Palustrine Scrub-Shrub

HGM Classification: Depressional

Sample Plots: WSE8-SP1 and WSE8-SP2

Wetland WSE8 is located east of 5th Avenue NE and west of the Jackson Park Golf Course, extending out of the delineation survey area to the east (see Figure 3-1a). Sample Plot WSE8-SP1 characterizes the wetland and WSE8-SP2 characterizes the upland.

Wetland hydrology is supported by stormwater runoff and a high groundwater table. Flowing water, inundation, and saturated soils were observed during the site investigations. Surface water flows south in a ditch within the wetland. No inlet was apparent, but the wetland drains to the North Branch of Thornton Creek.

Wetland WSE8 contains forested and scrub-shrub communities. Vegetation within the forested community is dominated by young red alder, Sitka willow, Pacific willow, salmonberry, rose spirea, and giant horsetail. Vegetation within the scrub-shrub community is dominated by salmonberry, Himalayan blackberry, and rose spirea. Other species observed include common ladyfern, creeping buttercup, and climbing nightshade.

Soil was examined to a depth of 22 inches and consists of three layers. The top layer is a 10-inch black (10YR 2/1) very mucky loam. The middle layer is a very dark gray (10YR 3/1) very mucky loam from 10 to 20 inches. The lower layer is a very dark greenish gray (10Y 3/1) gravelly sand. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WSE8 is dominated by disturbance-tolerant species of grasses and forbs to the west within the maintained roadside and maintained grasses to the west (golf course). Unmaintained areas of the buffer consist of red alder, Himalayan blackberry, English holly, English ivy, and western swordfern.

Wetland WSE8 is classified as palustrine forested/palustrine scrub-shrub under the USFWS system, and depressional under the HGM system. Wetland WSE8 is rated a Category III according to the City of Seattle (Seattle Municipal Code 25.09.160.A) and Ecology. The wetland scored 43 points on Ecology's rating form (18 points for water quality, 10 points for hydrologic functions, and 15 points for habitat functions) (Attachment D). The City of Seattle requires a standard 60-foot buffer for Category III wetlands with a lower level of habitat function (Seattle Municipal Code 25.09.160.C).

[8] Portions of this wetland are in the city of Seattle within road right-of-way (not on a publicly or privately owned parcel) and may not be subject to the City of Seattle Critical Areas Ordinance (Seattle Municipal Code 25.09).

3.1.2 Shoreline

Wetland WSH1

Size: Approximately 0.06 acre

City of Shoreline Rating: Type III

Ecology Rating: Category IV

USFWS Classification: Palustrine Emergent

HGM Classification: Depressional

Sample Plots: WSH1-SP1 and WSH1-SP2

Wetland WSH1 is located east of I-5, north of NE 145th Street, and west of 5th Avenue NE, in a maintained area of the I-5 right-of-way (see Figure 3-1a). The western portion is connected to a ditched swale associated with I-5 stormwater conveyance and the northern portion is a grassy slope. This wetland is located entirely within the delineation survey area. Sample Plot WSH1-SP1 characterizes the wetland and Sample Plot WSH1-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by a high groundwater table and stormwater runoff. The wetland had areas inundated, saturated, and containing drainage patterns during the site investigation. The outlet of Wetland WSH1 is a catch basin located at the southeastern corner of the wetland. Stormwater flows from the ditch to the wetland along the southern boundary.

Wetland WSH1 contains an emergent community that is mostly maintained. The dominant vegetation includes maintained grasses and forbs, including common rush, colonial bentgrass (*Agrostis capillaris*), red fescue (*Festuca rubra*), tall fescue (*Schedonorus phoenix*), small-fruited bulrush, giant horsetail, field horsetail (*Equisetum arvense*), creeping buttercup, American speedwell, muskflower (*Mimulus moschatus*), watercress, white clover (*Trifolium repens*), red clover (*Trifolium pratense*), and other rush and sedge species (*Juncus* sp. and *Carex* sp.). Common cattail and Himalayan blackberry are located around the outlet and some black cottonwood (*Populus trichocarpa*) along the wetland edge.

Soil was examined to a depth of 18 inches and consists of two layers. The top layer is an 8-inch very dark gray (10YR 3/1) silt loam. The lower layer is a dark gray (2.5Y 4/1) gravelly sandy loam with light olive brown (2.5Y 5/6) redoximorphic features. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WSH1 consists primarily of maintained grass, especially to the northwest, but also includes Himalayan blackberry and giant horsetail. Himalayan blackberry is dominant to the east and overhangs the wetland boundary. Few trees are present in the buffer.

Wetland WSH1 is classified as palustrine emergent under the USFWS system and depressional under the HGM system. According to the City of Shoreline, Wetland WSH1 is rated a Type III (Shoreline Municipal Code 20.80.320). According to Ecology's wetland rating system, the wetland is rated a Category IV based on its score. The wetland scored 27 points on Ecology's rating form (10 points for water quality, 10 points for hydrologic functions, and 7 points for habitat functions) (Attachment D). The City of Shoreline requires a standard 65-foot buffer for Type III (Shoreline Municipal Code 20.80.330).

Wetland WSH2

Size: Approximately 0.37 acre

City of Shoreline Rating: Type III

Ecology Rating: Category III

USFWS Classification: Palustrine Forested/Palustrine Emergent

HGM Classification: Depressional

Sample Plots: WSH2-SP1, WSH2-SP2, WSH2-SP3, WSH2-SP4, WSH2-SP5, WSH2-SP6, and WSH2-SP7

Wetland WSH2 is located on a gentle slope and shallow depression east of I-5, straddling the highway noise wall, within the WSDOT right-of-way and on private property, in the vicinity of NE 152nd Street, extending east of the delineation survey area (see Figure 3-1a). Sample Plots WSH2-SP1, WSH2-SP3, WSH2-SP5, and WSH2-SP7 characterize the wetland and Sample Plot WSH2-SP2, WSH2-SP4, and WSH2-SP6 characterize the adjacent upland.

Wetland hydrology is supported by a high groundwater table and some drainage from residences outside of the field survey area to the east. The wetland was saturated and inundated during the site investigations and drainage patterns were visible. Water flows to the west into a ditch along I-5.

Wetland WSH2 contains forested and emergent communities. Vegetation within the wetland is primarily maintained grasses and forbs, as well as common rush, small-fruited bulrush, reed canarygrass, and creeping buttercup. A large weeping willow (*Salix babylonica*) with Himalayan blackberry and salmonberry comprise a forested area to the southeast.

At Sample Plot WSH2-SP1, soil was examined to a depth of 20 inches and consists of two layers. The top layer is an 11-inch very dark brown (10YR 2/2) gravelly sandy loam with very dark brown (7.5YR 2.5/3) and dark reddish brown (5YR 3/4) redoximorphic features. The lower layer is a dark grayish brown (10YR 4/2) compacted silt loam. At Sample Plot WSH2-SP3, soil was examined to a depth of 18 inches and consists of two layers. The top layer is a 15-inch black (10YR 2/1) silt loam, and the lower layer is a loam with a matrix consisting of two colors—very dark brown (10YR 2/2) and gray (10YR 5/1). At Sample Plot WSH2-SP5, soil was examined to a depth of 18 inches and consists of three layers. The top layer is a 6-inch very dark grayish brown (10YR 3/2) gravelly sandy loam. The middle layer is a grayish brown (2.5Y 5/2) gravelly sandy loam with dark brown (7.5YR 3/4) redoximorphic features. The lower layer is a gray (2.5Y 5/1) gravelly sandy loam with strong brown (7.5YR 4/6) redoximorphic features.

At Sample Plot WSH2-SP7, soil was examined to a depth of 17 inches and consists of three layers over a hard pan. The top layer is an 8-inch very dark grayish brown (10YR 3/2) gravelly sandy loam. The middle layer is a very dark grayish brown (10YR 3/2) gravelly sandy loam with dark brown (7.5YR 3/4) redoximorphic features. The lower layer is a black (10YR 2/1) gravelly sandy loam with dark yellowish brown (10YR 4/6) redoximorphic features. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The vegetated buffer surrounding Wetland WSH2 consists primarily of maintained grasses and forbs in the I-5 right-of-way and on private property. Structures with yards are present to the east. There

are some trees (including western redcedar) in the southern buffer, with an understory of Himalayan blackberry, laurel, and climbing nightshade.

Wetland WSH2 is classified as palustrine forested/palustrine emergent under the USFWS system, and depressional under the HGM system. According to the City of Shoreline, Wetland WSH2 is rated a Type III (Shoreline Municipal Code 20.80.320). According to Ecology's wetland rating system, the wetland is rated a Category III based on its score. The wetland scored 34 points on Ecology's rating form (6 points for water quality, 20 points for hydrologic functions, and 8 points for habitat functions) (Attachment D). The City of Shoreline requires a standard 65-foot buffer for Type III wetlands (Shoreline Municipal Code 20.80.330).

Wetland WSH3

Size: Approximately 0.09 acre

City of Shoreline Rating: Type III

Ecology Rating: Category III

USFWS Classification: Palustrine Emergent

HGM Classification: Depressional

Sample Plots: WSH3-SP1 and WSH3-SP2

Wetland WSH3 is located east of I-5, just south of NE 155th Street, and west of the fire station (see Figure 3-1a). This wetland is primarily in a linear depression, located entirely within the delineation survey area. Sample Plot WSH3-SP1 characterizes the wetland and Sample Plot WSH3-SP2 characterizes the adjacent upland.

Wetland hydrology is primarily supported by shallow groundwater and precipitation; however, surface runoff from the fire station parking lot may also contribute to the hydrology. The wetland drains south to a ditch within the I-5 right-of-way. Inundation and saturated soils were observed during the field investigation.

Wetland WSH3 contains an emergent community. Vegetation within the wetland is dominated by reed canarygrass, but also includes one western redcedar, some Himalayan blackberry, giant horsetail, and climbing nightshade.

Soil was examined to a depth of 19 inches and consists of two layers. The top layer is a 5-inch dark grayish brown (10YR 4/2) gravelly sandy loam. The lower layer is a dark grayish brown (10YR 4/2) gravelly sandy loam with cobbles and strong brown (7.5YR 4/6) redoximorphic features. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WSH3 consists of a narrow slope dominated by reed canarygrass and Himalayan blackberry to the north and south. The buffer to the west is the I-5 fill slope, dominated by Himalayan blackberry, a row of Douglas fir trees, and maintained grasses. To the east there is a narrow row of ornamental trees along the edge of the parking lot of the fire station.

Wetland WSH3 is classified as palustrine emergent under the USFWS system and depressional under the HGM system. According to the City of Shoreline, Wetland WSH3 is rated a Type III (Shoreline Municipal Code 20.80.320). According to Ecology's wetland rating system, the wetland is rated a

Category III based on its score. The wetland scored 35 points on Ecology's rating form (14 points for water quality, 16 points for hydrologic functions, and 5 points for habitat functions) (Attachment D). The City of Shoreline requires a standard 65-foot buffer for Type III wetlands (Shoreline Municipal Code 20.80.330).

Wetland WSH4

Size: Approximately 0.10 acre

City of Shoreline Rating: Type III

Ecology Rating: Category III

USFWS Classification: Palustrine Forested/Palustrine Emergent

HGM Classification: Depressional

Sample Plots: WSH4-SP1, WSH4-SP2, and WSH4-SP3

Wetland WSH4 is located east of the I-5 off-ramp to State Route (SR) 104 and west of Forest Park Drive NE, extending northeast of the field reconnaissance and delineation survey areas (see Figure 3-1b). This linear wetland is near the I-5 right-of-way fence, ranging from the lower portion of the I-5 fill slope down to the toe. Sample Plots WSH4-SP1 and WSH4-SP3 characterize the wetland and Sample Plot WSH4-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by a high groundwater table and seeps. The seeps are located along the northwest boundary of the wetland. No specific inlet was observed. Water flows to the northeast in a swale at the edge of the I-5 right-of-way, draining to McAleer Creek. Inundation and saturated soils were observed during the field investigation.

Wetland WSH4 contains forested and emergent communities. Vegetation within the forested community includes red alder, salmonberry, twinberry honeysuckle (*Lonicera involucrata*), reed canarygrass, common ladyfern, fowl mannagrass (*Glyceria striata*), creeping buttercup, Himalayan blackberry, and giant horsetail. The vegetation within the emergent community includes giant horsetail, common ladyfern, Himalayan blackberry, American speedwell, fringed willowherb (*Epilobium ciliatum*), common duckweed, and twoheaded water-starwort.

At Sample Plot WSH4-SP1, soil was examined to a depth of 20 inches and consists of two layers. The top layer is a 17-inch black (10YR 2/1) silt loam with organics. The lower layer is a very dark gray (10YR 3/1) and dark grayish brown (10YR 4/2) very sandy loam with gravel and cobbles. At Sample Plot WSH4-SP3, soil was examined to a depth of 20 inches and consists of two layers. The top layer is a 15-inch black (10YR 2/1) silt loam with organics. The lower layer is a black (10YR 2/1) and dark grayish brown (10YR 4/2) gravelly sandy loam with cobbles. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer on the slope, north and west of Wetland WSH4, consists of Douglas fir, Himalayan blackberry, and Indian plum. The buffer consists of maintained residential yards, roads, and driveways to the south and east.

Wetland WSH4 is classified as palustrine forested/palustrine emergent under the USFWS system and depressional under the HGM system. According to the City of Shoreline, Wetland WSH4 is

rated a Type III (Shoreline Municipal Code 20.80.320). According to Ecology's wetland rating system, the wetland is rated a Category III based on its score. The wetland scored 37 points on Ecology's rating form (14 points for water quality, 10 points for hydrologic functions, and 13 points for habitat functions) (Attachment D). The City of Shoreline requires a standard 65-foot buffer for Type III wetlands (Shoreline Municipal Code 20.80.330).

Wetland WSH5

Size: Approximately 0.48 acre

City of Shoreline Rating: Type III

Ecology Rating: Category III

USFWS Classification: Palustrine Forested

HGM Classification: Depressional

Sample Plots: WSH5-SP1 and WSH5-SP2

Wetland WSH5 is in a deep depression associated with McAleer Creek, surrounded by roadway fill slopes. It is located entirely within the delineation survey area east of I-5 inside the northbound on-ramp cloverleaf south of SR 104 (see Figure 3-1b). Sample Plot WSH5-SP1 characterizes the wetland and Sample Plot WSH5-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by McAleer Creek, stormwater drainages, and a shallow groundwater table. Seeps and drainage patterns were also observed along the slopes of the wetland. The primary inlet and outlet are large culverts associated with McAleer Creek. Both the wetland and stream drain to the south.

Wetland WSH5 contains a forested community. Vegetation within the wetland includes red alder, black cottonwood, birch, rose spirea, Scouler's willow (*Salix scouleriana*), salmonberry, twinberry honeysuckle, reed canarygrass, small-fruited bulrush, giant horsetail, creeping buttercup, common ladyfern, coastal hedgenettle (*Stachys chamissonis*), climbing nightshade, and fringed willowherb.

Soil was examined to a depth of 18 inches and consists of two layers. The top layer is a 10-inch very dark grayish brown (10YR 3/2) sandy loam. The lower layer is a very dark greenish gray (10Y 3/1) gravelly sand with dark yellowish brown (10YR 4/6) redoximorphic features. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WSH5 consists of coniferous and deciduous trees. Species include Douglas fir, black cottonwood, red alder, western redcedar, ornamental maple, and ornamental cherry (*Prunus* sp.) Understory vegetation consists of Himalayan blackberry, rose spirea, Indian plum, English holly, trailing blackberry (*Rubus ursinus*), western swordfern, giant horsetail, and English ivy. Additionally, a narrow band of maintained herbaceous vegetation, including tick quackgrass (*Thinopyrum pycnanthum*), is located near the roadways.

Wetland WSH5 is classified as palustrine forested under the USFWS system and depressional under the HGM system. According to the City of Shoreline, Wetland WSH5 is rated a Type III (Shoreline Municipal Code 20.80.320). According to Ecology's wetland rating system, the wetland is rated a Category III based on its score. The wetland scored 33 points on Ecology's rating form (12 points for

water quality, 6 points for hydrologic functions, and 15 points for habitat functions) (Attachment D). The City of Shoreline requires a standard 65-foot buffer for Type III wetlands (Shoreline Municipal Code 20.80.330).

3.1.3 Mountlake Terrace

Wetland WMT1

Size: Approximately 0.49 acre

City of Mountlake Terrace and Ecology Rating: Category III

USFWS Classification: Palustrine Forested

HGM Classification: Depressional

Sample Plots: WMT1-SP1 and WMT1-SP2

Wetland WMT1 is in a deep depression associated with McAleer Creek surrounded by roadway fill slopes. It is located entirely within the delineation survey area east of I-5 inside of the cloverleaf northbound off-ramp, north of SR 104 (see Figure 3-1b). Sample Plot WMT1-SP1 characterizes the wetland and Sample Plot WMT1-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by McAleer Creek, stormwater runoff, a shallow groundwater table, and seeps. Saturation at the surface was commonly observed throughout the wetland, especially near the base of slopes. The wetland also contains inundated micro-depressions and drainage channels. Large amounts of stormwater were observed flowing from a pipe southwest of the wetland, down a rock-lined channel through Wetland WMT1 to McAleer Creek. The primary inlet and outlet are large culverts associated with McAleer Creek. The stream channel is well-defined throughout most of the wetland. The wetland drains to McAleer Creek, which flows to the south (to Wetland WSH5).

Wetland WMT1 contains a forested community dominated by red alder, black cottonwood, salmonberry, Himalayan blackberry, twinberry honeysuckle, rose spirea, common ladyfern, giant horsetail, and creeping buttercup. Other species observed include birch, Himalayan blackberry English holly, Indian plum, pale yellow iris (*Iris pseudacorus*), reed canarygrass, largeleaf avens (*Geum macrophyllum*), fringed willowherb, climbing nightshade, western touch-me-not (*Impatiens noli-tangere*), and western swordfern.

Soil was examined to a depth of 18 inches and consists of three layers. The top layer is a 5-inch very dark grayish brown (10YR 3/2) silt loam. The middle layer is a 4-inch dark gray (10YR 4/1) gravelly sandy loam with dark yellowish brown (10YR 4/6) redoximorphic features. The lower layer is a dark gray (10YR 4/1) very sandy loam with dark yellowish brown (10YR 4/6) redoximorphic features. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WMT1 consists of coniferous and deciduous trees. Species include Douglas fir, black cottonwood, red alder, birch, western hemlock (*Tsuga heterophylla*), and bitter cherry (*Prunus emarginata*). Understory vegetation consists of Himalayan blackberry, rose spirea, Indian plum, English holly, western swordfern, and giant horsetail. Additionally, a narrow band of maintained herbaceous vegetation is located near the roadways.

Wetland WMT1 is classified as palustrine forested under the USFWS system and depressional under the HGM system. Wetland WMT1 is rated a Category III according to the City of Mountlake Terrace (Mountlake Terrace Municipal Code 16.15.080) and Ecology. The wetland scored 33 points on Ecology's rating form (12 points for water quality, 6 points for hydrologic functions, and 15 points for habitat functions) (Attachment D). The City of Mountlake Terrace requires a standard 65-foot buffer for Category III wetlands (Mountlake Terrace Municipal Code 16.15.090).

Wetland WMT2

Size: Approximately 0.17 acre

City of Mountlake Terrace and Ecology Rating: Category III

USFWS Classification: Palustrine Forested

HGM Classification: Riverine/Slope

Sample Plots: WMT2-SP1, WMT2-SP2, and WMT2-SP3

Wetland WMT2 is located east of I-5, northeast of the northbound I-5 on-ramp from SR 104 and southeast of Gateway Place (see Figure 3-1b). This wetland is on a steep slope extending down to McAleer Creek, located entirely within the delineation survey area. Sample Plots WMT2-SP1 and WMT2-SP3 characterize the wetland and Sample Plot WMT2-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by McAleer Creek and seeps. Areas of saturation and inundation were observed in the wetland. The stream channel is well-defined throughout most of the wetland. McAleer Creek flows from the northwest (from the Nile Shrine Golf Course west of I-5) to the south in a pipe under the northbound I-5 on-ramp to Wetland WMT1.

Wetland WMT2 contains a forested community. Vegetation on the slope consists of black cottonwood and red alder in the overstory, with an understory dominated by scouring rush (*Equisetum hyemale*). Other species include Himalayan blackberry, trailing blackberry, salmonberry, laurel, English holly, Indian plum, common hawthorn, reed canarygrass, western swordfern, coastal hedgenettle, and giant horsetail. Vegetation in and adjacent to McAleer Creek includes overhanging black cottonwood, salmonberry, Himalayan blackberry, pale yellow iris, creeping buttercup, small-fruited bulrush, reed canarygrass, climbing nightshade, western touch-me-not, and giant horsetail.

At Sample Plot WMT2-SP1, soil was examined to a depth of 12 inches and consists of two layers. The top layer is a 6-inch very dark grayish brown (10YR 3/2) sandy loam. The lower layer is a dark grayish brown (2.5Y 4/2) gravelly sandy loam with yellowish brown (10YR 5/6) redoximorphic features. There is an extremely compacted restrictive layer at 12 inches. At Sample Plot WMT2-SP3, soil was examined to a depth of 20 inches and consists of four layers. The top layer is a 3-inch black (10YR 2/1) loam. The second layer is a dark gray (10YR 4/1) compacted sand with dark yellowish brown (10YR 3/6) redoximorphic features. The third layer is a very dark gray (10YR 3/1) compacted sand with gravel and small cobbles that has dark yellowish brown (10YR 3/6) redoximorphic features. The lowest layer is a very dark gray (10YR 3/1) sandy loam. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WMT2 consists generally of steep vegetated slopes. Species growing east of the wetland include Douglas fir, red alder, bitter cherry, bigleaf maple, ornamental

maple, Himalayan blackberry, trailing blackberry, and western swordfern. The buffer to the west consists of Douglas fir, western redcedar, red alder, ornamental maple, black cottonwood, Indian plum, Himalayan blackberry, trailing blackberry, and western swordfern.

Wetland WMT2 is classified as palustrine forested under the USFWS system, and riverine/slope under the HGM system. Wetland WMT2 is rated a Category III according to the City of Mountlake Terrace (Mountlake Terrace Municipal Code 16.15.080) and Ecology. The wetland scored 46 points on Ecology's rating form (16 points for water quality, 16 points for hydrologic functions, and 14 points for habitat functions) (Attachment D). The City of Mountlake Terrace requires a standard 65-foot buffer for Category III wetlands (Mountlake Terrace Municipal Code 16.15.090).

Wetland WMT3

Size: Approximately 0.07 acre

City of Mountlake Terrace and Ecology Rating: Category III

USFWS Classification: Palustrine Forested

HGM Classification: Depressional

Sample Plots: WMT3-SP1 and WMT3-SP2

Wetland WMT3 is in a small, shallow depression east of I-5, east of the northbound I-5 off-ramp, west of 237th Street SW, and south of 236th Street SW (see Figure 3-1c). The wetland is located entirely within the field survey area. Sample Plot WMT3-SP1 characterizes the wetland and Sample Plot WMT3-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by a high ground water table. Soil saturation was observed and water-stained leaves were present. There may also be some periods of inundation. It is a closed depression and therefore has no inlet or outlet.

Wetland WMT3 has a forested community consisting of red alder, western redcedar, salmonberry, common ladyfern, western skunk cabbage (*Lysichiton americanus*), and giant horsetail. A single bitter cherry tree, a single western hemlock tree, western swordfern, and salal (*Gaultheria shallon*) are growing on hummocks.

Soil was examined to a depth of 18 inches and consists of two layers. The top layer is an 11-inch very dark gray (10YR 3/1) silt loam. The lower layer is a black (10YR 2/1) silt loam. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WMT3 consists of a mixed forest. Species include bitter cherry, red alder, western redcedar, Douglas fir (on the upper slopes), western hemlock, Himalayan blackberry, Indian plum, salmonberry, cherry laurel (*Prunus laurocerasus*), red elderberry, giant horsetail, and English ivy.

Wetland WMT3 is classified as palustrine forested under the USFWS system and is depressional under the HGM system. Wetland WMT3 is rated a Category III according to the City of Mountlake Terrace (Mountlake Terrace Municipal Code 16.15.080) and Ecology. The wetland scored 41 points on Ecology's rating form (16 points for water quality, 14 points for hydrologic functions, and 11

points for habitat functions) (Attachment D). The City of Mountlake Terrace requires a standard 65-foot buffer for Category III wetlands (Mountlake Terrace Municipal Code 16.15.090).

Wetland WMT4

Size: Approximately 0.43 acre

City of Mountlake Terrace and Ecology Rating: Category III

USFWS Classification: Palustrine Scrub-Shrub

HGM Classification: Depressional

Sample Plots: WMT4-SP1 and WMT4-SP2

Wetland WMT4 is located in a depression west of I-5 and west of the southbound I-5 off-ramp to SR 104. This wetland was not delineated because it is outside of the delineation survey area. It also extends west of the field reconnaissance survey area onto the Nile Shrine Golf Course and is approximately 0.43 acre (see Figure 3-1b). Sample Plot WMT4-SP1 characterizes the wetland and Sample Plot WMT4-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by a high groundwater table and potentially stormwater runoff from I-5. The wetland drains north to McAleer Creek. Observations during the site investigation included flowing water and drainage patterns. The wetland is seasonally inundated and saturated.

Wetland WMT4 contains a scrub-shrub community. Vegetation within the wetland is dominated by salmonberry, common ladyfern, and Himalayan blackberry. Other species present include twinberry honeysuckle, reed canarygrass, western swordfern, giant horsetail, water horsetail (*Equisetum fluviatile*), and false lily of the valley (*Maianthemum dilatatum*).

Soil was examined to a depth of 18 inches and consists of three layers. The top layer is a 5-inch very dark brown (10YR 2/2) loam. The middle layer is an 11-inch very dark greenish gray (10Y 3/1) gravelly sand. The lower layer is a very dark gray (5Y 3/1) and dark greenish gray (10GY 4/1) very sandy loam. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WMT4 consists of narrow areas of forest to the east and west of the wetland. A large retaining wall disrupts the buffer to the east and a golf course is located to the west. The golf course beyond the forested strip to the west is composed of maintained grasses. The forested buffer consists of red alder, western redcedar, salmonberry, Indian plum, Himalayan blackberry, English holly, English ivy, and giant horsetail.

Wetland WMT4 is classified as palustrine scrub-shrub under the USFWS system and depressional under the HGM system. Wetland WMT4 is rated a Category III according to the City of Mountlake Terrace (Mountlake Terrace Municipal Code 16.15.080) and Ecology. The wetland scored 34 points on Ecology's rating form (16 points for water quality, 6 points for hydrologic functions, and 12 points for habitat functions) (Attachment D). The City of Mountlake Terrace requires a standard 65-foot buffer for Category III wetlands (Mountlake Terrace Municipal Code 16.15.090).

Wetland WMT5

Size: Approximately 0.34 acre

City of Mountlake Terrace and Ecology Rating: Category III

USFWS Classification: Palustrine Forested/Palustrine Emergent

HGM Classification: Depressional

Sample Plots: WMT5-SP1, WMT5-SP2, and WMT5-SP3

Wetland WMT5 is located in a shallow depression west of I-5, east of the southbound I-5 off-ramp to 220th Street SW, and north of 220th Street SW (see Figure 3-1c). The wetland is located entirely within the delineation survey area. Sample Plot WMT5-SP1 characterizes the wetland and Sample Plot WMT5-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by a high groundwater table and stormwater runoff. Saturation at the surface was observed along the perimeter of the wetland with pockets of inundation through the center of the wetland. The wetland drains to a catch basin located in the northern portion of the wetland.

Wetland WMT5 contains a forested community and an emergent community. The forested community is dominated by red alder, black cottonwood, quaking aspen (*Populus tremuloides*), twinberry honeysuckle, red-osier dogwood, and Sitka willow, but the emergent community is dominated by reed canarygrass. Other species observed include birch, climbing nightshade, common rush, and fringed willowherb.

At Sample Plot WMT5-SP1, soil was examined to a depth of 18 inches and consists of three layers. The top layer is a 4-inch very dark grayish brown (10YR 3/2) sandy loam. The middle layer is a 3-inch dark greenish gray (10Y 4/1) clay loam. The lower layer is a greenish gray (10Y 5/1) gravelly sandy loam. The middle and lower layers are very compacted.

At Sample Plot WMT5-SP3, soil was examined to a depth of 18 inches and consists of three layers. The top layer is a 6-inch very dark gray (10YR 3/1) gravelly sandy loam. The middle layer is a very dark gray (10YR 3/1) gravelly sandy loam with strong brown (7.5YR 4/6) redoximorphic features. The lowest layer is a very dark gray (2.5Y 3/1) gravelly sandy loam with light olive brown (2.5Y 5/6) redoximorphic features. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WMT5 consists of steep vegetated slopes and maintained road shoulders. The upper slopes, near the roadways, are generally maintained grasses and disturbance-tolerant forbs. The lower portion of the buffer consists of red alder, Douglas fir, black cottonwood, Himalayan blackberry, snowberry (*Symphoricarpos albus*), twinberry honeysuckle, western redcedar, and forsythia (*Forsythia suspensa*).

Wetland WMT5 is classified as palustrine forested/palustrine emergent under the USFWS system, and depressional under the HGM system. Wetland WMT5 is rated a Category III according to the City of Mountlake Terrace (Mountlake Terrace Municipal Code 16.15.080) and Ecology. The wetland scored 30 points on Ecology's rating form (14 points for water quality, 7 points for hydrologic functions, and 9 points for habitat functions) (Attachment D). The City of Mountlake Terrace requires a standard 65-foot buffer for Category III wetlands (Mountlake Terrace Municipal Code 16.15.090).

Wetland WMT6

Size: Approximately 1.12 acres

City of Mountlake Terrace and Ecology Rating: Category III

USFWS Classification: Palustrine Forested

HGM Classification: Depressional

Sample Plots: WMT6-SP1 and WMT6-SP2

Wetland WMT6 is located on a slope and depression northeast of the Mountlake Terrace City Hall. This location is west of I-5, southeast of 60th Avenue West, and west of the southbound I-5 off-ramp to 220th Street SW (see Figure 3-1c). The wetland is located entirely within the delineation survey area. Sample Plot WMT6-SP1 characterizes the wetland and Sample Plot WMT6-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by groundwater. Pockets of saturation and inundation were irregularly located throughout the wetland. The wetland has hummocks and micro-depressions as well as a slope. During the site investigation, the groundwater was expressing in the lower portions of the slope and draining to a catch basin in a ditch northwest of the wetland.

Wetland WMT6 contains a forested community. Vegetation within the wetland includes red alder, Pacific willow, black cottonwood, salmonberry, Himalayan blackberry, red-osier dogwood, giant horsetail, small-fruited bulrush, western skunk cabbage, spreading woodfern (*Dryopteris expansa*), and common ladyfern. Creeping buttercup, watercress, and American speedwell are dominant outside the right-of-way fence along 60th Avenue West.

Soil was examined to a depth of 18 inches and consists of two layers. The top layer is a 7-inch black (10YR 2/1) silt loam with organics. The lower layer is a greenish gray (10G 5/1) gravelly sandy loam. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WMT6 consists of forested areas and maintained lawn. The buffer to the southeast on the I-5 prism slope consists of Douglas fir, big-leaf maple, Himalayan blackberry, Indian plum, and giant horsetail. The buffer near the Mountlake Terrace City Hall and I-5 generally consists of maintained grasses and disturbance-tolerant forbs with some landscaped trees.

Wetland WMT6 is classified as palustrine forested under the USFWS system and depressional under the HGM system. Wetland WMT6 is rated a Category III according to the City of Mountlake Terrace (Mountlake Terrace Municipal Code 16.15.080) and Ecology. The wetland scored 30 points on Ecology's rating form (14 points for water quality, 7 points for hydrologic functions, and 9 points for habitat functions) (Attachment D). The City of Mountlake Terrace requires a standard 65-foot buffer for Category III wetlands (Mountlake Terrace Municipal Code 16.15.090).

Wetland WMT7

Size: Approximately 0.42 acre

City of Mountlake Terrace and Ecology Rating: Category III

USFWS Classification: Palustrine Forested

HGM Classification: Depressional

Sample Plots: WMT7-SP1 and WMT7-SP2

Wetland WMT7 is a relatively flat depression west of the I-5 fill slope, east of 60th Avenue West, and northeast of Wetland WMT6 (see Figure 3-1c). A portion of the wetland was delineated and surveyed in the WSDOT right-of-way, but this work was not completed on the private parcel to the west. The wetland extends outside of the field reconnaissance and delineation survey areas. Sample Plot WMT7-SP1 characterizes the wetland and Sample Plot WMT7-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by a high groundwater table. The predominant hydrologic regime is saturated soils and the outlet of the wetland is located on the west side of the wetland outside of the field reconnaissance and delineation survey areas. The wetland drains into a culvert that flows to the northwest under 60th Avenue West.

Wetland WMT7 contains a forested community. Vegetation within the wetland includes red alder, Sitka willow, Pacific willow, western redcedar, salmonberry, Himalayan blackberry, twinberry honeysuckle, common ladyfern, American skunk cabbage, giant horsetail, and coastal hedgenettle.

Soil was examined to a depth of 26 inches and consists of three layers. The top layer is a 10-inch black (10YR 2/1) organic layer. The middle layer is a 7-inch very dark brown (10YR 2/2) organic layer. The lower layer is a very dark gray (10YR 3/1) silt loam with organic matter inclusions. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer to the north, west, and south of Wetland WMT7 consists of red alder, western redcedar, and salmonberry. There is a narrow forested area on the steep slope of the I-5 road prism to the east that consists of big-leaf maple, European mountain ash (*Sorbus aucuparia*), Douglas fir, Himalayan blackberry, Indian plum, and western swordfern. A narrow band of generally maintained grasses and disturbance-tolerant forbs is located immediately adjacent to I-5.

Wetland WMT7 is classified as palustrine forested under the USFWS system and depressional under the HGM system (Brinson 1993). Wetland WMT7 is rated a Category III according to the City of Mountlake Terrace (Mountlake Terrace Municipal Code 16.15.080) and Ecology. The wetland scored 32 points on Ecology's rating form (14 points for water quality, 7 points for hydrologic functions, and 11 points for habitat functions) (Attachment D). The City of Mountlake Terrace requires a standard 65-foot buffer for Category III wetlands (Mountlake Terrace Municipal Code 16.15.090).

Wetland WMT8

Size: Approximately 0.01 acre

City of Mountlake Terrace and Ecology Rating: Category IV

USFWS Classification: Palustrine Forested

HGM Classification: Slope

Sample Plots: WMT8-SP1 and WMT8-SP2

Wetland WMT8 is located in a swale southeast of I-5, northwest of an apartment complex, and south of 212th Street SW (see Figure 3-1c). Although it is within the field reconnaissance survey area, this wetland was not delineated because it is outside of the delineation survey area. Sample Plot WMT8-SP1 characterizes the wetland and Sample Plot WMT8-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by a high groundwater table. No inlet or outlet was observed in the wetland. Water was flowing slowly from the south to the north during the site investigation. Inundation, saturation, water-stained leaves, and algae were also observed in the wetland. The flowing water likely goes subsurface and drains to a nearby stormwater drainage element.

Wetland WMT8 contains a forested community. Vegetation within the wetland includes salmonberry, common ladyfern, western skunk cabbage, Himalayan blackberry, piggy-back-plant (*Tolmiea menziesii*), giant horsetail, and English ivy. Red alder is growing along the edge, overhanging the wetland.

Soil was examined to a depth of 19 inches and consists of three layers. The top layer is a 5-inch very dark gray (10YR 3/1) loam. The middle layer is a dark gray (5Y 4/1) gravelly sandy loam with olive brown (2.5Y 4/3) redoximorphic features from 5 to 9 inches. The lower layer is a dark greenish gray (10Y 4/1) gravelly sandy loam with dark yellowish brown (10YR 3/4) redoximorphic features. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WMT8 is forested and consists of red alder, Douglas fir, big-leaf maple, European mountain ash, western redcedar, Himalayan blackberry, Indian plum, salmonberry, English ivy, and western swordfern.

Wetland WMT8 is classified as palustrine forested under the USFWS system and depressional under the HGM system. Wetland WMT8 is rated a Category IV according to the City of Mountlake Terrace (Mountlake Terrace Municipal Code 16.15.080) and Ecology. The wetland scored 14 points on Ecology's rating form (4 points for water quality, 3 points for hydrologic functions, and 7 points for habitat functions) (Attachment D). The City of Mountlake Terrace requires a standard 50-foot buffer for Category IV wetlands (Mountlake Terrace Municipal Code 16.15.090).

Wetland WMT9

Size: Approximately 0.03 acre

City of Mountlake Terrace and Ecology Rating: Category IV

USFWS Classification: Palustrine Emergent

HGM Classification: Depressional

Sample Plots: WMT9-SP1 and WMT9-SP2

Wetland WMT9 is a shallow, linear depression (associated with a ditch) located east of the I-5 northbound on-ramp, south of 236th Street SW (see Figure 3-1c). The wetland is located entirely within the delineation survey area. Sample Plot WMT9-SP1 characterizes the wetland and Sample Plot WMT9-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by precipitation, stormwater runoff, and a high groundwater table. There are no inlets to Wetland WMT9. A catch basin is located at the south end of the wetland providing an outlet. Areas of inundation and saturated soils were observed in the wetland.

Wetland WMT9 consists of an emergent vegetation community dominated by maintained grasses interspersed with locally dominant patches of broadleaf cattail, red fescue, common rush, and reed canarygrass.

Soil was examined to a depth of 15 inches and consists of three layers. The top layer is a 2-inch very dark gray (10YR 3/1) silt loam. The middle layer (2 to 9 inches) is a dark gray (2.5Y 5/1) loamy sand with light olive brown (2.5Y 5/6) redoximorphic features. The bottom layer is a compacted dark gray (5Y 5/1) loamy sand with reddish brown (5YR 6/8) redoximorphic features at 9 to 15 inches. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer east and directly adjacent to Wetland WMT9 is a mowed right-of-way dominated by disturbance-tolerant grasses and forbs. A vigorous stand of mixed trees and shrubs, likely planted about 10 years ago, dominate the area farther upslope, east of the wetland. Species consist of big-leaf maple, western serviceberry (*Amelanchier alnifolia*), Douglas fir, and vine maple (*Acer circinatum*). A thin strip of mowed right-of-way separates the wetland from the paved shoulder of the northbound I-5 on-ramp.

Wetland WMT9 is classified as palustrine emergent under the USFWS system and depressional under the HGM system (Brinson 1993). Wetland WMT9 is rated a Category IV according to the City of Mountlake Terrace (Mountlake Terrace Municipal Code 16.15.080) and Ecology. The wetland scored 17 points on Ecology's rating form (6 points for water quality, 4 points for hydrologic functions, and 7 points for habitat functions) (Attachment D). The City of Mountlake Terrace requires a standard 50-foot buffer for Category IV wetlands (Mountlake Terrace Municipal Code 16.15.090).

Wetland WMT10

Size: Approximately 0.03 acre

City of Mountlake Terrace and Ecology Rating: Category IV

USFWS Classification: Palustrine Scrub-Shrub

HGM Classification: Depressional

Sample Plots: WMT10-SP1 and WMT10-SP2

Wetland WMT10 is located east of the I-5 northbound on-ramp, north of SR 104 (see Figure 3-1b). This depressional wetland is near the I-5 right-of-way fence, at the toe of the I-5 fill slope. Sample Plot WMT10-SP1 characterizes the wetland and Sample Plot WMT10-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by a high groundwater table and runoff from the immediate vicinity. The wetland does not contain an inlet or an outlet. Saturated soils and a high water table were observed during the field investigation.

Wetland WMT10 contains a scrub-shrub community dominated by red-osier dogwood, black cottonwood, and Himalayan blackberry. Other common species include rose spirea, giant horsetail, and fringed willowherb. This wetland appears to be maintained periodically.

Soil was examined to a depth of 18 inches and consists of two layers. The top layer is a 5-inch dark grayish brown (10YR 3/2) sandy loam. The lower layer is a dark grayish brown (10YR 3/2) sandy loam and a dark yellowish brown (10YR 3/4) gravelly loamy sand at 5 to 18 inches. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer on the slope to the north, west, and south of Wetland WMT10 consists of a mowed right-of-way dominated by disturbance-tolerant grasses and forbs. Undeveloped (cleared) and developed (commercial building and large parking lot) parcels are located to the east of the wetland, outside the right-of-way fencing.

Wetland WMT10 is classified as palustrine scrub-shrub under the USFWS system and depressional under the HGM system. Wetland WMT10 is rated a Category IV according to the City of Mountlake Terrace and Ecology (Mountlake Terrace Municipal Code 16.15.080). The wetland scored 29 points on Ecology's rating form (12 points for water quality, 8 points for hydrologic functions, and 9 points for habitat functions) (Attachment D). The City of Mountlake Terrace requires a standard 50-foot buffer for Category IV wetlands (Mountlake Terrace Municipal Code 16.15.090).

Wetland WMT11

Size: Approximately 0.07 acre

City of Mountlake Terrace and Ecology Rating: Category III

USFWS Classification: Palustrine Scrub-Shrub

HGM Classification: Depressional

Sample Plots: WMT11-SP1 and WMT11-SP2

Wetland WMT11 is a previously maintained ditch/swale associated with an abandoned school site located east of the I-5 northbound on-ramp, south of 236th Street SW (see Figure 3-1c). The wetland extends outside of the delineation survey area to the east. Sample Plot WMT11-SP1 characterizes the wetland and Sample Plot WMT11-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by precipitation, stormwater runoff, high groundwater table, and occasional ephemeral flooding from Stream SMT1. The inlet to Wetland WMT11 is a partially buried 36-inch corrugated metal pipe that extends under a road to the west of the wetland conveying SMT1. The wetland transitions back to a stream (SMT1) that flows in a southerly direction along the toe of a slope (east of the wetland), eventually discharging into McAleer Creek. Areas of inundation and saturated soils were observed in the wetland.

Wetland WMT11 contains a scrub-shrub community dominated by Himalayan blackberry with locally dominant salmonberry that extends farther east and south, outside the delineation survey area. Emergent vegetation within this community is dominated by reed canarygrass and giant horsetail with a locally dominant patch of common ladyfern (also extending east and south outside the study area). Other species observed include climbing nightshade, creeping buttercup, and a solitary Pacific willow.

Soil was examined to a depth of 18 inches and consists of three layers. The top layer is a 6-inch black (10YR 2/1) sandy clay loam. The middle layer is a very dark grayish brown (10YR 3/2) loamy sand at 6 to 9 inches. At 9 to 18 inches, the bottom layer is a dark grayish brown (10YR 4/2) loamy sand with yellowish brown (10YR 5/8) redoximorphic features. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer northeast of Wetland WMT11 is unmaintained grasses and forbs. The buffer to the southwest is a narrow strip of unmaintained grasses and forbs preceded by paved roadway. A small portion of the wetland is bordered by a stand of mature trees and shrubs along the eastern perimeter, which are part of a larger contiguous vegetated corridor that extends north and south along a steep slope, where the Wetland WMT11 transitions to stream. The trees and shrubs primarily consist of big-leaf maple, black cottonwood, Douglas fir, vine maple, willow species, salmonberry, Himalayan blackberry, and red alder. The remainder of the buffer consists of unvegetated areas, including a road and abandoned building foundations.

Wetland WMT11 is classified as palustrine scrub-shrub under the USFWS system and depressional under the HGM system (Brinson 1993). Wetland WMT11 is rated a Category III according to the City of Mountlake Terrace (Mountlake Terrace Municipal Code 16.15.080) and Ecology. The wetland scored 37 points on Ecology's rating form (22 points for water quality, 4 points for

hydrologic functions, and 11 points for habitat functions) (Attachment D). The City of Mountlake Terrace requires a standard 65-foot buffer for Category III wetlands (Mountlake Terrace Municipal Code 16.15.090).

3.1.4 Lynnwood

Wetland WLY3

Size: Approximately 0.08 acre

City of Lynnwood and Ecology Rating: Category III

USFWS Classification: Palustrine Scrub-Shrub/Palustrine Emergent/Palustrine Unconsolidated Bottom

HGM Classification: Depressional

Sample Plots: WLY3-SP1, WLY3-SP2, WLY3-SP3, and WLY3-SP4

Wetland WLY3 is in a linear depression northwest of I-5 and south of the end of 53rd Avenue West (see Figure 3-1c). The wetland is located entirely within the delineation survey area. Sample Plot WLY3-SP1 characterizes the wetland and Sample Plots WLY3-SP2, WLY3-SP3, and WLY3-SP4 characterize the adjacent upland.

Wetland hydrology is supported by surface water from a culvert under 52nd Avenue and a high groundwater table. Saturation at the surface was observed along the perimeter of the wetland with flowing water through the center of the wetland. A well-defined, ditched channel is present through some of the wetland. The wetland drains to a lifted culvert located near the southwest end of the wetland.

Wetland WLY3 contains a scrub-shrub community dominated by rose spirea with some Himalayan blackberry. This wetland also has an emergent community dominated by reed canarygrass and creeping buttercup. Other species include colonial bentgrass, broadleaf cattail, water parsley, and black cottonwood saplings.

Soil was examined to a depth of 20 inches and consists of two layers. The surface layer is a mixture of a very dark gray (10YR 3/1) silt loam and a gray (2.5Y 5/1) clay loam with light olive brown (2.5Y 5/6) redoximorphic features. The lower layer is a black (10YR 2/1) silt loam. High levels of organic content were observed in the lower layer. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WLY3 consists of steep forested slopes on the I-5 fill slopes to the southeast and disturbed residential properties to the northwest. Vegetation in the I-5 right-of-way consists of Douglas fir, big-leaf maple, black cottonwood, red alder, redwood (*Sequoia* sp.), Himalayan blackberry, English holly, English ivy, Indian plum, and western swordfern. A row of trees including black cottonwood, Douglas fir, and big-leaf maple are growing on the right-of-way fence line northwest of the wetland.

Wetland WLY3 is classified as palustrine scrub-shrub/palustrine emergent/palustrine unconsolidated bottom under the USFWS system and depressional under the HGM system. Wetland WLY3 is rated

a Category III according to the City of Lynnwood (Lynnwood Municipal Code 17.10.050) and Ecology. The wetland scored 36 points on Ecology's rating form (10 points for water quality, 16 points for hydrologic functions, and 10 points for habitat functions) (Attachment D). The City of Lynnwood requires a standard 75-foot buffer for Category III wetlands (Lynnwood Municipal Code 17.10.051).

Wetland WLY4

Size: Approximately 16.54 acres

City of Lynnwood and Ecology Rating: Category II

USFWS Classification: Palustrine Forested/Palustrine Scrub-Shrub/Palustrine Emergent

HGM Classification: Riverine/Depressional

Sample Plots: WLY4-SP1, WLY4-SP2, WLY4-SP3, WLY4-SP4, and WLY4-SP5

Wetland WLY4 is a large wetland/stream complex associated with Scriber Creek, located southeast of Cedar Valley Road, northeast of 204th Street SW, and southwest of the Lynnwood Transit Center (see Figure 3-1c). The wetland extends outside of the field reconnaissance and delineation survey areas. Sample Plots WLY4-SP1, WLY4-SP3, and WLY4-SP5 characterize the wetland and Sample Plots WLY4-SP2 and WLY4-SP4 characterize the adjacent upland.

Wetland hydrology is supported primarily by Scriber Creek, which enters the wetland from the north. A high groundwater table and stormwater runoff likely contribute to the hydrology as well. Saturation of soils, inundation, a permanently flowing stream, and open water ponds were observed in areas of Wetland WLY4. The channel of Scriber Creek is well defined near the northern and southern boundaries, becoming less defined in between. The wetland and Scriber Creek drain southeast, out of the field reconnaissance and delineation survey areas.

Wetland WLY4 contains forested, scrub-shrub, and emergent communities. The forested areas are dominated by black cottonwood, Pacific willow, and reed canarygrass, with lesser amounts of western redcedar, Sitka spruce, and salmonberry. The scrub-shrub community consists primarily of rose spirea, red-osier dogwood, twinberry honeysuckle, and Sitka willow. Indian plum, western skunk cabbage, and water parsley are also present. Reed canarygrass dominates the emergent community. The southern portion of the wetland adjacent to the Interurban Trail is actively maintained.

At Sample Plot WLY4-SP1, soil was examined to a depth of 20 inches and consists of one layer—a black (10YR 2/1) mucky silt. High levels of organic content in various stages of decomposition were observed in the soil. At Sample Plot WLY4-SP3, soil was examined to a depth of 20 inches and consists of three layers. The surface layer is a very dark brown (10YR 2/2) loam with decomposed organic matter. The middle layer is a gray (10YR 5/1) sandy loam with gravels and dark yellowish brown (10YR 3/6) redoximorphic features. The lower layer is a greenish gray (10Y 5/1) sandy loam with gravels and dark yellowish brown (10YR 3/6) redoximorphic features. At Sample Plot WLY4-SP5, soil was examined to a depth of 18 inches and consists of one layer—a black (10YR 2/1) very silty loam. High levels of organic content in various stages of decomposition were observed in the soil. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WLY4 is generally very narrow, often forested or shrub. The wetland is in an urban setting and much of the buffer is a narrow line of trees located between the wetland and developed areas, such as parking lots, trails, or residential and commercial structures. Vegetation includes Douglas fir, western redcedar, red alder, black cottonwood, Himalayan blackberry, red-osier dogwood, English holly, Portugal laurel (*Prunus lusitanica*), western swordfern, English ivy, maintained grasses, and other disturbance-tolerant species. Plantings, a split rail fence, and Native Growth Protection Area (NGPA) signs were observed in the vicinity of the private property to the south along the wetland edge.

Wetland WLY4 is classified as palustrine forested/palustrine scrub-shrub/palustrine emergent under the USFWS system and riverine/depressional under the HGM system. Wetland WLY4 is rated a Category II according to the City of Lynnwood (Lynnwood Municipal Code 17.10.050) and Ecology. The wetland scored 69 points on Ecology's rating form (26 points for water quality, 20 points for hydrologic functions, and 23 points for habitat functions) (Attachment D). The City of Lynnwood requires a standard 110-foot buffer for Category II wetlands (Lynnwood Municipal Code 17.10.051).

Wetland WLY6

Size: Approximately 0.04 acre

City of Lynnwood and Ecology Rating: Category III

USFWS Classification: Palustrine Forested

HGM Classification: Depressional

Sample Plots: WLY6-SP1 and WLY6-SP2

Wetland WLY6 is located in a depression northwest of I-5 and northeast of 208th Street SW (see Figure 3-1c). The wetland is located entirely within the delineation survey area. Sample Plot WLY6-SP1 characterizes the wetland and Sample Plot WLY6-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by stormwater runoff from under 208th Street SW and a high groundwater table. Wetland WLY6 likely has seasonal flooded and seasonal saturated hydroperiods. Wetland hydrology indicators observed include small pockets of inundation and soil saturation. No inlet or outlet was located during the field investigation.

Wetland WLY6 contains a forested community dominated by Pacific willow and twinberry honeysuckle. Other vegetation within the wetland includes red alder, Himalayan blackberry, rose spirea, sedge, common ladyfern, creeping buttercup, and reed canarygrass.

Soil was examined to a depth of 18 inches and consists of three layers. The top layer is a 4-inch very dark gray (10YR 3/1) silt loam with yellowish red (5YR 4/6) redoximorphic features. The middle layer is a 5-inch dark gray (5Y 4/1) clay loam with strong brown (7.5YR 4/6) redoximorphic features. The lower layer is a dark gray (5Y 4/1) clay loam with fewer strong brown (7.5YR 4/6) redoximorphic features. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WLY6 to the west is narrow, consisting of disturbance-tolerant grasses and forbs associated with the maintained right-of-way for 208th Street SW. The buffer to

the north is dominated by black cottonwood and Himalayan blackberry with a few red elderberry and one Douglas fir, extending into a fallow field. The buffer to the south and east contains a gravel access road and is vegetated primarily with Himalayan blackberry and Scotch broom with a few trees and some grasses. Much of the buffer is disturbed by a gravel access road and 208th Street SW.

Wetland WLY6 is classified as palustrine forested under the USFWS system and depressional under the HGM system. Wetland WLY6 is rated a Category III according to the City of Lynnwood (Lynnwood Municipal Code 17.10.050) and Ecology. The wetland scored 40 points on Ecology's rating form (22 points for water quality, 10 points for hydrologic functions, and 8 points for habitat functions) (Attachment D). The City of Lynnwood requires a standard 75-foot buffer for Category III wetlands (Lynnwood Municipal Code 17.10.051).

Wetland WLY7

Size: Approximately 0.04 acre

City of Lynnwood and Ecology Rating: Category III

USFWS Classification: Palustrine Scrub-Shrub

HGM Classification: Depressional

Sample Plots: WLY7-SP1 and WLY7-SP2

Wetland WLY7 is in a small depression northwest of the intersection of 48th Avenue West and the Interurban Trail (see Figure 3-1c). The wetland is located entirely within the delineation survey area. Sample Plot WLY7-SP1 characterizes the wetland and Sample Plot WLY7-SP2 characterizes the adjacent upland. It appears the wetland and entire site on which it is located have been disturbed within the last 10 years.

Wetland hydrology is supported by surface water and precipitation. Saturation was observed at a depth of 9 inches. Water-stained leaves were also observed within the wetland. No inlets or outlets to the wetland were observed.

Wetland WLY7 contains a scrub-shrub community. Vegetation within the wetland is dominated by black cottonwood, Pacific willow, and Sitka willow. Other common species include red alder saplings, Scouler's willow, twinberry honeysuckle, and salmonberry. Herbaceous vegetation under the shrubs was dominated by colonial bentgrass and common velvetgrass (*Holcus lanatus*).

Soil was examined to a depth of 18 inches and consists of three layers. The top layer is an 8-inch grayish brown (10YR 5/1) clay loam. The middle layer is a 5-inch dark grayish brown (10YR 3/2) sandy loam with dark yellowish brown (10YR 4/6) redoximorphic features. The lower layer is a dark reddish brown (10YR 3/3) disturbed sandy loam with dark yellowish brown (10YR 4/6) redoximorphic features. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The buffer surrounding Wetland WLY7 to the northeast is primarily a narrow patch of shrub species preceded by the Edmonds School District property, which is a combination of pavement and areas of bare earth disturbed by heavy machinery. The narrow patch of shrub includes black cottonwood saplings, Himalayan blackberry, Sitka willow, and Scouler's willow. A small portion of the buffer to the west is a narrow shrub-dominated corridor that extends along the Interurban Trail. The

remaining buffer is a thin strip of forbs and grasses followed by the Interurban Trail to the south and 48th Avenue West to the east.

Wetland WLY7 is classified as palustrine scrub-shrub under the USFWS system and depressional under the HGM system. Wetland WLY7 is rated a Category III according to the City of Lynnwood (Lynnwood Municipal Code 17.10.050) and Ecology. The wetland scored 36 points on Ecology's rating form (16 points for water quality, 14 points for hydrologic functions, and 6 points for habitat functions) (Attachment D). The City of Lynnwood requires a standard 75-foot buffer for Category III wetlands (Lynnwood Municipal Code 17.10.051).

Wetland WLY8

Size: Approximately 0.08 acre

City of Lynnwood and Ecology Rating: Category III

USFWS Classification: Palustrine Emergent

HGM Classification: Depressional

Sample Plots: WLY8-SP1 and WLY8-SP2

Wetland WLY8 is in a linear depression northwest of I-5 and southeast of the intersection of 48th Avenue West and the Interurban Trail (see Figure 3-1c). The wetland is located entirely within the delineation survey area. Sample Plot WLY8-SP1 characterizes the wetland and Sample Plot WLY8-SP2 characterizes the adjacent upland.

Wetland hydrology is supported by surface water from a culvert under 48th Avenue West. Surface soil cracks and bare ground were observed in some areas of the wetland, and a well-defined, ditched channel is present in a part of the wetland. There is no outlet in the wetland.

Wetland WLY8 contains an emergent community. Vegetation within the wetland is dominated by common rush and various grasses with locally dominant patches of common spikerush (*Eleocharis palustris*). Reed canarygrass and broadleaf cattail are also present.

Soil was examined to a depth of 12 inches and consists of two layers. The top layer is a 4-inch dark grayish brown (10YR 4/2) gravelly silt loam. The bottom layer is a grayish brown (2.5Y 5/2) gravelly clay loam. Both layers contain dark yellowish brown (10YR 4/6) redoximorphic features. The soil was very compacted and gravel, cobble, and angular rock were observed throughout the soil profile. Soils in the wetland are not mapped by the NRCS (identified as Urban land).

The majority of the buffer surrounding WLY8 is disturbed and consists largely of invasive vegetation including Scotch broom and Himalayan blackberry. The remaining buffer is a thin strip of forbs and grasses preceded by 48th Avenue West and the Interurban Trail.

Wetland WLY8 is classified as palustrine emergent under the USFWS system and depressional under the HGM system. Wetland WLY8 is rated a Category III according to the City of Lynnwood (Lynnwood Municipal Code 17.10.050) and Ecology. The wetland scored 38 points on Ecology's rating form (22 points for water quality, 10 points for hydrologic functions, and 6 points for habitat functions) (Attachment D). The City of Lynnwood requires a standard 75-foot buffer for Category III wetlands (Lynnwood Municipal Code 17.10.051).

3.2 Streams

The study area for the Lynnwood Link Extension is drained by three stream systems: Thornton Creek, McAleer Creek, and Scriber Creek (see Figures 3-1a, 3-1b, and 3-1c; Attachment F). All three streams drain to Lake Washington. Thornton and McAleer creeks drain directly to the lake, while water from Scriber Creek flows to the lake via Swamp Creek and the Sammamish Slough. Lake Washington is the second-largest natural lake in Washington, with a surface area of 22,138 acres. The lake lies at an elevation of 22 feet and has a maximum depth of 214 feet. The major sources of water that enter the lake are the Cedar River (55 percent of the average inflow) and the Sammamish River (27 percent of the average inflow). The remainder of inflow comes from May Creek, Coal Creek, Lyon Creek, McAleer Creek, Thornton Creek, and other smaller streams. The lake drains to Puget Sound through the Lake Washington Ship Canal, which is an artificial waterway constructed in 1916.

Table 3-3 summarizes the stream information in the study area. The existing conditions of streams are described below, organized by stream system. Additional information about fish use, fish habitat quality, and riparian habitat conditions in the streams and their tributaries is provided in the Ecosystem Resources Technical Report (Sound Transit 2014).

Table 3-3. Summary of Streams in the Lynnwood Link Extension Study Area

Stream Name[a]	Stream Index No.[b]	Fish Habitat Status[c]	Local Jurisdiction	Local Jurisdiction Stream Classification[d]	Local Jurisdiction Buffer Width (feet)
Thornton Creek, North Branch	08.0030	Documented	Seattle	Type 3[e]	75[e]
Thornton Creek Tributary (SSE1)	NA	Potential	Seattle	Type 3[e]	75[e]
McAleer Creek Tributary (SSH2)	NA	Unknown (Presumed Potential)	Shoreline	Piped	10
McAleer Creek Tributary (SSH4)	NA	Unknown	Shoreline	Type III	65
McAleer Creek	08.0049	Documented	Shoreline	Type II	115
McAleer Creek	08.0049	Documented	Mountlake Terrace	Class II	100
McAleer Creek Tributary (SMT1)	08.0050	Potential	Mountlake Terrace	Class III/Class V[f]	65/0[f]
Scriber Creek	08.0061	Documented	Lynnwood	Category I	100
Scriber Creek Tributary (SLY1)	08.0064	Potential	Lynnwood	Category III	35

Streams other than Thornton Creek, McAleer Creek, and Scriber Creek are identified with alphanumeric codes: SYYn.
S stands for stream; YY = two-letter code for local jurisdiction (SE = Seattle, SH = Shoreline, MT = Mountlake Terrace, LY = Lynnwood); n = sequential identification number

[b] Water Resource Inventory Area (WRIA) identification numbers according to Williams et al. (1975). 'NA' indicates watercourses that are not identified in that inventory.

[c] Documented = Fish have been observed in the study area; Potential = Potential fish habitat is present, based on field assessment of stream width and gradient, but stream segments in the study area are upstream of human-caused fish passage barriers; Unknown = No fish presence data are available and stream segments are contained within culverts in the study area.

[d] Identification and classification of streams in this analysis represent conservative estimates, based on available information and the provisions of local critical areas rules. Some of the watercourses identified in this analysis may not actually be defined as streams by the local jurisdictions, or they may be assigned smaller buffers than indicated here. Actual impacts would be analyzed and mitigated as appropriate through local permitting processes.

[e] The Seattle Municipal Code applies development restrictions and specifies mitigation requirements only within environmentally critical areas or buffers on publicly or privately held parcels. The locations where the proposed alignments would pass near Thornton Creek and Stream SSE1 are within the right-of-way for I-5 and are therefore not subject to City of Seattle buffer requirements. Regulatory buffer widths are used in this analysis to identify areas where construction of the light rail alternatives could affect the condition of riparian buffers. Mitigation requirements would be developed through local permitting processes.

[f] See Stream SMT1 discussion under Section 3.2.2.

3.2.1 Thornton Creek and Tributaries

The 7,200-acre Thornton Creek basin drains a substantial portion of northeastern Seattle and most of Shoreline. The stream flows generally south and east before discharging to Lake Washington. Segments of the North Branch of Thornton Creek (Water Resource Inventory Area [WRIA] No. 08.0030) within and immediately upstream of the Jackson Park Golf Course fall within the study area. Also present is an unnamed tributary to the North Branch of Thornton Creek, identified as Stream SSE1 for this analysis.

Thornton Creek, North Branch

The North Branch of Thornton Creek originates near Ronald Bog in Shoreline and enters the study area south of North 145th Street and west of 5th Avenue NE, after emerging from culverts under I-5. Within the study area, the stream flows in a ditch between 5th Avenue NE and the Jackson Park Golf Course for approximately 700 feet before veering east into the golf course (Tetra Tech/KCM 2004a).

All portions of the North Branch of Thornton Creek in the study area are considered fish-bearing (WDFW 2014a). In-stream habitat within the study area is rated as low, based on channel morphology, sediment regime, and existing physical habitat conditions (City of Seattle 2007). Resident salmonids are present throughout the system. Spawning anadromous salmonids have been observed as far upstream as 35th Avenue NE and NE 115th Street, approximately 2.5 miles downstream of the study area (City of Seattle 2007; WDFW 2014a). WDFW (2014b) classified three of the culverts in the North Branch of Thornton Creek downstream of the study area as total barriers to fish passage. An additional 18 structures, including 7 culverts, 5 streambed control structures, 3 recreational dams, 2 bridges, and 1 artificial waterfall, are partial barriers (WDFW 2014b). Within the study area, the culverts under I-5 and 5th Avenue NE are also partial barriers (WDFW 2014b). However, an adult steelhead observed in 2004 upstream of the I-5 culvert suggests that none of these structures may present an absolute barrier to fish passage (Tetra Tech/KCM 2004a). Notably, steelhead are renowned for their ability to negotiate what would be considered barriers for most other salmonids (Tetra Tech/KCM 2004a).

Riparian habitat quality of the North Branch of Thornton Creek within the study area is rated low, based on riparian area width, connectivity, understory and canopy composition, canopy density, and the percentage of the stream shaded by vegetation (City of Seattle 2007). Much of the stream's riparian buffer in the study area consists of roads (5th Avenue NE and off-ramps from I-5) and other impervious surfaces. Stream banks in most portions of the study area are dominated by Himalayan blackberry, particularly along the segment that parallels 5th Avenue NE. On the opposite side of 5th Avenue NE from the light rail alignments, the stream passes through a 50- to 70-foot-wide strip of vegetation. Overstory species in this strip include red alder, black cottonwood, and scattered patches of immature western redcedar. This overstory canopy provides shade for the stream during spring and summer (when the trees have leaves), as well as the potential for contributing some woody debris. Within the golf course, the dominant riparian vegetation in the study area consists of non-native plants, turf, and landscaping.

The North Branch of Thornton Creek in the study area is located within the city of Seattle and is therefore subject to the provisions of the local Critical Areas Ordinance (Seattle Municipal Code 25.09). Notably, the ordinance applies development restrictions and specifies mitigation requirements only within environmentally critical areas or buffers on publicly or privately held parcels. The locations where the proposed alternative alignments would pass near the stream are within the right-of-way for I-5 and therefore are not subject to City of Seattle buffer requirements. However, to facilitate a comparison of the potential effects of the alternatives, the stream has been assigned an analytical buffer based on a provisional classification. Based on the presence of natural waters with moderate to slight value to fish for spawning, rearing, or migration (i.e., having a defined channel width of at least 2 feet and a gradient less than 16 percent), the North Branch of Thornton Creek in the study area would be classified as a Type 3 stream, requiring a riparian buffer of 75 feet.

Stream SSE1

Approximately 300 feet south of Thornton Creek's crossing under 5th Avenue NE, a watercourse emerges from a culvert in the I-5 right-of-way, flows southward in the ditch on the west side of 5th Avenue NE, and then drains to Thornton Creek via a culvert under 5th Avenue NE. The watercourse was not catalogued by Williams et al. (1975); the source of the water in the ditch is not known and historic maps of the area do not indicate the presence of a tributary to Thornton Creek at this location. However, field observations of flowing water during the summer months suggest that some flow may be derived from groundwater. No fish are known or expected to use the watercourse (WDFW 2014a). Riparian habitat for the surface-flowing segment of the watercourse consists of a strip of red alder and Himalayan blackberry in the I-5 right-of-way between 5th Avenue NE and the off-ramp from I-5 northbound to NE 145th Street.

The watercourse falls within the Seattle city limits and is therefore subject to the provisions of Seattle Municipal Code 25.09. For this analysis, this watercourse is provisionally identified as a stream (SSE1) and classified as Type 3, based on the presence of a 2-foot-wide channel and a gradient less than 16 percent. As with the North Branch of Thornton Creek, the surface-flowing portion of the stream in the study area is within a road right-of-way and therefore is not subject to City of Seattle buffer requirements. A formal determination of whether the watercourse is a stream (and if so, how it is classified) will occur through the process of project permitting with the City of Seattle.

3.2.2 McAleer Creek and Tributaries

McAleer Creek (WRIA No. 08.0049) originates at Lake Ballinger and flows roughly 6 miles to the northeast corner of Lake Washington. The 5,300-acre drainage basin includes portions of Lynnwood, Edmonds, Mountlake Terrace, Shoreline, and Lake Forest Park. Most of the northern portion of the study area (from NE 185th Street in Shoreline, north to about 208th Street SW in Lynnwood) drains to the McAleer Creek system. Areas north of 224th Street SW drain to Lake Ballinger, which empties to McAleer Creek.

McAleer Creek

Much of McAleer Creek within the study area is contained within culverts. The main stem enters the study area from an open channel through the Nile Shrine Golf Course west of I-5. The open-channel habitat and associated riparian areas of McAleer Creek in the study area occur in four discrete segments, separated by segments that are contained within culverts. The stream segments in the study area are as follows, progressing from upstream to downstream:

- Culvert under I-5 (440 feet)
- Open channel adjacent to the on-ramp from SR 104 westbound to I-5 northbound (240 feet)
- Culvert under the cloverleaf interchange between I-5 northbound and SR 104 westbound (280 feet)
- Open channel in the area enclosed by the cloverleaf off-ramp from I-5 northbound to SR 104 westbound (200 feet)
- 4-foot by 6-foot box culvert under SR 104 (320 feet)
- Channelized open water course in the area enclosed by the cloverleaf on-ramp from SR 104 eastbound to I-5 northbound (200 feet)
- 66-inch-diameter culvert beneath the off-ramp from I-5 northbound to SR 104 (280 feet)

All portions of McAleer Creek in the study area are considered fish-bearing, supporting both anadromous and resident salmonids (WDFW 2014a). Immediately downstream of the study area, the in-stream habitat of McAleer Creek has been rated as poor, based on the preponderance of fine sediments, as well as scouring and incision resulting from bank hardening (Tetra Tech/KCM 2004b). The channel provides poorly defined pool-riffle complexes; the only pool habitat consists of step-pools formed by weirs. The gravel/cobble stream substrate is heavily cemented with sediment, reducing its spawning suitability (Tetra Tech/KCM 2004b). Riparian habitat quality along the open-channel segments of McAleer Creek in the study area is generally good, dominated by forest canopy that provides shade and the potential for recruitment of woody debris that contributes to channel complexity. The value of the riparian habitat is limited, however, by a lack of connectivity.

McAleer Creek within the study area is located within two jurisdictions and is therefore subject to two separate Critical Area Ordinances. Stream segments south of NE 205th Street and SR 104 are within the city of Shoreline and are subject to the provisions of Shoreline Municipal Code chapter 20.80. Stream segments north of NE 205th Street and SR 104 are within the city of Mountlake Terrace and are subject to the provisions of Mountlake Terrace Municipal Code chapter 16.15. Shoreline Municipal Code 20.80.470 classifies McAleer Creek as Type III, which requires a 75-foot buffer. Mountlake Terrace Municipal Code 16.15.080 classifies McAleer Creek as Class II, which requires a 100-foot buffer.

Stream SSH2

Approximately 1,800 feet south of the I-5/SR 104 interchange, a tributary to McAleer Creek (Stream SSH2) has been identified as passing under I-5 (Tetra Tech/KCM 2004b). This tributary was not catalogued by Williams et al. (1975). After entering a culvert just west of I-5, the stream remains piped for approximately 1,500 feet, resurfacing shortly before its confluence with the main stem of McAleer Creek near a wastewater pumping station upstream of 15th Avenue NE (Tetra Tech/KCM 2004b). The open-water portions of the stream within the study area, west of I-5 (i.e., on the opposite side of I-5 from any of the proposed alternative alignments), are within concrete-lined ditches along NE 200th Street. During site visits conducted for this analysis, flowing water was observed in this watercourse only during and immediately after rainfall.

Based on intermittent flows and the presence of human-created barriers to fish passage, SSH2 is not known or expected to support fish under current conditions (WDFW 2014a). However, the basin size, channel width, and stream gradient of the watercourse indicate the potential to support fish in the future. Shoreline Municipal Code 20.80.470 classifies the stream as Piped, which requires a 10-foot buffer.

Stream SSH4

Within the cloverleaf interchange between eastbound SR 104 and northbound I-5, a watercourse emerges from a culvert under the roadway, flows approximately 30 feet, and then joins McAleer Creek. The watercourse was not catalogued as a stream by Williams et al. (1975), the source of the water is not known, and historical maps of the area do not indicate the presence of a tributary to McAleer Creek at this location. However, field observations of flowing water during the summer months suggest that some flow may be derived from groundwater. The surface-flowing segment of the stream in the study area can be accessed by fish from McAleer Creek.

For this analysis, this watercourse is provisionally identified as a stream (SSH4) and classified as Type III per Shoreline Municipal Code 20.80.470, based on the presence of a 2-foot-wide channel and a gradient less than 16 percent. A formal determination of whether the watercourse is a stream (and if so, how it is classified) will occur through the process of project permitting with the City of Shoreline. If the watercourse is classified as a Type III stream, its regulatory buffer will be contained entirely within the larger regulatory buffer for McAleer Creek. Riparian habitat conditions for Stream SSH4 are therefore the same as described for McAleer Creek above.

Stream SMT1

North of the I-5/SR 104 interchange, a tributary (WRIA No. 08.0050; Stream SMT1) joins McAleer Creek in the wooded area adjacent to the on-ramp from SR 104 westbound to I-5 northbound. The tributary originates in Veterans Memorial Park northeast of the Mountlake Terrace Transit Center, then flows south through a series of open watercourses and culverts east of I-5. During site visits conducted for this analysis, flowing water was observed in this watercourse only during and immediately after rainfall. Farther downstream, along the eastern border of the Edmonds School District property south of 236th Street SW, water from a culvert under the school property

contributes flow on a more regular basis. Based on intermittent flows and the presence of human-created barriers to fish passage, SMT1 is not known or expected to support fish under current conditions (WDFW 2014a). However, the basin size, channel width, and stream gradient of the watercourse indicate the potential to support fish in the future. Riparian habitat quality along the open-channel segments of Stream SMT1 in the study area is generally good, dominated by forest canopy that provides shade and the potential for recruitment of woody debris that contributes to channel complexity. The value of the riparian habitat is limited, however, by culverts that interfere with the passage of woody debris to downstream segments of fish-bearing streams.

The City of Mountlake Terrace has identified the uppermost reaches of this watercourse in the study area as a Class V (seasonal, non-fish-bearing) stream that does not require a regulatory buffer. It is possible that the City may determine that the downstream reaches meet the criteria for a Class IV (requiring a 50-foot buffer) or Class III stream (requiring a 65-foot buffer). The segment that is crossed by the proposed light rail alignments is upstream of the water source in the Edmonds School District property and is therefore likely to be considered a Class V stream.

3.2.3 Scriber Creek and Tributaries

Scriber Creek (WRIA No. 08.0061) drains an area of approximately 4,250 acres, including the extreme northern portion of the study area. The stream flows southeast, joining Swamp Creek approximately 2.5 miles downstream of the study area. Swamp Creek flows into the Sammamish River, which empties into the northern end of Lake Washington.

Scriber Creek

The study area includes approximately 2,000 feet of the main stem of Scriber Creek. For much of its length in the study area, the stream channel is braided and indistinct as it flows through the large wetland complex (Wetland WLY4) south and west of the Lynnwood Transit Center. The stream forms a defined channel as it exits the study area, flowing southeast and under I-5. Based on input provided by Ecology staff who collaborated on field delineations in July 2014, the OHWM of Scriber Creek through the wetland complex is defined as encompassing the entire breadth of the complex. At most times of year, flowing water is confined to a few channels that make up a small portion of the total wetland complex. The locations of these channels likely change from year to year.

All portions of Scriber Creek in the study area are considered fish-bearing, supporting resident salmonids (WDFW 2014a). Anadromous salmonids have been observed in Scriber Creek, but sources differ about their habitat use as far upstream as the study area (Sound Transit 2014). The main stem reach in the study area is dominated by the large scrub-shrub wetland adjacent to the park-and-ride lot. Salmon spawning habitat conditions within this reach are poor due to limited canopy and vegetative cover, the presence of bank armoring, and the abundance of silt and other fine substrates (Jones and Stokes 2000). Side channels and other low-velocity areas may provide good rearing habitat, however (City of Lynnwood 2004). Riparian vegetation for Scriber Creek in the study area generally consists of the surrounding wetland complex (Wetland WLY4). Vegetation in Wetland WLY4 is dominated by black cottonwood, Pacific willow, red-osier dogwood, and reed canarygrass.

Areas with dense growth of salmonberry and Himalayan blackberry are also present, along with red alder, western redcedar, big-leaf maple, and Pacific flowering dogwood (*Cornus nuttallii*).

Scriber Creek within the study area is located within the city of Lynnwood and therefore subject to the local Critical Areas Ordinance. Lynnwood Municipal Code 17.10.060 classifies Scriber Creek as a Category I, which requires a 100-foot buffer.

Stream SLY1

Also present in the study area is an unnamed, intermittent, non-fish-bearing tributary (WRIA No. 08.0064; Stream SLY1) that flows southward along the eastern edge of the Lynnwood Transit Center. The channel flows through a small patch of forest vegetation (the upper part has been recently planted) before it enters a culvert under the I-5 on-ramp and joins Scriber Creek southeast of I-5. The watercourse is highly channelized and does not flow at the surface for most of its length. The surface-flowing sections are the short segments within and downstream of the study area, including a segment on the Lynnwood Civic Center campus approximately 0.6 mile north of the study area. The primary source of flow for the tributary is urban runoff, and habitat quality is generally poor. Stormwater runoff from impervious surfaces likely contributes to a flashy flow regime during fall and winter (City of Lynnwood 2004). A flashy flow regime is one in which water volumes peak sharply after the onset of a precipitation event, rapidly returning to pre-rain levels shortly after the precipitation ends.

The portion of Stream SLY1 in the study area is separated from known fish-bearing waters by culverts under the off-ramp from I-5 northbound to 44th Avenue West, I-5 itself, and the on-ramp from 44th Avenue West to I-5 southbound. WDFW (2014b) has not evaluated the fish passage potential of these culverts because Stream SLY1 is considered a non-fish-bearing stream. Based on the presence of human-created barriers to fish passage, Stream SLY1 is not currently known or expected to support fish. Based on its basin size, channel width, and stream gradient, however, Stream SLY1 may have the potential to support fish in the future.

Lynnwood Municipal Code 17.10.060 classifies Stream SLY1 as Category III, which requires a 35-foot buffer.

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ATTACHMENT A

Wetland Field Investigation Dates

Table A-1. Dates of Field Reconnaissance Surveys

Wetland	Date of Field Investigation	Location
WSE1	3/9/12	I-5 ROW, west of 1st Avenue NE & south of on- & off-ramps
WSE3	3/14/12	I-5 ROW, between I-5 and 5th Avenue NE
WSE4	3/14/12	Between 5th Avenue NE and Jackson Park Golf Course
WSE5	3/19/12	I-5 ROW, between I-5 and 5th Avenue NE
WSE6	3/19/12	I-5 ROW, between I-5 off-ramp and 5th Avenue NE
WSE7	3/19/12	I-5 ROW, between I-5 and Transit off-ramp
WSE8	3/21/12	Between 5th Avenue NE and Jackson Park Golf Course
WSH1	3/15/12	I-5 ROW, west of 5th Avenue NE and north of NE 145th Street
WSH2	3/15/12	I-5 ROW and extending east, west of 3rd Avenue NE
WSH3	3/15/12	I-5 ROW, south of NE 155th Street, west of fire station
WSH4	3/21/12	I-5 ROW, east of I-5 off-ramp to SR 104
WSH5	3/21/12	I-5 ROW, in cloverleaf south of SR 104
WMT1	3/27/12	I-5 ROW, in cloverleaf north of SR 104
WMT2	3/27/12	I-5 ROW, east of I-5 on-ramp from SR 104
WMT3	3/28/12	I-5 ROW, east of I-5 off-ramp to 236th Street SW
WMT4	3/29/12	I-5 ROW, east of I-5 south off-ramp to SR 104
WMT5	4/3/12	I-5 ROW, west of I-5 south off-ramp to 220th Street SW
WMT6	4/3/12	I-5 ROW, east of I-5 south off-ramp to 220th Street SW
WMT7	4/3/12	I-5 ROW, east of 60th Avenue W
WMT8	4/3/12	I-5 ROW, east of I-5 and south of 212th Street SW
WLY3	4/5/12	I-5 ROW, northwest of I-5 and southwest of 52nd Avenue W
WLY4	4/9/12	Scriber Creek Park, southwest of Lynnwood Transit Center
WLY6	4/17/12	Northwest of I-5 and east of 208th Street SW

Table A-2. Dates of Delineation Surveys

Wetland	Date of Boundary Delineation	Location
WSE1	4/22/14	I-5 ROW, west of 1st Avenue NE & south of on- & off-ramps
WSE3	7/2/13	I-5 ROW, between I-5 and 5th Avenue NE
WSE4	5/30/14	Between 5th Avenue NE and Jackson Park Golf Course
WSE5	7/9/13	I-5 ROW, between I-5 and 5th Avenue NE
WSE6	7/9/13	I-5 ROW, between I-5 off-ramp and 5th Avenue NE
WSE7	7/11/13	I-5 ROW, between I-5 and Transit off-ramp
WSE8	5/30/14	Between 5th Avenue NE and Jackson Park Golf Course
WSH1	5/2/14	I-5 ROW, west of 5th Avenue NE and north of NE 145th Street
WSH2	4/22/14	I-5 ROW and extending east, west of 3rd Avenue NE
WSH3	3/27/14	I-5 ROW, south of NE 155th Street, west of fire station
WSH4	7/31/13	I-5 ROW, east of I-5 off-ramp to SR 104
WSH5	6/6/14	I-5 ROW, in cloverleaf south of SR 104
WMT1	6/2/14	I-5 ROW, in cloverleaf north of SR 104
WMT2	8/7/13	I-5 ROW, east of I-5 on-ramp from SR 104
WMT3	8/7/13	I-5 ROW, east of I-5 off-ramp to 236th Street SW
WMT4	NA	Outside of delineation survey area
WMT5	12/13/13	I-5 ROW, west of I-5 south off-ramp to 220th Street SW
WMT6	12/13/13	I-5 ROW, east of I-5 south off-ramp to 220th Street SW

Table A-2. Dates of Delineation Surveys

Wetland	Date of Boundary Delineation	Location
WMT7	4/30/14	I-5 ROW, east of 60th Avenue W
WMT8	NA	Outside of delineation survey area
WMT9	5/16/14	I-5 ROW, in ditch along off-ramp to 236th Street SW
WMT10	6/2/14	I-5 ROW, east of I-5 on-ramp from SR 104
WMT11	5/16/14	Edmonds School District property east of 237th Street SW
WLY3	4/30/14	I-5 ROW, northwest of I-5 and southwest of 52nd Avenue W
WLY4	7/16/14	Scriber Creek Park, southwest of Lynnwood Transit Center
WLY6	1/27/14	Northwest of I-5 and east of 208th Street SW
WLY7	7/16/14	North of Interurban Trail near 48th Avenue W
WLY8	7/16/14	South of Interurban Trail near 48th Avenue W

ATTACHMENT B

Photographs

Photograph 1. Wetland WSE1 facing north.

Photograph 2. Wetland WSE3, looking south at sample plot WSE3-SP1.

Photograph 3. Wetland WSE4, looking northeast at sample plot WSE4-SP1.

Photograph 4. Wetland WSE5 along 5th Avenue NE, facing south.

Photograph 5. Wetland WSE6, facing northeast.

Photograph 6. Wetland WSE7 from the south end, facing north.

Photograph 7. Wetland WSE8 from east of Thornton Creek, south of 5th Avenue NE crossing.

Photograph 8. Wetland WSH1 looking northeast at sample plot WSH1-SP1.

Photograph 9. Wetland WSH2 from the south end, facing north.

Photograph 10. Wetland WSH3 from the south side, facing north.

Photograph 11. Wetland WSH4 from the south end, facing north.

Photograph 12. Wetland WSH5 from the north end, facing southeast.

Photograph 13. Wetland WMT1 facing east side from culvert under SR 104 (McAleer Creek on left side of photograph).

Photograph 14. Wetland WMT2 from McAleer Creek, facing east.

Photograph 15. Wetland WMT3 looking north at sample plot WMT3-SP1.

Photograph 16. Wetland WMT4 from retaining wall, facing west.

Photograph 17. Wetland WMT5 from the center, facing south.

Photograph 18. Wetland WMT6 from the east side, facing west-southwest.

Photograph 19. Wetland WMT7 from the southeast, looking at sample plot WMT7-SP1.

Photograph 20. Wetland WMT8 from north looking south.

Photograph 21. Wetland WMT9 looking south.

Photograph 22. Wetland WMT10 from the southern end, looking north.

Photograph 23. Wetland WMT11 from the northern end, looking southeast.

Photograph 24. Wetland WLY3 facing west.

Photograph 25. Wetland WLY4 near 200th Street SW and Cedar Valley Road, facing southeast (Scriber Creek on left side of photograph).

Photograph 26. Wetland WLY6 from access road, facing north-northeast.

Photograph 27. Wetland WLY7 from the east.

Photograph 28. Wetland WLY8, western end.

Photograph 29. Thornton Creek near I-5 facing upstream (north).

Photograph 30. Stream SSE1 inlet near right-of-way fence.

Photograph 31. Stream SSH2 along 200th Street, west of I-5 facing upstream (west)..

Photograph 32. Stream SSH4 inlet within Wetland WSH5.

Photograph 33. McAleer Creek from culvert facing downstream (south).

Photograph 34. Stream SMT1 in the park from inlet at north end facing downstream (south).

Photograph 35. Scriber Creek facing downstream (south).

Photograph 36. Stream SLY1 approximately 100 feet downstream from inlet facing upstream (north).

ATTACHMENT C

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Seattle/King | Sampling Date: 3/9/12 & 04/22/14

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WSE1-SP1

Investigator(s): M. Maynard, C. Worsley; K. Seckel, C. Worsley | Section, Township, Range: S29, T26N, 4E

Landform (hillslope, terrace, etc.): toe of slope | Local relief (concave, convex, none): concave | Slope (%): 5

Subregion (LRR): A | Lat: 47.70557516600 | Long: -122.32901515600 | Datum: NAD83

Soil Map Unit Name: Urban land | NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: Sample plot is located at the edge of the wetted channel of stream SSE2 on the east side. Northwest of LB12 and WSE1-10A.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix lucida*	90	yes	FACW
2. *Frangula purshiana (rooted on WL boundary)*	10	no	FAC
3.			
4.			
50% = 50, 20% = 20	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Cornus sericea*	60	yes	FACW
2.			
3.			
4.			
5.			
50% = 30, 20% = 12	60	= Total Cover	
Herb Stratum (Plot size: 2M)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = _____, 20% = _____		= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	30	yes	FACU
2.			
50% = 15, 20% = 6	30	= Total Cover	

% Bare Ground in Herb Stratum 100

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE1-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/2	100					gr silt loam	
5-26	5GY 5/1	100					lo. sand	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☒ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	surface
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: 04/22/14 - inundation/flowing water (5 inches deep) in stream, at edge of sample pit. Saturated to the surface, and free water in pit to surface.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Seattle/King Sampling Date: 3/9/12 & 04/22/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WSE1-SP2

Investigator(s): M. Maynard, C. Worsley; K. Seckel, C. Worsley Section, Township, Range: S29, 26N, 4E

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): concave Slope (%): 20

Subregion (LRR): A Lat: 47.70558299100 Long: -122.32907995900 Datum: NAD83

Soil Map Unit Name: Urban land NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: The sample plot is located on the west side of the wetland on the hill slope to the I-5 off-ramp. West (approximately 8 feet), upslope of WSE1-10, and approximately 10 feet west of RB-12. Near base of Crataegus monogyna.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Crataegus monogyna*	30	yes	FACU
2. *Thuja plicata*	8	yes	FAC
3. *Pseudotsuga menziesii*	2	no	FACU
4.			
50% = 20, 20% = 8	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = , 20% =		= Total Cover	
Herb Stratum (Plot size: 2M)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = , 20% =		= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	75	yes	FACU
2.			
50% = 38, 20% = 15	75	= Total Cover	

% Bare Ground in Herb Stratum 95

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE1-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/1	100					Sa Loam	
5-18	2.5Y 4/3	100					Sand	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches):

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indiators were observed.
04/22/14 - No indicators of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Seattle/King | Sampling Date: 3/14/12 & 7/2/13

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WSE3-SP1

Investigator(s): M. Maynard, C. Worsley | Section, Township, Range: S20, T26N, 4E

Landform (hillslope, terrace, etc.): _____ | Local relief (concave, convex, none): concave | Slope (%): 1

Subregion (LRR): A | Lat: 47.72883384730 | Long: -122.32369209500 | Datum: NAD83

Soil Map Unit Name: Urban land | NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: WSE3-SP1 is located in a reed canarygrass patch at the north end of the wetland, approximately 5 feet west of the fence and 15 feet west of the power pole.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Phalaris arundinacea*	100	yes	FACW
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
50% = 50, 20% = 20	100	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	5	n/a*	FACU
2. _____			
50% = 2.5, 20% = 1	5	= Total Cover	

% Bare Ground in Herb Stratum 0 (7/2/13)

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: *excluded from calculations per chapter 2 guidance Rubus armeniacus is overhanging from upland. Species with 5% or less absolute coverage were not considered dominant. The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE3-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					Si Loam	
10-18	10YR 3/1	70					Gr Sa Loam	
	10YR 5/2	18	10YR 5/8	12	C	M	Gr Sa Loam	inclusions

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Lower layer has inclusions making up 30% of the layer that are a 10YR 5/2 gravelly sandy loam with 10YR 5/8 redoximorphic features.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	5
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Seattle/King Sampling Date: 3/14/12 & 7/2/13

Applicant/Owner: Sound Transit State: WA Sampling Point: WSE3-SP2

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S20, T26N, 4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): ____ Slope (%): 3

Subregion (LRR): A Lat: 47.72872167380 Long: -122.32377768800 Datum: NAD83

Soil Map Unit Name: Urban land NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: The sample plot is located west of the wetland in Himalayan blackberry, approximately 50 feet southwest of power pole and 20 feet west of the fence.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Crataegus monogyna*	20	yes	FACU
2. *ornamental maple*	15	n/a*	NL (UPL)
3. _____			
4. _____			
50% = 17.5, 20% = 7	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Rubus spectabilis*	5	no	FAC
2. _____			
3. _____			
4. _____			
5. _____			
50% = 2.5, 20% = 1	5	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
50% = _____, 20% = _____		= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	100	yes	FACU
2. _____			
50% = 50, 20% = 20	100	= Total Cover	

% Bare Ground in Herb Stratum 0 (leaf litter)

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: *Exluded from calculations. Species with 5% or less absolute coverage were not considered dominant. The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE3-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100					Gr Sa Loam	
6-18							Gr Sand	Fill

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Cobbles in the lower layer

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators observed. .

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Seattle/King Sampling Date: 7/2/13
Applicant/Owner: Sound Transit State: WA Sampling Point: WSE3-SP3
Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S20, T26N, 4E
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: Urban land NWI classification: upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: The sample plot is located approximately 3 feet west of the fence, between a cedar and birch, and approximatley 150 feet north-northwest of WSE3-SP2.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Betula papyrifera*	40	yes	FAC
2. *Thuja plicata*	25	yes	FAC
3. *Alnus rubra*	25	yes	FAC
4. _____			
50% = 45, 20% = 16.2	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____	5	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
50% = _____, 20% = _____		= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	80	yes	FACU
2. _____			
50% = 40, 20% = 16	80	= Total Cover	
% Bare Ground in Herb Stratum _____			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	75	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: *Exluded from calculations. Species with 5% or less absolute coverage were not considered dominant. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE3-SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	2.5Y 3/2	100					Gr Sa Loam	with cobbles
13-19	2.5Y 3/3	100					Gr Sa Sand	with cobbles

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Cobbles throughout profile

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators observed. The sample plot is located approximatley 4 feet west of the ditch. .

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Seattle/King Sampling Date: 4/29/14
Applicant/Owner: Sound Transit State: WA Sampling Point: WSE3-SP4
Investigator(s): M. Louther, C. Worsley Section, Township, Range: S20, T26N, 4E
Landform (hillslope, terrace, etc.): toe of I-5 fill slope Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: Urban land NWI classification: upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: Precipitation is greater than normal this late winter/early spring. The sample plot is located south of WSE3 between an unknown Acer sp to S and another unknown Acer sp to N. Alnus rubra and Pseudotsuga menziesii to NE, unknown Acer sp. to W, Sorbus aucuparia to ENE, and onions on slope to the west. At toe of I-5 fill slope.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer sp. (ornamental)*	60	n/a*	-
2. *Alnus rubra*	50	yes	FAC
3. *Pseudotsuga menziesii*	8	no	FACU
4. *Sorbus aucuparia*	5	no	NL (UPL)
50% = 32, 20% = 13	63	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Rubus spectabilis*	2	no	FAC
2. *Ilex aquifolium*	2	no	FACU
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
50% = 2, 20% = 1	4	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Alliuim sp (garden onion escapee)*	5	n/a*	-
2. *Phalaris arundinacea*	5	no	FACW
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
50% = 2.5, 20% = 1	5	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	30	yes	FACU
2. _____	_____	_____	_____
50% = 15, 20% = 6	30	= Total Cover	
% Bare Ground in Herb Stratum 90			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: *Exluded from calculations. Malus spp (ornamental) with 2% cover in tree stratum. Species with 5% or less absolute coverage were not considered dominant. The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE3-SP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	2.5Y 3/2	100					Gr Sa Loam	with cobbles
13-19	2.5Y 3/3	100					Gr Sa Sand	with cobbles

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Cobbles throughout profile

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators observed. The sample plot is located approximatley 4 feet west of the ditch. .

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Seattle/Kinig | Sampling Date: 3/14/12 & 7/2/13

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WSE4-SP1

Investigator(s): M. Maynard, C. Worsley | Section, Township, Range: S20, T26N, R4E

Landform (hillslope, terrace, etc.): bottom of linear depression | Local relief (concave, convex, none): none | Slope (%): ____

Subregion (LRR): A | Lat: 47.72905088520 | Long: -122.32339466800 | Datum: NAD83

Soil Map Unit Name: Urban land | NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: The sample plot is located on the east side of (adjacent to) standing water, approximately 35 feet east of the road and 25 feet west of the golf course. Between 2 western redcedars. Approximately 20 feet NNW of concrete monument.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Thuja plicata*	90	yes	FAC
2. *Ilex aquifolium*	2	no	NL (UPL)
3.			
4.			
50% = 46, 20% = 18.4	92	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Rubus spectabilis*	2	no	FAC
2.			
3.			
4.			
5.			
50% = 1, 20% = 0.4	2	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Athyrium filix femina*	80	yes	FAC
2. *Equisetum telmateia*	20	yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 50, 20% = 20	100	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Hedera helix*	5	no	NL (UPL)
2. *Rubus armeniacus*	2	no	FACU
50% = 2.5, 20% = 1	7	= Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE4-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/1	100					Mucky Lo	
5-11	10Y 4/1	92	10YR 4/3	8			Fine Sa Lo	
11-18	5Y 3/1	100					Gr Sa Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Partially decomposed leaf litter over soil. Organic lenses or layering, especially at 11 inches. Inclusions of silt loam in lower horizon (5Y 2/1). .

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	11
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Two inches of inundation near the sample plot (3/14/12 & 7/2/13

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Seattle/King | Sampling Date: 3/14/12 & 7/2/13

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WSE4-SP2

Investigator(s): M. Maynard, C. Worsley | Section, Township, Range: S20, T26N, R4E

Landform (hillslope, terrace, etc.): _____ | Local relief (concave, convex, none): none | Slope (%): 1

Subregion (LRR): A | Lat: 47.72910037860 | Long: -122.32329964000 | Datum: NAD83

Soil Map Unit Name: Urban land | NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: The sample plot is located approximately 18 feet east of WSE4-SP1 and approximately 10 feet west of the fence.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Thuja plicata*	50	yes	FAC
2.			
3.			
4.			
50% = 25, 20% = 10	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Rubus spectabilis*	15	yes	FAC
2. *Sambucus racemosa*	10	yes	FACU
3. *Prunus sp. (laurel)*	2	no	
4.			
5.			
50% = 13.5, 20% = 5.4	27	= Total Cover	
Herb Stratum (Plot size: 2M)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = _____, 20% = _____		= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	60	yes	FACU
2.			
50% = 30, 20% = 12	60	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE4-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/2						Gr Sa Loam	
9-18	10YR 2/1						Gr Sa Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Cobbles observed below at 16 inches and below. .

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Seattle/King | Sampling Date: 3/19/12 & 7/9/13

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WSE5-SP1

Investigator(s): M. Maynard, C. Worsley | Section, Township, Range: S20, T26N, R4E

Landform (hillslope, terrace, etc.): toe of road fill slope | Local relief (concave, convex, none): concave | Slope (%): 2

Subregion (LRR): A | Lat: 47.73129462180 | Long: -122.32368003200 | Datum: NAD83

Soil Map Unit Name: Urban land | NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: Sample plot is located approximately 70 feet south of North Branch Thornton Creek, at toe of I-5 slope, approximately 15 feet west of the fence.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	85	yes	FAC
2.			
3.			
4.			
50% = 42.5, 20% = 17	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Athyrium filix-femina*	20	yes	FAC
2. *Equisetum telmateia*	60	yes	FACW
3. *Scirpus mircrocarpus*	2	no	OBL
4. *Ranunculus repens*	2	no	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 42, 20% = 16.8	84	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	25	yes	FACU
2.			
50% = 12.5, 20% = 5	25	= Total Cover	
% Bare Ground in Herb Stratum _____			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: The 1988 Region 9 National Wetland Plant List and 1993 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE5-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-19	10YR 2/1	100					Gr Sa Loam	with cobbles. High organic content.

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☒ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Partially decomposed organic debris throughout the profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☒ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	16
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Water seeping into soil pit throughout profile. Soil saturation at surface on 7/9/13

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Seattle/King Sampling Date: 3/19/12

Applicant/Owner: Sound Transit State: WA Sampling Point: WSE5-SP2

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S20, T26N, R4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): 10

Subregion (LRR): A Lat: 47.73127973780 Long: -122.32376967800 Datum: NAD83

Soil Map Unit Name: Urban land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soil Present?	Yes	☐	No	☒	**Is the Sampled Area within a Wetland?** **Yes** ☐ **No** ☒
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: The sample plot is located approximately 22 feet east of I-5 guardrails and approximately 18 feet southwest of WSE5-SP1.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	90	yes	FAC
2.			
3.			
4.			
50% = 45, 20% = 18	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Equisetum telmateia*	30	yes	FACW
2. *Gallium aparine*	5	no	FACU
3. *Athyrium filix-femina*	2	no	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 18.5, 20% = 7.4	37	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	60	yes	FACU
2.			
50% = 30, 20% = 12	60	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	66	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: The 1988 Region 9 National Wetland Plant List and 1993 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE5-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1							Duff	partially decomposed
1-8	10YR 3/2	100					Gr Sa Loam	
8-12	10YR 4/2	100					Gr Sa Loam	inclusions of sand
12-20	2.5Y 5/2	80	10YR 5/4	20	C	M	Gr Sand	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Disturbed, some trash in upper layer.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	17
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	8

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Seattle/King Sampling Date: 3/19/12

Applicant/Owner: Sound Transit State: WA Sampling Point: WSE6-SP1

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S20, T26N, R4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): A Lat: 47.73230327350 Long: -122.32368177900 Datum: NAD83

Soil Map Unit Name: Urban land NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Hydric Soil Present?	Yes	☒	No	☐	
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: The sample plot is located approximately 75 feet south of 5th Ave/I-5 northbound off-ramp and approximately 18 feet east northeast of light pole. No paired plot for WSE6. Upland area to east and west consists of mowed fill slope for I-5 northbound off-ramp and 5th Avenue. Fill/disturbed soils with reed canarygrass and disturbance-tolerant roadside grasses.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Spirea douglasii*	60	yes	FACW
2. _____			
3. _____			
4. _____			
5. _____			
50% = 30, 20% = 12	60	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Phalaris arundinacea*	90	yes	FACW
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
50% = 45, 20% = 18	90	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. _____			
2. _____			
50% = _____, 20% = _____		= Total Cover	
% Bare Ground in Herb Stratum _____			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: The 1988 Region 9 National Wetland Plant List and 1993 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE6-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/1	100					Gr Si Loam	
9-18	10YR 4/2	100					Gr Sa Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☐

Remarks: Soils appear to have been disturbed. There are inclusions of sand in the lower layer and litter and debris throughout the profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	surface
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: The sample plot is adjacent to a microdepression with 1 inch of inundation.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Seattle/King | Sampling Date: 3/19/12 & 7/11/13

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WSE7-SP1

Investigator(s): M. Maynard, C. Worsley | Section, Township, Range: S20, T26N, R4E

Landform (hillslope, terrace, etc.): _____ | Local relief (concave, convex, none): concave | Slope (%): 1

Subregion (LRR): A | Lat: 47.73291615630 | Long: -122.32406708600 | Datum: NAD83

Soil Map Unit Name: Urban land | NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: The sample plot is located approximately 20 feet south southeast of tree in the wetland, east side of the southern cattail patch.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ornamental maple*	15	n/a*	-
2.			
3.			
4.			
50% = 7.5, 20% = 3	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Typha latifolia*	70	yes	OBL
2. *Agrostis capillaris*	40	yes	FAC
3. *Festuca rubra*	20	no	FAC
4. *Carex stipata*	20	no	OBL
5. *Lemna minor*	60	yes	OBL
6. *Holcus lanatus*	10	no	FAC
7. *Juncus effusus*	10	no	FACW
8.			
9.			
10.			
11.			
50% = 115, 20% = 46	230	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	25	yes	FACU
2.			
50% = 12.5, 20% = 5	25	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: *excluded from calculations per chapter 2 guidance The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation. One tree in wetland (ornamental maple).

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE7-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-6	10YR 2/1						Si Loam	
6-20	10YR 2/1						Gr Sa Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Inclusions of sand in the lower horizon. High concentrations of organic matter.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☒	No	☐	Depth (inches):	6
Water Table Present?	Yes	☒	No	☐	Depth (inches):	surface
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: 3 inches of inundation during 7/11/2013 site investigation

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Seattle/King Sampling Date: 3/19/12

Applicant/Owner: Sound Transit State: WA Sampling Point: WSE7-SP2

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S20, T26N, R4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): convex Slope (%): 2

Subregion (LRR): A Lat: 47.73291045000 Long: -122.32400494100 Datum: NAD83

Soil Map Unit Name: Urban land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: The sample plot is located east of the wetland in mowed grass, approximately 30 feet southeast of ornamental maple tree. No SP flag because area is mowed.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Agrostis capillaris*	40	yes	FAC
2. *Festuca rubra*	30	yes	FAC
3. *Holcus lanatus*	30	yes	FAC
4. *Schedonorus phoenix*	5	no	FACU
5. *Taraxicum officinale*	5	no	FACU
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
50% = 55, 20% = 22	110	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	10	yes	FACU
2. _____			
50% = 5, 20% = 2	10	= Total Cover	
% Bare Ground in Herb Stratum 0			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 – Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0[1]

☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ 5 - Wetland Non-Vascular Plants[1]

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: The 1988 Region 9 National Wetland Plant List and 1993 Supplement were used for this delineation. Dominant herbaceous species are all FAC disturbance-tolerant plants commonly found in maintained road ROW.

Project Site: Lynnwood Link Extension

SOIL Sampling Point: WSE7-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	100					Loam	
4-14	10YR 3/2	100					Gr Sa Loam	with cobbles

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Profile is compacted. Various inclusions. .

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☐	Depth (inches):	
Water Table Present?	Yes	☐	No	☐	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	4

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Seeping in at 4 inches below the surface. Compacted soils are likely creating a restrictive layer.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Seattle/King | Sampling Date: 3/21/12 & 7/11/13

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WSE8-SP1

Investigator(s): M. Maynard, C. Worsley | Section, Township, Range: S20, T26N, R4E

Landform (hillslope, terrace, etc.): _____ | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): A | Lat: 47.73149499190 | Long: -122.32336785500 | Datum: NAD83

Soil Map Unit Name: Urban land | NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: The sample plot is located approximately 15 feet northeast of NB Thornton Creek 5th Ave crossing. No paired upland sample plot.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	35	yes	FAC
2. *Salix lucida*	80	yes	FACW
3.			
4.			
50% = 57.5, 20% = 23	115	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Salix sitchensis*	40	yes	FACW
2. *Rubus spectabilis*	25	yes	FAC
3.			
4.			
5.			
50% = 32.5, 20% = 13	65	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Athyrium filix-femina*	30	yes	FAC
2. *Equisetum telmateia*	5	no	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 10, 20% = 4	35	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	20	yes	FACU
2.			
50% = 10, 20% = 4	20	= Total Cover	

% Bare Ground in Herb Stratum 80

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE8-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					v. Mu Loam	
10-20	10YR 3/1	100					v. Mu Loam	
20-22	10Y 3/1	100					Gr Sand	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☒ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Sulfidic odor. Soil from 0 to 20 inches has high organic content with varying degrees of decomposition.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☒ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	8
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soils saturated to the surface (3/21/12 & 7/9/13)

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Seattle/King Sampling Date: 7/11/13
Applicant/Owner: Sound Transit State: WA Sampling Point: WSE8-SP2
Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S20, T26N, R4E
Landform (hillslope, terrace, etc.): hill slope Local relief (concave, convex, none): concave Slope (%): 50
Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: Urban land NWI classification: Upland forest
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: The sample plot is located approximately 25 feet west of perimeter trail and chain link fence, east of the wetland on the slope.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	90	yes	FAC
2.			
3.			
4.			
50% = 45, 20% = 18	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Sorbus aucuparia*	10	yes	NO
2. *Ilex aquifolium*	5	no	FACU
3. *Rubus spectabilis*	20	yes	FAC
4.			
5.			
50% = 17.5, 20% = 7	35	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Ranunculus repens*	60	yes	FAC
2. *Geum macrophyllum*	2	no	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 31, 20% = 12.4	62	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	35	yes	FACU
2. *Hedera helix*	5	yes	FACU
50% = 20, 20% = 8	40	= Total Cover	
% Bare Ground in Herb Stratum 20			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	60	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSE8-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/1	100					Sa Loam	with cobbles
2-16	10YR 3/2	100					Sa Loam	
16-18	2.5Y 5/3	100					Sa Loam	gravel and sand in layer, compacted

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary indicators were observed

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Shoreline/King | Sampling Date: 3/15/12 & 7/16/13

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WSH1-SP1

Investigator(s): M. Maynard, C. Worsley | Section, Township, Range: S17, T26N, R4E

Landform (hillslope, terrace, etc.): _____ | Local relief (concave, convex, none): concave | Slope (%): 2

Subregion (LRR): A | Lat: 47.73447093280 | Long: -122.32399213200 | Datum: NAD83

Soil Map Unit Name: Urban Land | NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: The sample plot is located in the northern arm of the wetland, approximately 15 feet south southwest of a birch tree. Heavy rains during site investigation and more than average precipitation for the five days prior.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Betula papyrifera(overhaning from boundary)*	30	yes	FAC
2. _____	_____	____	____
3. _____	_____	____	____
4. _____	_____	____	____
50% = 15, 20% = 6	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. _____	_____	____	____
2. _____	_____	____	____
3. _____	_____	____	____
4. _____	_____	____	____
5. _____	_____	____	____
50% = _____, 20% = _____	_____	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Juncus effusus*	75	yes	FACW
2. *Equisetum telmatiea*	5	no	FACW
3. *Agrostis capillaris*	15	no	FAC
4. *Ranunculus repens*	35	yes	FACW
5. *Mimulus moschatus*	25	yes	OBL
6. *Hypochaeris radicata*	2	no	FACU
7. *Taraxacum officinale*	2	no	FACU
8. *Trifolium pratense*	5	no	FACU
9. *Holcus lanatus*	2	no	FAC
10. *Rorippa nasturtium-aquaticum*	25	yes	OBL
11. *Equisetum arvense*	50	yes	FAC
50% = 120.5, 20% = 48.2	241	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus ursinus*	2	no	FACU
2. *Rubus armeniacus (overhanging from upland)*	8	n/a*	FACU
50% = 5, 20% = 2	10	= Total Cover	

% Bare Ground in Herb Stratum 20

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	6	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: *excluded from calculations per chapter 2 guidance Species with 5% or less absolute coverage were not considered dominant. The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH1-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	100					Si Loam	
8-18	2.5Y 4/1	95	2.5Y 4/6	5	C	M	Gr Sa Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Inclusions of 10YR 2/1 sandy loam from 15 inches and below.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	7
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Sample plot is adjacent to standing water (1 inch deep). Soils were saturated to 4 inches below the surface during 7/16/13 site investigation.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Shoreline/King Sampling Date: 3/15/12
Applicant/Owner: Sound Transit State: WA Sampling Point: WSH1-SP2
Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S17, T26N, R4E
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): A Lat: 47.73441940360 Long: -122.32406798700 Datum: NAD83
Soil Map Unit Name: Urban Land NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: The sample plot is located northwest of the wetland (between north and west arms) on a grass slope, between north and west arms. Heavy rains during site investigation and more than average precipitation for the five days prior.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra (overhanging from S. WL boundary)*	40	n/a*	FAC
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Festuca rubra*	50	yes	FAC
2. *Agrostis capillaris*	50	yes	FAC
3. *Schedonorus phoenix*	20	no	FAC
4. *Achillea millefolium*	10	no	FACU
5. *Taraxacum officinale*	5	no	FACU
6. *Hypochaeris radicata*	5	no	FACU
7. *Holcus lanatus*	5	no	FAC
8. *Trifolium repens*	5	no	FAC
9. *Trifolium pratense*	5	no	FACU
10. _____			
11. _____			
50% = 77.5, 20% = 31	155	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	2	no	FACU
2. _____			
50% = 1, 20% = 0.4	2	= Total Cover	
% Bare Ground in Herb Stratum _____			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: *excluded from calculations per chapter 2 guidance Area is mowed/maintained. Moss in grass. Species with 5% or less absolute coverage were not considered dominant. The 1988 Region 9 National Wetland Plant List and 1993 Supplement were used for this delineation. Dominant herbaceous species are all FAC disturbance-tolerant plants commonly found in maintained road ROW.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH1-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/1	100					Sa Loam	
5-15	2.5Y 3/2	100					Gr Sa Loam	
15-18	2.5Y 4/2	85	10YR 4/6	15	C	M	Gr Sa Loam	with cobbles

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Garbage debris at 12 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	16
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	10

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Water seeping in to the pit at 10 inches.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Shoreline/King | Sampling Date: 3/15/12 & 3/26/14

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WSH2-SP1

Investigator(s): M. Maynard, C. Worsley; K. Seckel, C. Worsley | Section, Township, Range: S17, T26N, R4E

Landform (hillslope, terrace, etc.): swale | Local relief (concave, convex, none): concave | Slope (%): 2

Subregion (LRR): A | Lat: 47.73871180380 | Long: -122.32704887700 | Datum: NAD83

Soil Map Unit Name: Urban Land | NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: Located in center of swale, approximately 8 feet west of sound wall. Heavy rains during site investigation and more than average precipitation for the five days prior.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50% = ____, 20% = ____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = ____, 20% = ____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Juncus effusus*	50	yes	FACW
2. *Scirpus microcarpus*	5	no	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11. *Unknown grasses*	90	n/a*	-
50% = 27.5, 20% = 11	55	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1.			
2.			
50% = ____, 20% = ____		= Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: *The dominant vegetation (grasses) is mowed and unidentifiable. May be a WSDOT mix. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH2-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 2/2	70	5YR 3/4	25	C	M	Gr Sa Loam	
			7.5YR 5/8	5	C	M		
11-20	10YR 4/2	85	10YR 5/8	15	C	M	Silt Loam	Compacted

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Lower layer appears to be disturbed and contains inclusions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☒	No	☐	Depth (inches):	4
Water Table Present?	Yes	☒	No	☐	Depth (inches):	surface
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: 03/26/14 - Same conditions observed with 4 inches standing water.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Shoreline/King | Sampling Date: 3/15/12 & 3/26/14

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WSH2-SP2

Investigator(s): M. Maynard, C. Worsley; K. Seckel, C. Worsley | Section, Township, Range: S17, T26N, R4E

Landform (hillslope, terrace, etc.): _____ | Local relief (concave, convex, none): convex | Slope (%): 1

Subregion (LRR): A | Lat: 47.73875709240 | Long: -122.32704648000 | Datum: NAD83

Soil Map Unit Name: Urban Land | NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: The sample plot is located approximately 3 feet north of the wetland boundary and 4 feet west of the sound wall. Heavy rains during site investigation and more than average precipitation for the five days prior. Sample plot boundary limited by soundwall and wetland boundary.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Galium aparine*	5	no	FACU
2. *Geranium molle*	2	no	NL (UPL)
3. *Holcus lanatus*	2	no	FAC
4. *Echinochloa crus-galli*	10	yes	FAC
5. *Cirsium arvense*	5	no	FAC
6. *Pteridium aquilinum*	8	no	FACU
7. *Schedonorus arundinaceus*	10	yes	FAC
8. *Vicia americana*	2	no	FAC
9. _____			
10. _____			
11. *Unknown grass (likely mostly AGCA)*	80	n/a*	-
50% = 22, 20% = 9	44	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	20	yes	FACU
2. _____			
50% = 10, 20% = 4	20	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	67	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: *The dominant vegetation (grasses) is mowed and unidentifiable. May be a WSDOT mix. Wood chips near soundwall. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH2-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					Loam	
2-6	10YR 2/2	100					Gr Sa Loam	
6-18	10YR 3/2	96	10YR 6/8	2			Gr Sa Loam	with cobbles
			7.5YR 5/8	2				

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Soil is disturbed, pieces of concrete.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	15
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	10

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soils were saturated at 10 inches and below. This was during a heavy rain event.
3/26/14 - no indicators of wetland hydrology were observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Shoreline/King Sampling Date: 3/26/14
Applicant/Owner: Sound Transit State: WA Sampling Point: WSH2-SP3
Investigator(s): K. Seckel, C. Worsley Section, Township, Range: S17, T26N, R4E
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: Urban Land NWI classification: PFO
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Hydric Soil Present?	Yes	☒	No	☐	
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: Precipitation is greater than normal this late winter/early spring. Sample plot is located approximately 6 feet southeast of weeping willow and approximately 4 feet northwest of boundary flag WSH2-2. Area is PFO due to one large spreading weeping willow.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix babylonica*	80	yes	FACW
2. _____			
3. _____			
4. _____			
50% = 40, 20% = 16	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Prunus laurocerasus (overhaning from upland)*	5	n/a*	NL (UPL)
2. _____			
3. _____			
4. _____			
5. _____			
50% = 2.5, 20% = 1	5	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			-
50% = _____, 20% = _____		= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	95	yes	FACU
2. _____			
50% = 48, 20% = 19	95	= Total Cover	
% Bare Ground in Herb Stratum 70			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 – Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0[1]
☒ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Wetland Non-Vascular Plants[1]
☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: *excluded from calculations per chapter 2 guidance Rubus armeniacus is acting hydrophytically. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH2-SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR 2/1	70					si. loam	
15-18	10YR 2/2	20					loam	
15-18	10YR 5/1	80					loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☒ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Sulfidic odor.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	surface
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Small pockets of inundation in adjacent microdepressions.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Shoreline/King Sampling Date: 3/26/14
Applicant/Owner: Sound Transit State: WA Sampling Point: WSH2-SP4
Investigator(s): K. Seckel, C. Worsley Section, Township, Range: S17, T26N, R4E
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: Urban Land NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes** ☐	**No** ☒
Hydric Soil Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: Precipitation is greater than normal this late winter/early spring. Sample plot is located approximately 4 feet east of soundwall and approximately 10 feet south of wetland. Sample plot boundary is confined by soundwall.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix babylonica*	50	yes	FACW
2.			
3.			
4.			
50% = 25, 20% = 10	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			-
50% = _____, 20% = _____		= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	80	yes	FACU
2.			
50% = 40, 20% = 16	80	= Total Cover	

% Bare Ground in Herb Stratum 70

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks: The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH2-SP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/2	100					Loam	
1-3	10YR 5/2	35	10YR 5/8	5	C	M	lo. sand	
	10YR 3/2	60						
3-13	10YR 5/2	45	10YR 5/8	10	C	M	lo. sand	
13-18	10YR 4/1	70	10YR 5/8	5	C	M	sa. loam	
	10YR 5/1	25						

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Shoreline/King Sampling Date: 4/12/14
Applicant/Owner: Sound Transit State: WA Sampling Point: WSH2-SP5
Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S17, T26N, R4E
Landform (hillslope, terrace, etc.): undulating topography Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: Urban Land NWI classification: PEM
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Hydric Soil Present?	Yes	☒	No	☐	
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: Precipitation is greater than normal this late winter/early spring. Wetland was previously identified as PWSH1, and sample plot was previously named PWSH1-SP1. Sample plot is located approximately 8 feet WNW of boundary flag PWSH1-3. Approximately 5 feet east of soundwall and approximately 20 feet north of poplar.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Phalaris arundinacea*	70	yes	FACW
2. *Cirsium arvense*	5	no	FAC
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			-
50% = 38, 20% = 15	75	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	50	yes	FACU
2. _____			
50% = 25, 20% = 10	50	= Total Cover	
% Bare Ground in Herb Stratum 5			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☒ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: Rubus armeniacus is acting hydrophytically. Moss covers approximately 20 percent. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH2-SP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					gr. sa. loam	
6-15	2.5Y 5/2	80	7.5YR 3/4	20	C	M	gr. sa. loam	
15-18	2.5Y 5/1	80	7.5 YR 4/6	20	C	M	gr. sa. loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	16
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	8

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Shoreline/King Sampling Date: 4/12/14
Applicant/Owner: Sound Transit State: WA Sampling Point: WSH2-SP6
Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S17, T26N, R4E
Landform (hillslope, terrace, etc.): flat, slightly undulating topography Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: Urban Land NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	
Hydric Soil Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☐ **No** ☒
Wetland Hydrology Present?	Yes	☐	No	☒	

Remarks: Precipitation is greater than normal this late winter/early spring. Wetland was previously identified as PWSH1, and sample plot was previously named PWSH1-SP2. Sample plot is located SE of wetland in lawn, approximately 35 feet W of NW corner of parking lot and 20 feet E of soundwall.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Holcus lanatus*	40	yes	FAC
2. *Taraxacum officinale*	10	no	FACU
3. *Hypochaeris radicata*	30	yes	FACU
4. *Trifolium repens*	5	no	FAC
5. *Schedonorus arundinaceus*	15	no	FAC
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			-
50% = 50, 20% = 20	100	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. _____			
2. _____			
50% = _____, 20% = _____		= Total Cover	
% Bare Ground in Herb Stratum 0			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks: The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH2-SP6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					gr. sa. loam	
6-17	10YR 4/1	85	7.5YR 3/4	15	C	M	gr. sa. loam	w. some cobbles

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Soils appear to be disturbed. Some trash in sample pit.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches):		
Water Table Present?	Yes ☐	No ☒	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes ☒	No ☐	Depth (inches):	16	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Shoreline/King Sampling Date: 4/12/14
Applicant/Owner: Sound Transit State: WA Sampling Point: WSH2-SP7
Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S17, T26N, R4E
Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: Urban Land NWI classification: PEM
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Hydric Soil Present?	Yes	☒	No	☐	
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: Precipitation is greater than normal this late winter/early spring. Wetland was previously identified as PWSH1, and sample plot was previously named PWSH1-SP3. Sample plot is located in the NW corner of lawn, approximately 3 feet from maintained edge.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Schedonorus arundinaceus*	5	no	FAC
2. *Poa pratensis*	20	yes	FAC
3. *Hypochaeris radicata*	5	no	FACU
4. *Taraxacum officinale*	5	no	FACU
5. *Festuca rubra*	30	yes	FAC
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			-
50% = 33, 20% = 13	65	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. _____			
2. _____			
50% = _____, 20% = _____		= Total Cover	
% Bare Ground in Herb Stratum 0			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☒ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: Moss covers approximately 40 percent. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH2-SP7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100					gr. sa. loam	
8-10	10YR 3/2	80	7.5YR 3/4	20	C	M	gr. sa. loam	
10-17	10YR 2/1	80	10YR 4/6	20	C	M	gr. sa. loam	
17+							hard pan	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: trash in soil profile (glass)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	13
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	11

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Shoreline/King | Sampling Date: 3/15/12 & 3/26/14

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WSH3-SP1

Investigator(s): M. Maynard, C. Worsley; K. Seckel, C. Worsley | Section, Township, Range: S17, T26N, R4E

Landform (hillslope, terrace, etc.): _____ | Local relief (concave, convex, none): none | Slope (%): 2

Subregion (LRR): A | Lat: 47.74089017690 | Long: -122.32828328200 | Datum: NAD83

Soil Map Unit Name: Urban Land | NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: The sample plot is located approximately 5 feet west of the chainlink fence. Heavy rains during site investigation and more than average precipitation for the five days prior.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Thuja plicata*	15	yes	FAC
2.			
3.			
4.			
50% = 7.5, 20% = 3	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Phalaris arundinacea*	100	yes	FACW
2. *Equisetum telmateia*	15	no	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 57.5, 20% = 23	115	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	10	yes	FACU
2.			
50% = 5, 20% = 2	10	= Total Cover	

% Bare Ground in Herb Stratum 2

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	66	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH3-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/2	100					Gr Sa Loam	
5-19	10YR 4/2	70	7.5YR 4/6	30			Gr Sa Loam	with cobbles

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soils were dry below 9 inches below the surface when the pit was dug. It filled to 7 inches below the surface.
3/26/14 - no surface water, water table was at 12 inches below the surface, and soil saturation was at 11 inches below the surface.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Shoreline/King Sampling Date: 3/15/12 & 3/26/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WSH3-SP2

Investigator(s): M. Maynard, C. Worsley; K. Seckel, C. Worsley Section, Township, Range: S17, T26N, R4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): 2

Subregion (LRR): A Lat: 47.74094607150 Long: -122.32831303000 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: Heavy recent rains prior to delineations. The sample plot is located north of the wetland, approximately 6 feet west of the fence and 15 feet north of WSH3-SP1. Heavy rains during site investigation and more than average precipitation for the five days prior.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ornamental cedar*	15	n/a*	-
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
50% = _____, 20% = _____	_____	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Ornamental shrub*	5	n/a*	-
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
50% = _____, 20% = _____	_____	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Phalaris arundinacea*	100	yes	FACW
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
50% = 50, 20% = 20	100	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	5	no	FACU
2. _____	_____	_____	_____
50% = _____, 20% = _____	_____	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: The ornamental species are located outside of the fence in a landscaped area. Species with 5% or less absolute coverage were not considered dominant. Thuja plicata overhanging from wetland. Moss covers 80%. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH3-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 3/2	100					Gr Sa Loam	
11-18	10YR 4/1	70	7.5YR 5/8	30			Gr Sa Loam	with cobbles

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Debris in soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	12
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Heavy rains likely impacted the hydrology at the time of the site visit. Seeping from above.
3/26/14 -No indicators of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Shoreline/King Sampling Date: 3/21/12 & 7/31/13

Applicant/Owner: Sound Transit State: WA Sampling Point: WSH4-SP1

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S05, T26N, R4E

Landform (hillslope, terrace, etc.): linear depression Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): A Lat: 47.77536223460 Long: -122.31685488000 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: Sample plot is located approximately 8 feet northwest of flag WSH4-5.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	90	yes	FAC
2.			
3.			
4.			
50% = 45, 20% = 18	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Rubus spectabilis*	40	yes	FAC
2.			
3.			
4.			
5.			
50% = 20, 20% = 8	40	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Phalaris arundinacea*	45	yes	FACW
2. *Glyceria striata*	15	no	OBL
3. *Equisetum telmataeia*	40	yes	FACW
4. *Ranunculus repens*	5	no	FACW
5. *Athyrium filix-femina*	40	yes	FAC
6.			
7.			
8.			
9.			
10.			
11.			
50% = 55, 20% = 22	110	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	40	yes	FACU
2.			
50% = 20, 20% = 8	40	= Total Cover	

% Bare Ground in Herb Stratum

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: The 2012 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH4-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17	10YR 2/1	100					Si Loam	high organics
17-20	10YR 3/1	70					v Sa Loam	with gravel and cobbles
	10YR 4/2	30						

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☒ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☒	No	☐	Depth (inches):	2
Water Table Present?	Yes	☒	No	☐	Depth (inches):	surface
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Sulfidic odor in portions of wetland.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Shoreline/King Sampling Date: 3/21/12 & 7/31/13

Applicant/Owner: Sound Transit State: WA Sampling Point: WSH4-SP2

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S05, T26N, R4E

Landform (hillslope, terrace, etc.): small terrace (shelf) on hillslope Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): A Lat: 47.77541550900 Long: -122.31689681300 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: The sample plot is located approximately 18 feet upslope of WSH4-SP1 on a shelf of the hillslope. The overall hillslope is an approximately 30% slope.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	40	yes	FAC
2. *Pseudotsuga menzesii*	25	yes	FACU
3.			
4.			
50% = 22.5, 20% = 9	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = , 20% =		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Equisetum telmateia*	10	yes	FACW
2. *Calystegia sepium*	20	yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 15, 20% = 6	30	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	90	yes	FACU
2.			
50% = 45, 20% = 9	90	= Total Cover	

% Bare Ground in Herb Stratum

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2012 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation. Red alder is overhanging from wetland.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH4-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100					Gr Sa Loam	
6-19	2.5Y 4/2	100					Gr Sa Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators are present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Shoreline/King Sampling Date: 7/31/13
Applicant/Owner: Sound Transit State: WA Sampling Point: WSH4-SP3
Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S05, T26N, R4E
Landform (hillslope, terrace, etc.): linear depression Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: Urban Land NWI classification: PEM
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Hydric Soil Present?	Yes	☒	No	☐	
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: Sample plot is located approximately 25 feet west-northwest from the northwest corner of the red house, east of ditch in the wetland, approximately 15 feet west-northwest of flag WSH4-9.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Equisetum telmataeia*	90	yes	FACW
2. *Athyrium filix-femina*	55	yes	FAC
3. *Chamerion angustifolium*	5	no	FACU
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
50% = 75, 20% = 30	150	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	15	yes	FACU
2. _____			
50% = 7.5, 20% = 3	15	= Total Cover	
% Bare Ground in Herb Stratum 0			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	67	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: The 2012 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH4-SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR 2/1	100					Si Loam	high organics
15-20	10YR 2/1	80					Si Loam	
	10YR 4/2	20					Gr Sa Loam	with cobbles

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Organics in first layer include partially decomposed woody pieces.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	15
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Shoreline/King Sampling Date: 7/16/13
Applicant/Owner: Sound Transit State: WA Sampling Point: WSH5-SP1
Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S05, T26N, R4E
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: Urban Land NWI classification: PFO
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Hydric Soil Present?	Yes	☒	No	☐	
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: The data was orignially collected in March of 2012, but the original sample plot could not be relocated, so data was recollected. The sample plot is located on the west side of McAleer Creek, approximately 30 feet west northwest of the outlet.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix scouleriana*	30	yes	FAC
2. *Alnus rubra*	5	no	FAC
3. *Betula papyrifera*	45	yes	FAC
4. _____	_____	_____	_____
50% = 40, 20% = 16	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Sorbus aucuparia*	2	no	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
50% = 1, 20% = 0.4	_____	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Phalaris arundinacea*	90	yes	FACW
2. *Equisetum telmateia*	50	yes	FACW
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
50% = 70, 20% = 28	140	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	5	no	FACU
2. _____	_____	_____	_____
50% = 2.5, 20% = 1	5	= Total Cover	
% Bare Ground in Herb Stratum 10			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 – Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Wetland Non-Vascular Plants[1]
☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH5-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100					Sa Loam	
10-18	10Y 3/1	90	10YR 4/6	10	C	M	Gr Sand	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Redox concentrations in upper part of lower layer.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	8
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Shoreline/King Sampling Date: 3/21/12 & 7/16/13

Applicant/Owner: Sound Transit State: WA Sampling Point: WSH5-SP2

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S05, T26N, R4E

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 45

Subregion (LRR): A Lat: 47.77676142620 Long: -122.31717815600 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: The sample plot is located west of the wetland and McAleer Creek, on the I-5 slope.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	80	yes	FAC
2. *Pdeudotsuga menzeisii*	20	yes	FACU
3.			
4.			
50% = 50, 20% = 20	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = , 20% =		= Total Cover	
Herb Stratum (Plot size: 2M)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = , 20% =		= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	75	yes	FACU
2. *Hedera helix*	2	no	NL (UPL)
50% = 38.5, 20% = 15.4	77	= Total Cover	

% Bare Ground in Herb Stratum

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: Moss covers approximately 40% of the sample plot. The 1988 Region 9 National Wetland Plant List and 1993 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WSH5-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/3	100					Loam	
9-18	5Y 5/2	85	10YR 4/6	15	C	M	Gr Sa Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	9

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 3/27/12 & 7/31/13

Applicant/Owner: Sound Transit State: WA Sampling Point: WMT1-SP1

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S32, T27N, R4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): convex Slope (%): 2

Subregion (LRR): A Lat: 47.77842833220 Long: -122.31656532200 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: **The sample plot is located approximately 40 feet southwest of McAleer Creek inlet/culvert. It is located on the northwest side of the wetland, approximately 10 feet west of McAleer Creek.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	60	yes	FAC
2. *Betula sp*	15	yes	-
3. _____	_____	_____	_____
4. _____	_____	_____	_____
50% = 37.5, 20% = 15	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Rubus spectabilis*	25	yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
50% = 12.5, 20% = 5	25	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Equisetum telmateia*	75	yes	FACW
2. *Athyrium filix-femina*	50	yes	FAC
3. *Ranunculus repens*	35	yes	FACW
4. *Polystichum munitum*	10	no	FACU
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
50% = 85, 20% = 34	170	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	25	yes	FACU
2. _____	_____	_____	_____
50% = 7.5, 20% = 3	25	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT1-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100	-	-	-	-	Silt Loam	
5-9	10YR 4/1	80	10YR 4/6	20	C	M	Gr Sa Loam	
9-18	10Y 4/1	60	10YR 4/6	40	C	M	v. Sa Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	13
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soil saturation was at 15 inches below the surface during the 7/31/13 site investigation.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 3/27/12 & 7/31/13

Applicant/Owner: Sound Transit State: WA Sampling Point: WMT1-SP2

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S32, T27N, R4E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 18

Subregion (LRR): A Lat: 47.77849900740 Long: -122.31659300400 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **The sample plot is located approximately 40 feet west of McAleer Creek inlet/culvert, on the slope northwest of the wetland.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	65	yes	FAC
2. *Pseudotsuga menzeisii*	8	no	FACU
3.			
4.			
50% = 36.5, 20% = 14.6	73	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = , 20% =		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Polystichum munitum*	5	no	FACU
2. *Equisetum telmateia*	15	yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 10, 20% = 4	20	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	80	yes	FACU
2.			
50% = 40, 20% = 16	80	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Moss covers approximately 40% of the soil surface. Species with 5% or less absolute coverage were not considered dominant. The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT1-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/2	100					Gr Sa Loam	
9-18	2.5Y 5/2	70	7.5YR 4/6	30	C	M	Gr Sa Loam	Mostly sand

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No hydrology was present during 3/27/12 site investigation

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: ML Terrace/Snohomish | Sampling Date: 3/27/12 & 8/7/13

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WMT2-SP1

Investigator(s): M. Maynard, C. Worsley | Section, Township, Range: S32, T27N, R4E

Landform (hillslope, terrace, etc.): mid slope | Local relief (concave, convex, none): none | Slope (%): 50

Subregion (LRR): A | Lat: 47.77953531010 | Long: -122.31607243300 | Datum: NAD83

Soil Map Unit Name: Urban Land | NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: **The sample plot is located on the slope east of McAleer Creek, approximately 40 feet from the stream and 30 feet west of the right-of-way fence, approximately 10 feet northwest of wetland flag WMT2-10.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	70	yes	FAC
2. *Ilex aquifolium*	5	no	NL (UPL)
3.			
4.			
50% = 22.5, 20% = 9	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = ____, 20% = ____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Equisetum hymale*	90	yes	FACW
2. *Rubus ursinus*	70	yes	FACU
3. *Equisetum telmateia*	20	yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 90, 20% = 36	180	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	25	yes	FACU
2.			
50% = 12.5, 20% = 5	25	= Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species	90	x2 =	180
FAC species	40	x3 =	120
FACU species	80	x4 =	320
UPL species	5	x5 =	25
Column Totals:	215 (A)		645 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☒ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT2-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					Sa loam	
6-12	2.5Y 4/2		10YR 5/6		C	M	Gr Sa Loam	
12+								Extremely compacted soil

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Very compacted soils

Depth (inches): at 12 inches below the surface

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Restrictive layer/extremely compated at 12 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	10
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	0-12

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soils were saturated from the surface to 12 inches below the surface (water was seeping in from the upgradient side of the sample plot). Water seeping in from upgradient side. .

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: ML Terrace/Snohomish | Sampling Date: 3/27/12 & 8/7/13

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WMT2-SP2

Investigator(s): M. Maynard, C. Worsley | Section, Township, Range: S32, T27N, R4E

Landform (hillslope, terrace, etc.): flat bench | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): A | Lat: 47.77955318300 | Long: -122.31597964400 | Datum: NAD83

Soil Map Unit Name: Urban Land | NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **The sample plot is located east of the wetland on a flat bench, approximately 5 feet southwest of the right-of-way fence, approximately 20 feet (60 degrees) northeast of flag WMT2-10.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pseudotsuga menzeisii*	65	yes	FACU
2. *Prunus emerginata*	10	no	FACU
3. *Populus balsamifera*	10	no	FAC
4. *Acer spp.*	5	no	-
50% = 45, 20% = 18	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = , 20% =		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Polystichum munitum*	5	no	FACU
2. *Rubus ursinus*	70	yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 37.5, 20% = 15	75	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	40	yes	FACU
2.			
50% = 20, 20% = 8	40	= Total Cover	

% Bare Ground in Herb Stratum

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT2-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-2							Duff	
2-10	10YR 3/3	100					Sa Loam	with cobbles
10-18	10YR 3/4	100					Sa Loam	with cobbles

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Inclusions of other colors from 2-8 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 8/7/13
Applicant/Owner: Sound Transit State: WA Sampling Point: WMT2-SP3
Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S32, T27N, R4E
Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: Urban Land NWI classification: PFO
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soil Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: **The sample plot is located approximately in riverine HGM on west side of McAleer Creek, approximately 10 feet south from Pacific willow.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	75	yes	FAC
2. *Alnus rubra*	20	yes	FAC
3. *Salix lucida*	10	no	FACW
4. ____	____	____	____
50% = 52.5, 20% = 21	105	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Populus balsamifera (seedlings)*	2	no	FAC
2. ____	____	____	____
3. ____	____	____	____
4. ____	____	____	____
5. ____	____	____	____
50% = 12.5, 20% = 5	2	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Iris pseudacorus*	20	yes	OBL
2. *Phalaris arundinacea*	8	yes	FACW
3. *Equisetum telmateia*	8	yes	FACW
4. *Ranunculus repens*	5	no	FAC
5.	____	____	____
6. ____	____	____	____
7. ____	____	____	____
8. ____	____	____	____
9. ____	____	____	____
10. ____	____	____	____
11. ____	____	____	____
50% = 85, 20% = 34	41	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	20	yes	FACU
2. ____	____	____	____
50% = 7.5, 20% = 3	20	= Total Cover	
% Bare Ground in Herb Stratum 60			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	____	x1 =	____
FACW species	____	x2 =	____
FAC species	____	x3 =	____
FACU species	____	x4 =	____
UPL species	____	x5 =	____
Column Totals:	____ (A)		____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

☐ 1 – Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Wetland Non-Vascular Plants[1]
☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT2-SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100	-	-	-	-	Loam	
3-5	10YR 4/1	40	10YR 3/6	60	C	M	Sand	compacted
5-15	10YR 3/1	90	10YR 3/6	10	C	M	Sand	compacted with gravell and small cobble
15-20	10YR 3/1	10					Sa Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Redox from second layer streaking down to third layer

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	17
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	11

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: .

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: ML Terrace/Snohomish | Sampling Date: 3/28/12 & 8/7/13

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WMT3-SP1

Investigator(s): M. Maynard, C. Worsley | Section, Township, Range: S32, T27N, R4E

Landform (hillslope, terrace, etc.): _____ | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): A | Lat: 47.78429623900 | Long: -122.31451165100 | Datum: NAD83

Soil Map Unit Name: Indianola loamy sand | NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: **The sample plot is located near a patch of skunk cabbage, approximately 25 feet west of the right-of-way fence, 15 feet west of a hemlock on a stump, and 25 feet south of remnant high visibility fence.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tsuga heterophylla (on stump)*	15	no	FACU
2. *Prunus emerginata (on hummock)*	40	yes	FACU
3. *Alnus rubra*	75	yes	FAC
4.			
50% = 65, 20% = 26	130	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Rubus spectabilis*	80	yes	FAC
2. *Sorbus aucuparia (sapling)*	2	no	NL (UPL)
3. *Thuja plicata (sapling)*	2	no	FAC
4.			
5.			
50% = 42, 20% = 16.8	84	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Athyrium filix-femina*	70	yes	FAC
2. *Lysichiton americanus*	20	yes	OBL
3. *Polystichum munitum*	2	no	FACU
4. *Equisetum telmataeia*	5	no	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 48.5, 20% = 19.4	97	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1.			
2.			
50% = _____, 20% = _____		= Total Cover	

% Bare Ground in Herb Stratum 60

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT3-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 3/1	100					Si Loam	
11-18	10YR 2/1	100					Si Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: High concentrations of organic matter with varying degrees of decomposition.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☒ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	17
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	6

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology is presumed, based on the presence of water-stained leaves and saturation within 18 inches during March 2012 visit.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 3/28/12 & 8/7/13

Applicant/Owner: Sound Transit State: WA Sampling Point: WMT3-SP2

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S32, T27N, 4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): convex Slope (%): 15

Subregion (LRR): A Lat: 47.78444675300 Long: -122.31462495000 Datum: NAD83

Soil Map Unit Name: Indianola loamy sand NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **The sample plot is located northwest of the wetland, approximately 15 feet north of remnant high visibility fence.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	40	yes	FAC
2.			
3.			
4.			
50% = 20, 20% = 8	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Equisetum telmateia*	25	yes	FACW
2. *Calystegia sepium*	70	yes	FAC
3. *Equisetum telmateia*	50	yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 72.5, 20% = 29	145	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	90	yes	FACU
2.			
50% = 45.5, 20% = 18	90	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x1 = _____
FACW species _____	x2 = _____
FAC species _____	x3 = _____
FACU species _____	x4 = _____
UPL species _____	x5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT3-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/2	100					Sa Loam	
3-18	2.5Y 4/2	95	10YR 4/6	5	C	M	v. Sa Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☒ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☐	Depth (inches):
Water Table Present?	Yes	☐	No	☐	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	☐	No	☐	Depth (inches):

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: ML Terrace/Snohomish | Sampling Date: 3/29/12

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WMT4-SP1

Investigator(s): M. Maynard, C. Worsley | Section, Township, Range: S32, T27N, R4E

Landform (hillslope, terrace, etc.): _____ | Local relief (concave, convex, none): none | Slope (%): 3

Subregion (LRR): A | Lat: 47.77989034900 | Long: -122.31826331600 | Datum: NAD83

Soil Map Unit Name: Alderwood-Urban Land | NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soil Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: **The sample plot is located approximately 30 feet west of the large retaining wall and approximately 15 feet east of the right-of-way fence, near a red alder. Raining during the site investigation and heavy rains the night before.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	40	yes	FAC
2. _____			
3. _____			
4. _____			
50% = 20, 20% = 8	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. *Rubus spectabilis*	80	yes	FAC
2. _____			
3. _____			
4. _____			
5. _____			
50% = 40, 20% = 16	80	= Total Cover	
Herb Stratum (Plot size: _____)			
1. *Athyrium filix-femina*	20	yes	FAC
2. *Polystichum munitum*	2	no	FACU
3. *Phalaris arundinacea*	2	no	FACW
4. *Equisetum fluviatile*	2	no	OBL
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
50% = 13, 20% = 5.2	26	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. *Rubus armeniacus*	50	yes	FACU
2. _____			
50% = 25, 20% = 10	50	= Total Cover	
% Bare Ground in Herb Stratum _____			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	75	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 1988 Region 9 National Wetland Plant List and 1993 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT4-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/2	100					Loam	
5-16	10Y 3/1	100					Gr Sand	
16-18	10GY 4/1	30					v. Sa Loam	
	5Y 3/1	70					v. Sa Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☒ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	4
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 3/29/12

Applicant/Owner: Sound Transit State: WA Sampling Point: WMT4-SP2

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S32, T27N, R4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): convex Slope (%): 2

Subregion (LRR): A Lat: 47.77988545100 Long: -122.31817586200 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: **The sample plot is located approximately 6 feet west of the wall and approximately 25 feet east of WMT4-SP1. Heavy rains the previous night and light rain during the site investigation.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	75	yes	FAC
2.			
3.			
4.			
50% = 37.5, 20% = 15	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Rubus spectabilis*	5	no	FAC
2.			
3.			
4.			
5.			
50% = 2.5, 20% = 1	5	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Polystichum munitum*	5	no	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 2.5, 20% = 1	5	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	85	yes	FACU
2. *Hedera helix*	2	no	FACU
50% = 43.5, 20% = 17.4	87	= Total Cover	
% Bare Ground in Herb Stratum _____			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 1988 Region 9 National Wetland Plant List and 1993 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT4-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR 3/2	100					Gr Sa Loam	Primarily large quarry spalls

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Quarry spalls associated with the retaining wall compose much of the substrate.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☐	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	7
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Much of the observed hydrology is likely associated with runoff from the wall.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: ML Terrace/Snohomish | Sampling Date: 04/03/12 & 12/13/13

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WMT5-SP1

Investigator(s): M. Maynard, C. Worsley | Section, Township, Range: S29, T27N, R4E

Landform (hillslope, terrace, etc.): _____ | Local relief (concave, convex, none): none | Slope (%): 1

Subregion (LRR): A | Lat: 47.80006460900 | Long: -122.31539030600 | Datum: NAD83

Soil Map Unit Name: Urban Land | NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: **The sample plot is located in emergent community in center of the open area.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus tremuloides*	20	yes	FAC
2. *Betula sp.*	2	no	-
3.			
4.			
50% = 11, 20% = 4	22	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Lonicera involucrata*	5	no	FAC
2. *Cornus sericea*	2	no	FACW
3.			
4.			
5.			
50% = 3.5, 20% = 1.4	7	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Juncus effusus*	70	yes	FACW
2. *Phalaris arundinacea*	50	yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 60, 20% = 24	120	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	8	yes	FACU
2.			
50% = 4, 20% = 2	8	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x1 = _____
FACW species _____	x2 = _____
FAC species _____	x3 = _____
FACU species _____	x4 = _____
UPL species _____	x5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT5-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2						Sa Loam	
4-7	10Y 4/1	85	10YR 4/6	15	C	M	Cl Loam	
7-18	10Y 5/1	40	7.5YR 4/6	60	C	M	Gr Sa Loam	very sandy

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☒ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Inclusions in the 3rd layer (10YR 3/1 gravelly sandy loam). The two lower layers are very compacted. Soil colors variable in area. Cobbles in upper 7 inches observed during the 12-13-13 visit.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☒ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	8
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: There is standing water in adjacent micro-depressions. On 12-13-13 - soil saturated to the surface and 5 inches to free water in the soil pit.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 04/03/12 & 12/13/13

Applicant/Owner: Sound Transit State: WA Sampling Point: WMT5-SP2

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S29, T27N, R4E

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): concave Slope (%): 40

Subregion (LRR): A Lat: 47.80008890100 Long: -122.31554498100 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **The sample plot is located on the southbound I-5 off-ramp fill slope, west northwest of the wetland, approximately 25 feet soutwest of a Douglas fir.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus tremuloides*	70	yes	FAC
2. *Pseudotsuga menzesii*	2	no	FACU
3. *Betula sp*	8	no	-
4.			
50% = 40, 20% = 16	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Forsythia sp. (ornamental)*	60	yes	NO
2. *Prunus emerginata (sapling)*	8	no	FACU
3.			
4.			
5.			
50% = 34, 20% = 13.6	68	= Total Cover	
Herb Stratum (Plot size: 2M)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = _____, 20% = _____		= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	50	yes	FACU
2.			
50% = 25, 20% = 10	50	= Total Cover	

% Bare Ground in Herb Stratum 80

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x1 = _____
FACW species _____	x2 = _____
FAC species _____	x3 = _____
FACU species _____	x4 = _____
UPL species _____	x5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT5-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/3	100					Sa Loam	
9-18	2.5Y 4/3	100					Gr Sa Loam	very sandy

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☐	Depth (inches):
Water Table Present?	Yes	☐	No	☐	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	☐	No	☐	Depth (inches):

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 12/13/13
Applicant/Owner: Sound Transit State: WA Sampling Point: WMT5-SP3
Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S29, T27N, R4E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: Urban Land NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soil Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: **The sample plot is located in the southeast portion of the wetland, approximately 35 feet northeast (30 degrees) from wetland boundary flag WMT5-23, at the north end of fallen Sitka willow/edge of red-osier dogwood.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix sitchensis*	40	yes	FACW
2. *Populus tremuloides*	20	yes	FAC
3. *Alnus rubra*	5	no	FAC
4. ____	____	____	____
50% = 32, 20% = 13	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Cornus sericea*	50	yes	FACW
2. *Lonicera involucrata*	25	yes	FAC
3. ____	____	____	____
4. ____	____	____	____
5. ____	____	____	____
50% = 38, 20% = 15	75	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. ____	____	____	____
2. ____	____	____	____
3. ____	____	____	____
4. ____	____	____	____
5. ____	____	____	____
6. ____	____	____	____
7. ____	____	____	____
8. ____	____	____	____
9. ____	____	____	____
10. ____	____	____	____
11. ____	____	____	____
50% = ____, 20% = ____	____	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Solanum dulcamara*	10	yes	FAC
2. *Rubus armeniacus*	5	no	FACU
50% = 7.5, 20% = 3	15	= Total Cover	
% Bare Ground in Herb Stratum 90			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	33	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	____	x1 =	____
FACW species	____	x2 =	____
FAC species	____	x3 =	____
FACU species	____	x4 =	____
UPL species	____	x5 =	____
Column Totals:	____ (A)		____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation. Leaf litter covered the bare ground and moss covered 10% of the soil surface.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT5-SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100					Gr Sa Loam	
6-12	10YR 3/1	95	7.5YR 4/6	5	C	M	Gr Sa Loam	
12-16	2.5Y 3/1	90	2.5Y 5/6	10	C	M	Gr Sa Loam	more sand than upper layers

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Extremely compacted soils below 16 inches

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	14
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	9

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 4/3/12 & 12/13/13

Applicant/Owner: Sound Transit State: WA Sampling Point: WMT6-SP1

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S29, T27N, R4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): 5

Subregion (LRR): A Lat: 47.80057207800 Long: -122.31572022100 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: **Sample plot is located approximately 60 feet east of ROW fence near City Hall. Centrally in wetland, approximately 200 feet northeast of City Hall.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	70	yes	FAC
2. *Salix lucida*	35	yes	FACW
3. _____	_____	_____	_____
4. _____	_____	_____	_____
50% = 52.5, 20% = 21	105	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Rubus spectabilis*	30	yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
50% = 15, 20% = 6	30	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Equisetum telmateia*	55	yes	FACW
2. *Dryopteris expansa*	15	no	FACW
3. *Athyrium filix-femina*	20	yes	FAC
4. *Epilobium ciliatum*	2	no	FACW
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
50% = 46, 20% = 18.4	92	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	10	yes	FACU
2. _____	_____	_____	_____
50% = 5, 20% = 2	10	= Total Cover	

% Bare Ground in Herb Stratum 50

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT6-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 2/1	100					Si Loam	high organics
7-18	10G 5/1	100					Gr Sa Loam	very sandy

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☒ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	13
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Water seeping throughout profile.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 4/3/12 & 12/13/13

Applicant/Owner: Sound Transit State: WA Sampling Point: WMT6-SP2

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S29, 27N, R4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): 8

Subregion (LRR): A Lat: 47.80053681300 Long: -122.31562003700 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **The sample plot is located approximately 30 feet east of WMT6-SP1 and 30 feet west of the I-5 off-ramp on a "ledge" of the fill slope.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	80	yes	FAC
2. *Pseudotsuga menzesii*	5	no	FACU
3.			
4.			
50% = 42.5, 20% = 17	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Rubus spectabilis*	5	no	FAC
2.			
3.			
4.			
5.			
50% = 2.5, 20% = 1	5	= Total Cover	
Herb Stratum (Plot size: 2M)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = _____, 20% = _____		= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	60	yes	FACU
2.			
50% = 30, 20% = 12	60	= Total Cover	

% Bare Ground in Herb Stratum 80

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: Species with 5% or less absolute coverage were not considered dominant. TThe 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT6-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/2	100					Loam	trash in layer
5-18	2.5Y 5/3	100					Gr Sa Loam	very sandy, very compacted at 12 inches

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☐ Depth (inches): _____

Water Table Present? Yes ☐ No ☐ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: ML Terrace/Snohomish | Sampling Date: 4/3/12 & 12/19/13

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WMT7-SP1

Investigator(s): M. Maynard, C. Worsley | Section, Township, Range: S28, T27N, R4E

Landform (hillslope, terrace, etc.): _____ | Local relief (concave, convex, none): none | Slope (%): 1

Subregion (LRR): A | Lat: 47.80279636900 | Long: -122.31334645800 | Datum: NAD83

Soil Map Unit Name: Urban Land | NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: **The sample plot is located on east side of the wetland, approximately 5 feet southeast of the right-of-way fence.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	30	yes	FAC
2. *Acer macrophyllum (overhanging from upland)*	75	n/a*	FACU
3. *Sorbus aucuparia (overhanging from upland)*	20	n/a*	NL (UPL)
4. *Prunus emarginata (overhanging from upland)*	10	n/a*	FACU
50% = 15, 20% = 6	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Rubus spectabilis*	75	yes	FAC
2. *Lonicera involucrata*	40	yes	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
50% = 57.5, 20% = 23	115	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
50% = _____, 20% = _____	_____	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	20	yes	FACU
2. _____	_____	_____	_____
50% = 10, 20% = 4	20	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: *excluded from calculations per chapter 2 guidance The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT7-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					mucky peat	partially/mostly decomposed organics
10-17	10YR 2/2	100					mucky peat	partially/mostly decomposed organics
17-26	10YR 3/1	100					Si Loam	organic matter inclusions

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☒ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	2
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: 12/19/13 - Saturation at 26 inches below the surface.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 4/3/12 & 12/19/13

Applicant/Owner: Sound Transit State: WA Sampling Point: WMT7-SP2

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S28, T27N, R4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): ____ Slope (%): _____

Subregion (LRR): A Lat: 47.80276315100 Long: -122.31324289400 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **The sample plot is located approximately 30 feet west of I-5 shoulder.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer macrophyllum*	70	yes	FACU
2. *Sorbus aucuparia*	5	no	NL (UPL)
3. _____	_____	_____	_____
4. _____	_____	_____	_____
50% = 37.5, 20% = 15	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Rubus spectabilis*	10	yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
50% = 5, 20% = 2	10	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
50% = _____, 20% = _____	_____	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	20	yes	FACU
2. _____	_____	_____	_____
50% = 10, 20% = 4	20	= Total Cover	

% Bare Ground in Herb Stratum 80

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT7-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100					Loam	
5-16	2.5Y 5/4	60					Gr Sa Loam	very sandy
	5Y 4/1	40					Clay Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 5/16/14
Applicant/Owner: Sound Transit State: WA Sampling Point: WMT9-SP1
Investigator(s): K. Seckel, C. Worsley Section, Township, Range: S32, T27N, R4E
Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): A Lat: 47.783075 Long: -122.315731 Datum: NAD83
Soil Map Unit Name: Urban Land NWI classification: PEM
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soil Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: **The sample plot is located in a roadside ditch north of a patch of broadleaf cattail approximately 8-feet east of the I-5 northbound on-ramp, south of Mountlake Terrace Transit Center.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50% = , 20% =	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = , 20% =	0	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Juncus effusus*	60	yes	FACW
2. *Typha latifolia*	20	no	OBL
3. *Holcus lanatus*	15	no	FAC
4. *Unknown (Grass)*	15	no	-
5. *Festuca rubra*	10	no	FAC
6. *Poa pratensis*	5	no	FAC
7. *Schedonorus arundinaceus*	2	no	FAC
8. *Vicia americana*	2	no	FAC
9.			
10.			
11.			
50% = 62.5, 20% = 26	129	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1.			
2.			
50% = , 20% =		= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL Sampling Point: WMT1-SP9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/1	100	-	-	-	-	Silt Loam	
2-9	2.5Y 5/1	85	2.5Y 5/6	15	C	M	Loamy sand	
9-15	5Y 5/1	99	7.5YR 6/8	1	C	M	Loamy sand	compacted

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☒ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Meets the Hydric Soil Indicator A11

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	12
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soil saturation was to the surface. Small pockets of inundation observered adjacent to the pit.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 5/16/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WMT9-SP2

Investigator(s): K. Seckel, C. Worsley Section, Township, Range: S32, T27N, R4E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 27

Subregion (LRR): A Lat: 47.783075 Long: -122.315731 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	
Hydric Soil Present?	Yes	☐	No	☒	**Is the Sampled Area within a Wetland?** **Yes** ☐ **No** ☒
Wetland Hydrology Present?	Yes	☐	No	☒	

Remarks: **The sample plot is located east of the wetland on a slope approximately 25 feet west of the I-5 northbound on-ramp, south of Mountlake Terrace Transit Center. Western serviceberry to the east and west of the plot.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer macrophyllum*	15	yes	FACU
2. *Pseudotsuga menziessi*	2	yes	FACU
3.			
4.			
50% = 9, 20% = 2	17	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Amelanchier alnifolia*	8	yes	FACU
2.			
3.			
4.			
5.			
50% = 4, 20% = 1	8	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Unknown (Grass)*	70		-
2. *Vicia hirsuta*	40	yes	UPL
3. *Vicia americana*	25	yes	FAC
4. *AGLA*	10	no	-
5. *Holcus lanatus*	10	no	FAC
6. *Schedonorus arundinaceus*	10	no	FAC
7. *Taraxacum officinale*	2	no	FAC
8. *FEAR*	2	no	FAC
9.			
10.			
11.			
50% = 84.5, 20% = 17	169	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1.			
2.			
50% = ____, 20% = ____	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2014 National Wetland Plant List and 2010 Supplement were used for this delineation

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT2-SP9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100	-	-	-	-	Sndy Loam	high organic content
3-11	10YR 4/2	100					Lmy sand	
11-17	5Y 5/1	100					Lmy sand	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Gravel and cobble starting at 10 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 5/16/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WMT10-SP1

Investigator(s): K. Seckel, C. Worsley Section, Township, Range: S32, T27N, R4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): A Lat: 47.783075 Long: -122.315731 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soil Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: **The sample plot is located west of a keystone retaining wall, west of Sterling/ Savings and Loans, 5 feet west of right-of-way fence.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	60	yes	FAC
2. *2*			
3.			
4.			
50% = 30, 20% = 6	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Cornus alba*	70	yes	FACW
2.			
3.			
4.			
5.			
50% = 35, 20% = 7	70	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Equisetum telmateia*	5	no	FACW
2. *Epilobium ciliatum*	5	no	FACW
3. *Poa trivialis*	5	no	FAC
4. *Taraxacum officinale*	1	no	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 8, 20% = 2	16	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus aremeniacus*	10	yes	FACU
2.			
50% = 5, 20% = 1	10	= Total Cover	

% Bare Ground in Herb Stratum 90

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 – Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0[1]

☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ 5 - Wetland Non-Vascular Plants[1]

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: Species with 5% or less absolute coverage were not considered dominant.The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT10-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100	-	-	-	-	Sndy Loam	
5-18	10YR 3/2	65					gr lmy sand	
5-18	10YR 3/4	35						

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	10.5
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	5

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soil saturation observed at a depth of 5 inches. Free standing water in pit at 10.5 inches.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 6-2-14
Applicant/Owner: Sound Transit State: WA Sampling Point: WMT10-SP2
Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S28, T27N, R4E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 25
Subregion (LRR): A Lat: 47.780608 Long: -122.316213 Datum: NAD83
Soil Map Unit Name: Urban Land NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐**	**No ☒**
Hydric Soil Present?	Yes ☐	No ☒			
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: **The sample plot is located west of a keystone retaining wall, west of Sterling/ Savings and Loans, 25 feet west of right-of-way fence.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer macrophyllum*	70	yes	FACU
2. *Alnus rubra*	2	no	FAC
3.	2	no	FAC
4.			
50% = 37, 20% = 18	74	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Salix scouleriana*	10	yes	FAC
2. *Populus balsamifera*	5	no	FAC
3.			
4.			
5.			
50% = 7.5, 20% = 2	15	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Equisetum telmateia*	15	yes	FACW
2. *Holcus lanatus*	15	yes	FAC
3. *Agrostis capillaris*	5	no	FAC
4. *Vicia americana*	2	no	FAC
5. *Galium aparine*	2	no	FACU
6.			
7.			
8.			
9.			
10.			
11.			
50% = 19.5, 20% = 3.9	39	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	70	yes	FACU
2.			
50% = 35, 20% = 7	70	= Total Cover	

% Bare Ground in Herb Stratum 80

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	60	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒** **No ☐**

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WMT10-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5Y 4/2	100					v.sand.loam	w/ cobbles and gravel

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ____

Depth (inches): ____

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	____
Water Table Present?	Yes	☐	No	☒	Depth (inches):	____
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	____

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 5/16/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WMT11-SP1

Investigator(s): K. Seckel, C. Worsley Section, Township, Range: S32, T27N, R4E

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): A Lat: 47.783285 Long: -122.314565 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?**	**Yes** ☒	**No** ☐
Hydric Soil Present?	Yes	☒	No	☐			
Wetland Hydrology Present?	Yes	☒	No	☐			

Remarks: **The sample plot is located in swale, 50 feet southeast of road, 8 feet east of a single Scotch broom on southwest bank of the swale.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50% = , 20% =		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = , 20% =		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Phalris arundinacea*	100	yes	FACW
2. *Solanum dulcamara*	2	no	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 51, 20% = 10.5	102	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	40	yes	FACU
2.			
50% = 20, 20% = 4	40	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	0	x1 =	0
FACW species	100	x2 =	200
FAC species	2	x3 =	6
FACU species	40	x4 =	160
UPL species	0	x5 =	0
Column Totals:	142 (A)		366 (B)

Prevalence Index = B/A = 2.58

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☒ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2013 Region 9 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL Sampling Point: WMT11-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100					Sdy cl loam	
6-9	10YR 3/2						Loamy sand	
9-18	10YR 4/2	90	10YR 5/8	10	C	M	Loamy sand	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☒ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Meets hydric soil indicator A11, Depleted Below Dark Surface.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☒ Dry-Season Water Table (C2)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	20.5
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	13

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soils were saturated from the surface to 13 inches below the surface with a water talbe present at approximately 20 inches. Wetland was delineated during the dry season.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: ML Terrace/Snohomish Sampling Date: 5/16/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WMT11-SP2

Investigator(s): K. Seckel, C. Worsley Section, Township, Range: S32, T27N, R4E

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **The sample plot is located in grassy field 10 feet northeast of wetland, and 60 feet southeast of road.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			-
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Agrostis capillaris*	70	yes	FAC
2. *Taraxacum officinale*	25	yes	FACU
3. *Poa pratensis*	20	yes	FAC
4. *Holcus lanatus*	8	no	FAC
5. *Festuca arundinacea*	8	no	FAC
6. *Vicia americana*	2	no	FAC
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
50% = 66.5, 20% = 13.3	133	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. _____			
2. _____			
50% = _____, 20% = _____		= Total Cover	
% Bare Ground in Herb Stratum 0			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	66	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: The 2013 Region 9 National Wetland Plant List and 2010 Supplement w3ere used for this delineation.

Project Site: Lynnwood Link Extension

SOIL Sampling Point: WMT11-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-18	10YR 2/2						Sandy loam	lg cobbles at 12 inches and greater

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ____

Depth (inches): ____

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	____
Water Table Present?	Yes	☐	No	☒	Depth (inches):	____
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	____

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Lynnwood/Snohomish Sampling Date: 4/5/13 & 1/27/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WLY3-SP1

Investigator(s): M. Maynard Section, Township, Range: S21, T27N, R4E

Landform (hillslope, terrace, etc.): swale at toe of fill slope Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): A Lat: 47.80787823300 Long: -122.30477705600 Datum: NAD83

Soil Map Unit Name: UrbanLand NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: **The sample plot is located in a hardhack patch near the center of the wetland, approximately 10 feet west of trash rack outlet.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pseudotsuga menziesii (overhanging from buffer)*	40	n/a*	FACU
2.			
3.			
4.			
50% = ____, 20% = ____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Spiraea douglasii*	90	yes	FACW
2.			
3.			
4.			
5.			
50% = 45, 20% = 18	90	= Total Cover	
Herb Stratum (Plot size: 2M)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = ____, 20% = ____		= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	5	no	FACU
2.			
50% = 2.5, 20% = 1	5	= Total Cover	

% Bare Ground in Herb Stratum 80

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: *excluded from calculations per chapter 2 guidance Species with 5% or less absolute coverage were not considered dominant. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WLY3-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	75					Si Loam	
	2.5Y 5/1	23	2.5Y 5/6	2			Cl Loam	
8-20	10YR 2/1	100					Si Loam	high organic content

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☒ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Signs of disturbance (woody debris and inclusions)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	surface
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: 01/27/4 - Small pockets of inundation (0.5 inches) adjacent to sample plot location.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Lynnwood/Snohomish Sampling Date: 4/5/12 & 1/27/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WLY3-SP2

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S21, T27N, R4E

Landform (hillslope, terrace, etc.): lower portion of fill slope Local relief (concave, convex, none): convex Slope (%): 15

Subregion (LRR): A Lat: 47.80783324500 Long: -122.30471790300 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **The sample plot is located approximately 8 feet east-southeast (120 degrees), upslope of the trash trap on fill slope.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pseudotsuga menzesii*	45	yes	FACU
2. *Acer macrophyllum*	20	yes	FACU
3. *Populus balsamifera*	20	yes	FAC
4. *Sequoiadendron giganteum*	2	no	-
50% = 43.5, 20% = 17.4	87	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Ilex aquifolium*	5	no	FACU
2.			
3.			
4.			
5.			
50% = _____, 20% = _____	5	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Ranunculus repens*	2	no	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 1, 20% = 0.4	2	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	10	yes	FACU
2. *Hedera helix*	25	yes	NL (UPL)
50% = 17.5, 20% = 7	35	= Total Cover	
% Bare Ground in Herb Stratum 80			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	20	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WLY3-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					Sa Loam	
10-18	2.5Y 4/4	93	7.5YR 5/8	2			Gr Cl Loam	
			7.5YR 3/1	5				

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Lynnwood/Snohomish | Sampling Date: 4/24/14 & 4/30/14

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WLY3-SP3

Investigator(s): C. Worsley, M. Hall | Section, Township, Range: S21, T27N, R4E

Landform (hillslope, terrace, etc.): flat | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): A | Lat: _____ | Long: _____ | Datum: NAD83

Soil Map Unit Name: Urban Land | NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **Precipitation is greater than normal this late winter/early spring. The sample plot is located NW of wetland, approximately 12 feet NNW of inlet/pipe in wetland, approximately 10 feet from W fence and approximately 12 feet from N fence.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix matsudana (corkscrew willow)*	70	n/a*	-
2. *Prunus sp. (ornamental)*	5	n/a*	-
3.			
4.			
50% = 38, 20% = 15	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Phalaris arundinacea*	8	no	FACW
2. *Calystegia sepium*	45	yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 27, 20% = 11	53	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	90	yes	FACU
2.			
50% = 45, 20% = 18	90	= Total Cover	

% Bare Ground in Herb Stratum 90

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: *The corkscrew willow is planted in adjcent residential property and cherry is ornamental. Phalaris arundinacea is near wetland boundary. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WLY3-SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/1	100					Si. Loam	
12-13	5Y 3/2	40	10YR 4/6	10	C	M	Si. Loam	
	5Y 5/2	40	10YR 4/6	10	C	M	Si. Loam	
13-19	2.5Y 3/1	85	10YR 3/6	15	C	M	Si. Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	12.5
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	12

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Revisited the site and checked hydrology on 04/30/14. Free water was at 16 inches below the surface and soil saturation was at 15 inches below the surface.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Lynnwood/Snohomish Sampling Date: 4/24/14
Applicant/Owner: Sound Transit State: WA Sampling Point: WLY3-SP4
Investigator(s): C. Worsley, M. Hall Section, Township, Range: S21, T27N, R4E
Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83
Soil Map Unit Name: Urban Land NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **Precipitation is greater than normal this late winter/early spring. The sample plot is located on access road, E of wetland, approximately 50 feet SW of access gate.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pseudostuga menziesii*	35	yes	FACU
2. *Sorbus aucuparia*	5	no	NL (UPL)
3. *Alnus rubra*	2	no	FAC
4. *Acer macrophyllum*	5	no	FACU
50% = 24, 20% = 9	47	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Ilex aquifolium*	2	no	FACU
2. *Oemleria cerasiformis*	2	no	FACU
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
50% = 2, 20% = 1	4	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Ranunculus repens*	80	yes	FAC
2. *Equisetum arvense*	40	yes	FAC
3. *Cirsium arvense*	5	no	FAC
4. *Holcus lanatus*	5	no	FAC
5. *Poa pratensis*	30	no	FAC
6. *Phalaris arundinacea*	2	no	FACW
7. *Taraxacum officinale*	2	no	FACU
8. *Agrostis capillaris*	30	no	FAC
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
50% = 97, 20% = 39	194	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	8	yes	FACU
2. *Hedera helix*	2	no	FACU
50% = 5, 20% = 2	10	= Total Cover	
% Bare Ground in Herb Stratum 5			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: Species with 5% or less absolute coverage were not considered dominant. All trees and shrubs are growing S of sample plot on I-5 fill slope. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WLY3-SP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/2	100						partially decomposed wood chips
6-10	10YR 4/3	100					gr. sa. loam	w. angular cobbles (fill from maint. road)
10-14	10YR 2/2	100						partially decomposed wood chips
14-19	2.5Y 4/1	85	7.5YR 3/4	15	C	PL	gr. sa. loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Soil is disturbed being due to the maintenance access road. Some minerals were present in the partially decomposed wood chip layers. The 6-10 inch layer was compacted fill from the maintenance access road.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	3 to 6

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Saturation limited from 3 to 6 inches below the surface. This was confined to upper layer immediately above the compacted (2nd) layer. Water seeped in to bottom of pit from top layer filling the pit with 1 inch of water (at 18 inches below the surface). This limited saturation was likely a result of recent precipitation events, not groundwater.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Lynnwood/Snohomish Sampling Date: 4/9/12

Applicant/Owner: Sound Transit State: WA Sampling Point: WLY4-SP1

Investigator(s): M. Maynard Section, Township, Range: S21, T27N, R4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): A Lat: 47.81675583500 Long: -122.30002669800 Datum: NAD83

Soil Map Unit Name: McKenna Gravelly Silt Loam NWI classification: PEM fringe

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soil Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: **The sample plot is located east of the parking lot, approximately 20 feet west of Scriber Creek in reed canarygrass.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	30	yes	FAC
2.			
3.			
4.			
50% = 15, 20% = 6	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Salix lucida*	10	yes	FACW
2. *Cornus sericea*	25	yes	FACW
3.			
4.			
5.			
50% = 17.5, 20% = 7	35	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Phalaris arundinacea*	75	yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 37.5, 20% = 15	75	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1.			
2.			
50% = _____, 20% = _____		= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 – Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0[1]

☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ 5 - Wetland Non-Vascular Plants[1]

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: The 1988 Region 9 National Wetland Plant List and 1993 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WLY4-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-20	10YR 2/1						Mu Silt	with high organic content

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☒ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Organics are at various stages of decomposition

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	3
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Lynnwood/Snohomish Sampling Date: 4/9/12
Applicant/Owner: Sound Transit State: WA Sampling Point: WLY4-SP2
Investigator(s): M. Maynard Section, Township, Range: S21, T27N, R4E
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): A Lat: 47.81685512600 Long: -122.30019184700 Datum: NAD83
Soil Map Unit Name: McKenna Gravelly Silt Loam NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes** ☐	**No** ☒
Hydric Soil Present?	Yes ☐	No ☐			
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: **The sample plot is located near the base of a large black cottonwood, approximately 45 feet northwest of WLY4-SP1.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	50	yes	FAC
2. *Pseudotsuga menzesii*	20	yes	FACU
3. *Alnus rubra*	10	no	FAC
4. *Malus sp.*	15	no	NL (UPL)
50% = 42.5, 20% = 17	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Cornus sericea*	5	no	FACW
2. *Ilex aquifolium*	5	no	NL (UPL)
3. *Prunus lusitanica*	10	yes	NL (UPL)
4. _____	_____	____	____
5. _____	_____	____	____
50% = 10, 20% = 4	20	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. _____	_____	____	____
2. _____	_____	____	____
3. _____	_____	____	____
4. _____	_____	____	____
5. _____	_____	____	____
6. _____	_____	____	____
7. _____	_____	____	____
8. _____	_____	____	____
9. _____	_____	____	____
10. _____	_____	____	____
11. _____	_____	____	____
50% = _____, 20% = _____	_____	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Hedera helix*	80	yes	NL (UPL)
2. *Rubus armeniacus*	70	yes	FACU
50% = 75, 20% = 30	150	= Total Cover	
% Bare Ground in Herb Stratum _____			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	20	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 – Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Wetland Non-Vascular Plants[1]
☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 1988 Region 9 National Wetland Plant List and 1993 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WLY4-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/1	100					Loam	
14-18	10YR 3/2	100					Loam	w. cobbles

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? **Yes** ☐ **No** ☐

Remarks: Concrete rubble throughout area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Lynnwood/Snohomish Sampling Date: 7/14/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WLY4-SP3

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S21, T27N, R4E

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☒, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?**	**Yes** ☒	**No** ☐
Hydric Soil Present?	Yes	☒	No	☐			
Wetland Hydrology Present?	Yes	☒	No	☐			

Remarks: **The sample plot is located along Scriber Creek in finger of wetland adjacent to the toe of slope near property boundary (6 feet north of toe of slope) betweem wetland flags 25 and 28.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	80	yes	FAC
2. *Populus balsemifera*	10	yes	FAC
3.			
4.			
50% = 45, 20% = 9	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Rubus spectabilis*	2	no	FAC
2. *Cornus alba*	2	no	FACW
3. *Spiraea douglasii*	2	no	FACW
4.			
5.			
50% = 3, 20% = 0.6	6	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Equisetum telmateia*	2	no	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 1, 20% = 0.2	2	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Solanum dulcamara*	15	yes	FAC
2. *Rubus armeniacus*	5	no	FACU
50% = 10, 20% = 2	20	= Total Cover	
% Bare Ground in Herb Stratum 85			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2014 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL Sampling Point: WLY4-SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2						loam	with decomposed organic matter
2-17	10YR 5/1	75	10YR 3/6	15	C	M	sndy loam	with gravels
17-20	10Y 5/1	65	10YR 3/6	35	C	M	sndy loam	with gravels

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☒ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Meets the hydric soil indicator for A11, Depleted Below Dark Surface.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	19
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	9

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Observed water-stained leaves, free water in pit at 19 inches, saturated at 9 inches.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Lynnwood/Snohomish Sampling Date: 8/29/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WLY4-SP4

Investigator(s): M. Maynard, K. Seckel Section, Township, Range: S21, T27N, R4E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 10

Subregion (LRR): A Lat: 47.812946 Long: -122.296440 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes** ☐	**No** ☒
Hydric Soil Present?	Yes ☐	No ☒			
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: **The sample plot is located 15 feet upslope of wetland flag WLY4-28 and 10 feet downslope of chain link fence.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	65	yes	FAC
2. *Polystichum munitum*	5	no	FACU
3.			
4.			
50% = 35, 20% = 7	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Laburnum sp.*	50	yes	NL (UPL)
2.			
3.			
4.			
5.			
50% = 25, 20% = 5	50	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Geranium robertianum*	50	yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 25, 20% = 5	50	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	50	yes	FACU
2.			
50% = 25, 20% = 5	50	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☐ 1 – Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0[1]

☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ 5 - Wetland Non-Vascular Plants[1]

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks: Moss covered 50 percent of the herbacious sample plot. Species with 5% or less absolute coverage were not considered dominant. The 2014 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL Sampling Point: WLY4-SP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17	10YR 3/3	100					Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: compacted

Depth (inches): at 14 inches

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Lynnwood/Snohomish Sampling Date: 7/16/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WLY4-SP5

Investigator(s): M. Maynard, K. Seckel Section, Township, Range: S21,T27N, R4E

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): A Lat: _____ Long: _____ Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☒, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?**	**Yes**	☒	**No** ☐
Hydric Soil Present?	Yes	☒	No	☐				
Wetland Hydrology Present?	Yes	☒	No	☐				

Remarks: **The sample plot is located on the left bank of Scriber Creek approximately 14 feet southwest of paved Scriber Creek Trail, and approximately 20 feet wet of wetland flag WLY4-21B.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Spiraea douglasii*	50	yes	FACW
2. *Salix sitchensis*	35	yes	FACW
3. *Lonicera involucrata*	20	yes	FAC
4. *Cornis alba*	10	no	FACW
5. _____			
50% = 57.5, 20% = 11.5	115	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Oenanthe sarmentosa*	60	yes	OBL
2. *Callitriche heterophylla*	30	yes	OBL
3. *Athyrium cyclosorum*	2	no	FAC
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
50% = 46, 20% = 9.2	92	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. _____			
2. _____			
50% = _____, 20% = _____		= Total Cover	
% Bare Ground in Herb Stratum _____			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	5	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: Algal mats were observed over 15 percent of the sample plot. Species with 5% or less absolute coverage were not considered dominant. The 2014 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WLY4-SP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-18	10YR 2/1						vry silty lm	high decomposed organic content

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☒ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Meets the hydric soil indicator for A4, hydrogen sulfide.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☒ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☒	No	☐	Depth (inches):	4
Water Table Present?	Yes	☒	No	☐	Depth (inches):	surface
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Four inches of inundation, strong sulfidic odor.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Lynnwood/Snohomish | Sampling Date: 4/17/12 & 1/27/14

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WLY6-SP1

Investigator(s): M. Maynard | Section, Township, Range: S21, T27N, R4E

Landform (hillslope, terrace, etc.): depression | Local relief (concave, convex, none): none | Slope (%): 1

Subregion (LRR): A | Lat: 47.81175844700 | Long: -122.29768042500 | Datum: NAD83

Soil Map Unit Name: Urban Land | NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: **The sample plot is located in the southwest portion of the wetland, approximately 30 feet east of 208th St SW.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix lucida*	90	yes	FACW
2. *Alnus rubra*	15	no	FAC
3.			
4.			
50% = 52.5, 20% = 21	105	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Lonicera involucrata*	60	yes	FAC
2.			
3.			
4.			
5.			
50% = 30, 20% = 12	60	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Carex sp.*	2	no	-
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 1, 20% = 0.4	2	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	10	yes	FACU
2.			
50% = 5, 20% = 2	10	= Total Cover	

% Bare Ground in Herb Stratum 80

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x1 =
FACW species	x2 =
FAC species	x3 =
FACU species	x4 =
UPL species	x5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WLY6-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	80	5YR 4/6	20	C	M	Si Loam	
4-9	5Y 4/1	60	7.5YR 4/6	40	C	M	Cl Loam	
9-18	5Y 4/1	80	7.5YR 4/6	20	C	M	Cl Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☒	No	☐	Depth (inches):	2
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: 01-27-14 - Saturated to the surface, 1 inch of free water in pit.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension | City/County: Lynnwood/Snohomish | Sampling Date: 4/17/12 & 1/27/14

Applicant/Owner: Sound Transit | State: WA | Sampling Point: WLY6-SP2

Investigator(s): M. Maynard | Section, Township, Range: S21, T27N, R4E

Landform (hillslope, terrace, etc.): fill slope (top) | Local relief (concave, convex, none): convex | Slope (%): 3

Subregion (LRR): A | Lat: 47.81164518500 | Long: -122.29775300300 | Datum: NAD83

Soil Map Unit Name: Urban Land | NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **The sample plot is located southwest of the wetland , approximately 10 feet east of 208th St SW. At edge of maintained grass ROW for 208th St SW.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50% = ____, 20% = ____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = ____, 20% = ____		= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Holcus lanatus*	40	yes	FAC
2. *Cardamine oligosperma*	20	yes	FAC
3. *Dactylis glomerata*	15	no	FACU
4. *Taraxacum officinale*	2	no	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 38.5, 20% = 15.4	77	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	45	yes	FACU
2.			
50% = 22.5, 20% = 9	45	= Total Cover	

% Bare Ground in Herb Stratum 5

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	66	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Grass is mowed/maintained. The 2013 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WLY6-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 2/1	100					Loam	
14-18	10YR 3/2	100					Gr Sa Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Lynnwood/Snohomish Sampling Date: 6/6/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WLY7-SP1

Investigator(s): M. Maynard, C. Worsley Section, Township, Range: S21, T27N, R4E

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): A Lat: 47.812704 Long: -122.298140 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☒, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soil Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: **The sample plot is located on northwest portion of the wetland, approximately 10 feet northwest of Interurban Trail, south of 48th Avenue W.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50% = , 20% =	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Populus balsamifera*	40	yes	FAC
2. *Salix sitchensis*	20	yes	FACW
3. *Salix scouleriana*	10	yes	FAC
4. *Salix lucida*	10	yes	FACW
5. *Alnus rubra*	10	yes	FAC
50% = 50, 20% = 12	100*	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Juncus effusus*	70	yes	FACW
2. *Lotus corniculatus*	10	no	FAC
3. *Carex stipata*	2	no	OBL
4. *Juncus ensifolius*	2	no	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 42, 20% = 8	84	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus ursinus*	10	yes	FACU
2.			
50% = 5, 20% = 2	10	= Total Cover	

% Bare Ground in Herb Stratum 15

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	7	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	86	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: *Two additional species were identified in the shrub stratum, red-osier dogwood and salmonberry, both at 5 percent coverage. Species with 5% or less absolute coverage were not considered dominant. The 2014 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL Sampling Point: WLY7-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 5/1						clay loam	
8-13	10YR 3/2	97	10YR 4/6	3	C	M	sndy loam	
13-18	10YR 3/3	90	10YR 4/6	10	C	M	sndy loam	disturbed

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☒ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Cobble and gravel start at 13 inches below surface. Entire site, including sample plot have been disturbed within the last 10 years. Per Regional Supplement prodedure for difficult hydric soils, 1) the site meets the dominance text for vegetation, 2) the site meets two primary hydrologic indicators, 3) the site is in a level area (0 percent slope), and 4(b)(7) the soil is problematic in that it has been disturbed within the last 10 years.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	8

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Observed water-stained leaves, saturated at 8 inches.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Lynnwood/Snohomish Sampling Date: 6/6/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WLY7-SP2

Investigator(s): M. Maynard Section, Township, Range: S21, T27N, R4E

Landform (hillslope, terrace, etc.): fill slope Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): A Lat: 47.812704 Long: -122.298140 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **The sample plot is located northwest of the wetland, approximately 22 feet east of red alder and asphalt edge.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	25	yes	FAC
2.			
3.			
4.			
50% = 12.5, 20% = 2.5	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Cytisus scoparious*	10	yes	UPL
2. *Pseudotsuga menziesii*	5	no	FACU
3. *Salix scouleriana*	5	no	FACW
4. *Populus sp.*	2	no	-
5.			
50% = 11, 20% = 2.2	22	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Holcus lanatus*	70	yes	FAC
2. *Melilotus officinalis*	15	yes	FACU
3. *Trifolium pratense*	15	yes	FACU
4. *Agrostis scabra*	5	no	FAC
5. *Melilotus albus*	30	yes	NL (UPL)
6.			
7.			
8.			
9.			
10.			
11.			
50% = 67.5, 20% = 13.5	135	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus armeniacus*	20	yes	FACU
2.			
50% = 10, 20% = 2	20	= Total Cover	

% Bare Ground in Herb Stratum 5

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x1 =
FACW species	x2 =
FAC species	x3 =
FACU species	x4 =
UPL species	x5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☐ 1 – Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0[1]

☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ 5 - Wetland Non-Vascular Plants[1]

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2014 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WLY7-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	5Y 5/1	85	10YR 4/4	15			Gr Lmy snd	with cobble
9-14	5Y 4/2	97	10YR 3/6	3			Gr Lmy snd	with cobble

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: compacted

Depth (inches): 14

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Lynnwood/Snohomish Sampling Date: 7/16/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WLY8-SP1

Investigator(s): K. Seckel, M. Maynard Section, Township, Range: S21, T27N, R4E

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): A Lat: 47.812946 Long: -122.296440 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soil Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: **The sample plot is located in a slight depression at the east end of the wetland, approximately 15 feet of the paved edge of the Interurban Trail and approximately 6 feet south WLY8-2.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50% = , 20% =	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1.			
2.			
3.			
4.			
5.			
50% = 3, 20% = 0.6	6	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Eliocharis palustris*	90	yes	OBL
2. *Agrostis stolinifera*	5	no	FAC
3. *Holcus lanatus*	5	no	FAC
4. *Lotus corniculatus*	3	no	FAC
5. *Juncus tenuis*	3	no	FAC
6.			
7.			
8.			
9.			
10.			
11.			
50% = 53, 20% = 10.6	106	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1.			
2.			
50% = , 20% =		= Total Cover	

% Bare Ground in Herb Stratum 5

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2014 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL Sampling Point: WLY8-SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	95	10YR 4/6	5	C	M	gv slt loam	with gravels
4-12	2.5Y 5/2	90	10YR 4/6	10	C	M	gv cl loam	with gravels

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: compacted

Depth (inches): 12

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Gravel, cobble, angular rock throughout soils. Likely fill. Meets hydric soil indicator F6, Redox Dark Surface.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☒ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	19
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	9

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Meets wetland hydrology primary indicator B6, surface soil cracks, and secondary indicators C9, saturation visible on aerial imagery, and D2, geomorphic position.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Lynnwood Link Extension City/County: Lynnwood/Snohomish Sampling Date: 7/16/14

Applicant/Owner: Sound Transit State: WA Sampling Point: WLY8-SP2

Investigator(s): M. Maynard, K. Seckel Section, Township, Range: S21, T27N, R4E

Landform (hillslope, terrace, etc.): lower portion of fill slope Local relief (concave, convex, none): convex Slope (%): 4

Subregion (LRR): A Lat: 47.812946 Long: -122.296440 Datum: NAD83

Soil Map Unit Name: Urban Land NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes** ☐	**No** ☒
Hydric Soil Present?	Yes ☐	No ☒			
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: **The sample plot is located on slope of WLY8 SE of wetland flag WLY8-14, approximately 25 feet south of Interurban Trail paved edge in patch of Scotch broom.**

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50% = ____, 20% = ____		= Total Cover	
Sapling/Shrub Stratum (Plot size: 5M)			
1. *Cytisus scoparius*	70	yes	UPL
2.			
3.			
4.			
5.			
50% = 35, 20% = 7	70	= Total Cover	
Herb Stratum (Plot size: 2M)			
1. *Festuca rubra*	15	yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 7.5, 20% = 1.5	15	= Total Cover	
Woody Vine Stratum (Plot size: 5M)			
1. *Rubus ursinus*	75	yes	FACU
2.			
50% = 37.5, 20% = 7.5	75	= Total Cover	
% Bare Ground in Herb Stratum 5			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	33	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ☐ 1 – Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks: Species with 5% or less absolute coverage were not considered dominant. The 2014 National Wetland Plant List and 2010 Supplement were used for this delineation.

Project Site: Lynnwood Link Extension

SOIL

Sampling Point: WLY8-SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/2	100					Gr Slt Loam	
7-14	10YR 4/1	20					Gr Slt Loam	
	10YR 4/2	80					Gr Slt Loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: compacted

Depth (inches): at 14 inches

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indicators present.

ATTACHMENT D

Wetland Rating Forms

Wetland name or number WSE1 _____

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WSE1 Date of site visit: 03/09/12; 04/22/14

Rated by: M Maynard Trained by Ecology? Yes X No _____ Date of training: 04/06

SEC: 29 TOWNSHIP: 26N RANGE: 4E Is S/T/R in Appendix D? Yes _____ No X

Map of wetland unit: Figure _____ Estimated size _____

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I _____ II _____ III X IV _____

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	16
Score for Hydrologic Functions	16
Score for Habitat Functions	10
TOTAL Score for Functions	42

Category based on SPECIAL CHARACTERISTICS of Wetland I _____ II _____ Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	
Riverine	**X**
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WSE1 _____

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

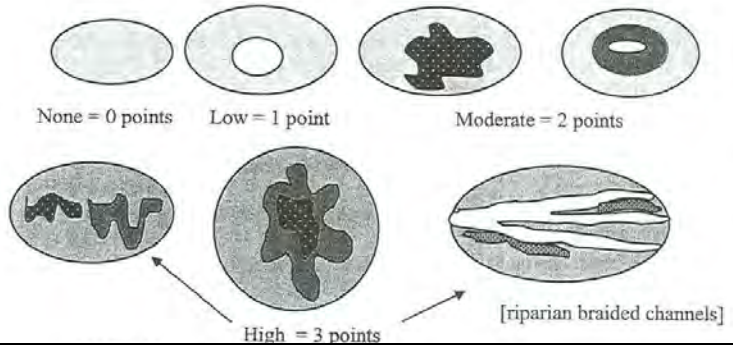
If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

Wetland name or number WSE1 _____

R	Riverine and Freshwater Tidal Fringe Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
R 1	**Does the wetland have the potential to improve water quality?** *(see p.52)*	
	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event: • Depressions cover > 3/4 area of wetland ..... points = 8 • Depressions cover > 1/2 area of wetland ..... points = 4 **(If depressions > 1/2 of area of unit draw polygons on aerial photo or map)** • Depressions present but cover < 1/2 area of wetland. ..... points = 2 • No depressions present ..... points = 0	**Figure ___** 0
	R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): • Trees or shrubs > 2/3 area of the unit ..... points = 8 • Trees or shrubs > 1/3 area of the wetland ..... points = 6 • Ungrazed, herbaceous plants > 2/3 area of unit ..... points = 6 • Ungrazed herbaceous plants > 1/3 area of unit ..... points = 3 • Trees, shrubs, and ungrazed herbaceous < 1/3 area of unit ..... points = 0 **Aerial photo or map showing polygons of different vegetation types**	**Figure ___** 8
	Add the points in the boxes above	8
R 2	**Does the wetland have the opportunity to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ____ Grazing in the wetland or within 150 ft ____ Untreated stormwater discharges to wetland ____ Tilled fields or orchards within 150 ft. of wetland ____ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ____ The river or stream linked to the wetland has a contributing basin where human activities have raised levels of sediment, toxic compounds or nutrients in the river water above standards for water quality. ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 53)* Multiplier 2
◆	**TOTAL – Water Quality Functions** Multiply the score from R1 by R2; then ***add score to table on p. 1***	16
	HYDROLOGIC FUNCTIONS – Indicators that wetland functions to reduce flooding and stream erosion.	
R 3	**Does the wetland have the potential to reduce flooding and erosion?**	*(see p.54)*
	R 3.1 Characteristics of the overbank storage the wetland provides: *Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit) / (average width of stream between banks).* • If the ratio is more than 20 ..... points = 9 • If the ratio is between 10 – 20 ..... points = 6 • If the ratio is 5- <10 ..... points = 4 • If the ratio is 1- <5 ..... points = 2 • If the ratio is < 1 ..... points = 1 **Aerial photo or map showing average widths**	**Figure ___** 1
	R 3.2 Characteristics of vegetation that slow down water velocities during floods: *Treat large woody debris as "forest or shrub". Choose the points appropriate for the best description. (polygons need to have >90% cover at person height NOT Cowardin classes):* • Forest or shrub for > 1/3 area OR herbaceous plants > 2/3 area ..... points = 7 • Forest or shrub for > 1/10 area OR herbaceous plants > 1/3 area ..... points = 4 • Vegetation does not meet above criteria ..... points = 0 **Aerial photo or map showing polygons of different vegetation types**	**Figure ___** 7
	Add the points in the boxes above	8
R 4	**Does the wetland have the opportunity to reduce flooding and erosion?** Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.* __X__ There are human structures and activities downstream (roads, buildings, bridges, farms) that can be damaged by flooding. ____ There are natural resources downstream (e.g. salmon redds) that can be damaged by flooding ____ Other _____ *(Answer NO if the major source of water to the wetland is controlled by a reservoir or the wetland is tidal fringe along the sides of a dike)* YES multiplier is 2 NO multiplier is 1	*(see p.57)* Multiplier 2
◆	**TOTAL – Hydrologic Functions** Multiply the score from R3 by R4; then ***add score to table on p. 1***	16

Comments:

Wetland name or number WSE1 _____

These questions apply to wetlands of all HGM classes.		**Points**
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	(only 1 score per box)
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ____ Aquatic Bed ____ Emergent plants ____ Scrub/shrub (areas where shrubs have > 30% cover) __X__ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ____ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 0
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ____ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 __X__ Occasionally flooded or inundated — 2 types present.....points = 1 ____ Saturated only — 1 type present .....points = 0 ____ Permanently flowing stream or river in, or adjacent to, the wetland __X__ Seasonally flowing stream in, or adjacent to, the wetland ____ **Lake-fringe wetland..... = 2 points** ____ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 2
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ____ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ____ Standing snags (diameter at the bottom > 4 inches) in the wetland ____ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ____ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ____ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	3

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** __X__ Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

	H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)* Which of the following priority habitats are within 330 ft. (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). __X__ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). _X__ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = 0 points Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)	3
	H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)* • There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5 • The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3 • The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3 • There is at least 1 wetland within 1/2 mile .....points = 2 • There are no wetlands within 1/2 mile.....points = 0	3
	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	7
	TOTAL for H 1 from page 8	3
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	10

Comments:

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WSE3

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WSE3 Date of site visit: 03/14/12; 07/02/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 20 TOWNSHIP: 26N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	14
Score for Hydrologic Functions	10
Score for Habitat Functions	8
TOTAL Score for Functions	32

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WSE3 _____

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   __X__ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

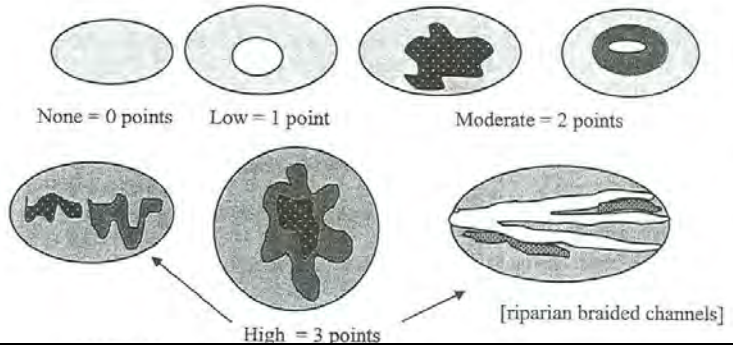
If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

Wetland name or number WSE3 _____

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 3
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 2
	Total for D 1 *Add the points in the boxes above*	7
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ____ Grazing in the wetland or within 150 ft ____ Untreated stormwater discharges to wetland ____ Tilled fields or orchards within 150 ft. of wetland ____ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ____ Wetland is fed by groundwater high in phosphorus or nitrogen ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier <u>2</u>
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	14
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	5

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. X Wetland drains to a river or stream that has flooding problems ___ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	10

Comments:

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ____ Aquatic Bed __X__ Emergent plants ____ Scrub/shrub (areas where shrubs have > 30% cover) ____ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ____ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 0
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ____ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 ____ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 ____ Permanently flowing stream or river in, or adjacent to, the wetland ____ Seasonally flowing stream in, or adjacent to, the wetland ____ **Lake-fringe wetland..... = 2 points** ____ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	0
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ____ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ____ Standing snags (diameter at the bottom > 4 inches) in the wetland ____ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ____ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ____ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	1

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** __X__ Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

	H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)* Which of the following priority habitats are within 330 ft. (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). _X__ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). __X_ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = 0 points Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)	3
	H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)* • There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5 • The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3 • The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3 • There is at least 1 wetland within 1/2 mile .....points = 2 • There are no wetlands within 1/2 mile.....points = 0	3
	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	7
	TOTAL for H 1 from page 8	1
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	8

Comments:

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover*)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WSE4

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WSE4 Date of site visit: 03/14/12; 07/02/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 20 TOWNSHIP: 26N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	14
Score for Hydrologic Functions	16
Score for Habitat Functions	10
TOTAL Score for Functions	40

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WSE4

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

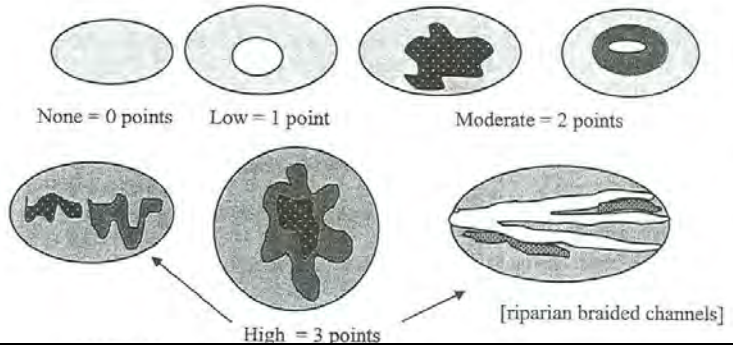
Wetland name or number WSE4

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 3
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 2
	Total for D 1 *Add the points in the boxes above*	7
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?**	*(see p. 44)*
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging _X_ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	Multiplier 2
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	14
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	3
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	8

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. X Wetland drains to a river or stream that has flooding problems ___ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	16

Comments:

Wetland name or number WSE4

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ____ Aquatic Bed ____ Emergent plants ____ Scrub/shrub (areas where shrubs have > 30% cover) __X__ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* __X__ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ____ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 ____ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 ____ Permanently flowing stream or river in, or adjacent to, the wetland ____ Seasonally flowing stream in, or adjacent to, the wetland ____ **Lake-fringe wetland..... = 2 points** ____ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ____ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ____ Standing snags (diameter at the bottom > 4 inches) in the wetland ____ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ____ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ____ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	3

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** __X__ Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report* *http://wdfw.wa.gov/hab/phslist.htm*)

Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?

NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).

____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).

____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.

____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).

_X___ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).

__X_ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*

____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.

____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

3

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	7
	TOTAL for H 1 from page 8	3
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	10

Comments:

Wetland name or number WSE4

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number WSE4

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WSE5

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WSE5 Date of site visit: 03/19/12; 07/09/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 20 TOWNSHIP: 26N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	14
Score for Hydrologic Functions	10
Score for Habitat Functions	12
TOTAL Score for Functions	36

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WSE5

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

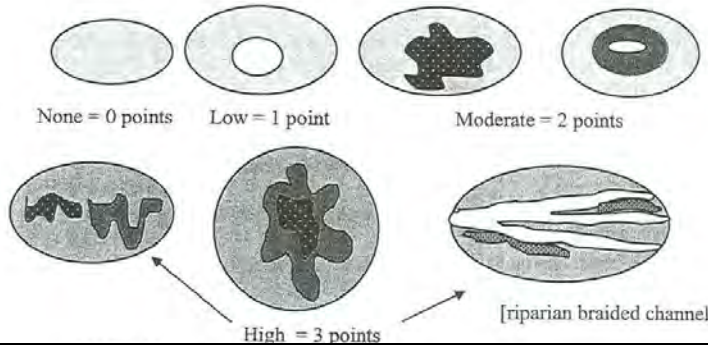
Wetland name or number WSE5

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 5
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 0
	Total for D 1 *Add the points in the boxes above*	7
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier 2
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	14
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	5

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ____ Wetland is in a headwater of a river or stream that has flooding problems. ____X Wetland drains to a river or stream that has flooding problems ____ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	10

Comments:

Wetland name or number WSE5

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed ___ Emergent plants ___ Scrub/shrub (areas where shrubs have > 30% cover) _X_ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ___X___ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 _X_ Seasonally flooded or inundated — 3 or more types present.....points = 2 ___ Occasionally flooded or inundated — 2 types present.....points = 1 _X_ Saturated only — 1 type present .....points = 0 _X_ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 2
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ___ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) _X_ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	1
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	5

Wetland name or number WSE5

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** __X__ Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
__X__ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
__X__ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

3

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4* 7

TOTAL for H 1 from page 8 5

◆ **Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1*** 12

Comments:

Wetland name or number WSE5

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WSE6

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WSE6 Date of site visit: 03/19/12; 07/09/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 20 TOWNSHIP: 26N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	12
Score for Hydrologic Functions	18
Score for Habitat Functions	8
TOTAL Score for Functions	38

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WSE6

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

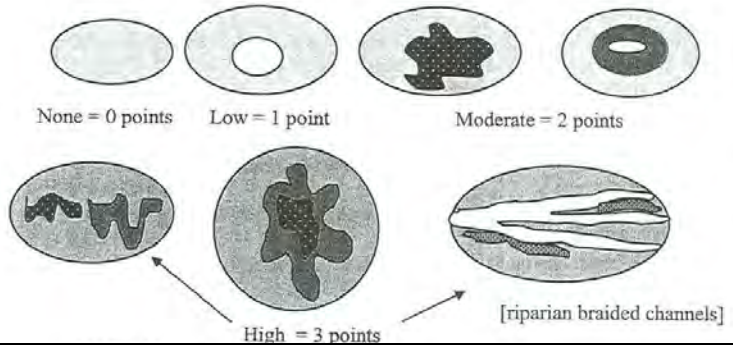
Wetland name or number WSE6

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 3
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 3
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 0
	Total for D 1 *Add the points in the boxes above*	6
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?**	*(see p. 44)*
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	Multiplier 2
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	12
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	4
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	5
	Total for D 3 *Add the points in the boxes above*	9

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. ___ Wetland drains to a river or stream that has flooding problems X Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	18

Comments:

Wetland name or number WSE6

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ____ Aquatic Bed ____ Emergent plants __X__ Scrub/shrub (areas where shrubs have > 30% cover) ____ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ____ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 0
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ____ Permanently flooded or inundated — 4 or more types present points = 3 ____ Seasonally flooded or inundated — 3 or more types present.....points = 2 __X__ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 ____ Permanently flowing stream or river in, or adjacent to, the wetland ____ Seasonally flowing stream in, or adjacent to, the wetland ____ **Lake-fringe wetland..... = 2 points** ____ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	0
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ____ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ____ Standing snags (diameter at the bottom > 4 inches) in the wetland ____ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ____ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ____ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	1

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** __X__ Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
__X__ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
__X__ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

3

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	7
	TOTAL for H 1 from page 8	1
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	8

Comments:

Wetland name or number WSE6

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WSE7

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WSE7 Date of site visit: 03/19/12; 07/09/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 20 TOWNSHIP: 26N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	14
Score for Hydrologic Functions	10
Score for Habitat Functions	11
TOTAL Score for Functions	35

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WSE7

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

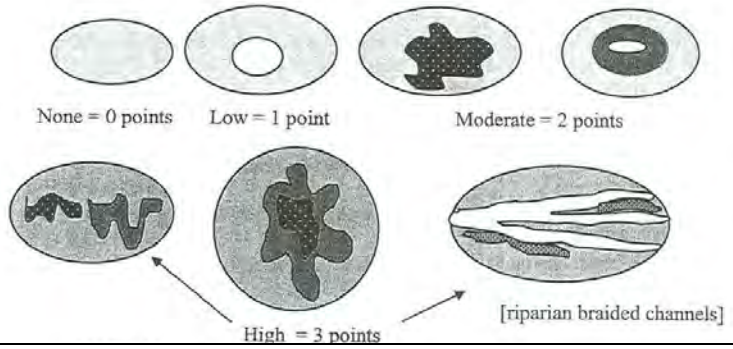
Wetland name or number WSE7

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 3
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 2
	Total for D 1 *Add the points in the boxes above*	7
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier <u>2</u>
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	14
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	5

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. __2__ Wetland drains to a river or stream that has flooding problems ___ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	10

Comments:

Wetland name or number WSE7

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed __X__ Emergent plants __X__ Scrub/shrub (areas where shrubs have > 30% cover) ___ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ___ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 3 structures..... points = 2 2 structures..... points = 1 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated 4 or more types present points = 3 __X__ Seasonally flooded or inundated 3 or more types present.....points = 2 ___ Occasionally flooded or inundated 2 types present.....points = 1 __X__ Saturated only 1 type present .....points = 0 ___ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 1
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ___ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ___ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	4

Wetland name or number WSE7

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** __X__ Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
__X__ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
__X__ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

3

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	7
	TOTAL for H 1 from page 8	4
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	11

Comments:

Wetland name or number WSE7

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WSE8

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WSE8 Date of site visit: 03/21/12; 07/11/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 20 TOWNSHIP: 26N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	18
Score for Hydrologic Functions	10
Score for Habitat Functions	15
TOTAL Score for Functions	43

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WSE8

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

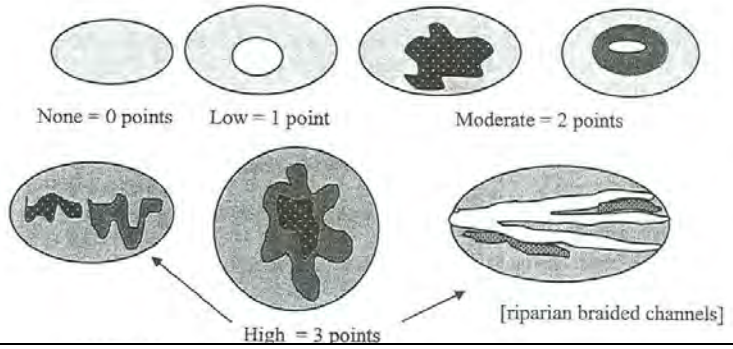
Wetland name or number WSE8

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 5
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 2
	Total for D 1 *Add the points in the boxes above*	9
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ____ Grazing in the wetland or within 150 ft ____ Untreated stormwater discharges to wetland ____ Tilled fields or orchards within 150 ft. of wetland ____ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ____ Wetland is fed by groundwater high in phosphorus or nitrogen ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier <u>2</u>
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	18
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	5

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. X Wetland drains to a river or stream that has flooding problems ___ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	10

Comments:

Wetland name or number WSE8

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed ___ Emergent plants __X__ Scrub/shrub (areas where shrubs have > 30% cover) __X__ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* __X__ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 2
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 ___ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 __X__ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 2
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 1
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* __X__ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) __X__ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	2
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	8

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
__X__ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
__X__ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

3

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	7
	TOTAL for H 1 from page 8	8
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	15

Comments:

Wetland name or number WSE8

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number WSE8

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WSH1

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WSH1 Date of site visit: 03/15/12; 07/16/14

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 17 TOWNSHIP: 26N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III IV X

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	10
Score for Hydrologic Functions	10
Score for Habitat Functions	7
TOTAL Score for Functions	27

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") IV

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WSH1

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   ____X The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

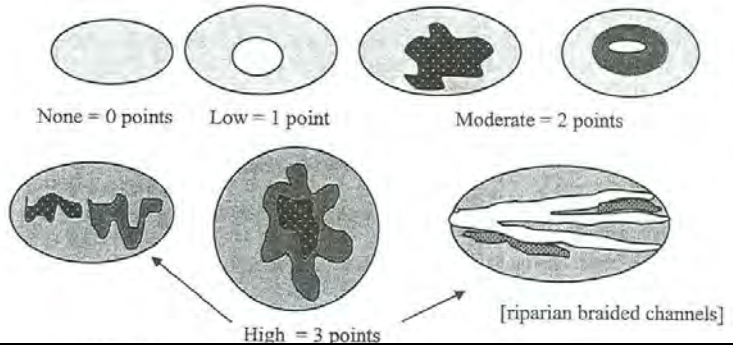
Wetland name or number WSH1

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 1
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 2
	Total for D 1 *Add the points in the boxes above*	5
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?**	*(see p. 44)*
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	Multiplier 2
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	10
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	5

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. X Wetland drains to a river or stream that has flooding problems ___ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	10

Comments:

Wetland name or number WSH1

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the potential to provide habitat for many species?**	
	H 1.1 Vegetation structure *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ____ Aquatic Bed __X__ Emergent plants ____ Scrub/shrub (areas where shrubs have > 30% cover) ____ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ____ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 0
	H 1.2 Hydroperiods *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ____ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 ____ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 ____ Permanently flowing stream or river in, or adjacent to, the wetland ____ Seasonally flowing stream in, or adjacent to, the wetland ____ **Lake-fringe wetland..... = 2 points** ____ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 Richness of Plant Species *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 Special Habitat Features *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ____ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ____ Standing snags (diameter at the bottom > 4 inches) in the wetland ____ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ____ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ____ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* __X__ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	1
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	3

Wetland name or number WSH1

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** __X__ Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

	H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)* Which of the following priority habitats are within 330 ft. (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). ____ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). ____ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = 0 points Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)	0
	H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)* • There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5 • The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3 • The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3 • There is at least 1 wetland within 1/2 mile .....points = 2 • There are no wetlands within 1/2 mile.....points = 0	3
	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	4
	TOTAL for H 1 from page 8	3
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	7

Comments:

Wetland name or number WSH1

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover*)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number WSH1

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WSH2

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WSH2 Date of site visit: 03/15/12; 03/26/14

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 17 TOWNSHIP: 26N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	6
Score for Hydrologic Functions	20
Score for Habitat Functions	8
TOTAL Score for Functions	34

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WSH2

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

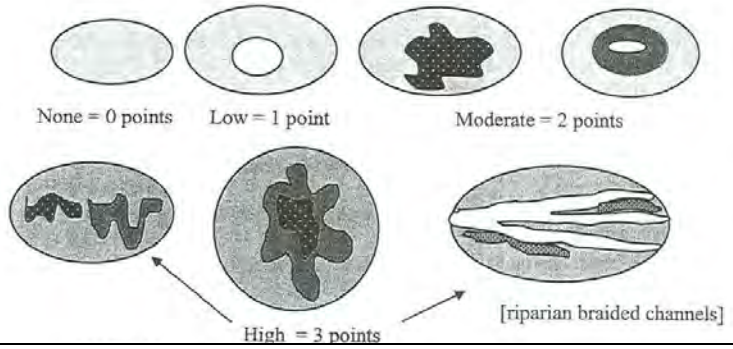
Wetland name or number WSH2

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the potential to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 1
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 0
	Total for D 1 *Add the points in the boxes above*	3
D 2	**Does the wetland have the opportunity to improve water quality?**	*(see p. 44)*
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	Multiplier 2
◆	**TOTAL – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	6
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the potential to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	3
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	5
	Total for D 3 *Add the points in the boxes above*	10

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ____ Wetland is in a headwater of a river or stream that has flooding problems. ____ Wetland drains to a river or stream that has flooding problems ____ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	20

Comments:

Wetland name or number WSH2

These questions apply to wetlands of all HGM classes.		**Points**
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	(only 1 score per box)
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed __X__ Emergent plants ___ Scrub/shrub (areas where shrubs have > 30% cover) __X__ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ___ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 ___ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 ___ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 1
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ___ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ___ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	4

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** __X__ Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

	H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)* Which of the following priority habitats are within 330 ft. (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). ____ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). ____ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = 0 points Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)	0
	H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)* • There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5 • The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3 • The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3 • There is at least 1 wetland within 1/2 mile .....points = 2 • There are no wetlands within 1/2 mile.....points = 0	3
	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	4
	TOTAL for H 1 from page 8	4
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	8

Comments:

Wetland name or number WSH2

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover*)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number WSH2

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WSH3

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WSH3 Date of site visit: 03/15/12; 03/27/14

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 17 TOWNSHIP: 26N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	14
Score for Hydrologic Functions	16
Score for Habitat Functions	5
TOTAL Score for Functions	35

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WSH3

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

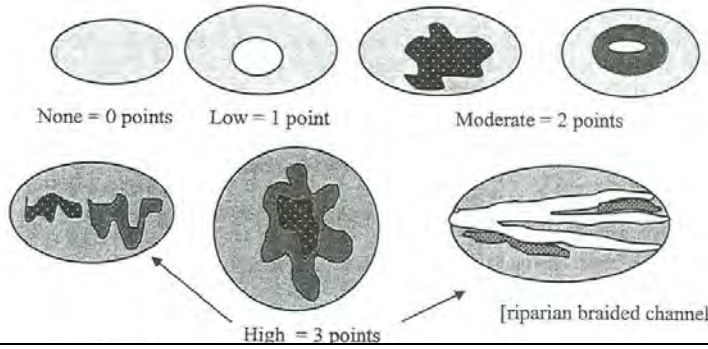
Wetland name or number WSH3

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 3
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 2
	Total for D 1 *Add the points in the boxes above*	7
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?**	*(see p. 44)*
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ____ Grazing in the wetland or within 150 ft ____ Untreated stormwater discharges to wetland ____ Tilled fields or orchards within 150 ft. of wetland ____ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging ____ Residential, urban areas, golf courses are within 150 ft. of wetland ____ Wetland is fed by groundwater high in phosphorus or nitrogen ____ Other _____ YES multiplier is 2 NO multiplier is 1	Multiplier <u>14</u>
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	3
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	8

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ____ Wetland is in a headwater of a river or stream that has flooding problems. ____ Wetland drains to a river or stream that has flooding problems ____ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	16

Comments:

Wetland name or number WSH3

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ____ Aquatic Bed __X__ Emergent plants ____ Scrub/shrub (areas where shrubs have > 30% cover) ____ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ____ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 0
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ____ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 ____ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 ____ Permanently flowing stream or river in, or adjacent to, the wetland ____ Seasonally flowing stream in, or adjacent to, the wetland ____ **Lake-fringe wetland..... = 2 points** ____ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	 0
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ____ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ____ Standing snags (diameter at the bottom > 4 inches) in the wetland ____ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ____ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ____ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	 0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	1

Wetland name or number WSH3

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

	H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)* Which of the following priority habitats are within 330 ft. (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). ____ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). ____ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = 0 points Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)	0
	H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)* • There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5 • The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3 • The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3 • There is at least 1 wetland within 1/2 mile .....points = 2 • There are no wetlands within 1/2 mile.....points = 0	3
	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	1
	TOTAL for H 1 from page 8	4
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	5

Comments:

Wetland name or number WSH3

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number WSH3

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WSH4

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WSH4 Date of site visit: 03/25/12; 07/31/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 5 TOWNSHIP: 26N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	14
Score for Hydrologic Functions	10
Score for Habitat Functions	13
TOTAL Score for Functions	37

Category based on SPECIAL CHARACTERISITCS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WSH4

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

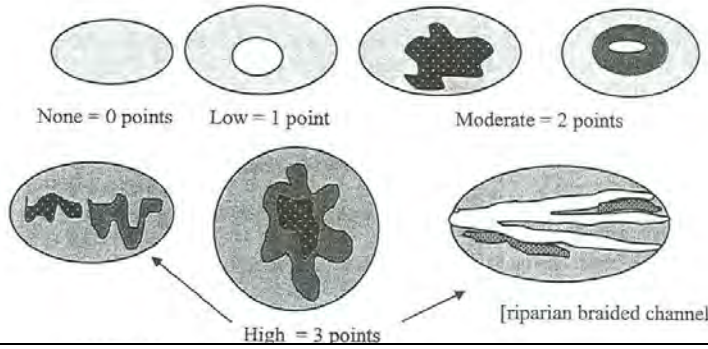
Wetland name or number WSH4

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 3
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 2
	Total for D 1 *Add the points in the boxes above*	7
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ____ Grazing in the wetland or within 150 ft ____ Untreated stormwater discharges to wetland ____ Tilled fields or orchards within 150 ft. of wetland ____ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ____ Wetland is fed by groundwater high in phosphorus or nitrogen ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier 2
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	14
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	5

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. __X__ Wetland drains to a river or stream that has flooding problems ___ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	10

Comments:

Wetland name or number WSH4

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed __X__ Emergent plants ___ Scrub/shrub (areas where shrubs have > 30% cover) __X__ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ___ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 ___ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 ___ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 1
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* __X__ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ___ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	1
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	5

Wetland name or number WSH4

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** __X__ Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	1

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
__X_ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
__X_ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

		3
		3
	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	8
	TOTAL for H 1 from page 8	5
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	13

Comments:

Wetland name or number WSH4

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number WSH4

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WSH5

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WSH5 Date of site visit: 03/21/12; 07/16/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 5 TOWNSHIP: 26N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	12
Score for Hydrologic Functions	6
Score for Habitat Functions	15
TOTAL Score for Functions	33

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WSH5

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

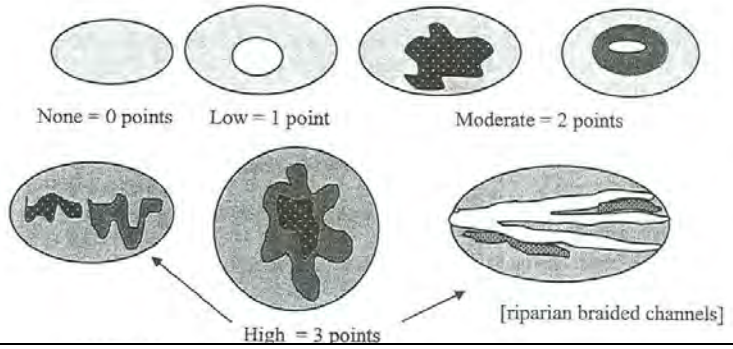
Wetland name or number WSH5

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 1
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 5
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 0
	Total for D 1 *Add the points in the boxes above*	6
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier 2
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	12
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	0
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	3

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. __X__ Wetland drains to a river or stream that has flooding problems ___ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	6

Comments:

Wetland name or number WSH5

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed ___ Emergent plants ___ Scrub/shrub (areas where shrubs have > 30% cover) X Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* X The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 X Seasonally flooded or inundated — 3 or more types present.....points = 2 X Occasionally flooded or inundated — 2 types present.....points = 1 X Saturated only — 1 type present .....points = 0 X Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 3
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* X Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) X Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	2
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	7

Wetland name or number WSH5

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	1

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
_X___ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
__X_ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

3

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	8
	TOTAL for H 1 from page 8	7
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	15

Comments:

Wetland name or number WSH5

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number WSH5

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WMT1

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WMT1 Date of site visit: 03/27/12; 08/07/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 32 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	12
Score for Hydrologic Functions	6
Score for Habitat Functions	15
TOTAL Score for Functions	33

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WMT1

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

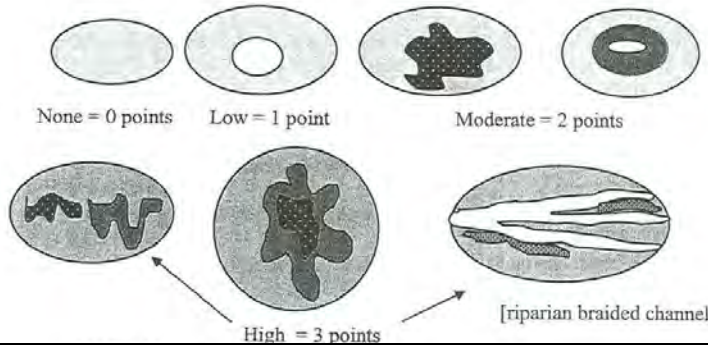
Wetland name or number WMT1

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 1
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 5
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 0
	Total for D 1 *Add the points in the boxes above*	6
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier 2
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	12
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	0
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	3

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. __X__ Wetland drains to a river or stream that has flooding problems ___ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	6

Comments:

Wetland name or number WMT1

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed ___ Emergent plants ___ Scrub/shrub (areas where shrubs have > 30% cover) __X__ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* __X__ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 __X__ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 __X__ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 3
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* __X__ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) __X__ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	2
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	7

Wetland name or number WMT1

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** __X__ Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	1

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
__X__ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
__X__ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

3

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	8
	TOTAL for H 1 from page 8	7
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	15

Comments:

Wetland name or number WMT1

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number WMT1

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WMT2

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WMT2 Date of site visit: 03/27/12; 08/07/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 32 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	16
Score for Hydrologic Functions	16
Score for Habitat Functions	14
TOTAL Score for Functions	46

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	

Wetland HGM Class used for Rating	
Depressional	
Riverine	**X**
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	X

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WMT2

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

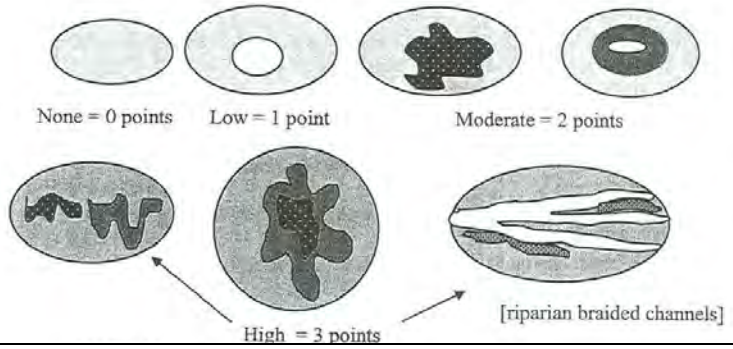
If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

Wetland name or number WMT2

R	Riverine and Freshwater Tidal Fringe Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
R 1	**Does the wetland have the potential to improve water quality?** *(see p.52)*	
	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event: • Depressions cover > 3/4 area of wetland ..... points = 8 • Depressions cover > 1/2 area of wetland ..... points = 4 **(If depressions > 1/2 of area of unit draw polygons on aerial photo or map)** • Depressions present but cover < 1/2 area of wetland. ..... points = 2 • No depressions present ..... points = 0	**Figure ___** 2
	R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): • Trees or shrubs > 2/3 area of the unit ..... points = 8 • Trees or shrubs > 1/3 area of the wetland ..... points = 6 • Ungrazed, herbaceous plants > 2/3 area of unit ..... points = 6 • Ungrazed herbaceous plants > 1/3 area of unit ..... points = 3 • Trees, shrubs, and ungrazed herbaceous < 1/3 area of unit ..... points = 0 **Aerial photo or map showing polygons of different vegetation types**	**Figure ___** 6
	Add the points in the boxes above	8
R 2	**Does the wetland have the opportunity to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ The river or stream linked to the wetland has a contributing basin where human activities have raised levels of sediment, toxic compounds or nutrients in the river water above standards for water quality. ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 53)* Multiplier 2
◆	**TOTAL – Water Quality Functions** Multiply the score from R1 by R2; then ***add score to table on p. 1***	16
	HYDROLOGIC FUNCTIONS – Indicators that wetland functions to reduce flooding and stream erosion.	
R 3	**Does the wetland have the potential to reduce flooding and erosion?**	*(see p.54)*
	R 3.1 Characteristics of the overbank storage the wetland provides: *Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit) / (average width of stream between banks).* • If the ratio is more than 20 ..... points = 9 • If the ratio is between 10 – 20 ..... points = 6 • If the ratio is 5- <10 ..... points = 4 • If the ratio is 1- <5 ..... points = 2 • If the ratio is < 1 ..... points = 1 **Aerial photo or map showing average widths**	**Figure ___** 1
	R 3.2 Characteristics of vegetation that slow down water velocities during floods: *Treat large woody debris as "forest or shrub". Choose the points appropriate for the best description. (polygons need to have >90% cover at person height NOT Cowardin classes):* • Forest or shrub for > 1/3 area OR herbaceous plants > 2/3 area ..... points = 7 • Forest or shrub for > 1/10 area OR herbaceous plants > 1/3 area ..... points = 4 • Vegetation does not meet above criteria ..... points = 0 **Aerial photo or map showing polygons of different vegetation types**	**Figure ___** 7
	Add the points in the boxes above	8
R 4	**Does the wetland have the opportunity to reduce flooding and erosion?** Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.* __X__ There are human structures and activities downstream (roads, buildings, bridges, farms) that can be damaged by flooding. ___ There are natural resources downstream (e.g. salmon redds) that can be damaged by flooding ___ Other _____ *(Answer NO if the major source of water to the wetland is controlled by a reservoir or the wetland is tidal fringe along the sides of a dike)* YES multiplier is 2 NO multiplier is 1	*(see p.57)* Multiplier 2
◆	**TOTAL – Hydrologic Functions** Multiply the score from R3 by R4; then ***add score to table on p. 1***	16

Comments:

Wetland name or number WMT2

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ____ Aquatic Bed ____ Emergent plants ____ Scrub/shrub (areas where shrubs have > 30% cover) __X__ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* X The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 3 structures..... points = 2 2 structures..... points = 1 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ____ Permanently flooded or inundated 4 or more types present points = 3 __X__ Seasonally flooded or inundated 3 or more types present.....points = 2 ____ Occasionally flooded or inundated 2 types present.....points = 1 __X__ Saturated only 1 type present .....points = 0 __X__ Permanently flowing stream or river in, or adjacent to, the wetland ____ Seasonally flowing stream in, or adjacent to, the wetland ____ **Lake-fringe wetland..... = 2 points** ____ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 2
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* __X__ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) X Standing snags (diameter at the bottom > 4 inches) in the wetland ____ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ____ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ____ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	2
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	6

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	1

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
_X___ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
_X__ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

3

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	8
	TOTAL for H 1 from page 8	6
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	14

Comments:

Wetland name or number WMT2

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WMT3

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WMT3 Date of site visit: 03/28/12; 08/07/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 32 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	16
Score for Hydrologic Functions	14
Score for Habitat Functions	11
TOTAL Score for Functions	41

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WMT3

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

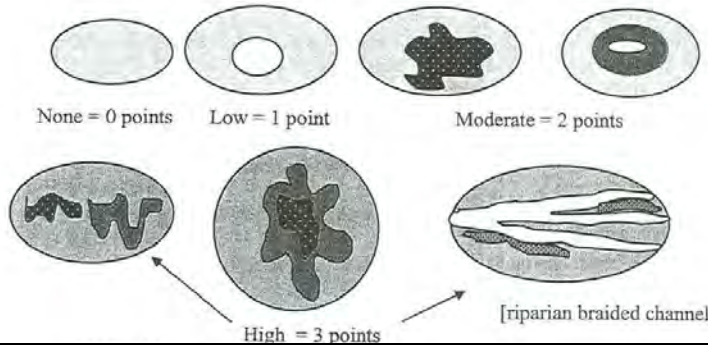
Wetland name or number WMT3

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 3
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 5
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 0
	Total for D 1 *Add the points in the boxes above*	8
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier <u>2</u>
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	16
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	4
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	7

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. ___ Wetland drains to a river or stream that has flooding problems X Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	14

Comments:

Wetland name or number WMT3

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed ___ Emergent plants ___ Scrub/shrub (areas where shrubs have > 30% cover) X Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* X The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 ___ Seasonally flooded or inundated — 3 or more types present.....points = 2 X Occasionally flooded or inundated — 2 types present.....points = 1 X Saturated only — 1 type present .....points = 0 ___ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* X Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ___ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* X Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	2
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	5

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	1

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
_X___ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
____ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

1

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	6
	TOTAL for H 1 from page 8	5
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	11

Comments:

Wetland name or number WMT3

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number WMT3

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WMT4

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WMT4 Date of site visit: 03/29/12

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 32 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	16
Score for Hydrologic Functions	6
Score for Habitat Functions	12
TOTAL Score for Functions	34

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WMT4

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

Wetland name or number WMT4

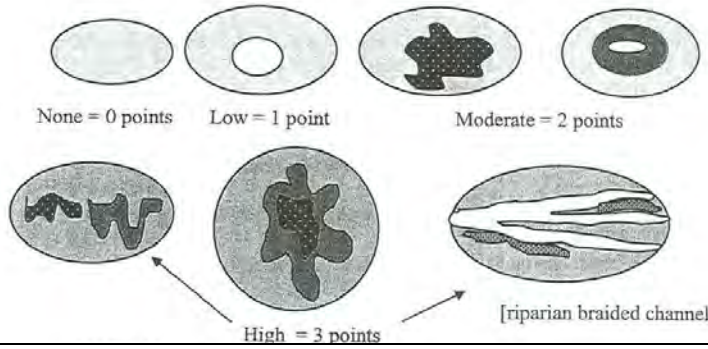
D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 1
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 5
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 2
	Total for D 1 *Add the points in the boxes above*	8
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier <u>2</u>
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	16
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	0
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	3

Wetland name or number WMT4

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. __X__ Wetland drains to a river or stream that has flooding problems ___ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	6

Comments:

Wetland name or number WMT4

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed ___ Emergent plants X Scrub/shrub (areas where shrubs have > 30% cover) ___ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ___ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 0
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 X Seasonally flooded or inundated — 3 or more types present.....points = 2 ___ Occasionally flooded or inundated — 2 types present.....points = 1 X Saturated only — 1 type present .....points = 0 X Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 2
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* X Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ___ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	1
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	4

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	1

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
__X__ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
__X__ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

3

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	8
	TOTAL for H 1 from page 8	4
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	12

Comments:

Wetland name or number WMT4

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WMT5

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WMT5 Date of site visit: 04/3/12; 12/13/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 29 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	14
Score for Hydrologic Functions	7
Score for Habitat Functions	9
TOTAL Score for Functions	30

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WMT5

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

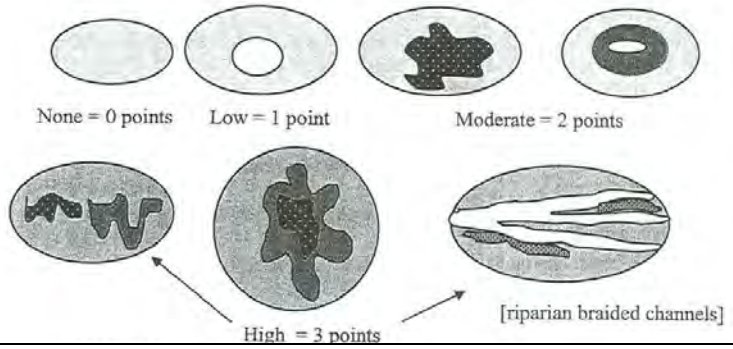
Wetland name or number WMT5

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 5
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 0
	Total for D 1 *Add the points in the boxes above*	7
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier <u>2</u>
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	14
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	5
	Total for D 3 *Add the points in the boxes above*	7

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ____ Wetland is in a headwater of a river or stream that has flooding problems. ____ Wetland drains to a river or stream that has flooding problems ____ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 1
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	7

Comments:

Wetland name or number WMT5

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed __X__ Emergent plants ___ Scrub/shrub (areas where shrubs have > 30% cover) __X__ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* __X__ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 2
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 ___ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 ___ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 1
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ___ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ___ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	5

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*

Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?

NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).

____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).

____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.

____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).

____ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).

____ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*

____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.

____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

0

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	4
	TOTAL for H 1 from page 8	5
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	9

Comments:

Wetland name or number WMT5

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WMT6

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WMT6 Date of site visit: 04/3/12; 12/13/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 29 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	14
Score for Hydrologic Functions	7
Score for Habitat Functions	9
TOTAL Score for Functions	30

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WMT6

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

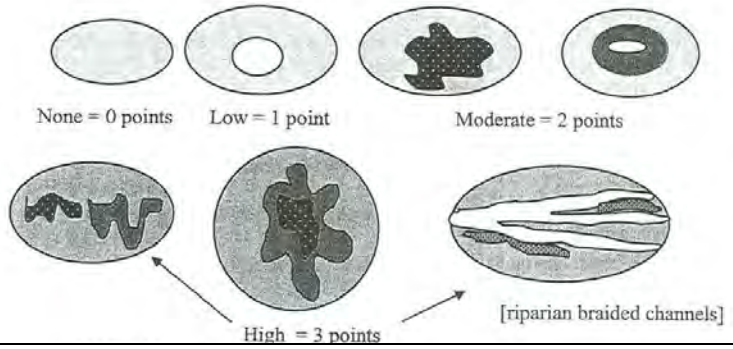
Wetland name or number WMT6

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 5
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 0
	Total for D 1 *Add the points in the boxes above*	7
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier 2
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	14
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	5
	Total for D 3 *Add the points in the boxes above*	7

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ____ Wetland is in a headwater of a river or stream that has flooding problems. ____ Wetland drains to a river or stream that has flooding problems ____ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 1
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	7

Comments:

Wetland name or number WMT6

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the potential to provide habitat for many species?**	
	H 1.1 Vegetation structure *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ____ Aquatic Bed ____ Emergent plants ____ Scrub/shrub (areas where shrubs have > 30% cover) __X__ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* __X__ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 Hydroperiods *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ____ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 ____ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 ____ Permanently flowing stream or river in, or adjacent to, the wetland ____ Seasonally flowing stream in, or adjacent to, the wetland ____ **Lake-fringe wetland..... = 2 points** ____ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 Richness of Plant Species *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 Special Habitat Features *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* __X__ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) __X__ Standing snags (diameter at the bottom > 4 inches) in the wetland ____ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ____ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ____ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	2
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	5

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report* *http://wdfw.wa.gov/hab/phslist.htm*)

Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?

NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).

____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).

____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.

____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).

____ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).

____ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*

____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.

____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

0

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	4
	TOTAL for H 1 from page 8	5
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	9

Comments:

Wetland name or number WMT6

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WMT7

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WMT7 Date of site visit: 04/3/12; 12/19/13

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 28 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	14
Score for Hydrologic Functions	7
Score for Habitat Functions	11
TOTAL Score for Functions	32

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WMT7

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

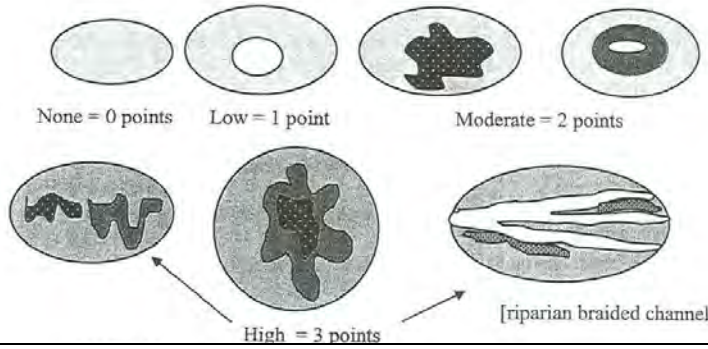
Wetland name or number WMT7

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 5
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 0
	Total for D 1 *Add the points in the boxes above*	7
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier <u>2</u>
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	14
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	5
	Total for D 3 *Add the points in the boxes above*	7

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ____ Wetland is in a headwater of a river or stream that has flooding problems. ____ Wetland drains to a river or stream that has flooding problems ____ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 1
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	7

Comments:

Wetland name or number WMT7

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed ___ Emergent plants ___ Scrub/shrub (areas where shrubs have > 30% cover) __X__ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* __X__ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 ___ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 ___ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* __X__ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ___ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	1
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	4

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** __X__ Buffer does not meet any of the criteria above..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
__X_ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
__X_ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

3

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4* 7

TOTAL for H 1 from page 8 4

◆ **Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1*** 11

Comments:

Wetland name or number WMT7

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WMT8

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WMT8 Date of site visit: 04/3/12

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 28 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III IV X

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	4
Score for Hydrologic Functions	3
Score for Habitat Functions	7
TOTAL Score for Functions	14

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") IV

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	
Riverine	
Lake-fringe	
Slope	**X**
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WMT8

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

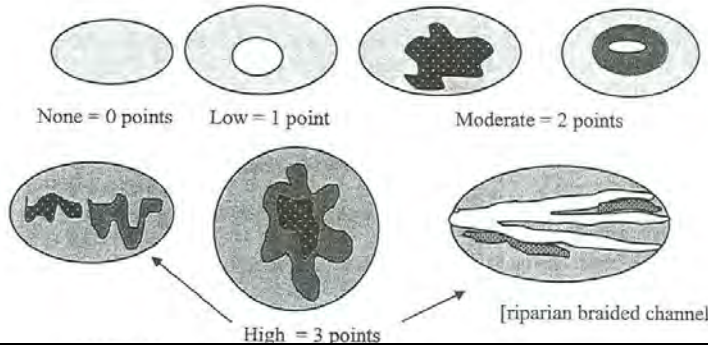
If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

Wetland name or number WMT8

S	Slope Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
S 1	**Does the wetland have the potential to improve water quality?**	*(see p.64)*
	S 1.1 Characteristics of average slope of unit: • Slope is 1% or less *(a 1% slope has a 1 ft. vertical drop in elevation for every 100 ft. horizontal distance)*..... points = 3 • Slope is 1% - 2% ..... points = 2 • Slope is 2% - 5%. ..... points = 1 • Slope is greater than 5% ..... points = 0	1
	S 1.2 The soil 2 inches below the surface (or duff layer) is clay, organic *(Use NRCS definitions).* YES = 3 points NO = 0 points	0
	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: *Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches.* • Dense, uncut, herbaceous vegetation > 90% of the wetland area..... points = 6 • Dense, uncut, herbaceous vegetation > 1/2 of area ..... points = 3 • Dense, woody, vegetation > 1/2 of area..... points = 2 • Dense, uncut, herbaceous vegetation > 1/4 of area ..... points = 1 • Does not meet any of the criteria above for vegetation..... points = 0 **Aerial photo or map with vegetation polygons**	**Figure ___** 1
	Total for S 1 *Add the points in the boxes above*	2
S 2	**Does the wetland have the opportunity to improve water quality?**	*(see p. 67)*
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields, logging, or orchards within 150 ft. of wetland __X__ Residential, urban areas, or golf courses are within 150 ft. upslope of wetland ___ Other _____ YES multiplier is 2 NO multiplier is 1	Multiplier 2
◆	**TOTAL – Water Quality Functions** Multiply the score from S1 by S2; then ***add score to table on p. 1***	4
	HYDROLOGIC FUNCTIONS – Indicators that wetland functions to reduce flooding and stream erosion.	
S 3	**Does the wetland have the potential to reduce flooding and stream erosion?**	*(see p.68)*
	S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms: *Choose the points appropriate for the description that best fits conditions in the wetland (stems of plants should be thick enough (usually > 1/8in), or dense enough to remain erect during surface flows).* • Dense, uncut, **rigid** vegetation covers > 90% of the area of the wetland..... points = 6 • Dense, uncut, **rigid** vegetation> 1/2 area of wetland..... points = 3 • Dense, uncut, **rigid** vegetation > 1/4 area..... points = 1 • More than 1/4 of area is grazed, mowed, tilled, or vegetation is not rigid..... points = 0	1
	S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows. The slope has small surface depressions that can retain water over at least 10% of its area. YES = 2 points NO = 0 points	2
	Add the points in the boxes above	3
S 4	**Does the wetland have the opportunity to reduce flooding and erosion?**	*(see p. 70)*
	Is the wetland in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows? *Note which of the following conditions apply.* ___ Wetland has surface runoff that drains to a river or stream that has flooding problems ___ Other _____ *(Answer NO if the major source of water is controlled by a reservoir (e.g. wetland is a seep that is on the downstream side of a dam)* YES multiplier is 2 NO multiplier is 1	Multiplier 1
◆	**TOTAL – Hydrologic Functions** Multiply the score from S3 by S4; then ***add score to table on p. 1***	3

Comments:

Wetland name or number WMT8

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ____ Aquatic Bed ____ Emergent plants ____ Scrub/shrub (areas where shrubs have > 30% cover) X Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* X The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ____ Permanently flooded or inundated — 4 or more types present points = 3 X Seasonally flooded or inundated — 3 or more types present.....points = 2 ____ Occasionally flooded or inundated — 2 types present.....points = 1 X Saturated only — 1 type present .....points = 0 ____ Permanently flowing stream or river in, or adjacent to, the wetland ____ Seasonally flowing stream in, or adjacent to, the wetland ____ **Lake-fringe wetland..... = 2 points** ____ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ____ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ____ Standing snags (diameter at the bottom > 4 inches) in the wetland ____ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ____ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ____ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	3

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

	H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)* Which of the following priority habitats are within 330 ft. (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). ____ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). ____ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = 0 points Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)	0
	H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)* • There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5 • The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3 • The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3 • There is at least 1 wetland within 1/2 mile .....points = 2 • There are no wetlands within 1/2 mile.....points = 0	3
	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	4
	TOTAL for H 1 from page 8	3
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	7

Comments:

Wetland name or number WMT8

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WMT9

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WMT9 Date of site visit: 05/16/14

Rated by: C. Worsley Trained by Ecology? Yes X No Date of training: 11/05

SEC: 32 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III IV X

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	6
Score for Hydrologic Functions	4
Score for Habitat Functions	7
TOTAL Score for Functions	17

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") IV

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WMT9

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

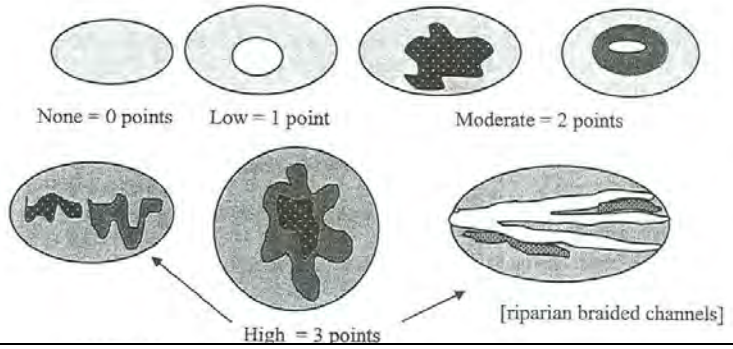
Wetland name or number WMT9

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 1
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 0
	Total for D 1 *Add the points in the boxes above*	3
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft __X__ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging ___ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier <u>2</u>
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	6
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	0
	Total for D 3 *Add the points in the boxes above*	2

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. X Wetland drains to a river or stream that has flooding problems ___ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	4

Comments:

Wetland name or number WMT9

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed X Emergent plants ___ Scrub/shrub (areas where shrubs have > 30% cover) ___ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ___ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 0
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 X Seasonally flooded or inundated — 3 or more types present.....points = 2 ___ Occasionally flooded or inundated — 2 types present.....points = 1 X Saturated only — 1 type present .....points = 0 ___ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ___ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ___ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	2

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	1

Comments:

	H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)* Which of the following priority habitats are within 330 ft. (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). ____ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). ____ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = 0 points Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)	0
	H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)* • There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5 • The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3 • The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3 • There is at least 1 wetland within 1/2 mile .....points = 2 • There are no wetlands within 1/2 mile.....points = 0	3
	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	5
	TOTAL for H 1 from page 8	2
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	7

Comments:

Wetland name or number WMT9

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WMT10

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WMT10 Date of site visit: 06/02/14

Rated by: C. Worsley Trained by Ecology? Yes X No Date of training: 11/05

SEC: 32 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III IV X

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	12
Score for Hydrologic Functions	8
Score for Habitat Functions	9
TOTAL Score for Functions	29

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") IV

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WMT10

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

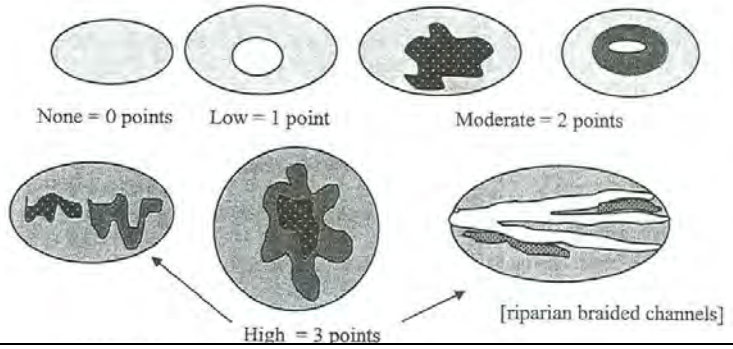
Wetland name or number WMT10

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 3
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 3
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 0
	Total for D 1 *Add the points in the boxes above*	6
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?**	*(see p. 44)*
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	Multiplier 2
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	12
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	4
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	0
	Total for D 3 *Add the points in the boxes above*	4

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. X Wetland drains to a river or stream that has flooding problems ___ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	8

Comments:

Wetland name or number WMT10

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ____ Aquatic Bed ____ Emergent plants X Scrub/shrub (areas where shrubs have > 30% cover) ____ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ____ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 0
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ____ Permanently flooded or inundated — 4 or more types present points = 3 ____ Seasonally flooded or inundated — 3 or more types present.....points = 2 ____ Occasionally flooded or inundated — 2 types present.....points = 1 X Saturated only — 1 type present .....points = 0 ____ Permanently flowing stream or river in, or adjacent to, the wetland ____ Seasonally flowing stream in, or adjacent to, the wetland ____ **Lake-fringe wetland..... = 2 points** ____ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 0
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ____ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ____ Standing snags (diameter at the bottom > 4 inches) in the wetland ____ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ____ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ____ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	1

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	1

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
__X_ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
__X_ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

3

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	8
	TOTAL for H 1 from page 8	1
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	9

Comments:

Wetland name or number WMT10

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WMT11

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WMT11 Date of site visit: 5/16/14

Rated by: K Seckel Trained by Ecology? Yes X No Date of training: 6/2008

SEC: 32 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size .07 acres**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	22
Score for Hydrologic Functions	4
Score for Habitat Functions	11
TOTAL Score for Functions	37

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	**X**

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WMT11

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

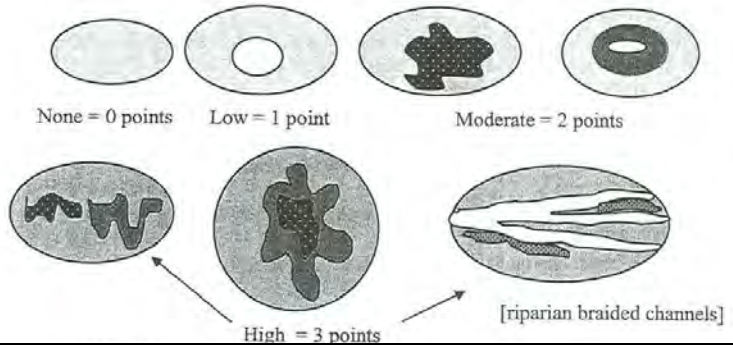
Wetland name or number WMT11

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 5
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 4
	Total for D 1 *Add the points in the boxes above*	11
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ____ Grazing in the wetland or within 150 ft ____ Untreated stormwater discharges to wetland ____ Tilled fields or orchards within 150 ft. of wetland ____ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging ____ Residential, urban areas, golf courses are within 150 ft. of wetland ____ Wetland is fed by groundwater high in phosphorus or nitrogen ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier <u>2</u>
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	22
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	0
	Total for D 3 *Add the points in the boxes above*	2

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ____ Wetland is in a headwater of a river or stream that has flooding problems. ____ Wetland drains to a river or stream that has flooding problems ____ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	4

Comments:

Wetland name or number WMT11

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the potential to provide habitat for many species?**	
	H 1.1 Vegetation structure *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed ___ Emergent plants __X__ Scrub/shrub (areas where shrubs have > 30% cover) ___ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ___ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 0
	H 1.2 Hydroperiods *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 ___ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 ___ Permanently flowing stream or river in, or adjacent to, the wetland __X__ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 2
	H 1.3 Richness of Plant Species *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 Special Habitat Features *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ___ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ___ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	3

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? (Lk. Ballinger) NO = 0 points	1

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
_X__ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
__X__ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

3

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	8
	TOTAL for H 1 from page 8	3
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	11

Comments:

Wetland name or number WMT11

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WLY3

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WLY3 Date of site visit: 04/5/12; 01/27/14

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 21 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	10
Score for Hydrologic Functions	16
Score for Habitat Functions	10
TOTAL Score for Functions	36

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WLY3

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

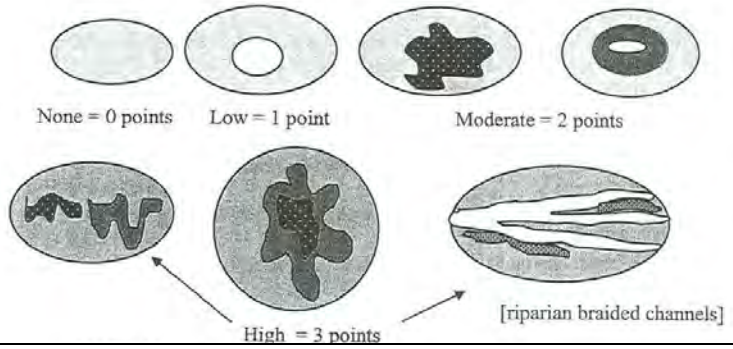
Wetland name or number WLY3

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 1
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 2
	Total for D 1 *Add the points in the boxes above*	5
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?**	*(see p. 44)*
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	Multiplier 2
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	10
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	3
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	8

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ____ Wetland is in a headwater of a river or stream that has flooding problems. ____ Wetland drains to a river or stream that has flooding problems ____ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	16

Comments:

Wetland name or number WLY3

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed __X__ Emergent plants __X__ Scrub/shrub (areas where shrubs have > 30% cover) ___ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ___ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* __X__ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 __X__ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 ___ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 3
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 1
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ___ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ___ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	6

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

	H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)* Which of the following priority habitats are within 330 ft. (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). ____ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). ____ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = 0 points Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)	0
	H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)* • There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5 • The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3 • The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3 • There is at least 1 wetland within 1/2 mile .....points = 2 • There are no wetlands within 1/2 mile.....points = 0	3
	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	4
	TOTAL for H 1 from page 8	6
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	10

Comments:

Wetland name or number WLY3

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number WLY3

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WLY4

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WLY4 Date of site visit: 04/9/12; 07/11/14

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 21 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II X III IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	26
Score for Hydrologic Functions	20
Score for Habitat Functions	23
TOTAL Score for Functions	69

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") II

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	X

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WLY4

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

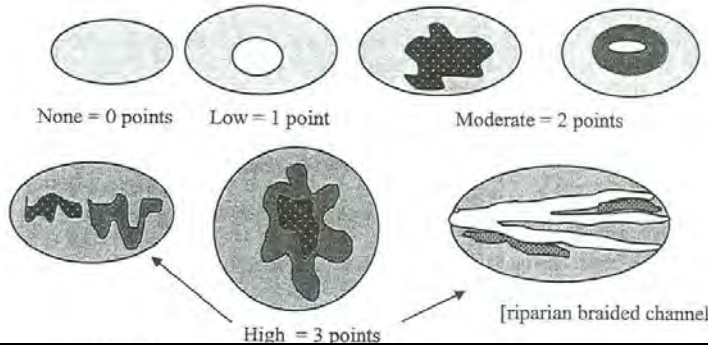
Wetland name or number WLY4

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	4
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 5
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 2
	Total for D 1 *Add the points in the boxes above*	13
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging __X__ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier <u>2</u>
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	26
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	3
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	5
	Total for D 3 *Add the points in the boxes above*	10

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems. X Wetland drains to a river or stream that has flooding problems ___ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	20

Comments:

Wetland name or number WLY4

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the potential to provide habitat for many species?**	
	H 1.1 Vegetation structure *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed __X__ Emergent plants __X__ Scrub/shrub (areas where shrubs have > 30% cover) __X__ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* X The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 4
	H 1.2 Hydroperiods *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 __X__ Seasonally flooded or inundated — 3 or more types present.....points = 2 __X__ Occasionally flooded or inundated — 2 types present.....points = 1 __X__ Saturated only — 1 type present .....points = 0 __X__ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 3
	H 1.3 Richness of Plant Species *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 3
	H 1.5 Special Habitat Features *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* X___ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) __X__ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) X___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* X___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* X___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	5
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	16

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** __X__ Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*
Which of the following priority habitats are within 330 ft. (100m) of the wetland unit?
NOTE: the connections do not have to be relatively undisturbed.

____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
__X_ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
__X_ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).*
____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.

If wetland has **3 or more** priority habitats **= 4 points**
If wetland has **2** priority habitats = **3 points**
If wetland has **1** priority habitat **= 1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

3

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile.....points = 0

3

H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4* 7

TOTAL for H 1 from page 8 16

◆ **Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1*** 23

Comments:

Wetland name or number WLY4

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover*)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WLY6

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WLY6 Date of site visit: 04/17/12; 01/27/14

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 21 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	22
Score for Hydrologic Functions	10
Score for Habitat Functions	8
TOTAL Score for Functions	40

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WLY6

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

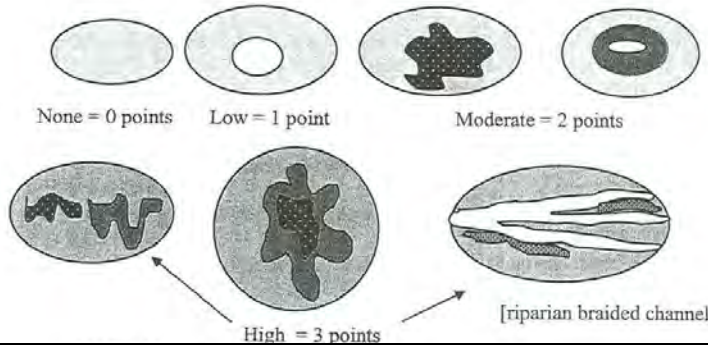
Wetland name or number WLY6

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 5
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 4
	Total for D 1 *Add the points in the boxes above*	11
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging X Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 44)* Multiplier 2
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	22
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	5

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ____ Wetland is in a headwater of a river or stream that has flooding problems. ____ Wetland drains to a river or stream that has flooding problems ____ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	10

Comments:

Wetland name or number WLY6

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed ___ Emergent plants ___ Scrub/shrub (areas where shrubs have > 30% cover) X Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* X The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 — 3 structures..... points = 2 2 structures..... points = 1 — 1 structure ..... points = 0	**Figure ___** 1
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated — 4 or more types present points = 3 X Seasonally flooded or inundated — 3 or more types present.....points = 2 ___ Occasionally flooded or inundated — 2 types present.....points = 1 X Saturated only — 1 type present .....points = 0 ___ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* X Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ___ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	1
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	4

Wetland name or number WLY6

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

	H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)* Which of the following priority habitats are within 330 ft. (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). ____ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). ____ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = 0 points Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)	0
	H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)* • There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5 • The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3 • The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3 • There is at least 1 wetland within 1/2 mile .....points = 2 • There are no wetlands within 1/2 mile.....points = 0	3
	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	4
	TOTAL for H 1 from page 8	4
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	8

Comments:

Wetland name or number WLY6

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number WLY6

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WLY7

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WLY7 Date of site visit: 7/16/14

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 21 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	16
Score for Hydrologic Functions	14
Score for Habitat Functions	6
TOTAL Score for Functions	36

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WLY7

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

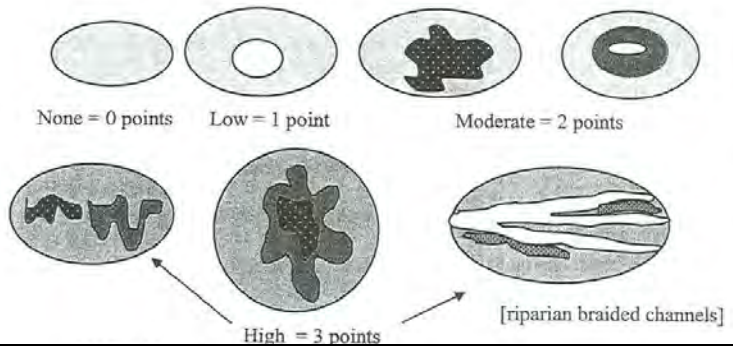
Wetland name or number WLY7

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 3
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 3
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 2
	Total for D 1 *Add the points in the boxes above*	8
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?**	*(see p. 44)*
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging X Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	Multiplier 2
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	16
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	4
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	7

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ____ Wetland is in a headwater of a river or stream that has flooding problems. ____ Wetland drains to a river or stream that has flooding problems ____ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	14

Comments:

Wetland name or number WLY7

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ____ Aquatic Bed ____ Emergent plants X Scrub/shrub (areas where shrubs have > 30% cover) ____ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ____ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 3 structures..... points = 2 2 structures..... points = 1 1 structure ..... points = 0	**Figure ___** 0
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ____ Permanently flooded or inundated 4 or more types present points = 3 X Seasonally flooded or inundated 3 or more types present.....points = 2 ____ Occasionally flooded or inundated 2 types present.....points = 1 X Saturated only 1 type present .....points = 0 ____ Permanently flowing stream or river in, or adjacent to, the wetland ____ Seasonally flowing stream in, or adjacent to, the wetland ____ **Lake-fringe wetland..... = 2 points** ____ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ____ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ____ Standing snags (diameter at the bottom > 4 inches) in the wetland ____ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ____ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ____ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	2

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

	H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)* Which of the following priority habitats are within 330 ft. (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). ____ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). ____ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = 0 points Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)	0
	H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)* • There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5 • The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3 • The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3 • There is at least 1 wetland within 1/2 mile .....points = 2 • There are no wetlands within 1/2 mile.....points = 0	3
	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	4
	TOTAL for H 1 from page 8	2
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	6

Comments:

Wetland name or number WLY7

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number WLY7

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

Wetland name or number WLY8

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct. 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WLY8 Date of site visit: 07/16/14

Rated by: M Maynard Trained by Ecology? Yes X No Date of training: 04/06

SEC: 21 TOWNSHIP: 27N RANGE: 4E Is S/T/R in Appendix D? Yes No X

Map of wetland unit: Figure **Estimated size**

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I II III X IV

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	22
Score for Hydrologic Functions	10
Score for Habitat Functions	6
TOTAL Score for Functions	38

Category based on SPECIAL CHARACTERISTICS of Wetland I II Does not apply X

Final Category (choose the "highest" category from above") III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland HGM Class used for Rating	
Depressional	**X**
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number WLY8

Classification of Vegetated Wetlands for Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

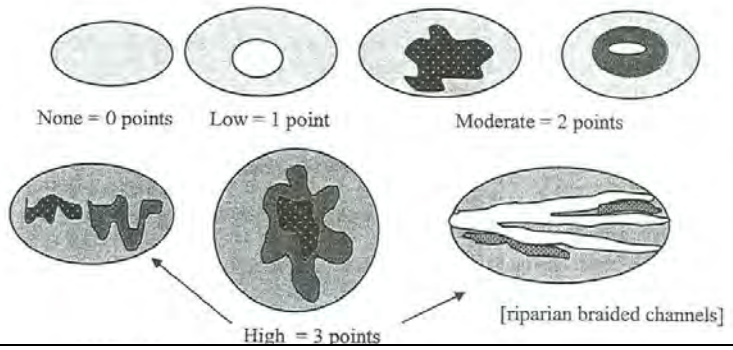
Wetland name or number WLY8

D	Depressional and Flat Wetlands	Points
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	(only 1 score per box)
D 1	**Does the wetland have the <u>potential</u> to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • Unit is a depression with no surface water leaving it (no outlet)..... points = 3 • Unit has an intermittently flowing, OR highly constricted, permanently flowing outlet ..... points = 2 • Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) ..... points = 1 • Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* **Provide photo or drawing**	**Figure ___** 2
	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) YES points = 4 NO points = 0	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): • Wetland has persistent, ungrazed vegetation > = 95% of area..... points = 5 • Wetland has persistent, ungrazed vegetation > = 1/2 of area..... points = 3 • Wetland has persistent, ungrazed vegetation > = 1/10 of area..... points = 1 • Wetland has persistent, ungrazed vegetation < 1/10 of area..... points = 0 **Map of Cowardin vegetation classes**	**Figure ___** 5
	D 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	**Figure ___** 4
	Total for D 1 *Add the points in the boxes above*	11
D 2	**Does the wetland have the <u>opportunity</u> to improve water quality?**	*(see p. 44)*
	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ___ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging X Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ YES multiplier is 2 NO multiplier is 1	Multiplier 2
◆	**<u>TOTAL</u> – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	22
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the <u>potential</u> to reduce flooding and erosion?**	*(see p.46)*
	D 3.1 Characteristics of surface water flows out of the wetland unit • Unit is a depression with no surface water leaving it (no outlet)..... points = 4 • Unit has an intermittently flowing, OR highly constricted permanently flowing outlet ..... points = 2 • Unit is a "flat" depression (Q.7 on key) or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch..... points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* • Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)* ..... points = 0	2
	D 3.2 Depth of storage during wet periods. *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* • Marks of ponding are 3 ft. or more above the surface or bottom of the outlet ..... points = 7 • The wetland is a "headwater" wetland..... points = 5 • Marks of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet..... points = 5 • Marks are at least 0.5 ft. to < 2 ft. from surface or bottom of outlet..... points = 3 • Wetland is flat (yes to Q.2 or Q.7 on key)but has small depressions on the surface that trap water points = 1 • Marks of ponding less than 0.5 ft..... points = 0	0
	D 3.3 Contribution of wetland unit to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* • The area of the basin is less than 10 times the area of unit..... points = 5 • The area of the basin is 10 to 100 times the area of the unit ..... points = 3 • The area of the basin is more than 100 times the area of the unit..... points = 0 • Entire unit is in the FLATS class ..... points = 5	3
	Total for D 3 *Add the points in the boxes above*	5

D 4	**Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ____ Wetland is in a headwater of a river or stream that has flooding problems. ____ Wetland drains to a river or stream that has flooding problems ____ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ____ Other _____ YES multiplier is 2 NO multiplier is 1	*(see p. 49)* Multiplier 2
◆	**<u>TOTAL</u> – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	10

Comments:

Wetland name or number WLY8

These questions apply to wetlands of all HGM classes.		**Points** (only 1 score per box)
	HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	
H 1	**Does the wetland have the <u>potential</u> to provide habitat for many species?**	
	H 1.1 <u>Vegetation structure</u> *(see P. 72)*: *Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.* ___ Aquatic Bed X Emergent plants ___ Scrub/shrub (areas where shrubs have > 30% cover) ___ Forested (areas where trees have > 30% cover) *If the unit has a forested class check if:* ___ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. *Add the number of vegetation types that qualify. If you have:* **Map of Cowardin vegetation classes** 4 structures or more..... points = 4 3 structures..... points = 2 2 structures..... points = 1 1 structure ..... points = 0	**Figure ___** 0
	H 1.2 <u>Hydroperiods</u> *(see p.73)*: *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated 4 or more types present points = 3 X Seasonally flooded or inundated 3 or more types present.....points = 2 ___ Occasionally flooded or inundated 2 types present.....points = 1 X Saturated only 1 type present .....points = 0 ___ Permanently flowing stream or river in, or adjacent to, the wetland ___ Seasonally flowing stream in, or adjacent to, the wetland ___ **Lake-fringe wetland..... = 2 points** ___ **Freshwater tidal wetland..... = 2 points** **Map of hydroperiods**	**Figure ___** 1
	H 1.3 <u>Richness of Plant Species</u> *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species ..... points = 2 5 – 19 species..... points = 1 List species below if you want to: < 5 species ..... points = 0 _____ _____ _____ _____	1
	H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 0
	H 1.5 <u>Special Habitat Features</u> *(see p. 77)*: *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ___ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) ___ Standing snags (diameter at the bottom > 4 inches) in the wetland ___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants *NOTE: The 20% stated in early printings of the manual on page 78 is an error.*	0
	H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	2

Wetland name or number WLY8

H 2	**Does the wetland have the <u>opportunity</u> to provide habitat for many species?**	(only 1 score per box)
	H 2.1 <u>Buffers</u> *(see P. 80)*: *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed".* ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% of circumference. No structures are within the undisturbed part of buffer (relatively undisturbed also means no grazing, no landscaping, no daily human use)..... **points = 5** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... **points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference..... **points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... **points = 3** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference ..... **points = 3** **If buffer does not meet any of the criteria above:** ____ No paved areas (except paved trails) or buildings within 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK ..... **points = 2** ____ No paved areas of buildings within 50m of wetland for > 50% circumference. Light to moderate grazing or lawns are OK..... **points = 2** ____ Heavy grazing in buffer ..... **points = 1** ____ Vegetated buffers are < 2m wide (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... **points = 0** X Buffer does not meet any of the criteria above ..... **points = 1** **Arial photo showing buffers**	**Figure ___** 1
	H 2.2 <u>Corridors and Connections</u> *(see p. 81)* H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft. wide, has at least a 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? *(Dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).* YES = **4 points** (go to H 2.3) NO = go to H 2.2.2 H. 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50 ft. wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (go to H 2.3) NO = go to H 2.2.3 H. 2.2.3 Is the wetland: • Within 5 mi (8km) of a brackish or salt water estuary OR • Within 3 miles of a large field or pasture (> 40 acres) OR YES = 1 point • Within 1 mile of a lake greater than 20 acres? NO = 0 points	0

Comments:

	H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): *(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)* Which of the following priority habitats are within 330 ft. (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ____ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ____ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ____ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ____ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ____ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). __ __ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ____ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). __ __ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ____ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ____ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ____ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = 0 points Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)	0
	H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)* • There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5 • The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3 • The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 3 • There is at least 1 wetland within 1/2 mile .....points = 2 • There are no wetlands within 1/2 mile.....points = 0	3
	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	4
	TOTAL for H 1 from page 8	2
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then ***record the result on p. 1***	6

Comments:

Wetland name or number WLY8

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO __X__	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp,. are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**Natural Heritage Wetlands** *(see p. 87)* Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO __X__ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? YES = Is a bog for purpose of rating NO = go to question 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cove*r)? YES = Category I NO = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number WLY8

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = __X__ not a forested wetland with special characteristics	**Cat. I**
SC5	**Wetlands in Coastal Lagoons** *(see p. 91)* Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ____ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ____ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom.)* YES = Go to SC 5.1 NO __X__ not a wetland in a coastal lagoon SC 5.1 Does the wetland meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO __X__ not an interdunal wetland for rating ***If you answer yes you will still need to rate the wetland based on its functions.*** In practical terms that means the following geographic areas: • Long Beach Peninsula -- lands west of SR 103 • Grayland-Westport -- lands west of SR 105 • Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
◆	**Category of wetland based on Special Characteristics** *Choose the "highest" rating if wetland falls into several categories, and record on p. 1.* If you answered NO for all types enter "Not Applicable" on p. 1	**NA**

Comments:

ATTACHMENT E

Wetland Functions and Values Forms

Summary of Functions and Values

Wetland I.D. WSE1 **Project:** Lynnwood Link **Assessed by**: C. Worsley **Date:** 04/22/14

Cowardin Class: PFO **Wetland size:** 0.42 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Receives surface water from stormwater pond to the north, channelized flow in wetland.	1,5	Low. Minimal storage capacity.
Sediment removal	X		Limited pockets of inundation. Sediment from stormwater runoff.	1,3,4,6	Moderate. Wetland is linear with channelized flow.
Nutrient and toxic removal	X		Limited pockets of inundation. Pollutants from stormwater runoff.	1	Moderate. Wetland is linear with channelized flow.
Erosion control & shoreline stabilization	X		Dense vegetation.	1,2,3	Low.
Production of organic matter and its export	X			2,4,6	Low.
General habitat suitability	X		Wetland is surrounded by development, limited buffer.		Low.
Habitat for aquatic invertebrates	X		Surface water present with high interspersion with vegetation.	1,4,5,6	Low.
Habitat for amphibians	X		Wetland is surrounded by development.	1,2,4,6	Low.
Habitat for wetland-associated mammals	X		Wetland is surrounded by development, limited buffer.	1,2,3	Low. Wetland is linear with channelized flow.
Habitat for wetland-associated birds		X	Lacks sufficient open water habitat to provide this function.		
General fish habitat		X	Not associated with fish-bearing water course in a manner that provides habitat.		
Native plant richness		X	Dominant vegetation includes invasives.		
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WSE3 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/28/14

Cowardin Class: PEM **Wetland size:** 0.05 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Wetland receives water from adjacent lined ditch and has limited storage capacity.	1	Low.
Sediment removal	X		Only small pockets of inundation. Limited sediment sources.	1,3	Low.
Nutrient and toxic removal	X		Only small pockets of inundation in wetland. Toxicants from stormwater runoff.	1,2,4	Low.
Erosion control & shoreline stabilization		X	Signs of erosion around adjacent lined ditch. Not directly associated with a water course or shoreline.		
Production of organic matter and its export	X		Limited inundation and outlet is confined.	1,5,6	Low.
General habitat suitability	X		Wetland is surrounded by development, limited buffer.	3	Low.
Habitat for aquatic invertebrates		X	Lacks sufficient inundation to provide this function.		
Habitat for amphibians		X	Lacks sufficient inundation to provide this function.		
Habitat for wetland-associated mammals		X	No permanent open water.		
Habitat for wetland-associated birds		X	Lacks sufficient inundation to provide this function.		
General fish habitat		X	Not associated with fish-bearing water course in a manner that provides habitat.		
Native plant richness		X	Wetland is dominated by invasives.		
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WSE4 **Project:** Lynnwood Link **Assessed by**: C. Worsley **Date:** 05/30/14

Cowardin Class: PFO **Wetland size:** 0.12 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X			4,5	Low.
Sediment removal	X		Linear surface water flow through wetland. Sediment from stormwater runoff.	1,3	Moderate.
Nutrient and toxic removal	X		Linear surface water flow through wetland. Pollutants from stormwater runoff.	1,2,5	Moderate.
Erosion control & shoreline stabilization		X	Not directly associated with a water course or shoreline.		
Production of organic matter and its export	X		Limited inundation and outlet is confined.	5,6	Low.
General habitat suitability	X		Wetland is surrounded by development, limited buffer.	3	Low.
Habitat for aquatic invertebrates	X		Surface water present with high interspersion with vegetation.	1,4,5,6	Low.
Habitat for amphibians	X		Surface water present with high interspersion with vegetation.	1,2,4,6	Low.
Habitat for wetland-associated mammals		X	No permanent open water.		
Habitat for wetland-associated birds		X	Lacks open water to provide this function.		
General fish habitat		X	Not associated with fish-bearing water course in a manner that provides habitat.		
Native plant richness		X	Invasives are co-dominant.		
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WSE5 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/28/14

Cowardin Class: PFO **Wetland size:** 0.26 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		May occasionally receive floodwater from Thornton Creek. Provides water storage before draining to the stream.	2,4,5	Moderate.
Sediment removal	X		Receives sediments from 5th Ave. This function is limited to a small portion of the wetland.	1,3,4,5	Moderate.
Nutrient and toxic removal	X		Receives pollutants from 5th Ave. This function is limited to a small portion of the wetland.	1,2,3,4	Moderate.
Erosion control & shoreline stabilization	X		Associated with an unnamed stream (SSE1) and Thornton Creek, but there are limited connections to both.	1,2,3	Low.
Production of organic matter and its export	X		Export of organic matter is limited by topography.	1,2,4,5,6	Low.
General habitat suitability	X		Area surrounding wetland is developed and has limited connections to other habitat types.	3	Low.
Habitat for aquatic invertebrates	X		Area of inundation is small, immediately adjacent to 5th Ave, and densely vegetated.	1,4,6	Low.
Habitat for amphibians	X		Area of inundation is small, immediately adjacent to 5th Ave, and densely vegetated	1,2,6	Low.
Habitat for wetland-associated mammals		X	No permanent open water or suitable habitat for wetland-associated mammals.		
Habitat for wetland-associated birds		X	Area of inundation is too small and adjacent to 5th Ave.		
General fish habitat		X	Wetland is not in a topographic position/association with Thornton Creek to provide this function.		
Native plant richness		X	Wetland has multiple Cowardin classes, but is co-dominated with invasves.		
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WSE6 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/28/14

Cowardin Class: PSS **Wetland size:** 0.08 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Wetland is a closed depression, but does not receive flood water from a water course.	2,3,5	Low.
Sediment removal	X		Likely receives some sediment from surrounding roads, but has minimal inundation.	1	Moderate.
Nutrient and toxic removal	X		Likely receives some pollutants from surrounding roads, but has minimal inundation.	1	Moderate. Densely vegetated.
Erosion control & shoreline stabilization		X	Not associated with a water course or shoreline.		
Production of organic matter and its export		X	Although the wetland is densely vegetated there is no outlet or inundation (very limited small pockets) to support this function.		
General habitat suitability	X		Wetland is nearly surrounded by maintained vegetation and roadways, but has limited connectivity to the south.	3	Low.
Habitat for aquatic invertebrates		X	Lacks sufficient inundation to support this function.		
Habitat for amphibians		X	Lacks sufficient inundation to support this function.		
Habitat for wetland-associated mammals		X	Lacks sufficient inundation to support this function.		
Habitat for wetland-associated birds		X	Lacks sufficient open water habitat to support this function.		
General fish habitat		X	Not associated with a fish-bearing water course.		
Native plant richness		X	Invasive species are co-dominant.		
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WSE7 **Project:** Lynnwood Link **Assessed by**: C. Worsley **Date:** 07/11/13

Cowardin Class: PSS/PEM **Wetland size:** 0.19 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Wetland is a closed depression, but does not receive flood water from a water course.	2	Low.
Sediment removal	X		Likely receives sediment from surrounding roads.	1,3,4,5	Moderate.
Nutrient and toxic removal	X		Likely receives pollutants from surrounding roads.	1,2,3,4	Moderate.
Erosion control & shoreline stabilization		X	Not associated with a water course or shoreline.		
Production of organic matter and its export	X			1,4,5,6	Low.
General habitat suitability	X		Wetland is surrounded by development, limited buffer.	5	Low.
Habitat for aquatic invertebrates		X	Surface water present with high interspersion with vegetation.	1,4,5,6	Low.
Habitat for amphibians		X	Wetland is surrounded by development.	1,2,4,6	Low.
Habitat for wetland-associated mammals		X	Wetland is isolated by highway and on-off ramps.		
Habitat for wetland-associated birds		X	Lacks sufficient open water habitat to support this function.		
General fish habitat		X	Not associated with a fish-bearing water course.		
Native plant richness		X	Invasive species are co-dominant.		
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WSE8 **Project:** Lynnwood Link **Assessed by**: C. Worsley **Date:** 05/30/14

Cowardin Class: PFO/PSS **Wetland size:** 0.12 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Associated with Thornton Creek.	5,6	Low.
Sediment removal	X		Sediment from stormwater runoff.	1,5	Moderate.
Nutrient and toxic removal	X		Pollutants from stormwater runoff.	1,2,5	Moderate.
Erosion control & shoreline stabilization	X		Associated with Thornton Creek.		Low.
Production of organic matter and its export	X		Limited inundation and outlet is confined.	2,5,6	Moderate.
General habitat suitability	X		Wetland is surrounded by development, limited buffer.	3,5	Low.
Habitat for aquatic invertebrates	X		Surface water present with high interspersion with vegetation.	1,6	Low.
Habitat for amphibians	X		Surface water present with high interspersion with vegetation.	1,4,6	Low.
Habitat for wetland-associated mammals	X		Associated with Thornton Creek.		Low.
Habitat for wetland-associated birds		X	Lacks open water to provide this function.		
General fish habitat	X		Associated with Thornton Creek.	1,4	Low.
Native plant richness	X		Invasive species are co-dominant, but contains two Cowardin classes.	2	Low.
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WSH1 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/24/14

Cowardin Class: PEM **Wetland size:** 0.06 acre **Ecology Category:** IV **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Much of the wetland is sloped, but the lower depressional portion has some capacity for storage.		Low.
Sediment removal	X		The sloped portion of the wetland and wetland size limit this function. Receives sediment from stormwater runoff.	1,3,5	Low.
Nutrient and toxic removal	X		The sloped portion of the wetland and wetland size limit this function. Receives pollutants from stormwater runoff.	1,2,4	Low.
Erosion control & shoreline stabilization		X	Not associated with a water course or shoreline.		
Production of organic matter and its export	X		Some organic matter produced and flushed out the outlet. Limited by mowing of vegetation.	1,5,6	Low.
General habitat suitability	X		Most of wetland is mowed and surrounding area is developed.		Low.
Habitat for aquatic invertebrates	X		Limited inundation in lower depression provides low levels of this function.	1,4,6	Low.
Habitat for amphibians		X	Lacks sufficient inundation for this function and is isolated by development.		
Habitat for wetland-associated mammals		X	Lacks sufficient inundation for this function.		
Habitat for wetland-associated birds		X	Lacks open water for this function.		
General fish habitat		X	Not associated with a fish-bearing water course.		
Native plant richness		X	Dominated by native vegetation, but also contains non-native species and maintained ROW grass.		
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WSH2 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/24/14

Cowardin Class: PFO/PEM **Wetland size:** 0.37 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Wetland has storage capacity during flood events, but is not associated with a water course.	2,3,5	Low.
Sediment removal	X		Some sediment removal likely occurs, but limited source nearby.	2,3,4,5	Low.
Nutrient and toxic removal	X		May receive pollutants from I-5.	1,2,4	Moderate.
Erosion control & shoreline stabilization		X	Not associated with a water course or shoreline.		
Production of organic matter and its export	X		Some organic matter produced and flushed out the outlet. Limited by mowing of vegetation.	1,2,5,6	Low.
General habitat suitability	X		Located between I-5 and residential structures with sound wall through the wetland.	3,5	Low.
Habitat for aquatic invertebrates	X		Some inundation in ditched portion, but limited duration.	1,4,5,6	Low.
Habitat for amphibians	X		Some inundation in ditched portion, but limited duration.	1,6	Low.
Habitat for wetland-associated mammals		X	Lacks sufficient inundation for this function.		
Habitat for wetland-associated birds		X	Lacks open water for this function.		
General fish habitat		X	Not associated with a fish-bearing water course.		
Native plant richness		X	Invasive species are co-dominant. Maintained ROW and residential lawn are also co-dominant.		
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WSH3 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/28/14

Cowardin Class: PEM **Wetland size:** 0.09 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Wetland provides some storage, but is not associated with a water course.	2	Low.
Sediment removal	X		Receives some sediment from I-5.	1,3,5,6	Moderate.
Nutrient and toxic removal	X		Receives some pollutants from I-5.	1,2,3	Moderate.
Erosion control & shoreline stabilization		X	Not associated with a water course or shoreline.		
Production of organic matter and its export	X			5,6	Low.
General habitat suitability	X		Very limited levels of habitat provided	3	Low.
Habitat for aquatic invertebrates	X		Size of wetland and inundation duration limit this function.	1,4,5,6	Low.
Habitat for amphibians	X		Size of wetland and inundation duration limit this function.	1,6	Low.
Habitat for wetland-associated mammals		X	No sufficient inundation for this function.		
Habitat for wetland-associated birds		X	Lacks appropriate open water for this function.		
General fish habitat		X	Not associated with a fish-bearing water course.		
Native plant richness		X	Dominated by reed canarygrass and has very limited diversity.		
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WSH4 **Project:** Lynnwood Link **Assessed by**: C. Worsley **Date:** 06/06/14

Cowardin Class: PFO/PEM **Wetland size:** 0.10 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Limited storage capacity.	4	Low.
Sediment removal	X		Limited sediment sources.	1,3	Low.
Nutrient and toxic removal	X		Limited pollutant sources.	1,4	Low.
Erosion control & shoreline stabilization		X	Not associated with a water course or shoreline.		
Production of organic matter and its export	X		Many sources of input, outlet to McAleer Creek.	1,2,5,6	Moderate.
General habitat suitability	X		Buffer is limited by surrounding development.	3,5	Low.
Habitat for aquatic invertebrates	X			1,5,6	Low.
Habitat for amphibians	X			1,4,6	Low.
Habitat for wetland-associated mammals		X	Lacks sufficient permanent water for this function.		
Habitat for wetland-associated birds		X	Does not have sufficient open water for this function.		
General fish habitat		X	Not associated with a fish-bearing water in a manner that provides habitat.		
Native plant richness	X		Invasive species are co-dominant, but contains two Cowardin classes.	2	Low.
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WSH5 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/28/14

Cowardin Class: PFO **Wetland size:** 0.48 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Limited storage capacity because of slopes, but may receive overbank flooding from McAleer Creek.	5,6	Low.
Sediment removal	X		Inundation is limited to micro-depressions.	1,3	Moderate.
Nutrient and toxic removal	X		Inundation is limited to micro-depressions.	1,4	Moderate.
Erosion control & shoreline stabilization	X		Associated with McAleer Creek, but much of the wetland is located above typical flood levels.	1,2,3	Moderate.
Production of organic matter and its export	X		Many tree leaves are dropped directly into McAleer Creek. Some overbank flooding also likely exports organic matter.	1,2,6	Moderate.
General habitat suitability	X		Buffer is limited by surrounding off-ramp, but is forested. Only one Cowardin class and moderate plant diversity.		Low.
Habitat for aquatic invertebrates	X		Inundation is limited to micro-depressions within wetland.	1, 6	Low. Very limited inundation, but associated with McAleer Creek, which provides habitat for aquatic invertebrates.
Habitat for amphibians	X		Inundation is limited to micro-depressions within wetland.	1,4,6	Low. Very limited inundation, but associated with McAleer Creek, which provides habitat for amphibians.
Habitat for wetland-associated mammals	X		Lacks permanent water within wetland, but is associate with McAleer Creek.		Low.
Habitat for wetland-associated birds		X	Does not have appropriate open water to vegetation ratio.		
General fish habitat	X			1,4	Low.
Native plant richness	X		Dominant plants are native and has some diversity of species, but does also have some invasive species.	3	Low.
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WMT1 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/24/14

Cowardin Class: PFO **Wetland size:** 0.49 **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Limited storage capacity because of slopes, but may receive overbank flooding from McAleer Creek.	5,6	Low.
Sediment removal	X		Inundation is limited to micro-depressions.	1,3	Moderate.
Nutrient and toxic removal	X		Inundation is limited to micro-depressions.	1,4	Moderate.
Erosion control & shoreline stabilization	X		Associated with McAleer Creek, but much of the wetland is located above typical flood levels.	1,2,3	Moderate.
Production of organic matter and its export	X		Many tree leaves are dropped directly into McAleer Creek. Some overbank flooding also likely exports organic matter.	1,2,6	Moderate.
General habitat suitability	X		Buffer is limited by surrounding off-ramp, but is forested. Only one Cowardin class and moderate plant diversity.		Low.
Habitat for aquatic invertebrates	X		Inundation is limited to micro-depressions within wetland.	1, 6	Low. Very limited inundation, but associated with McAleer Creek, which provides habitat for aquatic invertebrates.
Habitat for amphibians	X		Inundation is limited to micro-depressions within wetland.	1,4,6	Low. Very limited inundation, but associated with McAleer Creek, which provides habitat for amphibians.
Habitat for wetland-associated mammals	X		Lacks permanent water within wetland, but is associate with McAleer Creek.		Low.
Habitat for wetland-associated birds		X	Does not have appropriate open water to vegetation ratio.		
General fish habitat	X			1,4	Low.
Native plant richness	X		Dominant plants are native and has some diversity of species, but does also have some non-native species.	3	Low.
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WMT2 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/24/14

Cowardin Class: PFO **Wetland size:** 0.17 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Limited storage capacity because of slopes, but may receive some overbank flooding from McAleer Creek.	5,6	Low.
Sediment removal	X		Inundation is limited to small pockets and much of the sediments are likely removed in buffer.	1,3	Moderate.
Nutrient and toxic removal	X		Inundation is limited to small pockets and much of the toxicants are likely removed in buffer.	1,4	Moderate.
Erosion control & shoreline stabilization	X		Associated with McAleer Creek, but much of the wetland is located above typical flood levels.	1,2,3	Moderate.
Production of organic matter and its export	X		Many tree leaves are dropped directly into McAleer Creek. Some overbank flooding also likely exports organic matter.	1,2,6	Moderate.
General habitat suitability	X		Buffer is limited by surrounding off-ramp, but is forested. Only one Cowardin class and moderate plant diversity.		Low.
Habitat for aquatic invertebrates	X		Inundation is limited to small pockets within wetland.	1, 6	Low. Very limited inundation, but associated with McAleer Creek, which provides habitat for aquatic invertebrates.
Habitat for amphibians	X		Inundation is limited to small pockets within wetland.	1,4,6	Low. Very limited inundation, but associated with McAleer Creek, which provides habitat for amphibians
Habitat for wetland-associated mammals		X	Lacks permanent water within wetland.		
Habitat for wetland-associated birds		X	Does not have appropriate open water to vegetation ratio.		
General fish habitat	X			1,4	Low.
Native plant richness	X		Dominant plants are native and has some diversity of species, but does also have multiple non-native species present.	3	Low.
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WMT3 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 7/24/14

Cowardin Class: PFO **Wetland size:** 0.07 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Wetland is a closed depression and has minimal storage capacity, but does not appear to receive flood waters.	2,3,5	Low.
Sediment removal		X	Lacks a source of sediments.		
Nutrient and toxic removal		X	Lacks a source of nutrients and pollutants.		
Erosion control & shoreline stabilization		X	Not associated with a water course.		
Production of organic matter and its export	X		Produces organic matter, but lacks an outlet to export through.	1,2	Moderate.
General habitat suitability	X		The wetland buffer to the southeast is developed and wetland has one Cowardin class.	3	Low.
Habitat for aquatic invertebrates		X	May have some seasonal inundation but only saturation observed.		
Habitat for amphibians		X	May have some seasonal inundation but only saturation observed.		
Habitat for wetland-associated mammals		X	No permanent water.		
Habitat for wetland-associated birds		X	No open water.		
General fish habitat		X	Not associated with a fish-bearing water course.		
Native plant richness	X		Dominant plants are native.	1,3	Moderate.
Educational or scientific use		X	No educational or scientific values provided.		
Uniqueness & heritage		X	Wetland does not contain T&E species.		

Summary of Functions and Values

Wetland I.D. WMT5 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/24/14

Cowardin Class: PFO/PEM **Wetland size:** 0.34 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		The wetland has storage capacity, but is limited by outlet (catch basin) near north end.	2,4,5	Low. Not associated with a water course.
Sediment removal	X		Limited interspersion of water and vegetation and sediment sources.	3	Low.
Nutrient and toxic removal	X		May receive pollutants from I-5 and off-ramp. Pockets of inundation in wetland.	1,2,4	Moderate.
Erosion control & shoreline stabilization		X	Not associated with a water course or shoreline.		
Production of organic matter and its Export	X		Limited inundation and opportunity for export.	1,2,5	Low.
General habitat suitability	X		Wetland is surrounded by highway/off-ramp.	1	Low.
Habitat for aquatic invertebrates	X		Small pockets of inundation in center of wetland	1,4,5	Low.
Habitat for amphibians		X	Likely insufficient inundation for amphibians.		
Habitat for wetland-associated mammals		X	No permanent open water.		
Habitat for wetland-associated birds		X	No open water suitable for wetland-associated birds.		
General fish habitat		X	Not associated with a fish-bearing watercourse.		
Native plant richness	X		Some Cowardin class diversity, but has several non-native species present.	1,2,3	Low.
Educational or scientific use		X	No public access or educational value.		
Uniqueness & heritage		X	Not used by T&E species.		

Summary of Functions and Values

Wetland I.D. WMT6 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 0/24/14

Cowardin Class: PFO **Wetland size:** 1.12 acres **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Much of the wetland is sloped and there is limited inundation within the wetland.	5	Low.
Sediment removal	X		The wetland has small areas of inundation and limited sources of sediment.	3,5	Low.
Nutrient and toxic removal	X		Surrounding roadways provide sources of pollutants, but wetland has small areas of inundation.	1,2,4	Low. Some areas of dense vegetation.
Erosion control & shoreline stabilization		X	Not associated with a water course or shoreline.		
Production of organic matter and its export	X		Limited opportunity for export (export to a ditch and catch basin).	1,2,3,5,6	Moderate.
General habitat suitability	X		Surrounding area is developed and wetland lacks Cowardin class diversity.	3	Low.
Habitat for aquatic invertebrates	X		The wetland has small areas of inundation.	1,5,6	Low.
Habitat for amphibians		X	Areas of inundation are likely to small and lack the necessary duration for amphibians.		
Habitat for wetland-associated mammals		X	No permanent water.		
Habitat for wetland-associated birds		X	No open water. Areas of inundation are below tree cover and behind fence.		
General fish habitat		X	Not associated with a fish-bearing water course.		
Native plant richness	X		Dominant plants are mostly native.	1	Low.
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WMT7 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/24/14

Cowardin Class: PFO **Wetland size:** 0.42 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X			2,4,5	Low.
Sediment removal	X		Minimal sources of sediment input.	5	Low.
Nutrient and toxic removal	X		Surrounding roadways provide some source of pollutants, wetland has small areas of inundation.	1,2,4,5	Low.
Erosion control & shoreline stabilization		X	Wetland outlets to a small stream, but is not adjacent to a water course or shoreline.		
Production of organic matter and its export	X		Organic matter is produced and there is an outlet, but likely little is exported.	2,6	Low.
General habitat suitability	X		Most of surrounding area is developed.	3	Low.
Habitat for aquatic invertebrates		X	Insufficient inundation to support this function.		
Habitat for amphibians		X	Insufficient inundation to support this function.		
Habitat for wetland-associated mammals		X	Insufficient permanent water to support this function.		
Habitat for wetland-associated birds		X	Insufficient open water to support this function.		
General fish habitat		X	Not associated with a fish-bearing water course.		
Native plant richness	X		Wetland is forested and has multiple strata.	1,3	Low.
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WMT9 **Project:** Lynnwood Link **Assessed by**: C. Worsley **Date:** 05/16/14

Cowardin Class: PEM **Wetland size:** 0.03 acre **Ecology Category:** IV **Local Rating:** IV

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Wetland is associated with roadside ditch.		Low.
Sediment removal	X		Roadway runoff likely provides sediment input.	3,5	Low.
Nutrient and toxic removal	X		Adjacent roadway provides a source of pollutants.	1,2,4	Moderate.
Erosion control & shoreline stabilization		X	Not associated with a water course or shoreline.		
Production of organic matter and its export	X		Organic matter is produced, catch basin provides outlet.	1,5,6	Low.
General habitat suitability	X		Most of surrounding area is developed.	3	Low.
Habitat for aquatic invertebrates		X	Insufficient inundation to support this function.		
Habitat for amphibians		X	Insufficient inundation to support this function.		
Habitat for wetland-associated mammals		X	No permanent water to support this function.		
Habitat for wetland-associated birds		X	No open water to support this function.		
General fish habitat		X	Not associated with a fish-bearing water course.		
Native plant richness		X	Invasive species are co-dominant. Wetland is within maintained portion of ROW.		
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WMT10 **Project:** Lynnwood Link **Assessed by**: C. Worsley **Date:** 06/02/14

Cowardin Class: PSS **Wetland size:** 0.03 acre **Ecology Category:** IV **Local Rating:** IV

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X			3	Low.
Sediment removal	X		Minimal sources of sediment input.		Low.
Nutrient and toxic removal	X		Adjacent roadway provides a source of pollutants.	1	Low.
Erosion control & shoreline stabilization		X	Not associated with a water course or shoreline.		
Production of organic matter and its export	X		Organic matter is produced but there is no outlet.	2,6	Low.
General habitat suitability	X		Most of surrounding area is developed.	3	Low.
Habitat for aquatic invertebrates		X	No inundation to support this function.		
Habitat for amphibians		X	No inundation to support this function.		
Habitat for wetland-associated mammals		X	No permanent water to support this function.		
Habitat for wetland-associated birds		X	No open water to support this function.		
General fish habitat		X	Not associated with a fish-bearing water course.		
Native plant richness		X	Invasive species are co-dominant.		
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WMT11 **Project:** Lynnwood Link **Assessed by**: C. Worsley **Date:** 05/16/14

Cowardin Class: PSS **Wetland size:** 0.07 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Linear ditch wetland with seasonal stream flow through.	3,6	Low.
Sediment removal	X		Minimal sources of sediment input.		Low.
Nutrient and toxic removal	X		Seasonal stream likely provides a source of pollutants.	1,2,4	Low.
Erosion control & shoreline stabilization	X		Associated with stream SMT1.	1,2	Low.
Production of organic matter and its export	X			1,5	Low.
General habitat suitability	X			3	Low.
Habitat for aquatic invertebrates		X	Insufficient inundation to support this function.		
Habitat for amphibians		X	Insufficient inundation to support this function.		
Habitat for wetland-associated mammals		X	No permanent water to support this function.		
Habitat for wetland-associated birds		X	No open water to support this function.		
General fish habitat		X	Not associated with a fish-bearing water course.		
Native plant richness		X	Invasive species are co-dominant.		
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WLY3 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/21/14

Cowardin Class: PSS/PEM/PUB **Wetland size:** 0.26 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Wetland provides storage during storm events. Area is generally flat with a ditch feature.	2,4,5	Moderate. An elevated culvert provides opportunity for storage.
Sediment removal	X		Sparse vegetation through most of wetland. Dense Spiraea at southwest end of wetland.	2,5	Moderate. Would provide higher levels of function if outlet was located further to the south.
Nutrient and toxic removal	X		Lacks dense herbaceous vegetation.	1,2,5	Moderate. Vegetation and storage duration likely limit function level.
Erosion control & shoreline stabilization		X	Wetland is not associated with a water course or shoreline.		
Production of organic matter and its Export	X		Wetland has limited amounts of vegetation and outlet culvert is elevated.	2,5	Low.
General habitat suitability	X		Wetland has 1 Cowardin class and limited diversity.	3	Low. Much of the buffer is disturbed.
Habitat for aquatic invertebrates	X			1,2,5,6	Moderate. Water depth fluctuates frequently.
Habitat for amphibians	X		Development limit this function.	1,6	Low.
Habitat for wetland-associated mammals	X		Shallow banks and low habitat diversity limits this function.	3	Low. Very low levels of this function provided.
Habitat for wetland-associated birds	X		Low habitat diversity limits this function.	3,6	Low. Mallards observed in wetland.
General fish habitat		X	Wetland is not associated with a fish bearing water.		
Native plant richness	X		Co-dominant vegetation is native, but diversity is very limited.	1	Low.
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WLY4 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/21/14

Cowardin Class: PFO/PSS/PEM **Wetland size:** ~17 acres **Ecology Category:** II **Local Rating:** II

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Wetland receives flood flows from Scriber Creek. Wetland is large and can store flood waters.	2,4,5,6	High.
Sediment removal	X		Dense vegetation and high interspersion between vegetation and water.	2,3,4,5,6	High. Some sediment deposition observed at north end of wetland in/near Scriber Creek.
Nutrient and toxic removal	X		Wetland likely receives toxins from surrounding areas and has dense vegetation, high interspersion, and large size.	1,2,3,4,5	High.
Erosion control & shoreline stabilization	X		Dense woody and herbaceous vegetation.	1,2,3	High. Associated with Scriber Creek
Production of organic matter and its Export	X		Dense deciduous vegetation, but constricted outlet limits export.	2,3,4,5,6	High.
General habitat suitability	X		Evidence of wildlife use observed and high degree of Cowardin class interspersion, but surrounding area is highly developed.	3,4,5,6,7	Moderate.
Habitat for aquatic invertebrates	X		Permanent and seasonal inundation with high habitat interspersion and multiple water depths.	1,2,4,5,6	High.
Habitat for amphibians	X		Permanent and seasonal inundation with high habitat interspersion and multiple water depths.	1,2,4,6	High.
Habitat for wetland-associated mammals	X		Beaver activity observed. Diverse vegetation and habitats.	1,2,3,4,5,7	High.
Habitat for wetland-associated birds	X		Good habitat complexity, but limited deep open water features.	2,3,4,6	High.
General fish habitat	X		Likely provides refuge and feeding. Much of the inundated areas is likely seasonal.	1,2,4	Moderate. Associated with Scriber Creek
Native plant richness	X		Somewhat limited in species diversity. Much of wetland is not mature.	1,2,3	Moderate. Some invasive species throughout.
Educational or scientific use	X		Trails near and through wetland. Parking available.	2,3	Low.
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		Scriber Creek in the wetland is mapped as “modeled” for Chinook and steelhead. (Could be present if barriers downstream were removed.)

Summary of Functions and Values

Wetland I.D. WLY6 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/21/14

Cowardin Class: PFO **Wetland size:** 0.04 acre **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Wetland is a closed depression that receives stormwater runoff from under 208th St.	2,3,5	Moderate. Not associated with a water course.
Sediment removal	X		Wetland has limited inundation, only small pockets.	5	Low.
Nutrient and toxic removal	X		Wetland has limited inundation, only small pockets.	1,2	Low. Few herbaceous plants.
Erosion control & shoreline stabilization		X	Not associated with a water course or shoreline.		
Production of organic matter and its Export	X		No outlet observed. Trees are deciduous.	2,5	Low. Only small pockets of inundation.
General habitat suitability	X		Surrounding area is generally developed or disturbed.	3	Low. Only one Cowardin class.
Habitat for aquatic invertebrates	X		Very limited inundation and primarily woody vegetation.	1,5	Low.
Habitat for amphibians		X	Likely insufficient inundation in the wetland.		
Habitat for wetland-associated mammals		X	No permanent inundation.		
Habitat for wetland-associated birds		X	No open water.		
General fish habitat		X	Not associated with a fish bearing water.		
Native plant richness	X		Only one Cowardin class and limited diversity.	1	Low.
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WLY7 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 07/21/14

Cowardin Class: PSS **Wetland size:** 0.15 **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Provides limited storage, but does not receive flood waters.	2,3,5	Low. Wetland is small and shallow.
Sediment removal	X		Compacted soils and nearby soil disturbances.	1,4	Low. Wetland is small and shallow.
Nutrient and toxic removal	X		May provide low levels of this function. A nearby paved area is occasionally used by motorized vehicles.	2, 5	Low. Wetland is small and shallow.
Erosion control & shoreline stabilization		X	Not associated with a water course or shoreline.		
Production of organic matter and its Export	X		Organic matter is produced, but limited and wetland lacks an outlet.	2,5	Low.
General habitat suitability	X		Much of the surrounding area has been disturbed or is recreational paved trail.	3	Low.
Habitat for aquatic invertebrates	X		Most of area that appears to be inundated is bare ground.	1,6	Low.
Habitat for amphibians		X	Likely insufficient inundation in the wetland.		
Habitat for wetland-associated mammals		X	No permanent water within wetland.		
Habitat for wetland-associated birds		X	Insufficient habitat for wetland associated birds.		
General fish habitat		X	Not associated with a fish bearing water.		
Native plant richness	X		Dominated by native shrubs/saplings.		Low.
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

Summary of Functions and Values

Wetland I.D. WLY8 **Project:** Lynnwood Link **Assessed by**: M Maynard **Date:** 7/24/14

Cowardin Class: PEM **Wetland size:** 0.08 **Ecology Category:** III **Local Rating:** III

Function/Value	Occurrence Y	Occurrence N	Rationale	Indicators present	Comments
Flood flow alteration	X		Wetland likely receives little flood flow. Wetland has little storage capacity.	2,3	Low.
Sediment removal	X		Limited sediment sources and area for deposition in wetland.	1,2,3,5	Low.
Nutrient and toxic removal	X		Limited nutrient/toxicant sources and wetland is small.	2,4	Low.
Erosion control & shoreline stabilization		X	Not associated with a water course or shoreline		
Production of organic matter and its Export	X		No outlet for export of organic matter.	1,4,5	Low.
General habitat suitability	X		Low general habitat functions provided, but does connect to other habitats.	3	Low.
Habitat for aquatic invertebrates	X		No permanent inundation and very little cover.	1,4,6	Low.
Habitat for amphibians		X	Likely lacks sufficient inundation and structure for amphibian habitat.		
Habitat for wetland-associated mammals		X	No permanent water present		
Habitat for wetland-associated birds		X	Lacks open water and/or aquatic bed. Also limited in size.		
General fish habitat		X	Not associated with a fish-bearing water		
Native plant richness	X		Limited diversity of vegetation	1	Low.
Educational or scientific use		X	Wetland does not provide educational or scientific value.		
Uniqueness & heritage		X	Wetland does not contain T&E species or critical habitat.		

ATTACHMENT F

Delineated and Estimated Wetland and Streams

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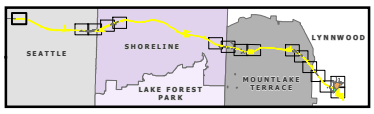
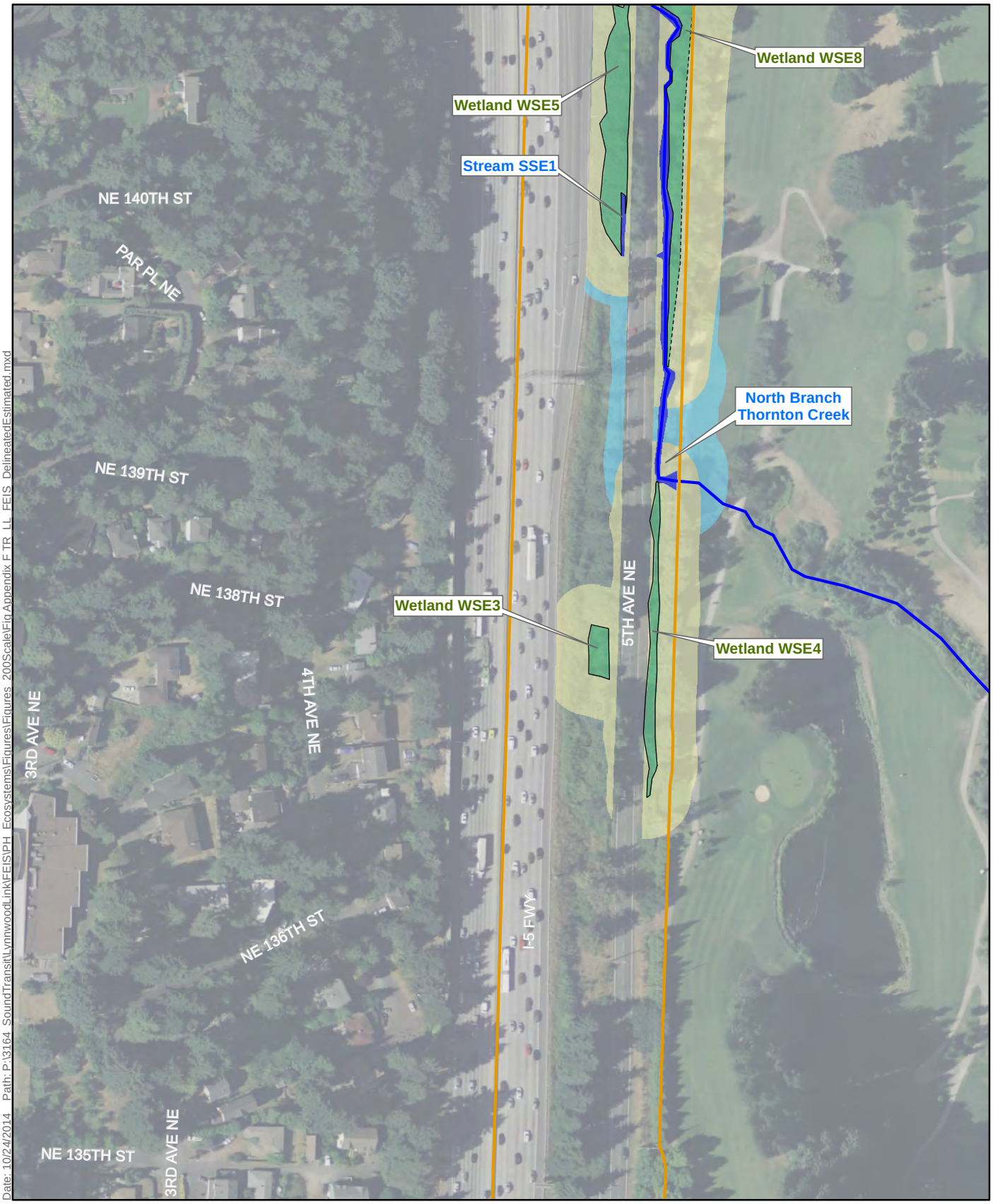


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 1
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension



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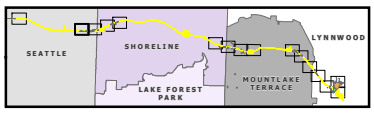

Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
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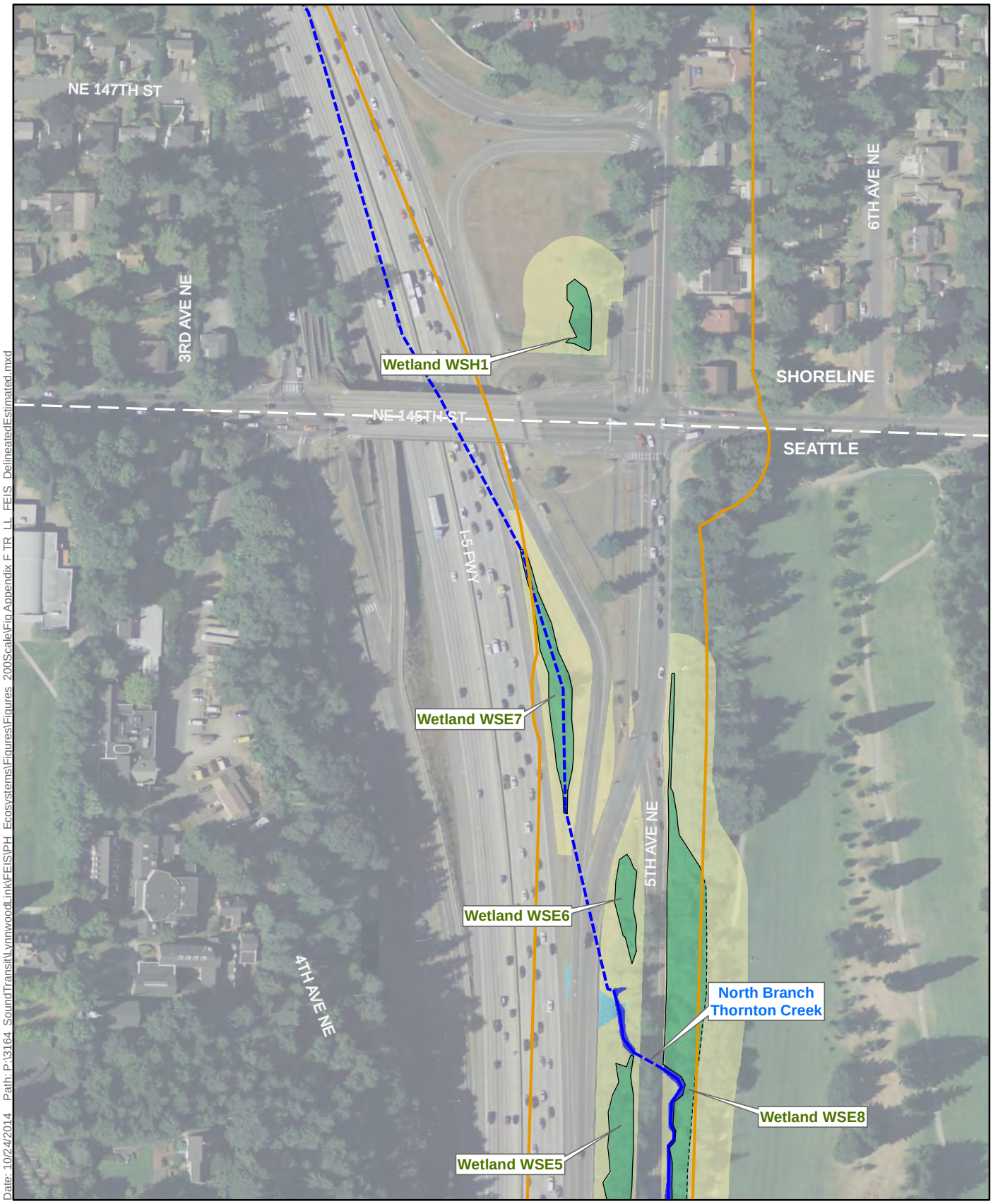
- Piped Stream
- Delineation Study Area

Attachment F
Figure 2
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension



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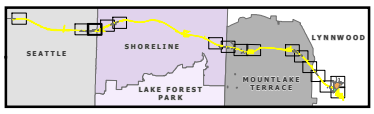
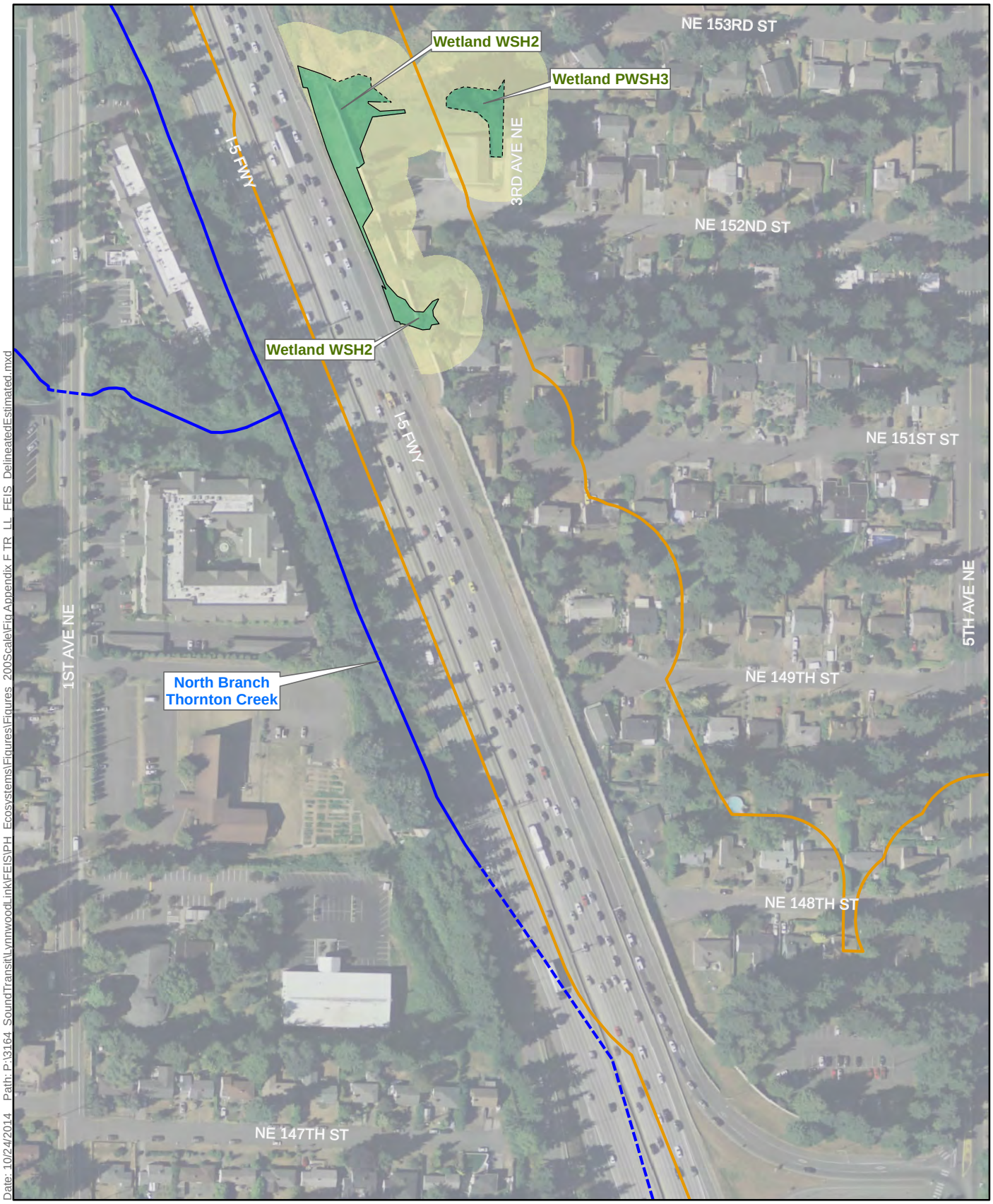


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 3
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension



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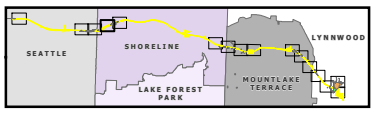
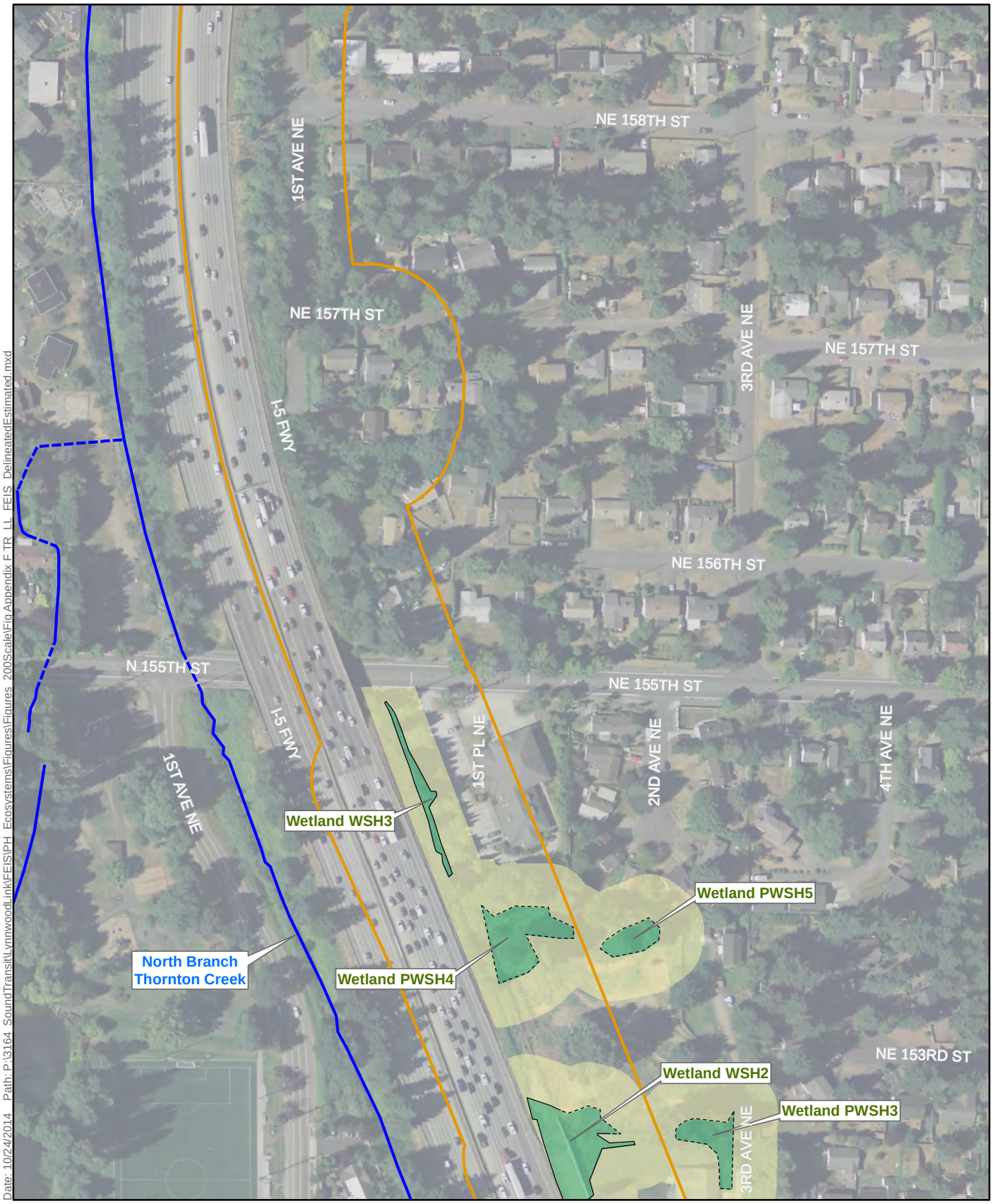


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 4
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension



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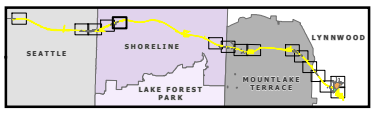
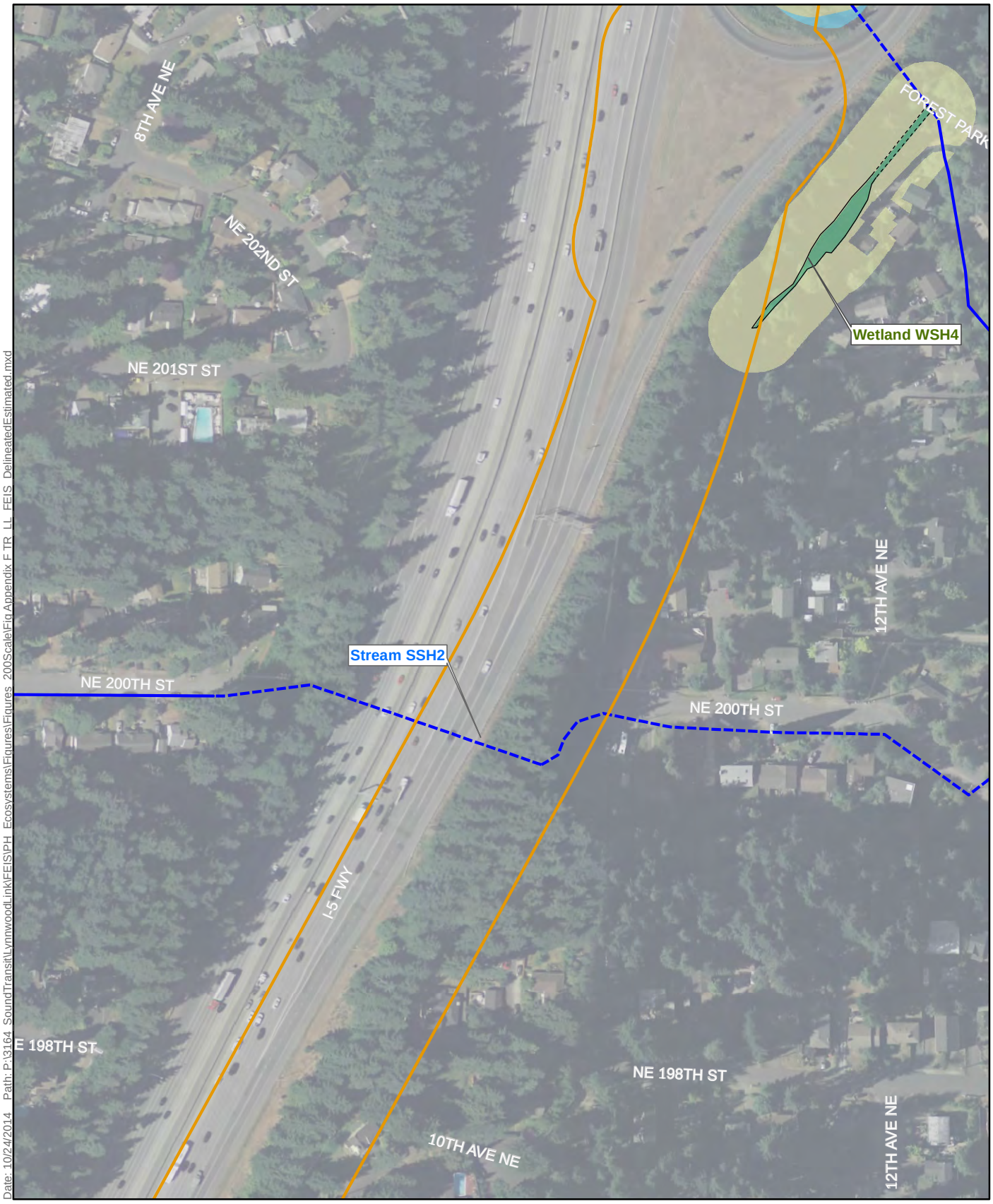


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 5
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension



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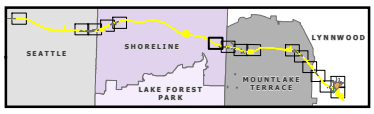
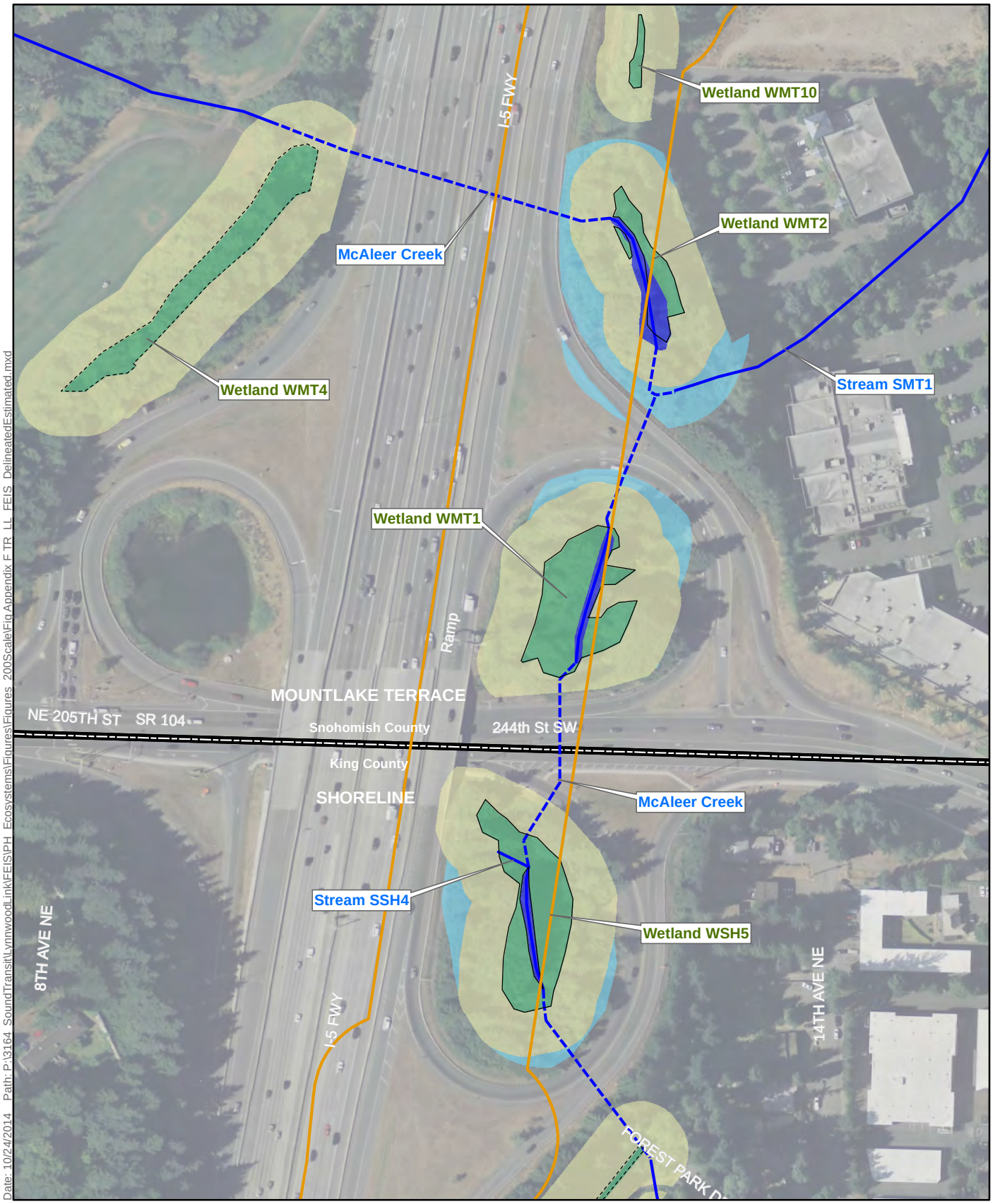


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 6
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension



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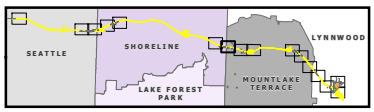
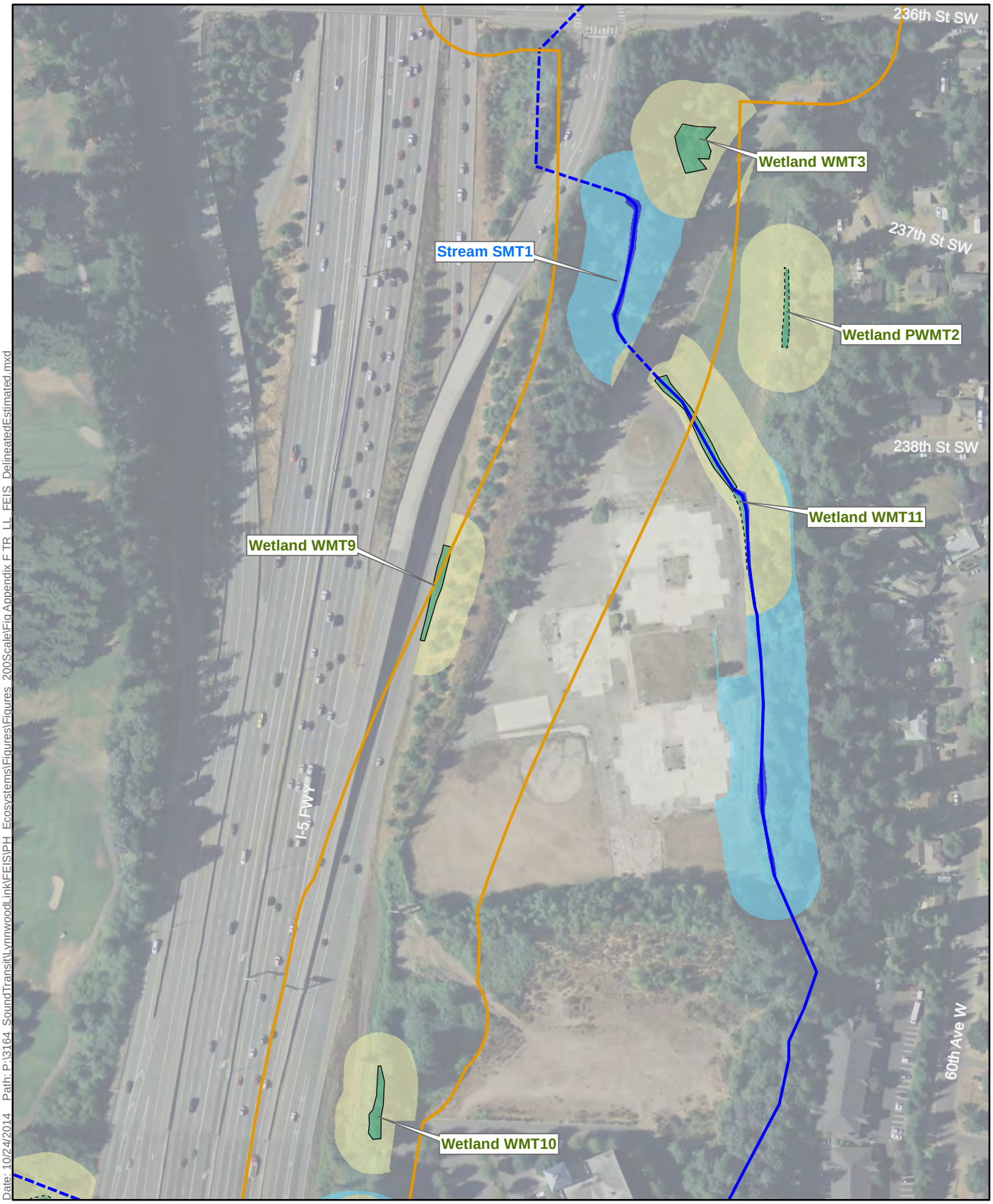


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 7
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension



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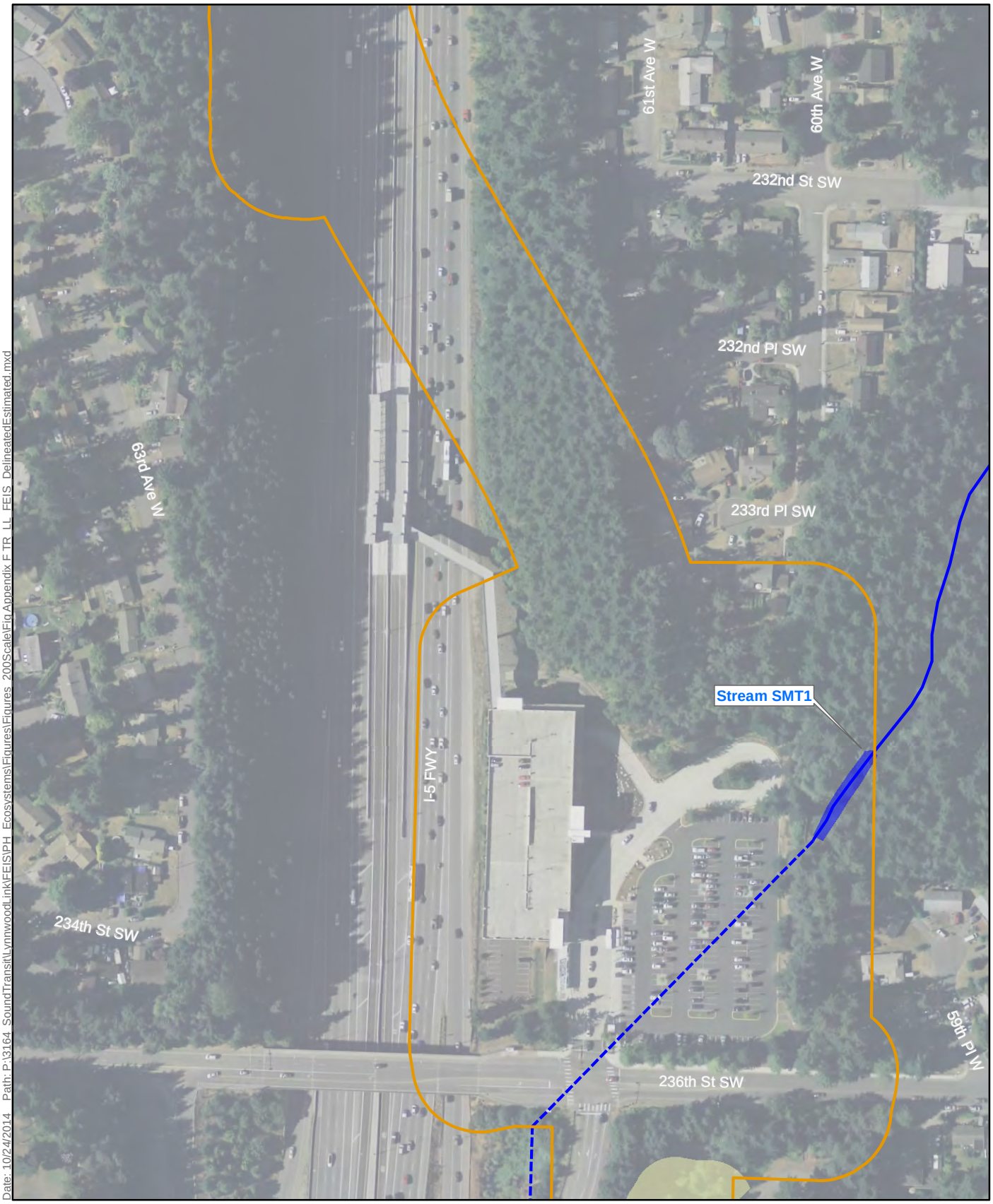
SEATTLE SHORELINE LAKE FOREST PARK MOUNTLAKE TERRACE LYNNWOOD

Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 8
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension



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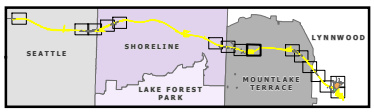

Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 9
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension

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SEATTLE SHORELINE LAKE FOREST PARK MOUNTLAKE TERRACE LYNNWOOD

Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 10
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension

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SEATTLE SHORELINE LYNNWOOD LAKE FOREST PARK MOUNTLAKE TERRACE

Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 11
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension

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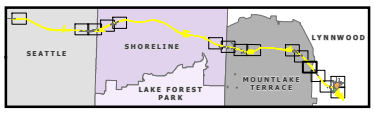
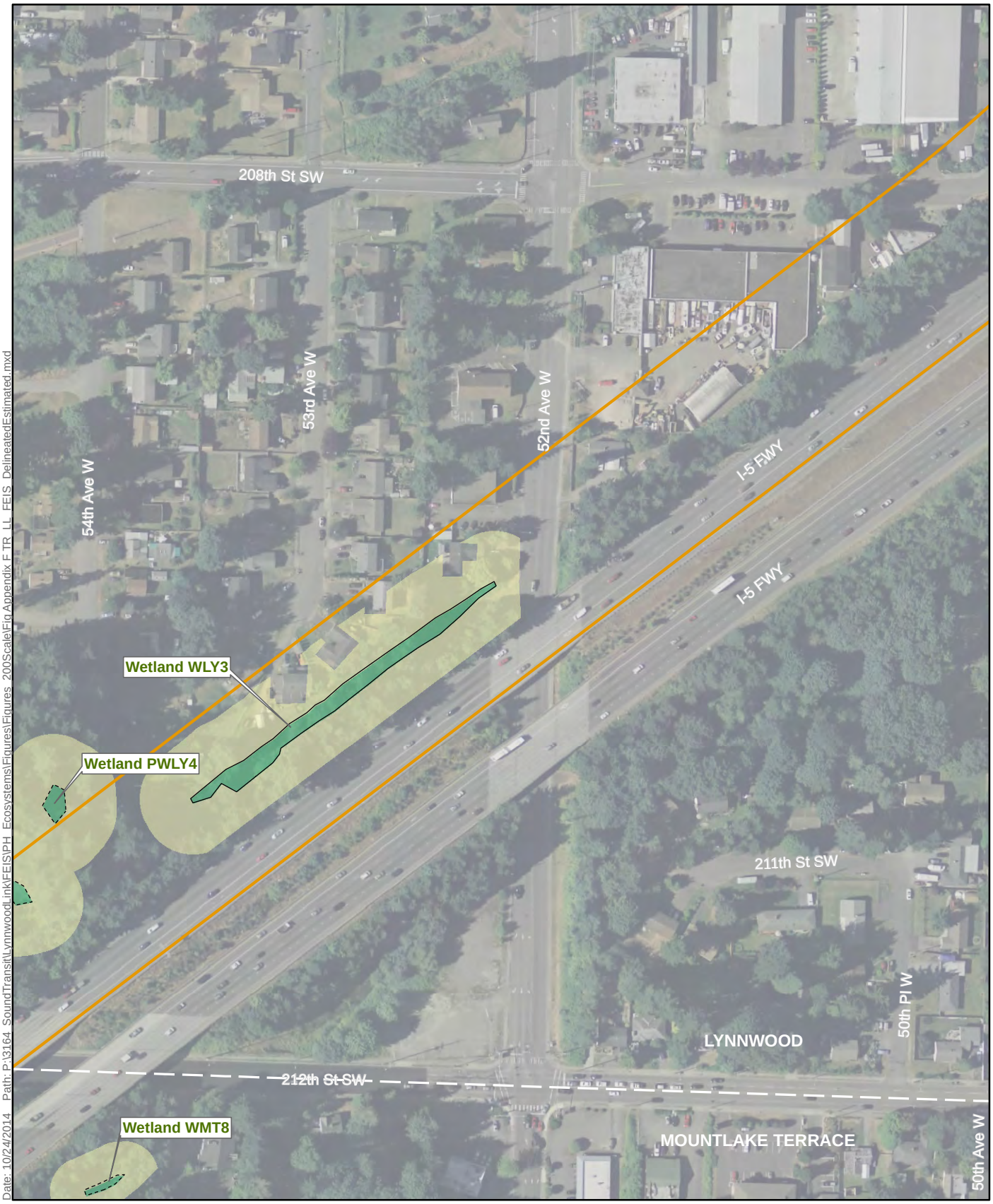


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 12
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension



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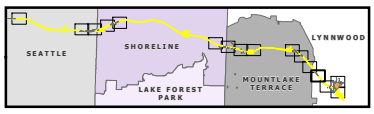
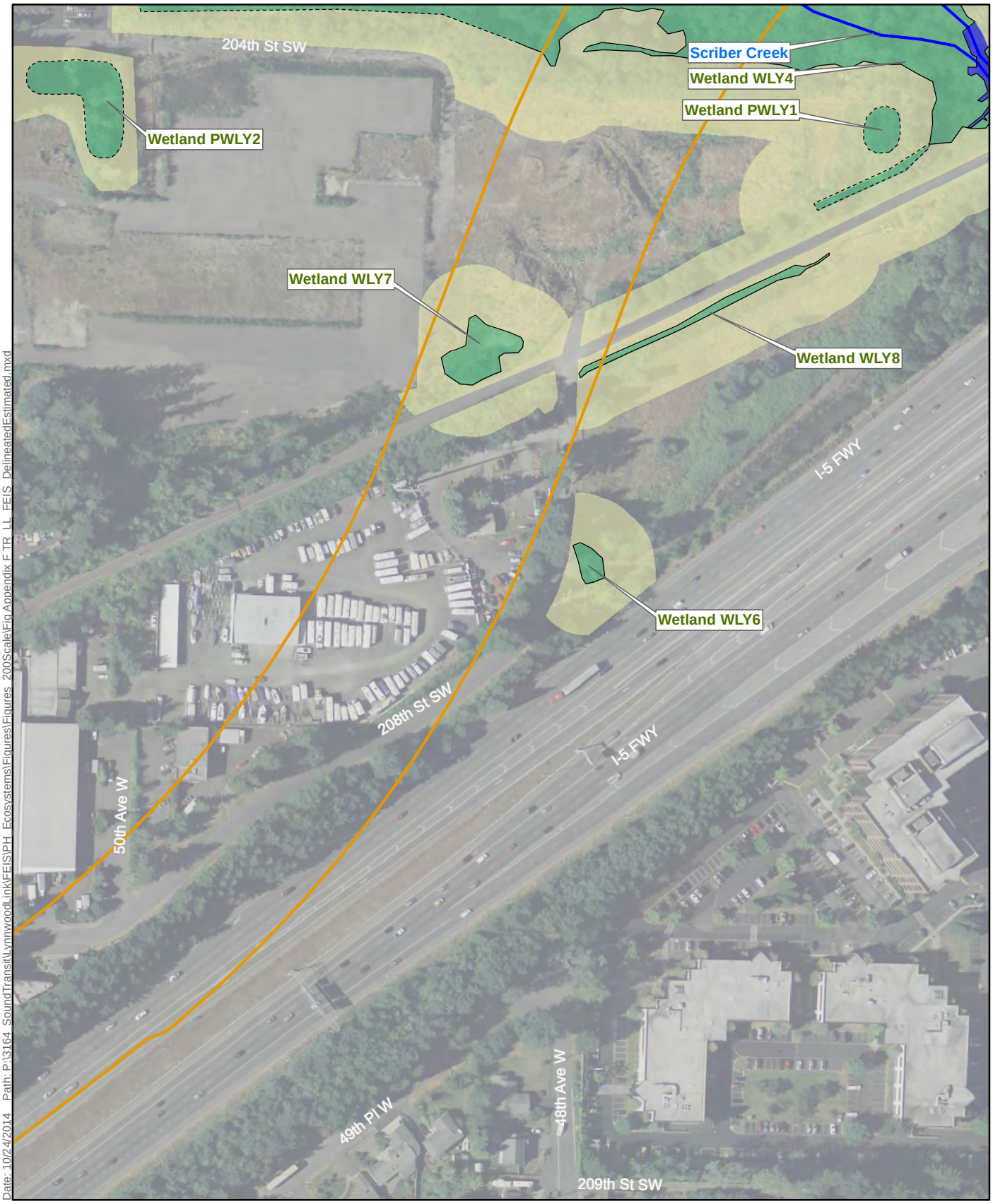


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 13
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension



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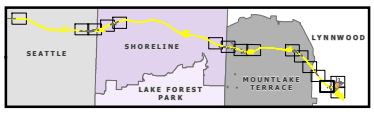

Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 14
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension

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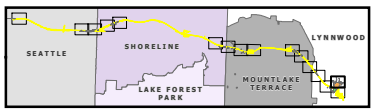
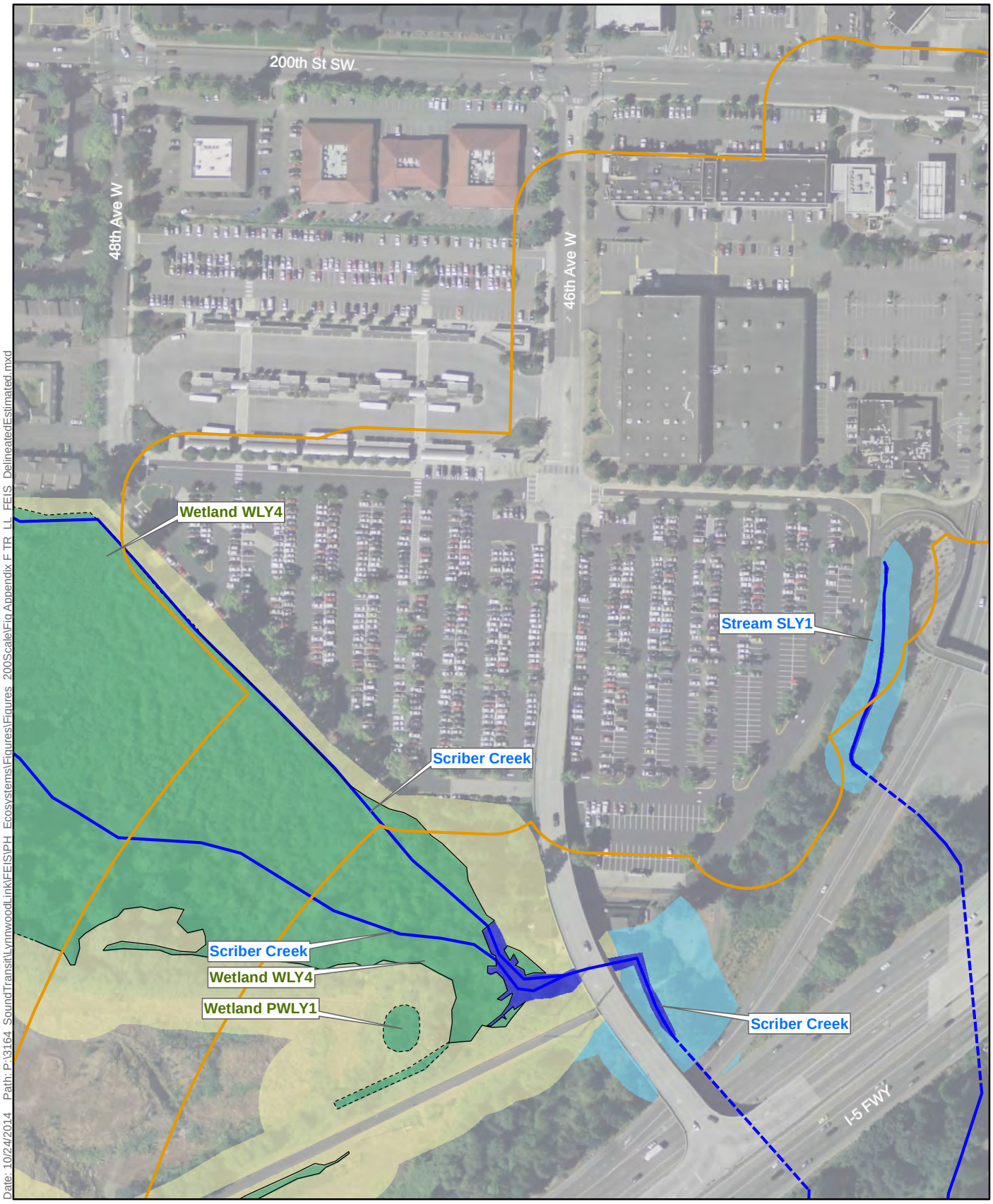


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 15
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension



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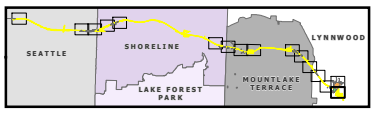

Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Delineated Wetland
- Estimated Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Delineation Study Area

Attachment F
Figure 16
Delineated and Estimated Wetlands and Streams

Lynnwood Link Extension

APPENDIX C

Stream Photographs

Photograph 1. Thornton Creek near I-5 facing upstream (north).

Photograph 2. Stream SSH3 along 200th Street, west of I-5 facing upstream (west).

Photograph 3. McAleer Creek from culvert facing downstream (south).

Photograph 4. Stream SMT1 in the park from inlet at north end facing downstream (south).

Photograph 5. Scriber Creek facing downstream (south).

Photograph 6. Stream (SLY1) approximately 100 feet downstream from inlet facing upstream (north).

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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Study Area
Roadway
Local Street
Photo Location
Open Stream
Piped Stream
Waterbody
City Boundary
County Boundary
Park

Figure C-1
Stream Photo Locations

Lynnwood Link Extension

APPENDIX D

Wetland and Stream Impacts

Tables D-1, D-2, and D-3 present estimates of the area of wetlands and wetland buffers that would be subjected to long-term impacts under each project alternative in Segments A, B, and C. Tables D-4 and D-5 present estimates of the area of wetlands and wetland buffers that would be subjected to temporary, construction-related impacts under each project alternative in Segments B and C. Note that no construction-related impacts were identified in Segment A. Because most of the alignment and associated features for the Segment A alternatives are situated on or adjacent to currently developed areas, it was assumed for this analysis that no additional construction areas in wetlands or buffers would be required outside of the analytical buffer that was used to estimate long-term impacts.

Estimates of impact areas are based on a GIS analysis of the intersection between project limits and ecosystem resource base maps, as depicted in the figures that make up the remainder of this appendix. Blank cells indicate a lack of impacts. Please note that these estimates do not distinguish between at-grade and elevated guideways, even though the intensity and area of effects associated with these two types of structures could differ substantially at any given location. The actual impacts of any of the alternatives would depend on the final alternative design, construction footprint and methods, BMPs implemented during construction, performance of post-construction restoration of temporarily disturbed wetlands and buffers, and performance of compensatory mitigation for impacts on areas protected under local Critical Areas Ordinances.

Table D-1. Estimated Long-Term Impacts on Wetlands and Wetland Buffers in Segment A, by Project Alternative

	Wetland Area Affected (acres)							Wetland Buffer Area Affected (acres)						
Wetland ID	**Preferred Alternative**	**A1**	**A3**	**A5**	**A7**	**A10**	**A11**	**Preferred Alternative**	**A1**	**A3**	**A5**	**A7**	**A10**	**A11**
WSE1								0.01	0.01	0.01	0.01	0.01	0.01	0.01
WSE3	0.05*	0.05*	0.05*	0.05*	0.05*	0.05*	0.05*							
WSE4								0.03	0.03	0.03	0.03	0.03	0.03	0.03
WSE5	0.26*	0.26*	0.26*	0.26*	0.26*	0.26*	0.26*							
WSE6	0.08*	0.08*	0.08*	0.08*	0.08*	0.08*	0.08*							
WSE7								0.03	0.01	0.01	0.03	0.03	0.01	0.01
WSE8								0.06	0.09	0.09	0.09	0.09	0.09	0.09
WSH1	0.06*	0.06*	0.06*			0.06*	0.06*				0.11	0.11		
WSH2	0.37*	0.37*	0.37*	0.37*	0.37*	0.37*	0.37*							
WSH3	0.06*	0.06*	0.06*	0.06*	0.06*	0.06*	0.06*							
PWSH4	0.07	0.05	0.05	0.10	0.10	0.05	0.05	0.21	0.19	0.20	0.39	0.39	0.19	0.20
PWSH5											0.20	0.20		
Total	**0.95**	**0.93**	**0.93**	**0.92**	**0.92**	**0.93**	**0.93**	0.34	**0.33**	**0.34**	**0.86**	**0.86**	**0.33**	**0.34**

* Asterisks denote wetlands that would be completely lost as a result of project construction under a particular alternative. Note that no buffer impacts are associated with such wetlands because loss of a wetland would render moot the need to mitigate for impacts to that wetland's buffer.

Table D-2. Estimated Long-Term Impacts on Wetlands and Wetland Buffers in Segment B, by Project Alternative

	Wetland Area Affected (acres)					Wetland Buffer Area Affected (acres)				
Wetland ID	**Preferred Alternative**	**Pref. Alt. with 220th St. SW Station option**	**B1**	**B2A**	**B4**	**Preferred Alternative**	**Pref. Alt. with 220th St. SW Station option**	**B1**	**B2A**	**B4**
WSH5	0.03	0.03	0.02	0.02	0.05	0.24	0.24	0.20	0.20	0.28
WMT1					0.10	0.27	0.27	0.26	0.26	0.21
WMT2					0.03	0.10	0.10	0.09	0.09	0.21
WMT3						0.20	0.20	0.25	0.25	
WMT5	0.34*			0.34*						
WMT6	0.32	0.35		1.12*		0.24	0.25			
WMT7	0.10	0.10		0.11		0.25	0.21		0.25	
WMT9										0.03
WMT10					0.03*	0.15	0.24	0.12	0.12	
WMT11						0.01	0.01	0.01	0.01	
PWLY3						0.10	0.10		0.08	
Total	**0.79**	**0.48**	**0.02**	**1.59**	**0.21**	**1.56**	**1.62**	**0.93**	**1.26**	**0.73**

* Asterisks denote wetlands that would be completely lost as a result of project construction under a particular alternative. Note that no buffer impacts are associated with such wetlands because loss of a wetland would render moot the need to mitigate for impacts to that wetland's buffer.

Table D-3. Estimated Long-Term Impacts on Wetlands and Wetland Buffers in Segment C, by Project Alternative

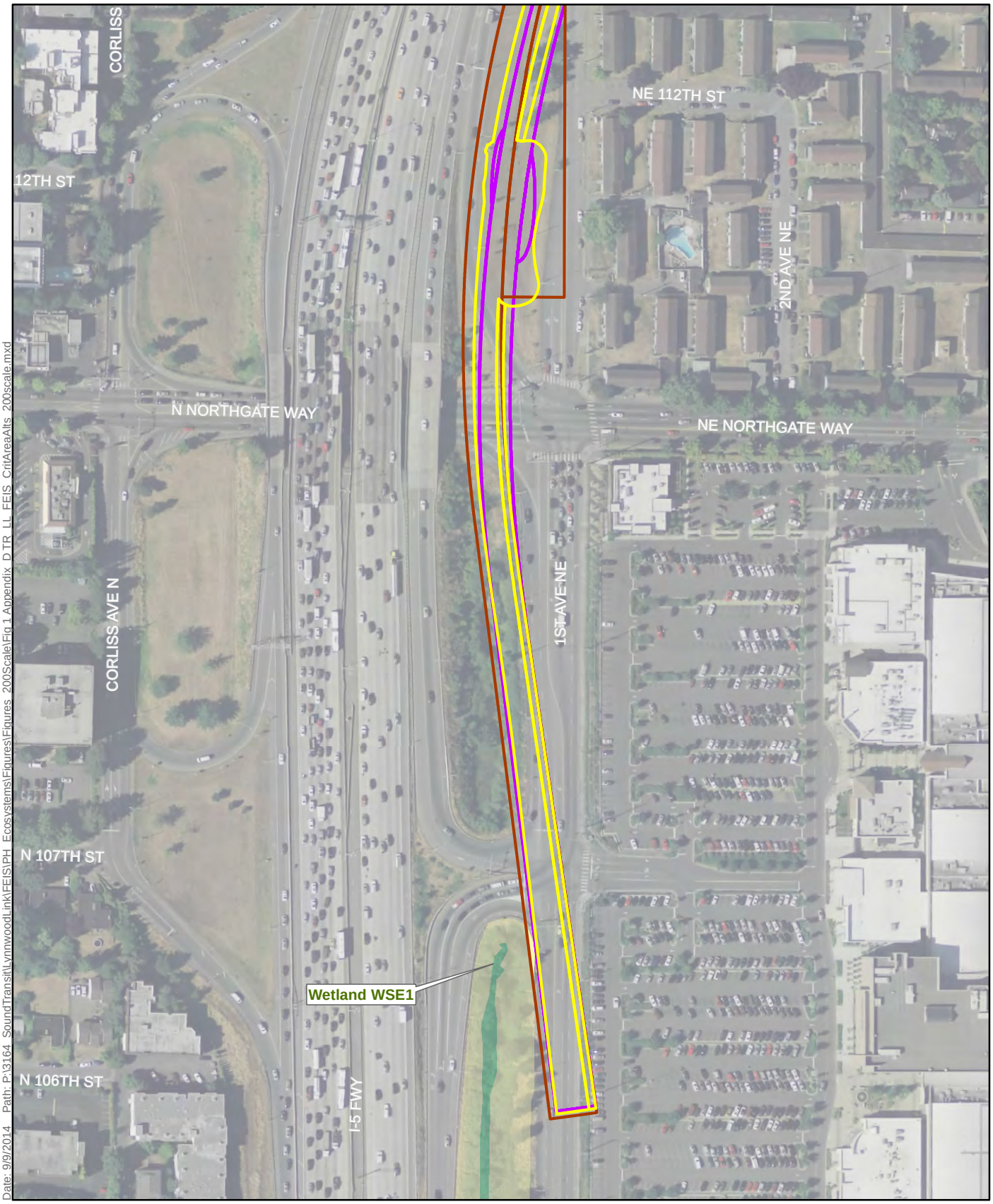
	Wetland Area Affected (acres)							Wetland Buffer Area Affected (acres)						
Wetland ID	**Preferred Alternative**	**C1M**	**C1W**	**C2M**	**C2W**	**C3M**	**C3W**	**Preferred Alternative**	**C1M**	**C1W**	**C2M**	**C2W**	**C3M**	**C3W**
WLY3	0.17		0.14		0.18		0.16	0.49	0.14	0.56	0.14	0.62		0.61
WLY4	0.52	0.04	0.04	0.94	0.94	0.14	0.14	0.28	0.53	0.53	0.45	0.45	0.55	0.55
WLY7	0.03							0.21					0.07	0.07
WLY8													0.21	0.21
PWLY1						0.02	0.02						0.23	0.23
PWLY3										0.01		0.01		0.01
PWLY5									<0.01	<0.01				
Total	**0.72**	**0.04**	**0.18**	**0.94**	**1.12**	**0.16**	**0.32**	**0.98**	**0.67**	**1.10**	**0.59**	**1.08**	**1.06**	**1.68**

Table D-4. Estimated Construction Impacts on Wetlands and Wetland Buffers in Segment B, by Project Alternative

	Wetland Area Affected (acres)					Wetland Buffer Area Affected (acres)				
Wetland ID	**Preferred Alternative**	**Pref. Alt. with 220th St. SW Station option**	**B1**	**B2A**	**B4**	**Preferred Alternative**	**Pref. Alt. with 220th St. SW Station option**	**B1**	**B2A**	**B4**
WSH5	0.01	0.01				0.06	0.06			
WMT1	0.00	0.00				0.07	0.07			
WMT2						0.04	0.04			
WMT3						0.04	0.04	0.06	0.06	
WMT5										
WMT6	0.05	0.06				0.04	0.06			
WMT7	0.05	0.05				0.03	0.03			
WMT9						0.04	0.04			
WMT10						0.01	0.01	0.02	0.02	0.07
WMT11										
PWLY3						0.03	0.03			
Total	**0.11**	**0.12**	**0.00**	**0.00**	**0.00**	**0.36**	**0.38**	**0.08**	**0.08**	**0.07**

Table D-5. Estimated Construction Impacts on Wetlands and Wetland Buffers in Segment C, by Project Alternative

	Wetland Area Affected (acres)							Wetland Buffer Area Affected (acres)						
Wetland ID	**Preferred Alternative**	**C1M**	**C1W**	**C2M**	**C2W**	**C3M**	**C3W**	**Preferred Alternative**	**C1M**	**C1W**	**C2M**	**C2W**	**C3M**	**C3W**
WLY3	0.11				0.04			0.04				0.07		0.07
WLY4	0.15							0.09			0.22	0.22		
WLY7	0.02							0.07						
WLY8														
PWLY1														
PWLY3														
PWLY5														
Total	**0.28**	**0.00**	**0.00**	**0.00**	**0.04**	**0.00**	**0.00**	**0.20**	**0.00**	**0.00**	**0.22**	**0.29**	**0.00**	**0.07**



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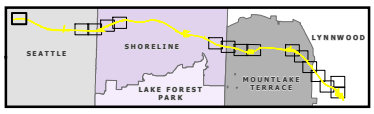


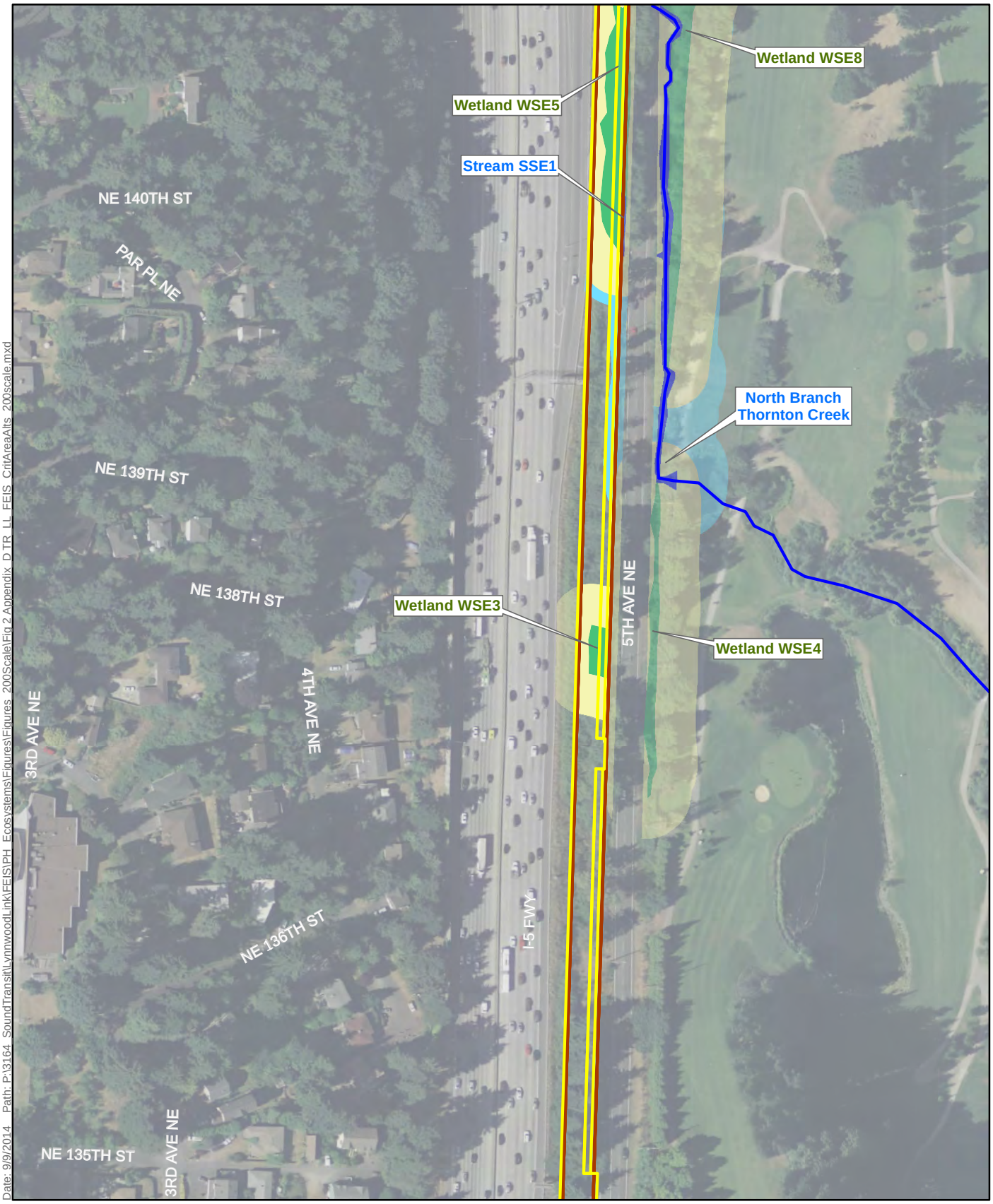
Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream

- Preferred Alternative
- A1
- A3; A5; A7; A10; A11

Appendix D
Figure 1
Wetland and Stream Impacts

Lynnwood Link Extension



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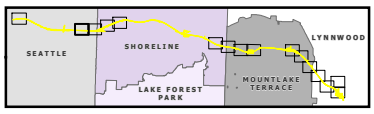
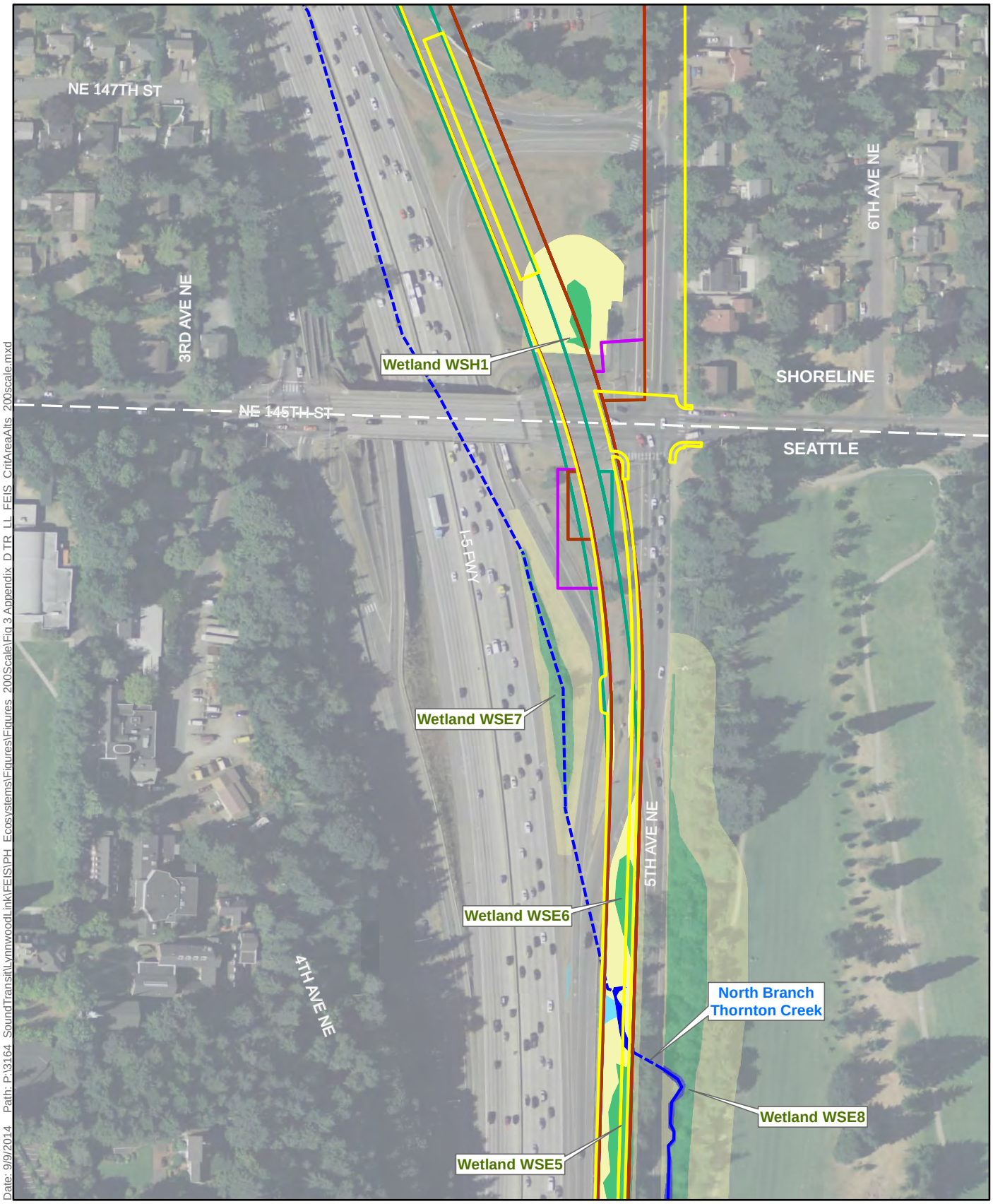


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- A1; A3; A5; A7; A10; A11

Appendix D
Figure 2
Wetland and Stream Impacts

Lynnwood Link Extension



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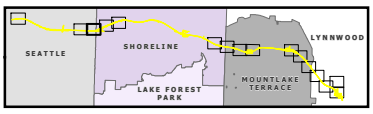
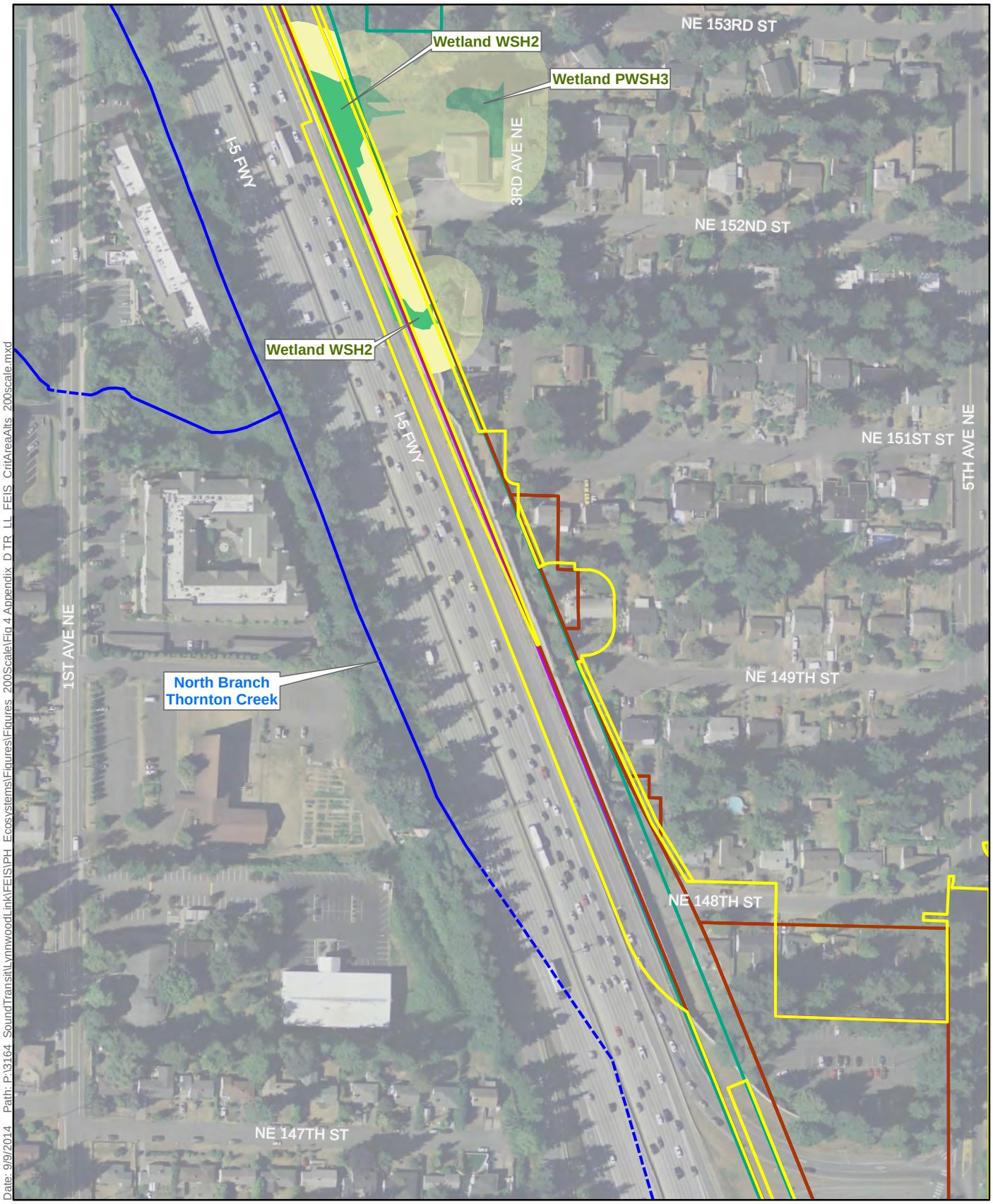


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- A1; A10
- A3; A11
- A5; A7

Appendix D
Figure 3
Wetland and Stream Impacts

Lynnwood Link Extension



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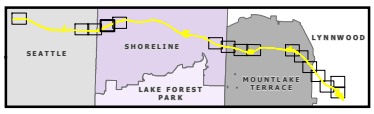
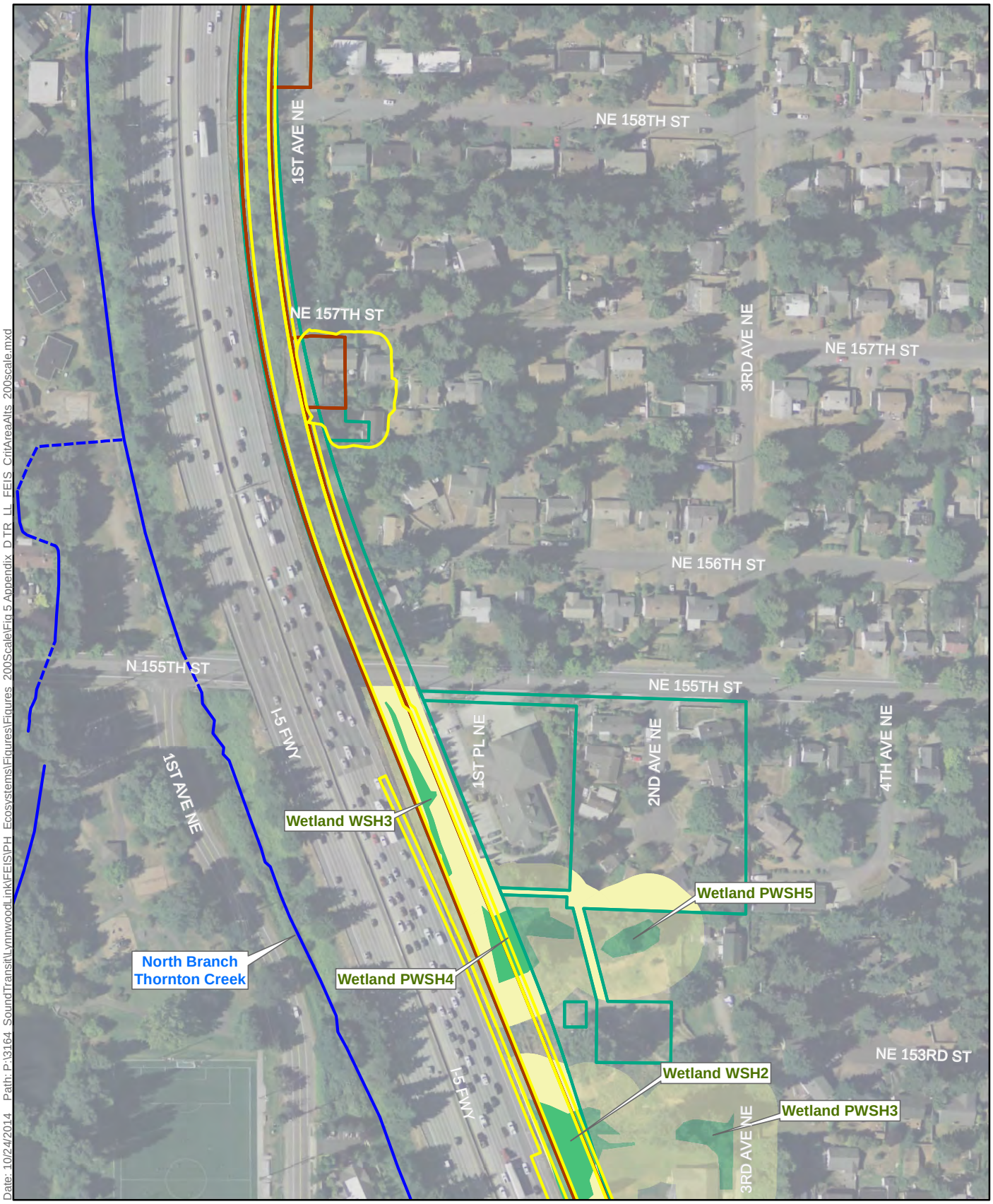


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- A1; A10
- A3; A11
- A5; A7

Appendix D
Figure 4
Wetland and Stream Impacts

Lynnwood Link Extension



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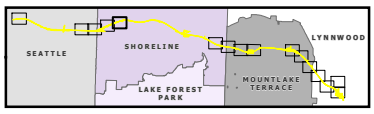
Feet

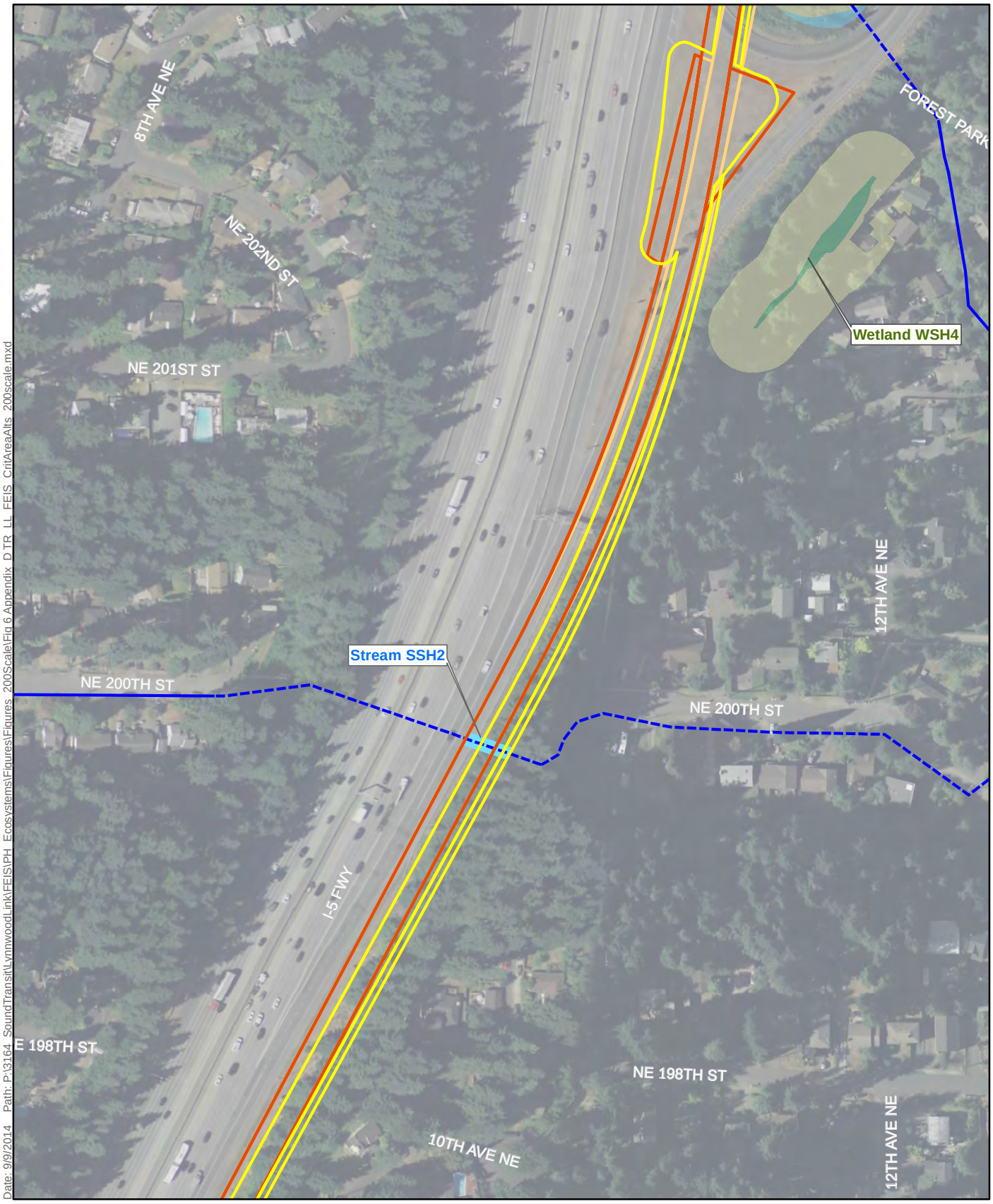


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- A1; A3; A10; A11
- A5; A7

Appendix D
Figure 5
Wetland and Stream Impacts

Lynnwood Link Extension



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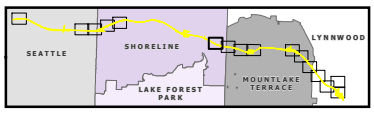
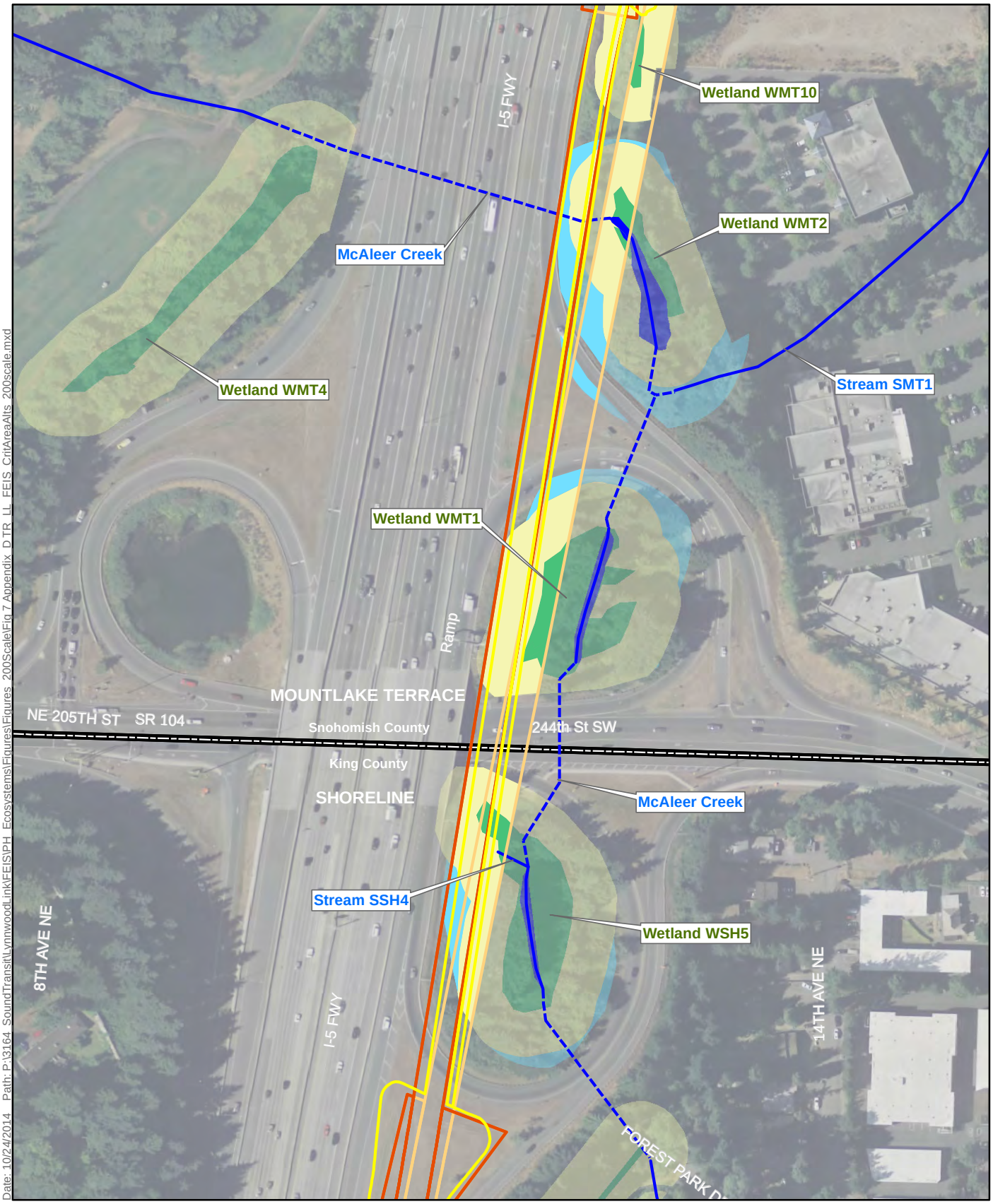


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- B1; B2A
- B4

Appendix D
Figure 6
Wetland and Stream Impacts

Lynnwood Link Extension



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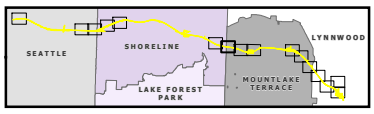


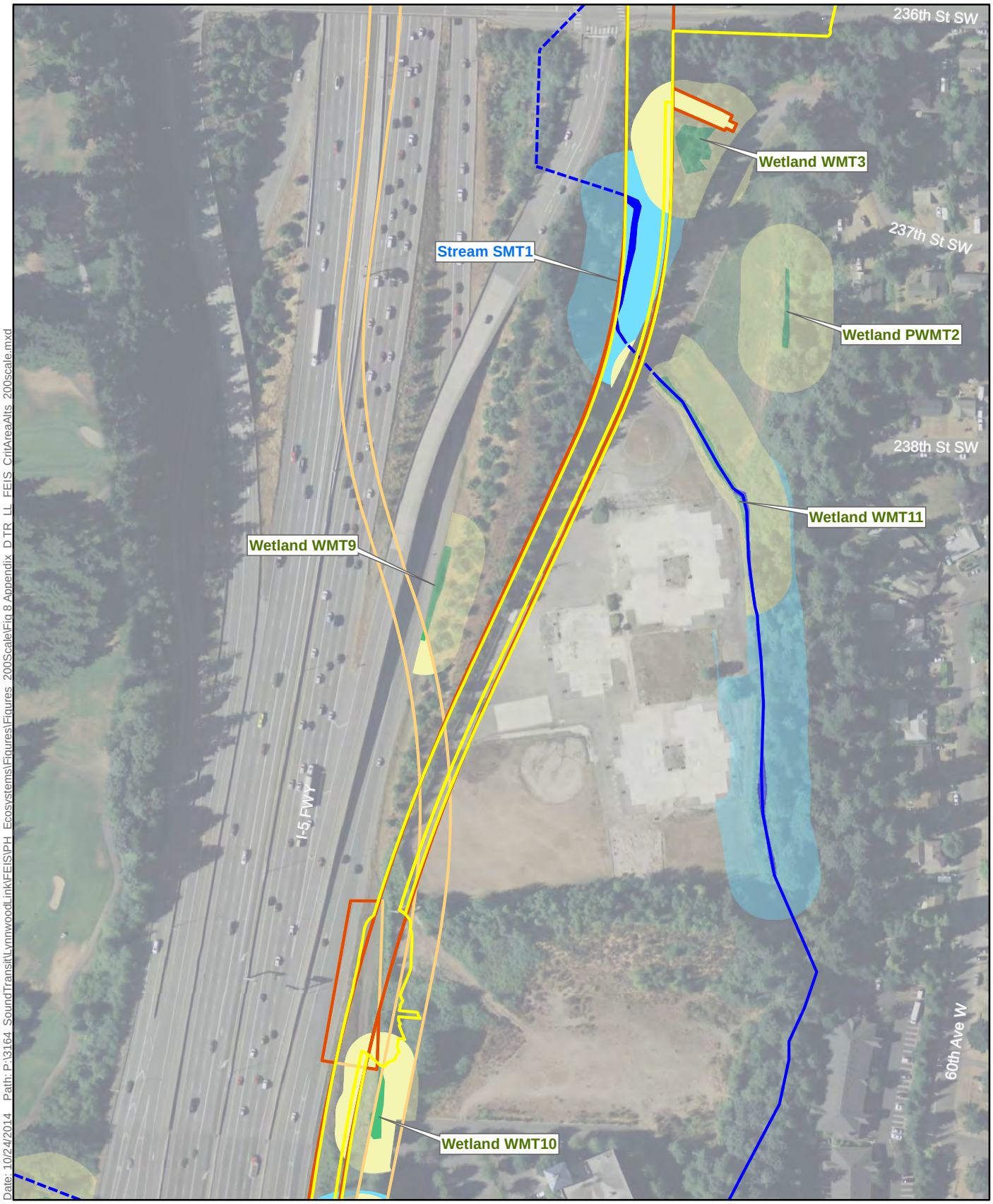
Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream

- Preferred Alternative
- B1; B2A
- B4

Appendix D
Figure 7
Wetland and Stream Impacts

Lynnwood Link Extension



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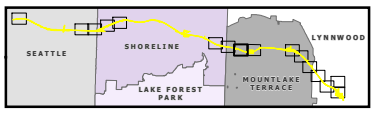
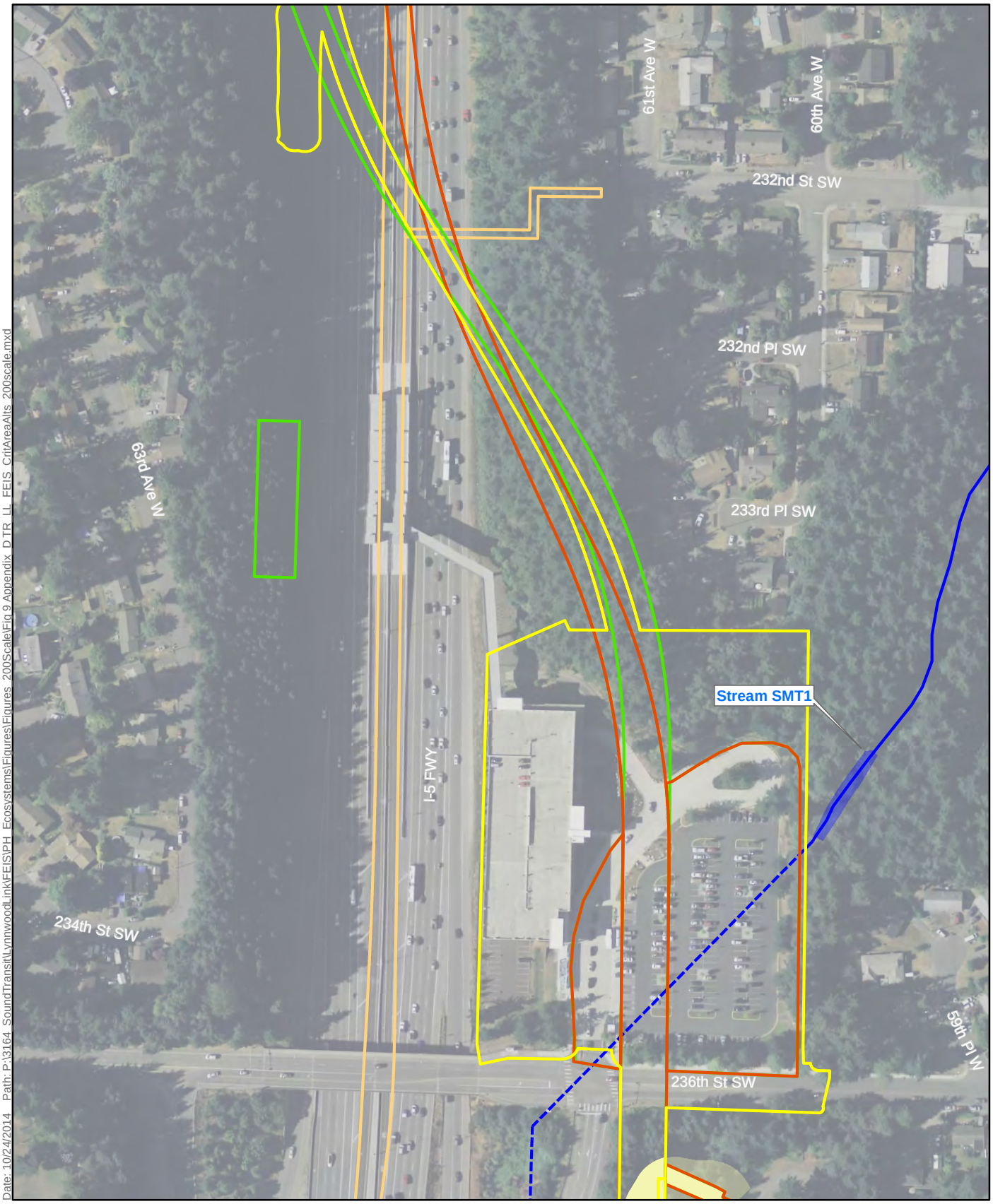


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- B1; B2A
- B4

Appendix D
Figure 8
Wetland and Stream Impacts

Lynnwood Link Extension



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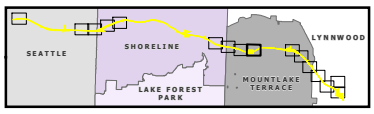
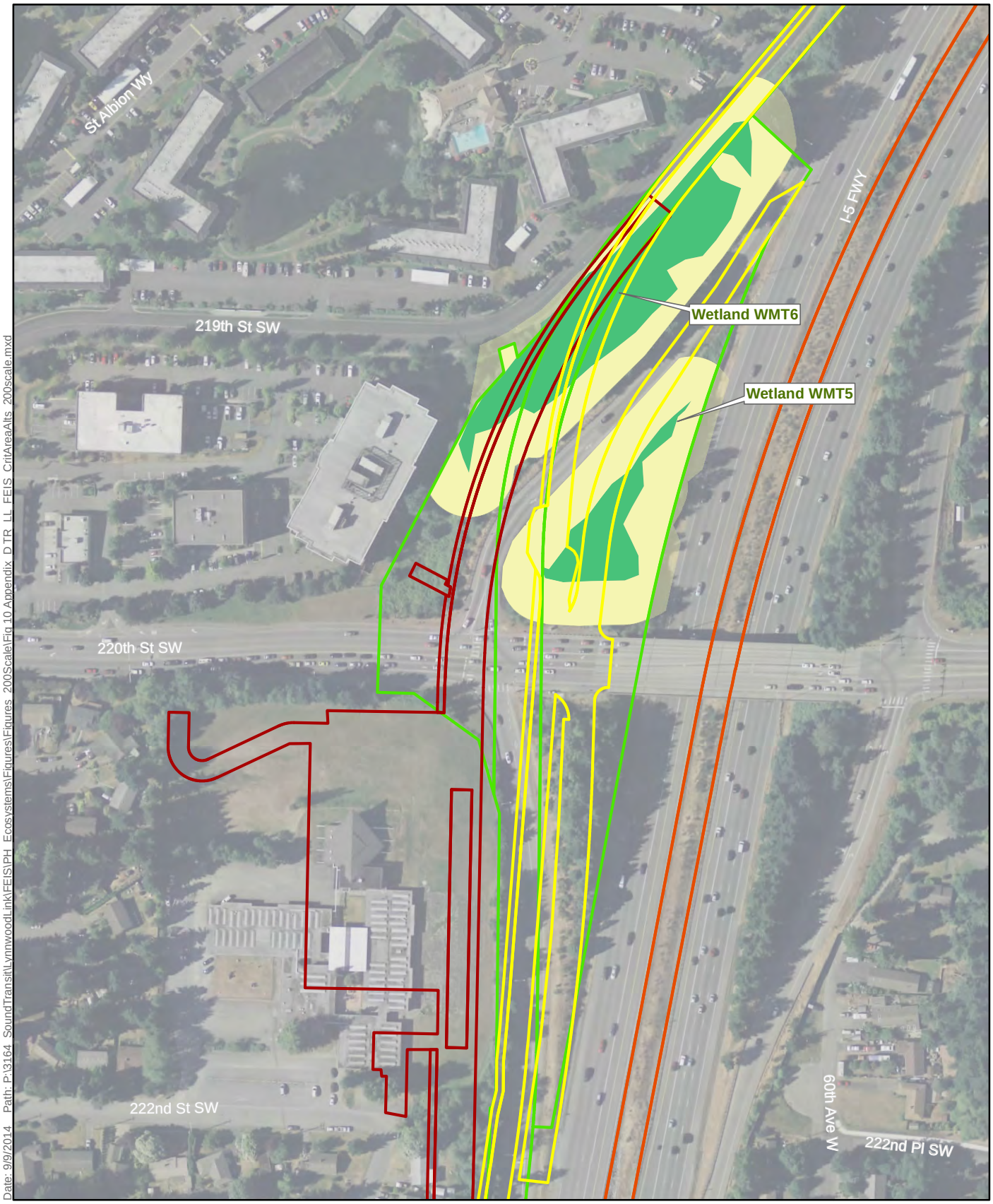


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- B1
- B2A
- B4

Appendix D
Figure 9
Wetland and Stream Impacts

Lynnwood Link Extension



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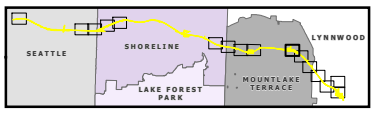
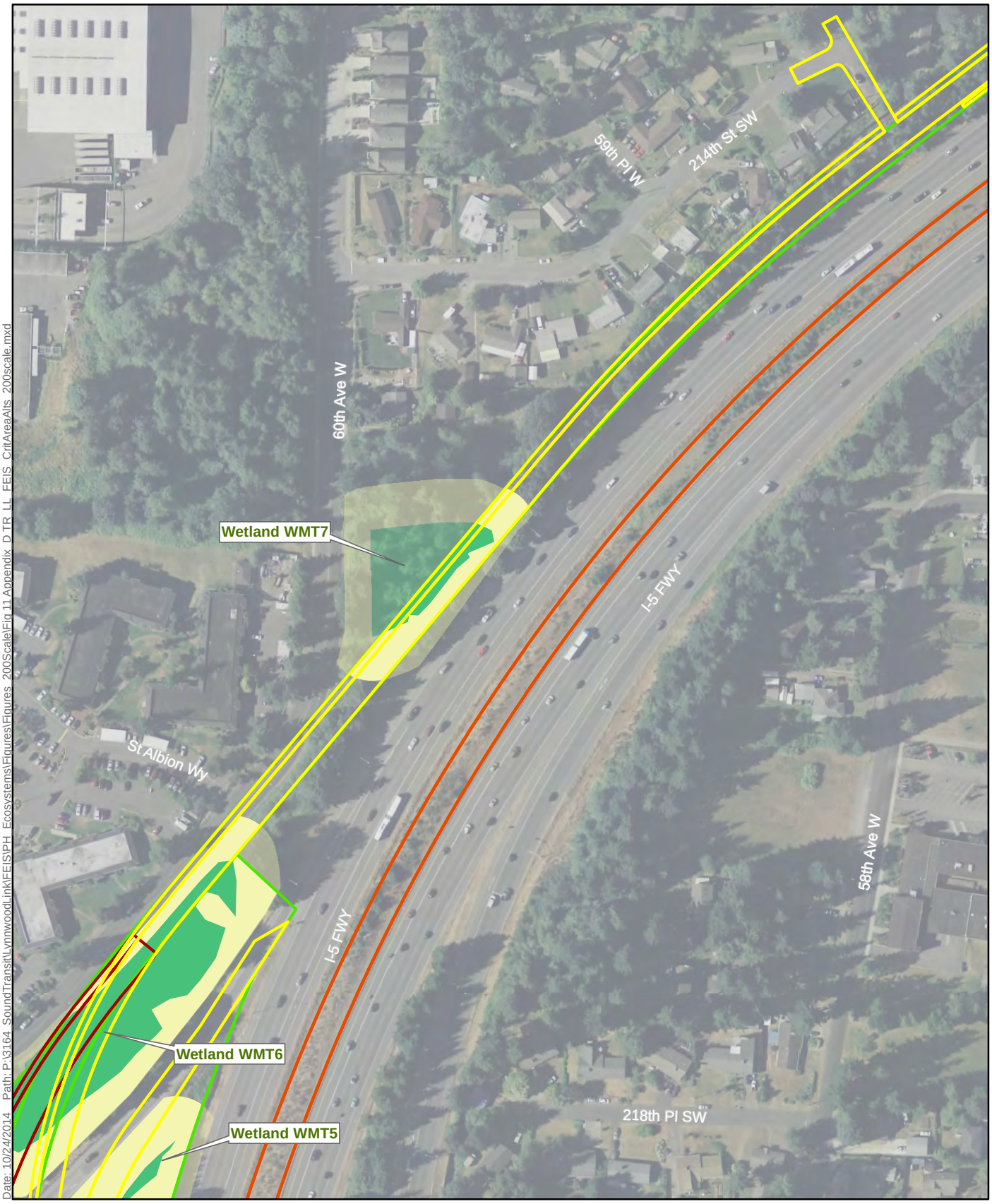


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- 220th Street SW Station Option
- B1; B4
- B2A

Appendix D
Figure 10
Wetland and Stream Impacts

Lynnwood Link Extension



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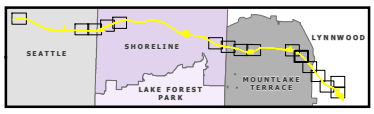

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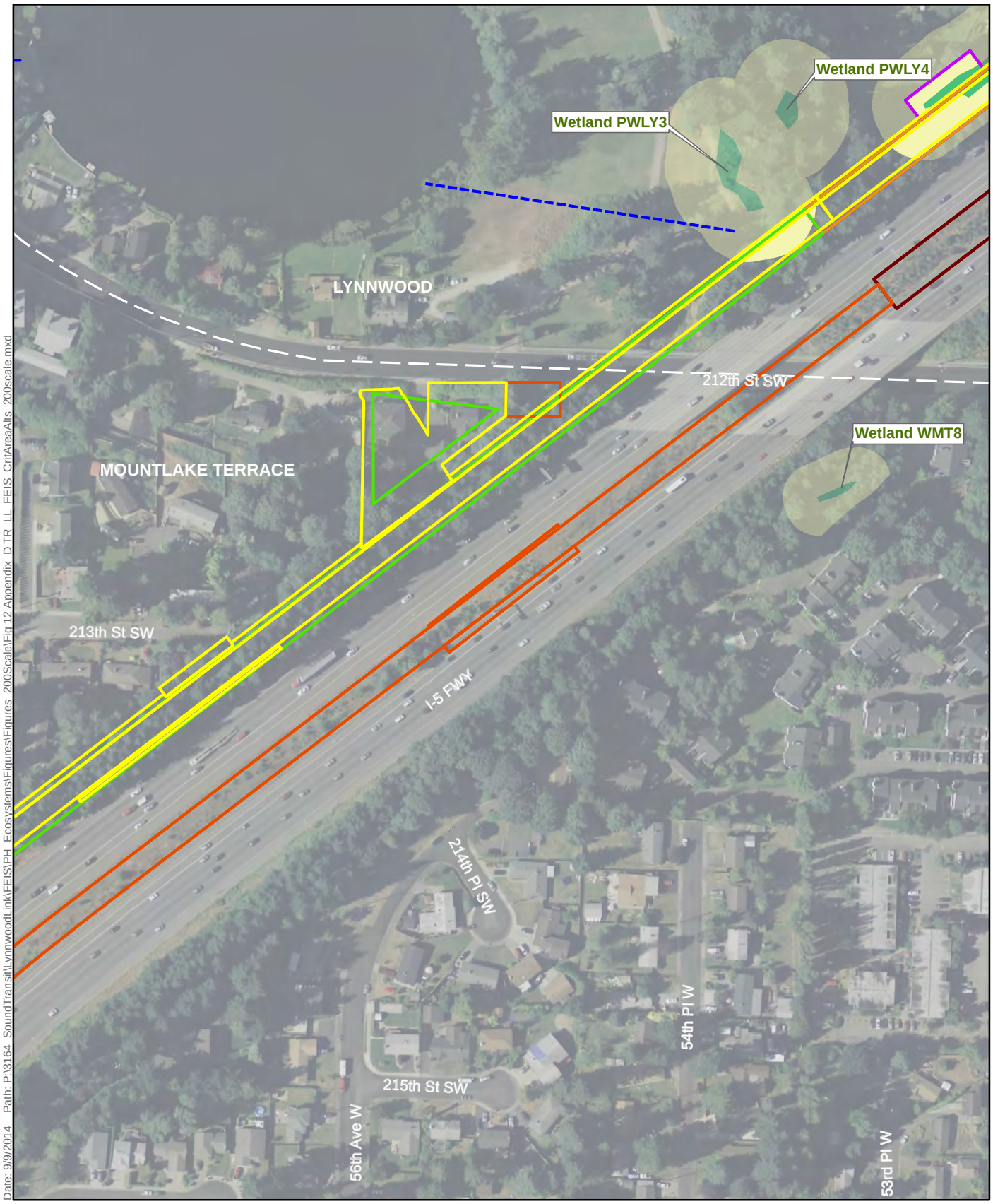
- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- 220th Street SW Station Option
- B1; B4
- B2A

Appendix D
Figure 11
Wetland and Stream Impacts

Lynnwood Link Extension



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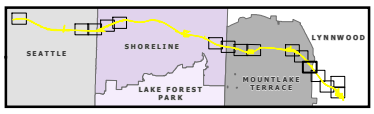
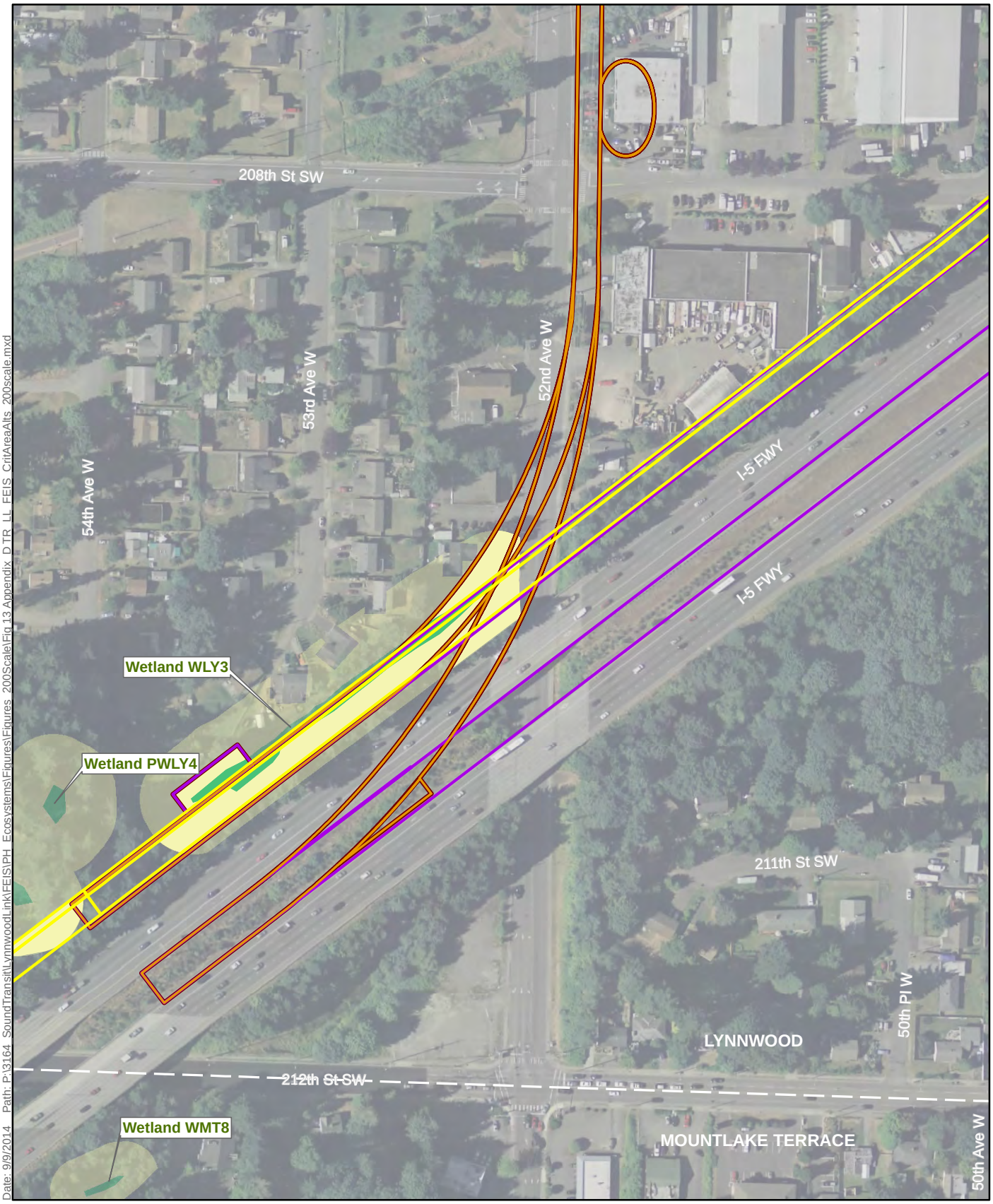


Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- B1; B4
- B2A
- C1W
- C2W; C3W
- C1M; C2M; C3M

Appendix D
Figure 12
Wetland and Stream Impacts

Lynnwood Link Extension



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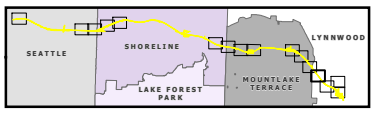

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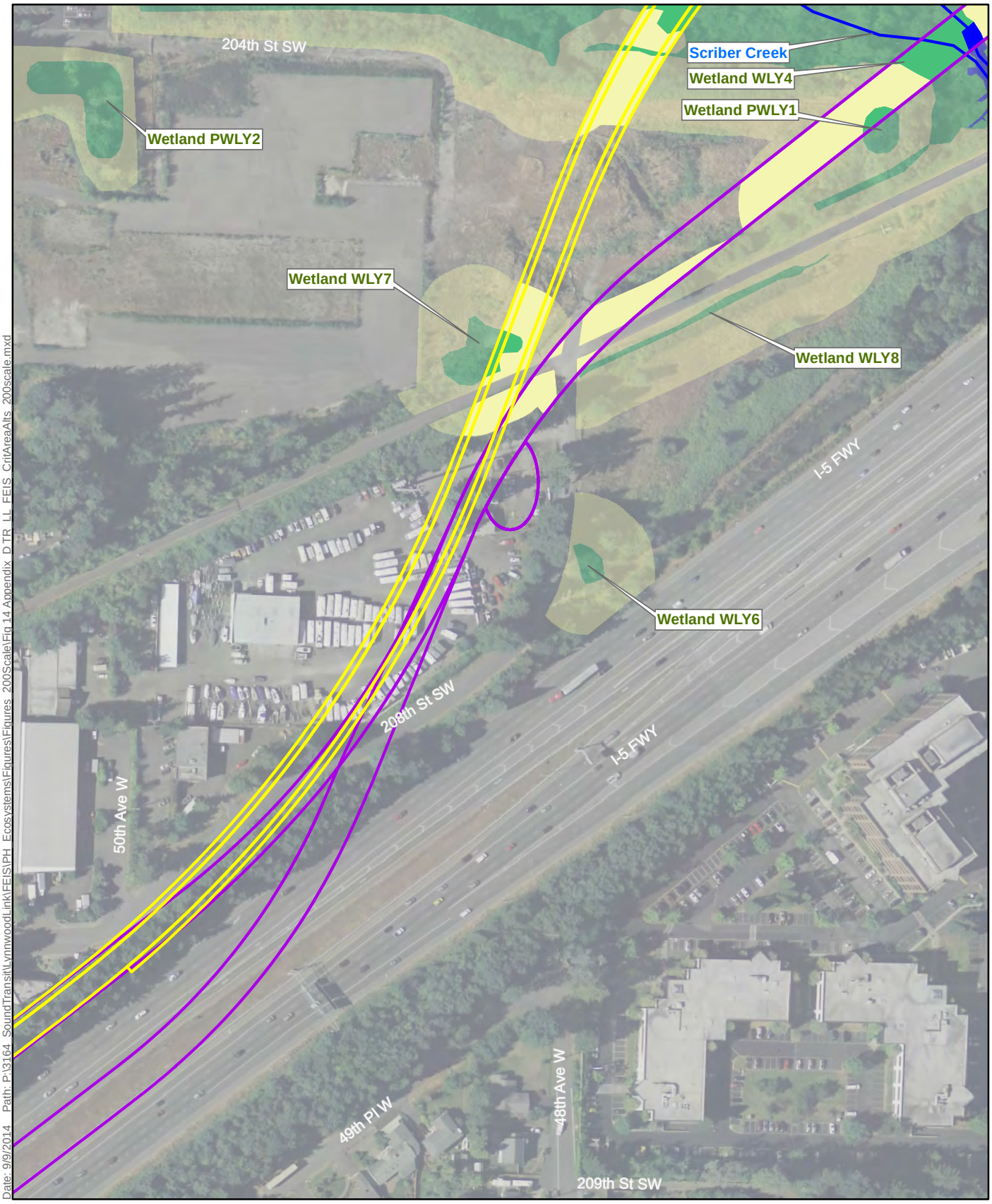
- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- C1M; C1W
- C2M; C2W
- C3M; C3W

Appendix D
Figure 13
Wetland and Stream Impacts

Lynnwood Link Extension



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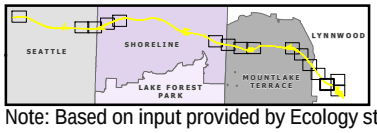


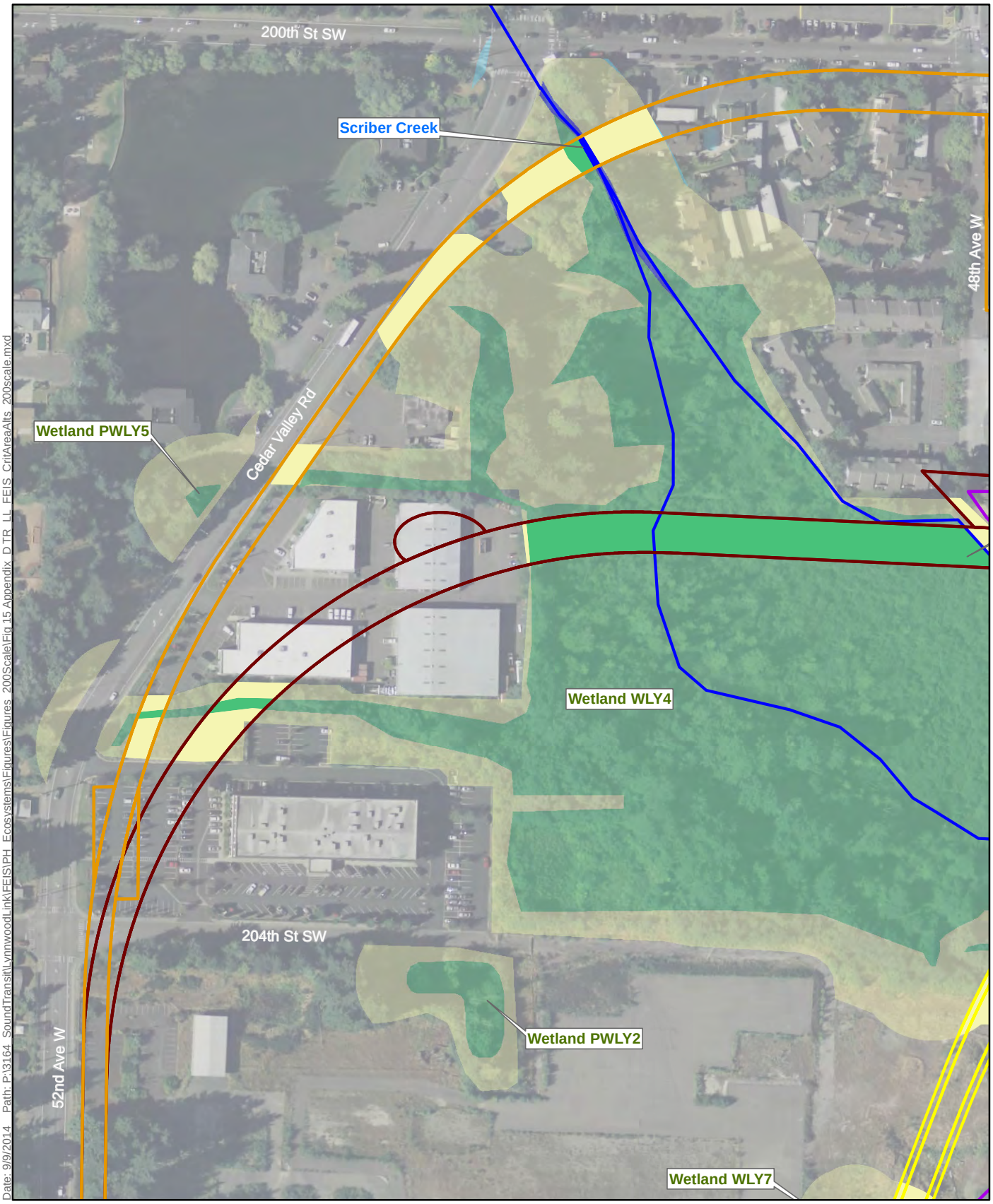
Data Sources: (King & Snohomish County, WSDOT, Streamnet, City of Seattle, City of Shoreline, ESA, Aerials Express.)

- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- C3M; C3W

Appendix D
Figure 14
Wetland and Stream Impacts

Lynnwood Link Extension

Note: Based on input provided by Ecology staff who collaborated on field delineations in July 2014, the ordinary high water mark of Scriber Creek where it has not been mapped (i.e., through the Scriber Creek wetland complex, Wetland WLY4) is generally defined as coinciding with the delineated wetland boundary.



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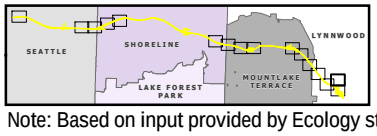

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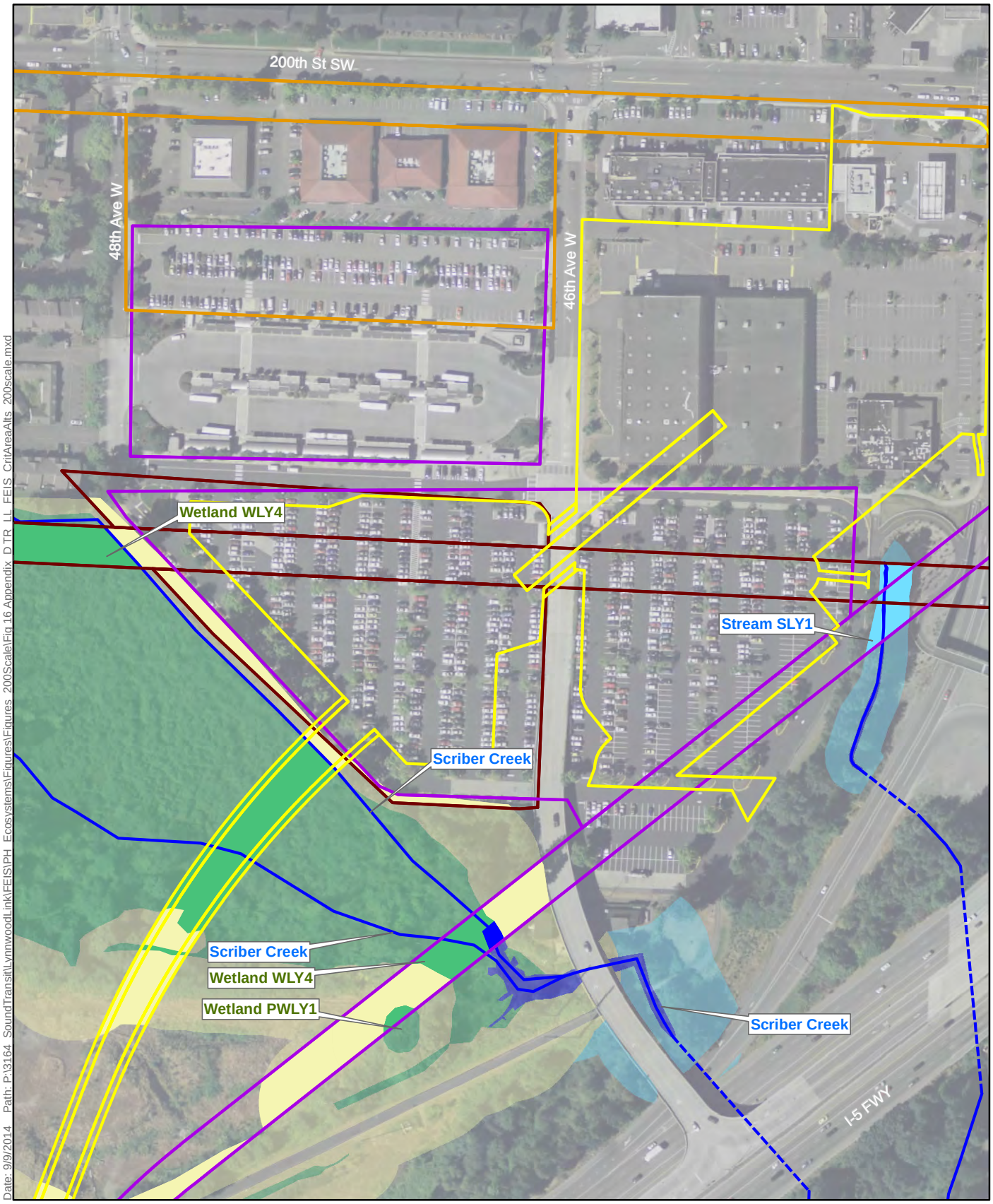
- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- C1M; C1W
- C2M; C2W
- C3M; C3W

Appendix D
Figure 15
Wetland and Stream Impacts

Lynnwood Link Extension

Note: Based on input provided by Ecology staff who collaborated on field delineations in July 2014, the ordinary high water mark of Scriber Creek where it has not been mapped (i.e., through the Scriber Creek wetland complex, Wetland WLY4) is generally defined as coinciding with the delineated wetland boundary.



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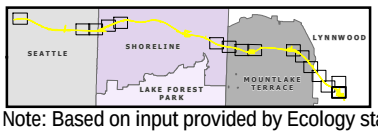

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- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Open Stream
- Piped Stream
- Preferred Alternative
- C1M; C1W
- C2M; C2W
- C3M; C3W

Appendix D
Figure 16
Wetland and Stream Impacts

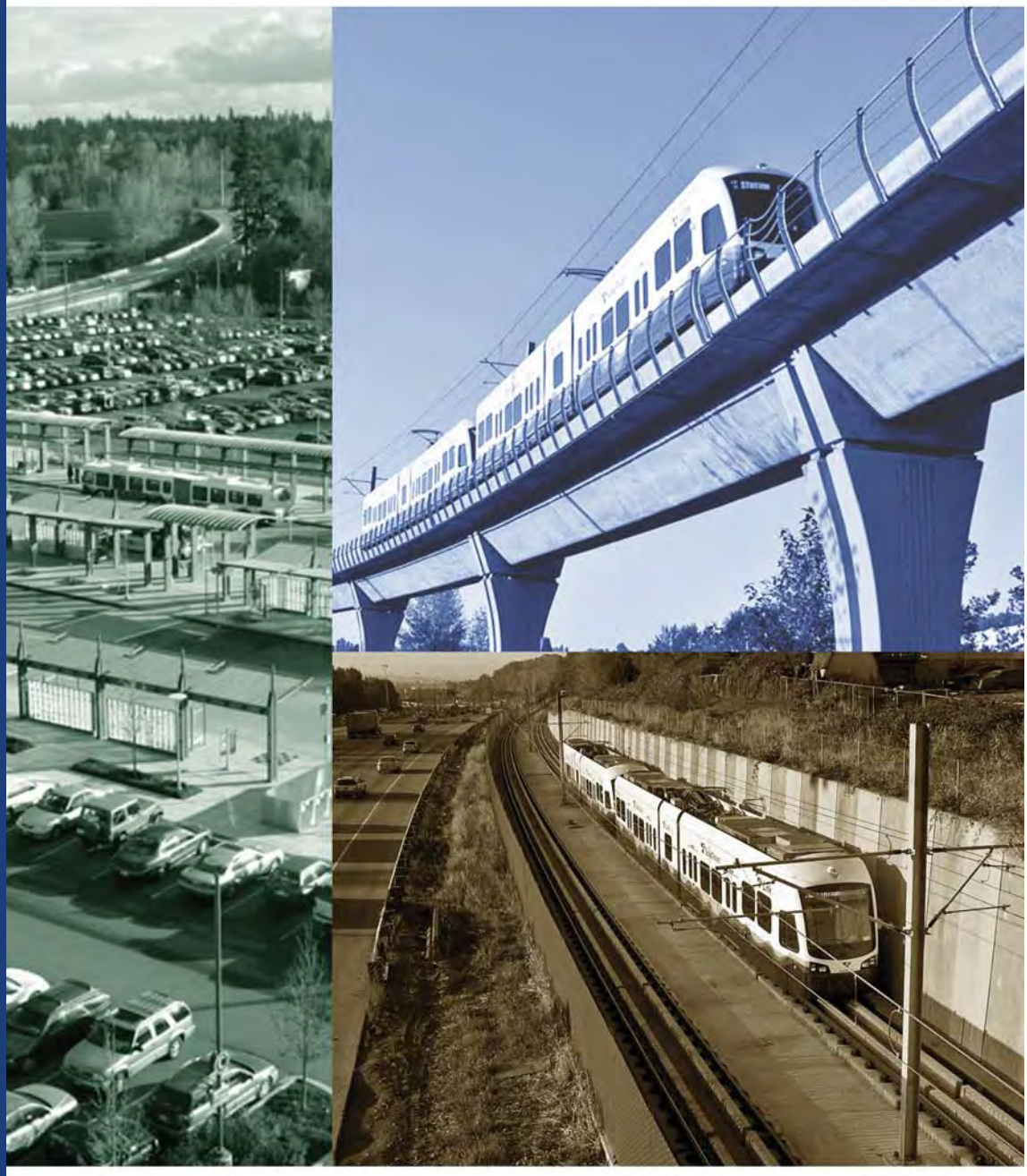
Lynnwood Link Extension

Note: Based on input provided by Ecology staff who collaborated on field delineations in July 2014, the ordinary high water mark of Scriber Creek where it has not been mapped (i.e., through the Scriber Creek wetland complex, Wetland WLY4) is generally defined as coinciding with the delineated wetland boundary.

LYNNWOOD LINK EXTENSION

FINAL ENVIRONMENTAL IMPACT STATEMENT

Noise and Vibration Technical Report



SOUNDTRANSIT

U.S. Department of Transportation
Federal Transit Administration

APRIL 2015

Lynnwood Link Extension

Technical Report

Noise and Vibration

401 South Jackson Street
Seattle, WA 98104-2826

April 2015

North Corridor Transit Partners
PARAMETRIX + PARSONS BRINCKERHOFF

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A Noise Monitoring Details

B Detailed Noise Analysis Sheets

C Detailed Noise Analysis Maps

D Vibration Impacts by Build Alternative

E Vibration Propagation Data

F Maps of Noise Wall Mitigation Locations

Acronyms and Abbreviations

ANSI	American National Standards Institute
BVR	Building Vibration Response
CFR	Code of Federal Regulations
dB	decibel
dBA	unit of A-weighted sound level in decibels
DNR	Department of Natural Resources
EDNA	Environmental Designation for Noise Abatement
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
FDL	Force Density Level
FHWA	Federal Highway Administration
FST	floating slab track
FTA	Federal Transit Administration
GIS	geographic information system
HUD	U.S. Department of Housing and Urban Development
HVAC	heating, ventilation, and air conditioning
Hz	Hertz
I-5	Interstate 5
Ldn	24-hour, time-averaged, A-weighted sound level (day-night)
Leq	equivalent continuous sound level
Lmax or Lm	maximum noise level
LSR	Line Source Response (equivalent to Line Source Transfer Mobility, TMline)
Lv	vibration velocity level
mph	miles per hour
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NIST	National Institute of Standards and Technology
PPV	peak particle velocity

PSR	Point Source Response
rms	root mean square
SEPA	State Environmental Act
SFC	spring frog crossover
SMC	Seattle Municipal Code
Sound Transit	Central Puget Sound Regional Transit Authority
SR	State Route
ST2	Sound Transit 2
TDA	tire-derived aggregate
TNM	Traffic Noise Model
V	velocity
VdB	decibel unit for vibration level
VTA	Santa Clara Valley Transportation Authority
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation

Part 1: Noise

1 INTRODUCTION AND SUMMARY

This technical report presents a noise impact study for the Lynnwood Link Extension being proposed by the Central Puget Sound Regional Transit Authority (Sound Transit). The objective of the study is to assess the potential noise impacts of the planned light rail transit project.

Section 1 of this report describes the background and results of the assessment. Section 2 discusses environmental noise basics, and Section 3 describes the existing noise conditions and measurement results. The criteria and methods used to assess noise impacts are presented in Sections 4 and 5, respectively. Future No Build noise conditions projections are described in Section 6. Section 7 summarizes the impact assessment, and Section 8 outlines potential mitigation measures. Attachment A includes noise monitoring details; Attachment B provides detailed noise impact assessment data; and Attachment C presents noise impact maps by affected alternative.

2 ENVIRONMENTAL NOISE BASICS

What humans perceive as sound is a series of continuous air pressure fluctuations superimposed on the atmospheric pressure that surrounds us. The amplitude of fluctuation is related to the energy carried in a sound wave; the greater the amplitude, the greater the energy, and the louder the sound. The full range of sound pressures encountered in the world is so great that it is more convenient to compress the range by using a logarithmic scale, resulting in the fundamental descriptor used in acoustics—the sound pressure level, which is measured in decibels (dB). When sounds are unpleasant, unwanted, or disturbingly loud, people tend to classify them as noise.

Another aspect of sound is the quality described as its pitch. The pitch of a sound is established by the frequency, which is a measure of how rapidly a sound wave fluctuates. The unit of measurement is cycles per second, called hertz (Hz). When a sound is analyzed, its energy content at individual frequencies is displayed over the frequency range of interest, usually the range of human audibility from 20 Hz to 20,000 Hz. This display is called a frequency spectrum.

Sound is measured using a sound-level meter with a microphone designed to respond accurately to all audible frequencies. However, the human hearing system does not respond equally to all frequencies. Low-frequency sounds below about 400 Hz are progressively and severely attenuated, as are high frequencies above 10,000 Hz. To approximate the way humans interpret sound, a filter circuit with frequency characteristics similar to the human hearing mechanism is built into sound-level meters. Measurements with this filter enacted are called A-weighted sound levels, expressed in A-weighted decibels (dBA). Community noise is usually characterized in terms of the A-weighted sound level. Figure 2-1 illustrates the A-weighted levels of common sounds.

The range of human hearing extends from about 0 dBA for young healthy ears (that have not been exposed to loud noise sources) to about 140 dBA. When sounds exceed 110 dBA, there is a potential for hearing damage, even with relatively short exposures. In quiet suburban areas far from major freeways, the noise levels during the late night hours will drop to about 30 dBA. Outdoor noise levels lower than this only occur in isolated areas where there is a minimum amount of natural noises, such as leaves blowing in the wind, crickets, or flowing water.

Another characteristic of environmental noise is that it is constantly changing. The noise level increase when a train passes is an example of a short-term change. The lower average noise levels occur during nighttime hours when activities are at a minimum; higher noise levels during daytime hours are caused by daily patterns of noise-level fluctuation. The instantaneous A-weighted sound level is insufficient to describe the overall acoustic "environment." Thus, it is common practice to condense the fluctuating noise levels into a single number, called the "equivalent" sound level (Leq). Leq can be thought of as the steady sound level that represents the same sound energy as the varying sound levels over a specified time period (typically 1 hour or 24 hours). Often, the Leq values over a 24-hour period are used to calculate cumulative noise exposure in terms of the day-night equivalent sound level (Ldn, also abbreviated DNL), which is defined as the 24-hour Leq but with a 10-dB penalty added to each nighttime hourly Leq (with "nighttime" defined

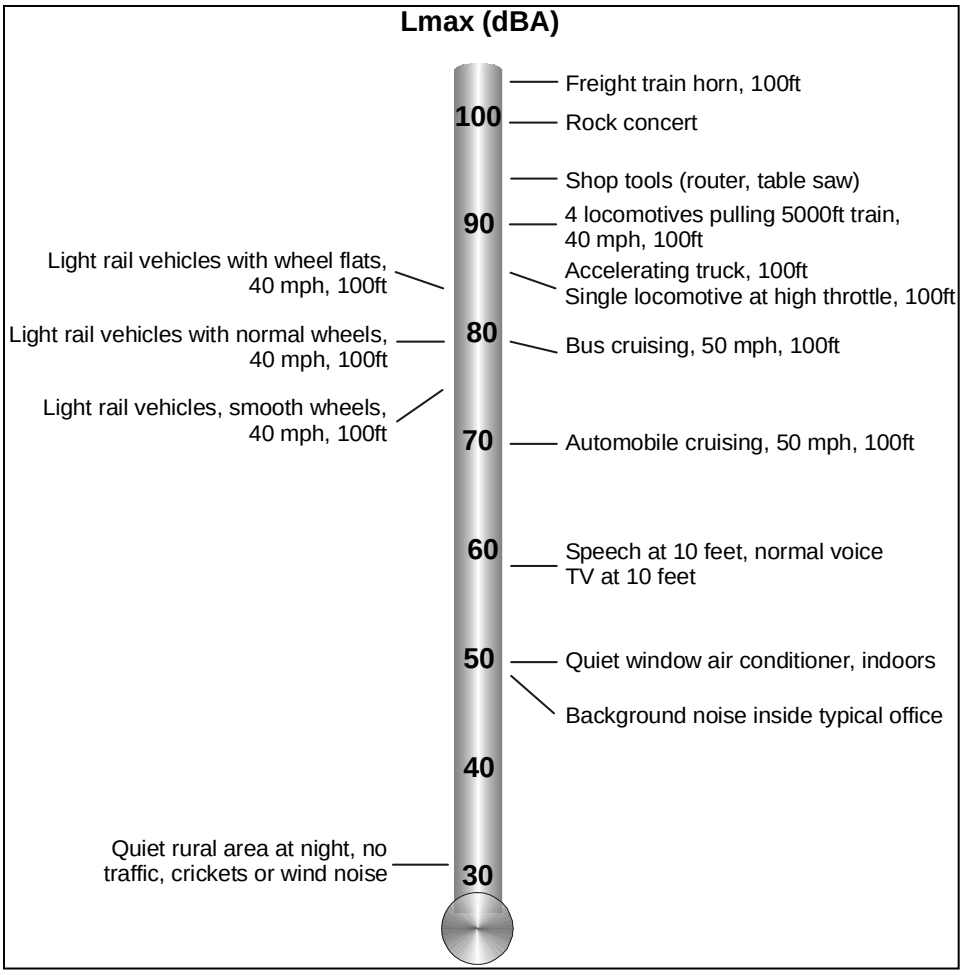


Figure 2-1. Comparison of Various Noise Levels

as the period from 10:00 pm to 7:00 am). The effect of this penalty is that any event during the nighttime is equivalent to 10 events during the daytime. This strongly weights Ldn toward nighttime noise to reflect most people being more easily annoyed by noise at night, when background noise is lower and most people are resting.

Environmental impact assessments for mass transit projects in the United States typically use Ldn to describe the community noise environment at residential locations. Studies of community response to a wide variety of noises indicate that Ldn is a good measure of the noise environment. Figure 2-2 defines typical community noise levels in terms of Ldn. Most urban and suburban neighborhoods are usually in the range of Ldn 50 dBA to 70 dBA. An Ldn of 70 dBA is a relatively noisy environment that might be found at buildings on a busy surface street, close to a freeway, or near a busy airport and would usually be considered unacceptable for residential land use without special measures taken to enhance outdoor-indoor sound insulation. Residential neighborhoods that are not near major sound sources are usually in the range of Ldn 55 dBA to 60 dBA. If there is a freeway or moderately busy arterial nearby, or any nighttime noise, Ldn is usually in the range of 60 to 65 dBA.

Ldn is the designated noise metric of choice for many federal agencies, including the U.S. Department of Housing and Urban Development (HUD), Federal Aviation Administration (FAA), Federal Transit Administration (FTA), and U.S. Environmental Protection Agency (EPA). Most federal and state agency criteria for noise impacts are based on some measurement of noise energy. For example, the FAA and HUD use Ldn, and the Federal Highway Administration (FHWA) uses peak hour Leq. The noise impact criteria applicable to residential areas, and included in the FTA *Transit Noise and Vibration Impact Assessment* (FTA 2006) (FTA guidance manual), use both Leq and Ldn to characterize community noise.

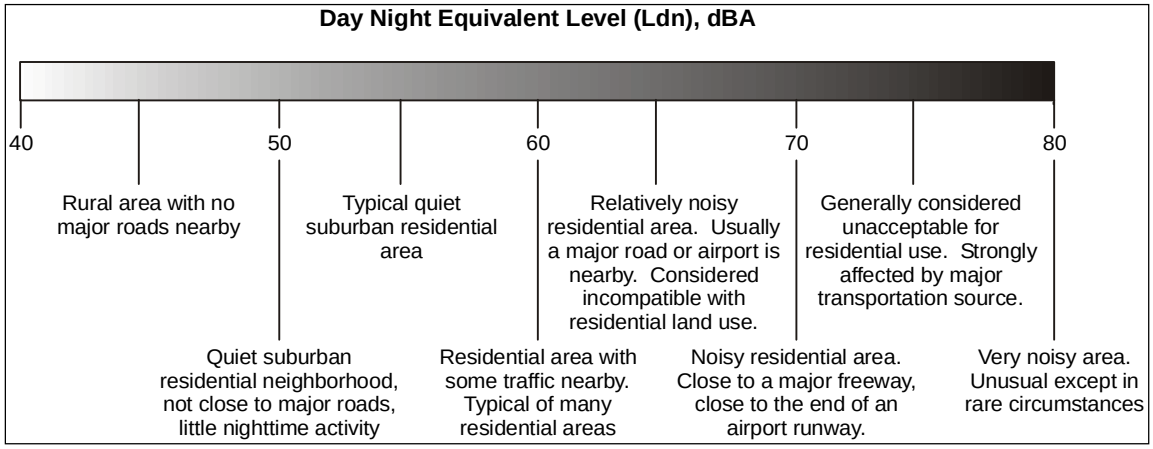


Figure 2-2. Examples of Typical Outdoor Noise Exposure

3 AFFECTED ENVIRONMENT

Sound Transit examined the project corridor to identify noise-sensitive locations and select locations where noise monitoring would be performed. The potential area of affect for the noise study was determined by modeling the worst-case operational noise levels and including all noise-sensitive properties within that area that have a potential for a noise impact. The following sections describe the land use along the project corridor, the existing noise-level measurements, and the current noise sources in the project corridor. Figures 3-1 and 3-2 show the different alternatives and noise monitoring locations.

3.1 Land Use

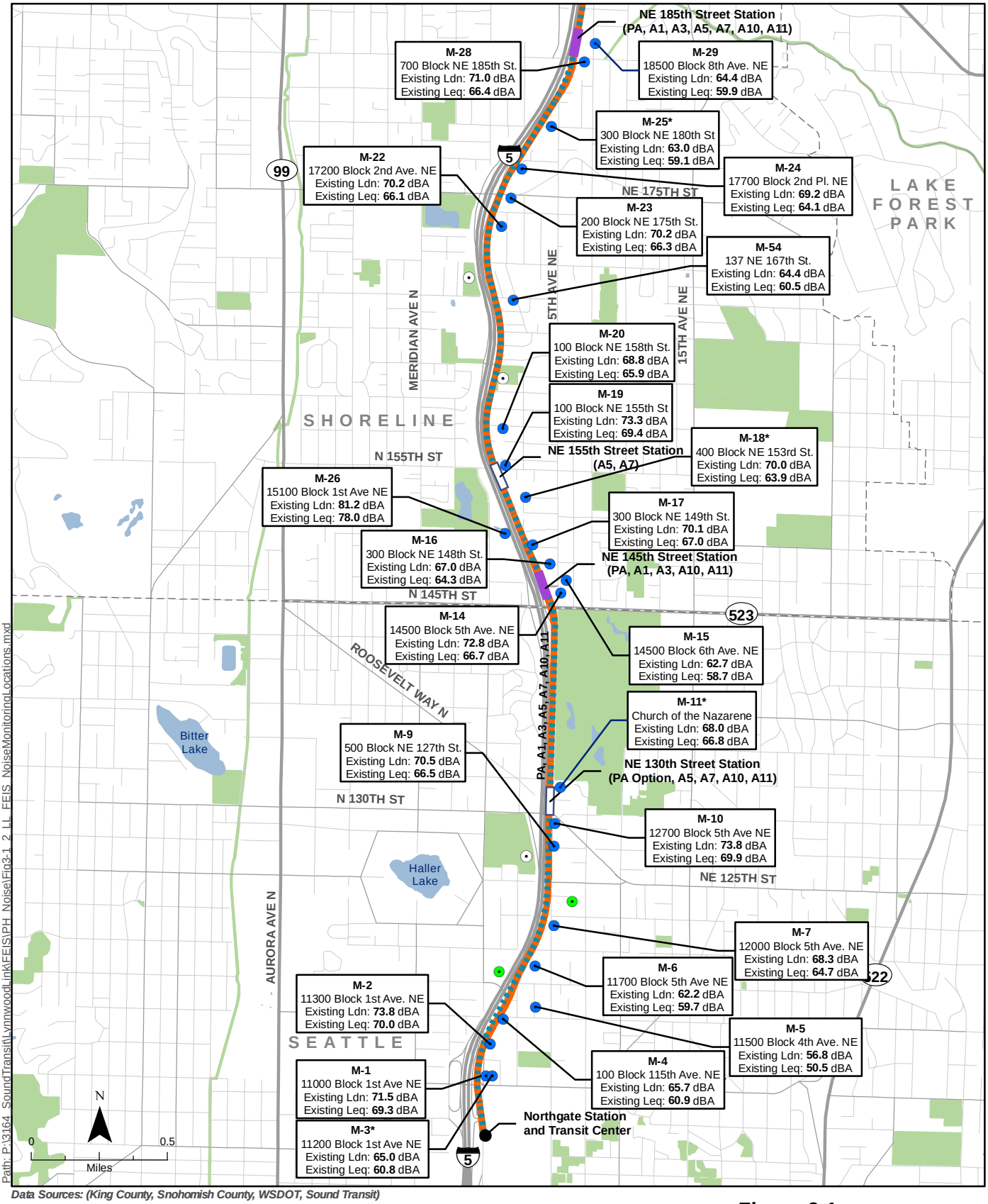
This section provides an overview of the land uses along the proposed corridor. Noise impacts under the FTA regulations are based on the land use type. Complete details on the regulatory categories are provided in Section 4, Noise Impact Criteria. Figures 3-3 and 3-4 show the land uses in the project vicinity.

3.1.1 Segment A

The Lynnwood Link Extension would begin at the northern end of the Northgate Link Extension, between Interstate 5 (I-5) and Northgate Mall. On the east side of I-5 south of Northgate Way, there are only commercial uses, including the shopping mall fronted by a parking lot. There is a freestanding restaurant in the northwest corner of the parking lot. North of Northgate Way is the Northgate Apartments complex (11200 1st Avenue NE), which consists of approximately 25 buildings. North of this complex is the Northgate West condominiums at 11300 1st Avenue NE. East of the condominiums are the Citigate apartments. All but one building in the Citigate complex is shielded from I-5 and the potential light rail alignment by the condominiums.

Continuing northward on the east side of I-5, single-family residences predominate beginning just south of NE 115th Street and going north past Roosevelt Way NE to 131st Place. North of the 1st Avenue NE overpass, land use is primarily single-family residential, with the Seattle Latvian Evangelical Lutheran Church located adjacent to I-5, just north of NE 117th Street. There is an existing traffic noise wall along this segment, beginning at the 1st Avenue NE overpass, and ending near the ramps from I-5 to NE 130th Street.

A string of properties beginning at the corner of 5th Avenue NE and NE 123rd Street and continuing northward consist of newly constructed multifamily units that would be acquired as part of the project. These properties are directly adjacent to the existing noise wall previously described. The Seattle Arabic Baptist Church is located at 13130 5th Avenue NE, just south of where the proposed light rail alignment would begin running alongside the Jackson Park Golf Course. The northern boundary of the golf course is NE 145th Street. On the west side of I-5 in this area, there are four non-residential noise-sensitive uses: the Northgate Elementary School at 11700 1st Avenue NE; the Korean Catholic Church, which is just west of Northgate Elementary School; Northacres



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Noise Monitor Locations

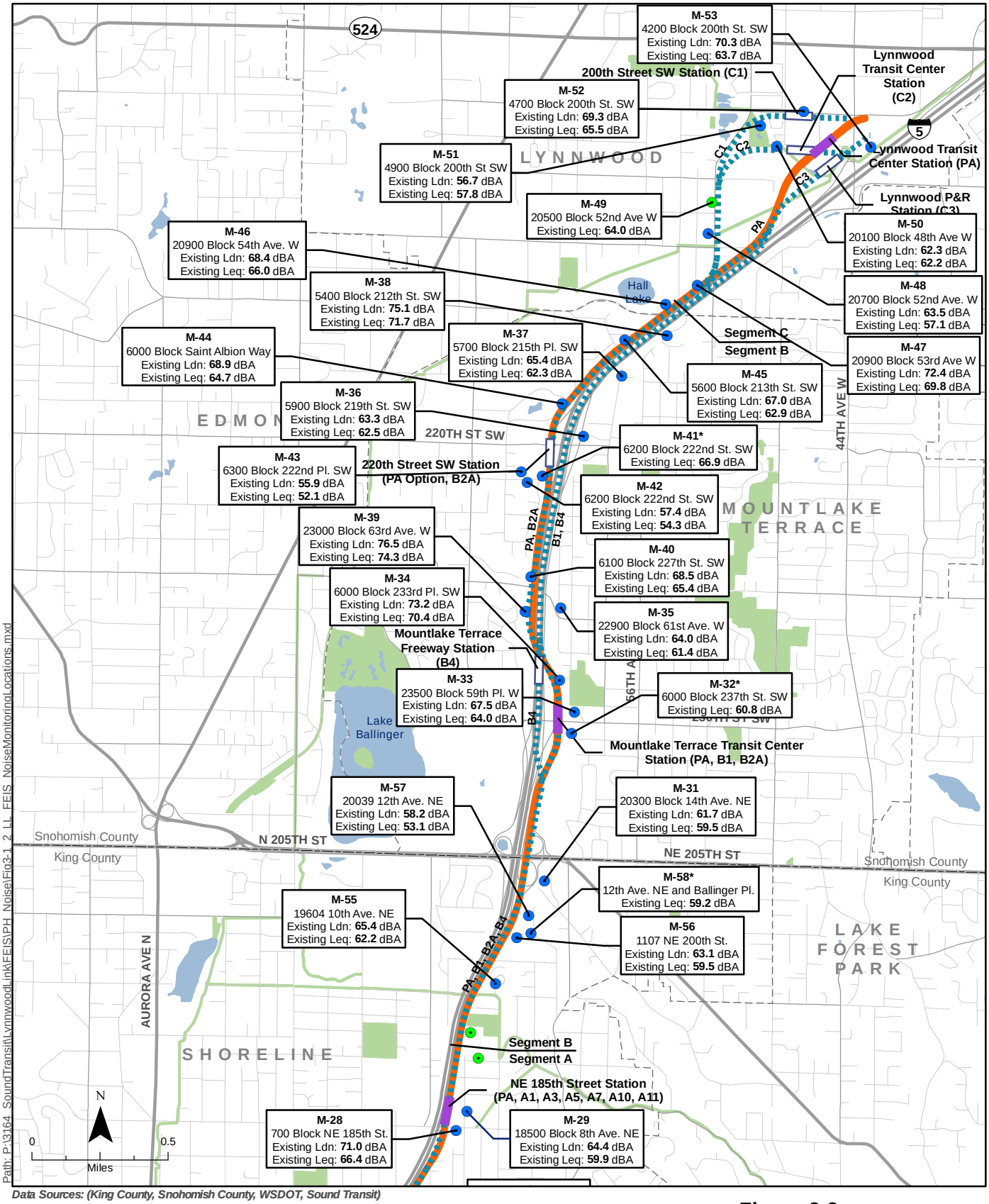
- FTA Land-use Category 2
- FTA Land-use Category 3
- General Ambient Noise Location

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives

Notes: - Ldn values for residences and hotels only.
- Noise Monitor Locations displayed with an asterisk (M-32*) are short term monitoring sites.

Figure 3-1
Noise Monitor Locations
Segment A

Lynnwood Link Extension



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Noise Monitor Locations

- FTA Land-use Category 2
- FTA Land-use Category 3
- General Ambient Noise Location

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives

Notes: - Ldn values for residences and hotels only.
- Noise Monitor Locations displayed with an asterisk (M-32*) are short term monitoring sites.

Figure 3-2
Noise Monitor Locations
Segments B and C

Lynnwood Link Extension

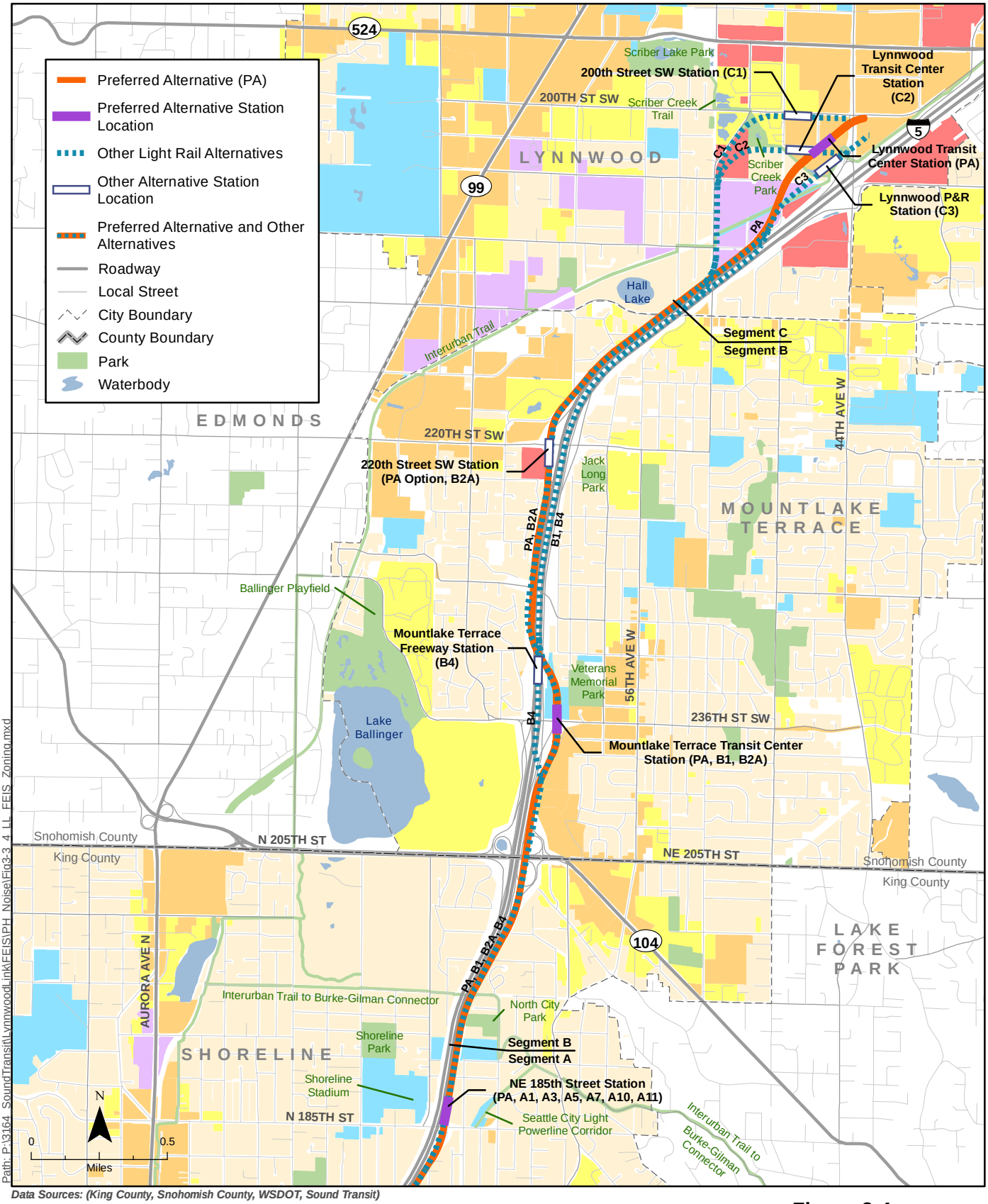
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Generalized Zoning

- Commercial
- Industrial/Warehouse
- Institutional/Public
- Single Family Residential
- Multi Family Residential
- Mixed Use (Residential/Commercial)

Figure 3-3
Generalized Zoning
Segment A

Lynnwood Link Extension



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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Generalized Zoning

- Commercial
- Industrial/Warehouse
- Institutional/Public
- Single Family Residential
- Multi Family Residential
- Mixed Use (Residential/Commercial)

Figure 3-4
Generalized Zoning
Segment A

Lynnwood Link Extension

Park, which is immediately south of North 130th Street/Roosevelt Way NE; and the Lakeside Schools campus, which is southwest of the NE 145th Street/I-5 interchange.

On the east side of I-5, north of NE 145th Street and the existing park-and-ride lot, and south of NE 155th Street, there is another stretch of single-family homes. Also in this area is the Resurrection Fellowship Church of God at 225 NE 152nd Street. North of that church is a parcel of undeveloped land and the Shoreline Fire Department Station. On the west side of I-5, uses of note include three churches and Aegis Senior Living, an assisted living facility at 14900 1st Avenue NE.

Between NE 155th Street and NE 175th Street, on the east side of I-5, the project corridor is all residential except for Ridgecrest Park, which is between NE 161st and NE 163rd Streets, and a publicly-owned undeveloped parcel of land on the southeast corner of North 175th Street and the I-5 northbound off-ramp. On the west side of I-5, land uses include the St. Barnabas Anglican Church at 2340 N. 155th Street, an undeveloped parcel of land just north of the church, an expansive transit facility at North 165th Street, James Keough Park north of the transit facility, and the Ronald Bog, which borders NE 175th Street.

Between NE 175th Street and NE 185th Street, land use on the east side of I-5 is all single-family homes. On the west side of the freeway, an undeveloped parcel south of NE 185th Street that fronts I-5 is owned by the DNR (King County parcel number 6084100050). There is also an undeveloped parcel owned by the Shoreline Water District at the far northeastern point of Segment A (King County parcel number 6084100040).

Segment A extends to just south of NE 194th Street and North City Park on the east side of I-5. Between NE 185th Street and North City Park are residential land uses, with a strip of land to the east dedicated solely to power transmission lines (King County parcel number 0526049039). North of this residential area and south of North City Park is the North City Cooperative Preschool and an adjacent recreational field. On the west side of I-5, noise-sensitive land uses include a pocket of homes between I-5 and the Shoreline School District football field and the Evergreen Baptist Church.

3.1.2 Segment B

Segment B begins just south of NE 194th Street on the east side of I-5 near North City Park. In this area, there is a pocket of residential land uses adjacent to the I-5 pedestrian overpass. North of NE 195th Street and south of the I-5/(SR) 104 interchange is another area of predominantly single-family homes. Near SR 104, there are multifamily apartments and a four-unit condominium complex at 20101 14th Avenue NE. Other land uses in the area include a commercial storage facility and a 31-unit apartment complex at 20333 15th Avenue NE. North of the interchange but south of 236th Street SW commercial land uses predominate, including a strip mall, movie theatres, an office building, and the Studio 6 hotel. The former site of the Evergreen Elementary School abuts the proposed light rail route just south of 236th Street SW. Between the former school site and these commercial uses is a 4.87-acre piece of undeveloped land (Snohomish County parcel number 27043200401600). Facing the former school across I-5 is the Nile Shrine and Nile Golf Course and Country Club.

North of 236th Street SW/Lakeview Drive and on the east side of I-5 are the Mountlake Terrace Transit Center, Veterans Memorial Park, and residential uses north to 230th Street SW (228th Street SW on the west side of I-5). On the west side of I-5, there are only residences between 236th Street SW/Lakeview Drive and 228th Street SW (230th Street SW on the east side of I-5).

Residential land uses predominate in the project corridor on the east side of I-5 from 230th Street SW north to 220th Street SW. Near the I-5/220th Street SW interchange, second-line noise receivers would include Jack Long Park and a recreational field. At the interchange, homes abut the I-5 northbound on-ramp. Just north, at 21705 58th Avenue West, is a school affiliated with the City Church. Surrounding the school are several undeveloped parcels associated with the church and school (Snohomish County parcel numbers 00619900001401, 00619900001402, 00619900001102, and 00619900005300). Homes in this area only partially shield the school from I-5. After the bend in I-5 north of the school, the 106-unit Maple Glen apartment complex is at 5402 212th Street SW, and just south of that complex is a duplex at 5509 214th Place SW. East of the complex are numerous multifamily residences and a small store. Just north of the complex and north of 212th Street SW is a vacant, triangular-shaped property that was formerly a service station. Farther north of 212th Street SW are some single-family homes and another vacant piece of land.

On the west side of I-5 between 228th Street SW and 220th Street SW, land uses include some single-family homes relatively close to I-5. The 320-unit Lakeside Apartments complex is north of City Hall. There are two undeveloped parcels adjacent to I-5 as it begins to bend northeast (Snohomish County parcel numbers 00619900005000 and 00619900004800), and immediately northwest is a large recreational area at Hall Lake. Beyond this recreational area, land uses along the project corridor are residential northward to the northern end of Segment B, just past 212th Street SW.

3.1.3 Segment C

Segment C begins just north of 212th Street SW on the west side of I-5 or in between the northbound and southbound lanes of the freeway, depending on the alternative. Land use on the west side of I-5 is residential from 212th Street SW north to 52nd Avenue West. Northeast of 52nd Avenue West is one single-family residence (20909 52nd Avenue West), and then land uses transition to commercial. Near 50th Avenue West are a warehouse and distribution facility and the Interurban Trail. East of 52nd Avenue West are several vacant parcels, state and private office buildings, and Scriber Creek Park. Other land uses near the Segment C alternatives include single-family residences on the west side of 52nd Avenue West, the Park Five Apartments at 20104 48th Avenue West, the 76-unit Cedar Creek condominium complex at 4800-4920 200th Street SW, the Oxford Square Apartments at 4807 200th Street SW, the Cambridge Apartments at 4727 200th Street SW, the Marriott Courtyard Hotel at 4220 200th Street SW, and the La Quinta Motel at 4220 Alderwood Mall Boulevard.

3.2 Existing Noise Environment

Sound Transit characterized the existing noise environment through on-site inspections and on-site noise monitoring. Monitoring was performed at 59 locations, including 45 long-term (24-hour or

greater) and 14 short-term (15-minute) sites. Long-term monitoring was performed at noise-sensitive locations representative of nearby properties. Short-term monitoring was also performed at other locations where long-term monitoring was not practical or where short-term data were used to supplement nearby long-term monitoring results. Sound Transit also performed short-term noise level readings and traffic counts at all of the long-term sites in preparation for the noise wall analysis that would be required for all relocated noise walls along the project corridor. Sound Transit selected monitoring sites based on land use, existing noise sources, light rail alternative proximity and profile type, and the site's ability to represent nearby noise-sensitive land uses.

All noise measurements were taken in accordance with the FTA guidance manual and the American National Standards Institute (ANSI) procedures for community noise measurements and guidelines provided in the FTA guidance manual. Measurement locations were at least 5 feet from any solid structure to prevent acoustical reflections and at a height of 5 feet off the ground as required by FTA and ANSI standards. The noise measurements and accompanying traffic counts were also taken in accordance with FHWA and Washington State Department of Transportation (WSDOT) standards to ensure their suitability for relevant analyses. The equipment used for noise monitoring included Bruel & Kjaer Type 2238 sound level meters. The meters were calibrated before and after measurement periods using a sound-level calibrator. Complete system calibration is performed on an annual basis by an accredited testing laboratory. The laboratory system calibration is traceable to the National Institute of Standards and Technology (NIST). The systems meet or exceed the requirements for an ANSI Type 1 noise measurement system.

For long-term monitoring locations, the Ldn was calculated using logarithmic energy averaging for the 24-hour data with a 10-dBA penalty for noise measured between 10:00 pm and 7:00 am. For short-term monitoring locations, the projected Ldn levels were calculated using formulas in the FTA guidance manual and comparing the levels with other nearby long-term noise monitoring sites.

The following sections describe the existing noise environment by project segments. Segments A and B have numerous existing noise walls along I-5 that might be affected by the proposed project. If it is necessary to remove an entire noise wall or a portion as part of the project, the noise wall would need to be replaced or relocated to a new location in order to maintain future noise levels that are equal to, or less than, the current noise levels.

3.2.1 Segment A

Segment A had 21 long-term and 11 short-term monitoring locations. Noise levels along the proposed light rail alternative route in Segment A are dominated by traffic noise from I-5 and major arterial roadways such as NE Northgate Way, 1st Avenue NE, 5th Avenue NE, NE 130th Street, NE 145th Street, NE 155th Street, and NE 185th Street.

The Ldn at first-line receivers near Segment A in the Northgate area ranged from 72 dBA to 74 dBA (sites M-1, M-2, M-9, M-10, and M-27). The high Ldn noise levels are primarily because of the constant traffic flow along I-5, in addition to noise on local major and minor arterials. Peak-hour noise levels measured at two schools, two churches, and other outdoor locations ranged from 69 dBA to 70 dBA Leq (sites M-8, M-11, M-12, M-13, M-21, M-27, and M-30).

Ldn noise levels at monitoring locations south of Jackson Park Golf Course along 5th Avenue NE ranged from 68 dBA to 74 dBA. Peak-hour noise levels measured at these same locations ranged from 65 dBA to 70 dBA Leq. In all cases, measured noise levels were higher at receivers closer to the I-5/NE 130th Street interchange.

In the residential neighborhood north of NE 145th Street between 5th Avenue NE and I-5, the measured Ldn ranged from 67 dBA to 70 dBA (sites M-16 and M-17). Peak-hour noise levels at these homes ranged from 64 dBA to 67 dBA Leq. As with other locations in Segment A, the major noise source is I-5 and major arterial roadways.

Near the proposed NE 155th Street Station, the measured Ldn was 73 dBA at site M-19 and the peak-hour noise level was 69 dBA Leq. Noise levels in that area are dominated by vehicles on I-5, and to a lesser extent, by local traffic on NE 155th Street and other arterial roadways.

At the NE 185th Street/I-5 overpass, represented by site M-28, the measured front-line Ldn was 71 dBA. At a second-line site (M-29), the Ldn was 64 dBA. Peak-hour noise levels at these two locations were 66 dBA and 60 dBA Leq, respectively. Noise levels here are dominated by I-5, with additional noise from arterial roadways. Noise levels at the entrance to the North City Cooperative Preschool were measured at 59 dBA Leq (M-30A), while to the north of the school, in the play area, noise levels are slightly higher, and were measured at 65 dBA Leq (see site M-30B in Segment B below).

Table 3-1 summarizes the noise monitoring effort for Segment A, which includes the monitoring location number, address, land use, and type of measurement. Although the monitoring site numbers may not be in order, the monitoring sites are presented beginning in the south end of the segment moving north. The peak-hour Leq is presented for all sites, but the 24-hour Ldn is presented for only FTA Category 2 land uses, such as residences and hotels. Although the monitoring data are presented to the tenth of a dBA, FTA recommends presenting the noise analysis data for impact analysis in whole numbers only.

3.2.2 Segment B

Segment B had 17 long-term and 4 short-term monitoring locations. Noise levels along the proposed light rail alternative route in Segment B are dominated by traffic noise from I-5 and major arterial roadways such as SR 104 and 220th Street SW.

South of Ballinger Way NE, and north of the North City Cooperative Preschool, noise levels ranged from 59 to 65 dBA Leq and 58 to 65 dBA Ldn (sites M-30B, M-55, M-56, M-57, and M-58). Behind the Mountlake Transit Center Station at site M-33, measured Ldn was 68 dBA and the peak-hour Leq was 64 dBA. Just north of the station on the bluff overlooking the transit center and I-5, the measured Ldn at site M-34 was 73 dBA and the peak-hour noise level was 70 dBA Leq. At site M-34, homes are not shielded from traffic noise on I-5, and they have a clear line-of-sight to the freeway. Likewise, at site M-39 on the west side of I-5, the Ldn was 77 dBA. For sites with some shielding from I-5, such as site M-35, the Ldn was reduced to 64 dBA.

Table 3-1. Segment A Noise Measurements

Monitoring Location[a]	Address	Land Use Type	Type of Measurement	Leq (Peak-hour Leq in dBA)	Ldn (24-hour Ldn in dBA)[b]
M-1	11012 1st Avenue NE (Northgate Apartments)	Multifamily	Long term	69.3	71.5
M-2	11300 1st Avenue NE (Northgate West Condominiums)	Multifamily	Long term	70.0	73.8
M-3	11200 1st Avenue NE (Northgate Apartments)	Multifamily	Short term	60.8	65.0
M-4	133 115th Avenue NE	Single family	Long term	60.9	65.7
M-5	11516 4th Avenue NE	Single family	Long term	50.5	56.8
M-6	11725 5th Avenue NE	Single family	Long term	59.7	62.2
M-7	12042 5th Avenue NE	Single family	Long term	64.7	68.3
M-8	12345 8th Avenue NE (Northgate Preschool and Child Care Center)	School	Short term	56.1	N/A[c]
M-9	502 NE 127th Street	Single family	Long term	66.5	70.5
M-10	12740 5th Avenue NE	Single family	Long term	69.9	73.8
M-11 #1	13130 5th Avenue NE (Church of the Nazarene and Parish Home)—Morning	Church and Single family	Short term	66.8	68.0
M-11 #2	13130 5th Avenue NE (Church of the Nazarene and Parish Home)—Afternoon	Church and Single family	Short term	66.7	68.0
M-12	11700 1st Avenue NE (St. Andrew Kim Korean Catholic Church)	Church	Short term	63.7	N/A[c]
M-13	12718 1st Avenue NE	Public	Short term	66.4	N/A[c]
M-14	14526 5th Avenue NE	Single family	Long term	66.7	72.8
M-15	14549 6th Avenue NE	Single family	Long term	58.7	62.7
M-16	348 NE 148th Street	Single family	Long term	64.3	67.0
M-17	314 NE 149th Street	Single family	Long term	67.0	70.1
M-18	405 NE 153rd Street	Single family	Short term	63.9	70.0
M-19	132 NE 155th Street	Single family	Long term	69.4	73.3
M-20	123 NE 158th Street	Single family	Long term	65.9	68.8
M-21	108 NE 161st Street	Public	Short-term	61.8	砚/A[c]
M-54	137 NE 167th Street	Single-Family	Long-term	60.5	64.4
M-22	17205 2nd Avenue NE	Single-family	Long-term	66.1	70.2
M-23	211 NE 175th Street	Single family	Long term	66.3	70.2
M-24	17748 2nd Place NE	Single family	Long term	64.1	69.2
M-25	350 NE 180th St	Single-family	Short-term	59.1	63.0
M-26	15100 1st Avenue NE (Aegis Senior Living)	Multifamily	Long term	78.0	81.2
M-27	2350 N 167th Street	Public	Short term	67.9	N/A[c]
M-28	721 NE 185th Street	Single family	Long term	66.4	71.0
M-29	18528 8th Avenue NE	Single family	Long term	59.9	64.4
M-30A	816 NE 190th Street (North City Cooperative Preschool)	School	Short term	59.4	N/A[c]

[a] Sites shown on Figures 3-1 and 3-2.

[b] Projected Ldn levels for short-term monitoring sites have been calculated using formulas and methods in the FTA *Transit Noise and Vibration Impact Assessment* (FTA 2006) and comparison with other nearby long-term noise monitoring sites.

[c] These sites were only measured for peak-hour Leq, and no Ldn measure is required because these sites do not represent residential uses.

dBA = decibel with A-weighting, FTA = Federal Transit Administration, Ldn = 24 hour, time-averaged, A-weighted sound level, Leq = equivalent continuous sound level, N/A = not applicable

Measured Ldn at homes west of the school building located at 6205 222nd Street SW (sites M-42 and M-43) ranged from 56 to 57 dBA. Peak hour Leq at these homes ranged from 52 to 54 dBA. Peak-hour Leq on the east side of the school building at site M-41, facing I-5, was 66.9 dBA.

Table 3-2 summarizes the noise monitoring effort for Segment B, which includes the monitoring location number, address, land use, and type of measurement, with the peak hour Leq for all sites and the 24-hour Ldn for FTA Category 2 land uses. Although the monitoring site numbers may not be in order, the monitoring sites are presented beginning in the south end of the segment and moving north.

Table 3-2. Segment B Noise Measurements

Monitoring Location[a]	Address	Land Use Type	Type of Measurement	Leq (Peak-hour Leq in dBA)	Ldn (24-hour Ldn in dBA)[b]
M-30B	816 NE 190th Street (North City Cooperative Preschool)	School	Short term	65.4	N/A[C]
M-55	19604 10th Avenue NE	Single family	Long term	62.2	65.4
M-56	1107 NE 200th Street	Single family	Long term	59.5	63.1
M-57	20039 12th Avenue NE	Single family	Long term	53.1	58.2
M-58	Corner of 12th Avenue NE and Ballinger Place NE	Right-of-way	Short term	59.2	N/A[C]
M-31	20313 14th Avenue NE	Single family	Long term	59.5	61.7
M-32	Grassy median across from 6002 and 5906 237th Street SW	Right-of-way	Short term	60.8	N/A[C]
M-33	23504 59th Place West	Single family	Long term	64.0	67.5
M-34	6005 233rd Place SW	Single family	Long term	70.4	73.2
M-35	22905 61st Avenue West	Single family	Long term	61.4	64.0
M-36	5905 219th Street SW	Single family	Long term	62.5	63.3
M-37	5709 215th Place SW	Single family	Long term	62.3	65.4
M-38	5402 212th Street SW	Multifamily	Long term	71.7	75.1
M-39	23005 63rd Avenue West	Single family	Long term	74.3	76.5
M-40	6103 227th Street SW	Single family	Long term	65.4	68.5
M-41	6205 222nd Street SW	School	Short term	66.9	N/A[C]
M-42	6206 222nd Street SW	Single family	Long term	54.3	57.4
M-43	6302 222nd Place SW	Single family	Long term	52.1	55.9
M-44	6102 Saint Albion Way	Multifamily	Long term	64.7	68.9
M-45	5632 213th Street SW	Single family	Long term	62.9	67.0
M-46	20908 54th Avenue West #1	Single family	Long term	66.0	68.4

[a] Sites shown on Figure 3-2.

[b] Projected Ldn levels for short-term monitoring sites have been calculated using formulas and methods in the FTA *Transit Noise and Vibration Impact Assessment* (FTA 2006) and comparison to other nearby long-term noise monitoring sites.

[c] These sites were only measured for peak hour Leq, and no Ldn measure is required because these sites do not represent residential uses.

dBA = decibel with A-weighting, FTA = Federal Transit Administration, Ldn = 24 hour, time-averaged, A-weighted sound level, Leq = equivalent continuous sound level, N/A = not applicable

3.2.3 Segment C

Segment C had seven long-term and no short-term monitoring locations. Noise levels along the proposed light rail alternative routes in Segment C are dominated by traffic noise from I-5 and major arterial roadways such as 52nd Avenue West and 200th Street SW.

The existing Ldn at homes west of 52nd Avenue West and adjacent to I-5 was characterized by site M-47, with a measured Ldn noise level of 72 dBA and a peak-hour Leq of 70 dBA. North along 52nd Avenue West, the measured Ldn at sites M-48 and M-49 ranged from 64 dBA to 65 dBA, and peak-hour Leq ranged from 57 dBA to 64 dBA. In this area, the major noise sources are traffic on 52nd Avenue West, 208th Street SW, and 208th Street SW, with background noise from I-5.

The results from monitoring locations near the Lynnwood Transit Center where noise measurements were taken vary depending on their proximity to major roadways. Major noise sources in this area include traffic on 200th Street SW, Cedar Valley Road, and, for sites near the existing transit center, 44th Avenue West. At the three multifamily buildings near and along 200th Street SW (site M-52), and at the Marriott Courtyard Hotel along I-5 (site M-53), the measured Ldn ranged from 69 dBA to 70 dBA. Peak-hour Leq at these locations ranged from 64 dBA to 66 dBA. Noise levels at the multifamily residences that abut Scriber Creek Park are quieter because these residences are shielded from traffic noise emanating from 200th Street SW, Cedar Valley Road, and the transit center. Measured Ldn at sites M-50 and M-51 ranged from 57 dBA to 62 dBA, and peak-hour Leq ranged from 58 dBA to 62 dBA.

Table 3-3 summarizes the noise monitoring for Segment C, which includes the monitoring location number, address, land use, and type of measurement, with the peak-hour Leq for all sites and the 24-hour Ldn for FTA Category 2 land uses.

Table 3-3. Segment C Noise Measurements

Monitoring Location[a]	Address	Land Use Type	Type of Measurement	Leq (Peak-hour Leq in dBA)	Ldn (24-hour Ldn in dBA)[b]
M-47	20929 53rd Avenue West	Single family	Long term	69.8	72.4
M-48	20706 52nd Avenue West	Single family	Long term	57.1	63.5
M-49	20526 52nd Avenue West (Cedar Valley Grange)	Public	Long term	64.0	N/A[C]
M-50	20128 48th Avenue West, Bldg. C, Apt. #30 (Park Five Apartments)	Multifamily	Long term	62.2	62.3
M-51	4900 200th Street SW, Bldg. C (Cedar Creek Condominiums)	Multifamily	Long term	57.8	56.7
M-52	4727 200th Street SW, Apt. A101 (Cambridge Apartments)	Multifamily	Long term	65.5	69.3
M-53	4220 200th Street SW (Courtyard Marriott)	Hotel	Long term	63.7	70.3

[a] Sites shown on Figure 3-2.

[b] Projected Ldn levels for short-term monitoring sites have been calculated using formulas and methods in the FTA *Transit Noise and Vibration Impact Assessment* (FTA 2006) and comparison with other nearby long-term noise monitoring sites.

c These sites were only measured for peak hour Leq, and no Ldn measure is required because these sites do not represent residential uses.

dBA = decibel with A-weighting, FTA = Federal Transit Administration, Ldn = 24 hour, time-averaged, A-weighted sound level, Leq = equivalent continuous sound level, N/A = not applicable

4 NOISE IMPACT CRITERIA

The operation of a light rail system can cause noise from transit operations (e.g., light rail operational noise, warning bells, maintenance facilities, ancillary facilities, and buses and park-and-ride lots at transit centers), changes in traffic resulting from a roadway being widened or realigned for the project, or changes in the noise path between existing noise sources and receivers, such as altering an existing noise wall; different criteria exist for each source of noise. This section summarizes what defines a noise impact, as applicable to the Lynnwood Link Extension.

4.1 Transit Noise Impact Criteria

Noise impacts for the proposed project are determined based on the criteria defined in the FTA guidance manual (FTA 2006). The FTA noise impact criteria are based on well-documented research on community reaction to noise and on change in noise exposure rated using a sliding scale. Although more transit noise is allowed in neighborhoods with high levels of existing noise, as existing noise levels increase, smaller increases in total noise exposure are allowed than in areas with lower existing noise levels. The FTA noise impact criteria group noise-sensitive land uses into the following three categories:

- Category 1: Tracts of land where quiet is an essential element in their intended purpose. This category includes lands set aside for serenity and quiet, land uses such as outdoor amphitheaters and concert pavilions, as well as National Historic Landmarks with significant outdoor use. Also included in this category are recording studios and concert halls.
- Category 2: Residences and buildings where people normally sleep. This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.
- Category 3: Institutional land uses with primarily daytime and evening use. This category includes schools, libraries, theaters, and churches where it is important to avoid interference with activities such as speech, meditation, and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds, and recreational facilities are also considered to be in this category. Certain historical sites and parks are also included, but their sensitivity to noise must be related to their defining characteristics; generally, parks with active recreational facilities are not considered noise sensitive.

Ldn is used to characterize noise exposure for residential areas (Category 2). For other noise-sensitive land uses, such as outdoor amphitheaters and school buildings (Categories 1 and 3), the maximum 1-hour Leq during the facility's operating period is used.

The two levels of impact included in the FTA criteria (severe and moderate) are as follows:

- Severe Impact: Project-generated noise in the severe impact range can be expected to cause a large percentage of people to be highly annoyed by the new noise and represents the most

compelling need for mitigation. Noise mitigation will normally be specified for severe impact areas unless there are truly extenuating circumstances that prevent mitigation.

- Moderate Impact: In this range of noise impact, the change in the cumulative noise level is noticeable to most people but may not be sufficient to cause strong, adverse reactions from the community. In this transitional area, other project-specific factors must be considered to determine the magnitude of the impact and the need for mitigation. These factors include the existing level, the projected level of increase over existing noise levels, the types and numbers of noise-sensitive land uses affected, the noise-sensitivity of the properties, the effectiveness of the mitigation measures, community views, and the cost of mitigating noise to more acceptable levels.

The FTA noise impact criteria are summarized in graphical form in Figure 4-1, which shows the existing noise exposure and the allowable noise exposure from the transit project that would cause either moderate or severe impact. The future noise exposure would be the combination of the existing noise exposure and the additional noise exposure caused by the light rail project. Figure 4-2 expresses the same criteria in terms of the increase in total or cumulative noise that can occur in the overall noise environment before an impact occurs.

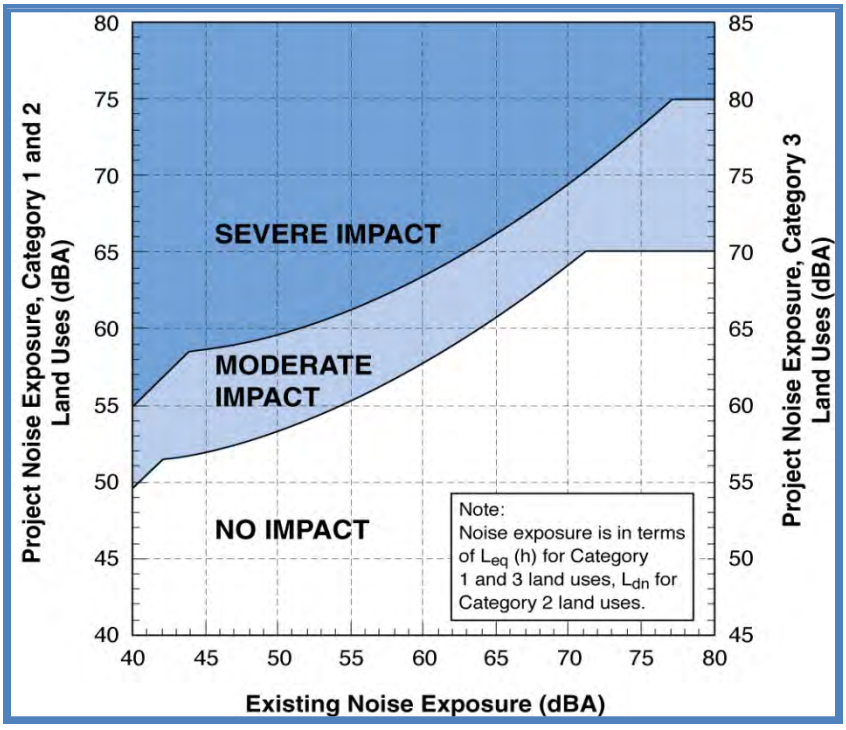


Figure 4-1. FTA Project Noise Impact Criteria

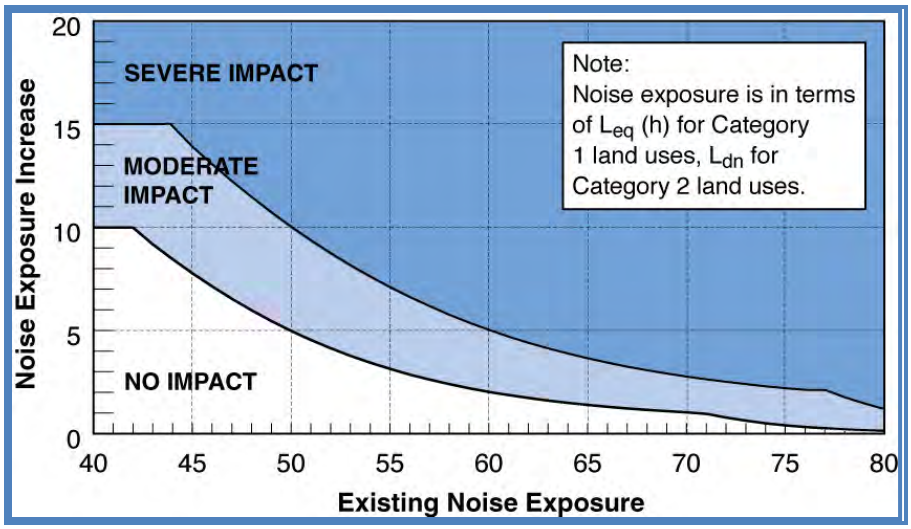


Figure 4.2. Increase in Cumulative Noise Exposure Allowed by FTA Criteria

The FTA guidance manual provides details on how parks are analyzed for noise in Chapter 3, Section 2, Application of Noise Impact Criteria, of the manual. FTA assumes that parks are a special case, and how they are used and where they are located should be considered when considering whether or not a particular park, or an area in a park, is considered noise-sensitive. Parks that are used for outdoor recreation are typically not considered noise-sensitive. This includes parks with baseball diamonds, soccer fields, basketball courts, football fields, and other active recreation areas.

Noise-sensitive parks are defined as those where quiet is an essential element in their intended purpose, or places where it is important to avoid interference with activities such as speech, meditation, and reading. The existing noise levels at a park can indicate the sensitivity of its use. All parks along the project corridor were evaluated for consideration under the FTA criteria, and based on the park locations and existing noise levels, none met the requirements for noise-sensitivity under the FTA Category 3 criteria.

4.2 Traffic Noise Impact Criteria

Consistent with the FTA guidance manual, Sound Transit used FHWA methodology and criteria to evaluate future project related traffic noise impacts. The criteria for highway noise impacts are taken from Title 23 of the Code of Federal Regulations (CFR) Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise. Table 4-1 lists the traffic noise abatement criteria.

Under the FHWA criteria, projects that include construction of new highways, reconstruction of existing highways that includes significantly changing either the horizontal or vertical profile, or an increase in the number of through-traffic lanes require a traffic noise analysis. A significant change in the horizontal or vertical profile occurs when the change is likely to result in increased noise levels on developed lands that are perceptible to an average person, typically defined as a 3-dBA increase. The FHWA criteria are provided because they will be used in the analysis for any potential traffic

noise impacts related to new or modified roadways that meet the above requirements, the relocation of existing noise walls, modification of existing physical shielding, and removal of existing shielding structures.

4.2.1 FHWA and WSDOT Traffic Noise Criteria

Under the FHWA criteria, a noise impact occurs if projected noise levels approach or exceed the FHWA levels listed in Table 4-1 or substantially exceed existing noise levels. Each state defines its own quantitative levels considered to approach or substantially exceed existing noise levels. WSDOT is responsible for implementing the FHWA regulations in Washington. Under WSDOT policy, a traffic noise impact occurs if projected noise levels are within 1 dBA of the FHWA criteria; therefore, a residential impact occurs at 66 dBA Leq and many commercial impacts occur at 71 dBA Leq. WSDOT also considers a 10-dBA increase in noise a substantial increase impact, regardless of the existing noise level. Potential noise from park-and-ride lots was assessed using the local noise criteria, which is discussed later in Section 4.3.1.

Table 4-1. Noise Abatement Criteria (NAC) by Land Use Category

Activity Category	Activity Criteria in hourly Leq (dBA)		Evaluation Location	Activity Description
	FHWA NAC	WSDOT NAC		
A	57	56	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B[1]	67	66	Exterior	Residential (single-family and multifamily units)
C[a]	67	66	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools , television studios, trails, and trail crossings
D	52	51	Interior	Auditoriums, daycare centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios

Table 4-1. Noise Abatement Criteria (NAC) by Land Use Category

Activity Category	Activity Criteria in hourly Leq (dBA)		Evaluation Location	Activity Description
	FHWA NAC	WSDOT NAC		
E[a]	72	71	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F
F	--	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	--	--	--	Undeveloped lands that are not permitted

Notes:
[a] Includes undeveloped lands permitted for this activity category.
dBA = decibel with A-weighting, FHWA = Federal Highway Administration, Leq = equivalent continuous sound level, WSDOT = Washington State Department of Transportation

4.3 State Regulations and Local Noise Ordinances

Project operation and construction would take place in Seattle and Shoreline in King County, and in Mountlake Terrace and Lynnwood in Snohomish County. Therefore, four different noise ordinances would be applicable to the operation of ancillary facilities, such as park-and-ride lots, and traction-power substations, as well as to project-related construction activities.

In Chapter 173-60 of the Washington Administrative Code (WAC), the Department of Ecology has adopted Maximum Environmental Noise Levels for residential, commercial, industrial, and construction areas. However, WAC 173-60-110 states that:

> *"The department conceives the function of noise abatement and control to be primarily the role of local government and intends actively to encourage local government to adopt measures for noise abatement and control. Wherever such measures are made effective and are being actively enforced, the department does not intend to engage directly in enforcement activities."*

Each of the four cities has adopted measures for noise abatement and control. Seattle and Lynnwood have adopted ordinances that are based upon WAC 173-60, while Shoreline and Mountlake Terrace have taken different approaches as discussed in sections 4.2.5 and 4.2.6. The provisions of WAC 173-60 are summarized below.

4.3.1 Washington Administrative Code

WAC Chapter 173-60 (Maximum Environmental Noise Levels) defines three classes of property usage, called Environmental Designation for Noise Abatement (EDNA), and states maximum allowable noise levels for each, as shown in Table 4-2. For example, the noise caused by a commercial property must be less than 57 dBA at the closest residential property line. From 10:00 pm to 7:00 am, the allowable maximum sound levels shown in Table 4-2 are reduced by 10 dBA in

Class A EDNAs (residential zones). The WAC contains short-term exemptions to the property line noise standards in Table 4-2 based on the minutes per hour that the noise limit is exceeded. These exceedances are outlined in Table 4-3.

Table 4-2. Washington State Noise Control Regulation

EDNA Source of Noise	EDNA Receiver of Noise (Maximum Allowable Sound Level in dBA[a])		
	Residential	Commercial	Industrial
Class A Residential	55	57	60
Class B Commercial	57	60	65
Class C Industrial	60	65	70

[a] Between 10 pm and 7 am, the levels given above are reduced by 10 dBA in Class A EDNAs.
dBA = decibel with A-weighting

Table 4-3. Washington State Exemptions for Short-Term Noise Exceedances

Minutes Per Hour	Adjustment to Maximum Sound Level
15	+5 dBA
5	+10 dBA
1.5	+15 dBA

dBA = decibel with A-weighting

WAC Construction Noise Criteria

Sounds received in Class A EDNAs that originate from construction sites are exempt from the limits of the WAC regulations during normal daytime hours (7:00 am to 10:00 pm). If construction is performed during the nighttime, the contractor must still meet the WAC noise-level requirements for sounds received in Class A EDNAs, as presented in Table 4-2, or get a noise variance from the governing jurisdiction.

The WAC also contains a set of construction-specific allowable noise-level limits. These construction noise regulations are organized by type of noise and, among other things, include haul trucks and back-up safety alarm criteria.

Haul Truck Noise Criteria

Maximum permissible sound levels for haul trucks on public roadways are limited to 86 dBA for speeds of 35 miles per hour (mph) or less, and 90 dBA for speeds over 35 mph when measured at 50 feet (Chapter 173-62, WAC). For trucks operating within staging areas, the general construction equipment noise criteria would be used to determine compliance during nighttime hours in Class A EDNAs.

Noise Related to Back-up Alarms

Sounds created by back-up alarms are essentially prohibited by the WAC during nighttime hours (10:00 pm and 7:00 am) in Class A EDNAs, when other forms of back-up safety measures would need to be used. These could include the use of smart back-up alarms, which automatically adjust the alarm level based on the background level, or switching off back-up alarms and replacing them with spotters.

4.3.2 City of Seattle

The City of Seattle has maximum permissible environmental noise level requirements that are similar to those contained in the WAC (Seattle Municipal Code [SMC] Chapter 25.08; SMC Section 25.08.410). However, while the WAC does not define a noise descriptor to be used for purposes of applying the limits shown in Table 4-2, the City of Seattle explicitly mandates that the Leq descriptor be used. In addition, during a measurement interval, maximum noise levels (Lmax) may exceed the Leq exterior sound level limits shown in Table 4-2 above by no more than 15 dBA (SMC Section 25.08.410(B)).

The SMC also imposes the following three limitations on the maximum permissible sound level limits, which are more restrictive than the WAC:

- The Seattle ordinance extends the 10 dBA reduction in maximum nighttime noise levels to 9:00 am on weekends and legal holidays, while under the WAC the reduction stops at 7:00 am.
- For any source of sound (other than an electrical substation) that has a pure tone component, the exterior sound level limits established under SMC Section 25.08.410 are reduced by 5 dBA.
- For any source of sound that is impulsive and not measured with an impulse sound level meter, the exterior sound level limits established under SMC Section 25.08.410 are reduced by 5 dBA.

Construction Noise Criteria

The WAC exempts construction noise from maximum permissible noise levels except during nighttime hours in residential zones, but the Seattle code provides upper limits on construction noise at all times. Under SMC Section 25.08.425, the sound level limits established by SMC Section 25.08.410 may be exceeded for non-impact construction equipment used on public projects, such as the Lynnwood Link Extension, between 7:00 am and 10:00 pm on weekdays, and between 9:00 am and 10:00 pm on weekends and legal holidays, by no more than the following:

- **25 dBA** for equipment on construction sites, including, but not limited to, crawlers, tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, graders, off-highway trucks, ditchers, trenchers, compactors, compressors, and pneumatic-powered equipment.
- **20 dBA** for portable-powered equipment used in temporary locations in support of construction activities or used in the maintenance of public facilities, including, but not limited to, chainsaws, log chippers, lawn and garden maintenance equipment, and hand-powered tools.

- **15 dBA** for powered equipment used in temporary or periodic maintenance or repair of the grounds and appurtenances of residential property, including, but not limited to, lawnmowers, powered hand tools, snow-removal equipment, and composters.

For impact types of equipment, including, but not limited to, pavement breakers, pile-drivers, jackhammers, sandblasting tools, or other types of equipment that create impulse sound or impact sound, the sound level limits established by SMC Section 25.08.425 may be exceeded in any 1-hour period between 8:00 am and 5:00 pm on weekdays and 9:00 am and 5:00 pm on weekends and legal holidays, but in no event may the sound level for impact types of equipment exceed the following:

- Leq 90 dBA continuously
- Leq 93 dBA for 30 minutes
- Leq 96 dBA for 15 minutes
- Leq 99 dBA for 7.5 minutes

Sound levels in excess of Leq 99 dBA are prohibited unless authorized by variance, and impact equipment that produces sound levels less than 90 dBA must comply with the non-impact equipment construction sound level requirements between 7:00 am 8:00 am and again between 5:00 pm and 10:00 pm on weekdays and between 9:00 am and 10:00 pm on weekends and legal holidays.

The sound levels for all types of construction equipment are measured at the property line of the receiver or at a distance of 50 feet from the equipment making the sound, whichever is greater. Furthermore, any type of equipment that exceeds the sound level limits in SMC Section 25.08.410, when measured from the interior of buildings within a commercial district, is prohibited between 8:00 am and 5:00 pm.

Haul Truck Noise Criteria

Sounds created by motor vehicles on public roadways, including haul trucks, are exempt from Seattle's previously described maximum permissible environmental noise levels, and instead, maximum permissible sound levels for haul trucks on public roadways are simply limited to 95 dBA (SMC Section 25.08.430 et seq.). However, the previously described maximum permissible environmental noise level requirements do apply to vehicles operating off highways, such as trucks at staging areas, when the sounds are received within a residential district.

Noise Related to Back-Up Alarms

Sounds created by warning devices or alarms not operated continuously for more than 30 minutes per incident are exempt from the City of Seattle noise control requirements (SMC Section 25.08.530). For nighttime construction activity, the noise from the alarms would be addressed in permit conditions.

4.3.3 City of Shoreline

The City of Shoreline regulates noise pursuant to Chapter 9.05 of its Code, Public Disturbance Noise. A public disturbance noise is one that unreasonably disturbs or interferes with the peace and comfort of owners or possessors of real property. The City of Shoreline does not have any maximum permissible environmental noise level requirements that are similar to those contained in the WAC (as outlined in Section 4.2.3 of this report) or otherwise. Therefore, Sound Transit has chosen to use the WAC regulations for ancillary equipment and park-and-ride facilities.

Construction Noise Criteria

Sounds originating from construction sites including, but not limited to, sounds from construction equipment, power tools, and hammering, between 10:00 pm and 7:00 am on weekdays and 10:00 pm and 9:00 am on weekends, may constitute "public disturbance noise" depending on the location of the construction site and the receiving property (Shoreline Municipal Code Section 9.05.010(C)(8)). Noise from construction activities is, therefore, generally permitted on weekdays between 7:00 am and 10:00 pm and on weekends between 9:00 am and 10:00 pm. In addition, construction activities in the city's right-of-way that have been conditioned by the city to minimize the impact on adjacent property owners are exempt from regulation as public disturbance noise, while the creation within a residential district of frequent, repetitive or continuous sounds in connection with the operation of any motor vehicle may be a public disturbance noise.

The City of Shoreline does not have any laws or regulations that address noise variances.

4.3.4 City of Mountlake Terrace

The City of Mountlake Terrace primarily regulates noise pursuant to Chapter 8.20 of its Municipal Code, Regulation of Noise and Sound. That chapter prohibits "unreasonable noise that disturbs another" and therefore constitutes a public nuisance. (Mountlake Terrace Municipal Code Section 8.20.010(A)). The City of Mountlake Terrace does not have any maximum permissible environmental noise level requirements that are similar to those contained in the WAC (as outlined in Section 4.3.1 of this report) or otherwise. Therefore, Sound Transit has chosen to use the WAC regulations for ancillary equipment and park-and-ride facilities.

Construction Noise Criteria

Sounds created by blasting and sounds originating from construction sites as a result of construction activity are considered a nuisance when performed between 10:00 pm and 7:00 am (Mountlake Terrace Municipal Code Section 8.20.010(D)(2) and (D)(3)). Hence, sounds from construction activities are exempt every day of the week between 7:00 am and 10:00 pm. In addition, "loud and frequent, repetitive or intermittently continuous sounds made in connection with the starting, operation, repair, rebuilding or testing of any motor vehicle" are considered a nuisance.

Mountlake Terrace also regulates Essential Public Facilities pursuant to Chapter 18.15 of the City's Municipal Code, and one of the purposes of this chapter is to ensure that such facilities are subject to reasonable conditions for noise. (Mountlake Terrace Municipal Code Section 18.15.010).

The City of Mountlake Terrace does not have any laws or regulations that address construction noise variances.

4.3.5 City of Lynnwood

The City of Lynnwood primarily regulates noise pursuant to Chapter 10.12 of its Code, Noise, which states maximum permissible environmental noise level requirements that are similar to those contained in the WAC (Lynnwood Municipal Code Section 10.12.500). These requirements are outlined in Section 4.3.1 of this report. In addition, Lynnwood Municipal Code Section 17.05.070, Environmental Health, authorizes a responsible official to "require applicants for city permits to provide documentation by a qualified consultant that the project will not exceed noise standards or violate nuisance regulations pertaining to noise, and provide recommendations from such a consultant as to how noise can be minimized. The responsible official is authorized to condition or deny projects which would violate state and local standards. "

Sounds that are exempt at all times from the maximum permissible sound levels include "Sounds created by warning devices not operating continuously for more than 5 minutes, or bells, chimes, and carillons (Lynnwood Municipal Code Section 10.12.500(F)(4)).

Construction Noise Criteria

Sounds originating from construction sites as a result of construction activity are exempt on every day of the week from the City of Lynnwood environmental noise level requirements at all times in Class B and C EDNAs and between 7:00 am and 10:00 pm in Class A EDNAs (Lynnwood Municipal Code Section 10.12.500(E)).

In addition, section 10.12.500(G) states "Nothing in these exemptions is intended to preclude the community development director from requiring installation of the best available noise abatement technology consistent with economic feasibility."

The City of Lynnwood does not have any laws or regulations that address construction noise variances.

5 NOISE IMPACT ANALYSIS METHODS

This section summarizes the models used to predict future noise levels for potential sources of community impact related to the Lynnwood Link Extension. These sources include light rail operation, changes in traffic noise altered by the project, and construction activities.

5.1 Operational Measures

This section describes the assessment approach for noise related to operating the light rail system. This includes noise from light rail operations, traffic noise (where applicable), ancillary facilities, and wheel squeal. Sound Transit employs several operational measures to maintain low noise and vibration levels for its light rail trains. Table 5-1 lists operational and maintenance measures that Sound Transit performs on a regular basis and the benefit that each measure provides.

Table 5-1. Systemwide Light Rail Operational and Maintenance Measures

Operational Measure	System Benefit
Rail grinding, maintenance, and replacement	As rails wear, both noise and vibration levels from light rail operations can increase. By grinding or replacing worn rails or correcting improper track alignment, noise and vibration levels will remain at the projected levels.
Wheel truing and replacement	Wheel truing is a method of grinding down flat spots (commonly called wheel flats) on the vehicle wheels. Flat spots occur primarily because of hard braking. When flat spots occur, they can cause increases in both the noise and vibration levels produced by the light rail vehicles.
Vehicle maintenance	Vehicle maintenance includes performing scheduled and general maintenance on items such as air conditioning units, bearings, wheel skirts, and other mechanical units on the light rail vehicles. Keeping the mechanical systems on the light rail vehicles in top condition will also help to maintain the projected levels of noise and vibration.
Operator training	Operators will be trained to operate light rail vehicles at the speeds given in the operation plan that was used for the analysis and to avoid "hard-braking," which can cause wheel flats and may also damage the track. Furthermore, by training operators to identify potential wheel flats and other mechanical problems with the light rail trains, proper maintenance can be performed in a timely manner.

5.2 Reference Light Rail Noise Levels

Sound Transit modeled noise from light rail operations using the methods described in the FTA guidance manual. Input to the model included measured reference noise levels for the new light rail vehicles that are currently being used on the Central Link light rail system. Reference measurements for light rail operations were taken along the ballast and tie segment of the initial segment in south Seattle in March 2010. The measured reference noise levels are 79 dBA Lmax for a single-car train traveling at 40 mph at a distance of 50 feet.

5.3 Alignment and Special Trackwork

A plan and profile of the proposed light rail alignment, including the locations of special trackwork, such as crossovers, and typical speeds, were obtained from project design engineers. The design information included the elevation of the trackway, type of track (ballast and tie, embedded, aerial, and direct fixation), and the location and design of the station alternatives. The current design calls for ballast and tie, aerial, and direct fixation types of trackway.

Track crossovers are mechanical devices that enable light rail cars to be guided from one track to another at a junction point. Crossovers have a gap in the rails that is necessary for the flange of the light rail wheels to pass through at the location where the two tracks cross. As a wheel passes through the gap there is increased noise and vibration levels. According to the FTA guidance manual and measurements of the Central Link light rail system, standard frogs, which are crossover components, can increase noise levels by as much as 8 to 10 dBA.

Spring switch and movable point frogs solve the added noise and vibration problems by closing the gap on the rails. Flange-bearing frogs, another mitigation option, transfer the vehicle load from the wheel tread to the wheel flange and raise the light rail car up and over the gap, reducing noise and vibration levels. Each of these types of frogs produce notably lower noise levels than standard frogs. Depending on the type of crossover and angle between the crossover and mainline track, special frogs, like those described, can reduce noise levels between 4 and 8 dBA compared to a standard frog. The type of frogs used for the Lynnwood Link Extension would depend on the track type, crossover location, and proximity of noise-sensitive properties.

5.4 Light Rail Warning Bells

Sound Transit measured and validated train-mounted bells on light rail cars in October 2009, with several supplemental measurements over the last 2 years. Consistent with Sound Transit operating rules, this analysis assumes that train-mounted bells would be sounded twice as a train enters a station, and twice when the train leaves the station. The bells produce a maximum noise level of 80 dBA Lmax at 50 feet between 6:00 am and 10:00 pm and are reduced to 72 dBA Lmax between 10:00 pm and 6:00 am.

5.5 Operational Plan

The Sound Transit operations schedule includes all other planned light rail expansions between now and 2030. The operations plan for this analysis is taken from the Sound Transit 2 (ST2) Plan, which assumes service to Lynnwood as well as the East Link Extension would be complete and running. Under this worst-case future operational plan, all light rail trains would operate with four passenger cars during all hours of operation.

The operating plan used in the analysis was taken from the highest potential service for the 2030 ridership model, which uses the following train lengths and headways:

- Peak (6:00 am to 8:30 am and 3:00 pm to 6:30 pm): 4-minute headways, four-car trains
- Midday and early evening (8:30 am to 3:00 pm and 6:30 pm to 10:00 pm): 5-minute headways, four-car trains
- Early morning and late evening (5:00 am to 6:00 am and 10:00 pm to 1:00 am): 7.5-minute headways, four-car trains

5.6 Wheel Squeal and Wheel-Flanging Noise

Wheel squeal is caused by the oscillation of the wheel against the rail on curved sections of the track. Sound Transit measured wheel squeal noise levels at several different locations along the Central Link corridor and used these measurements as reference data. Based on these measurements, curves with radii of less than 600 feet can produce maximum wheel squeal noise levels of 80 dBA to 90 dBA at 50 feet.

Research into methods of reducing wheel squeal noise, including using lubricants that are not oil based (such as water) and friction modifiers, has found such methods effectively reduce or eliminate wheel squeal. The lubricants can be applied by personnel working trackside or by an automated applicator. It is a general policy of Sound Transit to install lubricators or prepare for lubrication on any curves near noise-sensitive properties with a radius of less than 1,000 feet. If, after system operation begins, wheel squeal is identified, it is possible to add lubricators in a reasonable amount of time.

Sound Transit examined the project corridor for curves with radii of 600 feet or less and identified no such curves. There are curves in Segment C with radii of 800 feet. Under Alternatives C1 and C2 with Option 1, the curve from the I-5 median to 52nd Avenue West has a radius of 800 feet. Also, under Alternatives C1 and C2 with both design options, the curve from Cedar Valley Road to the transit station also has a radius of 800 feet. Sound Transit would prepare the light rail tracks along these curves to accept automated lubricators in case wheel squeal is noted during the initial system testing.

5.7 Light Rail Noise Projections

Noise impacts that would result from the Lynnwood Link Extension were determined through the following approach:

1. Sound Transit performed a land use survey of potential noise-sensitive receptors near the proposed light rail alignments. This process involved site visits and use of area land-use maps and information from other project team members.
2. Sound Transit conducted long-term (multi-day) and short-term (15- to 30-minute) noise monitoring to establish existing noise levels for the potentially affected area. Ambient noise monitoring was taken at 55 locations along the corridor. The criteria for monitoring location selection included land use, existing ambient noise, number of sensitive receivers in the area,

and level of expected impact. Traffic counts were also taken at several sites that will be used for future traffic noise modeling as part of noise wall relocation.

3. Field noise measurements were used to develop a set of existing ambient sound levels for the noise-sensitive receptors.
4. Existing ambient sound levels were used to determine the noise impact criteria. The FTA criteria for noise impact are based on the existing noise level and land use.
5. Projections of light rail noise levels were made based on track type, train speed, number of passenger cars, and distance of receiver from tracks, with adjustments for shielding and ground attenuation. Adjustments based on track type, noise walls, elevated acoustical walls, and retained cut situations are shown in Table 5-2. Sound attenuation related to physical shielding from the elevated structure and other existing and planned structures were included in the analysis using acoustical formulas from the FTA Manual. Noise related to warning bells at stations and special trackwork was also included in the analysis. Measured noise reductions taken in Tukwila, Washington, as part of Sound Transit's commitment to maintain a quiet system, were used in this analysis.
6. Sound Transit evaluated projections regarding impact thresholds to determine if a receiver would be affected by light rail operations.
7. Where noise impacts were identified, mitigation was considered. Mitigation recommendations followed the Sound Transit Noise Mitigation Policy and, as such, these recommendations were considered reasonable and feasible.

Table 5-2. Light Rail Track-Type and Shielding Adjustments

Track Type	Adjustment in Decibels (dBA)
At-grade ballast and tie-track (ballast exposed)	0
Elevated structure	+4
Embedded track or other trackway without any ballast overlay	+3
Retained cut with at least 4 to 6 feet below grade, with correction for deep cuts calculated with FTA. formulas	-5
Crossover, standard type	+10
Crossover, with special trackwork (movable point or spring rail type crossovers)	+2
Acoustical noise walls on structure between 4 and 6 feet above the top of rail with some going as high as 8 feet. Walls on structure over 8 feet are not normally used because of wind loading and safety concerns. If walls over 8 feet are required, the additional wind load would need to be considered in the design of the structure.	Typical noise reduction of 8 to 15 decibels or more, as predicted using FTA formulas and verified with measured data during normal operations along the Tukwila segment
Relocated noise wall at-grade with an expected height of at least 6 feet above the grade of the trackway. An at-grade noise wall can go as high as 20 feet or more when used to replace an existing traffic noise wall in addition to mitigating noise from the light rail operation. An at-grade wall for light rail only mitigation typically ranges from 4 to 8 feet.	Typical noise reduction of 8 to 12 decibels or more, as predicted using FTA formulas and verified with measured data during normal operations along the Tukwila segment

5.8 Park-and-Ride Noise Projections

Sound Transit calculated operational noise levels from buses and vehicles that would use the light rail park-and-ride facilities by using the methods outlined in the FTA guidance manual (FTA 2006). Future bus and passenger traffic volumes for the park-and-ride facilities are based on the predicted maximum number of parking spots, peak-hour bus service, and hourly bus service throughout the day, evening, and at night. Sound Transit used future park-and-ride operations to determine the noise levels at the residential areas near the proposed facilities.

As previously stated in Section 4.3, ancillary facilities must not only meet the FTA criteria for noise but also meet the applicable state, county, or city criteria. The Cities of Seattle and Lynnwood each have a local noise control ordinance. The Cities of Shoreline and Mountlake Terrace do not have an applicable noise ordinance, and therefore, as a matter of policy, Sound Transit has chosen to use the WAC regulations for ancillary equipment and park-and-ride facilities.

Sound Transit's noise analysis team calculated operational noise levels for the park-and-ride facilities at the nearest representative receivers' property line. Sound Transit projected the 24-hour Ldn and the peak hour Leq using the methods described in the FTA guidance manual (2006). The noise analysts obtained future hourly bus volumes and park-and-ride lot access times from Sound Transit. The daily Ldn noise levels were compared to the FTA noise regulations provided in Section 4.1.

The proposed park-and-ride facility sites are considered commercial uses, and most of the receiving sites near the proposed park-and-ride facilities are residential. As shown in Table 4-2, the maximum allowable noise level from a commercial property to the nearest residential use is 57 dBA at the property line. The noise impact analysis was performed for all passenger vehicles and buses only while they are on park-and-ride facility property using the worst case hourly Leq. Buses on public roadways, or at existing bus stops on public roadways, are exempt under local noise control ordinances. .

Table 5-3 summarizes the total number of parking spots for the transit centers and Table 5-4 summarizes the number of buses expected at each of the transit stations based on the time of day. The reference noise levels for park-and-ride operations for the peak-hour noise analysis and the 24-hour Ldn are provided in Table 5-5. Reference noise levels are provided for the parking lots and bus operations while at the park-and-ride.

Table 5-3. Passenger Vehicle Parking Spaces and Type

Station	Option	Parking Spaces[a]	Notes
NE 130th Street	Preferred Alternative and Option 1	100	Surface Lot (leased)
NE 130th Street	Option 2	100	Surface Lot
NE 145th Street	All NE 145th Street	500	Parking Garage
NE 155th Street	All NE 155th Street	500	Parking Garage
NE 185th Street	Preferred Alternative, Preferred Alternative with Shoreline Stadium Garage Option, and Options 1 and 2	500	Parking Garage
NE 185th Street	Option 3	360	Surface Lots
Mountlake Terrace Transit Center or Freeway Station	All Options	880	Parking Garage and Surface Lots
220th Street SW Station	All Options	200	Parking Garage and Surface Lots
Lynnwood Transit Center	All Options	1,900	Parking Garage and Surface Lots

[a] Parking spaces based on current design drawings

Table 5-4. Bus Trips by Park-and-Ride Option and Time of Day[a]

Station	Morning Peak 6:00 am to 7:00 am	Daytime Peak 5:00 pm to 6:00 pm	Daytime Trips 7:00 am to 10:00 pm	Nighttime Trips 10:00 pm to 7:00 am
NE 130th Street	8	8	120	16
NE 145th Street	24	24	360	48
NE 155th Street	24	24	360	48
NE 185th Street	44	44	620	84
Mountlake Terrace Transit Center or Freeway Station	44	44	532	84
220th Street SW Station	4	6	25	3
Lynnwood Transit Center	112	96	972	176

[a] Estimated maximum number of buses accessing each of the park-and-ride options.

Table 5-5. Reference Park-and-Ride Facility Noise Levels at 50 Feet

		Peak Hour Leq (dBA)[a]		24-hour Ldn (dBA)[b]	
Station	Park-and-Ride Option	Buses 6:00–7:00 am	Vehicles 6:00–7:00 am	Ldn Buses	Ldn Vehicles
NE 130th Street	All options	N/A[c]	43	49	40
NE 145th Street	All options	N/A[c]	50	54	47
NE 155th Street	All options	N/A[c]	50	54	47
NE 185th Street	Option 1, 2	55	50	56	47

Table 5-5. Reference Park-and-Ride Facility Noise Levels at 50 Feet

Station	Park-and-Ride Option	Peak Hour Leq (dBA)[a]		24-hour Ldn (dBA)[b]	
		Buses 6:00–7:00 am	Vehicles 6:00–7:00 am	Ldn Buses	Ldn Vehicles
NE 185th Street	Option 3	55	48	56	45
Mountlake Terrace Transit Center or Freeway Station	All Mountlake Terrace options	55	52	56	49
220th Street SW Station	All options	45	46	56	49
Lynnwood Transit Center	Preferred Alternative	59	61	70	67
Lynnwood Transit Center	200th Street SW (Alternative C1)	59	56	70	52
Lynnwood Transit Center	Lynnwood Transit Center (Alternative C2)	59	64	70	70
Lynnwood Transit Center	Lynnwood Park-and-Ride Option 1 (Alternative C3)	59	61	70	68
Lynnwood Transit Center	Lynnwood Park-and-Ride Option 2 (Alternative C3)	59	60	70	66

[a] Worst-case hourly Leq. For buses, the noise level was projected using the maximum number of buses at the park-and-ride in a single hour; for vehicles, the noise levels were projected assuming all parking spots would be occupied in a single hour.

[b] 24-hour Ldn projections that are based on the number of buses and vehicles predicted to access the park-and-ride throughout the daytime and nighttime hours.

[c] All bus traffic for this station option is on existing public roadways, at or near existing bus stops, and is therefore exempt from the local noise ordinances.

N/A = not applicable

5.9 Traffic Noise Analysis

As discussed in Section 4.2, Traffic Noise Impact Criteria, a traffic noise study would be required for any roadway modifications that increase capacity or modify the alignment and that increase the traffic noise by 3 dB or more. A traffic study is also required for the removal or replacement of any existing noise walls or other structural shielding. This project has several locations along I-5 where roadways are modified and/or noise walls or other noise reducing structural shielding are being removed or modified. Section 5.9.1 describes the methods for the traffic noise analysis for five locations along I-5 where noise walls are being relocated as part of this project. Section 5.9.2 describes the traffic noise analysis near the Lynnwood Transit Center, where several roadways are being modified to better serve the transit center operations.

5.9.1 Shielding and Structural Replacement

Because the Lynnwood Link Extension may need to remove several noise walls and shielding structures along I-5, the project would be responsible for replacing these noise walls and structural shielding with new noise walls. The Draft EIS noted that noise walls would need to be replaced or relocated, but it did not identify the specific locations where removal of noise walls or shielding or roadway realignment would necessitate a traffic noise study to determine the locations and

specifications of new noise walls within the project corridor. Since the publication of the Draft EIS, details of the Preferred Alternative alignment were used to review potential sites that would require a traffic noise study because of alternations caused by the project. While the alignment likely will continue to be revised as the design progresses, the general information used for this review is not expected to change substantially. Therefore, a traffic noise study was performed in five areas where existing traffic noise walls and/or structural shielding would be removed and/or replaced and roadways realigned as a result of the project. Details of the study areas are outlined below.

1. Replacement Traffic Noise Wall #1: Between NE 115th Street and NE 130th Street (approximate station numbers 30+00 to 76+00)—replacement of an existing noise wall, removal of shielding structures, and the realignment of 5th Avenue NE and the NE 130th Street off-ramps
2. Replacement Traffic Noise Wall #2: Between 5th Avenue NE to I-5 northbound just north of NE 145th Street (approximate station numbers 122+00 to 138+00)—relocation of an existing on-ramp and noise wall and removal of shielding for station construction and track installation
3. Replacement Traffic Noise Wall #3: Between NE 161st Street and NE 175th Street (approximate station numbers 161+00 to 200+00)—removal and replacement of an existing noise wall and earth berm from the Ridgecrest Park to NE 175th Street and the realignment of 1st Street NE along with the removal of several homes between NE 170th Street and NE 175th Street
4. Replacement Traffic Noise Wall #4: Between NE 180th Street and NE 185th Street (approximate station numbers 215+00 to 229+00)—replacement of an existing noise wall, removal of shielding, and realignment of NE 5th Avenue
5. Replacement Traffic Noise Wall #5: NE 185th Street Station area (approximate station numbers 230+00 to 243+00)—removal of approximately 16 homes, and replacement of a noise wall

The traffic noise modeling analysis for the Lynnwood Link Extension consisted of the following steps:

1. Traffic noise levels were predicted using FHWA's Traffic Noise Model (TNM®) software.
2. Each traffic noise model was validated using measured noise levels and actual traffic counts taken during the measuring periods at various locations along the project corridor.
3. Once each traffic noise model was validated, it was used to model existing and Future No Build conditions in each study area at receivers selected to be representative of homes throughout the study area. Existing traffic volumes and vehicle percentages provided by the project traffic engineers were used for this purpose. Future No Build traffic data was estimated based on existing travel patterns and connections combined with Future Build traffic projections.
4. Future Build conditions for each study area were also modeled in TNM using future year 2035 build traffic volumes and vehicle percentages provided by project traffic engineers. Any existing traffic noise walls not affected by the project were included in a model if the

walls affected the traffic noise analysis in the area being studied. Where applicable and constructible, replacement noise walls will be located on top of any cut and fill walls that will be constructed as part of the project. In such cases, the combined structure (cut and fill wall and noise wall) was analyzed against the design criteria because the cut and fill walls may also assist in the abatement of traffic noise.

5. The possibility of a replacement traffic noise wall also mitigating light rail noise from the project was also considered in designing each traffic noise wall, but the new wall was still required to meet the design criteria specific to traffic noise.

In the traffic noise analysis of replacement walls, the design criteria specified that the walls must be able to abate I-5 traffic noise in the specific study area, using the future (year 2035) traffic volumes at the posted speed limit, to the extent that when the proposed project becomes operational there would be, whenever feasible:

1. No new traffic noise impacts, and
2. No increase in the severity of any existing traffic noise impacts that would occur if the project were not built.

For example, the new noise walls were designed to ensure that there are no additional residences in the replacement noise wall study areas with I-5 traffic noise levels above the WSDOT Noise Abatement Criteria of 66 dBA as a result of the project, and that any residences in those same study areas that would experience traffic noise impacts (noise level above 66 dBA Leq) without the project would not have increased traffic noise levels as a result of the project. The analysis compared the existing and future 2035 traffic noise levels that would be experienced with the existing noise walls and highway configuration to the future (year 2035) roadway build conditions and the replacement walls. Noise levels for receivers behind the noise walls were evaluated based on the above criteria and the noise walls were optimized to meet these requirements. Noise wall optimization included adjusting the heights of individual noise wall panels to achieve the necessary noise reduction while maintaining a cost-effective form of noise abatement.

It is anticipated that final noise wall heights or even their placement may be reconsidered during final design when the light rail alignments and roadway configurations are further developed. However, this current traffic noise analysis provides sufficient data to allow the likely placement and scale of the new noise walls for this environmental impact statement (EIS) and other preliminary engineering efforts. Proposed noise walls will be located beyond the 84-foot WSDOT compatibility line whenever possible and, when feasible, will be installed between the light rail corridor and the private properties to mitigate noise from light rail operations as well as traffic noise. Any noise walls that cannot be constructed outside the 84-foot WSDOT compatibility line will require additional consultation between Sound Transit and WSDOT.

5.9.2 Traffic Noise Modeling

Since the publication of the Draft EIS, new details regarding the design of the Lynnwood Park-and-Ride Station were used to determine that a traffic noise analysis using the methods set forth in the

FTA manual would be necessary for the area surrounding the Lynnwood Park-and-Ride Station. As part of the project, several area roadways would be altered under the Preferred Alternative to include the following changes:

1. Addition of a northbound right turning lane at 48th Avenue W where it intersects with 200th Street SW;
2. Addition of an eastbound through lane on 200th Street SW between 48th Avenue W and 46th Avenue W;
3. Restricting traffic on 46th Avenue W to only high occupancy vehicles (HOV) so that the HOV designation includes the northern portion of that roadway between 200th Street SW and I-5 that is not already designated as HOV-only;
4. Extension westward of the eastbound right turn lane between 46th Avenue W and 44th Avenue W; and
5. Addition of a northbound left turning lane at 44th Avenue W where it intersects with 200th Street SW.

The study area included three apartment complexes, a condominium complex, and two motels. The two motels are the Marriott Courtyard Hotel at 4220 200th Street SW and the La Quinta Motel at 4220 Alderwood Mall Boulevard, both of which are located in a triangular area bounded by I-5, 44th Avenue W, and Alderwood Mall Boulevard. The three apartment complexes are the Park Five Apartments at 20104 48th Avenue West, the Oxford Square Apartments at 4807 200th Street SW, and the Cambridge Apartments at 4727 200th Street SW. The Cedar Creek condominium complex located at 4800-4920 200th Street SW was also included in the analysis.

In general, the traffic noise modeling analysis methodology for the Lynnwood Park-and-Ride Station area consisted of the same steps used for the replacement noise walls, as outlined in Section 5.9. However, FHWA and WSDOT Traffic Noise Criteria were used for the analysis.

6 FUTURE NO BUILD CONDITIONS

If the proposed project is not built, traffic on I-5 and ancillary roadways will increase. For roadways such as I-5, an increase in traffic volume of 1 to 2 percent per year is typical. Hence, in 35 years the daily traffic volume on I-5 will increase and cause a corresponding increase in traffic noise. Because I-5 is already at or near capacity during peak periods, the maximum-hour Leq(h) will not increase substantially unless the capacity is increased. In the future, one or more of the following cases might occur:

- Traffic would extend to off-peak hours, resulting in more hours of the day with high-traffic noise levels.
- Increased congestion, resulting in reduced speeds and lower noise levels during peak hours; the loudest hours would then occur during off-peak periods.
- Roadway capacity would increase to accommodate traffic demand, which would qualify as an FHWA and WSDOT Type 1 project and be evaluated individually for noise impact.

A doubling of traffic volumes, although unlikely, could cause an increase in current traffic noise levels of approximately 3 dBA if all other conditions remain the same. An increase in the traffic noise levels of 3 dBA is normally perceptible to most people. This projected increase in noise levels caused by an increase in I-5 traffic assumes a roadway-carrying capacity that can support such a volume in a manner that still allows for the free flow of traffic. Traffic that is at a standstill or traveling significantly less than the posted speeds produce even less noise. A general rule is a reduction of approximately 3 dBA for each reduction of 10 mph until the speeds slow to 25 to 30 mph, when motor noise, acceleration, and other traffic-related noise sources keep traffic noise fairly constant.

While traffic on I-5 is the dominant source of noise for many receivers in the project corridor, many receivers are also affected by noise from traffic on ancillary roadways. The projected annual volume increases on these roadways could be greater than 1 to 2 percent. Therefore, future noise levels at some homes might increase by more than 3 dBA over what they are now. Changes in ancillary roadway alignments and traffic control measures could also affect future noise levels at some homes. Roadway projects that would have a significant effect on traffic noise levels would require their own individual analysis under the National Environmental Policy Act (NEPA) or State Environmental Policy Act (SEPA), depending on the funding source.

7 FUTURE BUILD CONDITIONS

Sound Transit performed a detailed noise impact assessment based on the criteria discussed in Section 4 and on the methods and projections described in Section 5 of this report. For areas with noise impacts, noise mitigation measures are provided in Section 8. Detailed sheets, including complete tabulated data of the project parcel identification, existing noise levels, project noise levels, criteria, and other information, are provided in Attachment B.

7.1 Considerations of Traffic Noise, Existing Noise Barriers, and Removal of Shielding

Because the light rail alignment is proposed directly adjacent to I-5 (along either the west or east sides) between existing residential and commercial land uses, several existing noise walls constructed for traffic noise abatement would need to be relocated. Any existing noise walls that would be relocated would be required to meet FHWA and WSDOT requirements and achieve equal or better noise reduction. In addition, in some locations (currently estimated to be approximately 1,000 linear feet), the modification of the existing terrain or the removal of existing structures for some of the alternatives could result in the removal of shielding that could cause an increase in traffic noise levels at some residences. For these areas, replacement noise walls will be necessary based on the traffic noise modeling results discussed in Section 7.4 of this report. In the area around the Lynnwood Park-and-Ride Station, new traffic noise walls will be necessary based on the traffic noise modeling results, also discussed in Sections 7.4 and 8.8 of this report. In all cases, any property noted as a full displacement as part of construction for a specific alternative was not included in that alternative's noise analysis.

7.2 Transit Noise Impact Analysis

Sound Transit based the evaluation of the potential environmental noise impacts on the changes in the environmental noise level that would be caused by each project alternative and the number of dwelling units potentially affected by project noise. The transit noise methodology, as discussed in Section 5 of this report, is consistent with the FTA guidance manual (FTA 2006). Also, as defined in Sections 5.3 and 5.4, special trackwork, including crossovers, along with light-rail-mounted bells used at stations, are included in the analysis. Sound Transit also applied the FTA noise assessment methodology to evaluating the park-and-ride facilities and transit centers.

Since the Draft EIS, the operational schedule assumption has changed slightly, with four-car trains replacing two-car trains between 6:30 pm and 1:00 am. In addition, the noise study was further refined with updated design drawings and more detailed information on the replacement noise walls, structure configurations, and other revisions and updates. The noise analysts used this information to reevaluate noise levels and impacts for each potential alternative and design option. The most notable change in the modeling results is an overall increase in the total number of noise impacts under all Segment A alternatives, Alternative B2A in Segment B, and Alternative C3 Option 2 (west side of I-5) in Segment C.

In addition to the increase in the total number of impacts, there is also an increase in the number of moderate impacts under all alternatives, with a slight reduction in the number of severe impacts under all alternatives except Alternative C3 Option 2. The reduction in the number of severe impacts is directly related to the increase in moderate impacts. Refinement of the analysis reflects that some of the receivers located near the elevated structures are shielded from the far track noise by the base of the structure, thereby reducing the number of severe impacts and increasing the number of moderate impacts. Additional increases in the number of moderate impacts are caused by the four-car trains during evening and nighttime hours.

Because of the large number of properties analyzed for noise impacts, this report only provides a summary of the impacts. Attachment B provides complete tabulated data, including the project parcel identification, existing noise levels, project noise levels, criteria, and other information. Attachment C contains detailed maps showing all parcels analyzed, noise impacts, severity of impacts, and potential mitigation measures.

7.2.1 Segment A

Table 7-1 provides a summary of the moderate and severe impacts for each of the proposed Segment A alternatives, beginning with the Preferred Alternative. As Table 7-1 shows, the elevated alternatives (A3, A7 and A11) would have more impacts than the at-grade alternatives (Preferred Alternative and A1, A5, and A10). This is partly a result of the relocated noise walls for the at-grade alternatives, which would also reduce the noise from light rail operations. Details on noise impacts under the Segment A alternatives are provided in the following sections.

Table 7-1. Summary of Potential Transit Noise Impacts in Segment A

Alternative	Station Option	Moderate Light Rail Impacts	Severe Light Rail Impacts	Total Impacts
Preferred Alternative	NE 145th Street Elevated Station NE 185th Street At-Grade Station	181	112	293
Alternative A1	NE 145th Street Option 1 NE 185th Street Option 1	190	29	219
Alternative A3	NE 145th Street Option 2 NE 185th Street Option 2	269	198	467
Alternative A5	NE 130th Street Option 1 NE 155th Street Station NE 185th Street Option 3	181	105	286
Alternative A7	NE 130th Street Option 2 NE 155th Street Station NE 185th Street Option 2	296	183	479
Alternative A10	NE 130th Street Option 1 NE 145th Street Option 1 NE 185th Street Option 3	161	110	271
Alternative A11	NE 130th Street Option 2 NE 145th Street Option 2 NE 185th Street Option 2	272	195	467

Note: Also, see Section 7.3 for park-and-ride noise impacts.

Preferred Alternative Segment A

Under the Preferred Alternative, there would be 181 moderate and 112 severe noise impacts. No noise impacts were identified at any other institutional uses, such as schools and libraries, or any hospitals or other noise-sensitive medical uses. Included in this analysis is approximately 11,900 feet of relocated traffic noise walls as well as the noise-reducing effects of these new noise walls.

Between Northgate Way and NE 115th Street, several multifamily complexes, including the Citigate Apartments, would experience noise impacts. There are 68 severe noise impacts predicted at the three different complexes in this area. North of 115th Street to NE 130th Street, noise impacts are predicted at all front-line residences with 21 impacts in the severe category. A severe noise impact was also predicted at the Seattle Latvian Evangelical Lutheran Church.

The light rail alignment and reconfigured off-ramps from I-5 at NE 130th Street would require the construction of 4,599 feet of noise wall from NE 115th Street to the NE 130th Street overpass to replace the existing noise wall. Details of the proposed new noise walls and the accompanying traffic and light rail noise reductions are provided in the noise mitigation section. These new walls would be designed to replace the highway noise walls as well as mitigate noise from the light rail system.

North of NE 130th Street, no transit noise impacts are predicted because the light rail alignment is below grade near the only residences in this area and the North Seattle Church of the Nazarene. North of this church, the alignment is elevated along the Jackson Park Golf Course, which is not noise-sensitive, before entering the NE 145th Street Station; no noise impacts are predicted.

North of NE 145th Street and south of NE 158th Street, 850 feet of noise walls would be installed to replace an existing noise wall that would be displaced by the Preferred Alternative. Severe impacts in this area would occur along the elevated guideways between NE 151st Street and NE 158th Street. All other impacts between NE 145th Street and south of NE 158th Street would be in the moderate category. These impacts include the effects of a crossover at NE 151st Street. Because trains would be required to slow as they enter and exit the platforms at the NE 145th Street Station, the project noise levels and impacts are reduced in this area.

Between NE 158th Street and NE 175th Street, there would be five noise impacts, including one in the FTA severe category. The low number of impacts reflects the installation of approximately 3,800 feet of new replacement noise walls, with the light rail on the I-5 side of the wall, and approximately 2,500 feet where the light rail is shielded from the residences by being in a retained cut.

North of NE 175th Street and extending to the connection with Segment B, there would be 13 moderate impacts and 8 severe impacts. Two noise walls, with a total length of approximately 2,700 feet, would be relocated through this area, which would reduce the potential noise impact from light rail operations. As with the previous section of Segment A, all severe impacts, except one at NE 189th Street, would be along the elevated guideway sections.

Alternative A1: At-grade/Elevated with NE 145th Street and NE 185th Street Stations

Under Alternative A1, there would be 190 moderate impacts and 29 severe impacts. All noise impacts under Alternative A1 would be at single-family and multifamily residences. No noise impacts were identified at any institutional uses, such as schools, churches, or any hospitals or other noise-sensitive medical uses. As part of the project, approximately 7,900 feet of existing noise walls would be relocated in Segment A under Alternative A1, and, whenever possible, these relocated noise walls would also be used to reduce noise from light rail operations.

Noise impacts are predicted at 147 multifamily units in two different complexes just north of Northgate Way along 1st Avenue NE. These impacts include 8 severe impacts that would result from the added noise associated with an elevated profile and proximity to the multifamily units. There would also be one impact at a single-family residence that meets the FTA moderate impact criteria between NE 115th Street and NE 131st Place, near the south end of the Jackson Park Golf Course. The low number of noise impacts north of NE 115th Street would partly be a result of relocating 1,500 feet of existing noise walls, and placing the light rail alignment west of the noise walls along the east side of I-5.

Between NE 131st Place and NE 145th Street, land use consists of the Jackson Park Golf Course, which is not noise-sensitive. North of NE 145th Street and south of NE 158th Street, the relocation of an additional 1,200 feet of noise walls would minimize the noise impacts, with 26 moderate and 12 severe impacts identified. The severe impacts would be spread out along elevated guideway sections of the corridor. Because of the proposed station at NE 145th Street, trains would be required to slow as they enter and exit the platforms; therefore, project noise levels and impacts would be reduced in this area.

Between NE 158th Street and NE 175th Street, there would be 7 moderate noise impacts. The 7 impacts were determined assuming the relocation of approximately 3,400 feet of noise walls on the east side of I-5, with the light rail alignment placed on the I-5 side of the noise wall.

North of NE 175th Street to the connection with Segment B, there would be 17 moderate impacts and 9 severe impacts. Approximately 1,800 feet of noise wall would be relocated through this area, reducing the potential noise impact from light rail operations. As with the previous section of Segment A, most severe impacts would be along the elevated guideway sections.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Street Stations

Under Alternative A3, there would be 269 moderate impacts and 198 severe impacts. The noise impacts would be at single-family and multifamily residences, the North City Cooperative Preschool on NE 190th Street, and the Seattle Latvian Evangelical Lutheran Church. No noise impacts were identified at any other institutional uses, such as schools, or at any hospitals or other noise-sensitive medical uses. As part of the project, approximately 2,100 feet of existing noise walls would be relocated in Segment A due to the elevated guideway; however, the relocated noise walls would not be effective at reducing noise from light rail operations at most locations because of the track

elevation. As a result of the unshielded aerial guideway, before considering mitigation, there would be substantially more noise impacts from Alternative A3 than from Alternative A1.

Noise impacts are predicted at 171 multifamily units in three different complexes just north of Northgate Way along 1st Avenue NE. These impacts include 64 severe impacts that would result from the added noise associated with an elevated profile. There would also be 120 noise impacts between NE 115th Street and NE 131st Place, near the south end of the Jackson Park Golf Course. These 120 noise impacts would include severe impacts at 49 single-family residences, one duplex, and the Seattle Latvian Evangelical Lutheran Church. All severe impacts would be caused, in part, by the added noise from an elevated guideway and low existing noise levels because of shielding from I-5 by the existing noise wall.

Between NE 131st Place and NE 145th Street, land use consists of the Jackson Park Golf Course, which is not noise-sensitive. North of NE 145th Street and south of NE 158th Street, 57 noise impacts were identified, including 29 moderate and 27 severe impacts. All of the severe impacts would be along the elevated guideway.

Between NE 158th Street and NE 175th Street, there would be 12 noise impacts, including 4 in the FTA severe category. The 8 impacts were determined assuming the relocation of approximately 2,100 feet of noise walls on the east side of I-5, with the light rail alignment placed on the I-5 side of the noise wall.

North of NE 175th Street to the connection with Segment B, there would be 107 noise impacts, including 57 moderate impacts and 50 severe impacts. As with the previous Segment A area discussed, the severe impacts would be related to the added noise from the elevated guideway and lack of shielding from relocated noise walls.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Under Alternative A5, there would be 181 moderate impacts and 105 severe impacts. Noise impacts would include single-family and multifamily residences. No noise impacts were identified at any institutional uses, such as schools, or at any hospitals or other noise-sensitive medical uses. As part of the project, approximately 8,200 feet of existing noise walls would be relocated in Segment A under Alternative A5, and, whenever possible, these relocated noise walls would also be used to reduce noise from light rail operations.

Sound Transit predicts noise impacts at 173 multifamily units in three different complexes just north of Northgate Way along 1st Avenue NE. These 173 impacts include 72 severe impacts that would be caused by the added noise associated with an elevated light rail profile. There would also be 19 single-family residences that meet the impact criteria between NE 115th Street and NE 131st Place, near the south end of the Jackson Park Golf Course. These 19 impacts would include 10 severe impacts (8 at single-family residences and one duplex) and 16 moderate noise impacts. The severe impacts would be a result of the elevated guideway. Compared with Alternative A1, there would be a greater number of severe impacts in this area because the guideway would be closer

to the multifamily units near Northgate Way. Under Alternative A1, the alignment would remain on the west side of 1st Avenue NE, while under Alternative A5, the alignment would be along the east side of 1st Avenue NE, resulting in a notably higher number of impacts. The station at NE 130th Street would not cause any noise impacts.

Between NE 131st Place and NE 145th Street, land use consists of the Jackson Park Golf Course, which is not noise-sensitive. North of NE 145th Street and south of NE 158th Street, 47 moderate and 11 severe impacts were identified, even with the relocation of an additional 1,100 feet of noise walls, because of the elevated guideway. One of the moderate impacts would be at the Fire Station on NE 155th Street, with the other 57 at single-family residences. Most severe impacts would be along elevated guideway sections at single-family residences. Alternative A5 would result in fewer impacts near NE 155th Street than with Alternative A1 because of a reduced speed to serve the station and displacement of several residences north of NE 155th Street that otherwise would experience noise impacts.

Between NE 158th and NE 175th Streets, there would be 7 noise impacts, including 1 in the FTA severe category. The 7 noise impacts were determined assuming the relocation of approximately 3,400 feet of noise walls, with the light rail alignment placed on the I-5 side of the noise wall.

North of NE 175th Street to the connection with Segment B, there would be 18 moderate impacts and 11 severe impacts. Approximately 1,800 feet of noise wall would be relocated through this area, reducing the potential noise impact from light rail operations.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Under Alternative A7, there would be 296 moderate impacts and 183 severe impacts. Without mitigation, Alternative 7 would have the most noise impacts of any of the Segment A alternatives. The higher number of impacts would be caused, in part, by the higher noise levels associated with the elevated guideway structure. Noise impacts under Alternative A7 would affect single-family and multifamily residences as well as one church. No noise impacts were identified at any other institutional uses, such as schools, or at any hospitals or other noise-sensitive medical uses. As part of the project, approximately 2,100 feet of existing noise walls would be relocated in Segment A; however, because the guideway would be elevated, the relocated noise walls would not be effective at reducing noise from light rail operations at most locations. Under Alternative A7, noise impacts from the Northgate Transit Center to NE 115th Street would be the same as predicted for Alternative A3, with 107 moderate and 64 severe impacts predicted at the multifamily units in three different complexes just north of Northgate Way along 1st Avenue NE.

From NE 115th Street to the south end of the Jackson Park Golf Course, 71 moderate and 49 severe impacts were identified, including severe impacts at a multifamily duplex and a severe impact at the Seattle Latvian Evangelical Lutheran Church. All severe impacts would occur adjacent to the elevated guideway. There would be no impacts at the golf course.

North of NE 145th Street and south of NE 158th Street, 69 noise impacts were identified, including 53 moderate and 16 severe impacts. All impacts in this area would be on single-family residences, and the severe impacts would primarily be along elevated sections of the guideway.

Between NE 158th Street and NE 175th Street, noise impacts under Alternative A7 would be the same as under Alternative A3, with 12 noise impacts, including 4 in the FTA severe category. The 12 impacts were determined assuming the relocation of approximately 2,100 feet of noise walls on the east side of I-5, with the light rail alignment placed on the I-5 side of the noise wall.

North of NE 175th Street to the connection with Segment B, Alternative A7 noise impacts would be the same as under Alternative A3, with 107 noise impacts predicted, including 57 moderate impacts and 50 severe impacts.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Stations

Under Alternative A10, there would be 161 moderate impacts and 110 severe impacts. Noise impacts would include single-family and multifamily residences; no noise impacts were identified at any institutional uses, such as schools and churches, or at any hospitals or other noise-sensitive medical use locations. As part of the project, approximately 8,100 feet of existing noise walls would be relocated in Segment A under Alternative 10 and, whenever possible, these relocated noise walls would also be used to reduce noise from light rail operations.

Noise impacts would occur at 173 multifamily units in three different complexes just north of Northgate Way along 1st Avenue NE. These 173 impacts include 72 severe impacts that would be caused by the added noise associated with an elevated profile. There would also be 18 single-family residences that meet the impact criteria between NE 115th Street and NE 131st Place, near the south end of the Jackson Park Golf Course. These 18 impacts would include 7 severe impacts (5 at single-family residences and 1 at a duplex) and 11 moderate noise impacts. The severe impacts would be a result of the elevated guideway. Compared with Alternative A1, there would be a greater number of severe impacts in this area under Alternative A10 because the guideway would be closer to the multifamily units near Northgate Way. Under Alternative A1, the alignment would remain on the west side of 1st Avenue NE, while under Alternative A10 (and A5), the alignment would be along the east side of 1st Avenue NE, resulting in a notably higher number of impacts. There would be no noise impacts from just north of NE 126th Street northward to NE 145th Street. The station at NE 130th Street would not cause any noise impacts. Between NE 131st Place and NE 145th Street, land use consists of the Jackson Park Golf Course, which is not noise-sensitive.

Under Alternative A10, there would be 39 noise impacts north of NE 145th Street to NE 158th Street, with 13 of these being severe impacts. All impacts in this section of Segment A would be on single-family residences.

Between NE 158th and NE 175th Streets, there would be 8 noise impacts, including 1 in the FTA severe category. The 8 impacts reflect the relocation of approximately 3,400 feet of noise walls, with the light rail alignment placed on the I-5 side of the noise wall.

North of NE 175th Street to the connection with Segment B, there would be 16 moderate impacts and 17 severe impacts. Approximately 1,800 to 1,900 feet of noise wall would be relocated through this area, reducing the potential noise impact from light rail operations.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations

Under Alternative A11, there would be 272 moderate impacts and 195 severe impacts, the second most of the 7 Segment A alternatives. All noise impacts under Alternative A11 would be at single-family and multifamily residences, along with an impact at the Seattle Latvian Evangelical Lutheran Church and at the North City Cooperative Preschool on NE 190th Street. No noise impacts were identified at any other institutional uses, hospitals, or other noise-sensitive medical uses. As part of the project, approximately 3,400 feet of existing noise walls would be relocated in Segment A because of the elevated guideway. The relocated noise walls would not be effective at reducing noise from light rail operations at most locations because the track would be elevated.

From the Northgate Transit Center north to NE 131st Street, noise impacts under Alternative A11 would be the same as described under Alternative A7, with 107 moderate impacts and 64 severe impacts. From NE 145th Street to NE 175th Street, noise impacts would be the same as Alternative A3, with 37 moderate impacts and 32 severe impacts. North of NE 175th Street to Segment B, noise impacts would also be the same as predicted under Alternative A3, with 57 moderate and 50 severe impacts.

7.2.2 Segment B

Table 7-2 provides a summary of the moderate and severe transit noise impacts for the Segment B alternatives. As Table 7-2 shows, the Preferred Alternative would have more impacts than the other Segment B alternatives. This is partly related to Alternatives B1 and B4 being placed in the center of I-5 for much of this segment; in addition, an increased distance from the residences to the guideway also would reduce noise levels from light rail operations. Alternative B2A differs from the Preferred Alternative with the addition of the 220th Street Station, which would result in a reduced speed for station access, and reduce the noise level near the station and the total number of noise impacts by two. The connection modification to Segments A and C, where the track elevations would be different, depending on the connection, would not change the number or severity of impacts or cause any additional noise impacts. Details on noise impacts under the Segment B alternatives are provided in the following sections.

Table 7-2. Summary of Potential Transit Noise Impacts for Segment B

Alternative	Station Option	Moderate Light Rail Impacts	Severe Light Rail Impacts	Total Impacts
Preferred Alternative	Preferred Stations (no station at 220th Street SW)	148	65	213
Preferred Alternative Option	Mountlake Terrace Transit Center Station 220th Street Station South Option	133	65	198
Alternative B1	Mountlake Terrace Transit Center Station	89	29	118
Alternative B2A	Mountlake Terrace Transit Center Station 220th Street Station North Option	138	50	188
Alternative B4	Mountlake Terrace Freeway Station	73	33	106

Note: Also see Section 7.3 for park-and-ride noise impacts.

Preferred Alternative Segment B

Under the Preferred Alternative, there would be 148 moderate impacts and 65 severe impacts in Segment B. All noise impacts under the Preferred Alternative would be at single-family and multifamily residences; no noise impacts were identified at any institutional uses, such as schools, or at any hospitals or other noise-sensitive medical use locations. There would be no relocated noise walls under the Preferred Alternative in Segment B.

Between the north end of Segment A, near NE 190th Street, to just south of 236th Street SW near the Mountlake Transit Center, Sound Transit predicted noise impacts at 86 single-family and multifamily residences on the east side of I-5. This includes 52 moderate noise impacts and 34 impacts in the FTA severe category. Noise levels along the west side of I-5 in this area ranged from 58 to 62 dBA Ldn; no noise impacts were projected.

North of the Mountlake Terrace Transit Center Station and south of 230th Street SW, on the east side of I-5, where the alignment transitions to the center of I-5, there would be an additional 12 moderate and 2 severe noise impacts on the east side of I-5 near 232nd Street SW. On the west side of I-5, north of Lakeview Drive and south of 228th Street SW, there would be an additional 13 moderate noise impacts located along 63rd Avenue and 63rd Place, adjacent to I-5.

Once the light rail alignment is along the west side of I-5, north of 228th Street SW, and south of 220th Street SW, there are 2 moderate noise impacts predicted on the east side of I-5 near the ramps to 220th Street SW. On the west side of I-5 in this same area, there are 12 additional moderate noise impacts, all located to the north of 224th Street SW.

North of 220th Street SW, on the east side of I-5, 10 moderate noise impacts are predicted just north of 220th Street SW, west of 58th Avenue West. On the west side of I-5, north of 220th Street SW, there would be 40 impacts at the Lakeside Apartment complex, including 24 moderate and 16 severe. North of the apartment complex, north to the connection to Segment C, there would be an additional 23 moderate and 13 severe noise impacts at single-family residences along 214th Street SW, 213th Street SW, and 212th Street SW.

Preferred Alternative with 220th Street Station South Option

Under the Preferred Alternative with the 220th Street Station South Option, there would be 133 moderate and 65 severe noise impacts, which is 15 fewer moderate impacts than the Preferred Alternative. The only difference between the Preferred Alternative and the Preferred Alternative with the 220th Street Station South Option is the elimination of 2 moderate noise impacts on the east side of I-5 near the 220th Street SW off-ramps, and 13 noise impacts located to the west of the station resulting in part from slower speeds at the station platform. All other noise impacts would be the same as the Preferred Alternative.

Alternative B1: East Side to Mountlake Terrace Transit Center to Median

Under Alternative B1, there would be 89 moderate impacts and 29 severe impacts. All noise impacts under Alternative B1 would be at single-family and multifamily residences; no noise impacts were identified at any institutional uses, such as schools, or at any hospitals or other noise-sensitive medical use locations. Under Alternative B1, there would be no relocated noise walls.

Between the north end of Segment A, near NE 190th Street, to SR 104 (Ballinger Way – NE 205th Street), Sound Transit predicted noise impacts at 67 single-family and multifamily residences on the east side of I-5, including 39 moderate and 28 in the FTA severe category. Between SR 104 and 236th Street SW near the Mountlake Transit Center, an additional 14 moderate impacts were identified, with no severe impacts in this area due to the added distance between the residences and the light rail alignment. North of the Mountlake Terrace Transit Center Station, as the alignment transitions to the center of I-5 (236th Street to 230th Street), there would be an additional 20 moderate and 1 severe noise impact on the east side of I-5. On the west side of I-5, 12 moderate noise impacts were projected along 63rd Avenue and 63rd Place, adjacent to I-5.

When the light rail alignment is in the center of I-5, there would be no noise impacts along the east side of I-5 because the retained cut wall on the east side of the alignment would provide shielding. On the west side of I-5, moderate impacts were identified at 2 residences near 220th Street SW, with 2 more on 213th Street SW.

Alternative B2A: East Side to Mountlake Terrace Transit Center to West Side

Under Alternative B2A, there would be 138 moderate impacts and 50 severe impacts. All identified noise impacts under Alternative B2A would be at single-family and multifamily residences. Sound Transit predicted no other noise-sensitive uses with noise impacts. Under Alternative B2A, there would be approximately 900 feet of noise walls that would be relocated.

Between the northern end of Segment A, near NE 190th Street, north SR 104 (Ballinger Way – NE 205th Street), noise impacts under Alternative B2A would be the same as under Alternative B1, with 39 moderate and 28 severe impacts. As with other elevated guideway sections, the added noise from the elevated guideway would be the main reason for the severe impacts. Between SR 104 and 236th Street SW near the Mountlake Transit Center, an additional 8 moderate and 1 severe noise impacts were identified. Between 236th Street SW and 230th Street SW, north of the Mountlake Terrace

Transit Center Station, 21 single-family residences on the east side of I-5 would experience impacts, including 1 impact considered severe under FTA regulations. On the east side of I-5 between 230th Street SW and 220th Street SW, there would be no noise impacts because the alignment has transitioned to the west side of the highway.

On the west side of I-5, from the start of Segment B to SR 104, there would be no noise impacts. North of SR 104, to 228th Street SW, 10 moderate noise impacts were identified. All 10 noise impacts are at single-family residences along 63rd Avenue and 63rd Place SW. Once the alignment transitions to the west side of I-5 and is placed into a retained cut, Sound Transit predicted 32 single-family noise impacts between 228th Street SW and 220th Street SW on the west side of I-5. The 32 predicted noise impacts between 228th Street SW and 220th Street SW include 23 moderate and 9 severe impacts, including 6 severe impacts related to noise from the transit bells.

North of 220th Street SW, there would be 48 noise impacts on single-family and multifamily residences. These 48 impacts would include severe noise impacts at 7 single-family residences. The severe impacts would be caused, in part, by speed and proximity to the residences, along with some sections of the elevated guideway.

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median

Under Alternative B4, there would be 73 moderate impacts and 33 severe impacts. All noise impacts under Alternative B4 would be at single-family and multifamily residences. Sound Transit did not identify noise impacts at any schools, parks, churches, or medical facilities. Under Alternative B4, no noise wall relocations are planned.

Between the connection to Segment B and Ballinger Way NE, there would be 38 moderate and 28 severe noise impacts on single-family residences along the east side of the alignment. The severe impacts would be located at single-family and multifamily units in the vicinity of Forest Park Drive NE, south of Ballinger Way NE (also known as SR 104).

North of Ballinger Way NE, the light rail alignment transitions to the center of I-5, and there would be 8 moderate and 4 severe impacts along 237th Street SW. Sound Transit predicted 12 additional moderate and 1 severe noise impacts at single-family residences overlooking I-5 on, and near, 61st Avenue West, on the east side of I-5. In the same general area, but on the west side of I-5, there would be an additional 13 moderate noise impacts at single-family residences along 63rd Avenue West and the general vicinity. There would be 2 additional moderate noise impacts at the end point of the existing noise walls at 227th Street SW and at 222nd Street SW.

7.2.3 Segment C

Table 7-3 provides a summary of the moderate and severe impacts predicted for each of the Segment C alternatives. As Table 7-3 shows, the alternatives using 52nd Avenue West (i.e., both options under each of Alternatives C1 and C2) would have more impacts than the alternatives that remain along I-5 (Preferred Alternative, Alternative C3 Option 1 [from I-5 median] and Alternative C3 Option 2 [from west side of I-5]). This difference in impacts is related to the single-family and

multifamily residences that would be affected for the 200th Street SW Station option and, to a lesser extent, the transit center station option. Also, the primary difference between Option 1 and Option 2 connections is whether or not the light rail alignment would be in the middle of I-5 (Option 1) or west of I-5 (Option 2). The middle of I-5 options could only connect to Segment B Alternatives B1 and B4, while the west of I-5 options would connect to Segment B Preferred Alternative and Alternative B2A. The Preferred Alternative would connect between Segments B and C on the west side of I-5. No noise walls would be relocated as part of the project under any of the Segment C alternatives. Details on noise impacts under the Segment C alternatives are provided in the following sections.

Table 7-3. Summary of Potential Transit Noise Impacts for Segment C

Alternative	Station Option	Moderate Light Rail Impacts	Severe Light Rail Impacts	Total Impacts
Preferred Alternative West Side	Lynnwood Park-and-Ride Station	26	8	34
Alternative C1, Option 1	200th Street SW Station	159	24	183
Alternative C1, Option 2	200th Street SW Station	152	23	175
Alternative C2, Option 1	Lynnwood Transit Center	52	41	93
Alternative C2, Option 2	Lynnwood Transit Center	49	41	90
Alternative C3, Option 1	Park-and-Ride Option 1 Park-and-Ride Option 2	16	1	17
Alternative C3, Option 2	Park-and-Ride Option 1 Park-and-Ride Option 2	13	8	21

Note: Also see Section 7.3 for park-and-ride noise impacts.

Preferred Alternative Segment C

Under the Preferred Alternative, along the west side of I-5, there would be 26 moderate and 8 severe noise impacts. The 26 moderate noise impacts include single-family and multifamily residences located west of 52nd Avenue West. The 8 severe noise impacts are all located in this general area, which are the residences located closest to the elevated guideway along 52nd Avenue West, 53rd Avenue West, and 54th Avenue West. Noise levels on the east side of I-5 are all below the FTA criteria; no noise impacts were projected.

Alternative C1: 52nd Avenue West to 200th Street SW, with Option 1

Sound Transit identified that Alternative C1 with Option 1 would have 183 noise impacts (159 moderate and 24 severe). The noise impacts would include 1 severe impact at the quiet use area of Scriber Creek Park.

Noise impacts include 21 moderate noise impacts between Segment B and the alignment crossing over 206th Street and an additional 138 moderate impacts between 206th Street SW and the Lynnwood Transit Center. One hundred and ten of these moderate impacts occur between 201st Place SW and the transit center. These include 12 moderate impacts at the Park Five Apartments; 54 moderate noise impacts at the Oxford Square Apartments; and 44 moderate noise impacts at the

Cambridge Apartments. All of the severe impacts occur at noise sensitive receivers along 52nd Avenue West.

Alternative C1: 52nd Avenue West to 200th Street SW, with Option 2

Alternative C1 with Option 2 would have 230 noise impacts (152 moderate and 23 severe). Beginning at the connection to Segment B to the crossing at 208th Street SW, Sound Transit identified 10 moderate and 3 severe noise impacts. These would include noise impacts on 1 multifamily residential unit, 8 single-family residences (moderate), and 3 single-family residences (severe). All of these impacts would be along 52nd Avenue West, east of 208th Street SW. There would be an additional 51 noise impacts between 208th Street SW and 201st Place SW. This total includes 32 moderate impacts and 51 severe noise impacts. As with Option 1, the majority of impacts would be at the three multifamily complexes near the 200th Street SW Station.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center, with Option 1

Alternative C2 with Option 1 would result in 93 noise impacts (52 moderate and 41 severe). There would be 28 noise impacts, including 14 moderate and 4 severe, along the connection from Segment B to 206th Street SW. There would be 38 moderate and 37 severe noise impacts from 206th Street SW to the Lynnwood Transit Center Station, including 1 severe impact at the quiet use area of Scriber Creek Park, 24 severe impacts at the Park Five Apartments and 18 moderate impacts at the Cedar Creek Condominiums.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center, with Option 2

Alternative C2 with Option 2 would have 90 noise impacts (49 moderate and 41 severe). There would be several noise impacts along the elevated guideway from I-5 to the intersection of 52nd Avenue West and 208th Street SW. There would be 75 noise impacts, including 38 moderate and 37 severe impacts from 208th Street SW to the Lynnwood Transit Center Station. The noise impacts would include 1 severe impact at the quiet use area of Scriber Creek Park and the same 24 severe impacts at the Park Five Apartments and 18 moderate impacts at the Cedar Creek Condominiums that are identified under Option 1.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride, with Option 1

Alternative C3 with Option 1 would result in 17 noise impacts (16 moderate and 1 severe). Of these 17 noise impacts, 5 moderate and 1 severe noise impacts would occur at single-family homes and an apartment near I-5 along 52nd Avenue West and 53rd Avenue West. An additional 11 moderate noise impacts were identified on the east side of I-5. The number of impacts under this alternative option would be lower than Alternatives C1 and C2 because the light rail alignment would run in the I-5 median through areas with residences.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride, with Option 2

Alternative C3 with Option 2 would result in 21 noise impacts (13 moderate and 8 severe). All impacts would occur at single-family homes near I-5 along 52nd Avenue West and 53rd Avenue West. The lower number of noise impacts under this alternative and option, when compared with the other Segment C alternatives, is due to the light rail alignment remaining alongside I-5 and only affecting residences near the connection to Segment B, as well as to the reduced approach speeds at the 52nd Avenue West curve near I-5.

7.3 Park-and-Ride Facilities Impact Analysis

This section provides the results of the noise analysis for the proposed park-and-ride facilities. The analysis methods and reference values used for this analysis are provided in Section 5.8. The combination of park-and-ride facilities is based on alternative selection.

7.3.1 Segment A

The park-and-ride locations, options, impacts, and their associated light rail alternatives in Segment A are provided in Table 7-4, followed by a discussion of each station option.

Table 7-4. Summary of Park-and-Ride Facility Impacts by Alternatives and Options

Alternative	NE 130th Street Station	NE 145th Street Station	NE 155th Street Station	NE 185th Street Station
Preferred Alternative	N/A	No impacts	N/A	Preferred (13 impacts)
Preferred Alternative Optional	Optional Station (No impacts)	No impacts	N/A	Shoreline Stadium Parking Lot (16 impacts)
Alternative A1	N/A	Option 1 (2 impacts)	N/A	Option 1 (13 impacts)
Alternative A3	N/A	Option 2 (No impacts)	N/A	Option 2 (9 impacts)
Alternative A5	Option 1 (No impacts)	N/A	(5 impacts)	Option 3 (12 impacts)
Alternative A7	Option 2 (No impacts)	N/A	(5 impacts)	Option 2 (9 impacts)
Alternative A10	Option 1 (No impacts)	Option 1 (No impacts)	N/A	Option 3 (12 impacts)
Alternative A11	Option 2 (No impacts)	Option 2 (No impacts)	N/A	Option 2 (9 impacts)

N/A = not applicable

Preferred Alternative with NE 130th Street Station or Future Station Option

Under the Preferred Alternative with the NE 130th Street Station Option, there is a potential for a leased, 100 space, surface parking lot on private property owned by the nearby church. All bus activity and kiss-and-ride activity would occur on public right-of-way along 5th Avenue NE. As a

result, no impacts would be created by the surface parking lot due to the low number of parking spaces and lack of long-term bus layovers. The analysis results are provided in Table 7-5.

Table 7-5. Summary of Preferred Alternative NE 130th Street Station Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	Seattle Code Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
13041 Roosevelt Way	5 SFR west of I-5	32	29	72	66	None
502 NE 130th Street	2 SFR at Roosevelt Way	34	31	74	66	None
12740 5th Avenue NE	2 SFR south of 30th Street	32	29	74	66	None
510 131st Place NE	3 SFR south of church lot	39	36	72	66	None
13130 5th Avenue NE	Church residence	37	35	67	63	None
13085 8th Court NE	2 SFR east of church parking lot	36	33	66	62	None

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence
c. Peak-hour Leq for analysis, typically between 6:00 am and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

Preferred Alternative NE 145th Station

Under the Preferred Alternative with the NE 145th Street Station or Future Station options, no noise impacts were predicted. The analysis results are provided in Table 7-6.

Table 7-6. Summary of Preferred Alternative NE 145th Street Station Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
501 NE 145th Street	1 SFR on NE 145th Street	40	37	74	66	None
14512 5th Avenue NE	2 SFR on 5th Avenue NE	41	38	74	66	None
14526 5th Avenue NE	4 SFR on 5th Avenue NE	42	39	73	66	None
14556 5th Avenue NE	3 SFR on 5th Avenue NE	43	40	73	66	None
14570 5th Avenue NE	3 SFR on 5th Avenue NE	42	39	73	66	None
345 NE 148th Street	3 SFR on NE 148th Street	42	39	73	66	None

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 am and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

Preferred Alternative NE 185th Station

Under the Preferred Alternative, 13 impacts would be caused by station operations. Of the 13 impacts, 11 would occur at single-family residences along 8th Avenue NE, and 2 would occur on 185th Avenue near 8th Avenue NE. The impacts are related to noise from buses operating on the station turnout and general park-and-ride traffic during early morning hours. Table 7-7 provides the analysis results.

Table 7-7. Summary of Preferred Alternative NE 185th Street Station Noise Analysis[a]

Representative Address[b]	Location of Homes Represented[c]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[h]
		Leq[d]	Ldn[e]	Existing Ldn[f]	FTA Criteria[g]	
18504 8th Avenue NE	1 SF on 8th Avenue NE	**49**	50	63	60	1 SFR with WAC noise impact
18510 8th Avenue NE	1 SFR on 8th Avenue NE	**49**	50	63	60	1 SFR with WAC noise impact
18516/18522 8th Avenue NE	2 SFR on 8th Avenue NE	**49**	50	63	60	2 SFR with WAC noise impact
18528/18534 8th Avenue NE	2 SFR on 8th Avenue NE	**48**	50	63	60	2 SFR with WAC noise impact
18540/18554 8th Avenue NE	2 SFR on 8th Avenue NE	**48**	49	63	60	2 SFR with WAC noise impact
18547 8th Avenue NE	1 SFR on 8th Avenue NE	**52**	53	63	60	1 SFR with WAC noise impact
18553 8th Avenue NE	1 SFR on 8th Avenue NE	**50**	51	71	66	1 SFR with WAC noise impact
18559 8th Avenue NE	1 SFR on 8th Avenue NE	**49**	50	72	66	1 SFR with WAC noise impact
721/731 NE 185th Street	2 SFR on NE 185th Street	**51**	52	73	66	2 SFR with WAC noise impact
351 NE 185th Street	1 SFR on NE 185th Street	46	47	74	66	None
341 NE 185th Street	1 SFR on NE 185th Street	47	47	75	66	None
335 NE 185th Street	1 SFR on NE 185th Street	47	47	76	66	None

a. Includes impacts from buses at the station drop-off and layover area.
b. Address of representative parcel used in modeling.
c. Number and type of land use: SFR = single-family residence.
d. Peak-hour Leq for analysis, typically between 6:00 am and 7:00 am (> 47 dBA nighttime).
e. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
f. Existing Ldn from Section 3.2.
g. FTA criteria for 24-hour Ldn for category 2 land uses.
h. Number and type of noise impact from park-and-ride alternative.
Note: Values in red meet or exceed the project noise impact criteria.

Preferred Alternative NE 185th Station with Shoreline Stadium Garage Option

Under the Preferred Alternative with the Shoreline Stadium Garage Option, the main parking garage would be relocated along NE 185th Street at the existing surface lot. The relocated parking garage results in three additional noise impacts over those predicted under the Preferred Alternative with the NE 185th Street Station Option. The three new noise impacts are all along the south side of

NE 185th Street, near I-5. The other 13 noise impacts identified under the Preferred Alternative with the NE 185th Street Station Option also have impacts under this alternative. Table 7-8 provides the results of the noise analysis for this station option.

Table 7-8. Summary of Preferred Alternative with NE 185th Station Shoreline Stadium Garage Option Noise Analysis[a]

Representative Address[b]	Location of Homes Represented[c]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[h]
		Leq[d]	Ldn[e]	Existing Ldn[f]	FTA Criteria[g]	
18504 8th Avenue NE	1 SFR on 8th Avenue NE	**49**	50	63	60	1 SFR with WAC noise impact
18510 8th Avenue NE	1 SFR on 8th Avenue NE	**49**	50	63	60	1 SFR with WAC noise impact
18516/18522 8th Avenue NE	2 SFR on 8th Avenue NE	**49**	50	63	60	2 SFR with WAC noise impact
18528/18534 8th Avenue NE	2 SFR on 8th Avenue NE	**48**	50	63	60	2 SFR with WAC impact
18540/18554 8th Avenue NE	2 SFR on 8th Avenue NE	**48**	49	63	60	2 SFR with WA noise impact
18547 8th Avenue NE	1 SFR on 8th Avenue NE	**52**	53	63	60	1 SFR with WAC noise impact
18553 8th Avenue NE	1 SFR on 8th Avenue NE	**50**	51	71	66	1 SFR with WAC noise impact
18559 8th Avenue NE	1 SFR on 8th Avenue NE	**49**	50	72	66	1 SFR with WAC noise impact
721/731 NE 185th Street	2 SFR on NE 185th Street	**51**	52	73	66	2 SFR with WAC noise impact
351 NE 185th Street	1 SFR on NE 185th Street	**49**	49	74	66	1 SFR with WAC noise impact
341 NE 185th Street	1 SFR on NE 185th Street	**49**	49	75	66	1 SFR with WAC noise impact
335 NE 185th Street	1 SFR on NE 185th Street	**49**	48	76	66	1 SFR with WAC noise impact

a. Includes impacts from buses at the station drop-off and layover area.
b. Address of representative parcel used in modeling.
c. Number and type of land use: SFR = single-family residence.
d. Peak-hour Leq for analysis, typically between 6:00 am and 7:00 am (> 47 dBA nighttime).
e. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
f. Existing Ldn from Section 3.2.
g. FTA criteria for 24-hour Ldn for category 2 land uses.
h. Number and type of noise impact from park-and-ride alternative.

Note: Values in red meet or exceed the project noise impact criteria.

NE 130th Street Station Option 1

Under Alternatives A5 and A10 with the NE 130th Street Station Option 1, no park-and-ride impacts are predicted. The analysis results are provided in Table 7-9.

Table 7-9. Summary of NE 130th Street Station Option 1 Park-and-Ride Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	Seattle Code Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
13041 Roosevelt Way	5 SFR west of I-5	32	29	72	66	None
502 NE 130th Street	2 SFR at Roosevelt Way	34	31	74	66	None
12740 5th Avenue NE	2 SFR south of 30th Street	32	29	74	66	None
510 131st Place NE	3 SFR south of church lot	39	36	72	66	None
13130 5th Avenue NE	Church residence	37	35	67	63	None
13085 8th Court NE	2 SFR east of church parking	36	33	66	62	None

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 am and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

NE 130th Street Station Option 2

Under Alternatives A7 and A11 with the NE 130th Street Station Option 2, there would be no noise impacts from park-and-ride operations. The analysis results are provided in Table 7-10.

Table 7-10. Summary of NE 130th Street Station Option 2 Park-and-Ride Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	Seattle Code Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
13041 Roosevelt Way	5 SFR west of I-5	31	28	72	66	None
502 NE 130th Street	2 SFR at Roosevelt Way	31	28	74	66	None
12740 5th Avenue NE	2 SFR south of 30th Street	30	27	74	66	None
510 131st Place NE	3 SFR south of church lot	33	30	72	66	None
13130 5th Avenue NE	Church residence	33	30	67	63	None
13085 8th Court NE	2 SFR east of church parking	33	30	66	62	None

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 am and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

NE 145th Street Station Option 1

Under Alternatives A1 and A10 with the NE 145th Street Station Option 1, there would be two noise impacts from park-and-ride operations. Both impacts are at single-family residences on NE 148th Street. These results are provided in Table 7-11.

Table 7-11. Summary of NE 145th Street Station Option 1 Park-and-Ride Noise Analysis

Representative Address[a]	Homes Represented Location[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
501 NE 145th Street	1 SFR on NE 145th Street	39	36	74	66	None
14512 5th Avenue NE	2 SFR on 5th Avenue NE	39	37	74	66	None
14526 5th Avenue NE	4 SFR on 5th Avenue NE	40	37	73	66	None
14556 5th Avenue NE	3 SFR on 5th Avenue NE	43	40	73	66	None
14570 5th Avenue NE	3 SFR on 5th Avenue NE	42	39	73	66	None
358 NE 148th Street	2 SFR on NE 148th Street	48	45	73	66	2 SFR with WAC noise impact
336 NE 148th Street	4 SFR on NE 148th Street	47	44	72	66	None

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 am and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

NE 145th Street Station Option 2

Under Alternatives A3 and A11 with the NE 145th Street Station Option 2, there would be no noise impacts from park-and-ride operations. The results are provided in Table 7-12.

Table 7-12. Summary of NE 145th Street Station Option 2 Park-and-Ride Noise Analysis

Representative Address[a]	Homes Represented Location[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
501 NE 145th Street	1 SFR on NE 145th Street	40	37	74	66	None
14512 5th Avenue NE	2 SFR on 5th Avenue NE	41	38	74	66	None
14526 5th Avenue NE	4 SFR on 5th Avenue NE	42	39	73	66	None
14556 5th Avenue NE	3 SFR on 5th Avenue NE	43	40	73	66	None
14570 5th Avenue NE	3 SFR on 5th Avenue NE	42	39	73	66	None
345 NE 148th Street	3 SFR on NE 148th Street	42	39	73	66	None

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 am and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

NE 155th Street Station Option 1

Under Alternatives A5 and A7 with the NE 155th Street Station, there would be noise impacts at two residences directly east of the parking garage, two residences south of the parking garage, and also at the fire station to the west of the parking garage. These noise impacts are predicted to occur during the early morning hour of 6:00 am to 7:00 am and are related to vehicles accessing the parking garage. The analysis assumes that all 500 parking spaces would be filled between 6:00 am and 7:00 am; therefore, this can be considered a worst-case noise scenario. These noise level projections will be reviewed when more detailed information on the garage design is available. The updated analysis will include any shielding from the garage structure that would be predicted to reduce noise levels. However, for this analysis, the worst-case unshielded noise levels are presented for the most recent garage design. The analysis results are provided in Table 7-13.

Table 7-13. Summary of NE 155th Street Station Park-and-Ride Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
110 NE 155th Street	2 SFR on NE 155th Street	42	39	71	66	None
132 NE 155th Street	3 SFR on NE 155th/156th Streets	45	42	71	66	None
151 NE 156th Street	3 SFR on NE 156th Street	47	44	71	66	None
303 NE 155th Street and 15455 4th Avenue NE	2 SFR on NE 155th Street and 4th Avenue NE	**51**	48	68	63	2 SFR with WAC noise impact
15451 4th Avenue NE and 15240 3rd Avenue NE	2 SFR on 3rd Avenue NE and 4th Avenue NE	**51**	48	71	66	2 SFR with WAC noise impact
145 NE 155th Street	Fire Department	**51**	48	71	66	Fire Department with WAC noise impact

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 am and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

NE 185th Street Station Option 1

Under Alternative A1 with the NE 185th Street Station Option 1, Sound Transit identified 13 single-family residences that would experience noise impacts related to vehicles accessing the park-and-ride and buses accessing the station drop-off and layover area off 8th Avenue NE, and continuing along the new bus-only route to the elevated station. The noise impacts occur during the morning hours between 6:00 am and 7:00 am, when the noise code is more stringent. The analysis results are provided in Table 7-14.

Table 7-14. Summary of NE 185th Street Station Option 1 Park-and-Ride Noise Analysis[a]

Representative Address[b]	Homes Represented Location[c]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[h]
		Leq[d]	Ldn[e]	Existing Ldn[f]	FTA Criteria[g]	
18523 8th Avenue NE	4 SFR on 8th Avenue NE	**49**	51	65	61	4 SFR with WAC noise impact
18529 8th Avenue NE	1 SFR on 8th Avenue NE	**50**	52	63	60	1 SFR with WAC noise impact
18533 8th Avenue NE	1 SFR on 8th Avenue NE	**52**	54	63	60	1 SFR with WAC noise impact
18547 8th Avenue NE	1 SFR on 8th Avenue NE	**52**	53	63	60	1 SFR with WAC noise impact
18534 8th Avenue NE	3 SFR on 8th Avenue NE	**51**	53	63	60	3 SFR with WAC noise impact
18528 8th Avenue NE	1 SFR on 8th Avenue NE	**50**	51	63	60	1 SFR with WAC noise impact
18522 8th Avenue NE	1 SFR on 8th Avenue NE	**48**	50	63	60	1 SFR with WAC noise impact
18516 8th Avenue NE	1 SFR on 8th Avenue NE	**48**	49	63	60	1 SFR with WAC noise impact
721 NE 185th Street	2 SFR on NE 185th Street	47	49	71	66	None
18556 5th Avenue NE	1 SFR on 5th Avenue NE	42	39	63	60	None
338 NE 185th Street	1 SFR on NE 185th Street	42	39	64	61	None
330 NE 185th Street	1 SFR on NE 185th Street	42	39	63	60	None

a. Includes impacts from buses at the station drop-off and layover area.
b. Address of representative parcel used in modeling.
c. Number and type of land use: SFR = single-family residence.
d. Peak-hour Leq for analysis, typically between 6:00 am and 7:00 am (> 47 dBA nighttime).
e. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
f. Existing Ldn from Section 3.2.
g. FTA criteria for 24-hour Ldn for category 2 land uses.
h. Number and type of noise impact from park-and-ride alternative.

Note: Values in red meet or exceed the project noise impact criteria.

NE 185th Street Station Option 2

Under Alternatives A3, A7, and A11 with the NE 185th Street Station Option 2, Sound Transit identified nine single-family residences that would experience noise impacts related to the cars and buses accessing the park-and-ride facility. All of the nine residences are predicted to exceed the nighttime criteria between 6:00 am and 7:00 am with peak hour noise levels exceeding the allowable maximum level of 47 dBA Leq. The analysis results are provided in Table 7-15.

Table 7-15. Summary of NE 185th Street Station Option 2 Park-and-Ride Noise Analysis

Representative Address[a]	Homes Represented Location[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
18516 8th Avenue NE	1 SFR on 8th Avenue NE	49	49	63	60	1 SFR with WAC noise impact
18522 8th Avenue NE	1 SFR on 8th Avenue NE	49	50	63	60	1 SFR with WAC noise impact
18528 8th Avenue NE	1 SFR on 8th Avenue NE	50	51	63	60	1 SFR with WAC noise impact
18534 8th Avenue NE	1 SFR on 8th Avenue NE	51	52	63	60	1 SFR with WAC noise impact
18540/18554 8th Avenue NE	2 SFR on 8th Avenue NE	52	53	63	60	2 SFR with WAC noise impact
18547 8th Avenue NE	1 SFR on 8th Avenue NE	53	54	63	60	1 SFR with WAC noise impact
721/731 NE 185th Street	2 SFR on NE 185th Street	49	49	71	66	2 SFR with WAC noise impact

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 am and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

NE 185th Street Station Option 3

Under Alternatives A5 and A10 with the NE 185th Street Station Option 3, Sound Transit identified 12 single-family residences that would experience noise impacts related to traffic and buses accessing the park-and-ride on 8th Avenue NE. The twelve residences are predicted to exceed the nighttime criteria between the hours of 6:00 am and 7:00 am. The analysis results are provided in Table 7-16.

Table 7-16. Summary of NE 185th Street Station Option 3 Park-and-Ride Noise Analysis

Representative Address[a]	Homes Represented Location[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[h]
		Leq[d]	Ldn[e]	Existing Ldn[f]	FTA Criteria[g]	
18504 8th Avenue NE	1 SFR on 8th Avenue NE	52	53	74	66	1 SFR with WAC noise impact
18510 8th Avenue NE	1 SFR on 8th Avenue NE	52	53	68	63	1 SFR with WAC noise impact
18516 8th Avenue NE	1 SFR on 8th Avenue NE	51	52	65	61	1 SFR with WAC noise impact
18342 8th Avenue NE	1 SFR on 8th Avenue NE	48	50	68	63	1 SFR with WAC noise impact
731 NE 185th Street	2 SFR on NE185th Street	48	49	70	65	2 SFR with WAC noise impact

Table 7-16. Summary of NE 185th Street Station Option 3 Park-and-Ride Noise Analysis

Representative Address[a]	Homes Represented Location[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[h]
		Leq[d]	Ldn[e]	Existing Ldn[f]	FTA Criteria[g]	
18522 8th Avenue NE	1 SFR on 8th Avenue NE	**50**	51	63	60	1 SFR with WAC noise impact
18528 8th Avenue NE	1 SFR on 8th Avenue NE	**51**	52	63	60	1 SFR with WAC noise impact
18534 8th Avenue NE	1 SFR on 8th Avenue NE	**52**	53	63	60	1 SFR with WAC noise impact
18540/18554 8th Avenue NE	2 SFR on 8th Avenue NE	**52**	53	63	60	2 SFR with WAC noise impact
18547 8th Avenue NE	1 SFR on 8th Avenue NE	**52**	53	63	60	1 SFR with WAC noise impact
814 NE 185th Street	1 SFR on 8th Avenue NE	39	36	68	63	None
18525 10th Avenue NE	1 SFR on 10th Avenue NE	40	37	66	62	None

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 am and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

7.3.2 Segment B

The park-and-ride locations, options, impacts and their associated light rail alternatives in Segment B are provided in Table 7-17 followed by a discussion of each of the station options.

Table 7-17. Summary of Park-and-Ride Facility Impacts by Alternatives and Options

Alternative	Mountlake Terrace Station	220th Street Station
Preferred Alternative	Preferred Alternative (4 Impacts)	Preferred Alternative (None) 220th Street Station South Option (None)
Alternative B1	Transit Center (4 Impacts)	N/A
Alternative B2A	Transit Center (4 Impacts)	None
Alternative B4	Freeway Station (4 Impacts)	N/A

N/A = not applicable

a. Includes impacts from buses at the station drop-off and layover area.

Preferred Alternative Mountlake Terrace Transit Center Park-and-Ride

Under the Preferred Alternative with the Mountlake Terrace Transit Center Station Option, Sound Transit identified four single-family residences would experience noise impacts related to the noise

from buses leaving the park-and-ride along the eastern layover route and general park-and-ride traffic. Table 7-18 provides a summary of the noise analysis for the Mountlake Terrace Transit Center Park-and-Ride under the Preferred Alternative.

Table 7-18. Summary of Preferred Alternative Mountlake Terrace Transit Center Park-and-Ride Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
6002 233rd Place SW	2 SFR on 233rd Place SW	46	45	72	66	None
23504 59th Place SW	4 SFR on 59th Place SW	**51**	52	68	63	4 SFR with WAC noise impact
5906 236th Street SW	1 SFR on 236th Street SW	47	47	62	59	None

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

Preferred Alternative 220th Street Station South Option

Under the Preferred Alternative with the 220th Street Station South Option, there are no additional noise impacts related to station operation. The results of the analysis are provided in Table 7-19.

Table 7-19. Summary Preferred Alternative 220th Street Station South Option Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
6305 220th Place SW	1 SFR on 220th Place SW	41	38	72	66	None
6303 220th Place SW	1 SFR on 220th Place SW	41	39	73	66	None
6302 220th Place SW	1 SFR on 220th Place SW	41	38	74	66	None
6304 220th Place SW	1 SFR on 220th Place SW	40	37	75	66	None
6305 221st Place SW	1 SFR on 220th Place SW	39	37	76	66	None
6303 221st Place SW	1 SFR on 220th Place SW	39	37	77	66	None
6302 221st Place SW	1 SFR on 220th Place SW	39	36	78	66	None
6303 222nd Street SW	1 SFR on 220th Place SW	38	35	79	66	None

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

Mountlake Terrace Transit Center

Under Alternatives B1 and B2A with the Mountlake Terrace Transit Center Station Option, Sound Transit identified four single-family residences that would experience noise impacts during the early morning hours of 6:00 am to 7:00 am. The analysis results are provided in Table 7-20.

Table 7-20. Summary of Mountlake Terrace Transit Center Park-and-Ride Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
6002 233rd Place SW	2 SFR on 233rd Place SW	46	45	72	66	None
23504 59th Place SW	4 SFR on 59th Place SW	**51**	52	68	63	4 SFR with WAC noise impact
5906 236th Street SW	1 SFR on 236th Street SW	47	47	62	59	None

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

Mountlake Terrace Freeway Station

Under Alternative B4 with the Mountlake Terrace Freeway Station Option, park-and-ride noise impacts would be the same as with the Mountlake Terrace Transit Center Station Option. The analysis results are provided in Table 7-21.

Table 7-21. Summary of Alternative B4 Mountlake Terrace Freeway Station Park-and-Ride Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
6002 233rd Place SW	2 SFR on 233rd Place SW	46	45	72	66	None
23504 59th Place SW	4 SFR on 59th Place SW	**51**	52	68	63	4 SFR with WAC noise impact
5906 236th Street SW	1 SFR on 236th Street SW	47	47	62	59	None

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

220th Street Station

Under Alternative B2A with the 220th Street Station, there would be no noise impacts from station operation. The analysis results are provided in Table 7-22.

Table 7-22. Summary of Alternative B2A 220th Street Station Park-and-Ride Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
6305 220th Place SW	1 SFR on 220th Place SW	41	38	72	66	None
6303 220th Place SW	1 SFR on 220th Place SW	41	39	73	66	None
6302 220th Place SW	1 SFR on 220th Place SW	41	38	74	66	None
6304 220th Place SW	1 SFR on 220th Place SW	40	37	75	66	None
6305 221st Place SW	1 SFR on 220th Place SW	39	37	76	66	None
6303 221st Place SW	1 SFR on 220th Place SW	39	37	77	66	None
6302 221st Place SW	1 SFR on 220th Place SW	39	36	78	66	None
6303 222nd Street SW	1 SFR on 220th Place SW	38	35	79	66	None

a. Address of representative parcel used in modeling.
b. Number and type of land use: SFR = single-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

7.3.3 Segment C

The park-and-ride locations, options, impacts and their associated light rail alternatives in Segment C are provided in Table 7-23. Discussion for each of the station options follows the table.

Table 7-23. Summary of Park-and-Ride Facility Impacts by Alternatives and Options

Alternative	Lynnwood Transit Center
Preferred Alternative	Lynnwood Transit Center (58 Impacts)
Alternative C1	200th Street SW Station Option (51 Impacts)
Alternative C2	Lynnwood Transit Center Option (58 Impacts)
Alternative C3	Park-and-Ride Option 1 (58 Impacts)
Alternative C3	Park-and-Ride Option 2 (12 Impacts)

Preferred Alternative with Lynnwood Transit Center

Under the Preferred Alternative with the Lynnwood Transit Center, Sound Transit identified several multifamily buildings near the proposed facility that would experience noise impacts. Based on building plans from the complexes, 58 units were identified that would have noise impacts, including 28 units at the Park Five Apartments and 30 units at the Cedar Creek Condominiums. All impacts would be related to noise from buses accessing the reconfigured bus facility. The analysis results are provided in Table 7-24.

In addition to the station related impacts described above, new details regarding planned roadway improvements that are part of the Preferred Alternative with the Lynnwood Transit Center were made available. Because of these planned improvements, which meet the requirements for a traffic noise analysis using the methods set forth in the FTA manual, a separate traffic noise impact analysis was performed. The results of that traffic noise analysis are discussed in detail in Section7.4.3, New Traffic Noise Walls.

Table 7-24. Preferred Alternative: Lynnwood Transit Center Station Park-and-Ride Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	Lynnwood Code Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
20104 48th Avenue West (Park Five Bldg. A)	24 MFR on 48th Avenue West	**50**	61	66	62	24 MFR with noise impact
20104 48th Avenue West (Park Five Bldg. C)	4 MFR on 48th Avenue West	**50**	**61**	62	59	4 MFR with noise impact
4800 200th Street (Cedar Creek Bldg. D)	12 MFR on 200th Street SW	**49**	60	66	62	12 MFR with impact
4800 200th Street (Cedar Creek Bldg. E)	6 MFR on 200th Street SW	**49**	60	67	63	6 MFR with noise impact
4800 200th Street (Cedar Creek Bldg. E)	12 MFR on 200th Street SW	**49**	59	67	63	12 MFR with noise impact
4807 200th Street SW (Oxford Square SE corner on 200th Street SW)	10 MFR on 200th Street SW	45	55	69	64	No Impacts
4727 200th Street SW (Cambridge Apartments SW corner on 200th Street SW)	14 MFR on 200th Street SW	44	54	69	64	No Impacts
4727 200th Street SW (Cambridge Apartments on 200th Street SW)	14 MFR on 200th Street SW	45	55	69	64	No Impacts
4727 200th Street SW (Cambridge Apartments SE corner on 200th Street SW)	13 MFR on 200th Street SW	44	54	69	64	No Impacts

a. Address of representative parcel used in modeling.
b. Number and type of land use: MFR = multi-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

Alternative C1: 200th Street SW Station

Under the 200th Street SW Station Park-and-Ride Option, Sound Transit identified several multifamily buildings near the proposed facility that would experience noise impacts. Based on building plans from the complexes, 51 units were identified that would have noise impacts, including 14 units at the Park Five Apartments, 10 units at the Oxford Square Apartments, and 27 units at the Cambridge Apartments. All impacts would be related to noise from buses accessing the reconfigured bus facility and, to a lesser extent, from passenger vehicles accessing the parking areas off 48th Avenue West. The analysis results are provided in Table 7-25.

Table 7-25. Alternative C1: 200th Street SW Station Park-and-Ride Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	Lynnwood Code Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
20104 48th Avenue West (Park Five Bldg. A)	24 MFR on 48th Avenue West	53	51	66	62	14 MFR with noise impact
20104 48th Avenue West (Park Five Bldg. C)	4 MFR on 48th Avenue West	45	43	62	59	No Impacts
4807 200th Street SW (Oxford Square SE corner on 200th Street SW)	10 MFR on 200th Street SW	52	50	69	64	10 MFR with impact
4727 200th Street SW (Cambridge Apartments SW corner on 200th Street SW)	14 MFR on 200th Street SW	45	43	69	64	No Impacts
4727 200th Street SW (Cambridge Apartments on 200th Street SW)	14 MFR on 200th Street SW	52	50	69	64	14 MFR with noise impact
4727 200th Street SW (Cambridge Apartments SE corner on 200th Street SW)	13 MFR on 200th Street SW	52	50	69	64	13 MFR with noise impact

h. Address of representative parcel used in modeling.
i. Number and type of land use: MFR = multi-family residence.
j. Peak-hour Leq for analysis, typically between 6:00 and 7:00 am (> 47 dBA nighttime).
k. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
l. Existing Ldn from Section 3.2.
m. FTA criteria for 24-hour Ldn for category 2 land uses.
n. Number and type of noise impact from park-and-ride alternative.

Alternative C2: Lynnwood Transit Center

Under the Lynnwood Transit Center Station configuration with Alternative C2, the noise impacts would be the same as given above under the Preferred Alternative with the Lynnwood Transit Center. All impacts would be related to noise from buses accessing the reconfigured bus facility. The analysis results are provided in Table 7-26.

Table 7-26. Alternative C2: Lynnwood Transit Center Station Park-and-Ride Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	Lynnwood Code Analysis	FTA Analysis			
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	Impact Type and Criteria Exceeded[g]
20104 48th Avenue West (Park Five Bldg. A)	24 MFR on 48th Avenue West	**50**	61	66	62	24 MFR with noise impact
20104 48th Avenue West (Park Five Bldg. C)	4 MFR on 48th Avenue West	**50**	**61**	62	59	4 MFR with noise impact
4800 200th Street (Cedar Creek Bldg. D)	12 MFR on 200th Street SW	**49**	59	66	62	12 MFR with impact
4800 200th Street (Cedar Creek Bldg. E)	6 MFR on 200th Street SW	**49**	60	67	63	6 MFR with noise impact
4800 200th Street (Cedar Creek Bldg. E)	12 MFR on 200th Street SW	49	59	67	63	12 MFR with noise impact
4807 200th Street SW (Oxford Square SE corner on 200th Street SW)	10 MFR on 200th Street SW	45	55	69	64	No Impacts
4727 200th Street SW (Cambridge Apartments SW corner on 200th Street SW)	14 MFR on 200th Street SW	44	54	69	64	No Impacts
4727 200th Street SW (Cambridge Apartments on 200th Street SW)	14 MFR on 200th Street SW	44	55	69	64	No Impacts
4727 200th Street SW (Cambridge Apartments SE corner on 200th Street SW)	13 MFR on 200th Street SW	44	54	69	64	No Impacts

a. Address of representative parcel used in modeling.
b. Number and type of land use: MFR = multi-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative.

Alternative C3: Lynnwood Park-and-Ride Station

With Alternative C3, there would be two options for developing the station and park-and-ride garage. Under Option 1, there would be 58 noise impacts. These impacts would be the same as given above under the Preferred Alternative with the Lynnwood Transit Center, and all of them would be due to noise from buses accessing the facility. Under Option 2, there would be 12 noise impacts. All of these impacts would occur at building C of the Park Five Apartments, which is closest to the bus bays. All of these impacts would occur at night. The analysis results are provided in Tables 7-27 and 7-28.

Table 7-27. Alternative C3: Lynnwood Park-and-Ride Station Option 1 Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
20104 48th Avenue West (Park Five Bldg. A)	24 MFR on 48th Avenue West	**51**	61	66	62	24 MFR with noise impact
20104 48th Avenue West (Park Five Bldg. C)	4 MFR on 48th Avenue West	**51**	**61**	62	59	4 MFR with noise impact
4800 200th Street (Cedar Creek Bldg. D)	12 MFR on 200th Street SW	**50**	60	66	62	12 MFR with impact
4800 200th Street (Cedar Creek Bldg. E)	6 MFR on 200th Street SW	**50**	60	67	63	6 MFR with noise impact
4800 200th Street (Cedar Creek Bldg. E)	12 MFR on 200th Street SW	49	59	67	63	12 MFR with noise impact
4807 200th Street SW (Oxford Square SE corner on 200th Street SW)	10 MFR on 200th Street SW	45	55	69	64	No Impacts
4727 200th Street SW (Cambridge Apartments SW corner on 200th Street SW)	14 MFR on 200th Street SW	44	54	69	64	No Impacts
4727 200th Street SW (Cambridge Apartments on 200th Street SW)	14 MFR on 200th Street SW	45	55	69	64	No Impacts
4727 200th Street SW (Cambridge Apartments SE corner on 200th Street SW)	13 MFR on 200th Street SW	44	54	69	64	No Impacts

a. Address of representative parcel used in modeling.
b. Number and type of land use: MFR = multi-family residence.
c. Peak-hour Leq for analysis, typically between 6:00 and 7:00 am (> 47 dBA nighttime).
d. 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
e. Existing Ldn from Section 3.2.
f. FTA criteria for 24-hour Ldn for category 2 land uses.
g. Number and type of noise impact from park-and-ride alternative. .

Table 7-28. Alternative C3: Lynnwood Park-and-Ride Station Option 2 Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
20104 48th Avenue West (Park Five Bldg. A)	4 MFR on 48th Avenue West	46	56	66	62	No Impacts
20104 48th Avenue West (Park Five Bldg. C)	12 MFR on 48th Avenue West	**47**	57	62	59	12 MFR with noise impact
4800 200th Street (Cedar Creek Bldg. D)	12 MFR on 200th Street SW	45	56	66	62	No Impacts
4800 200th Street (Cedar Creek Bldg. E)	6 MFR on 200th Street SW	46	56	67	63	No Impacts
4800 200th Street (Cedar Creek Bldg. E)	12 MFR on 200th Street SW	45	55	67	63	No Impacts
4807 200th Street SW	10 MFR on 200th	42	52	69	64	No Impacts

Table 7-28. Alternative C3: Lynnwood Park-and-Ride Station Option 2 Noise Analysis

Representative Address[a]	Location of Homes Represented[b]	WAC Analysis	FTA Analysis			Impact Type and Criteria Exceeded[g]
		Leq[c]	Ldn[d]	Existing Ldn[e]	FTA Criteria[f]	
(Oxford Square SE corner on 200th Street SW)	Street SW					
4727 200th Street SW (Cambridge Apartments SW corner on 200th Street SW)	14 MFR on 200th Street SW	40	51	69	64	No Impacts
4727 200th Street SW (Cambridge Apartments on 200th Street SW)	14 MFR on 200th Street SW	41	51	69	64	No Impacts
4727 200th Street SW (Cambridge Apartments SE corner on 200th Street SW)	13 MFR on 200th Street SW	41	52	69	64	No Impacts

[a] Address of representative parcel used in modeling.
[b] Number and type of land use: MFR = multi-family residence.
[c] Peak-hour Leq for analysis, typically between 6:00 and 7:00 am (> 47 dBA nighttime).
[d] 24-hour Ldn noise from park-and-ride, includes vehicles in parking areas and buses on park-and-ride property.
[e] Existing Ldn from Section 3.2.
[f] FTA criteria for 24-hour Ldn for category 2 land uses.
[g] Number and type of noise impact from park-and-ride alternative.

7.4 Traffic Noise Modeling

As described in Section 5.9, a traffic noise analysis was performed in six areas where the project could change the traffic noise environment through the relocation of existing traffic noise walls or other structural shielding, or by project related roadway modifications.

This section provides the noise model validation and the results of the existing conditions traffic noise with any existing noise walls and shielding in place as it is today. As discussed in Section 8.7, noise modeling was performed for replacement noise walls under the Preferred Alternative to better provide the public with an understanding of the length and height of the new replacement noise walls, their locations with respect to nearby receivers, and any changes to noise levels from traffic on I-5 based on the year 2035 traffic projections. The model validation for the I-5 area is provided in Section 7.4.1, and the existing I-5 traffic noise levels are provided in Section 7.4.2.

Traffic noise modeling was also performed to determine if there are any new noise impacts in the vicinity of the Lynnwood Transit Center resulting from the proposed roadway modifications in that area. Model validation for this area is also provided in Section 7.4.1, with the existing traffic noise modeling results are provided in Section 7.4.3.

7.4.1 Traffic Noise Model Validation

Prior to performing the traffic noise analysis, the traffic noise levels were modeled to test the agreement of calculated and measured noise levels. This step is required to verify that the noise levels projected are accurate and capture the acoustical characteristics of the study area. This task is

performed for each monitoring site by entering the traffic count and speed data taken during the on-site noise monitoring and verifying that the noise model produces the same noise level (within +/- 2 dBA) measured at that site. A variance between the measured and modeled noise levels of +/- 2 dBA or less is considered acceptable because the average person needs a 3-dBA change in traffic noise levels to clearly discern a change in the noise levels. This step ensures that the modeled noise levels are correct and that noise modeling for all noise-sensitive properties can proceed. The 11 monitoring sites and their calculated measured noise levels are compared in Table 7-29.

Table 7-29. Measured Versus Modeled Noise Levels

Receiver[a]	Measured (dBA Leq)[b]	Modeled (dBA Leq)[c]	Difference (in dBA)[d]
M-6	59.7	58.5	1.2
M-7	64.7	63.1	1.6
M-9	66.5	66	0.5
M-16	64.3	63.4	0.9
M-17	66	64.1	1.9
M-18	63.9	63.8	0.1
M-22	66.1	68.1	-2
M-24	64.1	62.8	1.3
M-25	59.1	58.9	0.2
M-29	59.9	61	-1.1
M-30A	59.4	60.2	-0.8
M-51	57.8	56	1.8
M-52	65.5	66.9	-1.9
M-53	63.7	65.7	-2.0

[a] Receivers used in the modeling are shown on Figures 3-1 and 3-2 in Section 3.
[b] These are the noise levels measured at the receiver locations; traffic counts were taken during the noise measurements.
[c] Modeled noise levels using the FHWA TNM with the traffic counts to predict traffic noise levels.
[d] Change in noise levels between the measured and modeled noise levels.

7.4.2 Existing Noise Levels for Replacement Noise Walls

This section describes the existing conditions for the five areas along I-5 where existing noise walls and structural shielding may be removed and replaced as part of the project. For the analysis, modeling was performed at representative receivers to determine existing noise levels and anticipated future traffic noise levels in the year 2035 with and without construction of the project. The future noise levels were modeled with new or replacement noise walls. The replacement noise walls were designed to meet the design criteria so that when the proposed project becomes operational there will be, whenever feasible:

1. No new traffic noise impacts, and
2. No increase in the severity of any existing traffic noise impacts.

The new traffic noise walls, which are only found in the area around the Lynnwood Park-and-Ride Station, were designed to meet FHWA and WSDOT Traffic Noise Criteria.

The subsections below discuss the traffic noise modeling results at the representative receivers in each of the five modeled areas for the weekday PM peak hour existing conditions. The five modeling areas are shown in Figures 8-1 through 8-5 in Section 8, Potential Noise Mitigation Measures. These figures also provide the locations of the proposed replacement noise walls and Section 8.7 provides approximate height for each wall. A discussion of traffic noise analysis issues specific to each area is included.

Existing Traffic Noise Wall #1—NE 115th Street to NE 130th Street

Modeling was performed for 27 receiver locations selected to be representative of homes in the area, as well as the Seattle Latvian Evangelical Lutheran Church (receiver R-8). Table 7-30 provides a summary of the existing modeled traffic noise levels for these 27 receivers. Modeled traffic noise levels under existing conditions range from 56 to 72 dBA Leq. There are 4 receiver locations with traffic noise levels that meet or exceed the WSDOT NAC under the existing conditions. At present, there is a noise wall shielding receivers in the area from I-5 traffic noise. That wall runs from just south of NE 117th Street to the intersection of the off-ramp and 5th Avenue NE and ranges in height from approximately 4.5 to 16.5 feet tall.

Table 7-30. Traffic Noise Wall #1: Existing Modeled Traffic Noise Levels

	Leq (dBA)		
Receiver[a]	Criteria[b]	Existing[c]	Meets or Exceeds WSDOT Criteria[d]
M-4	66	63	No
R-1	66	59	No
R-2	66	64	No
R-3	66	65	No
R-4	66	60	No
R-5	66	61	No
R-6	66	61	No
R-7	66	58	No
R-8 (Latvian Church)	66	63	No
M-6	66	60	No
R-9	66	61	No
R-10	66	62	No
R-11	66	63	No
R-12	66	64	No
M-7	66	**66**	Yes
R-13	66	64	No
M-8	66	56	No
R-14	66	61	No
R-15	66	65	No
R-16	66	61	No
R-17	66	65	No
R-18	66	**66**	Yes
M-9	66	**68**	Yes
R-19	66	62	No

Table 7-30. Traffic Noise Wall #1: Existing Modeled Traffic Noise Levels

Receiver[a]	Leq (dBA)		Meets or Exceeds WSDOT Criteria[d]
	Criteria[b]	Existing[c]	
R-20	66	62	No
R-21	66	65	No
M-10	66	72	Yes

[a] Receivers shown on Figures 8-1 in Section 8.

[b] WSDOT traffic noise impact criteria.

[c] Peak hour modeled noise levels; noise levels that are equal to, or greater than, the WSDOT traffic noise abatement criteria are shown in red.

[d] Indicates whether the receiver currently meets, or exceeds, the WSDOT noise abatement criteria.

Existing Traffic Noise Wall #2—NE 145th Street

Modeling was performed for 13 receiver locations selected to be representative of homes in the area, as well as the True Jesus Church (receiver R-9). Table 7-31 provides a summary of the existing modeled traffic noise levels for these 13 receivers. Modeled traffic noise levels under existing conditions range from 64 to 67 dBA Leq. There is 1 receiver location (the True Jesus Church represented by receiver R-9) with traffic noise levels that meet or exceed the WSDOT NAC under the existing conditions. At present, there is a noise wall shielding receivers in the area from I-5 traffic noise. That wall runs from the NE 145th Street on-ramp to just north of the True Jesus Church and ranges in height from approximately 5 to 16 feet tall.

Table 7-31. Traffic Noise Wall #2: Existing Modeled Traffic Noise Levels

Receiver[a]	Leq (dBA)		Meets or Exceeds WSDOT Criteria[d]
	Criteria[b]	Existing[c]	
R-1	66	64	No
R-2	66	65	No
R-3	66	64	No
R-4	66	64	No
M-16	66	64	No
M-17	66	65	No
R-5	66	64	No
R-6	66	64	No
R-7	66	64	No
R-8	66	65	No
R-9	66	67	Yes
R-10	66	65	No
M-18	66	65	No

[a] Receivers shown on Figures 8-6 in Section 8.

[b] WSDOT traffic noise impact criteria.

[c] Peak hour modeled noise levels; noise levels that are equal to, or greater than, the WSDOT traffic noise abatement criteria are shown in red.

[d] Indicates whether the receiver currently meets, or exceeds, the WSDOT noise abatement criteria.

Existing Traffic Noise Wall #3—Ridgecrest Park to NE 175th Street

Modeling was performed for 19 receiver locations selected to be representative of homes in the area, as well as Ridgecrest Park (receiver M-21). Under FHWA and WSDOT NAC, parks are evaluated for traffic noise impacts under the same impact criteria as residences. Table 7-32 provides a summary of the existing modeled traffic noise levels for these 19 receivers. Modeled traffic noise levels under existing conditions range from 60 to 72 dBA Leq. There are 10 receiver locations with traffic noise levels that meet or exceed the WSDOT NAC under the existing conditions. At present, there are 2 noise walls shielding receivers in the area from I-5 traffic noise. The first wall runs from just north of Ridgecrest Park all the way up to NE 175th Street and ranges in height from approximately 5 to 11 feet tall. The second wall is 6.5 feet in height and is located between the NE 175th Street off-ramp and I-5.

In the section of this area located south of Ridgecrest Park, the project plans include the removal of physical shielding along with a slight roadway realignment along 1st Avenue NE between NE 158th Street and NE 161st Street. A review of this area's topographical conditions revealed that the second-line homes are at a substantially higher elevation than the front-line homes, and that the front-line homes are not providing any measureable noise reduction for the second-line homes. Hence, the removal of any front-line shielding in this area will have no impact on noise levels at the second-line homes. Consequently, a detailed traffic noise analysis was not conducted for this specific area located south of Ridgecrest Park.

Table 7-32. Traffic Noise Wall #3: Existing Modeled Traffic Noise Levels

Receiver[a]	Leq (dBA)		Meets or Exceeds WSDOT Criteria[d]
	Criteria[b]	Existing[c]	
M-21	66	64	No
R-1	66	**70**	Yes
R-2	66	**68**	Yes
R-3	66	**68**	Yes
R-4	66	**66**	Yes
R-5	66	**67**	Yes
R-6	66	64	No
R-7	66	65	No
R-8	66	**72**	Yes
R-9	66	64	No
R-10	66	64	No
R-11	66	60	No
R-12	66	60	No
R-13	66	65	No
R-14	66	62	No
R-15	66	**66**	Yes
M-22	66	**68**	Yes
R-16	66	**68**	Yes
R-17	66	**68**	Yes

[a] Receivers shown on Figures 8-3 in Section 8.
[b] WSDOT traffic noise impact criteria.
[c] Peak hour modeled noise levels; noise levels that are equal to, or greater than, the WSDOT traffic noise abatement criteria are shown in red.
[d] Indicates whether the receiver currently meets, or exceeds, the WSDOT noise abatement criteria.

Existing Traffic Noise Wall #4—NE 180th Street to NE 185th Street

Modeling was performed for 14 receiver locations selected to be representative of homes in the area. Table 7-33 provides a summary of the existing modeled traffic noise levels for these 14 receivers. Modeled traffic noise levels under existing conditions range from 58 to 65 dBA Leq. There are no receiver locations with traffic noise levels that meet or exceed the WSDOT NAC under the existing conditions. At present, there is a noise wall shielding receivers in the area from I-5 traffic noise. That wall runs from approximately NE 178th Street to approximately NE 184th Street and ranges in height from approximately 9 to 14 feet tall.

Table 7-33. Traffic Noise Wall #4: Existing Modeled Traffic Noise Levels

	Leq (dBA)		
Receiver[a]	Criteria[b]	Existing[c]	Meets or Exceeds WSDOT Criteria[d]
R-6	66	61	No
M-25	66	60	No
R-7	66	63	No
R-8	66	65	No
R-9	66	63	No
R-10	66	59	No
R-11	66	58	No
R-12	66	59	No
R-13	66	58	No
R-14	66	58	No
R-15	66	59	No
R-16	66	61	No
R-17	66	62	No
M-28	66	65	No

[a] Receivers shown on Figures 8-4 in Section 8.
[b] WSDOT traffic noise impact criteria.
[c] Peak hour modeled noise levels.
[d] Indicates whether the receiver currently meets, or exceeds, the WSDOT noise abatement criteria.

Existing Traffic Noise Wall #5—NE 185th Street to NE 191st Street

Modeling was performed for 9 receiver locations selected to be representative of homes in the area, as well as the Shoreline Cooperative Preschool (receiver M-30A). Table 7-34 provides a summary of the existing modeled traffic noise levels for these 9 receivers. Modeled traffic noise levels under existing conditions range from 60 to 73 dBA Leq. There are 2 receiver locations situated between the Shoreline Cooperative Preschool and I-5 that have traffic noise levels that meet or exceed the WSDOT NAC under the existing conditions. At present, there is a noise wall shielding receivers in the area from I-5 traffic noise. That wall runs from approximately NE 178th Street to approximately NE 190th Street and ranges in height from approximately 5 to 15 feet tall.

Table 7-34. Traffic Noise Wall #5: Existing Modeled Traffic Noise Levels

Receiver[a]	Leq (dBA)		Meets or Exceeds WSDOT Criteria[d]
	Criteria[b]	Existing[c]	
R-1	66	64	No
R-2	66	65	No
R-3	66	**67**	Yes
R-4	66	**73**	Yes
M-30A	66	60	No
R-5	66	63	No
R-6	66	62	No
M-29	66	61	No
R-7	66	65	No

[a] Receivers shown on Figures 8-5 in Section 8.
[b] WSDOT traffic noise impact criteria.
[c] Peak hour modeled noise levels; noise levels that are equal to, or greater than, the WSDOT traffic noise abatement criteria are shown in red.
[d] Indicates whether the receiver currently meets, or exceeds, the WSDOT noise abatement criteria.

7.4.3 New Traffic Noise Walls—Lynnwood Park-and-Ride Station

Modeling was performed for 111 receiver locations selected to be representative of 215 condominiums and apartment homes, as well as two hotels, surrounding the Lynnwood Park-and-Ride Station. Receivers R-1 through R-7 are for the Park Five Apartments, receivers R-8 through R-16 are for the Oxford Square Apartments, receivers R-17 through R-24B are for the Cambridge Apartments, and receivers R-27 through R-45 are for the Cedar Creek Condominiums. Finally receivers R-25 and R-26 are for the Courtyard Hotel and La Quinta Inn, respectively. Table 7-35 provides a summary of the existing modeled traffic noise levels for these 111 receivers. Modeled traffic noise levels under existing conditions range from 46 to 67 dBA Leq. There are 8 receiver locations with traffic noise levels that meet or exceed the WSDOT NAC under the existing conditions.

Table 7-35. Lynnwood Park-and-Ride Station: Existing Modeled Traffic Noise Levels

Receiver[a]	Leq (dBA)		Meets or Exceeds WSDOT Criteria[d]
	Criteria[b]	Existing[c]	
R-1 (Lower)	66	56	No
R-1 (Upper)	66	58	No
R-2 (Lower)	66	56	No
R-2 (Upper)	66	58	No
R-3/M-50 (Lower)	66	55	No
R-3 (Upper)	66	57	No
R-4 (Lower)	66	54	No
R-4 (Upper)	66	57	No
R-5 (Lower)	66	58	No
R-5 (Upper)	66	60	No
R-6 (Lower)	66	56	No
R-6 (Upper)	66	59	No
R-7 (Lower)	66	55	No
R-7 (Upper)	66	58	No
R-8 (Lower)	66	59	No
R-8 (Upper)	66	62	No
R-9 (Lower)	66	50	No
R-9 (Upper)	66	54	No
R-10 (Lower)	66	50	No
R-10 (Upper)	66	52	No
R-11 (Lower)	66	59	No
R-11 (Upper)	66	61	No
R-12 (Lower)	66	55	No
R-12 (Upper)	66	58	No
R-13 (Lower)	66	55	No
R-13 (Upper)	66	58	No
R-14 (Lower)	66	59	No
R-14 (Upper)	66	61	No
R-15 (Lower)	66	53	No
R-15 (Upper)	66	55	No
R-16 (Lower)	66	61	No
R-16 (Upper)	66	62	No
R-17 (Lower)	66	**66**	Yes
R-17 (Upper)	66	**67**	Yes
R-18 (Lower)	66	61	No
R-18 (Upper)	66	63	No
R-19 (Lower)	66	60	No
R-19 (Upper)	66	61	No
R-20 (Lower)	66	65	No
R-20 (Upper)	66	65	No
R-21 (Lower)	66	64	No
R-21 (Upper)	66	65	No
R-22A/M-52 (Lower)	66	65	No
R-22A (Upper)	66	**66**	Yes
R-22B (Lower)	66	65	No
R-22B (Upper)	66	**66**	Yes
R-23 (Lower)	66	59	No
R-23 (Upper)	66	62	No
R-24A (Lower)	66	**67**	Yes
R-24A (Upper)	66	**67**	Yes
R-24B (Lower)	66	**66**	Yes

Table 7-35. Lynnwood Park-and-Ride Station: Existing Modeled Traffic Noise Levels

R-24B (Upper)	66	**66**	Yes
R-25 - Courtyard Hotel	71	64	No
R-26 - La Quinta Inn	71	63	No
R-27 (Lower)	66	63	No
R-27 (Middle)	66	65	No
R-27 (Upper)	66	65	No
R-28 (Lower)	66	61	No
R-28 (Middle)	66	63	No
R-28 (Upper)	66	63	No
R-29 (Lower)	66	54	No
R-29 (Middle)	66	57	No
R-29 (Upper)	66	57	No
R-30/M-51 (Lower)	66	55	No
R-30 (Middle)	66	58	No
R-30 (Upper)	66	58	No
R-31 (Lower)	66	54	No
R-31 (Middle)	66	58	No
R-31 (Upper)	66	58	No
R-32 (Lower)	66	60	No
R-32 (Middle)	66	63	No
R-32 (Upper)	66	63	No
R-33 (Lower) - Pool Room	66	56	No
R-33 (Middle)	66	60	No
R-33 (Upper)	66	60	No
R-34 (Lower)	66	53	No
R-34 (Middle)	66	57	No
R-34 (Upper)	66	57	No
R-35 (Lower)	66	53	No
R-35 (Middle)	66	56	No
R-35 (Upper)	66	57	No
R-36 (Lower)	66	61	No
R-36 (Middle)	66	63	No
R-36 (Upper)	66	63	No
R-37 (Lower)	66	57	No
R-37 (Middle)	66	60	No
R-37 (Upper)	66	60	No
R-38 (Lower)	66	54	No
R-38 (Middle)	66	58	No
R-38 (Upper)	66	58	No
R-39 (Lower)	66	53	No
R-39 (Middle)	66	57	No
R-39 (Upper)	66	57	No
R-40 (Lower)	66	57	No
R-40 (Middle)	66	60	No
R-40 (Upper)	66	60	No
R-41 (Lower)	66	56	No
R-41 (Middle)	66	58	No
R-41 (Upper)	66	58	No
R-42 (Lower)	66	56	No
R-42 (Middle)	66	58	No
R-42 (Upper)	66	59	No
R-43 (Lower)	66	56	No
R-43 (Middle)	66	58	No

Table 7-35. Lynnwood Park-and-Ride Station: Existing Modeled Traffic Noise Levels

R-43 (Upper)	66	58	No
R-44 (Lower)	66	54	No
R-44 (Middle)	66	58	No
R-44 (Upper)	66	58	No
R-45 (Lower)	66	54	No
R-45 (Middle)	66	57	No
R-45 (Upper)	66	58	No

[a] Receivers shown on Figures 8-6 in Section 8.8.

[b] WSDOT traffic noise impact criteria.

[c] Peak hour modeled noise levels; noise levels that are equal to, or greater than, the WSDOT traffic noise abatement criteria are shown in red.

[d] Indicates whether the receiver currently meets, or exceeds, the WSDOT noise abatement criteria.

7.5 Construction Noise Impact Analysis

The construction noise analysis considers the temporary noise impacts that construction would cause in the project vicinity. These impacts would end when project construction is completed.

Noise related to construction would result from the operation of heavy equipment needed to construct various project components, including bridges, retaining walls, roads, park-and-ride facilities, and stations. The contractor would be required to adhere to local ordinances regulating noise, as discussed in Section 4.3. Construction activities outside normal weekday daytime hours would require a noise variance from the City or County where the work is being performed if regulatory noise levels are exceeded.

Equipment required to complete the Lynnwood Link Extension would include construction equipment typically used for transportation construction projects. Table 7-36 lists the typical equipment used for this type of project, the activities they would be used for, and the corresponding maximum noise levels that would be produced when measured at 50 feet from the sources under normal use.

Table 7-36. Construction Equipment and Reference Noise Levels

Equipment	Expected Project Use	Lmax[a, b] (dBA)
Air compressors	Pneumatic tools and general maintenance (all phases)	70 to 76
Backhoe	General construction and yard work	78 to 82
Concrete pump	Pumping concrete	78 to 82
Concrete saws	Concrete removal and utilities access	75 to 80
Crane	Materials handling: removal and replacement	78 to 84
Excavator	General construction and materials handling	82 to 88
Forklifts	Staging area work and hauling materials	72
Haul trucks	Materials handling: general hauling	86
Jackhammers	Pavement removal	74 to 82
Loader	General construction and materials handling	86
Pavers	Roadway paving	88
Pile-drivers	Support for structure and hillside	99 to 105
Power plants	General construction use: nighttime work	72

Table 7-36. Construction Equipment and Reference Noise Levels

Equipment	Expected Project Use	Lmax[a, b] (dBA)
Pumps	General construction use: water removal	62
Pneumatic tools	Miscellaneous construction work	78 to 86
Tractor trailers	Material removal and delivery	86
Utility trucks	General project work	72
Vibratory equipment	Shoring up hillside to prevent slides and soil compacting	82 to 88
Welders	General project work	76

[a] Typical maximum noise level under normal operation as measured at 50 feet from the noise source.

[b] Noise levels presented are based on measured data from the Portland Light Rail and I-5 Preservation and Hawthorne Bridge construction projects and other measured data, as well as U.S. Department of Transportation construction noise documentation and other construction noise sources.

dBA = decibel with A-weighting, Lmax = maximum noise level

7.5.1 Construction Noise

Several construction phases would be required to complete the Lynnwood Link Extension. The FHWA Construction Noise Model (2006) was used to provide an estimate of the project construction noise levels, as well as to predict the maximum noise levels for several different construction phases. The analysis assumes the worst-case average and maximum noise levels based on three major types of construction described below and shown in Table 7-37. The actual noise levels experienced during construction would generally be lower than those described in Table 7-36 because these are the maximum noise levels for each activity. The noise levels presented here are for short periods of maximum construction activity and would occur for a limited period of time.

Table 7-37. Noise Levels for Typical Construction Phases[a]

Scenario[b]	Equipment[c]	Lmax[d]	Leq[e]
Demolition, site preparation, and utilities relocation	Air compressors, backhoes, concrete pumps, cranes, excavators, forklifts, haul trucks, loaders, pumps, power plants, service trucks, tractor trailers, utility trucks, and vibratory equipment	88	87
Structures construction, track installation, and paving activities	Air compressors, backhoes, cement mixers, concrete pumps, cranes, forklifts, haul trucks, loaders, pavers, pumps, power plants, service trucks, tractor trailers, utility trucks, vibratory equipment, and welders	88	88
Miscellaneous activities	Air compressors, backhoes, cranes, forklifts, haul trucks, loaders, pumps, service trucks, tractor trailers, utility trucks, and welders	86	83

[a] Combined worst-case noise levels for all equipment at a distance of 50 feet from work site.

[b] Operational conditions under which the noise levels are projected.

[c] Normal equipment in operation under the given scenario.

[d] Lmax (dBA) is the highest maximum noise level for the construction equipment listed under the given scenario.

[e] Leq (dBA) is a 1-hour energy average noise emission for construction equipment operating under the given scenario.

7.5.2 Demolition, Site Preparation, and Utilities Relocation

Major noise-producing equipment in use during the preparation stage of light rail construction could include saw cutters, concrete pumps, cranes, excavators, haul trucks, loaders, tractor-trailers, and vibratory equipment. Maximum noise levels could reach 82 dBA to 94 dBA at the nearest residences (i.e., within 50 to 100 feet) for normal construction activities during this phase. Other

less-notable noise-producing equipment expected during this phase would include backhoes, air compressors, forklifts, pumps, power plants, service trucks, and utility trucks.

7.5.3 Structures Construction, Track Installation, and Paving Activities

The loudest noise sources in use during construction of elevated structures would include cement mixers, concrete pumps, cranes, pavers, haul trucks, and tractor-trailers. The cement mixers, cranes, and concrete pumps would be required for construction of the light rail superstructure. The pavers and haul trucks would be used to provide the final surface on the trackway, roadways, and ramps modified during other phases of construction. Maximum noise levels would range from 82 dBA to 94 dBA at the closest receiver locations.

7.5.4 Miscellaneous Activities

Following heavy construction, general construction would still be required such as installation of bridge railing, signage, roadway striping, and communication and power systems, as well as other miscellaneous activities. These less intensive activities are not expected to produce noise levels above 80 dBA at 50 feet except during rare occasions, and even then only for short periods of time when maximum noise levels could reach 91 dBA Lmax at 50 feet. Using the information in Table 7-36, typical construction noise levels were projected for several distances from the project work area. Figure 7-1 is a graph of general construction noise level versus distance for phases of construction.

7.5.5 Pile-Driving

Pile-driving would likely be required to support permanent structures such as piers for elevated structures and retaining tunnel walls. Pile-driving can produce maximum short-term noise levels of 99 dBA to 105 dBA at 50 feet. Actual levels can vary and would depend on the distance and topographical conditions between the pile-driving location and the receiver location. Figure 7-2 is a graph of maximum pile-driving noise levels versus distance.

7.5.6 Nighttime Construction Activities

Some construction activities might be required during nighttime hours because of the nature of the construction, to avoid daytime traffic impacts, or to accommodate adjacent land uses. In order to perform construction at night, a noise variance from the local governing agency would be required. If nighttime construction is deemed necessary, Sound Transit would work with each governing agency to obtain any necessary noise variance specific to project construction.

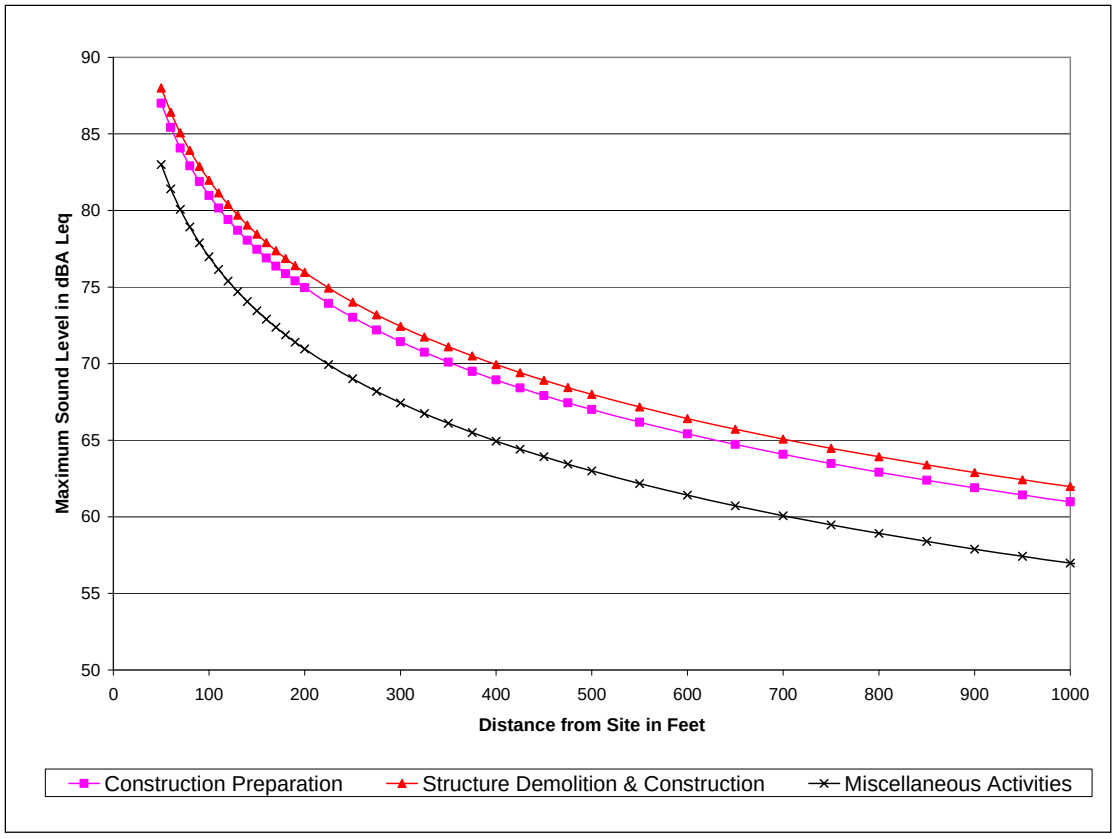


Figure 7-1. Maximum Noise Level versus Distance for Typical Construction Phases

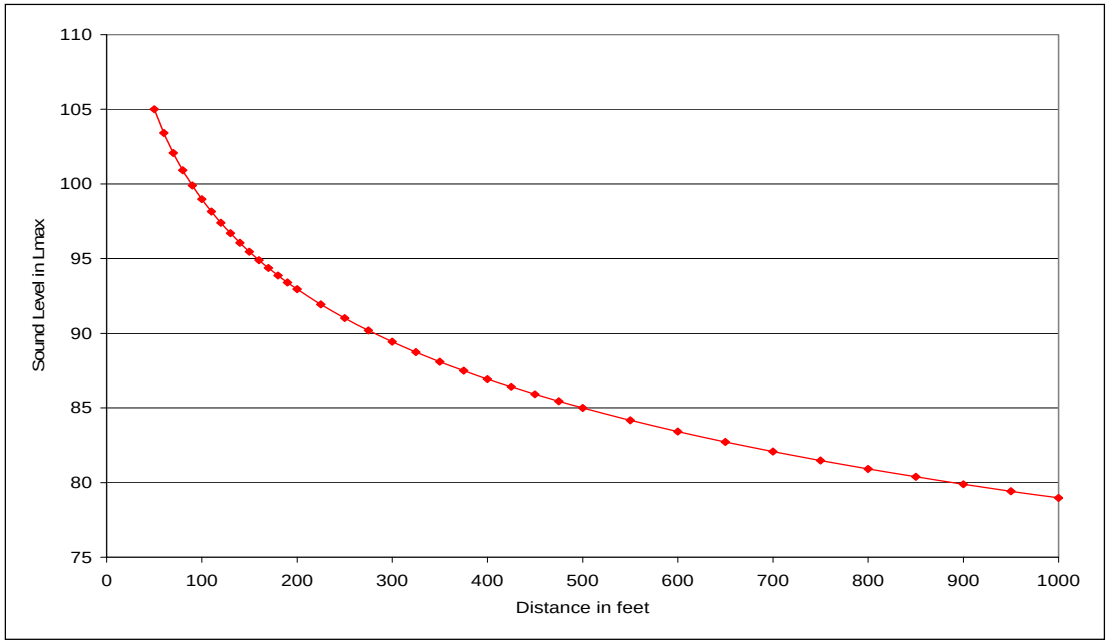


Figure 7-2. Pile-Driving Noise Level versus Distance

7.5.7 Segment A

There are a large number of single-family and multifamily residences along the Segment A alternative alignments. Under all of the Segment A alternatives, noise levels at adjacent residences would have short periods of time with maximum noise levels exceeding 80 dBA Lmax. Major construction noise would occur during demolition of existing structures; relocation of noise walls and utilities; installation of retaining walls (where required); repaving of local access and arterial roadways; and construction of the at-grade, retained cut-and-fill and elevated guideway structures. Pile-driving and sheet-pile installation might also be required. Pile-driving could produce noise levels of 105 dBA Lmax at 50 feet. Although there would be periods of relatively loud construction, noise levels would decrease as tasks are completed and construction activities move to other areas.

Near Northgate, the major noise generator for all light rail alternatives would be construction of the elevated structures connecting the Northgate Station to the guideway along 1st Avenue NE and crossing over Northgate Way. North of Northgate Way, major construction activities could include installation of the elevated guideway under all light rail alternatives and reconstruction of 1st Avenue NE and the North 117th Street overpass under Alternative A1. Several noise walls would also be relocated during the initial phase of the project. Every attempt would be made to replace the noise walls early in the construction process, if possible, which would allow the walls to also assist with mitigating construction noise. Without the noise walls, there would be short periods of time with maximum noise levels exceeding 80 dBA Lmax; when the walls are replaced, the maximum levels should be 10 dBA to 12 dBA lower than without the walls in place.

Under Alternatives A5, A7, A10, and A11, construction of the NE 130th Street Station would result in additional short-term construction activities in the vicinity of 5th Avenue NE and NE 130th Street. Because this station would not include any parking structures, the main construction activities would be restricted to the west side of 5th Avenue NE for station platforms and associated facilities, including a parking lot under the NE 130th Street Station Option 2. Maximum noise levels during periods of heavy construction would reach up to 75 dBA Lmax, with typical noise levels ranging from 65 dBA to 75 dBA during periods of active construction.

North of NE 130th Street and south of the NE 145th Station options in Segment A, the land use consists mainly of recreational uses that are not noise-sensitive under the FTA regulations. Although construction noise is expected to have some effect on noise levels at the golf course, the added distance and 5th Avenue NE buffer would help to reduce the overall noise effects in this area. With the buffer zone, noise levels should remain below 70 dBA to 75 dBA Lmax in this area.

Noise levels related to the construction of the NE 145th Street Station would be similar under Alternatives A1, A3, A10, and A11. For residences located near the proposed station, short-term maximum noise levels of 70 dBA to 80 dBA could be expected, with typical construction-related noise levels of 65 dBA to 75 dBA.

Several additional noise walls would be relocated under all Segment A alternatives north of the NE 145th Street Station. The noise walls would also be used to provide noise mitigation for light rail operations as well as traffic noise; therefore, these proposed walls might be slightly higher than the

existing noise walls. Sound Transit would attempt to relocate the noise walls early in the construction process to assist with construction noise mitigation. During the short periods when the walls would be removed, construction and traffic noise would likely meet or exceed 80 dBA at homes closest to the construction sites.

The NE 155th Street Station under Alternatives A5 and A7 would include the construction of a multistory parking facility. Because of the light rail station and parking structure, noise levels in the vicinity of this station would be elevated longer under Alternatives A7 and A10 than under Alternatives A1, A3, A10, and A11, which would not include the NE 155th Street Station.

North of NE 155th Street to the north end of Segment A, just past NE 185th Street, construction noise and activities would be similar to those described for the southern part of Segment A, with short periods of time with maximum noise levels exceeding 80 dBA Lmax. In addition, several existing noise walls in this area would also be relocated as part of the project.

Construction noise related to the NE 185th Street Station would vary by design option. Under Alternative A1 with the NE 185th Street Station Option 1, the parking structure would be on the west side of I-5, and the overpass would be improved for better pedestrian access. Therefore, Option 1 is the only option with which construction noise could affect residences on both sides of I-5. Construction of the parking area along the west side of I-5 would elevate noise levels at residences north of the station along 5th Avenue NE and south of the parking area along NE 185th Street.

Under Alternatives A3, A7, and A11, the NE 185th Street Station Option 2 would include a three-story parking facility constructed between the station and 8th Avenue NE. Both Alternatives A5 and A10 would include the NE 185th Street Station Option 3, which would have a surface parking lot between the station and 8th Avenue NE, with an option for additional parking farther east. Although both of these station design options would be located entirely on the east side of I-5, construction of the parking garage under Option 2 would be expected to elevate noise levels slightly higher and longer than under Option 3 because of the added construction effort and time required to build the parking structure. Construction of the elevated structures, parking garages, and other major project-related construction activities could result in noise levels of 83 to 87 dBA Leq during periods of heavy construction.

7.5.8 Segment B

Major construction activities in Segment B would include relocating utilities; installing retaining walls (where required); repaving local access and arterial roadways; and constructing the at-grade, retained cut-and-fill, and elevated guideway structures. Pile-driving and sheet-pile installation might also be required; pile-driving could produce Lmax noise levels of 105 dBA at 50 feet. Beginning just north of the NE 185th Street Station options, all four Segment B alternative alignments would be along the east side of I-5, and, as with other segments, would require relocating several noise walls. Construction-related noise levels would be highest during the relocation of the walls and installation of the elevated and retained cut-and-fill guideways. During these periods of heavy construction, noise levels would likely exceed 80 dBA Lmax at most front-line residences. When the noise wall

relocation is completed, construction noise levels would be reduced because the noise walls would provide shielding from many construction activities.

North of Ballinger Way (SR 104), all four of the Segment B alternatives would be elevated to the Mountlake Terrace Transit Center Station except for Alternative B4, which would move to the I-5 median and return to at-grade near the 236th Street SW overpass. Under all Segment B alternatives, several homes along 60th Avenue NW would experience elevated noise levels from project construction because they would have a direct line-of-sight to the construction areas north of Gateway Place. Because these residences are located approximately 500 feet from most of the construction activities, Sound Transit expects that noise levels during construction would remain below 70 dBA Lmax.

North of the Mountlake Terrace Transit Center Station, Alternatives B1 and B4 would remain in the I-5 median; therefore, most construction would be performed in the center of the freeway, using the express lanes and shoulders. The added buffer of 250 feet to 400 feet and existing noise walls (depending on location) could help to reduce maximum noise levels by 5 dBA to 10 dBA or more.

7.5.9 Segment C

Major construction noise would occur during the demolition of existing structures; relocation of utilities; repaving of local access and arterial roadways; and construction of the at-grade, retained cut-and-fill, and elevated guideway structures. In Segment C, a limited number of residential land uses would be affected by the construction noise. Noise would increase at the homes located in the residential area west of 52nd Avenue West, north of I-5, and south of the Interurban Trail. Under Alternatives C1 and C2, the area of affected homes would continue north along 52nd Avenue West. Businesses along 52nd Avenue West would also be affected. Conversely, under Alternative C3, only the aforementioned residential area and a few businesses would be affected along 52nd Avenue West near the connection between Segments B and C alternatives. Under Alternative C1, numerous apartment and condominium homes along 200th Street SW, which are 70 feet to 100 feet from the project work site, would also experience increased noise levels because of construction activities. Sound Transit projects that maximum noise levels would reach up to 80 dBA Lmax, with typical noise levels ranging from 72 dBA to 80 dBA during periods of active construction.

8 POTENTIAL NOISE MITIGATION MEASURES

For locations where Sound Transit has identified potential noise impacts, mitigation measures would be considered and reviewed using Sound Transit's Noise Mitigation Policy (Sound Transit 2004). Under this policy, mitigation measures would be considered for all noise impacts.

Sound Transit's practice is to mitigate both moderate and severe impacts beginning with source treatment, followed by treatments in the noise path (Sound Transit Light Rail Noise Mitigation Policy, Motion No. M2004-08). If source and path treatments are not sufficient to mitigate the impact, Sound Transit will evaluate and implement sound insulation at affected properties where the existing building does not already achieve sufficient exterior-to-interior reduction of noise levels. The following sections provide an introduction to the mitigation strategies normally used for light rail projects. Following this introduction are the mitigation strategies and measures proposed for the Lynnwood Link Extension.

During final design, all impacts and mitigation measures will be reviewed for verification. If it is discovered that the mitigation can be achieved by less costly means or if detailed analysis shows no impact, the mitigation measure may be eliminated.

8.1 Source Noise Mitigation

One of the most effective forms of noise mitigation is to reduce noise at the source. One form of source noise reduction is using vehicles with low noise levels during operation. Sound Transit has purchased state-of-the-art rail cars equipped with noise-reducing wheel skirts covering the wheel-rail interface. Several additional operational measures can also be used to reduce noise levels at the source. Table 5-1 in Section 5 lists operational and maintenance measures that Sound Transit performs on a regular basis and the benefits that these measures provide.

Source treatments that Sound Transit is currently using to minimize noise impacts include requiring wheel skirts, maintaining smooth tracks, performing vehicle maintenance and wheel truing, and conducting operator training.

8.2 Path Noise Mitigation

The next type of mitigation considered would be applied between the noise source and receiver. Typical noise path mitigation includes noise walls, earth berms, and buffer zones. Constructing noise walls between the light rail tracks and the affected receivers would reduce noise levels by physically blocking the transmission of noise generated by light rail. Barriers can be constructed as walls or earth berms, which require more right-of-way than walls and are usually constructed with a 3-to-1 slope gradient. For the Lynnwood Link Extension, berms would not be feasible because of topographical conditions and limited right-of-way. Noise walls should be high enough to break the line-of-sight between the noise source and the receiver. The typical height for at-grade noise walls is 6 feet to 8 feet and 4 feet to 6 feet when on elevated structures. Noise walls must also be long

enough to prevent flanking of noise around the ends of the walls. Openings in noise walls for driveway connections or intersecting streets greatly reduce the effectiveness of these walls.

Buffer zones are undeveloped open spaces between the noise source and receiver. Buffer zones are created when an agency purchases land or development rights in addition to the normal right-of-way to ensure that future dwellings cannot be constructed close to the noise source. However, because the Lynnwood Link Extension would be in an urban setting where land is at a premium, creating buffer zones is not a feasible form of noise mitigation because it would require substantially more project-related displacements.

8.3 Receiver Noise Mitigation

For situations where noise path mitigation would be either unfeasible or ineffective, Sound Transit would consider building sound insulation. Sound insulation programs are developed to reduce the interior noise levels in sleeping and living quarters in residential properties or in noise-sensitive areas such as schools and other institutional uses to within the guidelines set by HUD. Under these guidelines, interior noise levels for residential properties should not exceed 45 dBA Ldn, and a form of fresh air exchange must be maintained. The air exchange can be achieved by opening a window or using a ventilation system. Sound insulation is typically only used on older dwellings with single-paned windows, or in buildings with double-paned windows that are ineffective because of leakage. Sound insulation would not reduce exterior noise levels.

8.4 Crossover Mitigation

When a light rail train travels over a crossover, there is a loud clicking noise as the steel wheels go over the gap between the tracks. This can increase noise levels from the train by as much as 10 dBA compared with a smooth track with no gaps. Mitigation for noise impacts from crossover tracks can include relocating the crossover away from noise-sensitive properties, or the use of special trackwork, such as special "frogs" that include gap-closing mechanisms, or using movable point frogs. A frog in this context is a rail-crossing structure at track crossovers that allows the train to cross over to another track or continue moving on the same track. A gap is provided on top of the frog so that vehicle wheels can pass regardless of which track is in use. With standard rigid frogs, noise and vibration occurs when the wheels pass over the gap, but a movable-point frog eliminates the gap and one end of the frog moves in the direction of train travel. Other similar options for reducing noise from crossovers include spring-rail or flange-bearing frogs. Relocation of crossovers to more than 500 feet from noise-sensitive sites also would eliminate the noise impact from the crossovers.

8.5 Transit Noise Mitigation Analysis

This section generally describes the potential noise mitigation measures that would be used for the light rail alternatives. The mitigation design is based on the current alignments and are implemented to meet the requirements of the FTA and the Sound Transit Noise Mitigation Policy (Sound Transit 2004). However, if during final design Sound Transit determines that the relevant noise criterion

could be achieved by a less costly means, or that the noise impact at that location would not occur even without mitigation (for example, a revised alignment), then the mitigation measure might be eliminated or modified as needed. Conversely, if any additional noise impacts were identified during final design, then Sound Transit would provide mitigation that is consistent with the Sound Transit Noise Mitigation Policy (Sound Transit 2004).

Noise walls would be the primary form of noise mitigation for transit noise impacts. Attachment B provides complete details on mitigation, including projected noise levels with the proposed noise mitigation measures for each receiver. Table 8-1 summarizes specific mitigation measures for each alternative. Attachment F provides maps of the locations where at-grade and elevated noise walls are anticipated to mitigate the noise impacts for each alternative. Noise walls to reduce transit noise impacts would include short walls, like those used in Tukwila as part of Central Link, which are directly attached to the sides of the elevated guideway. These walls are acoustically absorbent and very effective at reducing noise; typical noise reductions are in the range of 10 dBA to 15 dBA, depending on the topographical conditions between the receiver and the guideway. Additional at-grade noise walls and walls along retained fills and cuts also would be used, depending on the track type. Because the majority of noise from light rail operations comes from the wheel-rail interface, even relatively short walls can reduce noise levels by 7 dBA to 10 dBA, depending on topographical conditions and distance. On elevated guideways short barriers can provide an even greater noise reduction.

Table 8-1. Summary of Potential Noise Impacts and Mitigation Measures

Alternative	Relocation of Noise Walls Required for Project Construction[a]	Light Rail Impacts		Proposed Noise Mitigation Measures for Impacts (Excluding New and Relocated Traffic Noise Walls)	Locations Considered for Sound Insulation
		Moderate[b]	Severe[c]		
Segment A Alternatives					
Preferred Alternative	Approximately 12,250 feet of relocated noise walls, 2,500 feet at-grade, 9,400 feet on retaining walls, and 350 feet along elevated structures sta 35-50: 1,500 feet sta 44-74: 3,100 feet sta 123-131: 1,150 feet (including 300 feet along ramp) sta 162-200: 3,800 feet sta 216-225: 950 feet sta 230-238: 800 feet sta 237-247: 950 feet	181	112	Approximately 9,700 feet of additional noise walls, 300 feet at-grade, 5,900 feet on retaining walls, and 3,500 feet along elevated structures	8
A1	sta 38–53: 1,500 feet sta 114–126: 1,200 feet sta 155–189: 3,400 feet sta 197–215: 1,800 feet	190	29	Approximately 11,200 feet of additional noise walls, 2,700 feet at-grade, 4,700 feet on retaining walls, and 3,800 feet along elevated structures	0

Table 8-1. Summary of Potential Noise Impacts and Mitigation Measures

Alternative	Relocation of Noise Walls Required for Project Construction[a]	Light Rail Impacts		Proposed Noise Mitigation Measures for Impacts (Excluding New and Relocated Traffic Noise Walls)	Locations Considered for Sound Insulation
		Moderate[b]	Severe[c]		
A3	sta 155-176: 2,100 feet	269	198	Approximately 17,300 feet of additional noise walls, 500 feet at-grade, 1,600 feet on retaining walls, and 15,200 feet along elevated structures	27
A5	sta 30–52: 2,200 feet sta 115–126: 1,100 feet sta 155–189: 3,400 feet sta 197–202: 500 feet sta 206–216: 1,000 feet	181	105	Approximately 11,000 feet of additional noise walls, 2,600 feet at-grade, 4,500 feet on retaining walls, and 3,900 feet along elevated structures	8
A7	sta 155–176: 2,100 feet	296	183	Approximately 17,400 feet of additional noise walls, 400 feet at-grade, 2,200 feet on retaining walls, and 14,800 feet along elevated structures	29
A10	sta 30–31: 100 feet sta 38–53: 1,500 feet sta 114–126: 1,200 feet sta 155–189: 3,400 feet sta 197–216: 1,900 feet	161	110	Approximately 11,500 feet of additional noise walls, 2,300 feet at-grade, on 5,100 feet on retaining walls, and 4,100 feet along elevated structures	3
A11	sta 155–189: 3,400 feet	272	195	Approximately 17,100 feet of additional noise walls, 300 feet at-grade, 1,600 feet on retaining walls, and 15,200 feet along elevated structures	28
Segment B Alternatives					
Preferred Alternative	None	148	65	Approximately 16,975 feet of additional noise walls, 1,100 feet at-grade, 4,550 feet on retaining walls, and 11,325 feet along elevated structures	9
Preferred Alternative – 220th Street Station Option	None	133	65	Approximately 16,975 feet of additional noise walls, 1,100 feet at-grade, 4,550 feet on retaining walls, and 11,325 feet along elevated structures	9
B1	None	89	29	Approximately 20,800 feet of additional noise walls, 14,600 feet at-grade or on retaining walls and 6,200 feet along elevated structures	0
B2A	None	138	50	Approximately 15,000 feet of additional noise walls, 5,600 feet at-grade or on retaining walls and 9,400 feet along elevated structures	3
B4	None	73	33	Approximately 20,000 feet of additional noise walls, 14,500 feet at-grade or on retaining walls and 5,500 feet along elevated structures	0

Table 8-1. Summary of Potential Noise Impacts and Mitigation Measures

Alternative	Relocation of Noise Walls Required for Project Construction[a]	Light Rail Impacts		Proposed Noise Mitigation Measures for Impacts (Excluding New and Relocated Traffic Noise Walls)	Locations Considered for Sound Insulation
		Moderate[b]	Severe[c]		
Segment C Alternatives					
Preferred Alternative	None	26	8	Approximately 3,960 feet of additional noise walls along elevated structures	0
C1, Option 1	None	159	24	Approximately 7,200 feet of additional noise walls along elevated structures	0
C1, Option 2	None	152	23	Approximately 7,200 feet of additional noise walls along elevated structures	0
C2, Option 1	None	52	41	Approximately 6,600 feet of additional noise walls along elevated structures	0
C2, Option 2	None	49	41	Approximately 6,600 feet of additional noise walls along elevated structures	0
C3, Option 1	None	16	1	Approximately 1,700 feet of additional noise walls, 700 feet on retained fill and 1,000 feet along elevated structures	0
C3, Option 2	None	13	8	Approximately 1,700 feet of additional noise walls, 700 feet on retained fill and 1,000 feet along elevated structures	0

[a] This column shows the location of the start and end points (sta) for relocated noise walls along the light rail route and the corresponding length (feet) of relocated noise walls. The "sta" references the designated station numbering, or location along the alignment, on the project design drawings, and each consecutive sta marker on the design drawings indicates a distance of 100 feet. For example, from sta 38 to 53 there are 15 sta on the design drawings, which multiplied by 100 for each sta equals a distance of 1,500 feet.

[b] Moderate impact: In this range of noise impact; the change in the cumulative noise level is noticeable to most people but might not be sufficient to cause strong, adverse reactions from the community.

[c] Severe impact: Project-generated noise in the severe impact range can be expected to cause a substantial percentage of people to be highly annoyed by the new noise and represents the most compelling need for mitigation.

In addition to noise walls for transit noise mitigation, the project would replace several highway noise walls that currently reduce traffic noise levels. The analysis for the replacement walls is separate from the transit mitigation analysis and these evaluations are presented in Section 8.7. The noise walls specified for the Preferred Alternative in Table 8-1 include the proposed replacement traffic noise walls but not the new traffic noise walls in the Lynnwood Park-and-Ride Station area.

All of the transit and traffic noise wall heights and locations specified in this report are approximations based on current alignment, topographical and other data. During final design, Sound Transit will update all of this data, and as a result, those heights and locations could change. Based on the current noise analysis, all noise impacts for the Preferred Alternative, except for 17 single-family and multifamily residences, would be fully mitigated by noise walls. Additional noise analysis will be performed during final design for the remaining 17 noise impacts to determine the best form of mitigation to complete the project's mitigation package. Options that could be used to mitigate the remaining 17 impacts could include special noise walls or sound insulation. The number of remaining impacts after including noise barriers would vary for the other alternatives.

8.5.1 Segment A

Noise mitigation in Segment A would be achieved with noise walls. The walls are located on retaining walls, at-grade, and along the sides of elevated structures.

Preferred Alternative Segment A

Under the Preferred Alternative, there are 21,957 feet of new and replacement noise walls that are used to mitigate light rail noise, and in some cases traffic noise. The effect of these walls on traffic noise is presented in Section 8.7. The walls range in height from a typical light rail elevated structure noise wall at 4 feet tall to a 16- to 20-foot-tall noise wall that reduces traffic noise and mitigates light rail noise. Table 8-2 provides a summary of the noise walls, including replacement traffic noise walls, proposed for the Preferred Alternative. With the proposed noise walls, and the relocation/replacement of existing traffic noise walls, Sound Transit would mitigate all predicted noise impacts resulting from the Preferred Alternative, with the exception of 8 residences, including 1 duplex and 6 single-family residences (Table 8-2). Any remaining homes with light rail noise impacts will be reevaluated during final design to verify the impacts and apply sound insulation if necessary.

There are several areas along the corridor where the existing traffic noise walls do not reduce traffic noise levels to below the NAC. In those areas, the relocated walls at their current height may also not reduce the traffic noise to below the NAC but still meet the criteria of producing no new traffic noise impacts or increasing the severity of any existing traffic noise impacts. In these areas, increasing the height of the wall may be considered and will be reviewed with WSDOT during final design.

Table 8-2. Summary of Potential Noise Mitigation Measures for Preferred Alternative

Wall Type[a]	Start Station[b]	End Station[b]	Length (linear feet)	Height (feet)
LR Wall on Structure	17	22	500	4
LR Wall on Structure	22	26	400	6
LR Wall on Structure	26	29.5	350	8
LR Wall on Fill Wall	29.5	32	250	8
LR Wall on Fill Wall	32	35	300	12
LR and TR Wall on Fill Wall	35	38	300	12
LR and TR Wall At-Grade	38	39	100	14
LR and TR Wall At-Grade	39	39.75	75	16
LR and TR Wall on Cut Wall	39.75	40	25	12
LR and TR Wall on Cut Wall	40	41	100	8
LR and TR Wall on Cut Wall	41	42	100	6
LR and TR Wall on Cut Wall	42	43	100	9
LR and TR Wall on Cut Wall	43	44	100	12
LR and TR Wall on Cut Wall	44	44.5	50	16
TR and LR Wall on Fill Wall	44.5	50	550	10
LR Wall on Fill Wall	50	55	500	8
LR Wall At-Grade	55	58	300	8
LR Wall on Cut Wall	58	59	100	4
LR Wall on Cut Wall	59	60	100	4
LR Wall on Cut Wall	60	61	100	2
LR Wall on Cut Wall	61	62	100	2

Table 8-2. Summary of Potential Noise Mitigation Measures for Preferred Alternative

Wall Type[a]	Start Station[b]	End Station[b]	Length (linear feet)	Height (feet)
TR Wall on Fill Wall	44	47	300	14
TR Wall on Fill Wall	47	49	200	16
TR Wall on Fill Wall	49	50	100	18
TR Wall on Fill Wall	50	56	600	22
TR Wall on Fill Wall	56	58	200	24
TR Wall on Fill Wall	58	59	100	24
TR Wall on Fill Wall	59	61	200	22
TR Wall on Fill Wall	61	62	100	20
TR Wall on Fill Wall	62	66	400	18
TR Wall At-Grade	2010.75	2011.75	100	16
TR Wall At-Grade	2011.75	2011.95	20	18
TR Wall At-Grade	2011.95	2012.75	80	20
TR Wall on Cut Wall	67.64	72	499	20
TR Wall on Cut Wall	72	74	200	18
TR Wall At-Grade	--	--	50	8
TR Wall At-Grade	--	--	50	10
TR Wall At-Grade	--	--	50	10
TR Wall At-Grade	--	--	50	10
TR Wall At-Grade	--	--	22	12
TR Wall At-Grade	--	--	30	12
TR Wall At-Grade	--	--	60	12
LR Wall on Structure	110	125	1,500	4
LR and TR Wall At-Grade (Alignment is on Structure)	123.2	123.5	60	38.37
LR and TR Wall At-Grade (Alignment is on Structure)	123.5	123.94	57	36.75
LR and TR Wall At-Grade (Alignment is on Structure)	123.94	124.67	73	35.2
LR and TR Wall At-Grade (Alignment is on Structure)	124.67	124.67	12	36.18
LR and TR Wall At-Grade (Alignment is on Structure)	124.67	126	133	36.18
LR and TR Wall At-Grade (Alignment is on Structure)	126	127	100	36.12
LR and TR Wall At-Grade (Alignment is on Structure)	127	128	100	13.07
LR and TR Wall At-Grade (Alignment is on Structure)	128	128.45	44	33.62
LR and TR Wall At-Grade (Alignment is on Structure)	128.45	128.78	50	33.16
LR and TR Wall At-Grade (Alignment is on Structure)	128.78	129.37	59	34.75
LR and TR Wall At-Grade (Alignment is on Structure)	129.37	130	63	33.81
LR and TR Wall At-Grade (Alignment is on Structure)	130	13.2	20	33.02
TR Wall At-Grade	130.2	131	80	20
LR Wall on Fill Wall	130.5	144	1,350	6
LR Wall on Structure	144	146	200	8
LR Wall on Fill Wall	146	162	1,600	8

Table 8-2. Summary of Potential Noise Mitigation Measures for Preferred Alternative

Wall Type[a]	Start Station[b]	End Station[b]	Length (linear feet)	Height (feet)
LR and TR Wall on Fill Wall	162	163	100	8
LR and TR Wall on Cut Wall	163	165	200	10
LR and TR Wall on Cut Wall	165	169	400	12
LR and TR Wall on Cut Wall	169	173	400	14
LR and TR Wall on Cut Wall	173	174	100	16
LR and TR Wall on Cut Wall	174	176	200	18
LR and TR Wall on Cut Wall	176	178	200	20
LR and TR Wall on Cut Wall	178	179	100	18
LR and TR Wall on Cut Wall	179	185	600	14
LR and TR Wall on Cut Wall	185	192	700	12
LR and TR Wall on Fill Wall	192	196.25	425	12
LR and TR Wall on Structure	196.25	200	375	8
LR Wall on Structure	200	205	500	8
LR Wall on Fill Wall	205	210	500	8
LR Wall on Cut Wall	210	216	600	8
TR and LR Wall on Cut Wall	216	217	100	10
TR and LR Wall on Cut Wall	217	218	100	12
TR and LR Wall on Cut Wall	218	219	100	14
TR and LR Wall on Cut Wall	219	220	100	16
TR and LR Wall on Cut Wall	220	221	100	16
TR and LR Wall on Cut Wall	221	222	100	18
TR and LR Wall on Cut Wall	222	223	100	18
TR and LR Wall on Cut Wall	223	223.5	50	18
TR and LR Wall on Cut Wall	223.5	224	50	16
TR and LR Wall on Cut Wall	224	224.5	50	12
TR and LR Wall on Cut Wall	224.5	225	50	10
TR and LR Wall on Cut Wall	225	225.45	45	8
TR Wall on Cut Wall	230	238	800	18
LR Wall on Cut Wall	233	237.33	433	6
LR and TR Wall At-Grade	237.33	238	67	14
LR and TR Wall At-Grade	238	239	100	16
LR and TR Wall At-Grade	239	242	300	18
LR and TR Wall At-Grade	242	244	200	20
LR and TR Wall At-Grade	244	245	100	18
LR and TR Wall At-Grade	245	246	100	16
LR and TR Wall At-Grade	246	247	100	14
Total linear feet of noise wall			**21,957**	

[a] "TR" stands for a replacement traffic noise wall that will mitigate traffic noise impacts caused by the project and, in some cases, light rail noise. "LR" stands for a wall that is intended to mitigate light rail noise only. All replacement traffic noise walls are included in this table.

[b] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

Alternative A1: At-grade/Elevated with NE 145th Street and NE 185th Street Stations

Table 8-3 summarizes the potential mitigation noise walls in Segment A for Alternative A1. The proposed noise mitigation would include approximately 11,200 linear feet of noise wall. The majority of noise walls on elevated structures would be 4 feet to 6 feet tall, while noise walls on

retaining walls and in cut-and-fill sections would range from 4 feet to 8 feet tall. With the proposed noise walls (Table 8-3) and the relocation of existing noise walls, Sound Transit would mitigate all predicted noise impacts resulting from Alternative A1. In some areas, proposed replacement traffic noise walls might not fully mitigate all noise impacts from the project; these walls could be increased in height, if possible, or sound insulation might be applied to provide additional noise mitigation, where required.

Table 8-3. Summary of Potential Noise Mitigation Measures for Alternative A1

Wall Type[a]	Start Station[b]	End Station[b]	Length (linear feet)	Height (feet)
Wall on Structure	11	20	900	4
Wall on Retaining Wall	20	26	600	6
Wall At-Grade	36	37	100	4
Wall on Retaining Wall	37	45	800	4
Wall At-Grade	45	53	800	4
Wall on Structure	107	122	1,500	4 to 6
Wall on Retaining Wall	122	133	1,100	4 to 6
Wall on Structure	133	141	800	4 to 6
Wall on Retaining Wall	141	151	1,000	4 to 6
Wall At-Grade	151	156	500	4 to 6
Wall on Structure	190	196	600	4 to 6
Wall on Retaining Wall	196	199	300	4 to 6
Wall At-Grade	199	206	700	4 to 8
Wall on Retaining Wall	206	212	600	4 to 8
Wall on Retaining Wall	228	231	300	4
Wall At-Grade	231	237	600	4
Total linear feet of noise wall			**11,200**	

[a] Replacement traffic noise walls that do not also mitigate light rail noise are not included in this summary, but they would be included in the project, as necessary, to mitigate traffic noise impacts caused by this alternative.

[b] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Street Stations

Table 8-4 summarizes the potential mitigation noise walls in Segment A for Alternative A3. The proposed noise mitigation would include approximately 17,300 linear feet of noise wall, with Sound Transit installing most of the walls along the elevated guideway structures. All noise walls would be 4 feet to 6 feet tall. The proposed noise walls (Table 8-4) and the relocation of existing noise walls would together mitigate most predicted noise impacts. Currently, 10 single-family homes and a duplex immediately adjacent to the proposed light rail alignment on the east side of I-5 between NE Northgate Way and NE 125th Street NE and 15 single-family homes immediately adjacent to the alignment on the east side of I-5 between NE 175th Street and NE 200th Street NE might need sound insulation.

Table 8-4. Summary of Potential Noise Mitigation Measures for Alternative A3

Wall Type[a]	Start Station[b]	End Station[b]	Length (linear feet)	Height (feet)
Wall on Structure	11	87	7,600	4 to 6
Wall on Structure	108	126	1,800	4 to 6
Wall on Retaining Wall	126	131	500	4 to 6
Wall on Structure	131	141	1,000	4 to 6
Wall on Retaining Wall	141	149	800	4 to 6
Wall At-Grade	149	154	500	4 to 6
Wall on Retaining Wall	154	157	300	4
Wall on Structure	185	233	4,800	4 to 6
Total linear feet of noise wall			**17,300**	

[a] Replacement traffic noise walls that do not also mitigate light rail noise are not included in this summary, but they would be included in the project, as necessary, to mitigate traffic noise impacts caused by this alternative.

[b] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Table 8-5 summarizes the potential mitigation noise walls in Segment A for Alternative A5. The proposed noise mitigation would include approximately 11,000 linear feet of noise wall, with Sound Transit installing most of the walls along the elevated guideway structures and on retaining walls. The majority of noise walls on elevated structures would be 4 feet to 6 feet tall, while noise walls on retaining walls and at-grade would range from 4 feet to 8 feet tall. With the proposed noise walls, (Table 8-5) and the relocation of existing noise walls, Sound Transit would mitigate most predicted noise impacts. Currently, six single-family homes and a duplex immediately adjacent to the proposed light rail alignment on the east side of I-5 may need sound insulation.

Table 8-5. Summary of Potential Noise Mitigation Measures for Alternative A5

Wall Type[a]	Start Station[b]	End Station[b]	Length (linear feet)	Height (feet)
Wall on Structure	11	23	1,200	4 to 6
Wall on Retaining Wall	23	26	300	8
Wall At-Grade	26	33	700	8
Wall on Retaining Wall	33	44	1,100	4
Wall At-Grade	44	45	100	4
Wall on Structure	107	115	800	4 to 6
Wall on Retaining Wall	115	124	900	4 to 6
Wall on Structure	124	134	1,000	4
Wall on Structure	138	141	300	4
Wall on Retaining Wall	141	151	1,000	4 to 6
Wall At-Grade	151	156	500	4 to 6
Wall on Structure	190	196	600	4 to 6
Wall on Retaining Wall	196	199	300	4 to 6
Wall At-Grade	199	204	500	4 to 8
Wall on Retaining Wall	204	209	500	4
Wall At-Grade	223	224	100	4

Table 8-5. Summary of Potential Noise Mitigation Measures for Alternative A5

Wall on Retaining Wall	224	226	200	4
Wall At-Grade	226	230	400	4 to 6
Wall on Retaining Wall	230	231	100	4
Wall At-Grade	231	234	300	4 to 6
Wall on Retaining Wall	234	235	100	4
Total linear feet of noise wall			**11,000**	

[a] Replacement traffic noise walls that do not also mitigate light rail noise are not included in this summary, but they would be included in the project, as necessary, to mitigate traffic noise impacts caused by this alternative.

[b] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Table 8-6 summarizes the potential mitigation noise walls in Segment A for Alternative A7. The proposed noise mitigation would include approximately 17,400 linear feet of noise wall, with Sound Transit installing most of the walls along the elevated guideway structures. The majority of noise walls on elevated structures would be 4 feet to 6 feet tall, while noise walls on retaining walls and at-grade would range from 4 feet to 8 feet tall. With the proposed walls (Table 8-6) and the relocation of existing noise walls, South Transit would mitigate most predicted noise impacts. Currently, 29 residences on the east side of I-5 may need sound insulation. Ten of these residences are 8 single-family residences and a duplex immediately adjacent to the proposed light rail alignment between NE Northgate Way and NE 120th Street NE. Four of these residences are located on the east side of I-5 between NE 120th Street and NE 152nd Street. The remaining 15 of these residences are single-family homes immediately adjacent to the alignment between NE 178th Street and NE 190th Street NE.

Table 8-6. Summary of Potential Noise Mitigation Measures for Alternative A7

Wall Type[a]	Start Station[b]	End Station[b]	Length (linear feet)	Height (feet)
Wall on Structure	11	87	7,600	4 to 6
Wall on Structure	107	114	700	4
Wall on Retaining Wall	114	125	1,100	4 to 8
Wall on Structure	125	140	1,500	4 to 6
Wall on Retaining Wall	140	150	1,000	4 to 6
Wall At-Grade	150	154	400	4 to 6
Wall on Retaining Wall	155	156	100	4
Wall on Structure	185	235	5,000	4 to 6
Total linear feet of noise wall			**17,400**	

[a] Replacement traffic noise walls that do not also mitigate light rail noise are not included in this summary, but they would be included in the project, as necessary, to mitigate traffic noise impacts caused by this alternative.

[b] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations

Table 8-7 summarizes the potential mitigation noise walls in Segment A for Alternative A10. The proposed noise mitigation would include approximately 11,500 linear feet of noise wall, with Sound Transit installing most of the walls along the elevated guideway structures and retaining walls. The majority of noise walls on elevated structures would be 4 feet to 6 feet tall, while noise walls on retaining walls and at-grade would range from 4 feet to 8 feet tall. The proposed walls (see Table 8-7) together with the relocation of existing noise walls would mitigate most predicted noise impacts. Currently, three single-family homes immediately adjacent to the proposed light rail alignment on the east side of I-5 may need sound insulation. Two of these homes are located between NE 115th Street and NE 117th Street NE, and one is just north of NE 175th Street.

Table 8-7. Summary of Potential Noise Mitigation Measures for Alternative A10

Wall Type[a]	Start Station[b]	End Station[b]	Length (linear feet)	Height (feet)
Wall on Structure	11	23	1,200	4 to 6
Wall on Retaining Wall	23	27	400	8
Wall At-Grade	27	34	700	8
Wall on Retaining Wall	34	44	1,000	4
Wall At-Grade	44	45	100	4
Wall on Structure	107	122	1,500	4 to 6
Wall on Retaining Wall	122	133	1,100	4 to 6
Wall on Structure	133	141	800	6 to 8
Wall on Retaining Wall	141	156	1,500	6 to 8
Wall on Structure	190	196	600	6
Wall on Retaining Wall	196	199	300	8
Wall At-Grade	199	206	700	8
Wall on Retaining Wall	206	210	400	8
Wall At-Grade	223	224	100	4
Wall on Retaining Wall	224	226	200	4
Wall At-Grade	226	230	400	4 to 6
Wall on Retaining Wall	230	231	100	4 to 6
Wall At-Grade	231	234	300	4 to 6
Wall on Retaining Wall	234	235	100	4 to 6
Total linear feet of noise wall			**11,500**	

[a] Replacement traffic noise walls that do not also mitigate light rail noise are not included in this summary, but they would be included in the project, as necessary, to mitigate traffic noise impacts caused by this alternative.

[b] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations

Table 8-8 summarizes the potential mitigation noise walls in Segment A for Alternative A11. The proposed noise mitigation would include approximately 17,100 linear feet of noise wall, with Sound Transit installing most of the walls along the elevated guideway structures. All noise walls would be 4 feet to 6 feet tall. The proposed walls (Table 8-8) together with the relocation of existing noise

walls would mitigate most predicted noise impacts. Currently, 10 single-family homes and a duplex immediately adjacent to the proposed light rail alignment on the east side of I-5 between NE 115th Street and NE 123rd Street NE, a single family residence on NE 158th Street, and 15 single-family homes immediately adjacent to the alignment on the east side of I-5 between NE 178th Street and NE 190th Street NE may need sound insulation.

Table 8-8. Summary of Potential Noise Mitigation Measures for Alternative A11

Wall Type[a]	Start Station[b]	End Station[b]	Length (linear feet)	Height (feet)
Wall on Structure	11	87	7,600	4 to 6
Wall on Structure	108	126	1800	4 to 6
Wall on Retaining Wall	126	131	500	4 to 6
Wall on Structure	131	141	1000	4 to 6
Wall on Retaining Wall	141	151	1000	4 to 6
Wall At-Grade	151	154	300	4 to 6
Wall on Retaining Wall	154	155	100	4
Wall on Structure	185	233	4,800	4 to 6
Total linear feet of noise wall			**17,100**	

[a] Replacement traffic noise walls that do not also mitigate light rail noise are not included in this summary, but they would be included in the project, as necessary, to mitigate traffic noise impacts caused by this alternative.

[b] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

8.5.2 Segment B

The primary noise mitigation measure in Segment B would be the use of noise walls, including short, acoustical absorbent walls directly attached to the sides of the elevated guideway. Sound Transit would also use additional at-grade noise walls and walls along retained fills and cuts, depending on the track type. In Segment B there are several locations where the receivers would be substantially above the grade of the alignment and, therefore, noise walls might not be as effective as when the light rail profile is at the same or higher elevation as the receivers. For those sites, building sound insulation might be the only form of noise mitigation available.

Preferred Alternative Segment B

Under the Preferred Alternative, there are 16,975 feet of new noise walls proposed. The walls are located on retaining walls, at-grade, and along the sides of elevated structures and range in height from 4 to 8 feet tall. With the additional noise walls, all predicted noise impacts resulting from the Preferred Alternative would be mitigated, with the exception of 9 single-family residences. The remaining homes with light rail noise impacts will be reevaluated during final design to verify the impacts and apply sound insulation if necessary.. Table 8-9 provides the location and heights of the noise walls. At the time of this report, there were no replacement traffic noise walls under the Preferred Alternative.

Table 8-9. Summary of Potential Noise Mitigation Measures for Preferred Alternative

Wall Type[a]	Start Station[b]	End Station[b]	Length (linear feet)	Height (feet)
East Side of Alignment				
LR Wall on Cut Wall	247	264	1,700	6
LR Wall on Cut Wall	264	265	100	8
LR Wall on Cut Wall	265	266.2	120	6
LR Wall on Structure	266.2	276	980	6
LR Wall on Structure	276	283	700	4
LR Wall on Structure	289	310	2,100	4
LR Wall on Structure	400	402.25	225	8
LR Wall on Cut Wall	402.25	406.7	445	8
LR Wall on Structure	442	465.8	2,380	4
LR Wall on Fill Wall	465.8	475	920	4
West Side of Alignment				
LR Wall on Cut Wall	402.25	406.7	445	4
LR Wall on Structure	406.7	411	430	4
LR Wall on Structure	411	423	1,200	8
LR Wall on Structure	442	452	1,000	6
LR Wall on Structure	452	465.8	1,380	4
LR Wall on Fill Wall	465.8	467	120	6
LR Wall on Fill Wall	467	469	200	8
LR Wall on Fill Wall	469	471	200	6
LR Wall on Fill Wall	471	473	200	4
LR Wall on Cut Wall	473	474	100	4
LR and TR Wall At-Grade	474	485	1,100	--
Total linear feet of noise wall and traffic safety barrier			**16,975**	

[a] "LR" stands for a wall that is intended to mitigate light rail noise only. There are no replacement traffic noise walls in Segment B.

[b] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

Preferred Alternative Segment B with 220th Street Station South Option

Mitigation for the Preferred Alternative with the 220th Street Station South Option is the same as provided for the Preferred Alternative.

Alternative B1: East side to Mountlake Terrace Transit Center to Median

Table 8-10 summarizes the potential mitigation noise walls in Segment B with Alternative B1. The proposed noise mitigation would include approximately 20,800 linear feet of noise wall, with 12,900 feet of wall on the east side and 7,900 feet of wall on the west side of the alignment. All noise walls would be 4 feet to 8 feet tall, and slightly taller walls could be used if they were found to be effective at mitigating receiver locations higher than the light rail alignment. In addition, where the alignment is in the I-5 median, the walls would be maintained continuously as an approximately 3- to 4-foot-tall safety barrier. This would be required regardless of the noise impacts, except along the portion of the alignment where the light rail would be in a retained cut below the grade of the northbound lanes, where a safety barrier already exists. Sound Transit would mitigate all predicted noise impacts by installing the proposed noise walls (Table 8-10).

Table 8-10. Summary of Potential Noise Mitigation Measures for Alternative B1

Wall Type	Start Station[a]	End Station[a]	Length (linear feet)	Height (feet)
East Side of Alignment				
Wall on Retaining Wall	305	321	1,600	4 to 6
Wall on Structure	321	338	1,700	4
Wall on Structure	352	364	1,200	4
Wall on Structure	370	388	1,800	4 to 6
Wall At-Grade or Wall on Retaining Wall (includes traffic safety barrier)	388	454	6,600	4 to 6
West Side of Alignment				
Wall on Structure	378	388	1,000	6
Wall on Retaining Wall (includes traffic safety barrier)	388	392	400	8
Wall At-Grade (includes traffic safety barrier)	392	451	5,900	4 to 6
Wall on Retaining Wall	451	452	100	8
Wall on Structure	452	457 (merge with wall in Segment C, which begins at station 500)	500	6
Total linear feet of noise wall and traffic safety barrier			**20,800**	

[a] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

Alternative B2A: East Side to Mountlake Terrace Transit Center to West Side

Table 8-11 summarizes the potential mitigation noise walls in Segment B with Alternative B2A. The proposed noise mitigation would include approximately 15,000 linear feet of noise wall, with 6,700 feet of wall on the east side and 8,300 feet of wall on the west side of the alignment. All noise walls would be 4 feet to 6 feet tall, and slightly taller walls could be used if they were found to be effective at mitigating receiver locations at a higher elevation than the light rail alignment. With the proposed noise walls (Table 8-11), relocating several noise walls, and adding building sound insulation where required, Sound Transit would mitigate all predicted noise impacts. Currently, one single-family home along the east side of I-5 near 12th Avenue NE might need sound insulation. In addition, two homes immediately south of the 212th Street SW that have severe noise impacts might also need sound insulation.

Table 8-11. Summary of Potential Noise Mitigation Measures for Alternative B2A

Wall Type	Start Station[a]	End Station[a]	Length (linear feet)	Height (feet)
East Side of Alignment				
Wall on Structure	321	338	1,700	4
Wall on Structure	353	365	1,200	4
Wall on Structure	369	388	1,900	4 to 6
Wall near Track	400	419	1,900	4

Table 8-11. Summary of Potential Noise Mitigation Measures for Alternative B2A

Wall Type	Start Station[a]	End Station[a]	Length (linear feet)	Height (feet)
West Side of Alignment				
Wall on Structure	377	385	800	4 to 6
Wall on Retaining Wall	385	400	1,500	4 to 6
Wall on Structure	400	438	3,800	4
Wall on Fill/Structure	438	460 (merge with wall in Segment C, which begins at station 500)	2,200	4 to 6
Total linear feet of noise wall			**15,000**	

[a] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median

Table 8-12 summarizes the potential noise walls that Sound Transit would use to mitigate noise in Segment B for Alternative B4. The proposed noise mitigation would include approximately 20,000 linear feet of noise wall, with 12,100 feet of wall on the east side and 7,900 feet of wall on the west side of the alignment. All noise walls would be 4 feet to 8 feet tall, and slightly taller walls could be used if they were found to be effective at mitigating receiver locations at a higher elevation than the light rail alignment. In addition, where the light rail alignment is in the I-5 median, the walls would be maintained continuously as a safety barrier approximately 3 feet to 4 feet tall. This would be required regardless of the noise impacts, except along the portion of the alignment where the light rail would be in a retained cut below the grade of the northbound lanes, and where a safety barrier already exists. With the proposed noise walls (Table 8-12), Sound Transit would mitigate all predicted noise impacts.

Table 8-12. Summary of Potential Noise Mitigation Measures for Alternative B4

Wall Type	Start Station[a]	End Station[a]	Length (linear feet)	Height (feet)
East Side of Alignment				
Wall on Retaining Wall	305	321	1,600	4 to 6
Wall on Structure	321	338	1,700	4
Wall on Structure	352	365	1,300	4
Wall on Structure (includes traffic safety barrier)	378	388	1,000	4 to 6
Wall At-Grade or Wall on Retaining Wall (includes traffic safety barrier)	388	453	6,500	4 to 6

Table 8-12. Summary of Potential Noise Mitigation Measures for Alternative B4

Wall Type	Start Station[a]	End Station[a]	Length (linear feet)	Height (feet)
West Side of Alignment				
Wall on Structure (includes traffic safety barrier)	378	388	1,000	6
Wall on Retaining Wall (includes traffic safety barrier)	388	392	400	8
Wall At-Grade (includes traffic safety barrier)	392	451	5,900	4 to 6
Wall on Retaining Wall (includes traffic safety barrier)	451	452	100	8
Wall on Structure (includes traffic safety barrier)	452	457 (merge with wall in Segment C, which begins at station 500)	500	4 to 6
Total linear feet of noise wall and traffic safety barrier			**20,000**	

[a] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

8.5.3 Segment C

The light rail alignment in Segment C would be mainly elevated in areas with noise impacts; therefore, noise walls on the elevated guideway structure would be the primary noise mitigation. Additional at-grade noise walls and walls along retained fills and cuts would also be used for the light rail alignments along I-5. New traffic noise walls would also be required under the Preferred Alternative in the area around the Lynnwood Park-and-Ride Station. These noise walls are not included in the discussions that follow but are explained in detail in Section 8.8 of this report.

Preferred Alternative Segment C

Under the Preferred Alternative in Segment C, there are 3,225 feet of noise walls proposed along the west side of the elevated structure and 735 feet along the east side of the elevated structure. With the proposed noise walls, all noise impacts would be mitigated. The noise wall location and heights are provided in Table 8-13.

Table 8-13. Summary of Potential Noise Mitigation Measures for Preferred Alternative

Wall Type[a]	Start Station[b]	End Station[b]	Length (linear feet)	Height (feet)
LR Wall on Structure	491 (continued from Segment B)	498	700	4
LR Wall on Structure	498	502	400	6
LR Wall on Structure	502	507.5	550	4
LR Wall on Structure	515	530.75	1,575	4
LR Wall on Structure	534.5	541.85	735	4
Total linear feet of noise wall			**3,960**	

[a] "LR" stands for a wall that is intended to mitigate light rail noise only. There are no replacement traffic noise walls in Segment C. New traffic noise walls are explained in detail in Section 8.8 of this report.

[b] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

Alternative C1: 52nd Avenue West to 200th Street SW, with Option 1

Table 8-14 summarizes the potential noise walls for noise mitigation in Segment C for Alternative C1 with Option 1. The proposed noise mitigation would include approximately 7,200 linear feet of noise wall, with 2,900 feet of wall on the east side and 4,300 feet of wall on the west side of the light rail alignment. All noise walls would be 4 feet to 6 feet tall, and slightly taller walls could be used if they were found to be effective at mitigating elevated receiver locations. With the proposed noise walls (Table 8-14), Sound Transit would mitigate all predicted noise impacts.

Table 8-14. Summary of Potential Noise Mitigation Measures for Alternative C1 with Option 1

Wall Type	Start Station[a]	End Station[a]	Length (linear feet)	Height (feet)
East Side of Alignment				
Wall on Structure	508	512	400	4
Wall on Structure	540	560	2,500	4 to 6
West Side of Alignment				
Wall on Structure	500 (continued from Segment B)	535	3,500	4
Wall on Structure	535	548	800	4 to 6
Total linear feet of noise wall			**7,200**	

[a] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

Alternative C1: 52nd Avenue West to 200th Street SW, with Option 2

Noise mitigation under Alternative C1 with Option 2 would be the same as described above for Alternative C1 with Option 1.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center, with Option 1

Table 8-15 summarizes the potential noise walls to mitigate noise in Segment C for Alternative C2 with Option 1. The proposed noise mitigation would include approximately 6,600 linear feet of noise wall, with 2,200 feet of wall on the east side and 4,400 feet of wall on the west side of the light rail alignment. All noise walls would be 4 feet to 6 feet tall, and slightly taller walls could be used if they were found to be effective at mitigating elevated receiver locations. With the proposed noise walls (see Table 8-15), Sound Transit would mitigate all predicted noise impacts.

Table 8-15. Summary of Potential Noise Mitigation Measures for Alternative C2 with Option 1

Wall Type	Start Station[a]	End Station[a]	Length (linear feet)	Height (feet)
East Side of Alignment				
Wall on Structure	508	512	400	4
Wall on Structure	535	553	1,800	4 to 6
West Side of Alignment				
Wall on Structure	500 (continued from Segment B)	535	3,500	4
Wall on Structure	535	544	900	4
Total linear feet of noise wall			**6,600**	

[a] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center, with Option 2

Noise mitigation under Alternative C2 with Option 2 would be the same as described for Alternative C2 with Option 1.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride, with Option 1

Table 8-16 summarizes the potential noise walls to mitigate noise in Segment C for Alternative C3 with Option 1. The proposed noise mitigation would include approximately 1,700 linear feet of noise wall. All noise walls would be 4 feet tall. With the proposed walls (Table 8-16), Sound Transit would mitigate all predicted noise impacts.

Table 8-16. Summary of Potential Noise Mitigation Measures for Alternative C3 with Option 1

Wall Type	Start Station[a]	End Station[a]	Length (linear feet)	Height (feet)
Wall on Retaining Wall	500 (continued from Segment B)	507	700	4
Wall on Structure	507	517	1,000	4
Total linear feet of noise wall			**1,700**	

[a] Station refers to locations on the project design drawings that indicate each 100-foot section of the proposed light rail route.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride, with Option 2

Noise mitigation under Alternative C3 with Option 2 would be the same as discussed for Alternative C3 with Option 1.

8.6 Park-and-Ride Facility Noise Mitigation

This section provides specific noise mitigation for impacts associated with the park-and-ride facilities based on the most current conceptual drawings for the facilities. Those impacts are summarized in Tables 7-4, 7-17 and 7-23. These mitigation measures would be in addition to those for the light rail operations and are not included in Table 8-1. The approximate length and heights of the walls are provided in the following sections.

8.6.1 Segment A

Preferred Alternative with NE 130th Station Option

With the NE 130th Street Station Option under the Preferred Alternative, there would be no park-and-ride noise impacts; therefore, no noise mitigation is proposed.

Preferred Alternative with NE 145th Station

With the NE 145th Street Station under the Preferred Alternative, there would be no park-and-ride noise impacts; therefore, no noise mitigation is proposed.

Preferred Alternative with NE 185th Station

With the NE 185th Street Station under the Preferred Alternative, there would be 13 park-and-ride noise impacts. Most of the noise impacts are related to the noise from buses operating on the station turnout during early morning hours in addition to traffic accessing the station. The noise mitigation would include a noise wall along the east side of the bus access area for approximately 530 feet long and 10 to 12 feet tall. The noise wall would reduce noise from bus operations by up to 10 dBA. There is a potential for sound insulation or a taller noise wall at one residence located at the north end of the station area. Further investigation will be performed during final design.

Preferred Alternative with NE 185th Station with Shoreline Stadium Garage Option

With the NE 185th Street Station with the Shoreline Stadium Garage Option under the Preferred Alternative, there would be 16 park-and-ride noise impacts. Noise mitigation is the same as proposed for the Preferred Alternative with the NE 185th Street Station with the exception of the three impacts located along NE 185th Street near I-5. These three impacts, which do not occur under the Preferred Alternative with the NE 185th Street Station, would be mitigated with station design, such as taller walls along the parking garage, or residential sound insulation.

NE 130th Street Station Option 1

Under Alternatives A5 and A10 with the NE 130th Street Station Option 1, there would be no park-and-ride noise impacts; therefore, no noise mitigation is proposed.

NE 130th Street Station Option 2

Under Alternatives A7 and A11 with the NE 130th Street Station Option 2, there would be no noise impacts; therefore, no noise mitigation is proposed.

NE 145th Street Station Option 1

Under Alternatives A1 and A10 with the NE 145th Street Station Option 1, there would be 2 park-and-ride noise impacts. Noise mitigation for the parking structure could include modifications to the structure to shield the nearby residences from traffic noise.

NE 145th Street Station Option 2

Under Alternatives A3 and A11 with the NE 145th Street Station Option 2, there would be no park-and-ride noise impacts; therefore, no noise mitigation is proposed.

NE 155th Street Station Option 1

Under Alternatives A5 and A7 with the NE 155th Street Station, there would be park-and-ride noise impacts at five properties directly adjacent to the parking garage during the early morning hours of 6:00 am to 7:00 am under the assumption that all 500 parking spaces would be filled in 1 hour by 7:00 am. The analysis assumes no additional shielding from the parking structure. Noise mitigation for the parking structure could include modifications to the structure to shield the nearby residences

and Fire Department from traffic noise emitted from the structure or by providing sound insulation as needed to the five impacted structures.

NE 185th Street Station Option 1

Under Alternative A1 with the NE 185th Street Station Option 1, Sound Transit identified 13 single-family residences that would experience park-and-ride noise impacts from buses accessing the station drop-off and layover area off 8th Avenue NE, and continuing along the new bus-only route to the elevated station. All impacts would be related to the noise from buses entering and leaving the drop-off and layover area near residences on 8th Avenue NE and near residences on NE 185th Street. Up to six of the affected residences would be mitigated with a noise wall along the northern and western property lines of the affected residences. These homes are located on 8th Avenue NE directly adjacent to the bus travel routes through the station drop-off and layover area. All other impacts would be mitigated with sound insulation. With the proposed noise mitigation measures, all noise impacts would be mitigated.

NE 185th Street Station Option 2

Under Alternatives A3, A7, and A11 with the NE 185th Street Station Option 2, Sound Transit identified nine single-family residences that would experience park-and-ride noise impacts from the buses accessing the park-and-ride. All noise impacts would be related to noise from buses entering the park-and-ride near residences on 8th Avenue NE and leaving the park-and-ride near residences on NE 185th Street. There are no feasible noise walls that could be used to provide noise mitigation; therefore, all nine single-family residences would be mitigated with sound insulation.

NE 185th Street Station Option 3

Under Alternatives A5 and A10 with the NE 185th Street Station Option 3, Sound Transit identified 12 single-family residences that would experience park-and-ride noise impacts from buses accessing the park-and-ride on 8th Avenue NE. The noise impacts would be related to noise from buses entering and leaving the park-and-ride near residences on 8th Avenue NE. The majority of the impacts would be mitigated with sound insulation. Two affected residences could be mitigated with a noise wall between 8th Avenue NE and the power substation. With the proposed mitigation, all noise impacts would be mitigated.

8.6.2 Segment B

Preferred Alternative with Mountlake Terrace Station

With the Mountlake Terrace Transit Center Station Option under the Preferred Alternative, Sound Transit identified four single-family residences that would have park-and-ride noise impacts. Mitigation for these impacts would include a noise wall on top of the eastern retaining wall between the park-and-ride facility and the residences. The wall would be effective at mitigating all noise impacts under this station option.

Preferred Alternative with 220th Street Station South Option

With the 220th Street Station South Option under the Preferred Alternative, there would be no park-and-ride noise impacts; therefore, no noise mitigation is proposed.

Mountlake Terrace Transit Center

With the Mountlake Terrace Transit Center Station Option under Alternatives B1 and B2A, Sound Transit identified four single-family residences that would have park-and-ride noise impacts. Mitigation for these impacts would include a noise wall on top of the eastern retaining wall between the park-and-ride facility and the residences. The wall would be effective at mitigating all noise impacts under this station option.

Mountlake Terrace Freeway Station

With the Mountlake Terrace Freeway Station Option under Alternative B4, the park-and-ride noise impacts and mitigation would be the same as described above under the Mountlake Terrace Transit Center Station option. With the proposed mitigation, all noise impacts would be mitigated.

220th Street SW Station

With the 220th Street Station North Option under Alternative B2A, there would be no noise impacts from vehicles accessing the park-and-ride lot; therefore, no noise mitigation is proposed.

8.6.3 Segment C

Preferred Alternative with Lynnwood Transit Center Station

With the Lynnwood Transit Center Station Option under the Preferred Alternative, Sound Transit identified park-and-ride noise impacts at 58 multifamily units near the proposed park-and-ride. All impacts would be related to noise from buses accessing the reconfigured bus facility. Because of the elevation of the multifamily units, all noise impacts would be mitigated with sound insulation.

200th Street SW

With the 200th Street SW Park-and-Ride Station Option under Alternative C1, Sound Transit identified park-and-ride noise impacts at 51 multifamily units near the proposed park-and-ride. All impacts would be related to noise from buses accessing the reconfigured bus facility and, to a lesser extent, from vehicles accessing the parking areas off 48th Avenue West. Because of the elevation of the multifamily units, all noise impacts would be mitigated with sound insulation.

Lynnwood Transit Center

With the Lynnwood Transit Center Station Option under Alternative C2, noise impacts from the transit center would be the same as given above under the Preferred Alternative with the Lynnwood Transit Center. Because of the elevation of the multifamily units, all noise impacts would be mitigated with sound insulation.

Lynnwood Park-and-Ride Station Option 1

With the Lynnwood Park-and-Ride Station Option 1 under Alternative C3, 58 noise impacts were identified. Because of the elevation of the multifamily units, all noise impacts would be mitigated with sound insulation.

Lynnwood Park-and-Ride Station Option 2

With the Lynnwood Park-and-Ride Station Option 2 12 noise impacts were identified. All impacts would be related to noise from buses accessing the reconfigured bus facility at night. Because of the elevation of the multifamily units, all noise impacts would be mitigated with sound insulation..

8.7 Traffic Noise Wall Replacements

This section describes the replacement traffic noise walls for the five areas modeled under the existing conditions and in the year 2035 with and without construction of the project (see Section 7.4, Traffic Noise Levels). Maps showing the location of the receivers used in the noise modeling and the locations and heights of each of the proposed replacement noise walls are provided on Figures 8-1 through 8-5. Some of these relocated walls would also reduce transit noise experienced in the neighborhoods behind the walls. The analysis of the transit noise benefits of the walls are included in Section 8.5.

This section provides the traffic noise modeling results at the representative receivers for the weekday PM peak hour under the Preferred Alternative, using year 2035 predicted traffic volumes, compared to the existing condition and the future No Build conditions for the year 2035. The modeling results are compared with the replacement wall design criteria (see Section 5.9). It is important to note that the Future No-Build conditions are the future noise levels (predicted for the year 2035) without the project, while the existing conditions are modeled results using the current (2013) traffic volumes. Therefore, the comparison of Future Build to No Build conditions provides an assessment of the direct impacts of the project, while the comparison to existing conditions provides an assessment of cumulative impacts of the project and increased traffic in the corridor. A discussion of traffic noise analysis issues specific to each area is included when applicable.

8.7.1 Replacement Traffic Noise Wall #1—NE 115th Street to NE 130th Street

Replacement Traffic Noise Wall #1 is a system of three separate but overlapping walls. The first wall begins south of NE 115th Street at approximately station number 35 and extends north along the east side of the light rail alignment to station number 50. The first wall is approximately 1,500 feet in length and has heights of 6 feet to 16 feet along the light rail alignment. The second wall begins at station number 44 and extends north along the west side of the light rail alignment (and east of the I-5 northbound off-ramp) to station number 66. The second wall is approximately 2,184 feet in length and has heights of 14 feet to 24 feet. The third wall begins at approximately ramp station number 2011 of the I-5 northbound off-ramp at NE 130th Street and extends north along the west side of the off-ramp to approximately ramp station number 2013, at which point it

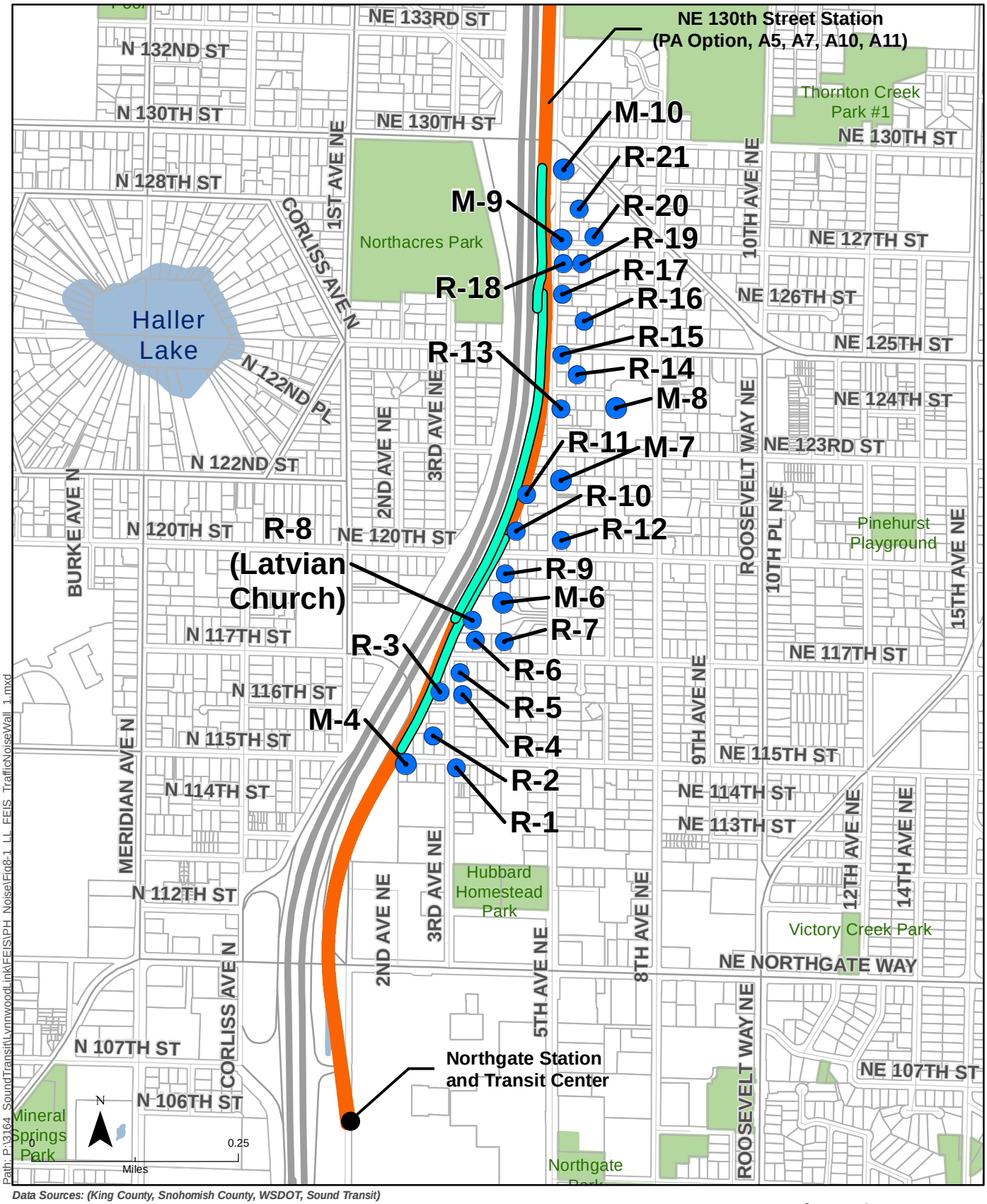


Figure 8-1
Traffic Noise Wall #1:
NE 115th Street to
NE 130th Street

Lynnwood Link Extension

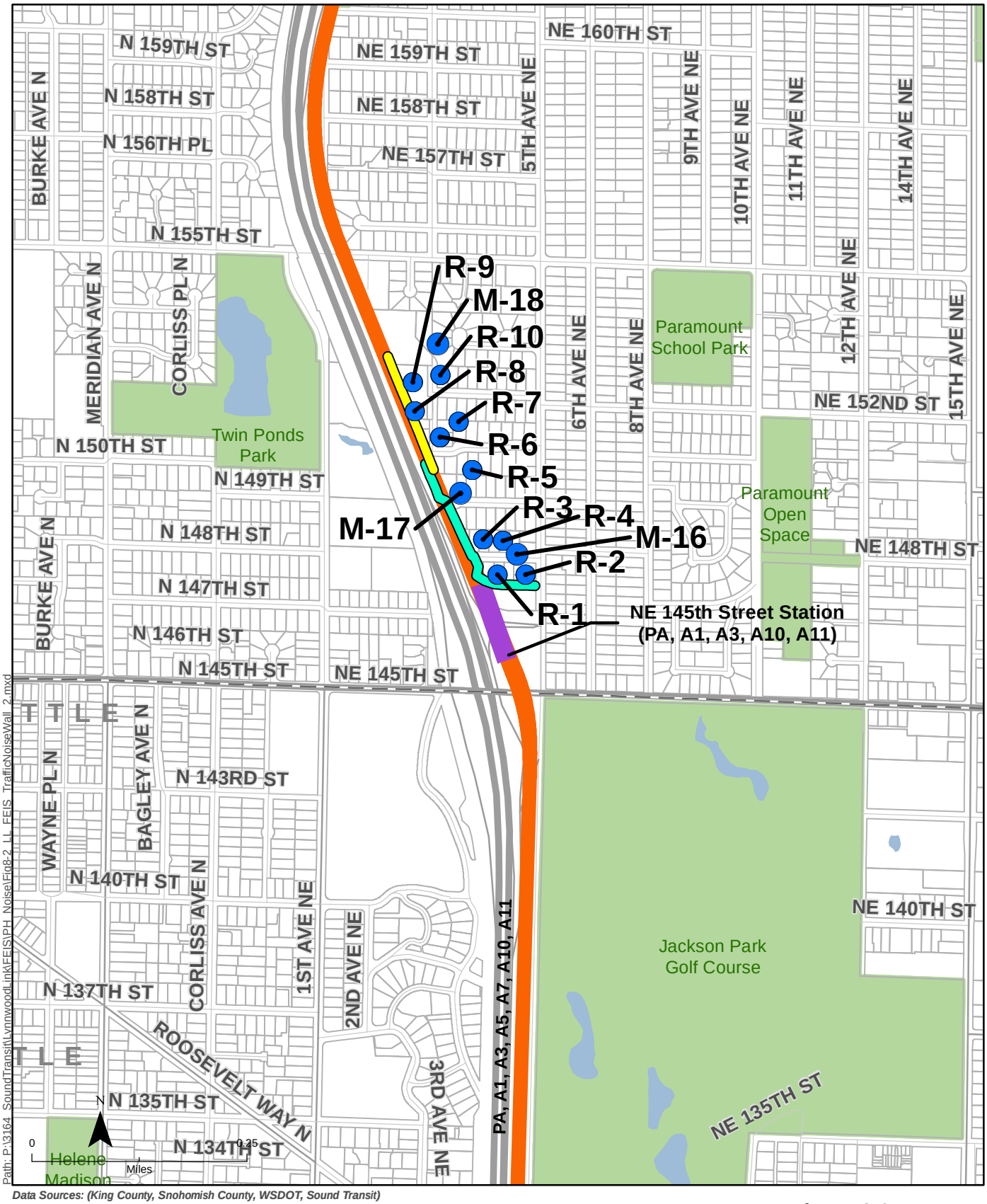


Figure 8-2
Traffic Noise Wall #2:
NE 145th Street

Lynnwood Link Extension

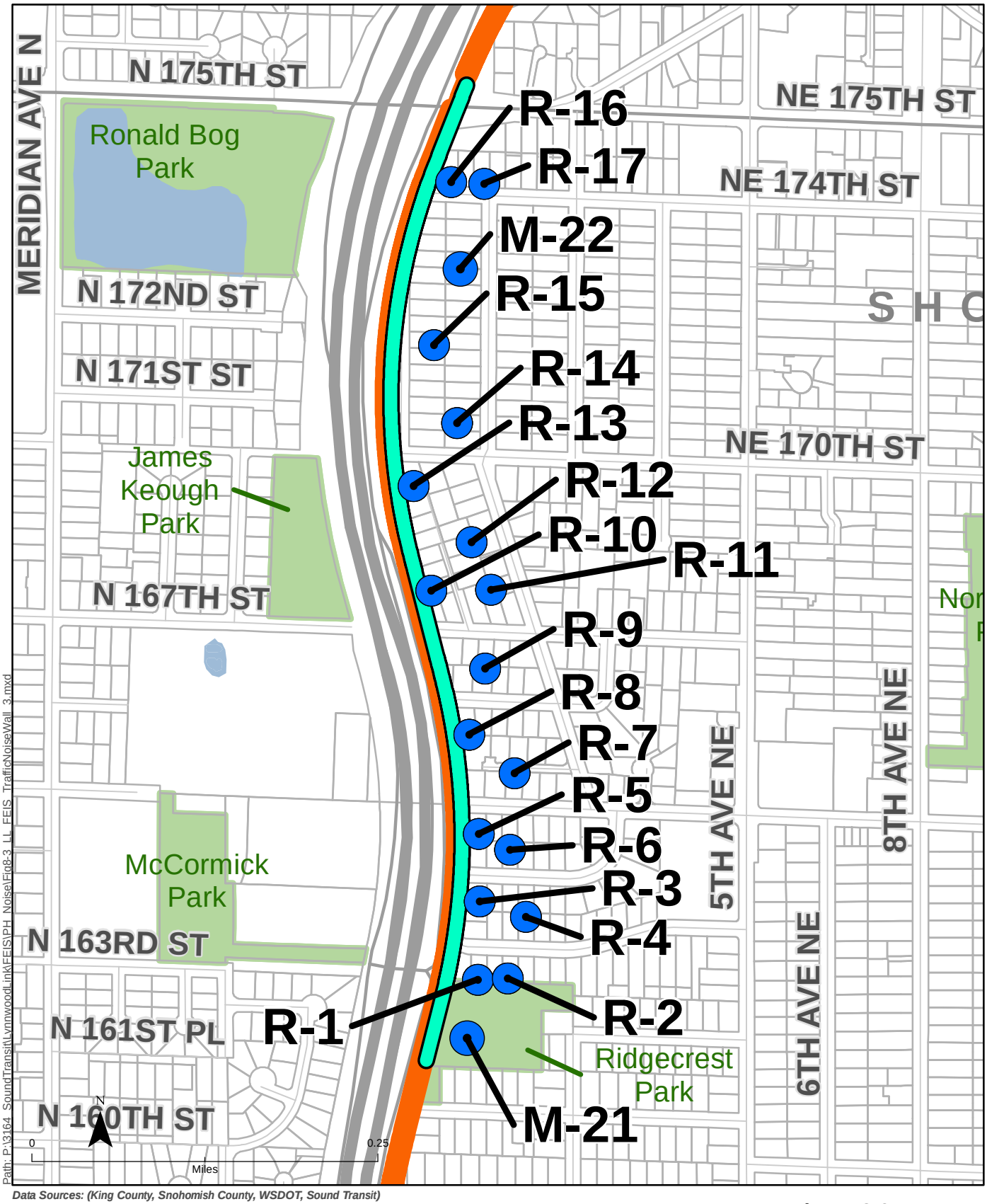


Figure 8-3
Traffic Noise Wall #3: Ridgecrest Park to NE 175th Street

Lynnwood Link Extension

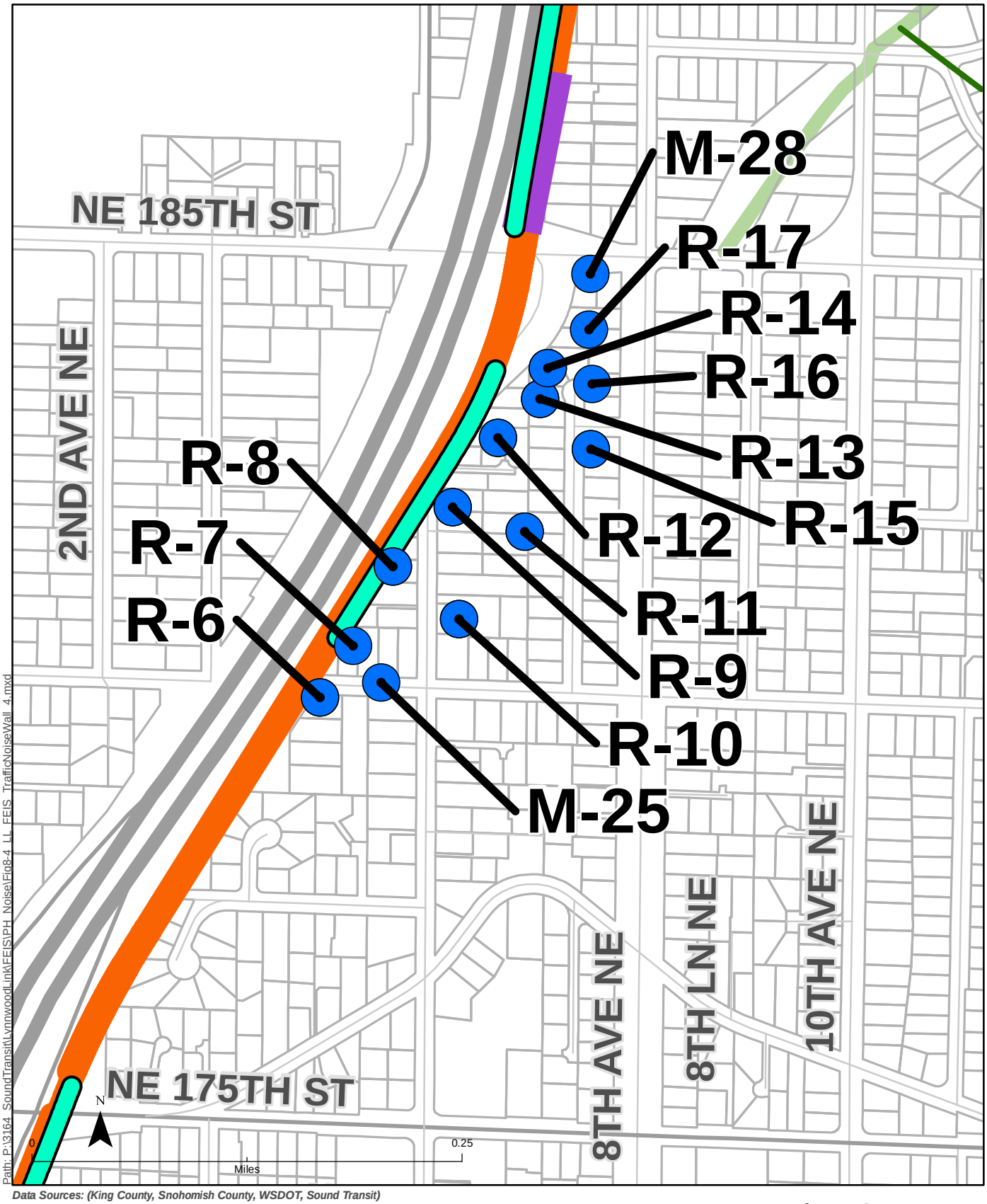


Figure 8-4
Traffic Noise Wall #4: NE 180th Street to NE 185th Street

Lynnwood Link Extension

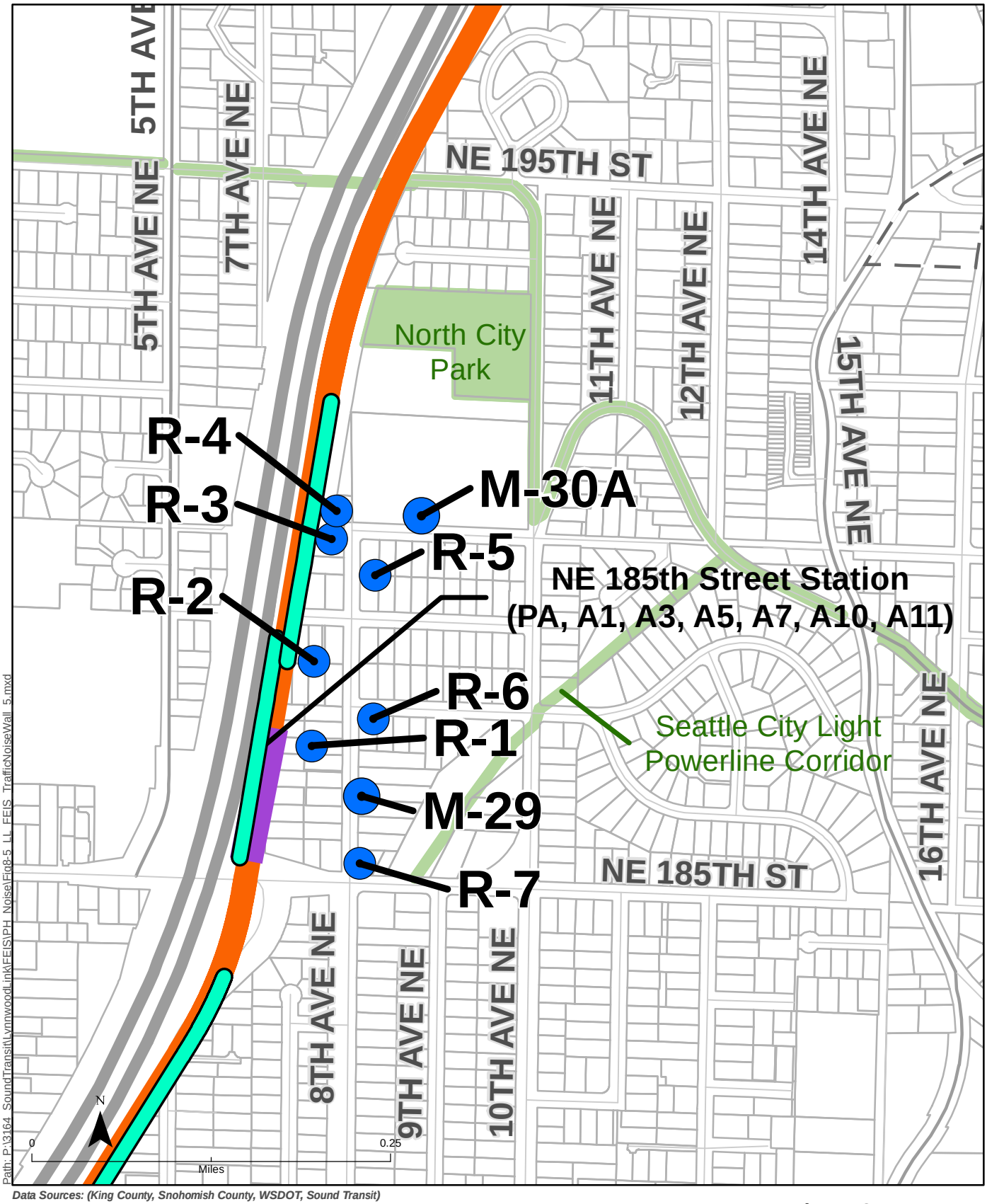


Figure 8-5
Traffic Noise Wall #5: NE 185th Street to NE 191st Street

Lynnwood Link Extension

continues along the west side of the light rail alignment to station number 74 of the alignment. The third wall is approximately 900 feet in length and has heights of 16 feet to 20 feet.

Replacement Traffic Noise Wall #1 is effective at meeting the traffic noise design criteria at all of the modeled receiver locations in the area. Under the Preferred Alternative, the severity of the impact at receiver M-7 (see Table 8-17) is expected to increase by 1 dBA compared to existing conditions, but would be less than the level under the No Build conditions. An increase of 1 dBA in traffic noise is not perceptible to the average human ear. I-5 is shielded by the noise wall at receiver M-7; however, the increase in future noise levels would result from increased traffic volumes and noise on 5th Avenue NE, which cannot be reduced with a noise wall. Additional modeling with and without traffic on I-5 would be needed to ascertain the exact contribution of each noise source.

Table 8-17. Traffic Noise Wall #1: Build Modeled Traffic Noise Levels

Receiver[a]	Leq (dBA)				Causes New Impact or Increases Severity of Impact[d]
	Criteria[b]	Existing	No Build[c]	Build[c]	
M-4	66	63	64	61	No
R-1	66	59	60	59	No
R-2	66	64	63	61	No
R-3	66	65	**66**	64	No
R-4	66	60	61	60	No
R-5	66	61	62	61	No
R-6	66	61	61	60	No
R-7	66	58	59	58	No
R-8 (Latvian Church)	66	63	63	61	No
M-6	66	60	60	60	No
R-9	66	61	61	61	No
R-10	66	62	63	62	No
R-11	66	63	63	62	No
R-12	66	64	65	65	No
M-7	66	**66**	**67**	**67**	No
R-13	66	64	65	64	No
M-8	66	56	57	56	No
R-14	66	61	61	59	No
R-15	66	65	65	64	No
R-16	66	61	62	60	No
R-17	66	65	**66**	64	No
R-18	66	**66**	**67**	65	No
M-9	66	**68**	**68**	**66**	No
R-19	66	62	63	60	No
R-20	66	62	62	60	No
R-21	66	65	**66**	62	No
M-10	66	**72**	**72**	**68**	No

[a] Receivers shown on Figure 8-1.

[b] WSDOT traffic noise impact criteria.

[c] Peak hour modeled noise levels for the year 2035; noise levels that equal or exceed the WSDOT traffic noise abatement criteria are shown in red.

[d] Indicates whether the Preferred Alternative is predicted to cause a new impact or increase the severity of any future No Build impact at the receiver.

8.7.2 Replacement Traffic Noise Wall #2—NE 145th Street

Replacement Traffic Noise Wall #2 begins north of NE 145th Street, close to 5th Avenue NE, at approximately station number 123 and extends from east to west along the north side of the I-5 on-ramp until it meets the guideway structure. At that point, it turns north and runs along the east side of the light rail until approximately station number 128+50. It then travels under the elevated guideway and runs along the west side of the light rail until station number 131. Noise Wall #2 is approximately 850 feet in length and has heights of approximately 33 feet to 38 feet.

The proposed light rail alignment is on an elevated structure in the area where Replacement Traffic Noise Wall #2 is located. As a result, Noise Wall #2 extends from the ground up to, and is integrated with, the transit noise wall in order to prevent traffic noise from reflecting off of the bottom of the elevated structure. This area is the only replacement noise wall location where the light rail alignment will be on an elevated structure.

Replacement Traffic Noise Wall #2 is effective at maintaining or reducing the traffic noise levels at all of the modeled receiver locations in the area by up to 5 dBA (Table 8-18). In addition, Noise Wall #2 meets the replacement wall design criteria at all receiver locations.

Table 8-18. Traffic Noise Wall #2: Build Modeled Traffic Noise Levels

Receiver[a]	L_{eq}(dBA)				Causes New Impact or Increases Severity of Impact[d]
	Criteria[b]	Existing	No Build[c]	Build[c]	
R-1	66	64	64	60	No
R-2	66	65	65	63	No
R-3	66	64	65	59	No
R-4	66	64	64	61	No
M-16	66	64	64	62	No
M-17	66	65	65	61	No
R-5	66	64	64	60	No
R-6	66	64	64	61	No
R-7	66	64	64	62	No
R-8	66	65	65	62	No
R-9	66	**67**	**67**	65	No
R-10	66	65	65	64	No
M-18	66	65	65	65	No

[a] Receivers shown on Figure 8-2.

[b] WSDOT traffic noise impact criteria.

[c] Peak hour modeled noise levels for the year 2035; noise levels that are equal to, or greater than, the WSDOT traffic noise abatement criteria are shown in red.

[d] Indicates whether the Preferred Alternative is predicted to cause a new impact or increase the severity of any future No Build impact at the receiver.

8.7.3 Replacement Traffic Noise Wall #3—Ridgecrest Park to NE 175th Street

Replacement Traffic Noise Wall #3 begins south of NE Ridgecrest Park at approximately station number 162 and extends north along the east side of the light rail alignment to station number 198. Noise Wall #3 is approximately 3,800 feet in length and has heights of 8 feet to 20 feet along the light rail alignment.

Replacement Traffic Noise Wall #3 is effective at maintaining or reducing by up to 4 dBA the existing traffic noise levels at all of the modeled receiver locations in the area (Table 8-19). In addition, Noise Wall #3 meets the replacement wall design criteria at all receiver locations. While the proposed replacement wall would be more effective at reducing traffic noise levels than the existing wall and meet all replacement criteria, Noise Wall #3 would still leave existing traffic noise impacts at seven of the representative receiver locations; however, they would be less severe than under No Build conditions.

Table 8-19. Traffic Noise Wall #3: Build Modeled Traffic Noise Levels

	Leq(dBA)				Causes New Impact or Increases Severity of Impact[d]
Receiver[a]	Criteria[b]	Existing	No Build[c]	Build[c]	
M-21	66	64	65	60	No
R-1	66	**70**	**71**	**69**	No
R-2	66	**68**	**69**	**67**	No
R-3	66	**68**	**68**	**67**	No
R-4	66	**66**	**66**	65	No
R-5	66	**67**	**67**	**66**	No
R-6	66	64	64	63	No
R-7	66	65	65	63	No
R-8	66	**72**	**72**	**68**	No
R-9	66	64	64	64	No
R-10	66	64	64	62	No
R-11	66	60	60	60	No
R-12	66	60	60	60	No
R-13	66	65	65	63	No
R-14	66	62	62	61	No
R-15	66	**66**	**66**	64	No
M-22	66	**68**	**68**	65	No
R-16	66	**68**	**69**	**67**	No
R-17	66	**68**	**68**	**67**	No

[a] Receivers shown on Figure 8-3.

[b] WSDOT traffic noise impact criteria.

[c] Peak hour modeled noise levels for the year 2035; noise levels that are equal to, or greater than, the WSDOT traffic noise abatement criteria are shown in red.

[d] Indicates whether the Preferred Alternative is predicted to cause a new impact or increase the severity of any future No Build impact at the receiver.

8.7.4 Replacement Traffic Noise Wall #4—NE 180th Street to NE 185th Street

Replacement Traffic Noise Wall #4 begins at approximately station number 215 and extends north along the east side of the light rail alignment to approximately station number 226. Noise Wall #4 is approximately 1,092 feet in length and has heights of 8 feet to 18 feet along the light rail alignment. The existing traffic noise wall just to the south of Noise Wall #4 will not be affected by the project.

Replacement Traffic Noise Wall #4 is effective at maintaining or reducing the traffic noise levels at 3 of the 14 modeled receiver locations in the area (Table 8-20). Traffic noise levels at the other 11 locations are expected to increase by up to 3 dBA. However, Noise Wall #4 meets the replacement wall design criteria at all receiver locations other than M-28. Under the Preferred Alternative, the severity of the impact at receiver M-28 is expected to increase by 2 dBA. An increase of 3 dBA in traffic noise is barely perceptible to the average human ear. This increase is likely unrelated to traffic noise emanating from I-5, which is shielded by the noise wall, and is more likely caused by increased traffic volumes on NE 185th Street, which would experience increased traffic volumes to and from the NE 185th Street station. Additional modeling with and without traffic on I-5 would be needed to ascertain the exact contribution of each noise source. In addition, increasing the height of the wall could decrease traffic noise levels at some or all of the 11 receiver locations where those noise levels are expected to increase.

Table 8-20. Traffic Noise Wall #4: Build Modeled Traffic Noise Levels

Receiver[a]	L_{eq}(dBA)				Causes New Impact or Increases Severity of Impact[d]
	Criteria[b]	Existing	No Build[c]	Build[c]	
R-6	66	61	61	62	No
M-25	66	60	60	60	No
R-7	66	63	63	63	No
R-8	66	65	65	64	No
R-9	66	63	63	64	No
R-10	66	59	59	60	No
R-11	66	58	58	59	No
R-12	66	59	60	61	No
R-13	66	58	58	61	No
R-14	66	58	58	59	No
R-15	66	59	59	62	No
R-16	66	61	61	62	No
R-17	66	62	62	64	No
M-28	66	65	65	**67**	Yes

[a] Receivers shown on Figure 8-4.
[b] WSDOT traffic noise impact criteria
[c] Peak hour modeled noise levels for the year 2035; noise levels that are equal to, or greater than, the WSDOT traffic noise abatement criteria are shown in red.
[d] Indicates whether the Preferred Alternative is predicted to cause a new impact or increase the severity of any future No Build impact at the receiver.

8.7.5 Replacement Traffic Noise Wall #5—NE 185th Street to NE 191st Street

Replacement Traffic Noise Wall #5 is a system of two separate but overlapping walls. The first wall begins north of NE 185th Street at approximately station number 230 and extends north along the west side of the light rail alignment to approximately station number 236. The first wall is approximately 592 feet in length and has a uniform height of 18 feet tall along the light rail alignment. The second wall begins at approximately station number 236 and also extends north along the west side of the light rail alignment to station number 247. The second wall is approximately 1,100 feet in length and has heights of 14 feet to 20 feet.

Replacement Traffic Noise Wall #5 is effective at meeting the traffic noise design criteria at all but one of the modeled receiver locations in the area (receiver R-7, see Table 8-21). Under the Preferred Alternative, the severity of the impact at receiver R-7 is expected to increase by 2 dBA. An increase of 3 dBA in traffic noise is barely perceptible to the average human ear. This increase is likely unrelated to traffic noise emanating from I-5, which is being shielded by the noise wall, and is more likely caused by increased traffic volumes on NE 185th Street and 8th Avenue NE, streets that would experience increased traffic volumes to and from the NE 185th Street station. Additional modeling with and without traffic on I-5 would be needed to ascertain the exact contribution of each noise source.

Table 8-21. Traffic Noise Wall #5: Build Modeled Traffic Noise Levels

Receiver[a]	L_{eq}(dBA)				Causes New Impact or Increases Severity of Existing Impact[d]
	Criteria[b]	Existing	No Build[c]	Build[c]	
R-1	66	64	64	62	No
R-2	66	65	65	63	No
R-3	66	**67**	**67**	63	No
R-4	66	**73**	**73**	64	No
M-30A	66	60	60	60	No
R-5	66	63	63	60	No
R-6	66	62	62	61	No
M-29	66	61	62	64	No
R-7	66	65	65	**67**	Yes

a Receivers shown on Figure 8-5.

b WSDOT traffic noise impact criteria.

c Peak hour modeled noise levels for the year 2035; noise levels that are equal to, or greater than, the WSDOT traffic noise abatement criteria are shown in red.

d Indicates whether the Preferred Alternative is predicted to cause a new impact or increase the severity of any future No Build impact at the receiver.

8.8 Roadway Improvement Traffic Noise Analysis

This section describes the traffic noise impact and mitigation analysis for the Lynnwood Park-and-Ride Station area modeled under the existing conditions and in the year 2035 with and without construction of the project (see Section 7.4, Traffic Noise Levels). The Preferred Alternative includes roadway changes to improve access to the Lynnwood Transit Center that would cause traffic noise impacts at 23 residential units. Sound Transit would mitigate noise impacts with the proposed noise walls shownin Figure 8-6, or through sound insulation. Although noise walls would effectively mitigate most of the impacts, they may not be practical along this urban corridor. Sound Transit will work with the City of Lynnwood on mitigation design.

This section provides the traffic noise modeling results at the representative receivers for the weekday PM peak hour under the Preferred Alternative, using year 2035 predicted traffic volumes, compared to the existing condition and the future No Build conditions for the year 2035. The modeling results are compared with the wall design criteria (see Section 5.9.2). It is important to note that the Future No-Build conditions are the future noise levels (predicted for the year 2035) without the project, while the existing conditions are modeled results using the current (2013) traffic volumes. Therefore, the comparison of Future Build to No Build conditions provides an assessment of the direct impacts of the project, while the comparison to existing conditions provides an assessment of cumulative impacts of the project and increased traffic in the corridor. A discussion of traffic noise analysis issues specific to each area is included when applicable.

Table 8-22 summarizes the existing conditions, No Build, and Future Build noise levels at each of the modeled receivers. Receivers R-1 through R-7 are for the Park Five Apartments, receivers R-8 through R-16 are for the Oxford Square Apartments, receivers R-17 through R-24B are for the Cambridge Apartments, and receivers R-27 through R-45 are for the Cedar Creek Condominiums. Finally receivers R-25 and R-26 are for the Courtyard Hotel and La Quinta Inn, respectively. Future Build traffic noise impacts (e.g., noise levels at or above 66 dBA Leq) were identified at the Cambridge Apartment complex and the Cedar Creek Condominiums. Hence, noise mitigation measures were only analyzed for those two locations. Neither the Park Five nor the Oxford Square Apartment complex is predicted to have any traffic noise impacts under the Preferred Alternative. The Park Five Apartments are located south of the Cedar Creek Condominiums and are well shielded from traffic noise by those buildings. The Oxford Square Apartments, although located directly on 200th SW, are set back from the roadway, and all exterior uses at this facility are shielded and have noise levels that are below the WSDOT NAC. The traffic noise mitigation analysis and recommendations follow the table.

Table 8-22. Lynnwood Park-and-Ride Station: Modeled Traffic Noise Levels

Receiver[a]	Leq(dBA)				Build Condition Meets or Exceeds WSDOT Criteria[d]
	Criteria[b]	Existing	No Build[c]	Build[c]	
R-1 (Lower)	66	56	56	58	No
R-1 (Upper)	66	58	58	60	No
R-2 (Lower)	66	56	55	57	No
R-2 (Upper)	66	58	58	59	No
R-3/M-50 (Lower)	66	55	55	56	No
R-3 (Upper)	66	57	57	59	No
R-4 (Lower)	66	54	55	55	No
R-4 (Upper)	66	57	57	58	No
R-5 (Lower)	66	58	58	61	No
R-5 (Upper)	66	60	60	63	No
R-6 (Lower)	66	56	57	59	No
R-6 (Upper)	66	59	59	61	No
R-7 (Lower)	66	55	56	57	No
R-7 (Upper)	66	58	59	60	No
R-8 (Lower)	66	59	61	62	No
R-8 (Upper)	66	62	64	64	No
R-9 (Lower)	66	50	52	53	No
R-9 (Upper)	66	54	56	57	No
R-10 (Lower)	66	50	52	53	No
R-10 (Upper)	66	52	54	55	No
R-11 (Lower)	66	59	61	61	No
R-11 (Upper)	66	61	63	63	No
R-12 (Lower)	66	55	57	57	No
R-12 (Upper)	66	58	60	61	No
R-13 (Lower)	66	55	57	58	No
R-13 (Upper)	66	58	61	61	No
R-14 (Lower)	66	59	61	61	No
R-14 (Upper)	66	61	64	63	No
R-15 (Lower)	66	53	56	56	No
R-15 (Upper)	66	55	58	58	No
R-16 (Lower)	66	61	62	63	No
R-16 (Upper)	66	62	64	65	No
R-17 (Lower)	66	**66**	**70**	**71**	Yes
R-17 (Upper)	66	**67**	**70**	**71**	Yes
R-18 (Lower)	66	61	65	**66**	Yes
R-18 (Upper)	66	63	**66**	**67**	Yes
R-19 (Lower)	66	60	64	65	No
R-19 (Upper)	66	61	64	65	No
R-20 (Lower)	66	65	**67**	**68**	Yes
R-20 (Upper)	66	65	**68**	**69**	Yes
R-21 (Lower)	66	64	**66**	**67**	Yes

Table 8-22. Lynnwood Park-and-Ride Station: Modeled Traffic Noise Levels

Receiver[a]	Leq(dBA)				Build Condition Meets or Exceeds WSDOT Criteria[d]
	Criteria[b]	Existing	No Build[c]	Build[c]	
R-21 (Upper)	66	65	**67**	**67**	Yes
R-22A/M-52 (Lower)	66	65	**67**	**68**	Yes
R-22A (Upper)	66	**66**	**68**	**68**	Yes
R-22B (Lower)	66	65	**67**	**68**	Yes
R-22B (Upper)	66	**66**	**68**	**68**	Yes
R-23 (Lower)	66	59	61	62	No
R-23 (Upper)	66	62	64	65	No
R-24A (Lower)	66	**67**	**69**	**69**	Yes
R-24A (Upper)	66	**67**	**69**	**69**	Yes
R-24B (Lower)	66	**66**	**68**	**68**	Yes
R-24B (Upper)	66	**66**	**68**	**68**	Yes
R-25 - Courtyard Hotel	71	64	64	64	No
R-26 - La Quinta Inn	71	63	64	64	No
R-27 (Lower)	66	63	**66**	**66**	Yes
R-27 (Middle)	66	65	**67**	**67**	Yes
R-27 (Upper)	66	65	**67**	**67**	Yes
R-28 (Lower)	66	61	63	63	No
R-28 (Middle)	66	63	65	65	No
R-28 (Upper)	66	63	65	65	No
R-29 (Lower)	66	54	54	55	No
R-29 (Middle)	66	57	57	58	No
R-29 (Upper)	66	57	57	58	No
R-30/M-51 (Lower)	66	55	55	56	No
R-30 (Middle)	66	58	58	59	No
R-30 (Upper)	66	58	58	59	No
R-31 (Lower)	66	54	56	56	No
R-31 (Middle)	66	58	60	60	No
R-31 (Upper)	66	58	60	60	No
R-32 (Lower)	66	60	63	64	No
R-32 (Middle)	66	63	**66**	**66**	Yes
R-32 (Upper)	66	63	**66**	**66**	Yes
R-33 (Lower) - Pool Room	66	56	59	59	No
R-33 (Middle)	66	60	63	63	No
R-33 (Upper)	66	60	63	63	No
R-34 (Lower)	66	53	54	55	No
R-34 (Middle)	66	57	58	59	No
R-34 (Upper)	66	57	58	59	No
R-35 (Lower)	66	53	53	54	No
R-35 (Middle)	66	56	57	58	No
R-35 (Upper)	66	57	57	58	No

Table 8-22. Lynnwood Park-and-Ride Station: Modeled Traffic Noise Levels

Receiver[a]	Leq(dBA)				Build Condition Meets or Exceeds WSDOT Criteria[d]
	Criteria[b]	Existing	No Build[c]	Build[c]	
R-36 (Lower)	66	61	64	64	No
R-36 (Middle)	66	63	**66**	**67**	Yes
R-36 (Upper)	66	63	**66**	**67**	Yes
R-37 (Lower)	66	57	60	60	No
R-37 (Middle)	66	60	63	63	No
R-37 (Upper)	66	60	63	63	No
R-38 (Lower)	66	54	57	57	No
R-38 (Middle)	66	58	61	61	No
R-38 (Upper)	66	58	61	61	No
R-39 (Lower)	66	53	55	56	No
R-39 (Middle)	66	57	59	60	No
R-39 (Upper)	66	57	60	60	No
R-40 (Lower)	66	57	56	59	No
R-40 (Middle)	66	60	60	63	No
R-40 (Upper)	66	60	60	63	No
R-41 (Lower)	66	56	55	57	No
R-41 (Middle)	66	58	58	60	No
R-41 (Upper)	66	58	58	60	No
R-42 (Lower)	66	56	56	58	No
R-42 (Middle)	66	58	59	61	No
R-42 (Upper)	66	59	59	61	No
R-43 (Lower)	66	56	56	57	No
R-43 (Middle)	66	58	58	60	No
R-43 (Upper)	66	58	59	60	No
R-44 (Lower)	66	54	55	57	No
R-44 (Middle)	66	58	58	60	No
R-44 (Upper)	66	58	59	60	No
R-45 (Lower)	66	54	55	56	No
R-45 (Middle)	66	57	58	59	No
R-45 (Upper)	66	58	59	60	No

[a] Receivers shown on Figure 8-6.

[b] WSDOT traffic noise impact criteria.

[c] Peak hour modeled noise levels for the year 2035; noise levels that are equal to, or greater than, the WSDOT traffic noise abatement criteria are shown in red.

[d] Indicates whether the Preferred Alternative is predicted to cause a traffic noise impact at the receiver.

8.8.1 Traffic Noise Mitigation for Cambridge Apartments—Lynnwood Park-and-Ride Station

There are six separate traffic noise walls for the Cambridge Apartments that act as a system. The first wall begins approximately 100 feet north of the northeast corner of the intersection of 48th Avenue W and 200th Street SW and extends south along the east side of 48th Avenue W to the corner, at which point it continues east along the north side 200th Street SW for approximately 150 feet until it reaches the walkway that provides pedestrian access from the sidewalk to the apartment homes. The second wall extends eastward from that same walkway to the main driveway entrance to the apartment complex about half-way down the block. Together, the first two walls are approximately 350 feet in length and ranges in height from 11 to 14 feet tall.

The remaining four walls start at the eastern edge of the driveway entrance to the complex and extend east along the north side of 200th Street SW to the northwest corner of where it intersects with 46th Avenue W. These four walls act as one contiguous wall, but they too have walkway openings that separate them to provide pedestrian access from the sidewalk to the apartment homes. Collectively, the these four walls are approximately 312 feet in length and ranges in height from 14 to 16 feet tall.

The Cambridge Apartment noise walls are effective at meeting the traffic noise design criteria and eliminate most of the traffic noise impacts at the impacted receiver locations (see Table 8-23). Traffic noise impacts would remain after inclusion of the proposed mitigation into the Preferred Alternative wherever an apartment home has a direct line of sight through the walls due to walkway openings (e.g., the homes represented by receiver R-24A). Because of the urban nature of the corridor and remaining impacts, sound insulation would be considered. With the proposed mitigation measures and/or sound insulation, all traffic noise impacts will be mitigated. Table 8-23 summarizes the performance of the evaluated noise walls working together as a system.

Table 8-23. Noise Wall Mitigation Performance Summary

Receiver[1]	No. of Uses[2]	Land Use[3]	Build Noise Level[4] *(No wall)*	Build Noise Level[5] *(With wall)*
R-17 (Lower)	2	Res	**71**	58
R-17 (Upper)	2	Res	**71**	64
R-18 (Lower)	2	Res	**66**	61
R-18 (Upper)	2	Res	**67**	63
R-19 (Lower)	2	Res	65	64
R-19 (Upper)	2	Res	65	64
R-20 (Lower)	4	Res	**68**	58
R-20 (Upper)	4	Res	**69**	62
R-21 (Lower)	4	Res	**67**	61
R-21 (Upper)	4	Res	**67**	63
R-22A/M-52 (Lower)	3	Res	**68**	64
R-22A (Upper)	3	Res	**68**	65
R-22B (Lower)	3	Res	**68**	60
R-22B (Upper)	3	Res	**68**	62
R-23 (Lower)	2	Res	62	58
R-23 (Upper)	2	Res	65	61

Table 8-23. Noise Wall Mitigation Performance Summary

Receiver[1]	No. of Uses[2]	Land Use[3]	Build Noise Level[4] *(No wall)*	Build Noise Level[5] *(With wall)*
R-24A (Lower)	3	Res	**69**	**66**
R-24A (Upper)	3	Res	**69**	**67**
R-24B (Lower)	4	Res	**68**	61
R-24B (Upper)	4	Res	**68**	64

Notes:
1. Receivers shown in Figure 8.6
2. Number of residential, commercial, or other uses represented by each receiver
3. Land use: Res = Residential
4. Future Build noise levels with no abatement. Impacts in **Bold-Red** typeface
5. Future Build noise levels with noise wall as described and remaining impacts in **Bold-Red** typeface

8.8.2 Traffic Noise Mitigation at Cedar Creek Condominiums—Lynnwood Park-and-Ride Station

There are two separate traffic noise walls for the Cedar Creek Condominiums that act as a system. The first wall begins on the east side of Cedar Valley Road and extends north to the southeast corner of the intersection of 50th Avenue W and 200th Street SW. The wall then turns to the east and extends almost to the western edge of the main entrance to the complex. The first wall is approximately 250 feet in length and ranges in height of from 10 to 12 feet. The second wall begins at about the midpoint of the block located on the south side of 200th Street SW between 50th Avenue W and 48th Avenue W and extends east to 48th Avenue W, where it wraps around the corner to the south. The second wall is approximately 350 feet in length and also ranges in height of from 10 to 12 feet.

The Cedar Creek Condominiums noise walls are effective at meeting the traffic noise design criteria and eliminate the traffic noise impacts at all of the impacted receiver locations. Given the urban nature of the corridor, sound insulation would be considered wherever impacts remain. With the proposed mitigation measures and/or sound insulation, all traffic noise impacts will be mitigated. Table 8-24 summarizes the performance of the evaluated noise walls working together as a system.

Table 8-24. Noise Wall Mitigation Performance Summary

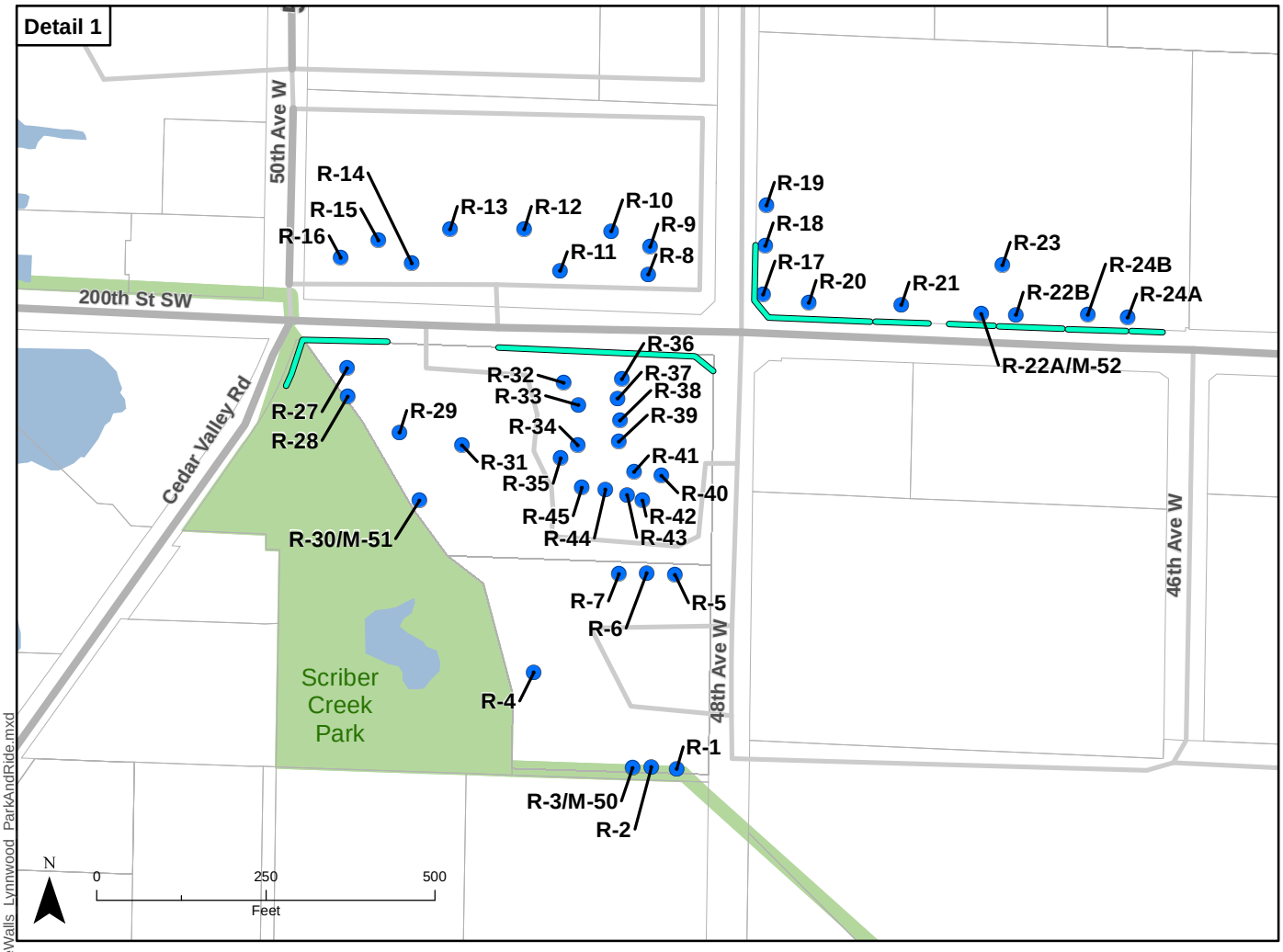
Receiver[1]	No. of Uses[2]	Land Use[3]	Build Noise Level[4] *(No wall)*	Build Noise Level[5] *(With wall)*
R-27 (Lower)	1	Res	**66**	59
R-27 (Middle)	1	Res	**67**	61
R-27 (Upper)	1	Res	**67**	62
R-28 (Lower)	1	Res	63	58
R-28 (Middle)	1	Res	65	60
R-28 (Upper)	1	Res	65	60
R-29 (Lower)	4	Res	55	54
R-29 (Middle)	4	Res	58	57
R-29 (Upper)	4	Res	58	57
R-30/M-51 (Lower)	4	Res	56	55
R-30 (Middle)	4	Res	59	58
R-30 (Upper)	4	Res	59	58
R-31 (Lower)	2	Res	56	55

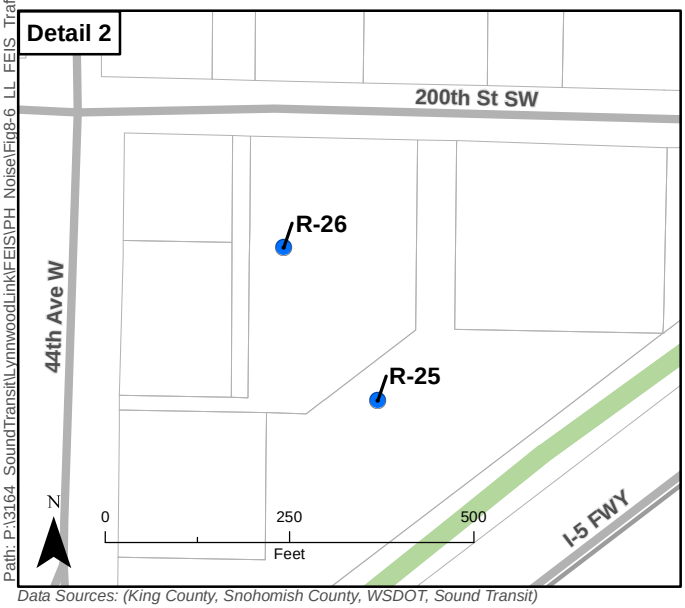
Table 8-24. Noise Wall Mitigation Performance Summary

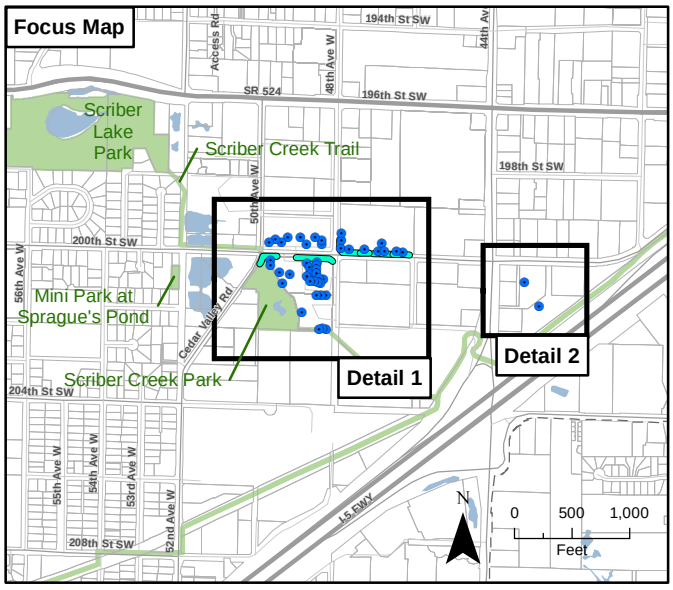
Receiver[1]	No. of Uses[2]	Land Use[3]	Build Noise Level[4] *(No wall)*	Build Noise Level[5] *(With wall)*
R-31 (Middle)	2	Res	60	59
R-31 (Upper)	1	Res	60	59
R-32 (Lower)	1	Res	64	58
R-32 (Middle)	1	Res	**66**	61
R-32 (Upper)	1	Res	**66**	62
R-33 (Lower) – Pool Room	0	Res	59	54
R-33 (Middle)	1	Res	63	57
R-33 (Upper)	1	Res	63	58
R-34 (Lower)	1	Res	55	53
R-34 (Middle)	1	Res	59	56
R-34 (Upper)	1	Res	59	57
R-35 (Lower)	1	Res	54	54
R-35 (Middle)	1	Res	58	57
R-35 (Upper)	1	Res	58	57
R-36 (Lower)	1	Res	64	57
R-36 (Middle)	1	Res	**67**	62
R-36 (Upper)	1	Res	**67**	62
R-37 (Lower)	1	Res	60	54
R-37 (Middle)	1	Res	63	58
R-37 (Upper)	1	Res	63	59
R-38 (Lower)	1	Res	57	52
R-38 (Middle)	1	Res	61	54
R-38 (Upper)	1	Res	61	55
R-39 (Lower)	1	Res	56	52
R-39 (Middle)	1	Res	60	54
R-39 (Upper)	1	Res	60	54
R-40 (Lower)	1	Res	59	59
R-40 (Middle)	1	Res	63	63
R-40 (Upper)	1	Res	63	63
R-41 (Lower)	1	Res	57	57
R-41 (Middle)	1	Res	60	59
R-41 (Upper)	1	Res	60	60
R-42 (Lower)	1	Res	58	57
R-42 (Middle)	1	Res	61	61
R-42 (Upper)	1	Res	61	61
R-43 (Lower)	1	Res	57	56
R-43 (Middle)	1	Res	60	59
R-43 (Upper)	1	Res	60	59
R-44 (Lower)	1	Res	57	56
R-44 (Middle)	1	Res	60	58
R-44 (Upper)	1	Res	60	59
R-45 (Lower)	1	Res	56	55
R-45 (Middle)	1	Res	59	58
R-45 (Upper)	1	Res	60	59

Notes:

1. Receivers shown in Figure 8.6
2. Number of residential uses represented by each receiver
3. Land use: Res = Residential
4. Future Build noise levels with no abatement. Impacts in **Bold-Red** typeface
5. Future Build noise levels with noise wall as described and remaining impacts in **Bold-Red** typeface







Path: P:\3164 SoundTransit\LynnwoodLink\FEIS\PH Noise\Fig8-6 LL FEIS TrafficNoiseWalls Lynnwood ParkAndRide.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Receiver Location

New Traffic Noise Wall

Note:
All receiver locations other than R-26 and R-27 have multi-floor receivers for modeling purposes at the outdoor uses of the apartment building location depicted.

Figure 8-6
Traffic Noise Walls:
Lynnwood Park-and-Ride Station

8.9 Construction Noise Mitigation Analysis

Construction noise and vibration impacts can be reduced with operational methods and scheduling, equipment choice, and acoustical treatments. In locations where existing noise walls will require relocation, the relocation would be completed as early in the construction process as practical so that the relocated walls would reduce noise from the ongoing construction activities. When required, Sound Transit or its contractor would seek the appropriate noise variance from the local jurisdiction. Noise control mitigation to meet local regulatory requirements, noise ordinances, and permit or variance conditions would be required. These measures could include the following actions:

- Install construction site noise barrier or wall by noise-sensitive receivers where appropriate.
- Use smart backup alarms during nighttime work that automatically adjust, or lower the alarm level or tone based on the background noise level, or switch off back-up alarms and replace with spotters.
- Use low-noise emission equipment.
- Implement noise-deadening measures for truck loading and operations.
- Monitor and maintain equipment to meet noise limits.
- Use lined or covered storage bins, conveyors, and chutes with sound-deadening material.
- Use acoustic enclosures, shields, or shrouds for equipment and facilities.
- Install high-grade engine exhaust silencers and engine-casing sound insulation.
- Prohibit aboveground jack hammering and impact pile driving during nighttime hours.
- Minimize the use of generators or use whisper quiet generators to power equipment.
- Limit use of public address systems.
- Use movable noise barriers at the source of the construction activity where practical.
- Limit or avoid certain noisy activities during nighttime hours.

9 REFERENCES AND SUPPORTING DOCUMENTS

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Part 2: Vibration

1 INTRODUCTION AND SUMMARY

1.1 Introduction

This technical report presents a vibration impact assessment for the Lynnwood Link Extension. Section 1 of this report summarizes the results of the vibration assessment. Section 2 discusses the fundamentals of environmental vibration and Section 3 describes the criteria used to assess potential vibration impacts. Section 4 presents the methodology used to predict vibration impacts. Section 5 summarizes the impact assessment and Section 6 outlines potential impact mitigation measures. In addition, Attachment D lists the projected vibration levels and potential vibration impacts by alternative and Attachment E provides detailed vibration measurement data.

1.2 Summary of Vibration Impact Assessment

Based on criteria from the Federal Transit Administration (FTA), the Lynnwood Link Extension would cause 8 to 32 potential vibration impacts without mitigation, depending upon the alignment alternative, at the locations listed in Table 1-1. These potential impacts would be related to annoyance impacts but not to building damage impacts. There will be no impacts related to building damage from future train operations. Section 5.1 includes detailed information regarding the potential vibration impacts from future train operations, and Section 6.1 discusses proposed mitigation measures for those potential impacts.

Most of the potential vibration impacts due to future train operations are limited to track segments with at-grade track and most of those impacts can be mitigated with tire-derived aggregate (TDA) as an underlayment beneath the sub-ballast layer of the track. Other mitigation approaches were considered. Of the mitigation approaches currently available, a floating slab track (FST) is the only option other than TDA that would remove all potential vibration impacts from at-grade track. However, FST costs as much as ten times more than TDA and, therefore, it would be considered for mitigation only if TDA would not fully mitigate an impact. Wayside noise from an FST track would be higher relative to noise from a ballast-and-tie track because noise would reflect from the concrete slab, whereas ballast effectively absorbs sound energy produced by wheel/rail interaction and under-car equipment. Higher levels of noise adjacent to FST were accounted for in the noise analysis, where FST is considered for vibration mitigation.

Some vibration impacts are predicted to occur next to the elevated structure but most of those impacts can be mitigated through the use of high compliance rail fasteners. Wayside noise might be higher adjacent to rail with high compliance fasteners relative to standard rail fasteners because the rail tends to vibrate more on the softer fasteners, generating more sound. This increase in sound can be offset by noise walls integrated with the elevated structure and is included in the noise analysis.

Some vibration impacts can be mitigated by incorporating special provisions in the design of track crossovers to avoid increased levels of ground vibration that are associated with typical crossover design, relative to track that is away from crossovers. For example, the use of spring or movable point frogs reduces impact energy at crossovers.

Table 1-1 lists the total length of vibration mitigation recommended for each alternative. Vibration impacts and mitigation options will be reviewed during final design to confirm that appropriate measures are included in the design.

Potential vibration impacts resulting from project construction are summarized in Section 5.2. The potential for cosmetic damage to nearby structures would be evaluated if vibratory pile-driving methods are to be used within 80 feet of any receptor or vibratory soil compactor within 40 feet. This task should include documenting the condition of buildings before construction and monitoring vibration during construction. No structural damage will occur to any building adjacent to project construction as long as the vibration does not exceed the threshold levels for causing cosmetic damage.

Potential vibration impacts related to annoyance during construction are projected for sensitive receptors near the stations and are discussed in Section 5.2. Approaches for mitigating potential vibration impacts resulting from construction are discussed in detail in Section 6.2.

Table 1-1. Summary of Potential Vibration Impacts and Mitigation

Alternative	Number of Potential Vibration Impacts	Number of Potential Vibration Impacts After Mitigation	Total Mitigation Length (feet)
Preferred Alternative (Segment A)	27	0	4,280[a,b]
A1: At-grade/Elevated with NE 145th and NE 185th Street Stations	9	0	1,725
A3: Mostly Elevated with NE 145th and NE 185th Street Stations	8	0	1,060[c]
A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations	16	0	2,800
A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations	9	0	1,410[c]
A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations	14	0	2,450
A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations	8	0	1,060[c]
Preferred Alternative (Segment B)	3	0	460[a,b]
Alternatives B1, B2A, and B4	0	0	0
Preferred Alternative (Segment C)	0	0	0
C1M: 52nd Avenue West to 200th Street SW, Option 1 within I-5 Median	2	0	450
C1W: 52nd Avenue West to 200th Street SW, Option 2 West of I-5	1	0	250
C2M: 52nd Avenue West to Lynnwood Transit Center, Option 1 within I-5 Median	2	0	450
C2W: 52nd Avenue West to Lynnwood Transit Center, Option 2 within I-5 Median	1	0	250
C3M and C3W: Along I-5 to Lynnwood Park-and-Ride Station	0	0	0

[a] Recommended mitigation includes using spring or movable point frogs and Tire Derived Aggregate underlayment at the crossover.
[b] Spring or movable point frogs recommended for crossovers at: Civil Station 130+50 – 132+80, 258+70 – 260+40, and 476+50 – 478 + 90 (three total, included as 230 feet each in Total Mitigation Length).
[c] Spring or movable point frogs recommended for crossovers at: Civil Station 200+25 – 203+50 and 204+75 – 208+00 (two total, as 230 feet each included in Total Mitigation Length).
Note: C1M = Alternative C1 Option 1: From I-5 median; C1W = Alternative C1 Option 2: From west side of I-5; C2M = Alternative C2 Option 1: From I-5 median; C2M = Alternative C2 Option 2: From west side of I-5

2 ENVIRONMENTAL VIBRATION BASICS

Groundborne vibration is the oscillatory motion of the ground in relation to a static equilibrium position, which can be described in terms of displacement, velocity, or acceleration. Displacement refers to the distance an object moves away from its equilibrium position. Velocity refers to the rate of change in displacement with respect to time or the speed of this motion. Acceleration refers to the time rate of change in the velocity of the object. At any given frequency of oscillation, vibration displacement, velocity, and acceleration are related. However, the relationship between these descriptors can vary greatly in different situations, depending on the frequency content of the vibration energy. The overall vibration is the total unfiltered vibration over the entire spectrum.

The response of humans, buildings, and equipment to vibration is usually described in terms of velocity or acceleration. Because human sensitivity to vibration typically corresponds to a constant level of vibration velocity amplitude as a function of frequency within the frequency range that is of most concern for environmental vibration produced by rail transit systems (i.e., roughly 8 to 100 Hertz [Hz]), vibration velocity is used in this analysis as the primary measure to evaluate the impacts of vibration.

Several different measures are used to quantify vibration velocity amplitude. One of the most common is the peak particle velocity (PPV), defined as the maximum instantaneous positive or negative peak of the vibration velocity. PPV is used to characterize the threshold of cosmetic damage to building components. The root mean square (rms) velocity is used for evaluating human response. The rms amplitude is defined as the square root of the average of the squared amplitude of the signal over a time interval, typically 1 second. In this report, the averaging time is the train passby duration, usually 4 to 8 seconds. The difference is generally small, but longer averaging times produce less statistical fluctuation when measured.

The vibration velocity is represented by its level in decibels. The decibel scale compresses the range of numbers required to describe vibration. In this report, the vibration is expressed in terms of velocity level in decibels relative to 1 micro-inch per second, defined as follows:

$$L_v = 20\log_{10}(v/v_{ref}), \text{ VdB} \qquad \text{(Equation 2-1)}$$

where:

v = rms velocity, inches/second
v_{ref} = 1×10^{-6} inches/second = 1 micro-inch/second

Figure 2-1 illustrates typical ground vibration velocity levels for common sources and associated human and structural responses. As shown, the range extends from approximately 50 VdB to 100 VdB (i.e., from imperceptible background vibration to the threshold of building cosmetic damage). Although the threshold of human perception to vibration is approximately 65 VdB, annoyance does not usually occur unless the rms vibration velocity level exceeds at least 72 VdB.

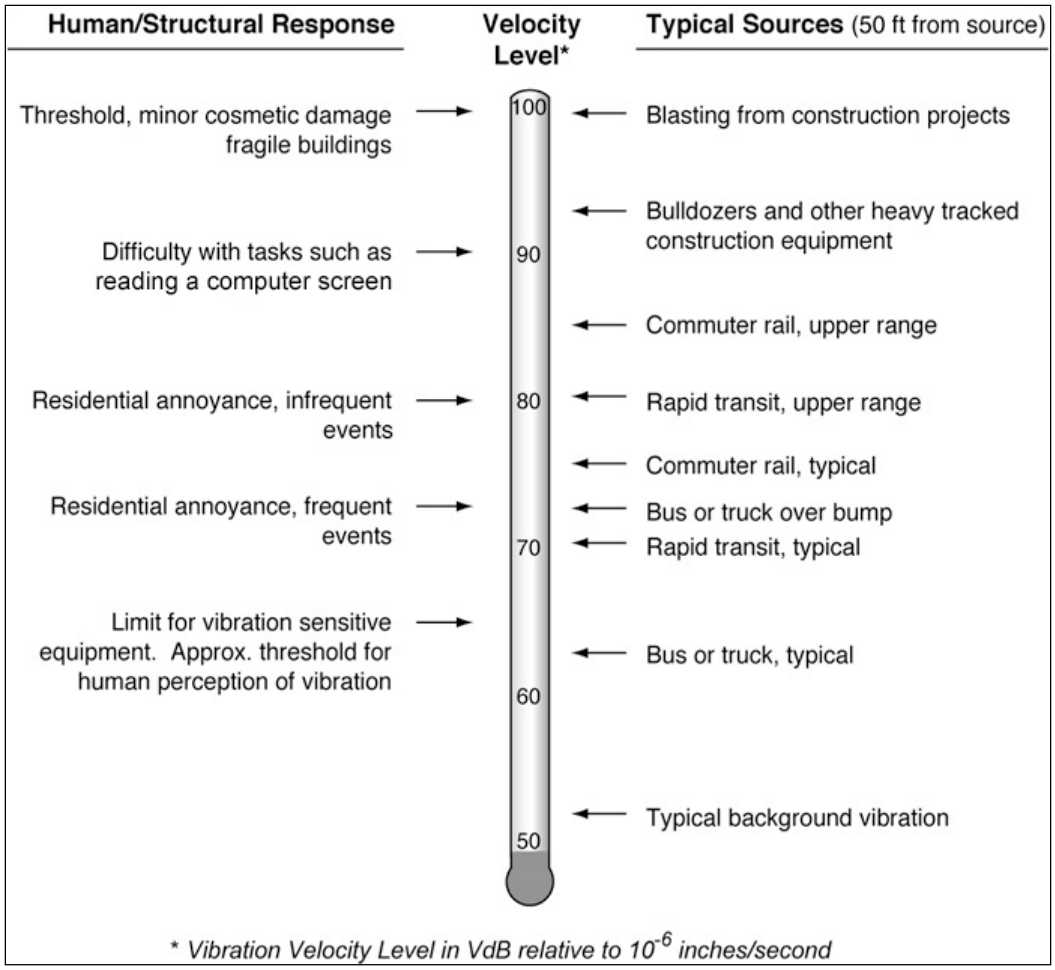


Figure 2-1. Typical Ground Vibration Levels and Human/Structural Response

When vibration propagates from transit vehicles to nearby buildings, the floors and walls of the building structure respond to the motion and resonate at natural frequencies. The vibration of the walls and floors may cause perceptible vibration, rattling of items such as windows or dishes on shelves, or a rumbling noise. The rumble is the noise radiated from the motion of the room surfaces and is called "groundborne noise." The potential annoyance of groundborne noise is described here in terms of the A-weighted sound level or dBA, averaged over the duration of the train passage.

3 VIBRATION IMPACT CRITERIA

This section briefly defines the criteria for vibration or groundborne noise impacts that might be produced by a transit system; these impacts are then evaluated as they apply to the Lynnwood Link Extension. The criteria for preventing building damage from construction-generated vibration are also discussed.

3.1 Transit Vibration and Groundborne Noise Criteria

3.1.1 Vibration Impact Criteria

The FTA vibration impact criteria are based on land use and train passage frequency. These criteria generally apply to floors of structures. Table 3-1 lists the criteria for a general assessment of most land uses. The FTA vibration criteria apply primarily to residential floors (including hotels and other places where people sleep) and to institutional land uses. Commercial land uses are only considered when they contain vibration-sensitive uses, such as medical offices or sensitive manufacturing equipment. The criteria applied to these locations depend on the sensitivity of the use. Some buildings, such as concert halls, recording studios, and theaters, can be particularly sensitive to vibration but do not fit into any of the three categories listed in Table 3-1. These buildings usually warrant special attention during the impact assessment. Table 3-2 provides the criteria for acceptable levels of groundborne floor vibration for special buildings.

If a general assessment of vibration impacts indicates that the project would exceed the criteria in Table 3-1, then a detailed analysis considering the frequency spectra of the vibration is used to provide more information about the effects of the project. In many cases, it is desirable to conduct a detailed analysis without first conducting a general assessment, as was done for the Lynnwood Link Extension.

Table 3-3 provides vibration criteria for the detailed vibration analyses that were used for the Lynnwood Link Extension. The criteria in Table 3-3 apply to the 1/3-octave-band vibration velocity levels over the frequency range 6.3 to 80 Hz. These detailed criteria are also used to assess vibration impacts at highly sensitive locations. However, no such highly sensitive locations have been identified along the project corridor. These criteria are also shown graphically in Figure 3-1.

During the public comment period for the Draft EIS, a concern was raised regarding a commercial property at 20815 52nd Avenue West in Lynnwood. One of the occupants uses lasers to etch plaques for trophies while another occupant conducts automobile restoration that includes antique automobile phonographs. Both occupants were concerned that vibration from construction and train operations would have an adverse impact upon their businesses. Referring to Table 3-3, a maximum 1/3 octave band level of 72 VdB was used as the criterion for estimating the vibration impact at the property.

3.1.2 Groundborne Noise Impact Criteria

Tables 3-1 and 3-2 include separate FTA criteria for groundborne noise—the "rumble" that can be radiated by the groundborne vibration of room surfaces in buildings. Because airborne noise often masks groundborne noise for aboveground (i.e., at-grade or elevated) transit systems, groundborne

noise criteria are commonly applied only to subway operations where airborne noise is not a factor. For above-grade transit systems, groundborne noise criteria are applied only to special types of buildings that have sensitive interior spaces that are well insulated from exterior noise and that are used for noise-sensitive activities, such as sound recording or concert production. There are no special uses that fall into these categories within the project corridor because the entire project is above ground; therefore, a groundborne noise analysis has not been included in this assessment.

Table 3-1. Groundborne Vibration and Noise Impact Criteria for General Assessment

	Groundborne Vibration Impact Levels (VdB re: 1 micro-inch/second)			Groundborne Noise Impact Levels (dB re: 20 micro-Pascals)		
Land Use Category	**Frequent Events[a]**	**Occasional Events[b]**	**Infrequent Events[c]**	**Frequent Events[a]**	**Occasional Events[b]**	**Infrequent Events[c]**
Category 1: Buildings where low ambient vibration is essential for interior operations	65 VdB[d]	65 VdB[d]	65 VdB[d]	N/A[e]	N/A[e]	N/A[e]
Category 2: Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use	75 VdB	78 VdB	83 VdB	40 dBA	43 dBA	48 dBA

[a] "Frequent Events" are defined as more than 70 vibration events of the same source per day; most rapid transit projects fall into this category.

[b] "Occasional Events" are defined as between 30 and 70 vibration events of the same source per day; most commuter trunk lines have this many operations.

[c] "Infrequent Events" are defined as fewer than 30 vibration events of the same kind per day; this category includes most commuter rail branch lines.

[d] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research requires detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the heating, ventilation, and air conditioning (HVAC) systems and stiffened floors.

[e] Not applicable. Vibration-sensitive equipment is generally not sensitive to groundborne noise.

Table 3-2. Groundborne Vibration and Noise Impact Criteria for Special Buildings

	Groundborne Vibration Impact Levels (VdB re: 1 micro-inch/sec)		Groundborne Noise Impact Levels (dB re: 20 micro Pascals)	
Type of Building or Room[a]	**Frequent Events[b]**	**Occasional or Infrequent Events[c]**	**Frequent Events[b]**	**Occasional or Infrequent Events[c]**
Concert Halls	65 VdB	65 VdB	25 dBA	25 dBA
Television Studios	65 VdB	65 VdB	25 dBA	25 dBA
Recording Studios	65 VdB	65 VdB	25 dBA	25 dBA
Auditoriums	72 VdB	80 VdB	30 dBA	38 dBA
Theaters	72 VdB	80 VdB	35 dBA	43 dBA

[a] If the building will rarely be occupied when trains are operating, then there is no need to consider impact. As an example, consider locating a commuter rail line next to a concert hall; if no commuter trains will operate after 7 pm, then trains should rarely interfere with the use of the hall.

[b] "Frequent Events" are defined as more than 70 vibration events per day; most transit projects fall into this category.

[c] "Occasional or Infrequent Events" are defined as fewer than 70 vibration events per day; this category includes most commuter rail systems.

Table 3-3. Vibration Criteria for Detailed Analysis

Criterion Curve	Maximum L_v (VdB)[a]	Description of Use
Workshop	90	Distinctly detectable vibration; appropriate to workshops and non-sensitive areas
Office	84	Detectable vibration; appropriate to offices and non-sensitive areas
Residential day	78	Barely detectable vibration; adequate for computer equipment and low-power optical microscopes (up to 20X)
Residential night, operating rooms, and sensitive hospital equipment	72	Vibration not detectable, but groundborne noise might be audible inside quiet rooms; suitable for medium-power optical microscopes (100X) and other equipment of low sensitivity
VC-A	66	Adequate for medium- to high-power optical microscopes (400X), microbalances, optical balances, and similar specialized equipment
VC-B	60	Adequate for high-power optical microscopes (1,000X) and inspection and lithography equipment up to 3 micron-line widths
VC-C	54	Appropriate for most lithography and inspection equipment to 1 micron detail size
VC-D	48	Suitable in most instances for the most demanding equipment, including electron microscopes operating to the limits of their capability
VC-E	42	The most demanding criterion for extremely vibration-sensitive equipment

[a] As measured in 1/3-octave bands of frequency over the frequency range 8 to 80 Hz.

L_v = vibration velocity level; VC = vibration criteria

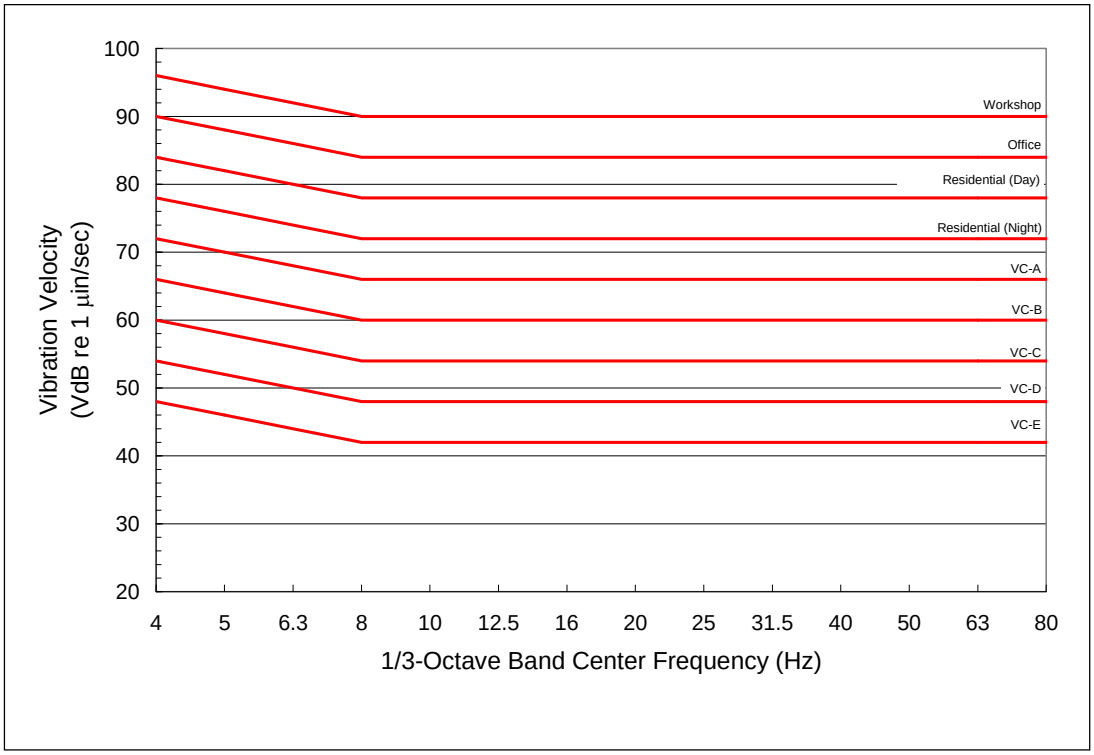


Figure 3-1. Vibration Criteria for Highly Sensitive Locations

3.2 Construction Vibration Criteria

Construction vibration from activities such as blasting and pile-driving, unlike vibration from train operations, has the potential to damage structures at very short distances. Because of this factor, the construction vibration discussion includes both damage criteria and annoyance impact criteria.

Table 3-4 presents threshold cracking criteria for visible cracking in building surfaces for a range of building types, in terms of the PPV. The approximate corresponding rms vibration velocity level is also included in Table 3-4. The majority of the residential receptors in the vicinity of the project guideway will fall into the Category III structure. Vibration that does not exceed threshold cracking criteria for cosmetic damage will not cause structural damage. Thus, threshold cracking criteria are used as the main building damage criteria.

Table 3-4. Cosmetic Structural Damage Criteria

Building Category	PPV (in/sec)	Approximate L_v[a]
I. Reinforced concrete, steel, or timber (no plaster)	0.50	102
II. Engineered concrete and masonry (no plaster)	0.30	98
III. Non-engineered timber and masonry buildings	0.20	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

[a] Root mean square velocity level in decibels (VdB) re 1 micro-inch/second

Structural damage, as opposed to cosmetic or threshold cracking, would be accompanied by permanent settlement, opened cracks in foundations and walls, misalignment or rocking of doors and windows, and the like. The probability of this being caused by construction vibration is negligible if ground vibration is limited to less than threshold cracking criteria. Structural damage is usually caused by natural building settlement, dewatering, surcharging, land slippage or creep, or pest damage, rather than by vibration.

When vibration and associated groundborne noise are assessed for annoyance due to specific construction activities, the transit vibration impact criteria determine the potential for impact (Table 3-1). Potential impact for threshold cracking damage is considered for all construction activities whereas potential impact for annoyance is considered only for long-term activities.

4 PREDICTION METHODOLOGY

This section summarizes the models, methods, and assumptions used to predict future noise and vibration velocity levels for potential sources of community impacts related to the Lynnwood Link Extension. These sources include light rail operation and construction activities. The light rail vehicle wheels and track are assumed to be maintained in good condition with regular wheel truing and rail grinding, in accordance with the Central Puget Sound Regional Transit Authority (Sound Transit) maintenance procedures.

4.1 Light Rail Vibration Projections

The vibration analysis for the Lynnwood Link Extension Environmental Impact Statement (EIS) follows the approach described in the FTA guidance manual, *Transit Noise and Vibration Impact Assessment*, Chapter 11, Detailed Vibration Analysis (FTA 2006). The 1/3 octave band floor vibration velocity levels (L_v) at each vibration-sensitive receptor were estimated from the 1/3 octave dynamic forces generated by the transit vehicle (Force Density Level [FDL]), the 1/3 octave line-source transfer mobility from the tracks to the receptor (Line Source Response [LSR]), and the 1/3 octave vibration response of the building (Building Vibration Response [BVR]). The BVR accounts for attenuation due to soil/foundation interaction and for amplification due to floor resonance. Additional adjustments were made to account for increased vibration due to special track work such as crossovers and any vibration impact mitigation incorporated into the track design. The above components were used to calculate the 1/3-octave vibration velocity level as follows:

$$L_v \text{ (VdB)} = \text{FDL} + \text{LSR} + \text{BVR} + \text{Adjustment} \qquad \text{(Equation 4-1)}$$

where: L_v = vibration velocity level due to trains (VdB re: 1 micro-inch/second)

FDL = train force density level (L_f) (dB re: 1 $lb/ft^{1/2}$)

LSR = soil line source response (TM_{line}) (dB re: (1 micro-inch/s)/($lb/ft^{1/2}$))

BVR = building vibration response (C_{build}) (dB)

Adjustment = adjustment to account for crossovers and/or mitigation (dB)

Each of the above factors for the Lynnwood Link Extension is described in the following sections.

In the project area, special purpose receptors with sensitive interior spaces that were well insulated from exterior noise were not found; moreover, the entire project would be above ground. Therefore, projections of groundborne noise were not included in this study.

The estimates presented in this analysis do not contain conservative elements, added "safety factors," or adjustments for uncertainty. They are the best estimates or median expected levels based on the best available information, and are compared directly with the "detailed" assessment criteria shown in Figure 3-1.

4.1.1 Force Density Level

The FDLs for all at-grade ballast-and-tie segments were based on measurements taken by ATS Consulting (ATS Consulting 2013). The data represent the most recent FDLs developed to date for Sound Transit at-grade ballast-and-tie track, and are the only FDL data at Sound Transit for multiple car trains on ballast-and-tie track. Figure 4-1 indicates the FDL spectra that were used for trains traveling at speeds from 25 to 55 miles per hour (mph), in 5-mph increments, on ballast-and-tie track. The FDL values plotted in Figure 4-1 are listed in Table 4-1. The FDLs reported by ATS Consulting were obtained at speeds up to 40 mph. The FDLs at higher speeds were obtained by adding differences between FDLs measured for higher speeds on a direct fixation track in a cut section along Macadam Road, north of the South 144th Street Bridge over I-5, and adding these differences to the 40-mph FDL for the ballast-and-tie track.

The FDLs for elevated structures were based on measurements at three locations. Wilson, Ihrig & Associates took measurements next to the elevated guideway leading into the west portal of the Beacon Hill tunnel (at Airport Way) in October 2011 and May 2012, and ATS Consulting took measurements at two locations next to the Tukwila elevated guideway in January and October 2011. These measurements were taken during revenue service, so the FDL for the elevated structure was determined at only one nominal speed at each location—35 mph west of the Beacon Hill tunnel, and an estimated speed of 55 mph at the two locations in Tukwila. In the model, the Wilson, Ihrig & Associates data were adjusted to a speed of 55 mph using the relationship between speed and force density that had been measured while running the trains at different speeds along the ballast-and-tie track in separate scenarios for two transit operators—for Sound Transit near the SODO Station in Seattle, and for the Santa Clara Valley Transportation Authority (VTA). Next, the energy average was taken of the speed-adjusted Airport Way FDL and the two FDLs measured in Tukwila to develop an FDL at 55 mph for use in the Lynnwood Link Extension vibration analysis. Finally, the differences due to speed that were observed in the previous measurements for Sound Transit and VTA were applied to the energy-averaged FDL to obtain an elevated structure FDL at different speeds. Figure 4-2 and Table 4-2 indicate the FDLs for trains traveling at speeds from 25 to 55 mph, in 5-mph increments, on elevated structures. The FDL applies to a line of vibration forces acting on the ground near the elevated structures and includes the effect of the soil/structure interaction at the foundations of the guideway columns.

Table 4-1. Sound Transit Force Density Levels (dB re: 1 lb/ft$^{1/2}$) on At-Grade Ballast-and-Tie Track

	1/3-Octave Band Center Frequency (Hz)																	
Speed	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
25 mph	25	20	21	23	23	29	24	19	21	18	18	15	21	24	25	21	20	15
30 mph	25	21	18	24	26	26	25	23	23	19	18	18	23	26	26	23	20	17
35 mph	28	24	24	25	30	28	25	25	25	21	18	19	22	28	27	23	21	17
40 mph	32	26	28	27	33	32	30	26	27	23	20	20	24	30	28	24	21	18
45 mph	31	25	23	26	35	37	35	27	28	24	22	20	26	31	28	24	21	18
50 mph	26	22	28	27	38	36	36	28	27	26	21	21	26	32	30	25	22	20
55 mph	24	29	31	27	39	36	37	29	25	27	21	23	25	32	31	26	23	22

Table 4-2. Sound Transit Force Density Levels (dB re: 1 lb/ft$^{1/2}$) on Elevated Structures

	1/3-Octave Band Center Frequency (Hz)																	
Speed	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
25 mph	10	12	23	31	18	23	23	27	15	9	10	15	22	20	22	21	18	22
30 mph	10	17	26	33	20	22	22	25	23	9	9	13	22	19	20	21	18	22
35 mph	13	16	26	35	26	26	22	28	21	17	10	15	22	20	21	21	19	21
40 mph	14	18	24	34	28	31	24	27	20	16	12	15	24	21	21	21	19	21
45 mph	19	24	27	37	31	35	29	27	22	16	17	17	24	20	21	21	20	24
50 mph	14	21	18	30	34	33	33	32	21	17	18	20	22	21	20	20	19	19
55 mph	13	28	25	24	29	34	31	31	18	14	11	22	24	24	24	23	21	22

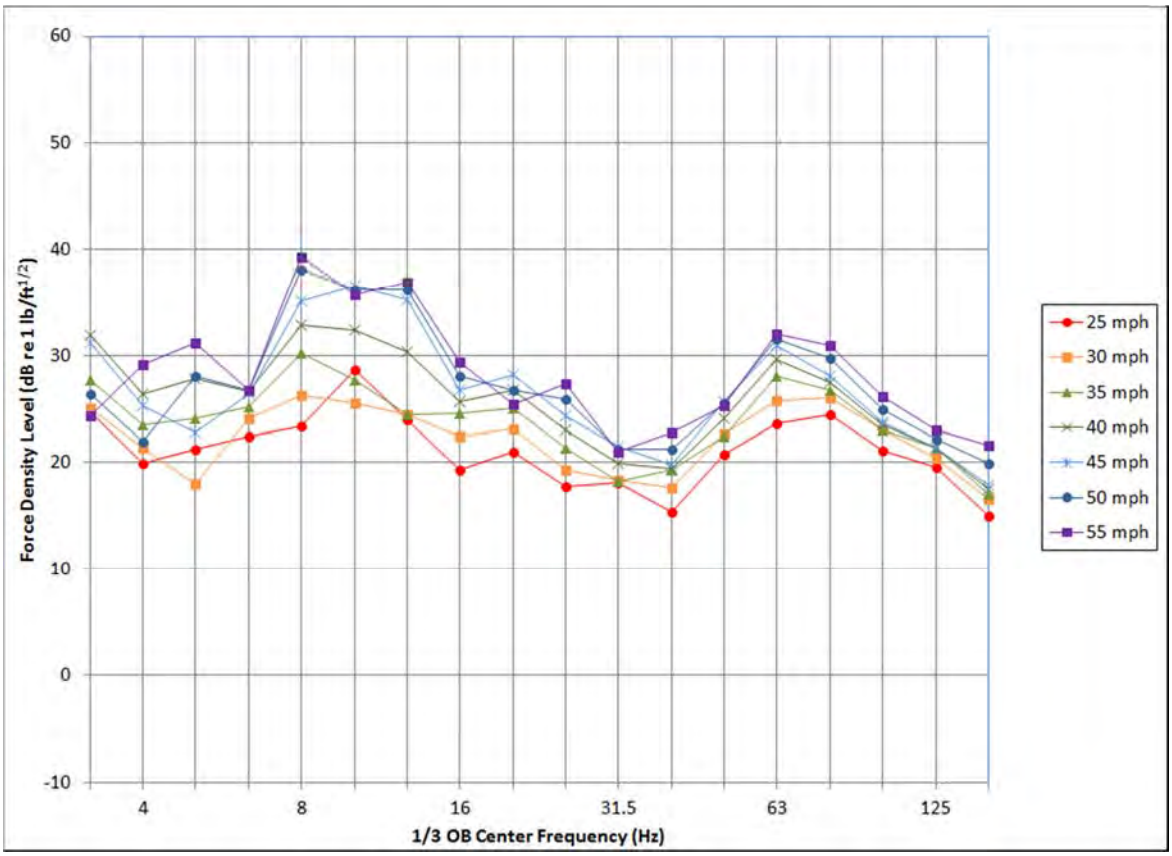


Figure 4-1. Sound Transit Force Density Levels on Ballast-and-Tie Track

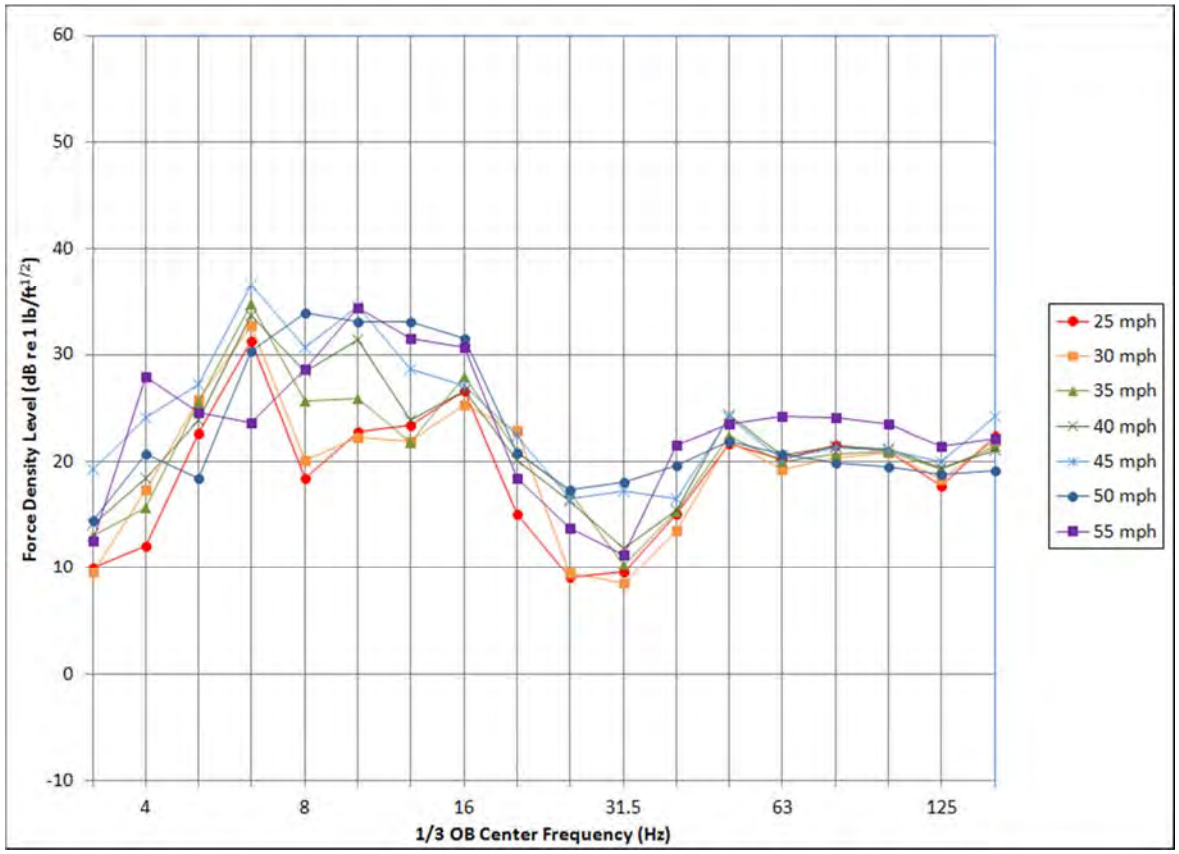


Figure 4-2. Sound Transit Force Density Levels on Elevated Structures

4.1.2 Line Source Response

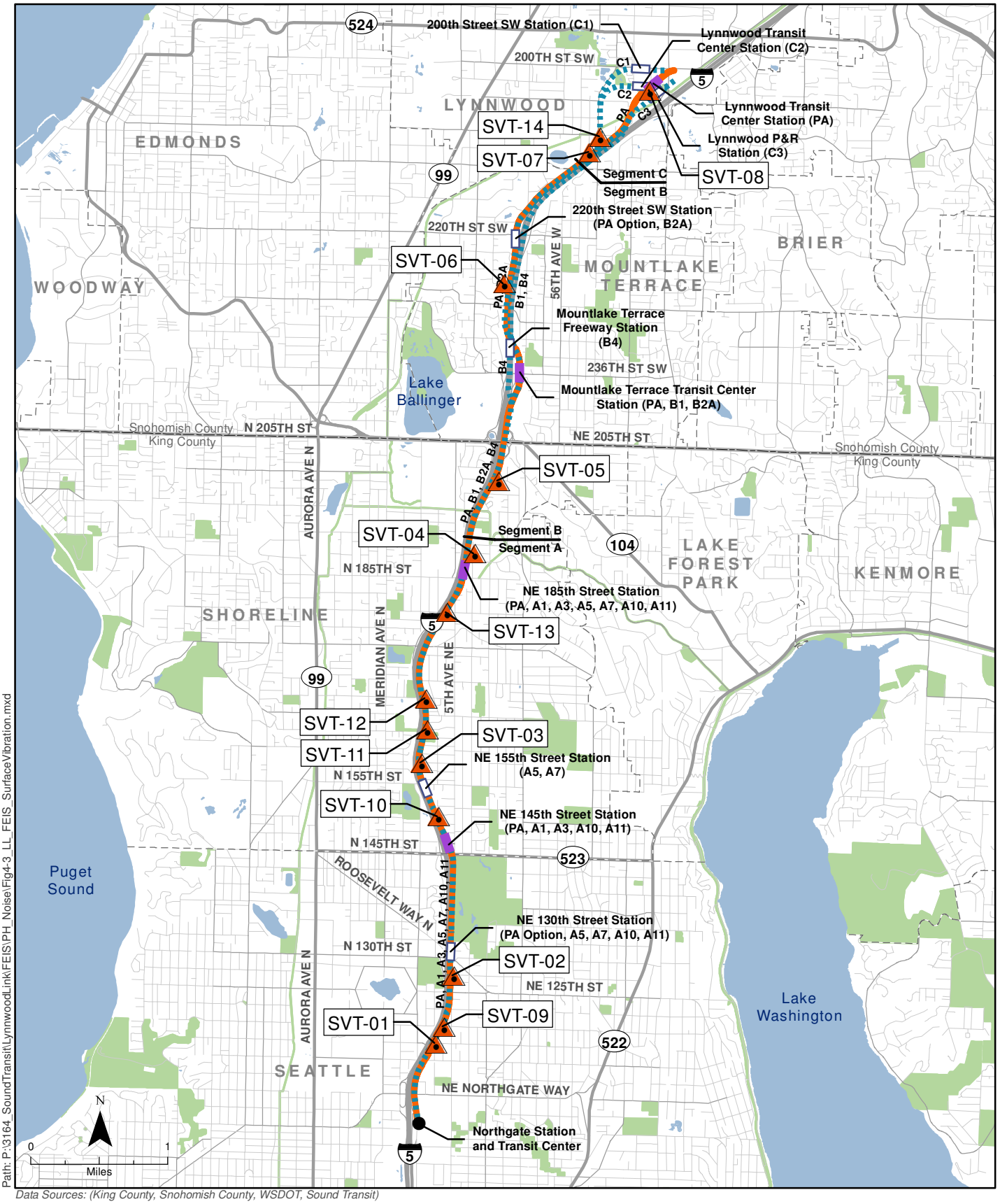
The LSR represents the response of the ground to vertical forces incoherently distributed over the length of the train (i.e., the force at one location is unrelated to the force at another location). To develop the LSR, the vibration propagation characteristics of the soil are determined by producing an impulsive force on or below the ground surface and measuring the vibration response in each 1/3-octave band (typically from 4 to 160 Hz) at geophones located over a range of distances. The transfer mobilities between each impact and geophone location are calculated from the measured data. The Point Source Response (PSR) is the level in dB of the transfer mobility magnitude. The LSR is calculated by integrating the square of the 1/3-octave transfer mobility at specific distances over the length of the train.

Vibration from elevated structures propagates outward from the foundations of the guideway columns, which act roughly like point sources within the ground. At the time of the vibration analysis, the proposed locations of the guideway columns were not known. Therefore, the LSRs developed for the analysis of the at-grade segments of track were combined with the FDLs developed for elevated structures (see Section 4.1.1) to estimate vibration impacts at locations along the proposed elevated guideway alignment. The FDL was based on vibration measurements taken near the columns of existing guideways. Thus, the projected vibration levels for elevated structures

represent the worst-case condition for receptors close to the columns. The vibration at receptors located farther away from the columns should be lower than projected.

The LSRs were measured at fourteen sites near the proposed alignment. Test sites were based on a review of aerial photographs, geological information available online from the Washington State Geological Survey, and supplemented by a visual land-use survey. The 14 test sites, designated as SVT-01 through SVT-14, were selected to represent a range of soil conditions in areas along the project corridor near sensitive land uses. The test sites were located in the municipalities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood. The locations of these test sites are shown in Figure 4-3 and are described below.

- **Site SVT-01:** This site was located at the intersection of 3rd Avenue NE and NE 117th Street in Seattle. The measurement at this location characterizes the vibration propagation in the south portion of Segment A.
- **Site SVT-02:** This site was located at the intersection of 5th Avenue NE and NE 127th Street in Seattle. The measurement at this location characterizes the vibration propagation in the south portion of Segment A, south of the Jackson Park Golf Course.
- **Site SVT-03:** This site was located at the intersection of 1st Avenue NE and NE 158th Street in Shoreline. The measurement at this location characterizes the vibration propagation in the middle portion of Segment A, north of the Jackson Park Golf Course.
- **Site SVT-04:** This site was located at the intersection of 8th Avenue NE and NE 189th Street in Shoreline. The measurement at this location characterizes the vibration propagation in the north portion of Segment A.
- **Site SVT-05:** This site was located at the end of NE 200th Street in Shoreline, immediately east of the I-5 corridor. The measurement at this location characterizes the vibration propagation in the south portion of Segment B.
- **Site SVT-06:** This site was located at the intersection of 226th Street SW and 62nd Avenue West in Mountlake Terrace. The measurement at this location characterizes the vibration propagation in the middle portion of Segment B.
- **Site SVT-07:** This site was located in the cul-de-sac at the south end of 53rd Avenue West in Lynnwood, north and west of the Interstate 5 (I-5) corridor. The measurement at this location characterizes the vibration propagation in the north portion of Segment B and the southern half of Segment C.
- **Site SVT-08:** This site was located in the Lynnwood Park-and-Ride parking lot in Lynnwood. The measurement at this location characterizes the vibration propagation in the north half of Segment C.
- **Site SVT-09:** This site was located at the end of NE 120th Street in Seattle, immediately east of the I-5 corridor. The measurement at this location characterizes the vibration propagation in the south portion of Segment A where potential vibration impact was indicated during the initial vibration study for the Draft EIS.



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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Surface Vibration Test Location
- Roadway
- Local Street
- City Boundary
- County Boundary
- Park
- Waterbody

Figure 4-3
Surface Vibration Test Locations

Lynnwood Link Extension

- **Site SVT-10:** This site was located at the intersection of 3rd Avenue NE and NE 151st Street in Shoreline. The measurement at this location characterizes the vibration propagation in the middle portion of Segment A where potential vibration impact was indicated during the initial vibration study for the Draft EIS.
- **Site SVT-11:** This site was located at the end of NE 163rd Street in Shoreline, immediately east of the I-5 corridor. The measurement at this location characterizes the vibration propagation in the middle portion of Segment A where potential vibration impact was indicated during the initial vibration study for the Draft EIS.
- **Site SVT-12:** This site was located at the end of NE 167th Street in Shoreline, immediately east of the I-5 corridor. The measurement at this location characterizes the vibration propagation in the middle portion of Segment A where potential vibration impact was indicated during the initial vibration study for the Draft EIS.
- **Site SVT-13:** This site was located at the end of NE 180th Street in Shoreline, immediately east of the I-5 corridor. The measurement at this location characterizes the vibration propagation in the north portion of Segment A where potential vibration impact was indicated during the initial vibration study for the Draft EIS.
- **Site SVT-14:** This site was located at 20825 52nd Avenue West in Lynnwood. The measurement at this location characterizes the vibration propagation at a potentially vibration-sensitive commercial property in the north portion of Segment C that was identified during the public comment period for the Draft EIS.

The vibration propagation test procedure and transducer layout are shown schematically in Figure 4-4. As shown in the cross-section view at the top of Figure 4-4, a 42-pound mass is dropped from a height of 4 feet onto a load cell placed against the ground to generate a dynamic impact force. The measurement equipment includes a load cell to measure the force produced by the weight, high-sensitivity geophones, amplifiers, and a multi-channel digital data recorder. Geophones produce an analog electrical signal that is proportional to the vertical vibration velocity of the ground surface to which they are attached. The geophones are located on paved surfaces, concrete curbs, or on aluminum stakes driven into soil, adhered with wax. Where space permitted, impact forces were generated along a line parallel with and adjacent to the rail alignment, at multiple points typically spaced 25 feet apart. Ten geophones were placed in a line perpendicular to the impact locations at distances of 15 to 400 feet from the impact locations. For locations at the ends of streets, impact forces were at three points at 0 and 25 feet offset to each side of the geophone line. For each impact location, a minimum of 30 impacts were used. Analog data were digitally recorded continuously for each set of impacts.

Data were analyzed with digital signal processing software to calculate the auto- and cross-spectral components from which the transfer mobility and coherence between each impact and geophone location were computed as functions of frequency. Coherence is a measure of the signal-to-noise ratio of the test as a function of frequency. The basic analysis steps taken are as follows:

- Linear averages of auto- and cross-spectral components were computed for each source-receiver location.

- Transfer mobilities and coherence functions for each source-receiver pair were computed from the auto- and cross-spectral components.
- The narrowband squared transfer mobility magnitudes were averaged over each 1/3-octave band and the result was expressed as the PSR in decibels.
- The PSR levels were plotted with respect to the logarithm of distance from the impacts and a polynomial curve was fitted to the data by the method of least squares for each 1/3-octave band using the following formula to obtain the PSR as a function of distance:

$$PSR = A_0 + A_1 \bullet \log_{10}(D) + A_2 \bullet \log_{10}^2(D) + A_3 \bullet \log_{10}^3(D) \quad \text{(Equation 4-2)}$$

where:

PSR is the Point Source Response in dB; A_0, A_1, A_2 and A_3 are the regression coefficients; and D is the distance (feet) between the source and the receiver.

- The LSR at each test site was calculated by integrating the 1/3-octave PSR energy at specific distances over the length of a four-car train (380 feet) using the regression coefficients determined above.
- Propagation test and analysis procedures are described in more detail in the FTA guidance manual *Transit Noise and Vibration Impact Assessment*.

Detailed vibration propagation data for the project are included in Attachment E of this report.

For all test sites with the exception of SVT-05, SVT-07, and SVT-10, there was no observable correlation between the LSR and the geological properties of the soil at those sites. Therefore, a general LSR was developed by energy-averaging the computed LSRs from each of the remaining sites (SVT-01 through SVT-04, SVT-06, SVT-08, SVT-09, and SVT-11 through SVT-14) at multiple distances up to 400 feet, then applying a polynomial curve fit to the data. The resulting general LSR is plotted at several distances in Figure 4-5 while the regression coefficients are listed in Table 4-3. The general LSR was applied along the length of the alignment except where noted below.

The LSRs calculated at SVT-05, SVT-07, and SVT-10 were notably different from those obtained at the other sites. A review of the geological data in the vicinities indicated a relatively deep top layer of soft soil (based on standard penetration test results) that was likely to have contributed to the observed differences. The LSRs calculated from the data at the above three test sites were applied for receivers in the vicinity of each site. The extents along the alignment where the LSR data were used were determined from available geological information obtained from the Washington State Geological Survey Web site. The LSR was calculated by integrating the PSR energy at specific distances over the length of a four-car train (380 feet) using the regression coefficients determined as described above. The PSR regression coefficients used to calculate the LSRs at SVT-05, SVT-07, and SVT-10 are provided in Attachment E with the vibration data from all the test sites.

Site-specific LSRs were used, where available, at every location indicated to have potential vibration impact. The PSR regression coefficients used to calculate each site-specific LSR are provided in Attachment E with the vibration data from all the test sites. Table 4-4 indicates the extents along the alignment where each LSR (site-specific or general) was used in the vibration analysis.

Table 4-3. Regression Coefficients for the General LSR Applied Along the Length of the Alignment Except Where Noted

	1/3-Octave Band Center Frequency (Hz)																	
Coefficient	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	44.5	-8.0	-7.0	7.5	10.0	22.9	18.8	32.3	50.2	52.7	118.2	89.9	51.7	15.4	57.5	86.4	47.6	-76.6
A_1	-49.7	39.6	41.4	15.6	17.0	0.8	13.9	-6.5	-27.7	-24.0	-116.2	-50.6	11.5	77.9	6.2	-49.4	18.0	230.3
A_2	25.4	-25.2	-27.1	-11.3	-12.6	-2.4	-9.6	4.8	17.5	16.3	61.9	21.2	-10.5	-52.2	-17.1	13.9	-24.8	-142.4
A_3	-4.4	4.9	5.3	2.1	2.4	0.4	1.5	-1.8	-4.7	-4.9	-12.7	-5.2	-0.4	7.7	2.2	-3.4	3.7	24.9

$LSR = A_0 + A_1 \bullet \log_{10}(D) + A_2 \bullet \log_{10}^2(D) + A_3 \bullet \log_{10}^3(D)$

Table 4-4. Extents[a] Where Each Line Source Response (LSR) Was Used in the Vibration Analysis

Starting Station[b]	Ending Station[b]	LSR
27+00	34+60	General
36+20	43+30	SVT-01
43+60	54+70	SVT-09
55+00	121+90	General
122+30	137+00	SVT-10
138+00	144+00	General
144+30	150+00	SVT-03
150+60	162+10	General
162+20	169+00	SVT-11
170+50	185+80	SVT-12
186+10	207+50	General
208+20	220+00	SVT-13
220+50	229+20	General
230+10	246+60	SVT-04
251+50	266+10	General
268+40	277+40	SVT-05
279+50	423+80	General
424+00	428+60	SVT-06
429+40	483+30	General
483+40	495+60	SVT-07
496+00	499+80	General
500+20	501+90	SVT-14
205+10	541+80	General

[a]Extents shown only where there are vibration-sensitive receptors.
[b]Preferred Alternative stationing

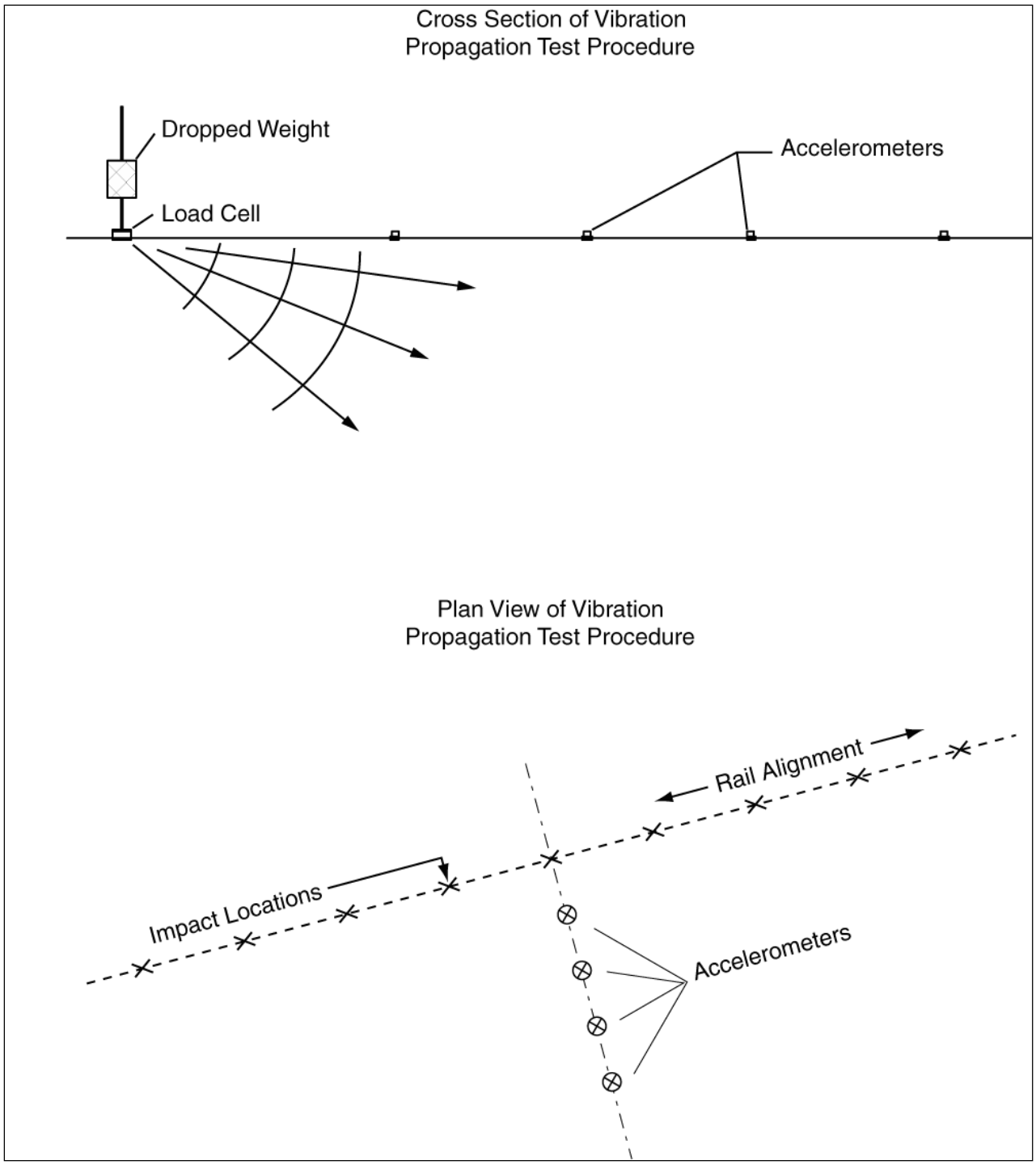


Figure 4-4. Surface Vibration Propagation Test Procedure

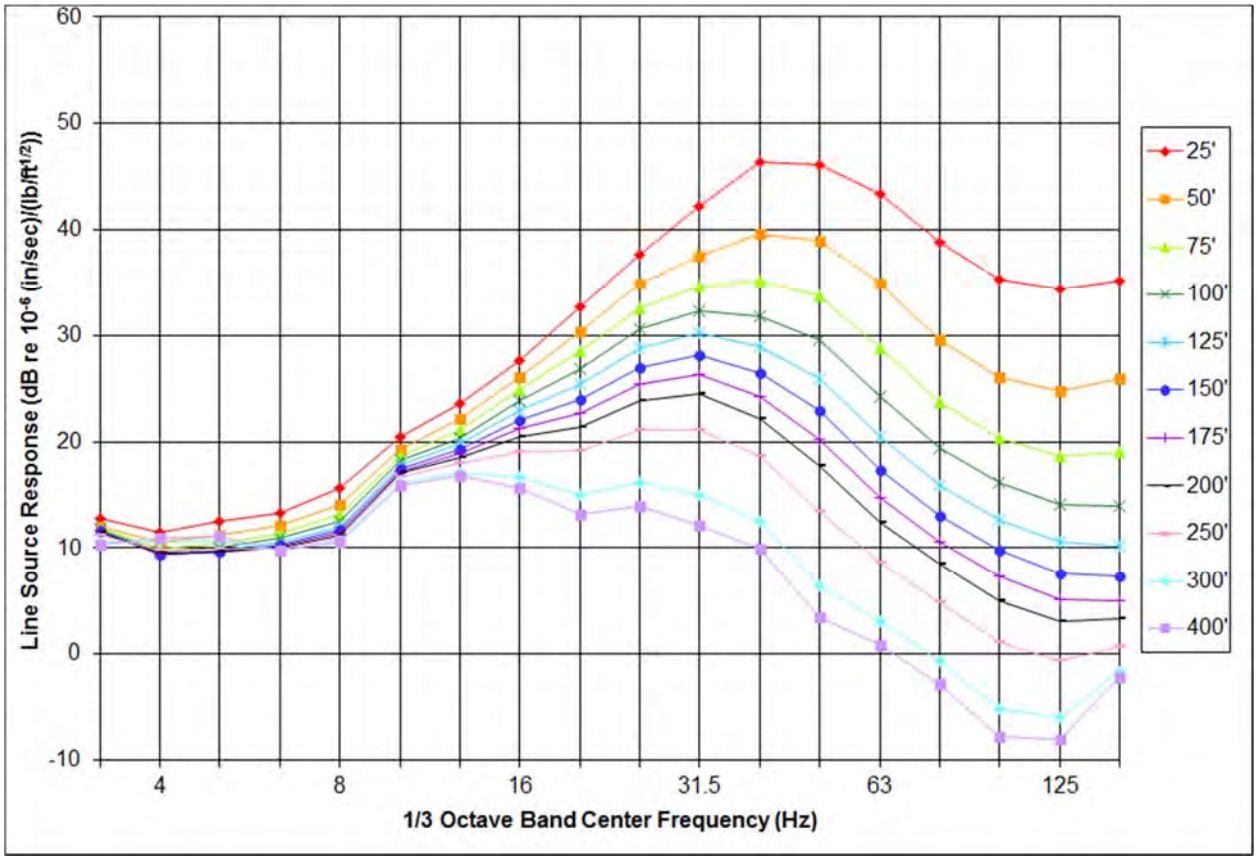


Figure 4-5. General Line Source Transfer Mobilities Based on SVT-01 through SVT-04, SVT-06, SVT-08, SVT-09, and SVT-11 through SVT-14

4.1.3 Building Vibration Response

The mechanical responses of various parts of building structures either reduce or increase the interior vibration levels. Composite building vibration responses were derived to represent the response of the foundation to incident ground vibration, floor-to-floor attenuation, and resonance amplification of floors. These building vibration responses are added to the predicted ground surface vibration levels to arrive at the final predicted indoor floor vibration levels.

Vibration is reduced as it travels from the soil into the building because of the mass of the building and foundation. These combined effects are referred to as the "foundation coupling loss." The FTA guidance manual provides foundation coupling losses for a variety of buildings. Because the majority of sensitive land uses along the project corridor are single-family residential structures, the predictions herein are for the first floor only. No floor-to-floor attenuation has been included to predict floor vibration at upper floors. The FTA manual states that the floor resonance amplification varies greatly; therefore, the manual suggests adding +6 dB to floor vibration velocity levels in the frequency range of the fundamental resonance in the floor—from 15 to 20 Hz for wood-frame residential structures and 20 to 30 Hz for a reinforced-concrete slab floor in modern buildings (Chapter 11: Detailed Vibration Analysis, page 11-11). The combined frequency range for both types of buildings includes the 1/3-octave bands from 16 to 31.5 Hz. For the Lynnwood Link

Extension vibration analysis, this adjustment was extended to all bands above 31.5 Hz and an adjustment was also added at frequencies below 16Hz. Table 4-5 lists these adjustments.

The foundation coupling losses, floor attenuation, and floor resonance amplification were combined to obtain the BVR in decibels. The BVRs for basic types of buildings are identical to those used previously for Sound Transit's University Link Extension and Northgate Link Extension, and are listed in Table 4-6. The BVR assigned to each type of building was based on observation of the buildings along the alignment.

Table 4-5. Adjustment for Floor Resonance Amplification (dB)

	1/3-Octave Band Center Frequency (Hz)														
	6.3	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
Adjustment	2	3	4	5	6	6	6	6	6	6	6	6	6	6	6

Table 4-6. Building Vibration Response (dB) (Including Adjustment for Floor Resonance Amplification)

	1/3-Octave Band Center Frequency (Hz)														
Structure	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
Single Family	2	2	2	2	2	1	1	1	1	1	1	1	1	1	2
1-2 Story Residential	2	1	-1	-1	-1	-2	-2	-2	-3	-3	-3	-3	-2	-2	-1
2-4 Story Masonry on Spread Footings	-1	-2	-3	-4	-4	-5	-6	-7	-8	-8	-8	-6	-6	-5	-4
Large Masonry on Pile Foundation	-2	-2	-1	0	0	-1	-2	-3	-3	-4	-5	-6	-7	-8	-8
Large Masonry on Spread Footings	-6	-7	-6	-6	-6	-7	-8	-8	-8	-8	-8	-8	-8	-7	-6
Slab on Grade Floor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

4.1.4 Additional Adjustments

Wheel impacts at crossovers increase vibration relative to a tangent track. The vibration generated by special track work tends to propagate as from a point source. Therefore, the adjustment depends strongly upon the proximity of the receptor to the crossover. To account for the increased vibration from crossovers, the following adjustment was applied:

$$+11 \text{ dB for } D < 20 \text{ ft} \qquad \text{(Equation 4-3)}$$

$$11 + 20\log_{10}(20/D) \text{ dB for } 20 \text{ ft} \leq D \leq 70 \text{ ft}$$

$$0 \text{ dB for } D > 70 \text{ ft}$$

where:

D equals the distance between the receiver and the closest extent of any crossover.

The above adjustment is based upon ground vibration measurements conducted adjacent to crossovers on other transit systems and is identical to the adjustment that was applied to the University Link Extension and Northgate Link Extension.

4.2 Construction Vibration Projections

Construction vibration, similar to noise, is highly dependent on the specific equipment and methods employed. Construction vibration can cause a variety of potential effects, including interference with vibration-sensitive equipment, low rumbling or groundborne noise, vibrations perceptible to humans at moderate levels, and cosmetic damage to buildings at the highest levels considered here. Because construction is a short-term, temporary impact, construction vibration was assessed at locations where prolonged annoyance or building cosmetic damage might occur; namely, at the receptors within the vicinity of the stations planned for the project.

Most construction processes do not generate high enough vibration levels to approach the threshold for cracking damage; moreover, structural damage is highly unlikely for construction vibration. Cosmetic damage from construction vibration is generally limited to pile-driving and vibratory rolling—the only two activities with PPV levels at 25 feet that are higher than the threshold for cracking damage. Because of this reason, care should be taken to limit these activities near structures as much as practicable.

The methodology for assessing construction vibration annoyance includes measuring maximum rms overall vibration levels with an integration time of 1 second for each source at a distance of 25 feet. A summary of expected upper-range vibration levels at a reference distance of 25 feet from the vibration source is presented in Table 4-7 (from FTA). For reference, the distance from the vibration source necessary to achieve vibration levels of 72 VdB or below is given in the last column. This level corresponds to the vibration annoyance criteria for frequent events at residential receptors (Table 3-1).

Using the available reference vibration levels at 25 feet, the following general prediction model (from the FTA guidance manual) gives the vibration level as a function of distance:

$$L_v(\text{distance}) = L_v(25 \text{ feet}) - 30*\log(\text{distance}/25 \text{ feet}) \qquad \text{(Equation 4-4)}$$

Table 4-7. Summary of Construction Equipment Vibration

Equipment	PPV at 25 feet (inches/second)	Approx. L_v[a] at 25-foot VdB	Minimum Distance between Equipment and Receptor to Avoid Annoyance Impact (feet)
Vibratory pile or casing	0.734	105	315
Oscillatory pile casing	0.089	87	80
Vibratory soil compactor	0.210	94	120
Auger drilling	0.016	72	25
Hoe ram	0.089	87	80
Excavator/grader/bulldozer	0.089	87	80
Loaded trucks	0.076	86	75

[a] Root mean square velocity level in decibels (VdB) re: 1 micro-inch/second, determined with an integration time of 1 second.

5 VIBRATION IMPACT ASSESSMENT

The detailed vibration impact assessment is based on the criteria discussed in Section 4 and on the projections described in this section. The assessment results are described below.

5.1 Light Rail Vibration Impact Assessment

The vibration impact assessment is based on the FDL as a function of train speed and the LSR as a function of distance from the receivers to the tracks. The locations of sensitive receptors and the distances from the receivers to the tracks were based on geographic information system (GIS) data available in the online document-sharing database for the project. Plan and profile information for all alternatives, except the Preferred Alternative, were based on the conceptual design drawings (dated 13 July 2012) in the Draft EIS. Plan and profile information for the Preferred Alternative were based on the Draft Preliminary Plans for the Final EIS evaluation dated April 2014.

Operating speeds used for the analysis were obtained from the Draft EIS conceptual plans for the Lynnwood Link Extension, dated June 8, 2012. In accordance with Sound Transit's *Link Design Criteria Manual* (May 2011), the maximum design speed for Link light rail corridors is 55 mph, and the maximum acceleration and deceleration rate is 3 mph per second. Using this rate, the design speed may be achieved in less than 20 seconds over a distance of less than 600 feet. As a result, and accounting for 380-foot platforms, the operating speed beyond 200 feet from stations was evaluated at 55 mph, except where limited by track geometry, as listed in Table 5-1. Within 200 feet of stations, a conservative average speed of 45 mph was used. A four-car consist was modeled as described in the operating plan in Part 1: Noise Section 5.5 of this report.

Table 5-1. Areas with Limited Operating Speed

Applicable Alternatives	Begin Track Station	End Track Station	Speed
Preferred	113+00	115+00	40 mph
Preferred	118+00	122+00	40 mph
Preferred	223+00	226+00	45 mph
Preferred	230+00	234+90	40 mph
Preferred	306+00	308+00	35 mph
Preferred	310+00	313+90	40 mph
Preferred	402+00	406+00	40 mph
Preferred	413+00	416+00	40 mph
Preferred	443+00	445+00	45 mph
Preferred	455+00	458+00	35 mph
Preferred	522+00	525+00	45 mph
Preferred	530+00	533+80	40 mph
Preferred	540+00	541+85	25 mph
A1, A3, A10	100+00	117+00	45 mph
A5, A10	212+00	218+00	45 mph

Table 5-1. Areas with Limited Operating Speed

Applicable Alternatives	Begin Track Station	End Track Station	Speed
B4	352+00	357+00	40 mph
B4	357+00	367+00	35 mph
B1	360+00	364+00	35 mph
B1	370+00	375+00	35 mph
B1	378+00	384+00	45 mph
B2A	348+00	356+00	45 mph
B2A	360+00	365+00	35 mph
B2A	371+00	376+00	35 mph
B2A	380+00	391+00	45 mph
B2A	407+00	411+00	45 mph
B2A	421+00	428+00	45 mph
B2A	438+00	444+00	45 mph
C1, C2	502+00	513+00	45 mph
C3	516+00	521+00	40 mph
C3	525+00	530+00	40 mph
C1	526+00	534+00	45 mph
C2	526+00	538+00	35 mph
C1	537+00	546+00	35 mph

Attachment D includes tables that list the vibration-sensitive receptor locations, receiver type, FTA criteria, distance to the nearest track, and the projected maximum 1/3-octave-band vibration velocity levels for each segment, including all alternatives. Receptors with potential vibration impacts are highlighted in the tables.

As discussed in Section 3.1.2, groundborne noise criteria are only applied to buildings that have sensitive interior spaces that are well insulated from exterior noise when assessing potential groundborne noise impacts from at-grade track or elevated guideway. No such buildings exist along the project alignment; therefore, no groundborne noise impacts are reported in this study.

Tables 5-2 through 5-13 summarize the potential vibration impacts, including locations and number of potential impacts at each receptor, for each project segment plus the Preferred Alternative. The number of potential impacts at multifamily receptors, if any, is estimated by assuming that the total number of residential units is divided evenly between buildings. The potential impacts reported in this section do not include potential mitigation measures. Mitigation for potential impacts is discussed in Section 6.1.

5.1.1 Segment A: Seattle to Shoreline

The following sections discuss the potential vibration impacts for each of the Segment A alternatives.

Preferred Alternative

Table 5-2 summarizes the potential vibration impacts for the Preferred Alternative in Segment A. Potential vibration impacts include 25 single-family homes and one duplex distributed along the alignment.

Table 5-2. Preferred Alternative Segment A Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
36+20	136 NE 115TH ST, Seattle	30	55	76	63	72	1
36+40	147 NE 116TH ST, Seattle	24	55	79	63	72	2
43+30	11710 3rd Avenue NE, Seattle	20	55	81	63	72	1
50+60	338 NE 120th Street, Seattle	37	55	73	63	72	1
52+40	12027 5th Avenue NE, Seattle	32	55	74	63	72	1
53+50	12045 5th Avenue NE, Seattle	24	55	77	63	72	1
54+30	12049 5th Avenue NE, Seattle	32	55	74	63	72	1
130+20	301 NE 151st Street, Shoreline	29	55	79	25	72	1
146+50	106 NE 155th Street, Shoreline	23	55	72	63	72	1
172+30	126 NE 165th Street, Shoreline	43	55	72	25	72	1
173+20	124 NE 165th Place, Shoreline	41	55	72	25	72	1
174+60	119 NE 166th Street, Shoreline	41	55	72	25	72	1
182+90	16735 2nd Avenue NE, Shoreline	45	55	72	25	72	1
183+00	16741 2nd Avenue NE, Shoreline	43	55	72	25	72	1
185+30	119 NE 170th Street, Shoreline	45	55	72	25	72	1
203+20	17737 2nd Place NE, Shoreline	22	55	72	50	72	1
209+00	17809 3rd Avenue NE, Shoreline	34	55	75	63	72	1
210+00	17821 3rd Avenue NE, Shoreline	23	55	79	63	72	1
213+40	331 NE 180th Street, Shoreline	28	55	77	63	72	1
216+30	338 NE 180th Street, Shoreline	40	55	73	63	72	1
217+30	18019 5th Avenue NE, Shoreline	25	55	78	63	72	1

Table 5-2. Preferred Alternative Segment A Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
218+40	18027 5th Avenue NE, Shoreline	45	55	72	63	72	1
218+90	18031 5th Avenue NE, Shoreline	20	55	80	63	72	1
238+70	715 NE 189th Street, Shoreline	30	55	73	63	72	1
239+20	718 NE 189th Street, Shoreline	17	55	78	63	72	1
240+60	18915 8th Avenue NE, Shoreline	24	55	75	63	72	1
						Total	**27**

Note: Vibration levels are measured in VdB referenced to 1 micro-inch per second.

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Street Stations

Table 5-3 summarizes the potential vibration impacts for Alternative A1. Potential vibration impacts include nine single-family homes distributed along the alignment.

Table 5-3. Alternative A1 Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
38+25	327 NE 120th Street, Seattle	34	55	74	63	72	1
155+50	121 NE 163rd Street, Shoreline	27	55	79	63	72	1
169+50	114 NE 167th Street, Shoreline	26	55	74	50	72	1
198+75	17815 3rd Avenue NE, Shoreline	22	55	79	63	72	1
199+75	17821 3rd Avenue NE, Shoreline	28	55	77	63	72	1
203+25	331 NE 180th Street, Shoreline	34	55	80	63	72	1
206+25	18019 5th Avenue NE, Shoreline	32	55	75	63	72	1
209+50	18031 5th Avenue NE, Shoreline	28	55	77	63	72	1
231+00	18921 8th Avenue NE, Shoreline	27	55	74	63	72	1
						Total	**9**

Note: Vibration levels are measured in VdB referenced to 1 micro-inch per second.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Street Stations

Table 5-4 summarizes the potential vibration impacts for Alternative A3. Potential vibration impacts include eight single-family homes along the alignment.

Table 5-4. Alternative A3 Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
33+00	11710 3rd Avenue NE, Seattle	21	55	73	63	72	1
114+75	324 NE 148th Street, Shoreline	24	45	72	16	72	1
155+50	121 NE 163rd Street, Shoreline	27	55	79	63	72	1
169+50	114 NE 167th Street, Shoreline	26	55	74	50	72	1
198+75	17815 3rd Avenue NE, Shoreline	22	55	72	50	72	1
199+50	17821 3rd Avenue NE, Shoreline	28	55	75	50	72	1
203+00	331 NE 180th Street, Shoreline	34	55	73	50	72	1
206+00	18019 5th Avenue NE, Shoreline	32	55	75	50	72	1
						Total	**8**

Note: Vibration levels are measured in VdB referenced to 1 micro-inch per second.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Table 5-5 summarizes the potential vibration impacts for Alternative A5. Potential vibration impacts include 14 single-family homes and one duplex distributed along the alignment.

Table 5-5. Alternative A5 Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
26+00	136 NE 115th Street, Seattle	30	55	76	63	72	1
26+25	147 NE 116th Street, Seattle	24	55	79	63	72	2
33+00	11708 3rd Avenue NE, Seattle	37	55	73	63	72	1
38+25	327 NE 120th Street, Seattle	34	55	74	63	72	1
114+75	324 NE 148th Street, Shoreline	44	55	72	25	72	1

Table 5-5. Alternative A5 Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
116+25	309 NE 149th Street, Shoreline	32	55	75	25	72	1
155+50	121 NE 163rd Street, Shoreline	27	55	79	63	72	1
169+50	114 NE 167th Street, Shoreline	26	55	74	50	72	1
198+75	17815 3rd Avenue NE, Shoreline	22	55	79	63	72	1
199+75	17821 3rd Avenue NE, Shoreline	28	55	77	63	72	1
203+25	331 NE 180th Street, Shoreline	34	55	80	63	72	1
206+00	18019 5th Avenue NE, Shoreline	32	55	75	63	72	1
209+25	18031 5th Avenue NE, Shoreline	28	55	77	63	72	1
228+75	718 NE 189th Street, Shoreline	20	55	77	63	72	1
230+25	18915 8th Avenue NE, Shoreline	23	55	75	63	72	1
						Total	**16**

Note: Vibration levels are measured in VdB referenced to 1 micro-inch per second.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Table 5-6 summarizes the potential vibration impacts for Alternative A7. Potential vibration impacts include nine single-family homes distributed along the alignment.

Table 5-6. Alternative A7 Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
33+00	11710 3rd Avenue NE, Seattle	21	55	73	63	72	1
114+75	324 NE 148th Street, Shoreline	44	55	72	25	72	1
116+25	309 NE 149th Street, Shoreline	32	55	75	25	72	1
155+50	121 NE 163rd Street, Shoreline	27	55	79	63	72	1
169+50	114 NE 167th Street, Shoreline	26	55	74	50	72	1
198+75	17815 3rd Avenue NE, Shoreline	22	55	72	50	72	1
199+50	17821 3rd Avenue NE, Shoreline	28	55	75	50	72	1

Table 5-6. Alternative A7 Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
203+00	331 NE 180th Street, Shoreline	34	55	73	50	72	1
206+00	18019 5th Avenue NE, Shoreline	32	55	75	50	72	1
						Total	**9**

Note: Vibration levels are measured in VdB referenced to 1 micro-inch per second.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations

Table 5-7 summarizes the potential vibration impacts for Alternative A10. Potential vibration impacts include 12 single-family homes and one duplex distributed along the alignment.

Table 5-7. Alternative A10 Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
26+00	136 NE 115th Street, Seattle	30	55	76	63	72	1
26+25	147 NE 116th Street, Seattle	24	55	79	63	72	2
33+00	11708 3rd Avenue NE, Seattle	37	55	73	63	72	1
38+25	327 NE 120th Street, Seattle	34	55	74	63	72	1
155+50	121 NE 163rd Street, Shoreline	27	55	79	63	72	1
169+50	114 NE 167th Street, Shoreline	26	55	74	50	72	1
198+75	17815 3rd Avenue NE, Shoreline	22	55	79	63	72	1
199+75	17821 3rd Avenue NE, Shoreline	28	55	77	63	72	1
203+25	331 NE 180th Street, Shoreline	34	55	80	63	72	1
206+00	18019 5th Avenue NE, Shoreline	32	55	75	63	72	1
209+25	18031 5th Avenue NE, Shoreline	28	55	77	63	72	1
228+75	718 NE 189th Street, Shoreline	20	55	77	63	72	1
230+25	18915 8th Avenue NE, Shoreline	23	55	75	63	72	1
						Total	**14**

Note: Vibration levels are measured in VdB referenced to 1 micro-inch per second.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations

Table 5-8 summarizes the potential vibration impacts for Alternative A11. Potential vibration impacts include eight single-family homes distributed along the alignment.

Table 5-8. Alternative A11 Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
33+00	11710 3rd Avenue NE, Seattle	21	55	73	63	72	1
114+75	324 NE 148th Street, Shoreline	24	45	72	16	72	1
155+50	121 NE 163rd Street, Shoreline	27	55	79	63	72	1
169+50	114 NE 167th Street, Shoreline	26	55	74	50	72	1
198+75	17815 3rd Avenue NE, Shoreline	22	55	72	50	72	1
199+50	17821 3rd Avenue NE, Shoreline	28	55	75	50	72	1
203+00	331 NE 180th Street, Shoreline	34	55	73	50	72	1
206+00	18019 5th Avenue NE, Shoreline	32	55	75	50	72	1
						Total	**8**

Note: Vibration levels are measured in VdB referenced to 1 micro-inch per second.

5.1.2 Segment B: Shoreline to Mountlake Terrace

No potential vibration impacts are projected along any of the alternatives or options for Segment B except where indicated in the Preferred Alternative.

Preferred Alternative

Table 5-9 summarizes the potential vibration impacts for the Preferred Alternative in Segment B. Potential vibration impacts include three single-family homes in Segment B.

Table 5-9. Preferred Alternative Segment B Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
259+30	19705 10th Avenue NE, Shoreline	40	55	76	63	72	1
259+80	19715 10th Avenue NE, Shoreline	45	55	72	63	72	1
478+80	5632 213th Street SW, Mountlake Terrace	48	55	72	63	72	1
						Total	**3**

Note: Vibration levels are measured in VdB referenced to 1 micro-inch per second.

5.1.3 Segment C: Mountlake Terrace to Lynnwood

Preferred Alternative

There are no potential vibration impacts for the Preferred Alternative in Segment C.

Alternative C1: 52nd Avenue West to 200th Street SW, Option 1 within I-5 Median

Table 5-10 summarizes the potential vibration impacts for Alternative C1 Option 1 (within the I-5 median). Potential vibration impacts include one single-family home and one commercial property identified to be potentially sensitive to vibration.

Table 5-10. Alternative C1 Option 1 Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
510+00	20909 52nd Avenue West, Lynnwood	25	55	75	50	72	1
513+00	20815 52nd Avenue West, Lynnwood	17	55	82	40	72	1
						Total	**2**

Note: Vibration levels are measured in VdB referenced to 1 micro-inch per second.

Alternative C1: 52nd Avenue West to 200th Street SW, Option 2 West of I-5

Table 5-11 summarizes the potential vibration impacts for Alternative C1 Option 2 (west of I-5). Only one potential vibration impact is projected at a commercial property identified to be potentially sensitive to vibration.

Table 5-11. Alternative C1 Option 2 Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
513+00	20815 52nd Avenue West, Lynnwood	17	55	82	40	72	1
						Total	**1**

Note: Vibration levels are measured in VdB referenced to 1 micro-inch per second.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center, Option 1 within I-5 Median

Table 5-12 summarizes the potential vibration impacts for Alternative C2 Option 1 (within the I-5 median). Potential vibration impacts include one single-family home and one commercial property identified to be potentially sensitive to vibration.

Table 5-12. Alternative C2 Option 1 Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
510+00	20909 52nd Avenue West, Lynnwood	25	55	75	50	72	1
513+00	20815 52nd Avenue West, Lynnwood	17	55	82	40	72	1
						Total	**2**

Note: Vibration levels are measured in VdB referenced to 1 micro-inch per second.

Alternative C2: 52nd Avenue West to 200th Street SW, Option 2 West of I-5

Table 5-13 summarizes the potential vibration impacts for Alternative C2 Option 2 (west of I-5). Only one potential vibration impact is projected at a commercial property identified to be potentially sensitive to vibration.

Table 5-13. Alternative C2 Option 2 Potential Vibration Impacts

Station No.	Address	Distance to Near Track (feet)	Speed (mph)	Maximum 1/3-Octave Vibration Level (VdB)	1/3-Octave Band (Hz)	Vibration Impact Criterion	No. of Potential Impacts
513+00	20815 52nd Avenue West, Lynnwood	17	55	82	40	72	1
						Total	**1**

Note: Vibration levels are measured in VdB referenced to 1 micro-inch per second.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride, Option 1 within I-5 Median

No potential vibration impacts are projected along Alternative C3 Option 1 (within the I-5 median).

Alternative C3: Along I-5 to Lynnwood Park-and-Ride, Option 2 West of I-5

No potential vibration impacts are projected along Alternative C3 Option 2 (west of I-5).

5.2 Construction Vibration Impact Assessment

Building damage is the primary concern related to construction vibration. Annoyance is typically a concern only where there is prolonged exposure to construction vibration that would occur during construction of the stations. The following sections discuss potential vibration impacts relative to building damage during construction of the guideway and potential vibration impacts relative to both building damage and annoyance during construction of the stations.

The construction assessment assumes that impact pile-driving will not be used in any construction related to the project. Alternative pile-driving techniques, such as vibratory pile-driving or augered piles, have been considered in this assessment as substitutes for impact pile-driving.

5.2.1 Guideway Construction

Two construction sources that have the potential to cause cosmetic damage to receptors along the alignment during construction of the guideway are vibratory soil compactors and vibratory pile drivers. Vibratory soil compactors might be used during construction of the at-grade segments of the guideway. Vibratory sheet pile-driving might be required during construction of the retained cut segments, for excavation, and/or for retaining wall foundations.

The design of the foundations for the elevated guideway columns may include large-diameter concrete piles. A common method is to force a large-diameter cylindrical steel casing into the ground to the required depth, excavate the contents of the casing, insert a rebar cage, and then pour concrete into the void. As the concrete is poured in, the casing is extracted for reuse. The casing would be driven into the ground using a vibratory hammer (with a variable frequency drive) that can produce substantial ground vibration. Constant frequency vibratory pile drivers produce substantially less vibration than vibratory hammers that sweep upwards through the resonance frequency of the pile casing, hammer, and soil. An oscillatory method whereby the temporary casing is rotated back and forth in torsion generates measurably less vibration. The vibration caused by the oscillatory method is similar to other non-pile-driving construction activities, and would not represent a substantial source of vibration. These pile-casing installation techniques may be used for localized foundations such as guideway columns or for large secant-piled walls.

The potential for cosmetic damage to nearby structures should be closely evaluated if vibratory pile-driving methods are to be used within 80 feet of any receptor, or if a vibratory soil compactor is to be used within 40 feet of any sensitive receptor. This task should include documenting the condition of buildings prior to construction and monitoring vibration during construction.

No structural damage would occur to any building as long as the vibration does not exceed the threshold cracking criteria, which is the vibration velocity magnitude at which minor cosmetic cracking might occur (Dowding 1996).

5.2.2 Station Construction

In general, station construction receptors would include primarily single-family residences, a church, a firehouse, and apartment complexes (multifamily residences) adjacent to the Lynnwood Transit Center and Park-and-Ride. All of the stations would be in proximity to I-5.

Station Construction Equipment

The precise means and methods of station construction are not yet known. General construction activities applicable to this project that can produce ground vibration are discussed below.

Demolition of existing structures: Some of the station options would require the demolition (or relocation) of existing buildings, sidewalks, curbs, or other structures. In general, this type of activity would involve the use of hoe rams to break up concrete and large bulldozers for moving materials around the site.

Site excavation and grading: At the station locations and adjacent parking garages as well as surface parking areas, various degrees of excavation and grading of the sites would be required. Large vibratory soil compactors may be used to pack down the soil after grading.

Foundations and shoring: Elevated station-platform supporting columns, multi-level parking structures, and retaining walls could require deep pile foundations. Piles could be driven or drilled into the ground using a number of methods.

A common method is to force a large-diameter cylindrical-steel casing into the ground to the required depth, excavate the contents of the casing, insert a rebar cage, and then pour concrete into the void. As the concrete is poured in, the casing is extracted for reuse. The casing can be driven into the ground using a vibratory hammer (with a variable frequency drive) that can produce substantial ground vibration. Constant frequency vibratory pile drivers produce substantially less vibration than vibratory hammers. An oscillatory method whereby the temporary casing is rotated back and forth generates measurably less vibration. These pile-casing techniques may be used for localized foundations such as guideway columns or for large secant-pile walls.

For smaller diameter piles and shallower foundations, pile shafts would typically be drilled with an auger. This would also apply to temporary shoring methods such as soldier pile walls.

Materials transport: For all phases of construction at all of the station sites, haul trucks would transport materials from the construction sites and bring in new materials, especially concrete.

Station Construction Vibration Impact Assessment Results

The analysis outlined herein assumes that impact pile-driving would not be used in the station construction. Alternative pile-driving techniques, such as vibratory pile-driving or augered piles, have been considered in the vibration assessment.

Cosmetic Damage Assessment

Based on the available station plans, vibration levels sufficient to cause cosmetic damage to adjacent buildings would not occur, or can be avoided. The potential for cosmetic damage to nearby structures should be more closely evaluated if vibratory pile-driving methods are used within 80 feet of the receptor or if vibratory soil compactors are used within 40 feet of the receptor. This task could include documenting the condition of buildings prior to construction and monitoring vibration during construction.

Vibration Annoyance Assessment

Construction will continue at the station sites for longer periods than at locations along the guideway. Therefore, nearby residents could be annoyed by vibration. Based on the approximate distances between receptors and the construction site and the distances indicated in the last column of Table 4-6, a summary of potentially affected receptors is presented in Table 5-14. This assessment is based on the assumption that pile foundations would be used only at the station platforms and multi-level parking garages, and that vibratory soil compactors might be used anywhere on the site. All receptors on the perimeter of the construction sites are assumed to be exposed to construction-related truck traffic regardless of other construction activity.

Potentially affected receptors with respect to vibration annoyance include primarily single-family residences, some apartment complexes, a church, and a fire station. The majority of pile-driving and other construction-related vibration would occur during daytime periods when most people are least sensitive to vibration.

Table 5-14. Summary of Potential Annoyance Impacts from Station Construction Vibration

	Potential Construction Vibration Annoyance Impacts		
Station	**Vibratory Pile Methods**	**Vibratory Soil Compactor, Non-Vibratory Pile**	**No Vibratory Methods**
NE 130th Street, Option 1	25 SFRs, 1 church	12 SFRs, 1 church	7 SFRs, 1 church
NE 130th Street, Option 2	12 SFRs, 1 church	6 SFRs	6 SFRs
NE 130th Street, Preferred Alternative Option Segment A	25 SFRs, 1 church	12 SFRs, 1 church	7 SFRs, 1 church
NE 145th Street, Option 1	43 SFRs	20 SFRs	20 SFRs
NE 145th Street, Option 2	46 SFRs	23 SFRs	23 SFRs
NE 145th Street, Preferred Alternative	46 SFRs	23 SFRs	23 SFRs
NE 155th Street	40 SFRs, fire station	10 SFRs, fire station	4 SFRs, fire station
NE 185th Street, Option 1	21 SFRs	12 SFRs	12 SFRs
NE 185th Street, Option 2	14 SFRs	11 SFRs	11 SFRs
NE 185th Street, Option 3	18 SFRs	14 SFRs	14 SFRs
NE 185th Street, Preferred Alternative	16 SFRs	7 SFRs	7 SFRs
NE 185th Street, Preferred Alternative Option Segment A	35 SFRs	7 SFRs	7 SFRs
Mountlake Terrace, Transit	0	0	0

Table 5-14. Summary of Potential Annoyance Impacts from Station Construction Vibration

Station	Potential Construction Vibration Annoyance Impacts		
	Vibratory Pile Methods	Vibratory Soil Compactor, Non-Vibratory Pile	No Vibratory Methods
Center Option			
Mountlake Terrace, Freeway Option	3 SFRs	3 SFRs	3 SFRs
Mountlake Terrace Transit Center, Preferred Alternative	0	0	0
Mountlake Terrace Transit Center, Preferred Alternative Option Segment B	8 SFRs	0	0
220th Street SW	Melody Hill School, Mountlake Terrace City Hall, 1 office building, 1 apartment complex (Lakeside Apartments)	Mountlake Terrace City Hall	Mountlake Terrace City Hall
220th Street SW Station – South, Preferred Alternative Option Segment B	3 SFRs	0	0
Lynnwood, 200th Street SW	3 Apartment Complexes	3 Apartment Complexes	3 Apartment Complexes
Lynnwood Transit Center	1 Apartment Building	0	0
Lynnwood Park-and-Ride, Option 1	1 Apartment Building	0	0
Lynnwood Park-and-Ride, Option 2	1 Apartment Building	0	0
Lynnwood Transit Center, Alternative – Preferred Alternative (C3 Modified)	2 Commercial Strip Malls 1 Commercial Bldg. (VCA) 4 Apartment Buildings 4 Office Buildings	4 Apartment Buildings 4 Office Buildings 1 Commercial Strip Mall	4 Apartment Buildings 4 Office Buildings 1 Commercial Strip Mall

SFR = Single-Family Residence

6 MITIGATION OF POTENTIAL VIBRATION IMPACTS

6.1 Potential Vibration Mitigation Measures

Several mitigation measures were considered during the analysis for mitigating potential vibration impacts.

The vibration analysis indicated that most potential vibration impacts next to an at-grade ballast-and-tie track could be mitigated with TDA as an underlayment beneath the sub-ballast layer of the track. TDA is inexpensive compared to other mitigation measures and has been installed beneath light rail tracks for systems in San Jose, California and Denver, Colorado. To date, there has been no indication of decreased effectiveness of the TDA nor an increase in maintenance costs attributed to the TDA at those light rail systems (Wilson, Ihrig & Associates, Inc. 2009). Vibration impacts and mitigation options will be reviewed during final design to confirm that appropriate measures are included in the design.

TDA is proposed for mitigating potential ground vibration impacts at the ballast-and-tie track if used for the project. A typical TDA installation consists of a compacted underlayment, 12 inches deep, of nominally 3-inch tire shreds or chips wrapped with geotextile filter fabric, covered with 12 inches of sub-ballast, and 12 inches of ballast above that to the base of the ties. A cross-sectional drawing of a typical TDA installation is provided in Figure 6-1. TDA can only be used on ballast-and-tie tracks. Tests indicate that the vibration-attenuation properties of this treatment are between that of ballast mats and FST. The adjustments applied in the vibration analysis to account for adding TDA under the tracks were empirically based and are listed in Table 6-1.

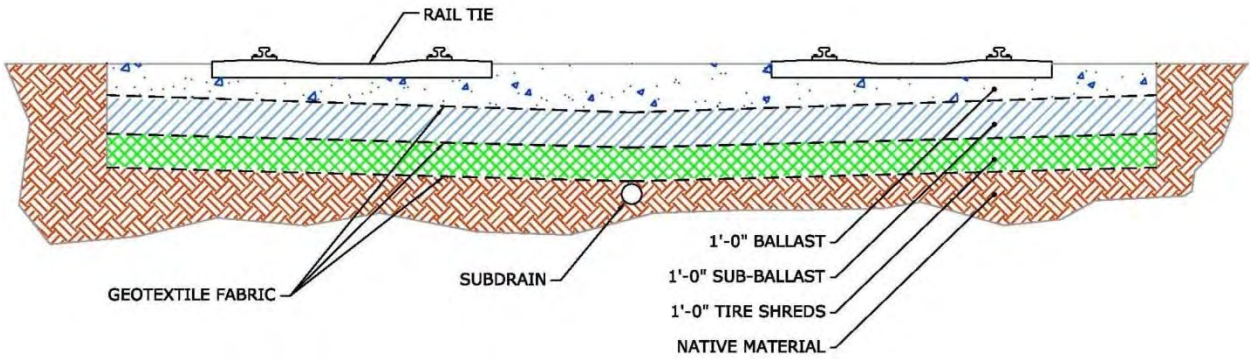


Figure 6-1. Typical Installation of Tire-Derived Aggregate (TDA) for Transit Vibration Mitigation

FST was considered for the at-grade ballast-and-tie segments wherever TDA would not sufficiently mitigate the vibration impacts. With an FST system, the rails would be fixed to either a continuous or segmented concrete slab that would be resiliently supported either by natural rubber pads or steel springs. Such systems have been used on transit systems globally to reduce vibration from running trains. A key feature in the design of an FST system is the natural or resonance frequency of the slab considered as a single-degree-of-freedom oscillator, or spring-mass system. Vibration transmitted to the soil would be reduced at frequencies above the natural frequency, whereas there would be a slight amplification at frequencies near or at the natural frequency and no reduction

below the natural frequency. The range of natural frequency for typical FST systems is 8 to 16 Hz. The effects of FST with different natural frequencies were assessed, where needed, and it was concluded that an FST with a maximum natural frequency of 8 Hz would be required to mitigate vibration impacts. An FST with a lower natural frequency may be desired to reduce possible dynamic interaction between the FST and the primary suspension of the light rail vehicles. The adjustments applied in the vibration analysis to account for replacing the ballast-and-tie track with FST were empirically based and are listed in Table 6-1.

Table 6-1. Adjustment (Insertion Gain, dB) for Vibration Mitigation

	1/3-Octave-Band Center Frequency (Hz)														
Mitigation	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
Tire-Derived Aggregate	0	0	0	0	-2	-5	-6	-7	-8	-12	-14	-14	-13	-11	-10
Floating Slab Track	0	2	0	-3	-5	-9	-12	-13	-14	-16	-18	-19	-19	-18	-18
High Compliance Fasteners	0	0	0	0	1	2	-1	-2	-3	-5	-6	-7	-7	-7	-5

Wayside noise along the FST would be higher relative to noise at the ballast-and-tie track due to the lack of acoustical absorption normally associated with ballast-and-tie tracks. Such increases in noise adjacent to the FST were accounted for in the noise analysis. Alternatives A5 and A7 would require FST at one residence, 309 NE 149th Street, which would be less than 50 feet from the tracks and require a greater reduction in vibration than could be provided with TDA.

High compliance rail fasteners were considered for mitigating potential vibration impacts along elevated structures compared to standard fasteners used on concrete structures. The adjustments applied in the vibration analysis to account for replacing standard rail fasteners on elevated structures with high compliance fasteners were empirically based and are listed in Table 6-1. There is a risk that wayside noise may be higher with high compliance fasteners relative to noise with standard rail fasteners because the rail tends to vibrate more on the softer fasteners generating more sound. This increase in sound may be offset by noise walls on the elevated guideway.

As discussed in Section 4.1.4, increased levels of vibration are generated by wheel impacts at typical crossovers. Impacts are often generated as the wheels cross the gap in what is referred to as the frog, i.e. where the rails of the main and diverging tracks cross. A spring or movable point frog is a device that provides a continuous surface for the wheels to travel upon along the main track, thereby avoiding wheel impacts during normal operations. Impacts while switching from one track to the other are not considered significant as the trains would be operating at a much slower speed than normal operations and would rarely occur. Figures 6-2(a) and 6-2(b) are photographs of a typical frog and a spring frog, respectively. The use of spring frogs (as well as movable point frogs) was considered wherever impacts were projected adjacent to a crossover and the projected vibration levels with spring or movable point frogs were calculated as if no crossover was present.

(a) (b)

Figure 6-2. Crossover frogs: (a) solid (typical), (b) spring (photographs: voestapline Nortrack)

The effects of installing ballast mat under at-grade track were assessed and it was concluded that a ballast mat would not provide enough vibration reduction to mitigate the potential vibration impacts. Soil modification beneath the tracks depends upon the relative stiffness of the modified and unmodified soils and may not provide sufficient vibration reduction.

Based on the vibration projections conducted for this study, all but a few potential vibration impacts could be mitigated by one of the approaches described above or by other approaches with identical or better vibration reduction performance. Table 6-2 outlines and Figures 6-3 and 6-4 show the projected extents along the alignment where mitigation for potential vibration impacts is recommended.

A total of three properties have potential vibration impacts that would not be completely mitigated with standard mitigation approaches. These potentially remaining vibration impacts are discussed below. Although this study shows these impacts as remaining after mitigation, this does not mean that they could not be mitigated; instead, they would need to be addressed individually during design.

The single-family residence at 301 NE 151st Street in Shoreline has a potentially remaining impact for the Preferred Alternative. This property is immediately past the north end of the proposed elevated guideway where the alignment has transitioned to a filled wall. There is also a double crossover planned for the Preferred Alternative at this location. Under the assumptions used for the study, the maximum predicted 1/3-octave-band vibration level is 79 VdB at 25 Hz without mitigation and 72 VdB at 12.5 Hz with TDA and spring or movable pointfrogs installed in the crossover, which equals the criteria. A more thorough investigation of the possible vibration and mitigation approach at this property can be conducted during final design to avoid vibration impacts. Should that analysis indicate a remaining impact at this property it could be avoided with FST combined with spring or movable point frogs at the crossover.

The single-family residence at 324 NE 148th Street in Shoreline has a potentially remaining impact for Alternatives A3 and A11, which are on an elevated guideway at this location. The projected vibration is highest within the 16 Hz 1/3 octave band. High compliance fasteners that are currently available are ineffective at reducing vibration at that frequency or lower. However, the projected maximum

1/3-octave-band vibration level is 72 VdB without mitigation, which equals the FTA vibration criteria. Modifying the structural design of the guideway and/or locating the support columns away from this property can be considered during final design in order to avoid vibration impacts.

The commercial property at 20815 52nd Avenue West in Lynnwood has a potentially remaining impact for Alternatives C1 Option 1 (within I-5 median), C1 Option 2 (west of I-5), C2 Option 1 (within I-5 median), and C2 Option 2 (west of I-5). These alternatives are on an elevated structure at 17 feet from the building. The projected vibration is 82 VdB within the 40 Hz 1/3 octave band, without mitigation. With high compliance rail fasteners, the projected maximum 1/3-octave-band vibration level is 79 VdB at 40 Hz, compared to an impact criterion of 72 VdB. Locating the support columns away from this property or incorporating features in the structural design of the guideway to reduce vibration transmitted to the ground can be considered in order to avoid vibration impacts. It may be possible to reduce the vibration through pier foundation design and/or soil modification, taking advantage of differences with the foundation at the elevated structure west of Beacon Hill, upon which the FDL for the elevated structure is based. Alternately, it may be possible to incorporate resilient supports at the tops of the piers, under the guideway, which would reduce the vibration transmitted to the piers. The above approaches to reduce vibration can be considered during final design in order to avoid vibration impacts.

Table 6-2. Recommended Locations for Vibration Mitigation

Alternative	Mitigation Extents (Station Numbers)	Mitigation Type	Total Mitigation Length (feet)
Preferred Alternative (Segment A)	34+50 – 38+00 42+75 – 44+25 49+25 – 55+50 129+75 – 131+50 145+75 – 146+75 171+75 – 175+75 181+75 – 185+50 207+75 – 220+00 237+00 – 241+75 202+75 – 204+50 130+50 – 132+80	TDA TDA TDA TDA TDA TDA TDA TDA TDA HCF SFC/MPF+TDA	3,875 TDA 175 HCF 230 SFC/MPF+TDA
A1: At-grade/Elevated with NE 145th and NE 185th Street Stations	37+25 – 38+50 155+00 – 156+50 168+50 – 170+00 198+50 – 210+00 231+00 – 232+50	TDA TDA TDA TDA TDA	1,725 TDA
A3: Mostly Elevated with NE 145th and NE 185th Street Stations	155+00 – 156+50 168+50 – 170+00 32+75 – 34+25 198+50 – 200+00 200+25 – 203+50 204+75 – 208+00	TDA TDA HCF HCF SFC/MPF SFC/MPF	300 TDA 300 HCF 460 SFC/MPF

Table 6-2. Recommended Locations for Vibration Mitigation

Alternative	Mitigation Extents (Station Numbers)	Mitigation Type	Total Mitigation Length (feet)
A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations	24+50 – 28+00 32+25 – 34+00 37+25 – 38+50 114+25 – 116+25 155+00 – 156+50 168+50 – 170+00 198+50 – 210+00 228+25 – 231+75 126+00 – 127+50	TDA TDA TDA TDA TDA TDA TDA TDA FST	2,650 TDA 150 FST
A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations	114+25 – 116+25 155+00 – 156+50 168+50 – 170+00 126+00 – 127+50 32+75 – 34+25 198+50 – 200+00 200+25 – 203+50 204+75 – 208+00	TDA TDA TDA FST HCF HCF SFC/MPF SFC/MPF	500 TDA 150 FST 300 HCF 460 SFC/MPF
A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations	24+50 – 28+00 32+25 – 34+00 37+25 – 38+50 155+00 – 156+50 168+50 – 170+00 198+50 – 210+00 228+25 – 231+75	TDA TDA TDA TDA TDA TDA TDA	2,450 TDA
A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations	155+00 – 156+50 168+50 – 170+00 32+75 – 34+25 198+50 – 200+00 200+25 – 203+50 204+75 – 208+00	TDA TDA HCF HCF SFC/MPF SFC/MPF	300 TDA 300 HCF 460 SFC/MPF
Preferred Alternative (Segment B)	258+70 – 260+40 476+50 – 478+90	SFC/MPF+TDA SFC/MPF+TDA	460 SFC/MPF+TDA
C1: 52nd Avenue West to 200th Street SW, Option 1 within I-5 Median	509+50 – 514+00	HCF	450 HCF
C1: 52nd Avenue West to 200th Street SW, Option 2 West of I-5	511+50 – 514+00	HCF	250 HCF
C2: 52nd Avenue West to Lynnwood Transit Center, Option 1 within I-5 Median	509+50 – 514+00	HCF	450 HCF
C2: 52nd Avenue West to Lynnwood Transit Center, Option 2 within I-5 Median	511+50 – 514+00	HCF	250 HCF

TDA = Tire-Derived Aggregate
FST = Floating Slab Track
HCF = High Compliance Rail Fastener
SFC/MPF = Spring or Movable Point Frog Crossover

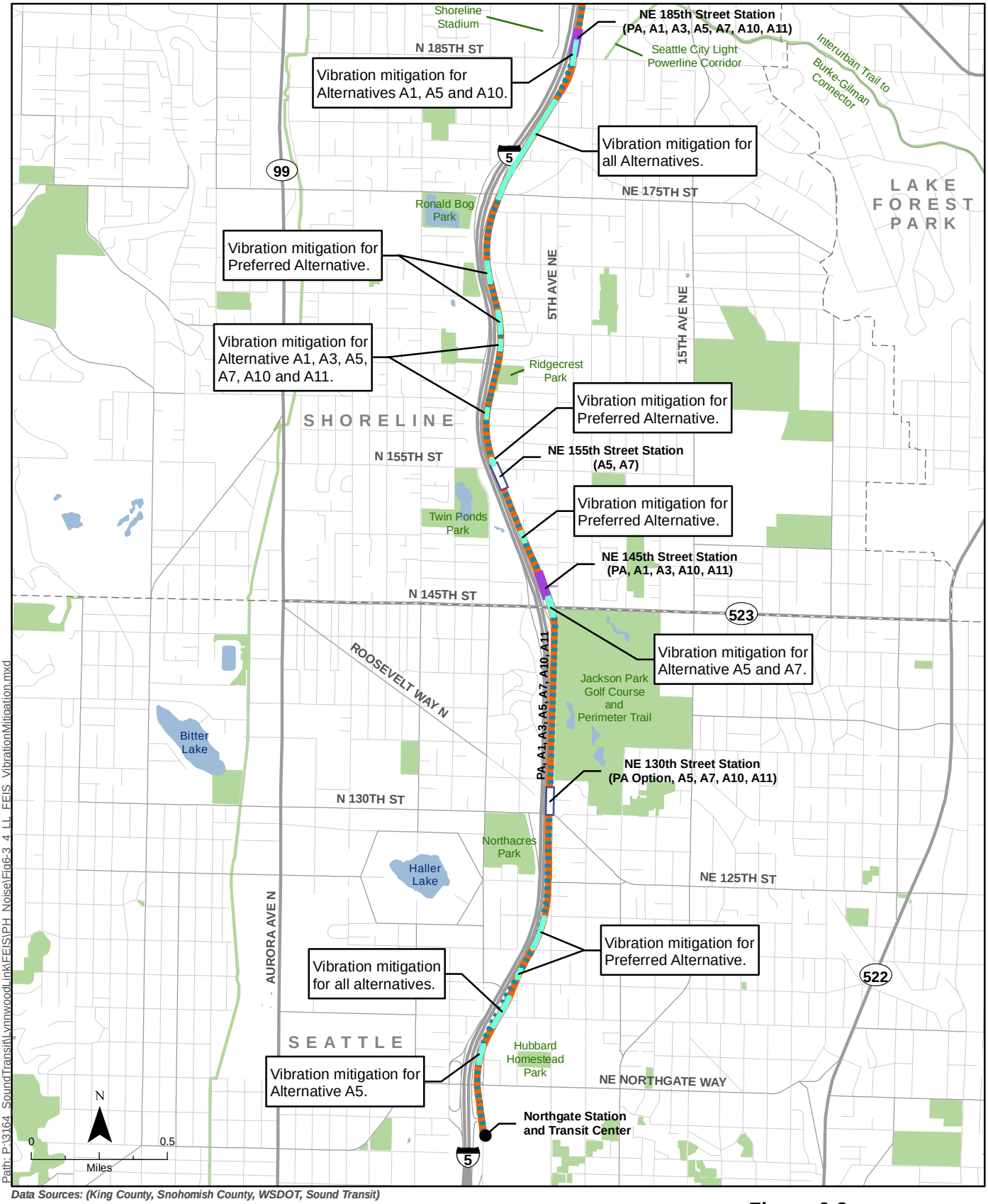
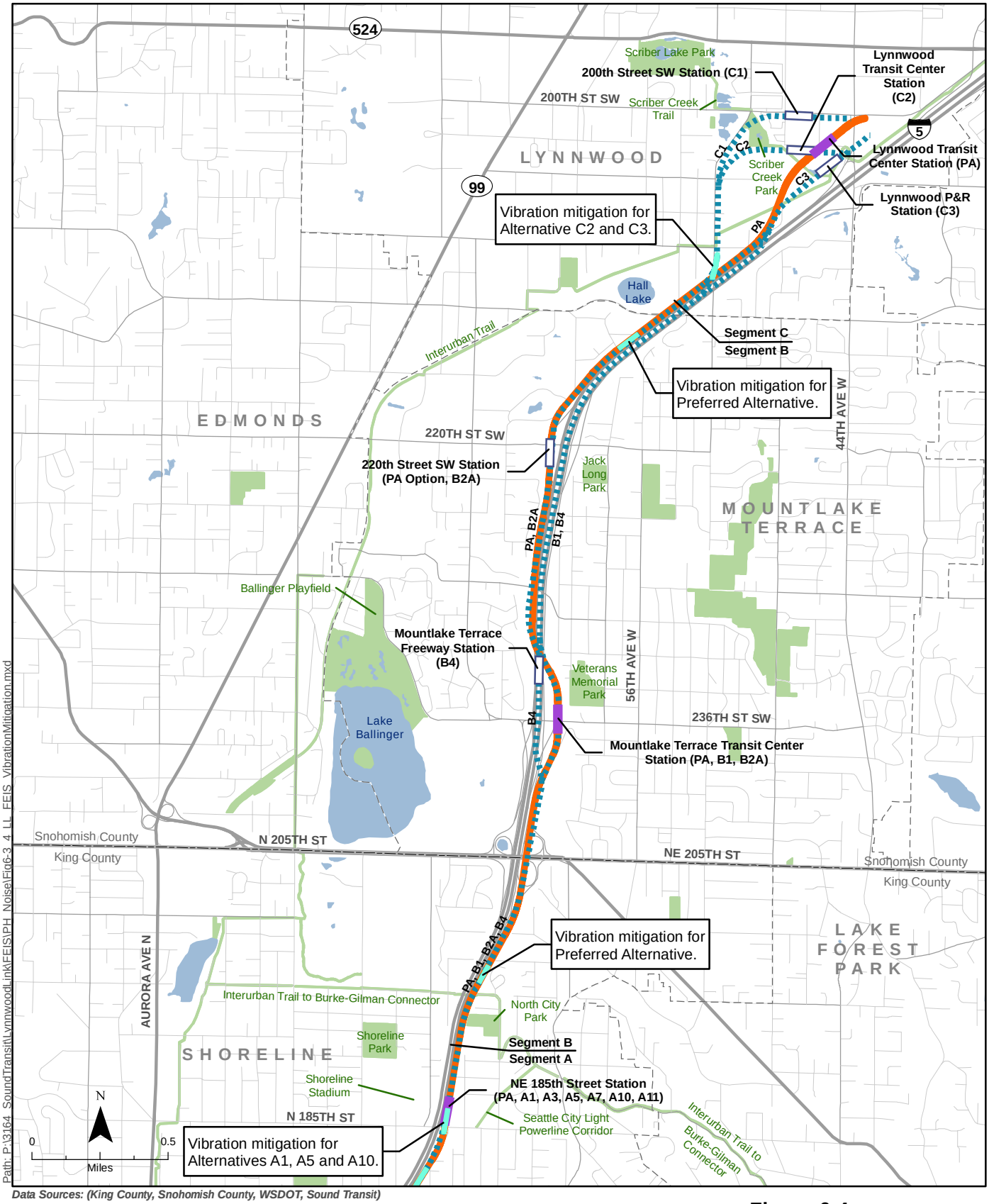


Figure 6-3
Recommended Locations for Vibration Mitigation Segment A

Lynnwood Link Extension



Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_Noise\Fig6-3_4_LL_FEIS_VibrationMitigation.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Vibration Mitigation Area

Figure 6-4
Recommended Locations for Vibration Mitigation Segments B and C

Lynnwood Link Extension

6.2 Construction Vibration Mitigation Control Provisions

Several measures can be implemented to control vibration during construction. The measures require consideration of construction equipment location relative to receptors, as well as construction processes. The basic approach is outlined in the FTA guidance manual. Vibration mitigation measures may include the following:

Project Scheduling:

- Avoid nighttime activities involving major vibration sources. People are generally less aware of vibration during waking hours than when lying in bed. Excessive vibration can disturb sleep.

Alternative Construction Methods:

- Demolish existing structures that are near vibration-sensitive receptors with methods that do not cause impact forces against the buildings or near them. For example, concrete structures can be saw-cut into small sections and loaded onto trucks, rather than breaking large sections and dropping them to the ground.
- Minimize use of vibratory soil compactors or compactors near vibration-sensitive receptors.
- Avoid using variable-frequency vibratory hammers in dense residential areas, such as around the NE 130th, NE 145th, NE 155th, and NE 185th Street Stations.
- Use of oscillatory pile-casing techniques where appropriate. Oscillatory pile-driving generates significantly lower vibration than impact pile-driving.
- Avoid conventional vibratory hammers. Conventional vibratory hammers that operate from zero to maximum frequency may cause objectionable vibration and risk cosmetic damage as the hammer sweeps through resonance. An alternative to conventional vibratory pile drivers is a resonance-free vibrator or variable eccentric moment vibrator.

7 REFERENCES

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ATTACHMENT A

Noise Monitoring Details

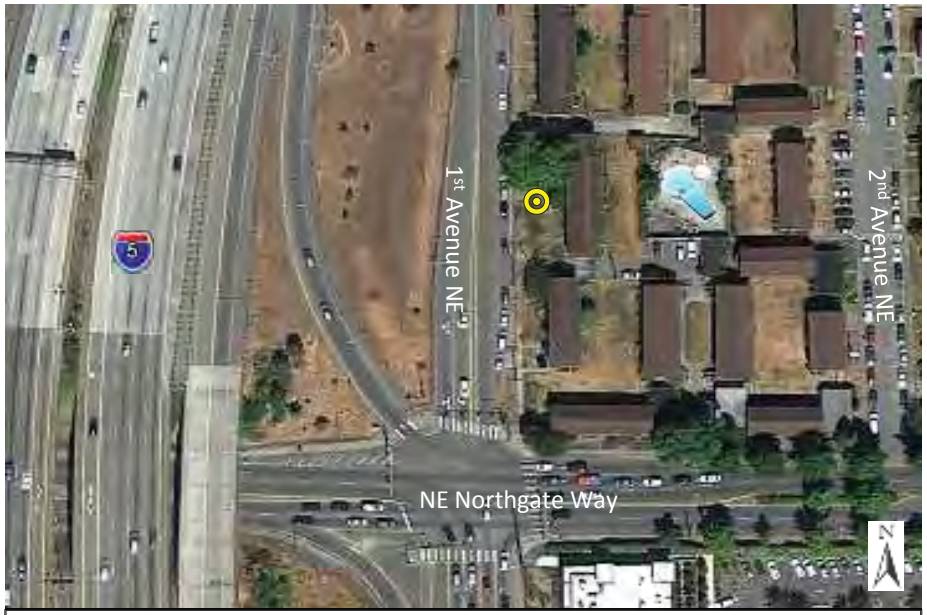

Photo 1: Aerial View

Photo 2: Looking north

Photo 3: Looking southwest toward Northgate Way & Interstate 5

Photo 4: Looking northwest toward Interstate 5

Monitoring Location M-1
11012 1st Avenue NE – Northgate Apartments
Seattle, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 1
Noise Monitoring Locations
Northgate to Lynwood Corridor

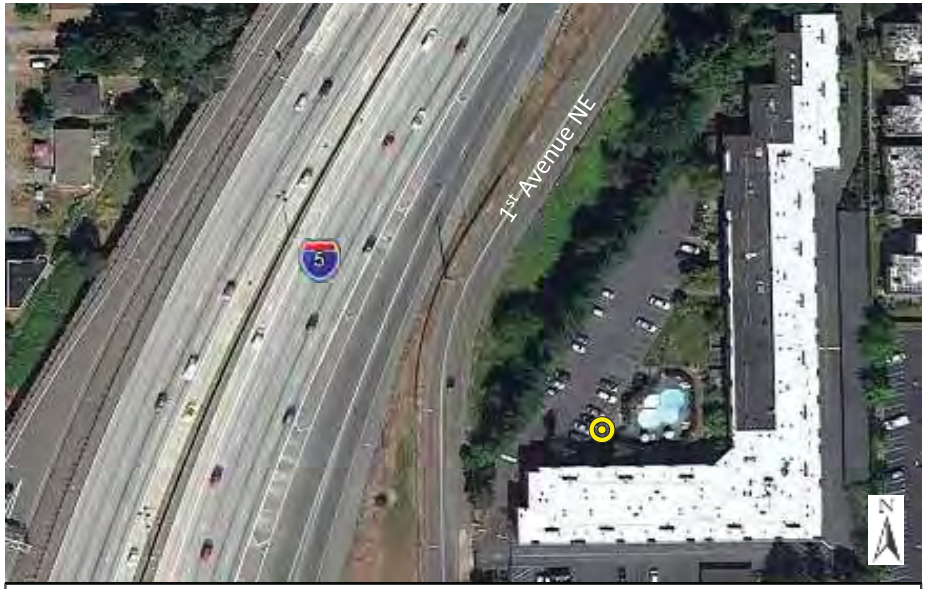

Photo 1: Aerial View

Photo 2: Looking east

Photo 3: Looking west toward Interstate 5

Photo 4: Looking north

Monitoring Location M-2
11300 1st Avenue NE – Northgate West Condos
Seattle, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 2
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking west toward Interstate 5

Photo 3: Looking south

Photo 4: Looking east

Monitoring Location M-3
11012 1st Avenue NE – Northgate Apartments
Seattle, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 3
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking north

Photo 3: Looking west

Photo 4: Looking east

Monitoring Location M-4
133 NE 115th Street
Seattle, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 4
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking south

Photo 3: Looking north

Photo 4: Looking west

Monitoring Location M-5
11516 4th Avenue NE
Seattle, Washington

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Sound.Vibration.Air
Portland, Oregon

Figure 5
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking east

Photo 3: Looking west

Photo 4: Looking south

Monitoring Location M-6
11725 5th Avenue NE
Seattle, Washington

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Sound.Vibration.Air
Portland, Oregon

Figure 6
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking west

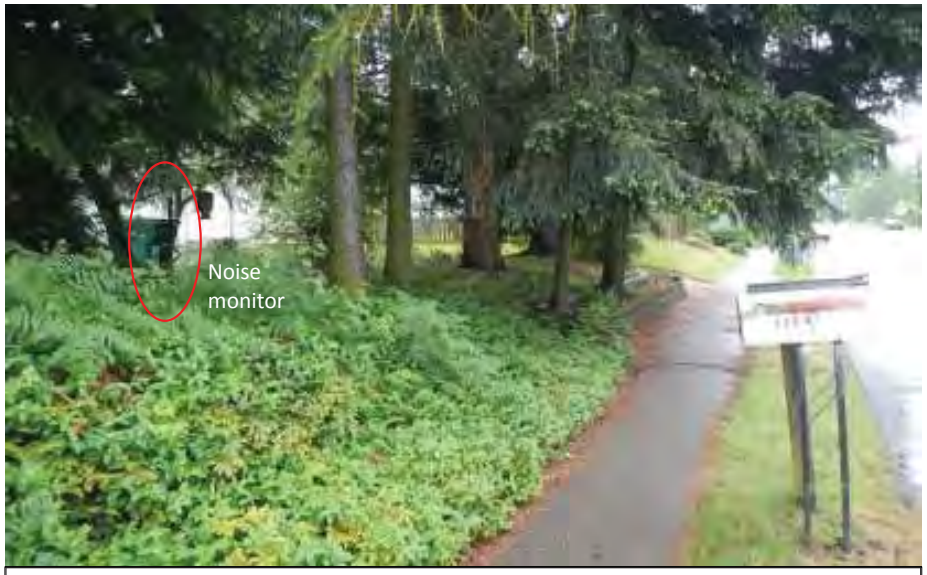

Photo 3: Looking south

Photo 4: Looking north

Monitoring Location M-7
12042 5th Avenue NE
Seattle, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 7
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

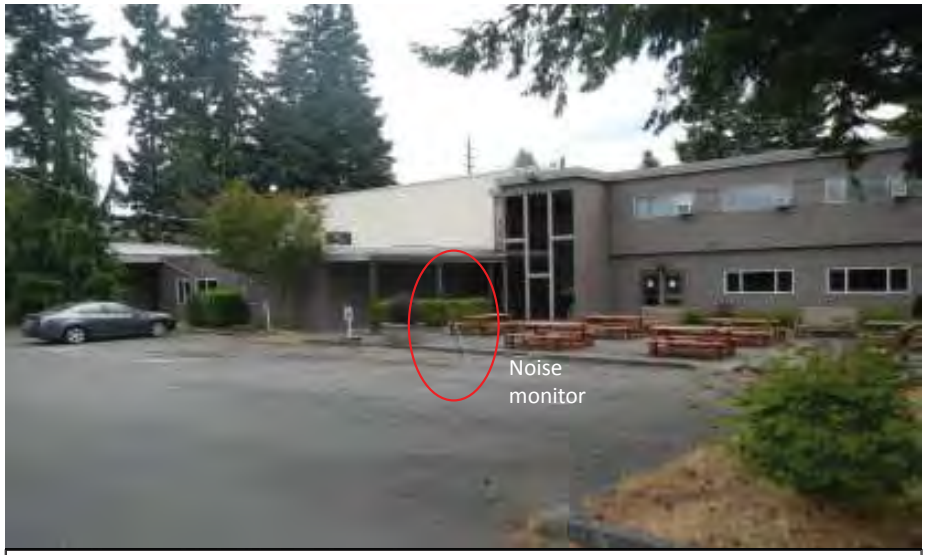

Photo 2: Looking east

Photo 3: Looking west

Photo 4: Looking northwest

Monitoring Location M-8
12345 8th Avenue NE – Northgate Preschool
Seattle, Washington

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Portland, Oregon

Figure 8
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

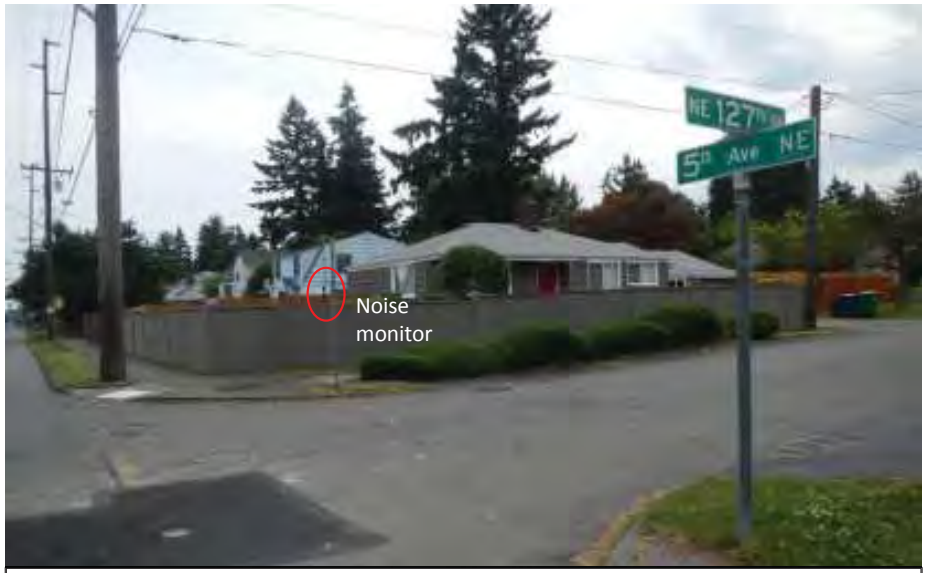

Photo 2: Looking northeast

Photo 3: Looking south

Photo 4: Looking west

Monitoring Location M-9
502 NE 127th Street
Seattle, Washington

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Portland, Oregon

Figure 9
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking west

Photo 3: Looking south

Photo 4: Looking north

Monitoring Location M-10
12740 5th Avenue NE
Seattle, Washington

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Portland, Oregon

Figure 10
Noise Monitoring Locations
Northgate to Lynwood Corridor

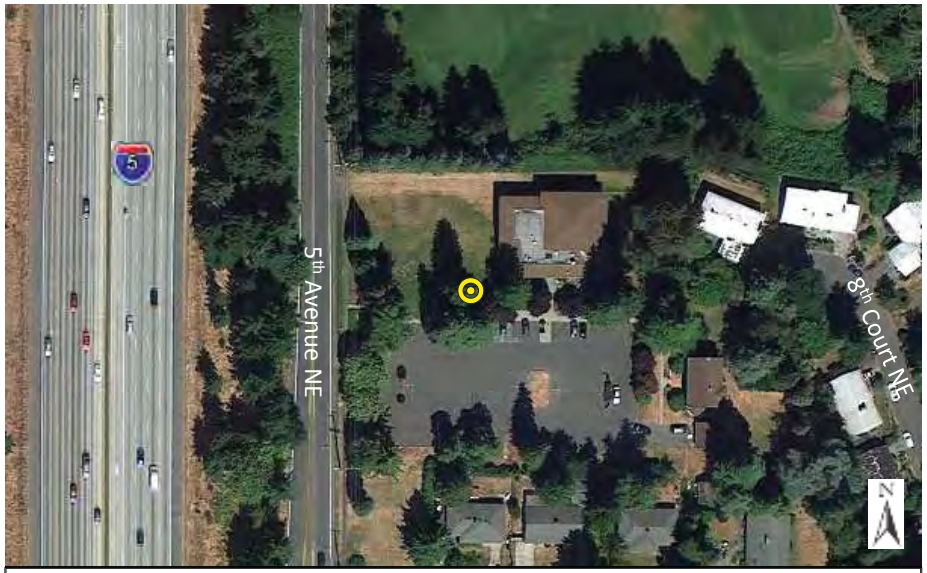

Photo 1: Aerial View

Photo 2: Looking south

Photo 3: Looking north

Photo 4: Looking south from 5th Avenue NE entrance

Monitoring Location M-11
13130 5th Avenue NE – Church of the Nazarene
Seattle, Washington

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Portland, Oregon

Figure 11
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking east

Photo 3: Looking west

Photo 4: Looking south

Monitoring Location M-12
11700 1st Ave NE – Korean Catholic Church
Seattle, Washington

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Portland, Oregon

Figure 12
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking southeast

Photo 3: Looking northeast

Photo 4: Looking northwest

Monitoring Location M-13
12718 1st Avenue NE – North Acres Park
Seattle, Washington

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Portland, Oregon

Figure 13
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

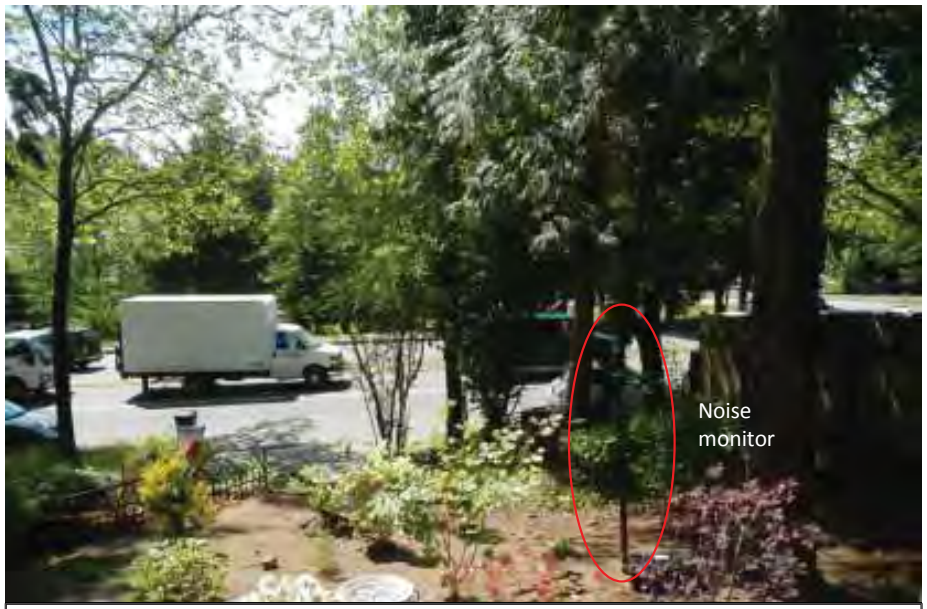

Photo 2: Looking west

Photo 3: Looking south

Photo 4: Looking east

Monitoring Location M-14
14526 5th Avenue NE
Seattle, Washington

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Portland, Oregon

Figure 14
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

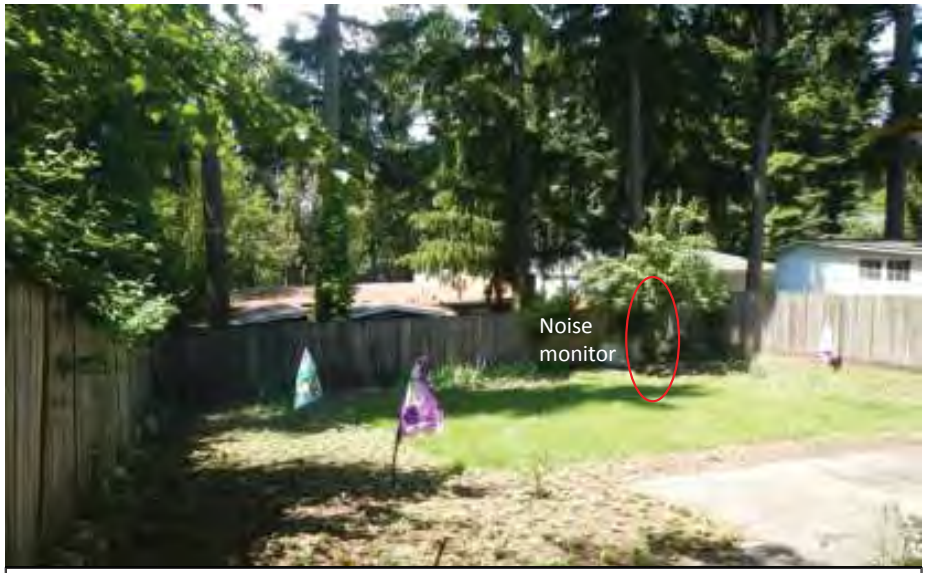

Photo 2: Looking northwest

Photo 3: Looking east

Photo 4: Looking southwest

Monitoring Location M-15
14549 6th Avenue NE
Seattle, Washington

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Portland, Oregon

Figure 15
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking north

Photo 3: Looking southeast

Photo 4: Looking west

Monitoring Location M-16
348 NE 148th Street
Seattle, Washington

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Portland, Oregon

Figure 16
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking southwest

Photo 3: Looking

Photo 4: Looking east

Monitoring Location M-17
314 NE 149th Street
Seattle, Washington

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Figure 17
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking

Photo 3: Looking

Photo 4: Looking west

Monitoring Location M-18
405 NE 153rd Street
Seattle, Washington

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Figure 18
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking

Photo 3: Looking

Photo 4: Looking

Monitoring Location M-19
132 NE 155th Street
Seattle, Washington

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Figure 19
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking southeast

Photo 3: Looking west

Photo 4: Looking west

Monitoring Location M-20
123 NE 158th Street
Seattle, Washington

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Figure 20
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking west

Photo 3: Looking

Photo 4: Looking

Monitoring Location M-21
108 NE 161st Street – Ridgecrest Park
Seattle, Washington

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Figure 21
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking east

Photo 3: Looking south

Photo 4: Looking west

Monitoring Location M-22
17205 2nd Avenue NE
Seattle, Washington

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Portland, Oregon

Figure 22
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking northwest from alley

Photo 3: Looking east

Photo 4: Looking northeast from alley

Monitoring Location M-23
211 NE 175th Street
Seattle, Washington

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Portland, Oregon

Figure 23
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

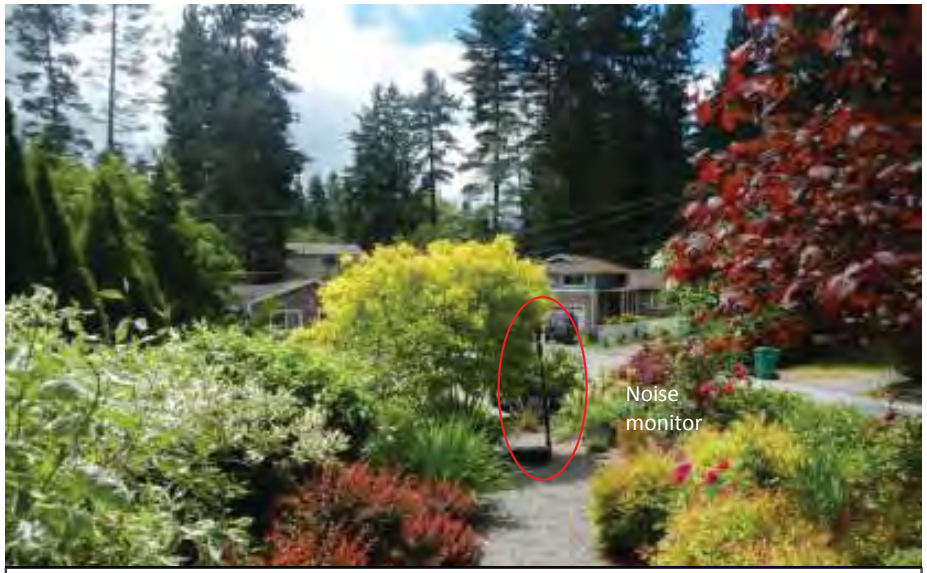

Photo 2: Looking

Photo 3: Looking

Photo 4: Looking

Monitoring Location M-24
17748 2nd Place NE
Seattle, Washington

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Portland, Oregon

Figure 24
Noise Monitoring Locations
Northgate to Lynwood Corridor

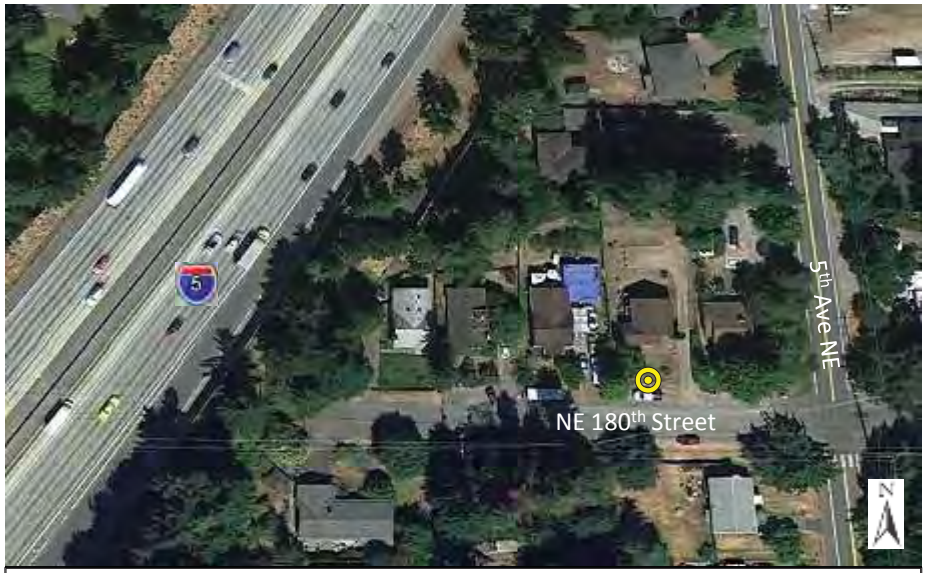

Photo 1: Aerial View

Photo 2: Looking south

Photo 3: Looking southeast toward 5th Avenue NE

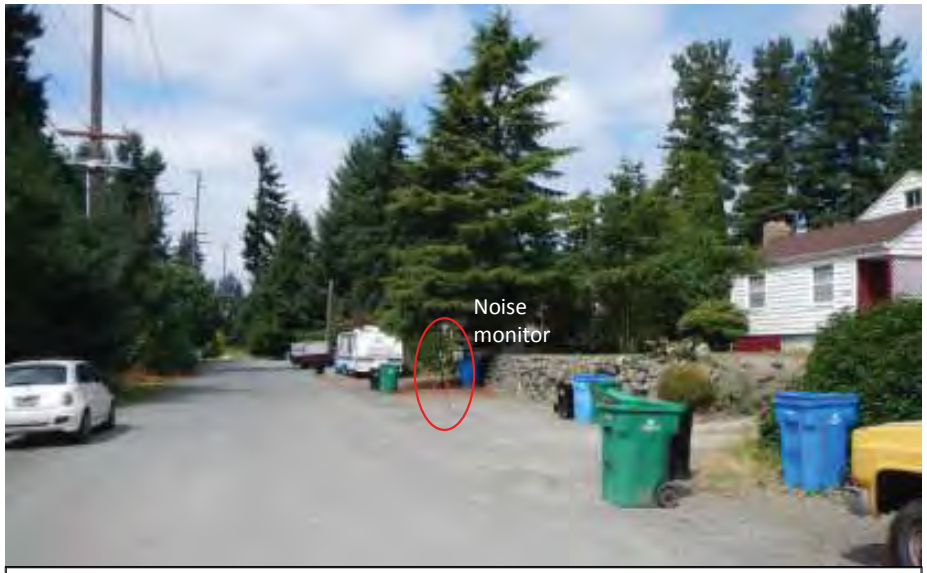

Photo 4: Looking west toward Interstate 5

Monitoring Location M-25
350 NE 180th Street
Seattle, Washington

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Portland, Oregon

Figure 25
Noise Monitoring Locations
Northgate to Lynwood Corridor

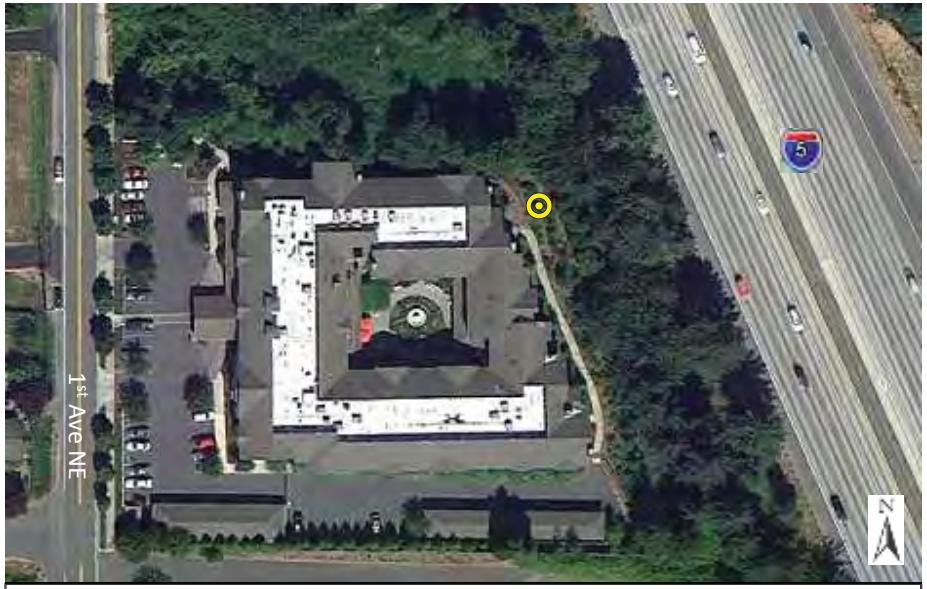

Photo 1: Aerial View

Photo 2: Looking south

Photo 3: Looking north

Photo 4: Looking west

Monitoring Location M-26
15100 1st Avenue NE – Aegis Living
Seattle, Washington

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Portland, Oregon

Figure 26
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking east

Photo 3: Looking northwest from Interstate 5

Photo 4: Looking south

Monitoring Location M-27
2350 N 167th Street – James Keough Park
Seattle, Washington

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Sound.Vibration.Air
Portland, Oregon

Figure 27
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking southwest at residence

Photo 3: Looking east at NE 185th Street

Photo 4: Looking west at NE 185th Street

Monitoring Location M-28
721 NE 185th Street
Seattle, Washington

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Portland, Oregon

Figure 28
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking east

Photo 3: Looking south

Photo 4: Looking north

Monitoring Location M-29
18528 8th Avenue NE
Seattle, Washington

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Portland, Oregon

Figure 29
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking north

Photo 3: Looking west

Photo 4: Looking south

Monitoring Location M-30 (from entry)
816 NE 190th St – North City Cooperative Preschool
Seattle, Washington

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Sound.Vibration.Air
Portland, Oregon

Figure 30
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking west

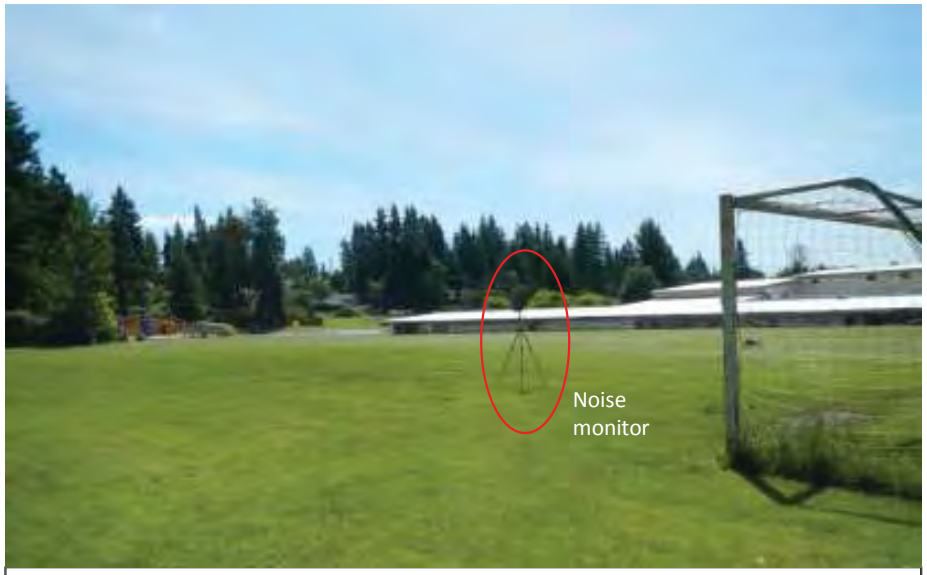

Photo 3: Looking south

Photo 4: Looking north

Monitoring Location M-30 (from field)
816 NE 190th St – North City Cooperative Preschool
Seattle, Washington

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Portland, Oregon

Figure 31
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking east

Photo 3: Looking southeast

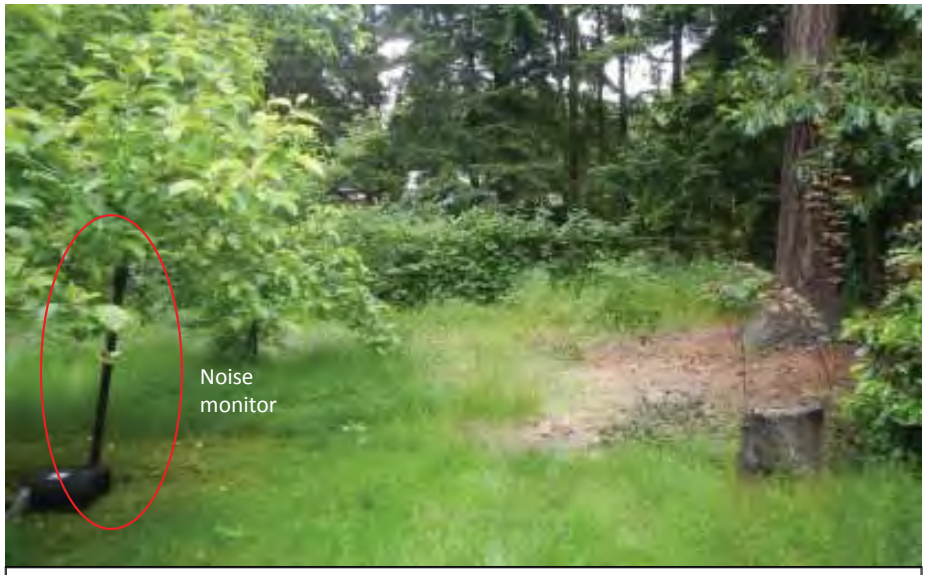

Photo 4: Looking west

Monitoring Location M-31
20313 14th Avenue NE
Seattle, Washington

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Portland, Oregon

Figure 32
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking south

Photo 3: Looking east

Photo 4: Looking west

Monitoring Location M-32
237th Street SW (at northernmost curve)
Seattle, Washington

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Portland, Oregon

Figure 33
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Western view of Transit Center

Photo 3: Looking west

Photo 4: Looking east

Monitoring Location M-33
23504 59th Place W
Seattle, Washington

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Portland, Oregon

Figure 34
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking west from noise monitor position

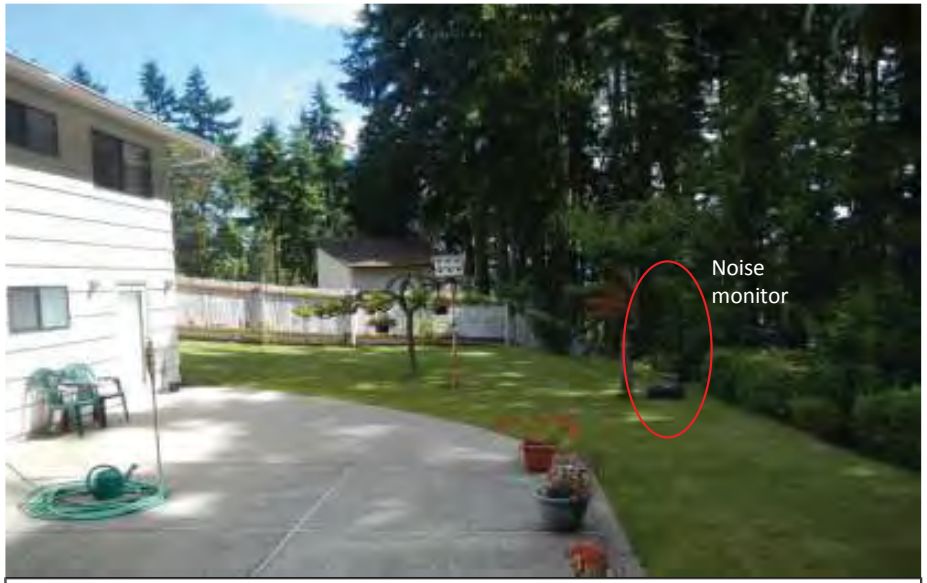

Photo 3: Looking south

Photo 4: Looking southwest from cul de sac

Monitoring Location M-34
6005 233rd Place SW
Seattle, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 35
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking east

Photo 3: Looking south

Photo 4: Looking north

Monitoring Location M-35
22905 61st Avenue W
Seattle, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 36
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking north

Photo 3: Looking west

Photo 4: Looking east

Monitoring Location M-36
5905 219th Street SW
Mountlake Terrace, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 37
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

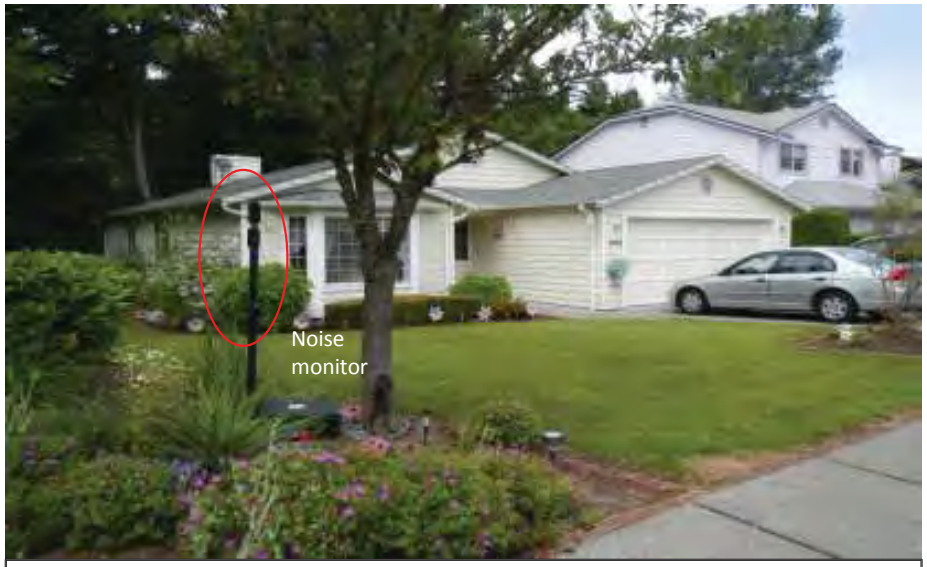

Photo 2: Looking northeast

Photo 3: Looking southwest

Photo 4: Looking east

Monitoring Location M-37
5709 215th Place SW
Mountlake Terrace, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 38
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking south

Photo 3: Looking north

Photo 4: Looking west

Monitoring Location M-38
5402 212th St SW – Maple Glen Apartments
Lynnwood, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 39
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Street view looking east

Photo 3: Looking southeast

Photo 4: Looking north

Monitoring Location M-39
23005 63rd Avenue W
Mountlake Terrace, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 40
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking north

Photo 3: Looking west

Photo 4: Looking east

Monitoring Location M-40
6103 227th Street SW
Mountlake Terrace, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 41
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking north

Photo 3: Looking east

Photo 4: Looking south

Monitoring Location M-41
6205 222nd Street SW – Mountlake Terrace Preschool
Mountlake Terrace, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 42
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking south

Photo 3: Looking northeast

Photo 4: Looking east

Monitoring Location M-42
6206 222nd Street SW
Mountlake Terrace, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 43
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking east

Photo 3: Looking west

Photo 4: Looking south

Monitoring Location M-43
6302 221st Place SW
Mountlake Terrace, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 44
Noise Monitoring Locations
Northgate to Lynwood Corridor

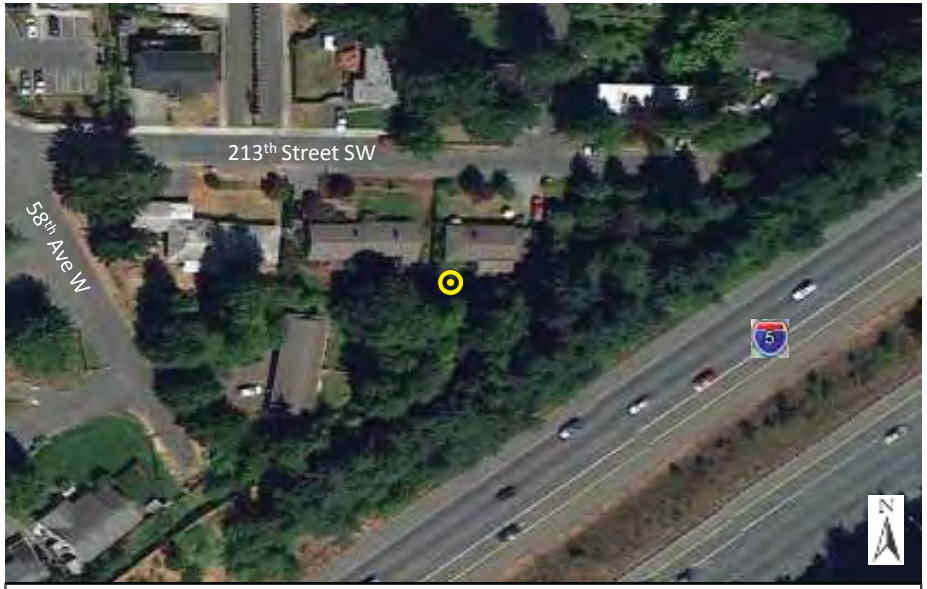

Photo 1: Aerial View

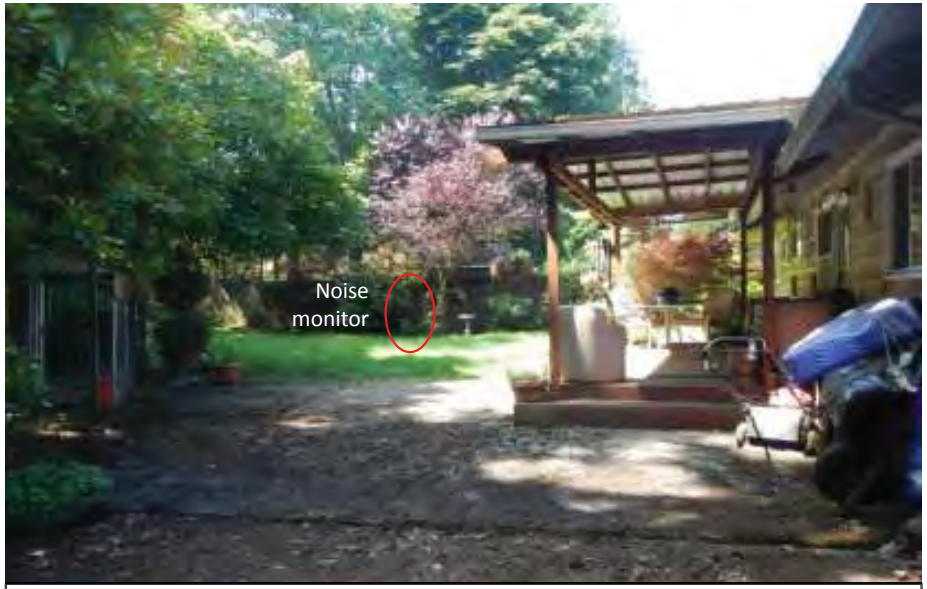

Photo 2: Looking

Photo 3: Looking

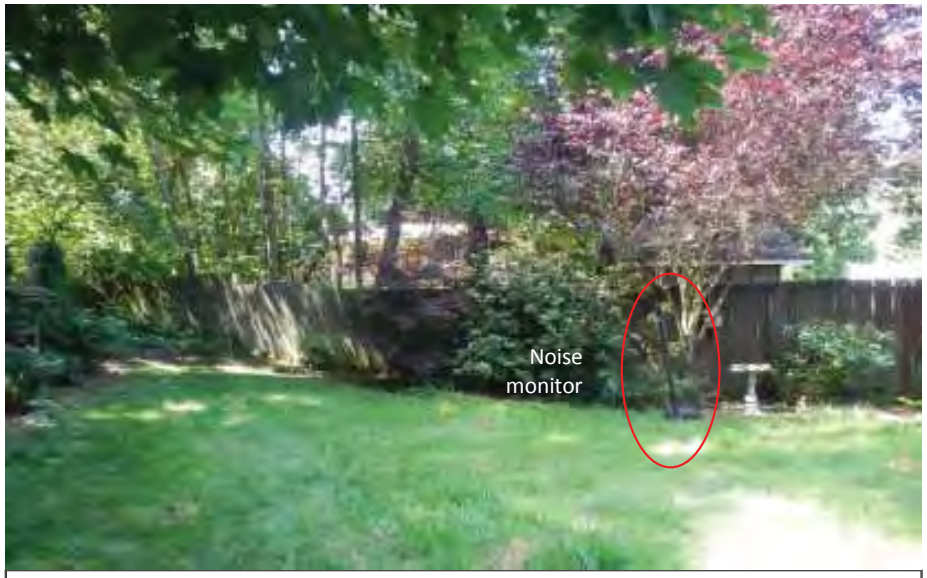

Photo 4: Looking

Monitoring Location M-45
5632 213th Street SW
Mountlake Terrace, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 45
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking south

Photo 3: Looking north

Photo 4: Looking east

Monitoring Location M-46
Green space east of Hall Lake at 212th Street SW
Lynnwood, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 46
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking

Photo 3: Looking

Photo 4: Looking

Monitoring Location M-47
20929 53rd Avenue W
Lynnwood, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 47
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking southeast

Photo 3: Looking north

Photo 4: Looking south

Monitoring Location M-48
20706 52nd Avenue W
Lynnwood, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 48
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking southwest

Photo 3: Looking south

Photo 4: Looking north

Monitoring Location M-49
20526 52nd Avenue W – Cedar Valley Grange
Lynnwood, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 49
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking northwest toward Lynnwood Transit Center

Photo 3: Looking east

Photo 4: Looking west

Monitoring Location M-50
20128 48th Avenue W C-30 – Park Five Apartments
Lynnwood, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 50
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking north

Photo 3: Looking south

Photo 4: Looking east

Monitoring Location M-51
4900 200th St SW Bldg. C – Cedar Creek Condos
Lynnwood, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 51
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking south

Photo 3: Looking west

Photo 4: Looking east

Monitoring Location M-52
4727 200th St SW #101A – Cambridge Apartments
Lynnwood, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 52
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking south

Photo 3: Looking east

Photo 4: Looking north

Monitoring Location M-53
4220 Alderwood Mall Blvd – Courtyard Marriott
Lynnwood, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 53
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking east

Photo 3: Looking west

Photo 4: Looking north

Monitoring Location M-54
137 NE 167th St.
Shoreline, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 54
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking east

Photo 3: Looking southwest

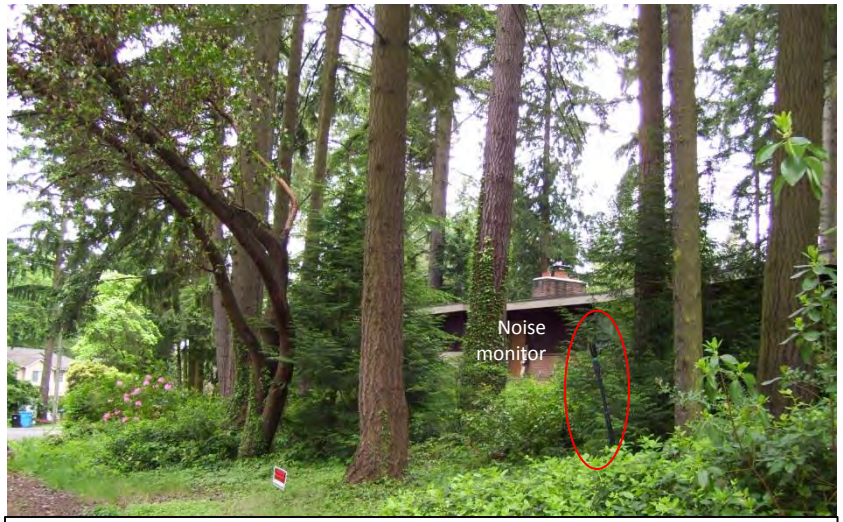

Photo 4: Looking north

Monitoring Location M-55
19604 10th Ave.
Shoreline, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 55
Noise Monitoring Locations
Northgate to Lynwood Corridor

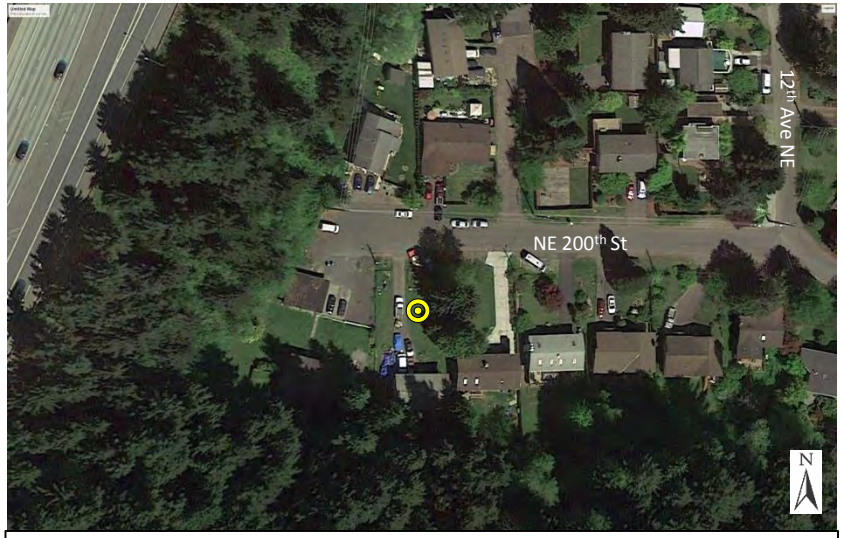

Photo 1: Aerial View

Photo 2: Looking southwest

Photo 3: Looking south

Photo 4: Looking north

Monitoring Location M-56
1107 NE 200th St.
Shoreline, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 56
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking north

Photo 3: Looking west

Photo 4: Looking east

Monitoring Location M-57
20039 12th Ave.
Shoreline, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 57
Noise Monitoring Locations
Northgate to Lynwood Corridor

Photo 1: Aerial View

Photo 2: Looking west

Photo 3: Looking north

Photo 4: Looking east

Monitoring Location M-58
2005 12th Ave.
Shoreline, Washington

Michael Minor & Associates
Sound.Vibration.Air
Portland, Oregon

Figure 58
Noise Monitoring Locations
Northgate to Lynwood Corridor

ATTACHMENT B

Detailed Noise Analysis Sheets

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
846

Impacts:	Moderate	Severe
	181	112

Residual Impacts	
RSIP =	8

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
Northgate to NE 115th Street																			
M-1: 71.5	2926049011	11200 1st Ave Ne	Southern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	69	Ldn	66	72	8	--	Wall on Structure	N/A	4		60
	2926049011	11200 1st Ave Ne	Southern F. line 2nd floor Apts. on 1st Ave.	4	72	2	No	No	70	Ldn	66	72	4	--	Wall on Structure	N/A	4		61
	2926049011	11200 1st Ave Ne	Northern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	72	Ldn	66	72	--	8	Wall on Structure	N/A	6		61
	2926049011	11200 1st Ave Ne	Northern F. line 2nd floor Apts. on 1st Ave.	8	72	2	No	No	72	Ldn	66	72	--	8	Wall on Structure	N/A	6		62
	2926049011	11200 1st Ave Ne	Front line Apts. on Northgate Way	1	72	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		60
	2926049011	11200 1st Ave Ne	Second line Apts. on Northgate Way	4	72	2	No	No	64	Ldn	66	72	--	--	Wall on Structure	N/A	0		61
	2926049011	11200 1st Ave Ne	Third line Apts. on Northgate Way	5	72	2	No	No	61	Ldn	66	72	--	--	Wall on Structure	N/A	0		60
M-3: 60.8 LEQ	2926049011	11200 1st Ave Ne	Southern 2nd line ground level Apts. on 1st Ave.	4	65	2	No	No	63	Ldn	61	67	4	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Southern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	64	Ldn	61	67	4	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Northern 2nd line ground level Apts. on 1st Ave.	8	65	2	No	No	64	Ldn	61	67	8	--	Wall on Structure	N/A	4		55
	2926049011	11200 1st Ave Ne	Northern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	65	Ldn	61	67	4	--	Wall on Structure	N/A	4		55
	2926049011	11200 1st Ave Ne	Southern 3rd line ground level Apts. on 1st Ave.	4	63	2	No	No	61	Ldn	60	66	4	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Southern 3rd line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	62	Ldn	60	66	4	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Northern 3rd line ground level Apts. on 1st Ave.	8	63	2	No	No	62	Ldn	60	66	8	--	Wall on Structure	N/A	4		53
	2926049011	11200 1st Ave Ne	Northern 3rd line 2nd floor Apts. on 1st Ave.	8	63	2	No	No	63	Ldn	60	66	8	--	Wall on Structure	N/A	4		53
	2926049011	11200 1st Ave Ne	Southern 4th line ground level Apts. on 1st Ave.	10	63	2	No	No	59	Ldn	60	66	--	--		N/A			59
	2926049011	11200 1st Ave Ne	Southern 4th line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	60	Ldn	60	66	4	--	Wall on Structure	N/A	4		50
	2926049011	11200 1st Ave Ne	Northern 4th line ground level Apts. on 1st Ave.	11	63	2	No	No	60	Ldn	60	66	11	--	Wall on Structure	N/A	4		50
	2926049011	11200 1st Ave Ne	Northern 4th line 2nd floor Apts. on 1st Ave.	11	63	2	No	No	61	Ldn	60	66	11	--	Wall on Structure	N/A	4		51
	2926049011	11200 1st Ave Ne	Southern ground level Apts. E of 2nd Ave.	10	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	0		56
	2926049011	11200 1st Ave Ne	Southern 2nd floor Apts. E of 2nd Ave.	10	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	0		57
	2926049011	11200 1st Ave Ne	Northern ground level Apts. E of 2nd Ave.	6	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	0		57
	2926049011	11200 1st Ave Ne	Northern 2nd floor Apts. E of 2nd Ave.	6	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	0		58
M-2: 73.5	6174800000	11300 1st Ave Ne	Front line ground level condos on 1st Ave. courtyard	11	74	2	No	No	73	Ldn	66	73	--	11	Wall on Structure	N/A	8		61
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on 1st Ave. courtyard	11	74	2	No	No	73	Ldn	66	73	--	11	Wall on Structure	N/A	8		61
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on 1st Ave. courtyard	11	74	2	No	No	75	Ldn	66	73	--	11	Wall on Structure	N/A	6		64
	6174800000	11300 1st Ave Ne	Front line ground level condos on south side	5	74	2	No	No	73	Ldn	66	73	--	5	Wall on Structure	N/A	8		61
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on south side	5	74	2	No	No	74	Ldn	66	73	--	5	Wall on Structure	N/A	8		62
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on south side	5	74	2	No	No	76	Ldn	66	73	--	5	Wall on Structure	N/A	8		63
	2926049050	11355 3rd Ave Ne-Bldg. E	1st Floor Citigate Apts.=108 unit Apt. complex that would be front line if M-2 is displaced	4	66	2	No	No	66	Ldn	62	68	4	--	Wall on Structure	N/A	8		54
	2926049050	11355 3rd Ave Ne-Bldg. E	2nd Floor at Citigate Apts.	4	66	2	No	No	67	Ldn	62	68	4	--	Wall on Structure	N/A	8		55

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
846

Impacts:	Moderate	Severe
	181	112

Residual Impacts	
RSIP =	8

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
	2926049050	11355 3rd Ave Ne-Bldg. E	3rd Floor at Citigate Apts.	4	66	2	No	No	68	Ldn	62	68	--	4	Wall on Structure	N/A	8		56
	2926049050	11355 3rd Ave Ne-East of Bldg.	1st Floor Citigate Apts.- 2nd line	2	63	2	No	No	59	Ldn	60	66	--	--		N/A	8		59
	2926049050	11355 3rd Ave Ne-East of Bldg.	2nd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	59	Ldn	60	66	--	--		N/A	8		59
	2926049050	11355 3rd Ave Ne-East of Bldg.	3rd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	60	Ldn	60	66	2	--	Wall on Structure	N/A	8		48
M-4: 65.65	2926049529	133 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	73	Ldn	62	68	--	1	Wall on Retaining Wall	N/A	11		61
	2926049530	139 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	64	Ldn	62	68	1	--	Wall on Retaining Wall	N/A	11		54
	2926049531	145 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	11		51
	2926049532	151 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	10		49
	2926049533	157 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	54	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	10		46
	2926049192	303 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	51	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	12		44
	2926049418	11352 3rd Ave	SF Residence on 3rd Ave.	1	62	2	No	No	51	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	10		44
	2926049191	315 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	50	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	12		43
NE 115th Street to 117th Street																			
	6411600161	136 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	73	Ldn	62	68	--	1	Wall on Retaining Wall	N/A	12		61
	6411600162	142 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	69	Ldn	62	68	--	1	Wall on Retaining Wall	N/A	12		56
	6411600163	148 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	12		52
	6411600164	154 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	58	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	12		49
	7810300035	147 Ne 116th St	Duplex on 116th St.	2	66	2	No	No	74	Ldn	62	68	--	2	Wall At-Grade	N/A	12	2	62
	7810300030	11519 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall At-Grade	N/A	12		54
	7810300025	11523 3rd Ave N	SF Residence on 3rd Ave.	1	66	2	No	No	69	Ldn	62	68	--	1	Wall At-Grade	N/A	14		58
	6411600147	156 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No	72	Ldn	61	66	--	1	Wall At-Grade	N/A	16		60
	7810300005	150 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No							Wall At-Grade	N/A	16		
	6411600146	157 Ne 117th St	SF Residence on 117th St.	1	64	2	No	No							Wall At-Grade	N/A	14		
	6411600186	11622 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	68	Ldn	59	65	--	1	Wall At-Grade	N/A	12		58
	6411600185	11610 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	67	Ldn	59	65	--	1	Wall At-Grade	N/A	14		57
	6411600182	11606 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall At-Grade	N/A	14		52
	6411600188	11600 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall At-Grade	N/A	16		56
	6411600172	11526 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall At-Grade	N/A	16		55
	6411600170	11522 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall At-Grade	N/A	14		49
	6161000031	11514 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall At-Grade	N/A	12		49
	6161000022	11508 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	12		48
	6161000021	304 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	54	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	12		46
	6411600173	316 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	51	Ldn	59	65	--	--	Wall At-Grade	N/A	12		44
	6411600171	322 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	50	Ldn	59	65	--	--	Wall At-Grade	N/A	12		43
	6161000015	11515 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	53	Ldn	59	65	--	--	Wall At-Grade	N/A	12		45
	6161000010	11519 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	53	Ldn	59	65	--	--	Wall At-Grade	N/A	14		45
	6161000005	11527 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall At-Grade	N/A	16		47
	6161000035	11533 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall At-Grade	N/A	14		47
	6411600181	11539 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	54	Ldn	59	65	--	--	Wall At-Grade	N/A	14		46
	6411600180	11545 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall At-Grade	N/A	14		46
	6411600183	325 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	53	Ldn	59	65	--	--	Wall At-Grade	N/A	14		45
	6411600187	321 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall At-Grade	N/A	14		47
	6411600184	311 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall At-Grade	N/A	14		50
	6411600200	401 Ne 117th St	SF Residence on 117th St.	1	61	2	No	No	51	Ldn	59	65	--	--	Wall At-Grade	N/A	12		44
	6411600198	11544 4th Ave Ne	SF Residence on 4th Ave.	1	61	2	No	No	52	Ldn	59	65	--	--	Wall At-Grade	N/A	12		45
	6411600201	11536 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	52	Ldn	58	64	--	--	Wall At-Grade	N/A	14		44
	6411600199	11532 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	51	Ldn	58	64	--	--	Wall At-Grade	N/A	14		44
	6411600207	11524 4th Ave Ne	SF Residence on 4th Ave.	1	58	2	No	No	51	Ldn	57	63	--	--	Wall At-Grade	N/A	16		43
M-4: 56.775	6411600211	11516 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	49	Ldn	57	63	--	--	Wall At-Grade	N/A	16		41
	6411600209	11510 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	49	Ldn	57	63	--	--	Wall At-Grade	N/A	14		42
	6411600213	11529 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	49	Ldn	57	63	--	--	Wall At-Grade	N/A	14		42
	6411600195	11537 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	49	Ldn	57	63	--	--	Wall At-Grade	N/A	12		42
	6411600202	11547 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	51	Ldn	57	63	--	--	Wall At-Grade	N/A	14		44
	6411600196	11545 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	49	Ldn	58	64	--	--	Wall At-Grade	N/A	14		42
	6411600203	11533 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	48	Ldn	58	64	--	--	Wall At-Grade	N/A	12		42
	6411600208	11525 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	48	Ldn	58	64	--	--	Wall At-Grade	N/A	12		41

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
846

Impacts:	Moderate	Severe
	181	112

Residual Impacts	
RSIP =	8

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
NE 117th Street to 120th Street																			
	6411600414	308 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No							Wall At-Grade	N/A	16		
	6411600413	11708 3rd Ave Ne	SF Residence	1	62	2	No	No							Wall At-Grade	N/A	16		
	6411600420	11710 3rd Ave Ne	Church	1	62	3	No	No	72	Leq	64	70	--	1	Wall on Retaining Wall	N/A	14		59
	6411600429	323 Ne 120th St	SF Residence north of the church	0	62	2	No	No							Wall on Retaining Wall	N/A	12		
	6411600430	325 Ne 120th St	SF Residence north of the church	0	62	2	No	No							Wall on Retaining Wall	N/A	10		
	6411600443	11737C 5th Ave Ne	SF Residence north of the church	1	62	2	No	No	63	Ldn	59	65	1	--	Increase I-5 wall height	N/A	10		54
	6411600442	11737 5th Ave Ne Unit B	SF Residence north of the church	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	10		53
	6411600441	11737 5th Ave Ne Unit A	SF Residence north of the church	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	10		49
	6411600440	11743 5th Ave Ne	SF Residence north of the church	1	63	2	No	No	52	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	10		46
	6411600451	11729 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	55	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	10		49
	6411600452	11727 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	58	Ldn	59	65	--	--		N/A	10		58
M-6 62.2	6411600450	11725 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Retaining Wall	N/A	12		57
	6411600464	11723 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Retaining Wall	N/A	12		56
	6411600463	11721 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	14		55
	6411600461	11719 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	53	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	16		45
	6411600462	11715 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	52	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	16		44
	6411600412	316 Ne 117th St	SF Residence east of the church	1	64	2	No	No	62	Ldn	61	66	1	--	Wall At-Grade	N/A	16		52
	6411600410	322 Ne 117th St	SF Residence south of the church	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	16		49
	6411600411	326 Ne 117th St	SF Residence south of the church	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	16		48
	6411600471	332 Ne 117th St	SF Residence south of the church	1	62	2	No	No	54	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	16		46
	6411600472	336 Ne 117th St	SF Residence south of the church	1	62	2	No	No	52	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	16		43
	6411600473	342 Ne 117th St	SF Residence south of the church	1	63	2	No	No	51	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	14		43
	6411600470	11707 5th Ave Ne	SF Residence south of the church	1	65	2	No	No	50	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	12		43
	6413100228	11718 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	49	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	10		44
	6413100229	11714 5th Ave Ne	SF Residence south of the church	1	63	2	No	No	48	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	10		43
	6413100241	11726 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	49	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	10		44
	6413100240	11734 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	10		44
	6411600428	327 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No							Increase I-5 wall height	N/A	10		
	2238000050	331 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	68	Ldn	62	68	--	1	Wall on Retaining Wall	N/A	10		58
	2238000045	337 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	8		54
	2238000040	343 Ne 120th St	SF Residence on 120th St.	1	62	2	No	No	58	Ldn	59	65	--	--		N/A	8		58
	2238000035	349 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	55	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		48
	2238000030	11755 5th Ave Ne	SF Residence on 120th St.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	6		49
NE 120th Street to NE 125th Street																			
	6412100091	332 Ne 120th St	SF Residence on 120th St.	0	65	2	No	No							Wall on Retaining Wall	N/A	8		
	6412100097	338 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	75	Ldn	61	67	--	1	Increase I-5 wall height	N/A	8	1	65
	6412100092	344 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	66	Ldn	61	67	1	--	Wall on Retaining Wall	N/A	8		58
	6412100095	348 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		53
	6412100096	12001 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	57	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		50
	2237500025	12004 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	52	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	8		47

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
846

Impacts:	Moderate	Severe
	181	112

Residual Impacts	
RSIP =	8

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
	2237500020	510 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	51	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	8		46
	2237500015	516 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	50	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		45
	2237500030	12014 5th Ave Ne	SF Residence on 120th St.	1	66	2	No	No	56	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	8		50
	6412100090	12015 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	67	Ldn	62	68	1	--	Wall on Retaining Wall	N/A	8		60
	6412100093	12021 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Retaining Wall	N/A	8		56
	6413600015	12016 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	56	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	8		51
	6413600005	12018 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	52	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		47
	6413600010	12020 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		49
	6413600020	12022 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	58	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	8		53
	6412100094	12025 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	70	Ldn	62	68	--	1	Wall on Retaining Wall	N/A	8	1	62
	6412100085	12027 5th Ave Ne	SF Residence near noise wall	1	65	2	No	No	74	Ldn	61	67	--	1	Increase I-5 wall height	N/A	8	1	64
	6412100087	12029 5th Ave Ne	SF Residence next to noise wall	0	65	2	No	No							Wall on Retaining Wall	N/A	8		
	6412100080	12035 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	72	Ldn	63	68	--	1	Increase I-5 wall height	N/A	8	1	63
	6412100082	12045 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	75	Ldn	63	68	--	1	Increase I-5 wall height	N/A	8	1	65
	6412100081	12049 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	73	Ldn	63	68	--	1	Wall At-Grade	N/A	8	1	64
	6412100084	12051 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No								N/A			
	6412100280	12301 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No								N/A			
	6412100281	12311 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6412100282	12321 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6412100283	12327 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6412100284	12401 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6412100250	12417 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6413600026	12030 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		53
	6413600036	12032 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		49
	6413600072	12035 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	51	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		46
	6413600079	12037 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	51	Ldn	61	67	--	--	Wall At-Grade	N/A	8		47
	6413600034	12034 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		50
	6413600035	12036 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		53
M-7: 68.27	6413600040	12042 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		54
	6413600041	12044 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--	Wall At-Grade	N/A	8		50
	6413600051	521 Ne 123rd St	SF Residence on 123rd	1	65	2	No	No	53	Ldn	61	67	--	--	Wall At-Grade	N/A	8		48
	6413600052	515 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	56	Ldn	62	68	--	--	Wall At-Grade	N/A	8		51
	6413600045	12048 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall At-Grade	N/A	8		54
	6413600050	12054 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	66	Ldn	63	69	1	--	Wall At-Grade	N/A	8		59
	6413600339	12302 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	67	Ldn	63	69	1	--	Wall At-Grade	N/A	8		60
	6413600340	510 Ne 123rd St	SF Residence on 123rd	1	67	2	No	No	54	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	8		48
	6413600335	518 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	51	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	8		46
	6413600338	522 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	49	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	8		44
	6413600337	12308 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	67	Ldn	63	69	1	--	Wall At-Grade	N/A	8		61
	6413600345	12316 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	8		56
	6413600343	12320 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	8		57
	6413600347	12312 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	53	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	8		48
	6413600346	12314 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	50	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	8		45
	9509900045	521 Ne 124th St	SF Residence on 124th	1	66	2	No	No	49	Ldn	62	68	--	--	CUT	N/A	10		43
	9509900040	515 Ne 124th St	SF Residence on 124th	1	66	2	No	No	52	Ldn	62	68	--	--	CUT	N/A	10		46
	9509900035	509 Ne 124th St	SF Residence on 124th	1	67	2	No	No	56	Ldn	63	68	--	--	CUT	N/A	10		49
	9509900030	503 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	8		58
	9509900005	500 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	64	Ldn	63	69	1	--	CUT	N/A	10		57
	9509900010	508 Ne 124th St	SF Residence on 124th	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	12		48
	9509900015	514 Ne 124th St	SF Residence on 124th	1	68	2	No	No	53	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	12		45
	9509900020	520 Ne 124th St	SF Residence on 124th	1	67	2	No	No	50	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	12		43
	6413600378	527 Ne 125th St	SF Residence on 125th	1	66	2	No	No	48	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	15		41
	6413600377	523 Ne 125th St	SF Residence on 125th	1	67	2	No	No	52	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	15		44
	6413600376	513 Ne 125th St	SF Residence on 125th	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	15		47
	6413600375	505 Ne 125th St	SF Residence on corner of 5th and 125th	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	12		56
NE 125th Street to NE 127th Street																			

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
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Impacts:	Moderate	Severe
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RSIP =	8

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
	6414100010	502 Ne 125th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	20		55
	6414100013	510 Ne 125th St	SF Residence on 125th	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	20		47
	6414100012	514 Ne 125th St	SF Residence on 125th	1	67	2	No	No	53	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	20		44
	6414100011	516 Ne 125th St	SF Residence on 125th	1	67	2	No	No	50	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	20		41
	6414100023	12514 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	50	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	20		41
	6414100024	12512 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	54	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	20		45
	6414100021	12518 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	20		55
	6414100020	12520 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	20		55
	6414100028	12528 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	20		55
	6414100025	12526 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	55	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	20		46
	6414100029	12524 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	49	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	20		40
	6414100026	12532 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	20		44
	6414100027	12534 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	20		55
	6414100033	12542 5th Ave Ne	Empty Lot	1	68	2	No	No							Wall on Retaining Wall	N/A	20		
	6414100030	12542 5th Ave Ne	SF Residence on 5th Ave.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Retaining Wall	N/A	20		55
	6414100032	12546 5th Ave Ne Unit B	SF Residence on 5th Ave.	1	68	2	No	No	54	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	20		45
	6414100031	12546 5th Ave Ne Unit C	SF Residence on 5th Ave.	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	20		42
	6414100039	527 NE 127th St	SF Residence on 127th	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	20		40
	6414100038	521 NE 127th St	SF Residence on 127th	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	20		41
	6414100037	515 NE 127th St	SF Residence on 127th	1	69	2	No	No	53	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	20		44
	6414100036	509 NE 127th St	SF Residence on 127th	1	69	2	No	No	56	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	20		47
	6414100035	503 NE 127th St	SF Residence on corner of 127th and 5th	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Retaining Wall	N/A	20		54
NE 127th Street to Roosevelt Way NE Jackson Park Golf Course																			
M-9: 70.45	6414100732	502 NE 127th St	SF Residence on corner of 127th and 5th	1	70	2	No	No	63	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	18		54
	6414100731	514 NE 127th St	SF Residence on 127th	1	70	2	No	No	54	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	18		45
	6414100733	522 NE 127th St	SF Residence on 127th	1	69	2	No	No	51	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	18		43
	6414100741	Grace Church open area	Empty Lot	0	64	3	No	No							Wall on Retaining Wall	N/A	18		
	6414100730	12708 5th Ave Ne	SF Residence on 5th Ave.	1	71	2	No	No	63	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	18		54
	6414100740	12718 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Retaining Wall	N/A	18		54
	6414100751	12726 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	63	Ldn	66	72	--	--	Wall on Retaining Wall	N/A	18		54
	6414100750	12732 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	64	Ldn	66	72	--	--	Wall on Retaining Wall	N/A	18		54
M-10: 73.8	6414100759	12740 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	No	No	63	Ldn	66	73	--	--	Wall on Retaining Wall	N/A	12		58
	6414100760	12759 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	No	No	56	Ldn	66	72	--	--	Wall on Retaining Wall	N/A	12		50
	6414100752	12749 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	72	2	No	No	53	Ldn	66	72	--	--	Wall on Retaining Wall	N/A	16		45
	6414100753	12745 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	No	No	53	Ldn	66	72	--	--	Wall on Retaining Wall	N/A	12		47
	1854700005	502 Ne 130th St	SF Residence on 130th	1	74	2	No	No	63	Ldn	66	73	--	--	Wall on Retaining Wall	N/A	10		59
	1854700010	510 Ne 130th St	SF Residence on 130th	1	74	2	No	No	55	Ldn	66	73	--	--	Wall on Retaining Wall	N/A	10		51
	1854700015	516 Ne 130th St	SF Residence on 130th	1	73	2	No	No	52	Ldn	66	72	--	--	Wall on Retaining Wall	N/A	10		48
	1787600096	519 Ne 131st Pl	SF Residence on 131st Place	1	73	2	No	No	51	Ldn	66	72	--	--	Wall on Retaining Wall	N/A	10		47
	1787600095	511 Ne 131st Pl	SF Residence on 131st Place	1	74	2	No	No	55	Ldn	66	73	--	--	Wall on Retaining Wall	N/A	10		51
	1787600098	505 Ne 131st Pl	SF Residence on 131st Place	1	74	2	No	No	63	Ldn	66	73	--	--	Wall on Retaining Wall	N/A	10		60
	1787600090	N Seattle Church of Naz	Empty Lot that is part of 13130 5th Church	0	72	3	No	No	60	Leq	71	77	--	--	Wall on Retaining Wall	N/A	10		57
	1787600094	510 Ne 131st Pl	SF Residence on 131st Place	1	72	2	No	No	55	Ldn	66	72	--	--	Wall on Retaining Wall	N/A	10		51
	1787600093	520 Ne 131st Pl	SF Residence on 131st Place	1	71	2	No	No	52	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	10		47
	1787600085	13130 5th Ave Ne	Church on 5th Ave.	1	67	2	No	No	55	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	10		51
M-11: 66.7 & 66.8	1787600085	13130 5th Ave Ne	Church on 5th Ave.	1	68	3	No	No	56	Leq	68	74	--	--	Wall on Retaining Wall	N/A	10		51
	2026049004	1000 NE 135th		1	70	3	No	No								N/A			
NE 145th Street to NE 148th Street																			
	7568700780	501 Ne 145th St	Water pump station	0	74				0	Leq	66	73	--	--					0
	7568700785	14512 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	Yes	No	69	Ldn	66	73	1	--	Wall on Structure	Special	4		60

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
846

Impacts:	Moderate	Severe
	181	112

Residual Impacts	
RSIP =	8

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
	7568700790	14518 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	69	Ldn	66	72	1	--	Wall on Structure	Special	4		60
M-14: 72.8	7568700795	14526 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	69	Ldn	66	72	1	--	Wall on Structure	Special	4		60
	7568700800	14532 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	69	Ldn	66	72	1	--	Wall on Structure	Special	4		59
	7568700805	14540 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	67	Ldn	66	72	1	--	Wall on Structure	Special	4		58
	7568700810	14544 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	67	Ldn	66	72	1	--	Wall on Structure	Special	4		57
	7568700815	14552 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	66	Ldn	66	72	1	--	Wall on Structure	Special	4		56
	7568700820	14556 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	66	Ldn	66	72	1	--	Wall on Structure	Special	4		56
	7568700825	14560 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	Yes	No	66	Ldn	66	72	1	--	Wall on Structure	Special	4		56
	7568700830	14570 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	Yes	No	65	Ldn	63	69	1	--	Wall on Structure	Special	4		56
	7568700835	14574 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	Yes	No	60	Ldn	61	67	--	--		Special			60
	7568700836	14578 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	Yes	No	56	Ldn	61	67	--	--	Wall on Structure	Special	4		48
	7568700775	-	Empty Lot	0	74														
	7568700770	516 Ne 145th St	SF Residence on 145th	1	73	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		52
	7568700765	522 Ne 145th St	SF Residence on 145th	1	72	2	No	No	61	Ldn	66	72	--	--	Wall on Structure	N/A	4		52
	7568700760	14515 6th Ave Ne	SF Residence on 6th Ave.	1	69	2	Yes	No	63	Ldn	64	70	--	--		Special			63
	7568700755	14521 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	Yes	No	63	Ldn	62	68	1	--	Wall on Structure	Special	4		54
	7568700745	14525 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	Yes	No	63	Ldn	61	67	1	--	Wall on Structure	Special	4		54
	7568700740	14535 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	Yes	No	63	Ldn	61	66	1	--	Wall on Structure	Special	4		54
	7568700734	14541 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	Yes	No	61	Ldn	60	66	1	--	Wall on Structure	Special	4		52
M-15: 62.65	7568700730	14549 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	Yes	No	60	Ldn	60	66	1	--	Wall on Structure	Special	4		51
	7568700725	14555 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	Yes	No	60	Ldn	59	65	1	--	Wall on Structure	Special	4		51
	7568700720	14565 6th Ave Ne	SF Residence on 6th Ave.	1	61	2	Yes	No	58	Ldn	59	65	--	--	Wall on Structure	Special	4		49
	7568700715	14567 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	Yes	No	56	Ldn	58	64	--	--	Wall on Structure	Special	4		48
	7568700705	14579 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	7568700710	515 NE 148th St.	SF Residence on 6th Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	7568700695	14572 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall on Structure	N/A	4		45
	7568700690	14566 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	7568700685	14562 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	7568700680	14550 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	7568700675	14548 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	4		48
	7568700670	14542 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	7568700665	14528 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	7568700660	14526 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	No	No	60	Ldn	61	67	--	--		N/A			60
	7568700655	14522 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	7568700650	14518 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
NE 148th Street to NE 149th Street																			
	8680300045	327 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No								Special			
	8680300050	333 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No								Special			
	8680300055	339 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No	66	Ldn	65	70	1	--	Wall on Structure	Special	4		56
	8680300060	345 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No	64	Ldn	65	70	--	--		Special			64
	2881700402	14727 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	Yes	No	63	Ldn	63	68	1	--	Wall on Structure	Special	4		54
	2881700400	-	Empty Lot	1	67	2	Yes	No							Wall on Structure	Special	4		
	8680300040	316 Ne 148th St	SF Residence on 148th	1	70	2	No	No							Wall on Retaining Wall	N/A	4		
	8680300035	324 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No							Wall on Retaining Wall	Special	4		
	8680300030	330 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No	57	Ldn	65	70	--	--	Wall on Retaining Wall	Special	4		49
	8680300025	336 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No	49	Ldn	65	70	--	--	Wall on Retaining Wall	Special	4		45
	8680300020	342 Ne 148th St	SF Residence on 148th	1	67	2	Yes	No	48	Ldn	63	68	--	--	Wall on Retaining Wall	Special	4		45
M-16: 66.95	8680300015	348 Ne 148th St	SF Residence on 148th	1	67	2	Yes	No	56	Ldn	63	68	--	--	Wall on Structure	Special	4		48
	8680300010	358 Ne 148th St	SF Residence on 148th	1	67	2	Yes	No	56	Ldn	63	68	--	--	Wall on Structure	Special	4		47
	8680300005	14807 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	55	Ldn	63	68	--	--	Wall on Structure	N/A	4		46
	2004100090	357 Ne 149th St	SF Residence on 149th	1	67	2	No	No	40	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		38
	2004100085	351 Ne 149th St	SF Residence on 149th	1	67	2	No	No	41	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		39
	2004100080	345 Ne 149th St	SF Residence on 149th	1	67	2	No	No	42	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		39
	2004100075	339 Ne 149th St	SF Residence on 149th	1	67	2	No	No	44	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		40
	2004100065	333 Ne 149th St	SF Residence on 149th	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	2004100060	327 Ne 149th St	SF Residence on 149th	1	69	2	No	No	49	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		42
	2004100055	321 Ne 149th St	SF Residence on 149th	1	70	2	No	No	55	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		46
	2004100050	309 Ne 149th St	SF Residence on 149th	1	70	2	No	No							Wall on Retaining Wall	N/A	4		
	2004100052	305 Ne 149th St	SF Residence on 149th	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	2004100045	308 Ne 149th St	SF Residence on 149th	0	70	2	No	No							Wall on Retaining Wall	N/A	4		

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
846

Impacts:	Moderate	Severe
	181	112

Residual Impacts	
RSIP =	8

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
M-17: 70.05	2004100040	314 Ne 149th St	SF Residence on 149th	1	70	2	No	No	56	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		47
	2004100035	320 Ne 149th St	SF Residence on 149th	1	70	2	No	No	53	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		46
	2004100030	326 Ne 149th St	SF Residence on 149th	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	4		60
	2004100025	332 Ne 149th St	SF Residence on 149th	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	2004100020	338 Ne 149th St	SF Residence on 149th	1	67	2	No	No	56	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		52
NE 148th Street to NE 152nd Street																			
	7568700355	14802 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Structure	N/A	4		44
	7568700360	14808 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Structure	N/A	4		44
	7568700365	14812 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	53	Ldn	61	66	--	--	Wall on Structure	N/A	4		44
	7568700370	14818 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	39	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		37
	7568700375	14902 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	38	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		37
	7568700380	14910 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	38	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		37
	7568700385	14916 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	36	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		35
	7568700390	14922 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	36	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		35
	7568700395	14928 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	39	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		38
	7568700400	14934 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	36	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		35
	7568700405	15100 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	36	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		35
	7568700410	15108 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	36	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		35
	7568700415	15114 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	36	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		35
	7568700420	15124 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	35	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		35
NE 151st Street to NE 155th Street																			
	2881700323	15101 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No								N/A			
	3222200030	301 Ne 151st St	SF Residence on 151st	0	68	2	No	No	80	Ldn	63	69	--	0	Wall on Retaining Wall	N/A	4	0	70
	3222200040	307 Ne 151st St	SF Residence on 151st	1	70	2	No	No	67	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		54
	3222200050	313 Ne 151st St	SF Residence on 151st	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		53
	802290040	321 Ne 151st St	SF Residence on 151st	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	802290041	327 Ne 151st St	SF Residence on 151st	1	68	2	No	No	55	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	802290050	335 Ne 151st St	SF Residence on 151st	1	68	2	No	No	54	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	802290055	347 Ne 151st St	SF Residence on 151st	1	67	2	No	No	51	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		49
	2881700322	15109 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	2881700321	15117 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	2881700311	15121 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	70	Ldn	63	69	--	1	Wall on Retaining Wall	N/A	6		57
	2881700310	225 Ne 152nd St	Church at end of 152nd St.	1	70	3	No	No	72	Leq	70	75	1	--	Wall on Structure	N/A	4		60
	2634500055	304 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	70	Ldn	65	70	--	1	Wall on Structure	N/A	4		61
	2634500060	310 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	69	Ldn	65	70	1	--	Wall on Structure	N/A	4		60
	2634500065	316 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	63	Ldn	64	70	--	--		N/A			63
	2634500070	322 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	61	Ldn	64	70	--	--	Wall on Structure	N/A	4		52
	2634500035	323 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	56	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		53
	2634500040	317 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		54
	2634500045	311 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		56
	2634500050	305 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	63	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		57
	3222200010	15112 3rd Ave Ne	SF Residence on 3rd Ave.	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		57
	3222200020	306 Ne 151st St	SF Residence on 151st	1	70	2	No	No	64	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		52
	802290035	316 Ne 151st St	SF Residence on 151st	1	70	2	No	No	57	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		50
	802290030	324 Ne 151st St	SF Residence on 151st	1	69	2	No	No	53	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		48
	2881700301	-	Empty Lot	0	70	2	No	No							Wall on Structure	N/A	4		
	5027800130	411 Ne 153rd St	SF Residence on 153rd St.	1	69	2	No	No	63	Ldn	64	70	--	--		N/A			63
	5027800120	407 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	69	Ldn	65	70	1	--	Wall on Structure	N/A	4		61
M-18 (63.9 LEQ)	5027800110	405 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	69	Ldn	65	70	1	--	Wall on Structure	N/A	4		61
	5027800100	403 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	69	Ldn	65	70	1	--	Wall on Structure	N/A	4		61
	5027800090	401 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	63	Ldn	65	70	--	--	Wall on Structure	N/A	4		56
	2881700300	15240 3rd Ave Ne	SF Residence on 3rd Ave.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Structure	N/A	4		62
	2807600030	15451 4th Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	63	Ldn	65	70	--	--	Wall on Structure	N/A	4		56
	0411100005	301 Ne 155th St	SF Residence on 4th Ave.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Structure	N/A	4		54
	0411100010	15420 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Structure	N/A	4		54

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
846

Impacts:	Moderate	Severe
	181	112

Residual Impacts	
RSIP =	8

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
	0411100015	15414 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Structure	N/A	4		54
	0411100020	15408 2nd Ave Ne	SF Residence on 2rd Ave.	1	71	2	No	No	62	Ldn	66	71	--	--	Wall on Structure	N/A	4		55
	0411100025	15404 2nd Ave Ne	SF Residence on 2rd Ave.	1	72	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	4		62
	0411100030	15401 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	6		62
	0411100035	15407 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	6		61
	0411100040	15419 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Structure	N/A	4		57
	0411100045	15425 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Structure	N/A	4		57
	0411100050	165 Ne 155th St	SF Residence on 155th St.	1	71	2	No	No	65	Ldn	66	71	--	--		N/A			65
	0411100055	145 Ne 155th St	Fire Station	1	76	2	No	No	73	Ldn	66	75	1	--	Wall on Structure	N/A	6		62
NE 155th Street to NE 158th Street																			
	2241700075	157 Ne 156th St	SF Residence on 156th St.	1	68	2	No	No	67	Ldn	63	69	1	--	Wall on Structure	N/A	6		58
	2241700070	151 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	68	Ldn	65	70	1	--	Wall on Structure	N/A	6		59
	2241700065	143 Ne 156th St	SF Residence on 156th St.	1	71	2	No	No	69	Ldn	66	71	1	--	Wall on Structure	N/A	6		60
	2241700060	137 Ne 156th St	SF Residence on 156th St.	1	72	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		62
M-19: 73.3	2241700055	132 Ne 155th St	SF Residence on 155th St.	1	73	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	6		61
	2241700050	125 Ne 156th St	SF Residence on 156th St.	1	74	2	No	No	72	Ldn	66	73	1	--	Wall on Structure	N/A	6		61
	2241700045	110 Ne 155th St	SF Residence on 155th St.	1	75	2	No	No	77	Ldn	66	74	--	1	Wall on Structure	N/A	8		64
	2881700240	106 Ne 155th St	SF Residence on 155th St.	1	76	2	No	No	76	Ldn	66	75	--	1	Wall on Structure	N/A	8		63
	2241700040	104 Ne 156th St	SF Residence on 156th St.	1	75	2	No	No	76	Ldn	66	74	--	1	Wall on Structure	N/A	8		63
	2241700035	108 Ne 156th St	SF Residence on 156th St.	1	73	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	6		62
	2241700030	122 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	6		61
	2241700025	130 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	65	Ldn	65	70	1	--	Wall on Structure	N/A	4		57
	2241700020	136 Ne 156th St	SF Residence on 156th St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		56
	2241700015	142 Ne 156th St	SF Residence on 156th St.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall on Structure	N/A	8		48
	2241700010	148 Ne 156th St	SF Residence on 156th St.	1	67	2	No	No	58	Ldn	63	68	--	--	Wall on Structure	N/A	8		47
	2241700005	156 Ne 156th St	SF Residence on 156th St.	1	66	2	No	No	57	Ldn	62	68	--	--	Wall on Structure	N/A	8		47
	2881700233	15615 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	8		50
	2881700234	15621 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	6		49
	2881700232	15625 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	58	Ldn	61	67	--	--	Wall on Structure	N/A	6		50
	2881700239	241 Ne 157th St	SF Residence on 157th St.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	6		52
	2881700229	235 Ne 157th St	SF Residence on 157th St.	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	6		52
	2881700226	229 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	6		54
	2881700224	223 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	6		55
	2881700225	125 Ne 157th St	SF Residence on 157th not =15544 1st Ave Ne	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	6		61
	2881700219	117 Ne 157th St	SF Residence on 157th St.	1	69	2	No	No	72	Ldn	64	70	--	1	Wall on Structure	N/A	8		60
	2881700220	111 Ne 157th St	SF Residence on 157th St.	1	71	2	No	No	73	Ldn	66	71	--	1	Wall on Structure	N/A	8		61
	2881700223	101 Ne 157th St	SF Residence on 157th St.	0	72	2	No	No							Wall on Structure	N/A	8		
	2881700230	15618 1st Ave Ne	SF Residence on 1st Ave.	0	72	2	No	No							Wall on Structure	N/A	6		
	2881700227	108 Ne 157th St	SF Residence on 157th St.	1	71	2	No	No							Wall on Structure	N/A	4		
	2881700218	15710 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	71	Ldn	66	71	--	1	Wall on Retaining Wall	N/A	4		64
	8142000180	105 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		64
	8142000170	111 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		58
	2881700222	116 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		56
	2881700221	126 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	4		55
	2881700231	132 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	8142000160	117 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
M-20: 68.33	8142000150	123 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
NE 158th Street to NE 165th Street																			
	8142000090	104 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	69	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		64
	8142000080	110 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		57
	8142000070	116 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
	8142000060	122 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
Change to A1	6159400080	117 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		56
	6159400075	125 Ne 159th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	6		52
	6159400085	113 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		58
	6159400090	105 Ne 159th St	SF Residence on 159th St.	1	71	2	No	No	69	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		63
	6159400045	104 Ne 159th St	SF Residence on 159th St.	0	71	2	No	No							Wall on Retaining Wall	N/A	8		
	6159400037	114 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	69	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	8		61

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
846

Impacts:	Moderate	Severe
	181	112

Residual Impacts	
RSIP =	8

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
	6159400035	118 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		55
	6159400030	124 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		52
	6159400025	130 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		51
	2111600080	129 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		52
	2111600075	139 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		52
	2111600085	123 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		55
	2111600090	115 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	68	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	8		62
	2111600095	15924 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	8		
	2111600100	15918 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	8		
M-21: 61.8 LEQ	2881700193	108 Ne 161st St	Ridgecrest Park	1	62	3	No	No							Wall At-Grade	N/A	4		
	2111600040	114 Ne 161st St	SF Residence on 161st St.	1	71	2	No	No	71	Ldn	66	71	--	1	Wall At-Grade	N/A	8		63
	2111600035	122 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall At-Grade	N/A	8		56
	2111600030	128 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall At-Grade	N/A	8		53
	2111600025	134 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	55	Ldn	63	69	--	--	Wall At-Grade	N/A	8		50
	7301300295	303 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
	7301400110	129 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	51	Ldn	62	68	--	--		N/A			51
	7301400120	121 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No								N/A			
	7301400220	128 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	60	Ldn	62	68	--	--		N/A			60
	7301300130	304 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	50	Ldn	62	68	--	--		N/A			50
	7301300135	310 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	46	Ldn	62	68	--	--		N/A			46
	7301300120	139 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301300125	135 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	7301400200	127 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	7301400211	124 Ne 163rd St	SF Residence on 163rd St.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	7301400070	-	Empty Lot	0	68	--	No	No								N/A			
	7301400060	132 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	60	Ldn	63	69	--	--		N/A			60
	7301400040	134 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	7301400046	140 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301300030	141 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301300035	135 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	7301400050	127 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
NE 165th Street to NE 170th Street																			
	5727500330	126 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59
	7307000050	124 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	58	Ldn	63	69	--	--		N/A			58
	5727500355	119 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	5727500350	123 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	7307000040	134 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	46	Ldn	63	69	--	--		N/A			46
	7301500010	132 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	7301500020	140 Ne 165th St	SF Residence on 165th St.	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	7307000030	140 Ne 165th Pl	SF Residence on 165th Place	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	5727500300	131 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	44	Ldn	62	68	--	--		N/A			44
	5727500363	120 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	5727500360	-	Empty Lot	0	68	--	No	No								N/A			
	9235900015	111 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	58	Ldn	63	69	--	--		N/A			58
	9235900020	117 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	9235900025	123 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	44	Ldn	62	68	--	--		N/A			44
	9235900040	130 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	5727500361	124 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	5727500086	114 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No								N/A			
	5727500103	16719 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500100	16723 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500102	16729 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500111	16731 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500110	16735 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500113	16741 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500120	109 Ne 170th St	SF Residence on 170th St.	0	68	2	No	No								N/A			
	7305900115	119 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59
	5727500130	121 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
846

Impacts:	Moderate	Severe
	181	112

Residual Impacts	
RSIP =	8

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
	5727500139	16742 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	5727500137	16738 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--		N/A			46
	5727500148	16728 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--		N/A			46
	5727500149	16722 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--		N/A			46
	5727500150	16716 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--		N/A			46
	5727500155	126 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	45	Ldn	63	69	--	--		N/A			45
	5727500087	118 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	5727500156	132 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500157	136 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	41	Ldn	62	68	--	--		N/A			41
	5727500159	16719 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500147	16725 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	41	Ldn	62	68	--	--		N/A			41
	5727500146	-	Empty Lot	0	66	--	No	No								N/A			
	5727500145	16735 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	41	Ldn	62	68	--	--		N/A			41
	5727500135	16741 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500136	16747 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500138	16753 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	5727500131	16761 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	45	Ldn	63	69	--	--		N/A			45
NE 170th Street to NE 175th Street																			
	7305300205	104 Ne 170th St	SF Residence on 170th St.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300210	17010 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300215	17016 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	54	Ldn	66	71	--	--		N/A			54
	7305300220	17022 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	54	Ldn	66	71	--	--		N/A			54
	7305300225	17028 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	54	Ldn	66	71	--	--		N/A			54
	7305300230	17034 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300235	17040 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300240	17046 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300245	17052 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No								N/A			
	7305300250	17058 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300255	17204 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300260	17210 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300265	17216 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300270	17222 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300275	105 Ne 174th St	SF Residence on 174th St.	0	70	2	No	No								N/A			
	7305300350	111 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	58	Ldn	66	71	--	--		N/A			58
	7305300345	17223 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	57	Ldn	66	71	--	--		N/A			57
	7305300340	17217 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	57	Ldn	66	71	--	--		N/A			57
M-22: 70.2	7305300335	17211 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300330	17205 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300325	17059 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300320	17053 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300315	17047 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	49	Ldn	64	70	--	--		N/A			49
	7305300310	17041 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300305	17035 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300300	17029 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300295	17023 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300290	17017 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300285	17011 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300280	110 Ne 170th St	SF Residence on 170th St.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300425	205 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	47	Ldn	64	70	--	--		N/A			47
	7305300420	17222 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--		N/A			47
	7305300415	17216 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--		N/A			47
	7305300410	17210 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--		N/A			46
	7305300405	17204 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--		N/A			46
	7305300400	17058 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--		N/A			46
	7305300395	17052 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--		N/A			46
	7305300390	17046 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	44	Ldn	63	68	--	--		N/A			44
	7305300385	17040 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300380	17034 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300375	17028 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300370	17022 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
846

Impacts:	Moderate	Severe
	181	112

Residual Impacts	
RSIP =	8

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
	7305300365	17016 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300360	17010 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300355	204 Ne 170th St	SF Residence on 170th St.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300010	110 Ne 174th St	SF Residence on 174th St.	0	??	2	No	No								N/A			
	7305300015	116 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	64	Ldn	66	71	--	--		N/A			64
	7305300020	122 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	63	Ldn	66	71	--	--		N/A			63
	7305300025	128 Ne 174th St	SF Residence on 174th St.	1	70	2	No	No	56	Ldn	65	70	--	--		N/A			56
	7305300030	204 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	7305300035	210 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	7305300040	216 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	62	Ldn	64	70	--	--		N/A			62
M-23: 70.2	7305300085	211 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	60	Ldn	65	70	--	--		N/A			60
	7305300090	217 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	54	Ldn	65	70	--	--		N/A			54
	7305300095	223 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	52	Ldn	64	70	--	--		N/A			52
NE 175th Street to NE 180th Street																			
	1115100230	208 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	6		61
	1115100232	-	Empty Lot	0	70	--	No	No							Wall on Structure	N/A	6		
	1115100235	206 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No							Wall on Structure	N/A	6		
	1115100210	216 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	6		60
	1115100208	218 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	6		61
	1115100211	222 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	6		53
	1115100209	220 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	6		54
	1115100200	230 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	6		51
	1115100205	234 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	6		52
	1115100195	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Structure	N/A	6		49
	1115100190	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	6		50
	1115100182	310 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	6		50
	1115100175	320 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	6		47
	1115100172	323 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	52	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		49
	1115100171	325 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	52	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		49
	1115100176	317 Ne 178th St	SF Residence on 178th St.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	6		49
	1115100180	308 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	63	Ldn	63	68	1	--	Wall on Structure	N/A	6		52
	1115100181	311 Ne 178th St	SF Residence on 178th St.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	6		53
	7772400110	239 Ne 178th St	SF Residence on 178th St.	1	69	2	No	No	71	Ldn	64	70	--	1	Wall on Structure	N/A	6		60
M-24: 69.15	7772400120	17748 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	6		60
	7772400130	17738 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	69	Ldn	64	70	1	--	Wall on Structure	N/A	4		60
	7772400140	17734 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	6		60
	7772400150	17733 2nd Pl Ne	SF Residence on 2nd Pl.	1	75	2	No	No	75	Ldn	66	74	--	1	Wall on Structure	N/A	6		62
	7772400160	17737 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No	73	Ldn	66	74	0	--	Wall on Structure	N/A	6		60
	7772400170	17741 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	7772400180	17747 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	7772400190	17753 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	1115100065	224 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No								N/A			
	1115100070	230 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No								N/A			
	7772400010	17803 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	4		54
	7772400020	17809 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	4		55
	7772400030	17815 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No								N/A			
	7772400040	17821 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall At-Grade	N/A	4		55
	7772400050	17825 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	60	Ldn	62	68	--	--		N/A			60
	7772400060	17822 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	7772400070	17816 3rd Ave Ne	SF Residence on 3rd Ave.	1	63	2	No	No	50	Ldn	60	66	--	--		N/A			50
	7772400080	17810 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	53	Ldn	61	66	--	--		N/A			53
	7772400090	17804 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	7772400100	312 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	48	Ldn	60	66	--	--		N/A			48

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
846

Impacts:	Moderate	Severe
	181	112

Residual Impacts	
RSIP =	8

Receiver Information							Impact Analysis						Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
	1115100119	330 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	1115100123	340 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	44	Ldn	59	65	--	--		N/A			44
	1115100121	344 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	1115100111	337 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	57	Ldn	60	66	--	--	Wall At-Grade	N/A	4		51
	1115100113	335 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	59	Ldn	60	66	--	--		N/A			59
	1115100112	333 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall At-Grade	N/A	4		54
	1115100110	331 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall At-Grade	N/A	4		55
	1115100120	336 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	42	Ldn	59	65	--	--		N/A			42
	1115100122	348 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	43	Ldn	60	66	--	--		N/A			43
	1115100125	-	Empty Lot	0	62	--	No	No							Wall At-Grade	N/A	6		
	1115100137	17861 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	48	Ldn	59	65	--	--	Wall At-Grade	N/A	8		41
	1115100138	17857 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	47	Ldn	59	65	--	--	Wall At-Grade	N/A	8		40
	1115100135	17845 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--	Wall At-Grade	N/A	6		41
	1115100136	17833 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	45	Ldn	59	65	--	--	Wall At-Grade	N/A	4		41
	1115100142	17829 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	56	Ldn	59	65	--	--		N/A			56
	1115100139	17825 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	52	Ldn	60	66	--	--		N/A			52
	1115100140	17821 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No								N/A			
	1115100146	356 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	50	Ldn	59	65	--	--		N/A			50
	0927100187	17822 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	52	Ldn	62	68	--	--		N/A			52
	0927100196	17832 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--		N/A			53
	0927100200	17840 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall At-Grade	N/A	4		51
	0927100199	17844 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall At-Grade	N/A	8		48
	0927100205	17852 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	54	Ldn	62	68	--	--	Wall At-Grade	N/A	6		50
NE 180th Street to NE 185th Street																			
	6084100118	332 Ne 180th St	SF Residence on 180th St.	0	63	2	No	No							Wall on Retaining Wall	N/A	6		
	6084100117	338 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	6084100114	344 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	55	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	6		49
M-25: 59.1 LEQ	6084100116	350 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	51	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	6		45
	6084100115	356 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	49	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	6		43
	6084100110	18017 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	6		42
	6084100113	18019 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	58	Ldn	60	66	--	--		N/A			58
	6084100105	18023 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	6084100100	18027 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	6084100095	18031 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	6084100086	18041 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No								N/A			
	0927100065	506 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	56	Ldn	61	66	--	--		N/A			56
	0927100066	514 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	53	Ldn	61	66	--	--		N/A			53
	0927100067	518 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	52	Ldn	60	66	--	--		N/A			52
	0927100068	524 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	50	Ldn	60	66	--	--		N/A			50
	5662100015	18015 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	5662100020	18021 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	0927100071	18022 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--		N/A			49
	0927100079	18020 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	0927100070	18016 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	42	Ldn	61	66	--	--		N/A			42
	0927100076	18032 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	42	Ldn	61	66	--	--		N/A			42
	5662100025	18027 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	5662100030	18033 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	0927100075	515 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	0927100073	18034 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	48	Ldn	62	68	--	--		N/A			48
	0927100082	18036 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	50	Ldn	62	68	--	--		N/A			50
	0927100080	519 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	5662100035	18039 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	48	Ldn	60	66	--	--		N/A			48
	5662100040	18045 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--		N/A			49
	0927100084	518 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	53	Ldn	61	66	--	--		N/A			53
	0927100083	504 Ne 182nd Ct	SF Residence on 182nd Ct.	1	66	2	No	No	53	Ldn	62	68	--	--		N/A			53
	0927100085	18210 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	57	Ldn	62	68	--	--		N/A			57
	0927100090	505 Ne 183rd Ct	SF Residence on 183rd Ct.	0	66	2	No	No								N/A			
	0927100094	18310 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No								N/A			
	0927100098	18320 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No								N/A			
	0927100081	514 Ne 182nd Ct	SF Residence on 182nd Ct.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
846

Impacts:	Moderate	Severe
	181	112

Residual Impacts	
RSIP =	8

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
	5662100045	18051 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	5662100050	18057 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	0927100091	515 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	5662100055	18063 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	0927100092	520 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	44	Ldn	61	67	--	--		N/A			44
	0927100093	514 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	54	Ldn	61	67	--	--		N/A			54
	0927100105	18326 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No								N/A			
	0927100100	18330 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No								N/A			
	0927100110	-	Empty Lot	0	67	--	No	No								N/A			
	5662100075	18313 7th Ave Ne	SF Residence on 7th Ave.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	4		58
	5662100080	18316 7th Ave Ne	SF Residence on 7th Ave.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		57
	0927100016	18323 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	No	No	62	Ldn	64	70	--	--		N/A			62
	0927100015	18329 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No	61	Ldn	64	70	--	--		Special			61
M-28: 70.97	0927100011	721 Ne 185th St	SF Residence on 185th St.	1	71	2	Yes	No	60	Ldn	66	71	--	--		Special			60
	5662100060	18069 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	54	Ldn	61	66	--	--		N/A			54
	5662100065	18301 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	54	Ldn	61	66	--	--		N/A			54
	5662100070	18307 7th Ave Ne	SF Residence on 7th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--		N/A			55
	5662100090	18308 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45
	5662100085	18317 7th Ave Ne	SF Residence on 7th Ave.	1	69	2	No	No	53	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		50
	0927100008	731 Ne 185th St	SF Residence on 185th St.	1	70	2	Yes	No	54	Ldn	65	70	--	--		Special			54
	6163900092	18342 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	6163900091	18343 9th Ave Ne	SF Residence on 9th Ave.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	6163900095	18332 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	50	Ldn	63	68	--	--		N/A			50
	6163900082	18318 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	48	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		46
	6163900081	18312 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	6163900073	18306 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	46	Ldn	60	66	--	--		N/A			46
	6163900071	18300 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	No	No	46	Ldn	61	66	--	--		N/A			46
	5662100095	18302 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	5662100100	18070 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	47	Ldn	60	66	--	--		N/A			47
	5662100105	18064 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	46	Ldn	60	66	--	--		N/A			46
	5662100110	18058 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	46	Ldn	60	66	--	--		N/A			46
	5662100115	18052 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	5662100120	18046 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	6163900063	18072 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	6163900061	18066 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	6163900053	18060 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	6163900050	18054 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	6163900043	18048 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
NE 185th Street to NE 189th Street																			
	0526049029	18510 7th Ave Ne	SF Residence on 7th Ave.	0	69	2	Yes	No								Special			
	0526049060	18516 7th Ave Ne	SF Residence on 7th Ave.	0	66	2	Yes	No								Special			
	0526049027	18520 7th Ave Ne	SF Residence on 7th Ave.	0	64	2	Yes	No								Special			
	0526049044	18528 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	Yes	No								Special			
	0526049015	18534 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	Yes	No							Wall At-Grade	Special	4		
	0526049056	18540 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	Yes	No							Wall At-Grade	Special	4		
	0526049061	18546 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	Yes	No							Wall on Retaining Wall	Special	4		
	0526049032	18552 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	Yes	No							Wall on Retaining Wall	Special	4		
	0526049031	18558 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	Yes	No							Wall on Retaining Wall	Special	4		
	3971702321	707 Ne 189th St	SF Residence on 189th St.	0	63	2	Yes	No							Wall on Retaining Wall	Special	4		
	3971702325	703 Ne 189th St	SF Residence on 189th St.	0	63	2	Yes	No							Wall At-Grade	Special	6		
	3971702320	715 Ne 189th St	SF Residence on 189th St.	1	63	2	Yes	No	71	Ldn	60	66	--	1	Wall At-Grade	Special	8		58
	3971702316	719 Ne 189th St	SF Residence on 189th St.	1	63	2	Yes	No	52	Ldn	60	66	--	--	Wall At-Grade	Special	8		45
	3971702315	721 Ne 189th St	SF Residence on 189th St.	1	63	2	Yes	No	48	Ldn	60	66	--	--		Special			48
	3971702311	18807 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	49	Ldn	60	66	--	--	Wall At-Grade	Special	6		46
	3971702310	727 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	49	Ldn	60	66	--	--	Wall At-Grade	N/A	8		41
	0526049011	18559 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	50	Ldn	60	66	--	--	Wall on Retaining Wall	Special	4		48
	0526049024	18553 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	50	Ldn	60	66	--	--	Wall on Retaining Wall	Special	4		49
	0526049025	18547 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	60	Ldn	60	66	1	--	Wall on Retaining Wall	Special	4		56
	0526049050	18539 8th Ave Ne	SF Residence on 8th Ave.	0	63	2	Yes	No							Wall on Retaining Wall	Special	4		
	0526049026	-	Empty Lot	0	63	--	Yes	No							Wall on Retaining Wall	Special	4		

Lynnwood Link Extension FEIS LPA: Segment A

Stations: 145th St. Station
185th St. Station

Total Units Analyzed
846

Impacts:	Moderate	Severe
	181	112

Residual Impacts	
RSIP =	8

Receiver Information							Impact Analysis						Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Type	X-Over	Height	Insulation	Ldn w/Mit
	0526049055	18533 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No								Special			
	0526049054	18529 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No								Special			
	0526049040	18523 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	No								Special			
	0526049028	18517 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No								Special			
	0526049052	18511 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No								Special			
	0526049030	18509 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	Yes	No								Special			
	3235100273	814 Ne 185th St	SF Residence on 185th St.	1	71	2	Yes	No	51	Ldn	66	71	--	--		Special			51
	3235100270	18504 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	Yes	No	56	Ldn	66	71	--	--		Special			56
	3235100265	18510 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	Yes	No	55	Ldn	63	69	--	--		Special			55
	3235100260	18516 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	No	54	Ldn	61	67	--	--		Special			54
	3235100255	18522 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	54	Ldn	60	66	--	--		Special			54
M-29: 64.4	3235100249	18528 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	No	59	Ldn	59	65	1	--	Wall At-Grade	Special	4		57
	3235100244	18534 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	No	55	Ldn	59	65	--	--	Wall on Retaining Wall	Special	4		52
	3235100240	18540 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	No	55	Ldn	59	65	--	--	Wall on Retaining Wall	Special	4		52
	3235100205	18554 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	No	45	Ldn	59	65	--	--	Wall on Retaining Wall	Special	4		44
	3235100210	811 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	44	Ldn	59	65	--	--	Wall on Retaining Wall	Special	4		44
	3235100215	817 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	42	Ldn	59	65	--	--	Wall on Retaining Wall	Special	4		42
	3235100220	823 Ne 188th St	SF Residence on 188th St.	1	60	2	No	No	31	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		29
	3235100224	829 Ne 188th St	SF Residence on 188th St.	1	60	2	No	No	30	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		29
	3235100230	835 Ne 188th St	SF Residence on 188th St.	1	60	2	No	No	30	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		28
	3235100235	841 Ne 188th St	SF Residence on 188th St.	1	60	2	No	No	27	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		26
	3235100200	18810 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	Yes	No	44	Ldn	61	66	--	--	Wall At-Grade	Special	6		43
	3235100105	18820 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	No	No	39	Ldn	61	66	--	--	Wall At-Grade	N/A	8		34
	3235100110	811 Ne 189th St	SF Residence on 189th St.	1	61	2	Yes	No	44	Ldn	59	65	--	--	Wall At-Grade	Special	8		43
	3235100195	810 Ne 188th St	SF Residence on 188th St.	1	61	2	No	No	36	Ldn	59	65	--	--	Wall At-Grade	N/A	6		32
	3235100190	816 Ne 188th St	SF Residence on 188th St.	1	61	2	No	No	46	Ldn	59	65	--	--	Wall At-Grade	N/A	6		42
	3235100185	822 Ne 188th St	SF Residence on 188th St.	1	61	2	No	No	45	Ldn	59	65	--	--	Wall At-Grade	N/A	6		41
	3235100120	823 Ne 189th St	SF Residence on 188th St.	1	61	2	No	No	45	Ldn	59	65	--	--	Wall At-Grade	N/A	6		41
	3235100115	817 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	47	Ldn	59	65	--	--	Wall At-Grade	Special	6		45
NE 189th Street to NE 194th Street																			
	3971702305	728 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	54	Ldn	60	66	--	--	Wall At-Grade	N/A	4		49
	3971702295	718 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	59	Ldn	60	66	--	--		N/A			59
	3971702210	18915 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--		N/A			59
	3971702215	18921 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--		N/A			59
	0526049063	19011 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	0526049010	19031 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	57	Ldn	63	68	--	--		N/A			57
M-30A&B: 59.4 & 6	0526049007	816 Ne 190th St	School on 190th St.	1	65	3	No	No	45	Leq	66	72	--	--		N/A			45
	3235100005	18920 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	3235100100	18910 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	40	Ldn	59	65	--	--		N/A			40
	3235100095	810 Ne 189th St	SF Residence on 189th St.	1	60	2	No	No	38	Ldn	58	64	--	--		N/A			38
	3235100010	811 Ne 190th St	SF Residence on 190th St.	1	60	2	No	No	44	Ldn	58	64	--	--	Wall At-Grade	N/A	4		42
	3235100015	817 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	51	Ldn	58	64	--	--	Wall At-Grade	N/A	4		49
	3235100090	816 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	45	Ldn	58	64	--	--		N/A			45
	3235100085	822 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	43	Ldn	58	64	--	--		N/A			43
	3235100080	828 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	42	Ldn	58	64	--	--		N/A			42
	3235100075	834 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	41	Ldn	58	64	--	--		N/A			41
	3235100020	823 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	48	Ldn	58	64	--	--	Wall At-Grade	N/A	4		46
	3235100025	829 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	47	Ldn	58	64	--	--	Wall At-Grade	N/A	4		45
	3235100030	835 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	46	Ldn	58	64	--	--	Wall At-Grade	N/A	4		45

Lynnwood Link Extension FEIS LPA: Segment B

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
621		148	65	RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
East Side																			
NE 189th Street to NE 200th Street																			
Begin B1 M30B-65	526049034	None	Athletic Field	1	65	3	No	No								N/A			
	526049017	-	Empty Lot	0	65	--	No	No							Wall on Retaining Wall	N/A	21		
	5490700080	805 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	21		49
	5490700075	814 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	21		50
	5490700070	812 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	21		48
	5490700005	-	Empty Lot	0	64	--	No	No							Wall on Retaining Wall	N/A	21		
	5490700010	815 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	58	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		47
	5490700015	821 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	48	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		38
	5490700020	827 Ne 195th St	SF Residence on 195th St.	1	65	2	No	No	44	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	21		34
	5490700065	818 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	48	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		38
	5490700060	824 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	44	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		34
	5490700085	817 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	54	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		44
	5490700090	823 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	46	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		36
	5490700095	831 Ne 194th St	SF Residence on 194th St.	1	65	2	No	No	42	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	21		33
	3985300331	822 Ne 195th St	SF Residence on 195th St.	1	64	2	Yes	No	65	Ldn	61	66	1	--	Wall on Retaining Wall	Special	21		52
	7805300020	19605 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	64	Ldn	61	66	1	--	Wall on Retaining Wall	Special	21		50
	3985300330	-	Empty Lot	0	64	--	Yes	No							Wall on Retaining Wall	Special	21		
	7805300030	19705 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	73	Ldn	61	66	--	1	Wall on Retaining Wall	Special	21		55
	7805300040	19715 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	74	Ldn	61	66	--	1	Wall on Retaining Wall	Special	21		56
	7805300050	19723 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	68	Ldn	61	66	--	1	Wall on Retaining Wall	Special	16		57
	7805300060	19731 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	65	Ldn	61	66	1	--	Wall on Retaining Wall	Special	14		57
	3971700710	1000 Ne 198th St	SF Residence on 198th St.	1	64	2	Yes	No	66	Ldn	61	66	--	1	Wall on Retaining Wall	Special	16		60
	3971700707	1006 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	66	Ldn	63	68	1	--	Wall on Retaining Wall	N/A	14		62
	3971700540	-	Empty Lot	0	64	--	Yes	No							Wall on Structure	Special	4		
	7805300180	834 Ne 195th St	SF Residence on 195th St.	1	67	2	Yes	No	64	Ldn	63	68	1	--	Wall on Retaining Wall	Special	21		52
	7805300010	840 Ne 195th St	SF Residence on 195th St.	1	65	2	Yes	No	60	Ldn	61	67	--	--	Wall on Retaining Wall	Special	21		49
	7805300130	1003 NE 196th	SF Residence on 196th St.	1	64	2	No	No	48	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	21		39
M-55: 65.4	7805300140	19604 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	Yes	No	53	Ldn	61	67	--	--	Wall on Retaining Wall	Special	21		42
	7805300150	1020 NE 196th	SF Residence on 196th St.	1	64	2	Yes	No	49	Ldn	61	66	--	--	Wall on Retaining Wall	Special	21		40
	7805300160	1010 Ne 197th St	SF Residence on 197th St.	1	65	2	Yes	No	57	Ldn	61	67	--	--	Wall on Retaining Wall	Special	21		44
	7805300170	19728 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	Yes	No	55	Ldn	61	67	--	--	Wall on Retaining Wall	Special	21		44
	7805300100	1036 Ne 197th St	SF Residence on 197th St.	1	65	2	No	No	42	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	16		34
	7805300070	19741 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	45	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	14		38
	3971700705	1002 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	56	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	12		49
	3971700700	1010 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	68	Ldn	61	67	--	1	Wall on Structure	N/A	6		60
	3971700695	1016 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	65	Ldn	61	67	1	--	Wall on Structure	N/A	4		58
	3971700690	1022 NE 198th	SF Residence on 198th St.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	4		56
	3971700551	-	Empty Lot	0	67	--	No	No								N/A			
																			0
NE 200th Street to SR 104																			0
	3971700560	1103 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	71	Ldn	61	66	--	1	Wall on Structure	N/A	6		58
M-56: 63.1	3971700570	1107 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	4		53
	3971700575	1109 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	4		51
	3971700580	1111 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	6		49
	3971700585	1115 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	6		49
	3971700590	1117 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	6		48
	3971700595	1119 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		45
	3971700597	1201 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	6		45
	3971700600	1207 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	54	Ldn	57	63	--	--	Wall on Structure	N/A	6		44
	3971700230	1102 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	71	Ldn	61	66	--	1	Wall on Structure	N/A	6		58
	3971700225	1104 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	64	Ldn	60	66	1	--	Wall on Structure	N/A	6		52
	3971700220	1114 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	6		50
	3971700215	20005 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	6		49
	3971700525	1206 Ne Ballinger Pl	SF Residence on Ballinger Pl	2	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	6		46
	3971700515	1212 NE Ballinger Pl.	SF Residence on Ballinger Pl	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	6		44
	3985300269	1108 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	71	Ldn	60	66	--	1	Wall on Structure	N/A	6		58

Lynnwood Link Extension FEIS LPA: Segment B

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
621		148	65	RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	3985300265	1110 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	6		58
	3985300267	1112 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	6		51
	3985300266	20015 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	4		50
	3985300209	20014 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	4		48
	3985300208	20018 12th Ave.	SF Residence on 12th Ave.	1	58	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	4		45
	3985300268	20017 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	6		57
	3985300264	20019 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	60	Ldn	57	63	1	--	Wall on Structure	N/A	6		50
	3985300206	20026 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		49
	3985300207	20022 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	6		46
	3985300261	20035 12th Ave Ne	SF Residence on 12th Ave.	1	62	2	No	No	71	Ldn	59	65	--	1	Wall on Structure	N/A	6	1	59
M-57: 58.2	3985300263	20039 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	63	Ldn	57	63	--	1	Wall on Structure	N/A	4		53
	3985300198	20038 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		50
	3985300197	20040 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	56	Ldn	57	63	--	--		N/A			56
	3985300262	20041 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	68	Ldn	57	63	--	1	Wall on Structure	N/A	6	1	57
	3985300195	20044 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		50
	3985300196	20042 12th Ave Ne		1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	4		47
	3985300260	20043 12th Ave Ne	SF Residence on 12th Ave.	1	65	2	No	No	70	Ldn	61	67	--	1	Wall on Structure	N/A	4		59
	3985300244	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	6		
	0308000070	20101 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	6		57
	0308000060	20105 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	4		58
	0308000050	20109 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	4		58
	0308000040	20108 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	0308000030	20104 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	6		50
	0308000020	20102 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	61	Ldn	58	64	1	--	Wall on Structure	N/A	6		50
	0308000010	20100 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	6		48
	0308000015	20041 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		46
	3985300175	20107 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		46
	3985300176	20117 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	58	Ldn	58	64	2	--	Wall on Structure	N/A	4		49
	3985300177	20123 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	57	Ldn	58	64	--	--		N/A			57
	3985300178	20131 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	61	2	No	No	61	Ldn	59	65	2	--	Wall on Structure	N/A	4		51
	3985300147	20149 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	4		58
	3985300146	20145 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	67	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	3985300145	20141 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	67	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	6792000000	20101 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	3971700175	20121 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	59	Ldn	59	65	4	--	Wall on Structure	N/A	4		50
	3971700165	20125 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	3971700156	20129 14th Ave Ne	SF Residence on 14th Ave.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		56
	3985300135	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700158	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700154	20307 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		57
M-31: 61.7	3971700145	20313 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		57
	3971700130	20317 14th Ave Ne	MF Residence on 14th Ave.	4	62	2	No	No	66	Ldn	59	65	--	4	Wall on Structure	N/A	4		57
	3971700125	20327 14th Ave Ne	MF Residence on 14th Ave.	2	63	2	No	No	66	Ldn	60	66	--	2	Wall on Structure	N/A	4		57
	3971700120	20329 14th Ave Ne	MF Residence on 14th Ave.	4	64	2	No	No	66	Ldn	61	66	--	4	Wall on Structure	N/A	4		57
	3971700104	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	4		
	3971700105	20333 14th Ave Ne	MF Residence on 14th Ave.	3	66	2	No	No	66	Ldn	62	68	3	--	Wall on Structure	N/A	4		57
	3971700100	20343 14th Ave Ne	MF Residence on 14th Ave.	3	67	2	No	No	66	Ldn	63	68	3	--	Wall on Structure	N/A	4		57
	3971700020	20333 15th Ave Ne	Largo Vista Apt. Courtyard	31	66	2	No	No	58	Ldn	62	68	--	--		N/A			58
																			0
SR 104 to 236th St																			0
	00520500101201	6015 244th St SW	Motel 6 on 244th near 242nd and Gateway - south bldg.	45	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	00520500101201	6015 244th St SW	Motel 6 - north bldg.	26	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	00520500102000	23908 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00520500102100	23906 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50

Lynnwood Link Extension FEIS LPA: Segment B

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
621

Impacts:	Moderate	Severe
	148	65

Residual Impacts	
RSIP =	9

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00520500102200	23904 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102300	23902 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102400	23900 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102500	23810 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		52
	00520500102600	23808 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102700	23806 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		51
	00520500102800	23804 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102900	23802 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00520900200100	5909 238th St SW	SF Residence on 238th St.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Structure	N/A	4		55
	00520900200200	6001 238th St SW	SF Residence on 238th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00520900200300	5907 238th St SW	SF Residence on 238th St.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00520900200600	6002 237th St SW	SF Residence on 237th St.	1	62	2	No	Yes	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		55
	00520900200700	5908 237th St SW	SF Residence on 237th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00520900200900	5904 237th St SW	SF Residence on 237th St.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00520900201300	5909 237th St SW	SF Residence on 237th St.	1	62	2	No	Yes	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		53
	00520900201400	5907 237th St SW	SF Residence on 237th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00520900201800	5906 236th St SW	SF Residence on 236th St.	1	62	2	No	Yes	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00520900201900	5904 236th St SW	SF Residence on 236th St.	1	62	2	No	Yes	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
																			0
236th Street to 230																			0
	00524100001500	23506 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		54
M-33: 67.525	00524100001400	23504 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		54
	00524100001300	23502 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		53
	00524100001200	23501 59th Pl W	SF Residence on 59th Pl.	1	67	2	No	Yes	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	00524100001100	23503 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	00524100001000	23505 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		52
	00524100000900	23507 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		52
	00524100000800	23509 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	00524800001502	6002 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	8		51
	00524800001400	6004 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	8		62
M-34: 73.15	00524800001300	6005 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	8		62
	00524800001200	6003 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	8	1	67
	00524800001100	6001 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	61	Ldn	66	72	--	--	Wall on Structure	N/A	8		53
	00524800001000	6002 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	59	Ldn	66	72	--	--	Wall on Structure	N/A	8		50
	00524800000900	6004 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	8		60
	00524800000800	6006 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	8	1	67
	00524800000700	6005 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	8		65
	00524800000600	6003 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	8		53
	00524800000500	6001 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	58	Ldn	66	72	--	--	Wall on Structure	N/A	8		48
	00524800000100	6102 232nd St SW	SF Residence on 232nd St.	1	73	2	No	No	71	Ldn	66	72	1	--	Wall on Structure	N/A	8		62
	00524800000200	6006 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	65	Ldn	66	72	--	--	Wall on Structure	N/A	8		55
	00524800000300	6004 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	61	Ldn	66	72	--	--	Wall on Structure	N/A	8		50
	00524800000401	6002 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	58	Ldn	66	72	--	--	Wall on Structure	N/A	8		48
	00522000302300	23112 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	69	Ldn	66	73	1	--	Wall on Structure	N/A	8		59
	00522000302400	23110 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	68	Ldn	66	73	1	--	Wall on Structure	N/A	8		59
	00522000302500	23106 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	68	Ldn	66	73	1	--	Wall on Structure	N/A	8		58
	00522000302700	23102 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	8		58
	00522000302800	23010 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	8		57
	00522000302900	23008 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	60	Ldn	66	73	--	--		N/A	8		60
	00522000600100	6008 230th St SW	SF Residence on 230th St.	1	67	2	No	No	52	Ldn	63	68	--	--		N/A	8		52
	00522000600200	23007 61st Ave W	SF Residence on 61st Ave.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A	8		51
	00522000600300	23009 61st Ave W	SF Residence on 61st Ave.	1	63	2	No	No	50	Ldn	60	66	--	--		N/A	8		50
	00522000600400	23101 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000600500	23105 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000600600	23109 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		48
	00522000600800	6007 232nd St SW	SF Residence on 232nd St.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	8		49
	00522000600900	6003 232nd St SW	SF Residence on 232nd St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	00522000601000	23108 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	00522000601100	23106 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000601200	23100 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000601300	23008 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		47

Lynnwood Link Extension FEIS LPA: Segment B

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
621

Impacts:	Moderate	Severe
	148	65

Residual Impacts	
RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00522000601400	23006 60st Ave W	SF Residence on 60th Ave.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A	8		50
	00522000601600	6004 230th St SW	SF Residence on 230th St.	1	66	2	No	No	51	Ldn	62	68	--	--		N/A	8		51
																			0
230th Street to 220th Street																			0
	00522000500700	6007 230th St SW	SF Residence on 230th St.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	00522000500600	22909 61st Ave W	SF Residence on 61st Ave.	1	64	2	No	No	42	Ldn	61	66	--	--		N/A			42
M-35: 63.95	00522000500500	22905 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	42	Ldn	59	65	--	--		N/A			42
	00522000500400	22901 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	42	Ldn	59	65	--	--		N/A			42
	00522000500300	22809 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00522000500200	22807 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00522000500100	22803 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300900	22707 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300800	22705 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00523000300700	22703 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00523000300600	22701 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300500	22609 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300400	22607 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00523000300300	22605 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00523000300200	22603 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00523000300100	6004 226th St SW	SF Residence on 226th St.	1	61	2	No	No	51	Ldn	59	65	--	--		N/A			51
	00523000201500	6005 226th St SW	SF Residence on 226th St.	1	59	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000200900	6006 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000200600	6003 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000200200	6004 224th St SW	SF Residence on 224th St.	1	60	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000100900	6003 224th St SW	SF Residence on 224th St.	1	61	2	No	No	54	Ldn	59	65	--	--		N/A			54
	00523000100800	22306 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	54	Ldn	59	65	--	--		N/A			54
	00523000100700	22304 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	55	Ldn	59	65	--	--		N/A			55
	00523000100600	22302 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	54	Ldn	59	65	--	--		N/A			54
	00523000100500	22210 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--		N/A			55
	00523000100400	22208 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--		N/A			55
	00523000100300	22206 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	55	Ldn	60	66	--	--		N/A			55
	00523000100200	22204 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	55	Ldn	60	66	--	--		N/A			55
	00523000100100	22202 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	55	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		51
	00524900000500	22111 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	53	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		51
	00524900000400	22109 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	53	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		51
	00524900000300	22107 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00524900000200	22105 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00524900000100	22103 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00523300002800	5904 221st St SW	SF Residence on 221st St.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00523300001700	5905 221st St SW	SF Residence on 221st St.	1	67	2	No	No	59	Ldn	63	68	--	--	Wall on Structure	N/A	4		50
	00523300001800	5903 221st St SW	SF Residence on 221st St.	1	67	2	No	No	58	Ldn	63	68	--	--	Wall on Structure	N/A	4		49
	00523300001900	5809 221st St SW	SF Residence on 221st St.	1	66	2	No	No	57	Ldn	62	68	--	--		N/A			57
																			0
220th Street to 212th Street																			0
	00523300001000	5902 219th St SW	SF Residence on 219th St.	1	73	2	No	No	59	Ldn	66	72	--	--	Wall on Structure	N/A	4		49
M-36: 63.325	00523300000700	5905 219th St SW	SF Residence on 219th St.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	4		51
	00523300000600	5901 219th St SW		1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00441000000500	5810 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	4		51
	00441000000400	5808 218th Pl SW		1	59	2	No	No	61	Ldn	58	64	1	--	Wall on Structure	N/A	4		52
	00441000000600	5811 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	4		51
	00441000000701	5809 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	No	61	Ldn	58	64	1	--	Wall on Structure	N/A	4		51
	00619900005502	21726 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	60	Ldn	61	67	--	--		N/A			60
	00619900005503	21712 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		52
	00619900005300	-	Empty Lot	0	67	--	No	No							Wall on Structure	N/A	4		
	00619900005101	21620 58th Ave W	SF Residence on 58th Ave.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	00619900005103	21616 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
	00619900004900	21530 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
	00619900004700	21528 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
M-37: 65.35	00766700000700	5709 215th Pl SW	SF Residence on 215th Pl.	1	65	2	No	No	56	Ldn	61	67	--	--		N/A			56
	00619900001601	21501 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	56	Ldn	61	67	--	--		N/A			56
	00619900001701	-	Empty Lot	0	65	--	No	No								N/A			

Lynnwood Link Extension FEIS LPA: Segment B

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
621

Impacts:	Moderate	Severe
	148	65

Residual Impacts	
RSIP =	9

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00619900001702	21404 56th Ave W	SF Residence on 56th Ave.	1	66	2	No	No	56	Ldn	62	68	--	--		N/A			56
	00474800001400	5506 214th Pl SW	SF Residence on 214th Pl.	1	68	2	No	No	55	Ldn	63	69	--	--		N/A			55
	00474800001800	5503 214th Pl SW	SF Residence on 214th Pl.	1	70	2	No	No	50	Ldn	65	70	--	--		N/A			50
	00474800001900	5505 214th Pl SW	SF Residence on 214th Pl.	1	72	2	No	No	50	Ldn	66	72	--	--		N/A			50
	27042800202000	5509 214th Pl SW	SF Residence on 214th Pl.	2	74	2	No	No	56	Ldn	66	73	--	--		N/A			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. D Grnd. Floor	2	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. D 1st Floor	2	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. C Grnd. Floor	2	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
M-38: 75.1	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. C 1st Floor	2	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. B Grnd. Floor	4	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. B 1st Floor	4	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. A Grnd. Floor	4	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. A 1st Floor	4	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	27042800201600	5302 212th St SW	Duplex on 212th St.	2	74	2	No	No	63	Ldn	66	73	--	--		N/A			63
	27042800200600	5228 212th St SW	SF Residence on 212th St.	1	73	2	No	No	62	Ldn	66	72	--	--		N/A			62
	27042800200700	5222 212th St SW	Triplex on 212th St.	3	72	2	No	No	62	Ldn	66	72	--	--		N/A			62
																			0
West Side of I-5																			0
SR 104 to 232nd Street																			0
	27043200400200	6601 244th St SW	Nile Shrine Golf Course between SR104 &236th	1	68	3	No	No								N/A			
	00524700001500	6300 234th St SW	SF Residence on 234th St.	1	72	2	No	No	58	Ldn	66	72	--	--		N/A			58
	00524700003400	6301 234th St SW	SF Residence on 234th St.	1	69	2	No	No	58	Ldn	64	70	--	--		N/A			58
	00524700003300	23310 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	61	Ldn	64	70	--	--		N/A			61
	00524700003200	23308 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	61	Ldn	64	70	--	--		N/A			61
	00524700003100	23306 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	61	Ldn	64	70	--	--		N/A			61
	00524700003000	23304 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	4		54
	00524700002900	23302 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		54
	00524700002800	23300 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	00524700002700	23212 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	4		57
	00524700000500	23209 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	66	Ldn	66	75	1	--	Wall on Structure	N/A	4		56
	00524700000400	23207 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	68	Ldn	66	75	1	--	Wall on Structure	N/A	4		58
	00524700000300	23205 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	4		59
	00524700000200	23203 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	4		58
	00524700000100	23201 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	62	Ldn	66	73	--	--	Wall on Structure	N/A	4		53
	27043200100100	23117 63rd Ave W	SF Residence on 63rd Ave.	1	77	2	No	No	69	Ldn	66	75	1	--	Wall on Structure	N/A	4		59
																			0
232nd Street to 228th Street																			0
	00522300305300	23115 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	70	Ldn	66	75	1	--	Wall on Structure	N/A	8		58
	00522300305400	23113 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	71	Ldn	66	75	1	--	Wall on Structure	N/A	8		62
	00522300305500	23111 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	8		52
	00522300306400	23014 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	72	Ldn	66	75	1	--	Wall on Structure	N/A	8	1	69
	00522300306500	23015 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	67	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	8		65
	00522300306600	23013 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	66	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	8		64
	00522300306700	23011 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	66	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	8		64
	00522300306800	23009 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	61	Ldn	66	75	--	--		N/A	8		61
	00522300306900	23007 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	61	Ldn	66	75	--	--		N/A	8		61
M-39: 76.45	00522300307000	23005 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	60	Ldn	66	75	--	--		N/A			60
	00522300307100	23003 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	60	Ldn	66	75	--	--		N/A			60
	00522300307200	23001 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	59	Ldn	66	75	--	--		N/A			59
	00522300307201	22909 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	59	Ldn	66	75	--	--		N/A			59
	00522400007301	22905 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	59	Ldn	66	75	--	--		N/A			59
	00522400007300	22903 63rd Ave W	SF Residence on 63rd Ave.	1	75	2	No	No	57	Ldn	66	74	--	--		N/A			57
	00522400007400	22901 63rd Ave W	SF Residence on 63rd Ave.	1	72	2	No	No	56	Ldn	66	72	--	--		N/A			56
	00522300103300	23112 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--		N/A	8		59

Lynnwood Link Extension FEIS LPA: Segment B

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
621		148	65	RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00522300305600	23109 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A	8		62
	00522300306300	23012 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A	8		62
	00522300306200	23010 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	55	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		52
	00522300306100	23008 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	55	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		52
	00522300305700	23107 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	8		49
	00522300305800	23105 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	8		48
	00522300305900	23103 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	8		48
	00522300306000	23101 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	52	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		48
	00522300204600	23002 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		47
	00522300204700	6302 230th St SW	SF Residence on 230th St.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	00522300204500	23004 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	00522300204800	6304 230th St SW	SF Residence on 230th St.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00522400007800	6301 230th St SW	SF Residence on 230th St.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	00522400007700	22906 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	00522400007600	22904 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	00522400007500	22902 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	00522400007900	6303 230th St SW	SF Residence on 230th St.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00522400009200	22807 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00522400009100	22805 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00522400009000	22803 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00522400008900	22801 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
																			0
228th Street to 220th Street																			0
	00524000000500	6101 227th St SW	SF Residence on 227th St.	1	69	2	No	No	62	Ldn	64	70	--	--		N/A			62
M-40: 68.5	00524000000600	6103 227th St SW	SF Residence on 227th St.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	00524000000700	6201 227th St SW	SF Residence on 227th St.	1	68	2	No	No	52	Ldn	63	69	--	--		N/A			52
	00524000000800	6203 227th St SW	SF Residence on 227th St.	1	68	2	No	No	44	Ldn	63	69	--	--		N/A			44
	00524000003501	22611 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00524000003601	22605 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00524000003801	22603 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00524000004000	22601 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	00524000004100	22505 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00524000004200	22503 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	55	Ldn	61	67	--	--		N/A			55
	00524000004300	22501 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	55	Ldn	61	67	--	--		N/A			55
	00524000004400	22407 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	57	Ldn	61	67	--	--		N/A			57
	00524000004500	22405 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--		N/A			59
	00524000004600	22403 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	57	Ldn	61	67	--	--		N/A			57
	00524000004700	22309 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	57	Ldn	61	67	--	--		N/A			57
	00524000004800	22307 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--		N/A			59
	00524000004900	22305 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--		N/A			59
	00524000005000	-	Empty Lot	0	71	--	No	No								N/A			
	00524000005100	22209 63rd Ave W	SF Residence on 63rd Ave.	1	70	2	No	No	56	Ldn	65	70	--	--		N/A			56
	00524000005400	22207 62nd Ave W	SF Residence on 62nd Ave.	1	70	2	No	No	55	Ldn	65	70	--	--		N/A			55
	00524000005500	22205 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Retaining Wall	N/A	4		58
	00524000005600	22203 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Retaining Wall	N/A	4		57
	00524000005700	22201 62nd Ave W	SF Residence on 62nd Ave.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	4		56
M-41: 66.9 LEQ	00378200300600	6205 222nd St SW	Empt Lot	0	68	3	No	No							Wall on Retaining Wall	N/A	4		
	00524000003400	22610 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	39	Ldn	61	66	--	--		N/A			39
	00524000003300	22608 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	38	Ldn	61	66	--	--		N/A			38
	00524000003200	22606 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	38	Ldn	61	66	--	--		N/A			38
	00524000003100	22604 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	38	Ldn	61	66	--	--		N/A			38
	00524000003000	6202 226th St SW	SF Residence on 226th St.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00524000006700	22504 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	42	Ldn	61	66	--	--		N/A			42
	00524000006800	22502 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00524000007300	22406 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	44	Ldn	61	66	--	--		N/A			44
	00524000007400	6202 224th St SW	SF Residence on 224th St.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00524000008400	6201 224th St SW	SF Residence on 224th St.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00524000008500	22302 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45
	00524000008600	6202 223rd Pl SW	SF Residence on 223rd Pl.	1	64	2	No	No	47	Ldn	61	66	--	--		N/A			47
	00524000009200	22206 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	54	Ldn	61	66	--	--		N/A			54

Lynnwood Link Extension FEIS LPA: Segment B

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
621

Impacts:	Moderate	Severe
	148	65

Residual Impacts	
RSIP =	9

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524000009301	22204 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	00524000009401	22202 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00524000009500	6202 222nd St SW	SF Residence on 222nd St.	1	64	2	No	No	51	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		47
	00524000002600	22605 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	35	Ldn	59	65	--	--		N/A			35
	00524000002700	22603 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	35	Ldn	59	65	--	--		N/A			35
	00524000002800	22601 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	34	Ldn	59	65	--	--		N/A			34
	00524000002900	6204 226th St SW	SF Residence on 226th St.	1	62	2	No	No	34	Ldn	59	65	--	--		N/A			34
	00524000006600	6201 226th St SW	SF Residence on 226th St.	1	62	2	No	No	40	Ldn	59	65	--	--		N/A			40
	00524000006900	6202 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	40	Ldn	59	65	--	--		N/A			40
	00524000007200	6201 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	40	Ldn	59	65	--	--		N/A			40
	00524000007500	6204 224th St SW	SF Residence on 224th St.	1	62	2	No	No	39	Ldn	59	65	--	--		N/A			39
	00524000008700	6204 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	No	40	Ldn	59	65	--	--		N/A			40
	00524000009100	6201 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	No	41	Ldn	59	65	--	--		N/A			41
	00524000009302	6208 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	No	38	Ldn	57	63	--	--		N/A			38
	00524000009402	6207 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	No	39	Ldn	57	63	--	--		N/A			39
M-42: 57.4	00524000009700	6206 222nd St S	SF Residence on 222nd St.	2	57	2	No	No	40	Ldn	57	63	--	--	Wall on Retaining Wall	N/A	4		36
	00524000009600	6204 222nd St SW	SF Residence on 222nd St.	1	66	2	No	No	41	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		37
	00378200300503	6303 222nd St SW	SF Residence on 222nd St.	1	56	2	No	No	39	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		35
	00378200300501	6305 222nd St SW	SF Residence on 222nd St.	1	56	2	No	No	38	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		34
	00378200300502	6307 222nd St SW	SF Residence on 222nd St.	1	56	2	No	No	36	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		32
	00378200300504	22103 64th Ave W	SF Residence on 64th Ave.	1	56	2	No	No	34	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		30
M-43: 55.9	00525400001300	6302 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	39	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		35
	00525400001400	6304 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	61	Ldn	56	63	1	--	Wall on Structure	N/A	4		51
	00525400001500	6306 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	57	Ldn	56	63	1	--	Wall on Structure	N/A	4		47
	00525400001200	6303 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	61	Ldn	56	63	1	--	Wall on Structure	N/A	4		51
	00525400001100	6305 221st Pl SW	SF Residence on 221st PL.	1	58	2	No	No	61	Ldn	57	63	1	--	Wall on Structure	N/A	4		51
	00525400001000	6307 221st Pl SW		1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		49
	00525400000900	22007 64th Ave.		1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	4		47
	00525400000800	22005 64th Ave.		1	58	2	No	No	56	Ldn	57	63	--	--		N/A			56
	00525400000700	6306 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	No	58	Ldn	59	65	--	--		N/A			58
	00525400000600	6304 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00525400000500	6302 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00525400000400	6303 220th Pl SW	SF Residence on 220th PL.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00525400000300	6305 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	00525400000200	6307 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	No	56	Ldn	62	68	--	--		N/A			56
	00525400000100	22001 64th Ave.	SF Residence on 220th PL.	1	66	2	No	No	54	Ldn	62	68	--	--		N/A			54
																			0
220th Street to 212th Street																			0
M-44: 68.9	27042900100800	6002 St Albion Way-Bldg. E grnd. Floor	Lakeside Apt. Complex near City Hall	7	69	2	No	No	71	Ldn	64	70	--	7	Wall on Structure	N/A	4		60
	27042900100800	6002 St Albion Way-Bldg. E 2nd Floor	Lakeside Apt. Complex near City Hall	7	69	2	No	No	71	Ldn	64	70	--	7	Wall on Structure	N/A	4		60
	27042900100800	6002 St Albion Way-Bldg. E 3rd Floor	Lakeside Apt. Complex near City Hall	2	69	2	No	No	71	Ldn	64	70	--	2	Wall on Structure	N/A	4		61
	27042900100800	21604 St Albion Way-Bldg. G grnd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	65	Ldn	64	70	8	--	Wall on Structure	N/A	4		54
	27042900100800	21604 St Albion Way-Bldg. G 2nd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	65	Ldn	64	70	8	--	Wall on Structure	N/A	4		55
	27042900100800	21604 St Albion Way-Bldg. g 3rd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	65	Ldn	64	70	8	--	Wall on Structure	N/A	4		56
	27042900100800	6001 St Albion Way-Bldg. F grnd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	59	Ldn	64	70	--	--	Wall on Structure	N/A	4		49
	27042900100800	6001 St Albion Way-Bldg. F 2nd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	59	Ldn	64	70	--	--	Wall on Structure	N/A	4		50
	27042900100800	6001 St Albion Way-Bldg. F 3rd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	60	Ldn	64	70	--	--	Wall on Structure	N/A	4		50
																			0
																			0
	00619900005000	-	Empty Lot	0	72	--	No	No							Wall on Structure	N/A	4		
	00619900004800	-	Empty Lot	0	72	--	No	No							Wall on Structure	N/A	4		
	00525100002500	21503 60th Ave W	SF Residence on 60th Ave.	1	72	2	No	No	76	Ldn	66	72	--	1	Wall on Structure	N/A	4		63
	00525100001100	5912 214th St SW	SF Residence on 214th St.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	4		53
	00525100001000	5910 214th St SW	SF Residence on 214th St.	1	67	2	No	No	65	Ldn	63	68	1	--	Wall on Structure	N/A	4		55

Lynnwood Link Extension FEIS LPA: Segment B

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
621

Impacts:	Moderate	Severe
	148	65

Residual Impacts	
RSIP =	9

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00525100000900	5908 214th St SW	SF Residence on 214th St.	1	69	2	No	No	67	Ldn	64	70	1	--	Wall on Structure	N/A	4		57
	00525100000800	5906 214th St SW	SF Residence on 214th St.	1	72	2	No	No	77	Ldn	66	72	--	1	Wall on Structure	N/A	6		63
	00525100000700	5904 214th St SW	SF Residence on 214th St.	1	67	2	No	No	77	Ldn	63	68	--	1	Wall on Structure	N/A	8	1	63
	00525100000600	5902 214th St SW	SF Residence on 214th St.	1	67	2	No	No	74	Ldn	63	68	--	1	Wall on Retaining Wall	N/A	8		62
	00525100000500	5810 214th St SW	SF Residence on 214th St.	1	67	2	No	No	65	Ldn	63	68	1	--	Wall At-Grade	N/A	4		53
	00525100000400	-	Empty Lot	0	67	--	No	No							Wall At-Grade	N/A	4		
	00525100000300	5806 214th St SW	SF Residence on 214th St.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall At-Grade	N/A	4		54
	00525100000200	5804 214th St SW	SF Residence on 214th St.	1	67	2	Yes	No	64	Ldn	63	68	1	--	Wall At-Grade	Special	4		55
	00525100000100	5802 214th St SW	SF Residence on 214th St.	1	67	2	Yes	No	64	Ldn	63	68	1	--	Wall At-Grade	Special	4		55
	00525100001200	5909 214th St SW	SF Residence on 214th St.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	00525100001300	5907 214th St SW	SF Residence on 214th St.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	4		53
	00525100001400	5905 214th St SW	SF Residence on 214th St.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	8		52
	00525100001500	5903 214th St SW	SF Residence on 214th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	4		55
	00525100001602	5901 214th St SW	SF Residence on 214th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	4		55
	00525100002200	21307 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall At-Grade	N/A	4		55
	00525100002300	5803 214th St SW	SF Residence on 214th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall At-Grade	N/A	4		55
	00525100002400	5801 214th St SW	SF Residence on 214th St.	1	63	2	Yes	No	61	Ldn	60	66	1	--	Wall At-Grade	Special	4		55
	00920100000100	21331 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	55	Ldn	61	66	--	--		N/A			55
	00525100001700	21304 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	56	Ldn	59	65	--	--		N/A			56
	00525100001800	21302 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00525100001900	21301 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00525100002000	21303 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00525100002100	21305 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	56	Ldn	59	65	--	--		N/A			56
	00619900004103	21318 58th Ave W	SF Residence on 58th Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall At-Grade	N/A	4		53
	00619900004102	21316 58th Ave W	SF Residence on 58th Ave.	1	61	2	Yes	No	59	Ldn	59	65	1	--	Wall At-Grade	Special	4		54
	00619900004101	21312 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	55	Ldn	59	65	--	--		N/A			55
	00619900003904	21232 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	52	Ldn	59	65	--	--	Wall At-Grade	N/A	10		46
	00619900004104	21314 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	53	Ldn	59	65	--	--	Wall At-Grade	N/A	10		46
	00619900003804	5908 212th Pl SW	SF Residence on 212th Pl.	1	62	2	No	No	50	Ldn	59	65	--	--	Wall At-Grade	N/A	10		44
	00404100000400	21317 58th Ave W	SF Residence on 58th Ave.	1	67	2	No	No	74	Ldn	63	68	--	1	Wall At-Grade	N/A	10		62
	00404100000300	5720 213th St SW	SF Residence on 213th St.	1	64	2	Yes	No	66	Ldn	61	66	--	1	Wall At-Grade	Special	10		53
	00404100000200	5710 213th St SW	SF Residence on 213th St.	1	67	2	Yes	No	80	Ldn	63	68	--	1	Wall At-Grade	Special	10		61
M-45: 66.95	00404100000100	5632 213th St SW	SF Residence on 213th St.	1	67	2	Yes	No	84	Ldn	63	68	--	1	Wall At-Grade	Special	10	1	64
	00619900002602	21229 58th Ave W	Duplex on 58th Ave.	2	60	2	No	No	55	Ldn	58	64	--	--	Wall At-Grade	N/A	10		49
	00619900002501	5723 213th St SW	SF Residence on 213th St.	1	60	2	Yes	No	59	Ldn	58	64	1	--	Wall At-Grade	Special	10		50
	00619900002502	5721 213th St SW	SF Residence on 213th St.	1	60	2	Yes	No	55	Ldn	58	64	--	--	Wall At-Grade	Special	10		48
	00619900002503	5719 213th St SW	SF Residence on 213th St.	1	60	2	No	No	53	Ldn	58	64	--	--	Wall At-Grade	N/A	10		46
	00619900002504	5717 213th St SW	SF Residence on 213th St.	1	60	2	No	No	50	Ldn	58	64	--	--	Wall At-Grade	N/A	10		44
	00619900002402	5711 213th St SW	SF Residence on 213th St.	1	61	2	Yes	No	62	Ldn	59	65	1	--	Wall At-Grade	Special	10		52
	00619900002403	5709 213th St SW	SF Residence on 213th St.	1	61	2	Yes	No	58	Ldn	59	65	--	--	Wall At-Grade	Special	10		49
	00619900002404	5707 213th St SW	SF Residence on 213th St.	1	62	2	Yes	No	55	Ldn	59	65	--	--	Wall At-Grade	Special	10		47
	00619900002303	5627 213th St SW	Duplex on 213th St.	2	61	2	Yes	No	65	Ldn	59	65	--	2	Wall At-Grade	Special	10		53
	00619900002301	5623 213th St SW	SF Residence on 213th St.	1	61	2	Yes	No	61	Ldn	59	65	1	--	Wall At-Grade	Special	10		51
	00619900003000	5700 212th St SW	SF Residence on 213th St.	1	61	2	No	No	55	Ldn	59	65	--	--	Wall At-Grade	N/A	10		48
	00619900002900	5616 212th St SW	SF Residence on 213th St.	1	61	2	No	No	52	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	10		43
	00619900002201	5619 213th St SW	SF Residence on 213th St.	1	61	2	Yes	No	58	Ldn	59	65	--	--	Wall on Retaining Wall	Special	10		48
	00619900002202	5625 213th St SW	SF Residence on 213th St.	1	63	2	Yes	No	75	Ldn	60	66	--	1	Wall At-Grade	Special	10	1	61
	00619900002101	5615 213th St SW	SF Residence on 213th St.	1	63	2	Yes	No	76	Ldn	60	66	--	1	Wall At-Grade	Special	10	1	61
	00619900002000	5604 212th St SW	SF Residence on 212th St.	1	72	2	Yes	No	73	Ldn	66	72	--	1	Wall At-Grade	Special	10		60
	27042800202400	None Given	SF Residence on 212th St.	1	72	2	No	No							Wall At-Grade	N/A	10		
	27042800202200	5522 212th St SW	SF Residence on 212th St.	1	72	2	No	No							Wall on Retaining Wall	N/A	10		
	27042800202100	-	Empty Lot	0	72	--	No	No							Wall on Retaining Wall	N/A	10		
	00619900002102	5610 212th St SW	SF Residence on 212th St.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	10		47
	00619900002700	5602 212th St SW	SF Residence on 212th St.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall At-Grade	N/A	10		53
	27042800202300	None Given	old number 00619900002300	1	71	2	No	No							Wall At-Grade	N/A	10		
	27042100306900	5615 212th St SW	SF Residence on 212th St.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall At-Grade	N/A	10		47
	27042100308400	-	Empty Lot	0	71	--	No	No							Wall At-Grade	N/A	10		
	27042100307700	5605 212th St SW	SF Residence on 212th St.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	10		49
	27042100310500	5525 212th St SW	SF Residence on 212th St.	1	65	2	No	No	65	Ldn	61	67	1	--	Wall on Retaining Wall	N/A	10		55
M-46: 68.35	27042100305400	20908 54th Ave W #1	Zoned Campground on 54th Ave./212th St.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	10		53

Lynnwood Link Extension FEIS LPA: Segment C

Stations: Lynwood Station at 200th

Total Units Analyzed
109

Impacts:	Moderate	Severe
	26	8

Residual Impacts	
RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	**Parcel**	**Address**	**Description**	**Units**	**Ldn/Leq**	**FTA-CAT**	**X-Over**	**Bell**	**Ldn/Leq**	**Type**	**Mod Imp**	**Sev Imp**	**Mod Imp**	**Sev Imp**	**Sound Wall Type**	**X-Over**	**Height**	**Insulation**	**Ldn w/Mit**
I-5 to 52nd Ave and 208th St																			
Begin C3	00462601501000	21031 54th Ave W	SF Residence on 54th Ave.	1	72	2	No	No	75	Ldn	66	72	--	1	Wall on Structure	N/A	4		63
	00462601500700	21031 54th Ave W	SF Residence on 54th Ave.	0	72	2	No	No	75	Ldn	66	72	--	0	Wall on Structure	N/A	4		63
	00462601500600	21019 54th Ave W	SF Residence on 54th Ave.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		62
	00462601500300	21011 54th Ave W	SF Residence on 54th Ave.	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	4		56
	00462601500200	21007 54th Ave W	SF Residence on 54th Ave.	1	67	2	No	No	65	Ldn	63	68	1	--	Wall on Structure	N/A	4		55
	00462400401000	20927 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	63	Ldn	62	68	1	--	Wall on Structure	N/A	4		53
	00462400400701	20921 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	4		53
	00462400400600	20919 54th Ave W	SF Residence on 54th Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	4		52
	00462400400300	20913 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00462400400200	20903 54th Ave W	SF Residence on 54th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--		N/A			59
	00462400500900	20829 54th Ave W	SF Residence on 54th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462400500600	20825 54th Ave W	SF Residence on 54th Ave.	1	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462400500500	20819 54th Ave W	SF Residence on 54th Ave.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00462400500200	20811 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462500500301	20804 53rd Ave W	SF Residence on 53rd Ave.	1	58	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	4		46
	00462500500302	20826 53rd Ave W	SF Residence on 53rd Ave.	1	58	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	4		46
	00462500500701	20828 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	57	Ldn	58	64	--	--		N/A			57
	00462500500702	20830 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462400400100	20902 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--		N/A			58
	00462400400400	20908 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00462400400500	20914 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	00462400400800	20922 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	00666500000100	20926 53rd Ave W	SF Residence on 53rd Ave.	1	69	2	No	No	63	Ldn	64	70	--	--		N/A			63
	00666500000200	20928 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	4		62
	00666500000300	20932 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	4		62
M-47: 72.35	00666500000400	20929 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	4		62
	00666500000500	20925 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	4		62
	00462601300700	20923 53rd Ave W	SF Residence on 53rd Ave.	1	71	2	No	No	66	Ldn	66	71	1	--	Wall on Structure	N/A	4		56
	00462601300600	20915 53rd Ave W	SF Residence on 53rd Ave.	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	6		54
	00462601300300	20911 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	6		53
	00462601300200	20901 53rd Ave W	SF Residence on 53rd Ave.	1	67	2	No	No	62	Ldn	63	68	--	--		N/A	6		62
	00462601201000	20829 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	6		51
	00462601200700	20825 53rd Ave W	SF Residence on 53rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--		N/A	6		60
	00462601200600	20819 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	6		47
	00462601200300	20813 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	4		48
	00462601200200	20807 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462601200100	20806 52nd Ave W	SF Residence on 52nd Ave.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462601200400	20812 52nd Ave W	SF Residence on 52nd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462601200500	20818 52nd Ave W	SF Residence on 52nd Ave.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall on Structure	N/A	6		51
	00462601200800	20830 52nd Ave W	(World Harvester) Church on 52nd Ave.	1	65	3	No	No	62	Leq	66	72	--	--	Wall on Structure	N/A	6		51
	00462601300100	0	Part of Church	2nd	68	3	No	No	62	Leq	68	74	--	--	Wall on Structure	N/A	6		52
	00462601300400	20918 52nd Ave W	Apartment Building on 52nd Ave.	2	69	2	No	No	67	Ldn	64	70	2	--	Wall on Structure	N/A	6		57
	00462601300800	20924 52nd Ave W	SF Residence on 52nd Ave.	1	70	2	No	No	75	Ldn	65	70	--	1	Wall on Structure	N/A	6		63
	27042100403800	20909 52nd Ave W	SF Residence on 52nd Ave.	1	72	2	No	No	75	Ldn	66	72	--	1	Wall on Structure	N/A	6		63
208th Street to 206th Street																			
	00462500700000	5211 208th St SW	SF Residence on 208th St.	1	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	27042100403700	0	Interurban Trail	1	61	3	No	No							Wall on Structure	N/A	4		
M-48: 63.5	00462500800000	20706 52nd Ave W	SF Residence on 52nd Ave.	1	61	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		46
Approach to the Lynnwood Transit Center																			
	00608400300101	20015 Cedar Valley Rd	Scriber Creek Park	1	53	3	No	No							Wall on Structure	N/A	4		
M-50: 62.3	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C grnd	6	62	2	No	No	62	Ldn	59	65	6	--	Wall on Structure	N/A	4		53
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C 1st Floor	6	62	2	No	No	62	Ldn	59	65	6	--	Wall on Structure	N/A	4		54
M-53: 70.3	00372600702108	4220 200th St SW	Marriott Courtyard Hotel	1	70	2	No	No	55	Ldn	65	70	--	--	Wall on Structure	N/A	4		46
	00372600702106	4220 Alderwood Mall Blvd	La Quinta Motel	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		49

Lynnwood Link Extension FEIS LPA: Segment C

Stations: Lynwood Station at 200th

Total Units Analyzed
109

Impacts:	Moderate	Severe
	26	8

Residual Impacts	
RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
Eastside of I-5																			
212th Street to 49th Avenue																			
	27042100400700	5123 212th St	SF Residence on 212th St.	1	72	2	No	No	63	Ldn	66	72	--	--		N/A			63
	27042100401000	5113 212th St	SF Residence on 212th St.	1	72	2	No	No	63	Ldn	66	72	--	--		N/A			63
	27042100400900	5107 212th St	SF Residence on 212th St.	1	71	2	No	No	57	Ldn	66	71	--	--		N/A			57
	00453500001100	5031 212th St	SF Residence on 212th St.	1	68	2	No	No	55	Ldn	63	69	--	--		N/A			55
	00453500001000	5035 212th St	SF Residence on 212th St.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00453500000100	5005 212th St	SF Residence on 212th St.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00453500000200	21115 50th Pl	SF Residence on 50th Pl.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00453500000300	21105 50th Pl	SF Residence on 50th Pl.	1	66	2	No	No	55	Ldn	62	68	--	--		N/A			55
	00453500000400	21029 50th Pl	SF Residence on 50th Pl.	1	67	2	No	No	57	Ldn	63	68	--	--		N/A			57
	00453500000500	21019 50th Pl	SF Residence on 50th Pl.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	00453500000600	5019 211th St	SF Residence on 211th St.	1	75	2	No	No	64	Ldn	66	74	--	--		N/A			64
	00453500000700	5025 211th St	SF Residence on 211th St.	1	71	2	No	No	62	Ldn	66	71	--	--		N/A			62
	27042100401200	5101 211th St	SF Residence on 211th St.	1	73	2	No	No	64	Ldn	66	72	--	--		N/A			64
	27042100405500	5121 211th St	SF Residence on 211th St.	1	75	2	No	No	64	Ldn	66	74	--	--		N/A			64
	27042100405400	5131 211th St	SF Residence on 211th St.	1	74	2	No	No	64	Ldn	66	73	--	--		N/A			64
	27042100402800	5126 211th St	SF Residence on 211th St.	1	73	2	No	No	62	Ldn	66	72	--	--		N/A			62
	27042100401100	5106 211th St	SF Residence on 211th St.	1	72	2	No	No	56	Ldn	66	72	--	--		N/A			56
	00453500001202	5030 211th St	SF Residence on 211th St.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00453500000800	21124 50th Pl	SF Residence on 50th Pl.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00453500000900	21128 50th Pl	SF Residence on 50th Pl.	1	66	2	No	No	53	Ldn	62	68	--	--		N/A			53
	27042100401300	21002 49th Ave.	SF Residence on 49th Ave.	1	71	2	No	No	62	Ldn	66	71	--	--		N/A			62
	27042100401900	20932 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	63	Ldn	66	74	--	--		N/A			63
	27042100403300	20910 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	63	Ldn	66	74	--	--		N/A			63
	00516600000702	20924 49th Ave.	SF Residence on 49th Ave.	1	74	2	No	No	63	Ldn	66	73	--	--		N/A			63
	00516600000600	20930 49th Ave.	SF Residence on 49th Ave.	1	73	2	No	No	57	Ldn	66	72	--	--		N/A			57
	00516600000500	21004 49th Ave.	SF Residence on 49th Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	00516600000400	21010 49th Ave.	SF Residence on 49th Ave.	1	70	2	No	No	55	Ldn	65	70	--	--		N/A			55
	00516600000300	21016 49th Ave.	SF Residence on 49th Ave.	1	69	2	No	No	55	Ldn	64	70	--	--		N/A			55
	00516600000200	21022 49th Ave.	SF Residence on 49th Ave.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00516600000100	21028 49th Ave.	SF Residence on 49th Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	27042100401600	21106 49th Ave.	SF Residence on 49th Ave.	1	63	2	No	No	51	Ldn	60	66	--	--		N/A			51
	27042100401800	21120 49th Ave.	SF Residence on 49th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--		N/A			49
	27042100401400	21128 49th Ave.	SF Residence on 49th Ave.	1	63	2	No	No	48	Ldn	60	66	--	--		N/A			48
	27042100401700	21132 49th Ave.	SF Residence on 49th Ave.	1	63	2	No	No	48	Ldn	60	66	--	--		N/A			48
49th Avenue to 48th Avenue																			
	00516600001100	20931 49th Ave.	SF Residence on 49th Ave.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00516600001000	20929 49th Ave.	SF Residence on 49th Ave.	1	71	2	No	No	58	Ldn	66	71	--	--		N/A			58
	00516600000900	20923 49th Ave.	SF Residence on 49th Ave.	1	73	2	No	No	58	Ldn	66	72	--	--		N/A			58
	27042100403000	20839 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	64	Ldn	66	74	--	--		N/A			64
	27042100402900	20823 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	64	Ldn	66	74	--	--		N/A			64
	27042100403100	20821 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	64	Ldn	66	74	--	--		N/A			64
	27042100402000	20801 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	63	Ldn	66	74	--	--		N/A			63
	27042100402400	20818 48th Ave.	SF Residence on 48th Ave.	1	75	2	No	No	62	Ldn	66	74	--	--		N/A			62
	27042100402100	20828 48th Ave.	SF Residence on 48th Ave.	1	73	2	No	No	57	Ldn	66	72	--	--		N/A			57
	27042100402300	20832 48th Ave.	SF Residence on 48th Ave.	1	70	2	No	No	56	Ldn	65	70	--	--		N/A			56
	27042100408100	20908 48th Ave.	SF Residence on 48th Ave.	1	68	2	No	No	54	Ldn	63	69	--	--		N/A			54
	27042100408200	20916 48th Ave.	SF Residence on 48th Ave.	1	68	2	No	No	56	Ldn	63	69	--	--		N/A			56
	27042100403200	20827 49th Ave.	SF Residence on 49th Ave.	1	70	2	No	No	58	Ldn	65	70	--	--		N/A			58
	01000000003800	4829 211th St	SF Residence on 211th St.	1	70	2	No	No	56	Ldn	65	70	--	--		N/A			56

Lynnwood Link Extension FEIS LPA: Segment B with 220th Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	
621	

Impacts:	Moderate	Severe
	140	65

Residual Impacts	
RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
East Side of I-5																			
NE 189th Street to NE 200th Street																			
Begin B1 M30B-65	526049034	None	Athletic Field Zoned Residential??	1	65	3	No	No								N/A			
	526049017	-	Empty Lot	0	65	--	No	No							Wall on Retaining Wall	N/A	21		
	5490700080	805 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	21		49
	5490700075	814 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	21		50
	5490700070	812 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	21		48
	5490700005	-	Empty Lot	0	64	--	No	No							Wall on Retaining Wall	N/A	21		
	5490700010	815 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	58	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		47
	5490700015	821 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	48	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		38
	5490700020	827 Ne 195th St	SF Residence on 195th St.	1	65	2	No	No	44	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	21		34
	5490700065	818 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	48	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		38
	5490700060	824 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	44	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		34
	5490700085	817 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	54	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		44
	5490700090	823 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	46	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		36
	5490700095	831 Ne 194th St	SF Residence on 194th St.	1	65	2	No	No	42	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	21		33
	3985300331	822 Ne 195th St	SF Residence on 195th St.	1	64	2	Yes	No	65	Ldn	61	66	1	--	Wall on Retaining Wall	Special	21		52
	7805300020	19605 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	64	Ldn	61	66	1	--	Wall on Retaining Wall	Special	21		50
	3985300330	-	Empty Lot	0	64	--	Yes	No							Wall on Retaining Wall	Special	21		
	7805300030	19705 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	73	Ldn	61	66	--	1	Wall on Retaining Wall	Special	21		55
	7805300040	19715 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	74	Ldn	61	66	--	1	Wall on Retaining Wall	Special	21		56
	7805300050	19723 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	68	Ldn	61	66	--	1	Wall on Retaining Wall	Special	16		57
	7805300060	19731 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	65	Ldn	61	66	1	--	Wall on Retaining Wall	Special	14		57
	3971700710	1000 Ne 198th St	SF Residence on 198th St.	1	64	2	Yes	No	66	Ldn	61	66	--	1	Wall on Retaining Wall	Special	16		60
	3971700707	1006 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	66	Ldn	63	68	1	--	Wall on Retaining Wall	N/A	14		62
	3971700540	-	Empty Lot	0	64	--	Yes	No							Wall on Structure	Special	4		
	7805300180	834 Ne 195th St	SF Residence on 195th St.	1	67	2	Yes	No	64	Ldn	63	68	1	--	Wall on Retaining Wall	Special	21		52
	7805300010	840 Ne 195th St	SF Residence on 195th St.	1	65	2	Yes	No	60	Ldn	61	67	--	--	Wall on Retaining Wall	Special	21		49
	7805300130	1003 NE 196th	SF Residence on 196th St.	1	64	2	No	No	48	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	21		39
M-55: 65.4	7805300140	19604 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	Yes	No	53	Ldn	61	67	--	--	Wall on Retaining Wall	Special	21		42
	7805300150	1020 NE 196th	SF Residence on 196th St.	1	64	2	Yes	No	49	Ldn	61	66	--	--	Wall on Retaining Wall	Special	21		40
	7805300160	1010 Ne 197th St	SF Residence on 197th St.	1	65	2	Yes	No	57	Ldn	61	67	--	--	Wall on Retaining Wall	Special	21		44
	7805300170	19728 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	Yes	No	55	Ldn	61	67	--	--	Wall on Retaining Wall	Special	21		44
	7805300100	1036 Ne 197th St	SF Residence on 197th St.	1	65	2	No	No	42	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	16		34
	7805300070	19741 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	45	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	14		38
	3971700705	1002 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	56	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	12		49
	3971700700	1010 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	68	Ldn	61	67	--	1	Wall on Structure	N/A	6		60
	3971700695	1016 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	65	Ldn	61	67	1	--	Wall on Structure	N/A	4		58
	3971700690	1022 NE 198th	SF Residence on 198th St.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	4		56
	3971700551	-	Empty Lot	0	67	--	No	No								N/A			
																			0
NE 200th Street to SR 104																			0
	3971700560	1103 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	71	Ldn	61	66	--	1	Wall on Structure	N/A	6		58
M-56: 63.1	3971700570	1107 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	4		53
	3971700575	1109 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	4		51
	3971700580	1111 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	6		49
	3971700585	1115 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	6		49
	3971700590	1117 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	6		48
	3971700595	1119 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		45
	3971700597	1201 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	6		45
	3971700600	1207 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	54	Ldn	57	63	--	--	Wall on Structure	N/A	6		44
	3971700230	1102 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	71	Ldn	61	66	--	1	Wall on Structure	N/A	6		58
	3971700225	1104 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	64	Ldn	60	66	1	--	Wall on Structure	N/A	6		52
	3971700220	1114 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	6		50
	3971700215	20005 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	6		49
	3971700525	1206 Ne Ballinger Pl	SF Residence on Ballinger Pl	2	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	6		46
	3971700515	1212 NE Ballinger Pl.	SF Residence on Ballinger Pl	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	6		44
	3985300269	1108 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	71	Ldn	60	66	--	1	Wall on Structure	N/A	6		58
	3985300265	1110 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	6		58

Lynnwood Link Extension FEIS LPA: Segment B with 220th Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
621

Impacts:	Moderate	Severe
	140	65

Residual Impacts	
RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	3985300267	1112 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	6		51
	3985300266	20015 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	4		50
	3985300209	20014 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	4		48
	3985300208	20018 12th Ave.	SF Residence on 12th Ave.	1	58	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	4		45
	3985300268	20017 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	6		57
	3985300264	20019 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	60	Ldn	57	63	1	--	Wall on Structure	N/A	6		50
	3985300206	20026 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		49
	3985300207	20022 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	6		46
	3985300261	20035 12th Ave Ne	SF Residence on 12th Ave.	1	62	2	No	No	71	Ldn	59	65	--	1	Wall on Structure	N/A	6	1	59
M-57: 58.2	3985300263	20039 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	63	Ldn	57	63	--	1	Wall on Structure	N/A	4		53
	3985300198	20038 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		50
	3985300197	20040 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	56	Ldn	57	63	--	--		N/A			56
	3985300262	20041 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	68	Ldn	57	63	--	1	Wall on Structure	N/A	6	1	57
	3985300195	20044 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		50
	3985300196	20042 12th Ave Ne		1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	4		47
	3985300260	20043 12th Ave Ne	SF Residence on 12th Ave.	1	65	2	No	No	70	Ldn	61	67	--	1	Wall on Structure	N/A	4		59
	3985300244	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	6		
	0308000070	20101 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	6		57
	0308000060	20105 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	4		58
	0308000050	20109 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	4		58
	0308000040	20108 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	0308000030	20104 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	6		50
	0308000020	20102 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	61	Ldn	58	64	1	--	Wall on Structure	N/A	6		50
	0308000010	20100 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	6		48
	0308000015	20041 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		46
	3985300175	20107 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		46
	3985300176	20117 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	58	Ldn	58	64	2	--	Wall on Structure	N/A	4		49
	3985300177	20123 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	57	Ldn	58	64	--	--		N/A			57
	3985300178	20131 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	61	2	No	No	61	Ldn	59	65	2	--	Wall on Structure	N/A	4		51
	3985300147	20149 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	4		58
	3985300146	20145 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	67	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	3985300145	20141 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	67	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	6792000000	20101 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	3971700175	20121 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	59	Ldn	59	65	4	--	Wall on Structure	N/A	4		50
	3971700165	20125 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	3971700156	20129 14th Ave Ne	SF Residence on 14th Ave.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		56
	3985300135	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700158	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700154	20307 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		57
M-31: 61.7	3971700145	20313 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		57
	3971700130	20317 14th Ave Ne	MF Residence on 14th Ave.	4	62	2	No	No	66	Ldn	59	65	--	4	Wall on Structure	N/A	4		57
	3971700125	20327 14th Ave Ne	MF Residence on 14th Ave.	2	63	2	No	No	66	Ldn	60	66	--	2	Wall on Structure	N/A	4		57
	3971700120	20329 14th Ave Ne	MF Residence on 14th Ave.	4	64	2	No	No	66	Ldn	61	66	--	4	Wall on Structure	N/A	4		57
	3971700104	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	4		
	3971700105	20333 14th Ave Ne	MF Residence on 14th Ave.	3	66	2	No	No	66	Ldn	62	68	3	--	Wall on Structure	N/A	4		57
	3971700100	20343 14th Ave Ne	MF Residence on 14th Ave.	3	67	2	No	No	66	Ldn	63	68	3	--	Wall on Structure	N/A	4		57
	3971700020	20333 15th Ave Ne	Largo Vista Apt. Courtyard	31	66	2	No	No	58	Ldn	62	68	--	--		N/A			58
																			0
SR 104 to 236th Street																			0
	00520500101201	6015 244th St SW	Motel 6 on 244th near 242nd and Gateway - south bldg.	45	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	00520500101201	6015 244th St SW	Motel 6 - north bldg.	26	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	00520500102000	23908 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00520500102100	23906 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102200	23904 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102300	23902 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50

Lynnwood Link Extension FEIS LPA: Segment B with 220th Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
621		140	65	RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00520500102400	23900 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102500	23810 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		52
	00520500102600	23808 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102700	23806 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		51
	00520500102800	23804 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102900	23802 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00520900200100	5909 238th St SW	SF Residence on 238th St.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Structure	N/A	4		55
	00520900200200	6001 238th St SW	SF Residence on 238th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00520900200300	5907 238th St SW	SF Residence on 238th St.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00520900200600	6002 237th St SW	SF Residence on 237th St.	1	62	2	No	Yes	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		55
	00520900200700	5908 237th St SW	SF Residence on 237th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00520900200900	5904 237th St SW	SF Residence on 237th St.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00520900201300	5909 237th St SW	SF Residence on 237th St.	1	62	2	No	Yes	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		53
	00520900201400	5907 237th St SW	SF Residence on 237th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00520900201800	5906 236th St SW	SF Residence on 236th St.	1	62	2	No	Yes	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00520900201900	5904 236th St SW	SF Residence on 236th St.	1	62	2	No	Yes	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
																			0
236th Street to 230th Street																			0
	00524100001500	23506 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		54
M-33: 67.525	00524100001400	23504 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		54
	00524100001300	23502 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		53
	00524100001200	23501 59th Pl W	SF Residence on 59th Pl.	1	67	2	No	Yes	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	00524100001100	23503 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	00524100001000	23505 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		52
	00524100000900	23507 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		52
	00524100000800	23509 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	00524800001502	6002 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	8		51
	00524800001400	6004 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	8		62
M-34: 73.15	00524800001300	6005 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	8		62
	00524800001200	6003 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	8	1	67
	00524800001100	6001 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	61	Ldn	66	72	--	--	Wall on Structure	N/A	8		53
	00524800001000	6002 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	59	Ldn	66	72	--	--	Wall on Structure	N/A	8		50
	00524800000900	6004 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	8		60
	00524800000800	6006 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	8	1	67
	00524800000700	6005 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	8		65
	00524800000600	6003 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	8		53
	00524800000500	6001 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	58	Ldn	66	72	--	--	Wall on Structure	N/A	8		48
	00524800000100	6102 232nd St SW	SF Residence on 232nd St.	1	73	2	No	No	71	Ldn	66	72	1	--	Wall on Structure	N/A	8		62
	00524800000200	6006 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	65	Ldn	66	72	--	--	Wall on Structure	N/A	8		55
	00524800000300	6004 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	61	Ldn	66	72	--	--	Wall on Structure	N/A	8		50
	00524800000401	6002 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	58	Ldn	66	72	--	--	Wall on Structure	N/A	8		48
	00522000302300	23112 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	69	Ldn	66	73	1	--	Wall on Structure	N/A	8		59
	00522000302400	23110 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	68	Ldn	66	73	1	--	Wall on Structure	N/A	8		59
	00522000302500	23106 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	68	Ldn	66	73	1	--	Wall on Structure	N/A	8		58
	00522000302700	23102 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	8		58
	00522000302800	23010 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	8		57
	00522000302900	23008 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	60	Ldn	66	73	--	--		N/A	8		60
	00522000600100	6008 230th St SW	SF Residence on 230th St.	1	67	2	No	No	52	Ldn	63	68	--	--		N/A	8		52
	00522000600200	23007 61st Ave W	SF Residence on 61st Ave.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A	8		51
	00522000600300	23009 61st Ave W	SF Residence on 61st Ave.	1	63	2	No	No	50	Ldn	60	66	--	--		N/A	8		50
	00522000600400	23101 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000600500	23105 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000600600	23109 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		48
	00522000600800	6007 232nd St SW	SF Residence on 232nd St.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	8		49
	00522000600900	6003 232nd St SW	SF Residence on 232nd St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	00522000601000	23108 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	00522000601100	23106 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000601200	23100 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000601300	23008 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000601400	23006 60st Ave W	SF Residence on 60th Ave.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A	8		50
	00522000601600	6004 230th St SW	SF Residence on 230th St.	1	66	2	No	No	51	Ldn	62	68	--	--		N/A	8		51
																			0

Lynnwood Link Extension FEIS LPA: Segment B with 220th Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
621

Impacts:	Moderate	Severe
	140	65

Residual Impacts	
RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
230th Street to 220th Street																			0
	00522000500700	6007 230th St SW	SF Residence on 230th St.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	00522000500600	22909 61st Ave W	SF Residence on 61st Ave.	1	64	2	No	No	42	Ldn	61	66	--	--		N/A			42
M-35: 63.95	00522000500500	22905 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	42	Ldn	59	65	--	--		N/A			42
	00522000500400	22901 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	42	Ldn	59	65	--	--		N/A			42
	00522000500300	22809 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00522000500200	22807 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00522000500100	22803 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300900	22707 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300800	22705 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00523000300700	22703 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00523000300600	22701 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300500	22609 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300400	22607 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00523000300300	22605 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00523000300200	22603 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00523000300100	6004 226th St SW	SF Residence on 226th St.	1	61	2	No	No	51	Ldn	59	65	--	--		N/A			51
	00523000201500	6005 226th St SW	SF Residence on 226th St.	1	59	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000200900	6006 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000200600	6003 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000200200	6004 224th St SW	SF Residence on 224th St.	1	60	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000100900	6003 224th St SW	SF Residence on 224th St.	1	61	2	No	No	54	Ldn	59	65	--	--		N/A			54
	00523000100800	22306 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	54	Ldn	59	65	--	--		N/A			54
	00523000100700	22304 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	55	Ldn	59	65	--	--		N/A			55
	00523000100600	22302 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	54	Ldn	59	65	--	--		N/A			54
	00523000100500	22210 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--		N/A			55
	00523000100400	22208 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--		N/A			55
	00523000100300	22206 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	55	Ldn	60	66	--	--		N/A			55
	00523000100200	22204 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	Yes	55	Ldn	60	66	--	--		N/A			55
	00523000100100	22202 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	Yes	53	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		51
	00524900000500	22111 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	Yes	51	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		49
	00524900000400	22109 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	Yes	51	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		49
	00524900000300	22107 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	Yes	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00524900000200	22105 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	Yes	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00524900000100	22103 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	Yes	58	Ldn	61	66	--	--		N/A			58
	00523300002800	5904 221st St SW	SF Residence on 221st St.	1	65	2	No	Yes	53	Ldn	61	67	--	--	Wall on Structure	N/A	4		45
	00523300001700	5905 221st St SW	SF Residence on 221st St.	1	67	2	No	Yes	52	Ldn	63	68	--	--	Wall on Structure	N/A	4		45
	00523300001800	5903 221st St SW	SF Residence on 221st St.	1	67	2	No	Yes	52	Ldn	63	68	--	--	Wall on Structure	N/A	4		44
	00523300001900	5809 221st St SW	SF Residence on 221st St.	1	66	2	No	Yes	52	Ldn	62	68	--	--		N/A			52
																			0
220th Street to 212th Street																			0
	00523300001000	5902 219th St SW	SF Residence on 219th St.	1	73	2	No	Yes	59	Ldn	66	72	--	--	Wall on Structure	N/A	4		50
M-36: 63.325	00523300000700	5905 219th St SW	SF Residence on 219th St.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	4		51
	00523300000600	5901 219th St SW		1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00441000000500	5810 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	Yes	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		50
	00441000000400	5808 218th Pl SW		1	59	2	No	No	61	Ldn	58	64	1	--	Wall on Structure	N/A	4		52
	00441000000600	5811 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	Yes	61	Ldn	58	64	1	--	Wall on Structure	N/A	4		51
	00441000000701	5809 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	Yes	61	Ldn	58	64	1	--	Wall on Structure	N/A	4		51
	00619900005502	21726 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	60	Ldn	61	67	--	--		N/A			60
	00619900005503	21712 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		52
	00619900005300	-	Empty Lot	0	67	--	No	No							Wall on Structure	N/A	4		
	00619900005101	21620 58th Ave W	SF Residence on 58th Ave.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	00619900005103	21616 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
	00619900004900	21530 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
	00619900004700	21528 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
M-37: 65.35	00766700000700	5709 215th Pl SW	SF Residence on 215th Pl.	1	65	2	No	No	56	Ldn	61	67	--	--		N/A			56
	00619900001601	21501 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	56	Ldn	61	67	--	--		N/A			56
	00619900001701	-	Empty Lot	0	65	--	No	No								N/A			
	00619900001702	21404 56th Ave W	SF Residence on 56th Ave.	1	66	2	No	No	56	Ldn	62	68	--	--		N/A			56
	00474800001400	5506 214th Pl SW	SF Residence on 214th Pl.	1	68	2	No	No	55	Ldn	63	69	--	--		N/A			55
	00474800001800	5503 214th Pl SW	SF Residence on 214th Pl.	1	70	2	No	No	50	Ldn	65	70	--	--		N/A			50
	00474800001900	5505 214th Pl SW	SF Residence on 214th Pl.	1	72	2	No	No	50	Ldn	66	72	--	--		N/A			50

Lynnwood Link Extension FEIS LPA: Segment B with 220th Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
621		140	65	RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	27042800202000	5509 214th Pl SW	SF Residence on 214th Pl.	2	74	2	No	No	56	Ldn	66	73	--	--		N/A			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. D Grnd. Floor	2	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. D 1st Floor	2	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. C Grnd. Floor	2	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
M-38: 75.1	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. C 1st Floor	2	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. B Grnd. Floor	4	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. B 1st Floor	4	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. A Grnd. Floor	4	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. A 1st Floor	4	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	2.70428E+13	5302 212th St SW	Duplex on 212th St.	2	74	2	No	No	63	Ldn	66	73	--	--		N/A			63
	2.70428E+13	5228 212th St SW	SF Residence on 212th St.	1	73	2	No	No	62	Ldn	66	72	--	--		N/A			62
	2.70428E+13	5222 212th St SW	Triplex on 212th St.	3	72	2	No	No	62	Ldn	66	72	--	--		N/A			62
																			0
Street to Street - West Side of I-5																			0
SR 104 to 232nd Street																			0
	2.70432E+13	6601 244th St SW	Nile Shrine Golf Course between SR104 &236th	1	68	3	No	No								N/A			
	00524700001500	6300 234th St SW	SF Residence on 234th St.	1	72	2	No	No	58	Ldn	66	72	--	--		N/A			58
	00524700003400	6301 234th St SW	SF Residence on 234th St.	1	69	2	No	No	58	Ldn	64	70	--	--		N/A			58
	00524700003300	23310 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	61	Ldn	64	70	--	--		N/A			61
	00524700003200	23308 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	61	Ldn	64	70	--	--		N/A			61
	00524700003100	23306 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	61	Ldn	64	70	--	--		N/A			61
	00524700003000	23304 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	4		54
	00524700002900	23302 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		54
	00524700002800	23300 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	00524700002700	23212 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	4		57
	00524700000500	23209 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	66	Ldn	66	75	1	--	Wall on Structure	N/A	4		56
	00524700000400	23207 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	68	Ldn	66	75	1	--	Wall on Structure	N/A	4		58
	00524700000300	23205 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	4		59
	00524700000200	23203 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	4		58
	00524700000100	23201 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	62	Ldn	66	73	--	--	Wall on Structure	N/A	4		53
	2.70432E+13	23117 63rd Ave W	SF Residence on 63rd Ave.	1	77	2	No	No	69	Ldn	66	75	1	--	Wall on Structure	N/A	4		59
																			0
232nd Street to 228th Street																			0
	00522300305300	23115 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	70	Ldn	66	75	1	--	Wall on Structure	N/A	8		58
	00522300305400	23113 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	71	Ldn	66	75	1	--	Wall on Structure	N/A	8		62
	00522300305500	23111 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	8		52
	00522300306400	23014 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	72	Ldn	66	75	1	--	Wall on Structure	N/A	8	1	69
	00522300306500	23015 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	67	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	8		65
	00522300306600	23013 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	66	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	8		64
	00522300306700	23011 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	66	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	8		64
	00522300306800	23009 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	61	Ldn	66	75	--	--		N/A	8		61
	00522300306900	23007 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	61	Ldn	66	75	--	--		N/A	8		61
M-39: 76.45	00522300307000	23005 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	60	Ldn	66	75	--	--		N/A			60
	00522300307100	23003 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	60	Ldn	66	75	--	--		N/A			60
	00522300307200	23001 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	59	Ldn	66	75	--	--		N/A			59
	00522300307201	22909 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	59	Ldn	66	75	--	--		N/A			59
	00522400007301	22905 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	59	Ldn	66	75	--	--		N/A			59
	00522400007300	22903 63rd Ave W	SF Residence on 63rd Ave.	1	75	2	No	No	57	Ldn	66	74	--	--		N/A			57
	00522400007400	22901 63rd Ave W	SF Residence on 63rd Ave.	1	72	2	No	No	56	Ldn	66	72	--	--		N/A			56
	00522300103300	23112 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--		N/A	8		59
	00522300305600	23109 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A	8		62
	00522300306300	23012 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A	8		62
	00522300306200	23010 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	55	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		52
	00522300306100	23008 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	55	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		52
	00522300305700	23107 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	8		49

Lynnwood Link Extension FEIS LPA: Segment B with 220th Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
621		140	65	RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00522300305800	23105 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	8		48
	00522300305900	23103 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	8		48
	00522300306000	23101 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	52	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		48
	00522300204600	23002 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		47
	00522300204700	6302 230th St SW	SF Residence on 230th St.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	00522300204500	23004 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	00522300204800	6304 230th St SW	SF Residence on 230th St.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00522400007800	6301 230th St SW	SF Residence on 230th St.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	00522400007700	22906 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	00522400007600	22904 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	00522400007500	22902 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	00522400007900	6303 230th St SW	SF Residence on 230th St.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00522400009200	22807 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00522400009100	22805 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00522400009000	22803 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00522400008900	22801 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
																			0
228th Street to 220th Street																			0
	00524000000500	6101 227th St SW	SF Residence on 227th St.	1	69	2	No	No	62	Ldn	64	70	--	--		N/A			62
M-40: 68.5	00524000000600	6103 227th St SW	SF Residence on 227th St.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	00524000000700	6201 227th St SW	SF Residence on 227th St.	1	68	2	No	No	52	Ldn	63	69	--	--		N/A			52
	00524000000800	6203 227th St SW	SF Residence on 227th St.	1	68	2	No	No	44	Ldn	63	69	--	--		N/A			44
	00524000003501	22611 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00524000003601	22605 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00524000003801	22603 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00524000004000	22601 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	00524000004100	22505 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00524000004200	22503 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	55	Ldn	61	67	--	--		N/A			55
	00524000004300	22501 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	55	Ldn	61	67	--	--		N/A			55
	00524000004400	22407 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	57	Ldn	61	67	--	--		N/A			57
	00524000004500	22405 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--		N/A			59
	00524000004600	22403 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	57	Ldn	61	67	--	--		N/A			57
	00524000004700	22309 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	57	Ldn	61	67	--	--		N/A			57
	00524000004800	22307 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--		N/A			59
	00524000004900	22305 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--		N/A			59
	00524000005000	-	Empty Lot	0	71	--	No	No								N/A			
	00524000005100	22209 63rd Ave W	SF Residence on 63rd Ave.	1	70	2	No	No	56	Ldn	65	70	--	--		N/A			56
	00524000005400	22207 62nd Ave W	SF Residence on 62nd Ave.	1	70	2	No	No	55	Ldn	65	70	--	--		N/A			55
	00524000005500	22205 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Retaining Wall	N/A	4		58
	00524000005600	22203 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Retaining Wall	N/A	4		57
	00524000005700	22201 62nd Ave W	SF Residence on 62nd Ave.	1	68	2	No	Yes	63	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	4		56
M-41: 66.9 LEQ	00378200300600	6205 222nd St SW	Empt Lot	0	68	3	No	Yes							Wall on Retaining Wall	N/A	4		
	00524000003400	22610 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	39	Ldn	61	66	--	--		N/A			39
	00524000003300	22608 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	38	Ldn	61	66	--	--		N/A			38
	00524000003200	22606 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	38	Ldn	61	66	--	--		N/A			38
	00524000003100	22604 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	38	Ldn	61	66	--	--		N/A			38
	00524000003000	6202 226th St SW	SF Residence on 226th St.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00524000006700	22504 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	42	Ldn	61	66	--	--		N/A			42
	00524000006800	22502 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00524000007300	22406 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	44	Ldn	61	66	--	--		N/A			44
	00524000007400	6202 224th St SW	SF Residence on 224th St.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00524000008400	6201 224th St SW	SF Residence on 224th St.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00524000008500	22302 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45
	00524000008600	6202 223rd Pl SW	SF Residence on 223rd Pl.	1	64	2	No	No	47	Ldn	61	66	--	--		N/A			47
	00524000009200	22206 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	54	Ldn	61	66	--	--		N/A			54
	00524000009301	22204 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	00524000009401	22202 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00524000009500	6202 222nd St SW	SF Residence on 222nd St.	1	64	2	No	No	51	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		47
	00524000002600	22605 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	35	Ldn	59	65	--	--		N/A			35
	00524000002700	22603 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	35	Ldn	59	65	--	--		N/A			35
	00524000002800	22601 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	34	Ldn	59	65	--	--		N/A			34

Lynnwood Link Extension FEIS LPA: Segment B with 220th Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
621

Impacts:	Moderate	Severe
	140	65

Residual Impacts	
RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524000002900	6204 226th St SW	SF Residence on 226th St.	1	62	2	No	No	34	Ldn	59	65	--	--		N/A			34
	00524000006600	6201 226th St SW	SF Residence on 226th St.	1	62	2	No	No	40	Ldn	59	65	--	--		N/A			40
	00524000006900	6202 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	40	Ldn	59	65	--	--		N/A			40
	00524000007200	6201 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	40	Ldn	59	65	--	--		N/A			40
	00524000007500	6204 224th St SW	SF Residence on 224th St.	1	62	2	No	No	39	Ldn	59	65	--	--		N/A			39
	00524000008700	6204 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	No	40	Ldn	59	65	--	--		N/A			40
	00524000009100	6201 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	No	41	Ldn	59	65	--	--		N/A			41
	00524000009302	6208 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	No	38	Ldn	57	63	--	--		N/A			38
	00524000009402	6207 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	No	39	Ldn	57	63	--	--		N/A			39
M-42: 57.4	00524000009700	6206 222nd St S	SF Residence on 222nd St.	2	57	2	No	No	40	Ldn	57	63	--	--	Wall on Retaining Wall	N/A	4		36
	00524000009600	6204 222nd St SW	SF Residence on 222nd St.	1	66	2	No	No	41	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		37
	00378200300503	6303 222nd St SW	SF Residence on 222nd St.	1	56	2	No	Yes	43	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		42
	00378200300501	6305 222nd St SW	SF Residence on 222nd St.	1	56	2	No	Yes	42	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		41
	00378200300502	6307 222nd St SW	SF Residence on 222nd St.	1	56	2	No	Yes	40	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		40
	00378200300504	22103 64th Ave W	SF Residence on 64th Ave.	1	56	2	No	Yes	39	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		39
M-43: 55.9	00525400001300	6302 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	Yes	43	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		42
	00525400001400	6304 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	Yes	58	Ldn	56	63	1	--	Wall on Structure	N/A	4		49
	00525400001500	6306 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	Yes	54	Ldn	56	63	--	--		N/A			54
	00525400001200	6303 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	Yes	58	Ldn	56	63	1	--	Wall on Structure	N/A	4		49
	00525400001100	6305 221st Pl SW	SF Residence on 221st PL.	1	58	2	No	Yes	58	Ldn	57	63	1	--	Wall on Structure	N/A	4		49
	00525400001000	6307 221st Pl SW		1	58	2	No	Yes	52	Ldn	57	63	--	--		N/A			52
	00525400000900	22007 64th Ave.		1	58	2	No	Yes	50	Ldn	57	63	--	--		N/A			50
	00525400000800	22005 64th Ave.		1	58	2	No	Yes	50	Ldn	57	63	--	--		N/A			50
	00525400000700	6306 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	Yes	52	Ldn	59	65	--	--		N/A			52
	00525400000600	6304 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	Yes	54	Ldn	59	65	--	--		N/A			54
	00525400000500	6302 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	Yes	54	Ldn	59	65	--	--		N/A			54
	00525400000400	6303 220th Pl SW	SF Residence on 220th PL.	1	64	2	No	Yes	54	Ldn	61	66	--	--		N/A			54
	00525400000300	6305 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	Yes	54	Ldn	62	68	--	--	Wall on Structure	N/A	4		46
	00525400000200	6307 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	Yes	51	Ldn	62	68	--	--		N/A			51
	00525400000100	22001 64th Ave.	SF Residence on 220th PL.	1	66	2	No	Yes	49	Ldn	62	68	--	--		N/A			49
																			0
220th Street to 212th Street																			0
M-44: 68.9	27042900100800	6002 St Albion Way-Bldg. E grnd. Floor	Lakeside Apt. Complex near City Hall	7	69	2	No	No	71	Ldn	64	70	--	7	Wall on Structure	N/A	4		60
	27042900100800	6002 St Albion Way-Bldg. E 2nd Floor	Lakeside Apt. Complex near City Hall	7	69	2	No	No	71	Ldn	64	70	--	7	Wall on Structure	N/A	4		60
	27042900100800	6002 St Albion Way-Bldg. E 3rd Floor	Lakeside Apt. Complex near City Hall	2	69	2	No	No	71	Ldn	64	70	--	2	Wall on Structure	N/A	4		61
	27042900100800	21604 St Albion Way-Bldg. G grnd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	65	Ldn	64	70	8	--	Wall on Structure	N/A	4		54
	27042900100800	21604 St Albion Way-Bldg. G 2nd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	65	Ldn	64	70	8	--	Wall on Structure	N/A	4		55
	27042900100800	21604 St Albion Way-Bldg. g 3rd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	65	Ldn	64	70	8	--	Wall on Structure	N/A	4		56
	27042900100800	6001 St Albion Way-Bldg. F grnd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	Yes	59	Ldn	64	70	--	--	Wall on Structure	N/A	4		50
	27042900100800	6001 St Albion Way-Bldg. F 2nd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	Yes	59	Ldn	64	70	--	--	Wall on Structure	N/A	4		50
	27042900100800	6001 St Albion Way-Bldg. F 3rd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	Yes	60	Ldn	64	70	--	--	Wall on Structure	N/A	4		51
																			0
																			0
	00619900005000	-	Empty Lot	0	72	--	No	No							Wall on Structure	N/A	4		
	00619900004800	-	Empty Lot	0	72	--	No	No							Wall on Structure	N/A	4		
	00525100002500	21503 60th Ave W	SF Residence on 60th Ave.	1	72	2	No	No	76	Ldn	66	72	--	1	Wall on Structure	N/A	4		63
	00525100001100	5912 214th St SW	SF Residence on 214th St.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	4		53

Lynnwood Link Extension FEIS LPA: Segment B with 220th Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
621

Impacts:	Moderate	Severe
	140	65

Residual Impacts	
RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00525100001000	5910 214th St SW	SF Residence on 214th St.	1	67	2	No	No	65	Ldn	63	68	1	--	Wall on Structure	N/A	4		55
	00525100000900	5908 214th St SW	SF Residence on 214th St.	1	69	2	No	No	67	Ldn	64	70	1	--	Wall on Structure	N/A	4		57
	00525100000800	5906 214th St SW	SF Residence on 214th St.	1	72	2	No	No	77	Ldn	66	72	--	1	Wall on Structure	N/A	6		63
	00525100000700	5904 214th St SW	SF Residence on 214th St.	1	67	2	No	No	77	Ldn	63	68	--	1	Wall on Structure	N/A	8	1	63
	00525100000600	5902 214th St SW	SF Residence on 214th St.	1	67	2	No	No	74	Ldn	63	68	--	1	Wall on Retaining Wall	N/A	8		62
	00525100000500	5810 214th St SW	SF Residence on 214th St.	1	67	2	No	No	65	Ldn	63	68	1	--	Wall At-Grade	N/A	4		53
	00525100000400	-	Empty Lot	0	67	--	No	No							Wall At-Grade	N/A	4		
	00525100000300	5806 214th St SW	SF Residence on 214th St.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall At-Grade	N/A	4		54
	00525100000200	5804 214th St SW	SF Residence on 214th St.	1	67	2	Yes	No	64	Ldn	63	68	1	--	Wall At-Grade	Special	4		55
	00525100000100	5802 214th St SW	SF Residence on 214th St.	1	67	2	Yes	No	64	Ldn	63	68	1	--	Wall At-Grade	Special	4		55
	00525100001200	5909 214th St SW	SF Residence on 214th St.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	00525100001300	5907 214th St SW	SF Residence on 214th St.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	4		53
	00525100001400	5905 214th St SW	SF Residence on 214th St.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	8		52
	00525100001500	5903 214th St SW	SF Residence on 214th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	4		55
	00525100001602	5901 214th St SW	SF Residence on 214th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	4		55
	00525100002200	21307 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall At-Grade	N/A	4		55
	00525100002300	5803 214th St SW	SF Residence on 214th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall At-Grade	N/A	4		55
	00525100002400	5801 214th St SW	SF Residence on 214th St.	1	63	2	Yes	No	61	Ldn	60	66	1	--	Wall At-Grade	Special	4		55
	00920100000100	21331 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	55	Ldn	61	66	--	--		N/A			55
	00525100001700	21304 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	56	Ldn	59	65	--	--		N/A			56
	00525100001800	21302 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00525100001900	21301 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00525100002000	21303 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00525100002100	21305 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	56	Ldn	59	65	--	--		N/A			56
	00619900004103	21318 58th Ave W	SF Residence on 58th Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall At-Grade	N/A	4		53
	00619900004102	21316 58th Ave W	SF Residence on 58th Ave.	1	61	2	Yes	No	59	Ldn	59	65	1	--	Wall At-Grade	Special	4		54
	00619900004101	21312 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	55	Ldn	59	65	--	--		N/A			55
	00619900003904	21232 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	52	Ldn	59	65	--	--	Wall At-Grade	N/A	10		46
	00619900004104	21314 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	53	Ldn	59	65	--	--	Wall At-Grade	N/A	10		46
	00619900003804	5908 212th Pl SW	SF Residence on 212th Pl.	1	62	2	No	No	50	Ldn	59	65	--	--	Wall At-Grade	N/A	10		44
	00404100000400	21317 58th Ave W	SF Residence on 58th Ave.	1	67	2	No	No	74	Ldn	63	68	--	1	Wall At-Grade	N/A	10		62
	00404100000300	5720 213th St SW	SF Residence on 213th St.	1	64	2	Yes	No	66	Ldn	61	66	--	1	Wall At-Grade	Special	10		53
	00404100000200	5710 213th St SW	SF Residence on 213th St.	1	67	2	Yes	No	80	Ldn	63	68	--	1	Wall At-Grade	Special	10		61
M-45: 66.95	00404100000100	5632 213th St SW	SF Residence on 213th St.	1	67	2	Yes	No	84	Ldn	63	68	--	1	Wall At-Grade	Special	10	1	64
	00619900002602	21229 58th Ave W	Duplex on 58th Ave.	2	60	2	No	No	55	Ldn	58	64	--	--	Wall At-Grade	N/A	10		49
	00619900002501	5723 213th St SW	SF Residence on 213th St.	1	60	2	Yes	No	59	Ldn	58	64	1	--	Wall At-Grade	Special	10		50
	00619900002502	5721 213th St SW	SF Residence on 213th St.	1	60	2	Yes	No	55	Ldn	58	64	--	--	Wall At-Grade	Special	10		48
	00619900002503	5719 213th St SW	SF Residence on 213th St.	1	60	2	No	No	53	Ldn	58	64	--	--	Wall At-Grade	N/A	10		46
	00619900002504	5717 213th St SW	SF Residence on 213th St.	1	60	2	No	No	50	Ldn	58	64	--	--	Wall At-Grade	N/A	10		44
	00619900002402	5711 213th St SW	SF Residence on 213th St.	1	61	2	Yes	No	62	Ldn	59	65	1	--	Wall At-Grade	Special	10		52
	00619900002403	5709 213th St SW	SF Residence on 213th St.	1	61	2	Yes	No	58	Ldn	59	65	--	--	Wall At-Grade	Special	10		49
	00619900002404	5707 213th St SW	SF Residence on 213th St.	1	62	2	Yes	No	55	Ldn	59	65	--	--	Wall At-Grade	Special	10		47
	00619900002303	5627 213th St SW	Duplex on 213th St.	2	61	2	Yes	No	65	Ldn	59	65	--	2	Wall At-Grade	Special	10		53
	00619900002301	5623 213th St SW	SF Residence on 213th St.	1	61	2	Yes	No	61	Ldn	59	65	1	--	Wall At-Grade	Special	10		51
	00619900003000	5700 212th St SW	SF Residence on 213th St.	1	61	2	No	No	55	Ldn	59	65	--	--	Wall At-Grade	N/A	10		48
	00619900002900	5616 212th St SW	SF Residence on 213th St.	1	61	2	No	No	52	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	10		43
	00619900002201	5619 213th St SW	SF Residence on 213th St.	1	61	2	Yes	No	58	Ldn	59	65	--	--	Wall on Retaining Wall	Special	10		48
	00619900002202	5625 213th St SW	SF Residence on 213th St.	1	63	2	Yes	No	75	Ldn	60	66	--	1	Wall At-Grade	Special	10	1	61
	00619900002101	5615 213th St SW	SF Residence on 213th St.	1	63	2	Yes	No	76	Ldn	60	66	--	1	Wall At-Grade	Special	10	1	61
	00619900002000	5604 212th St SW	SF Residence on 212th St.	1	72	2	Yes	No	73	Ldn	66	72	--	1	Wall At-Grade	Special	10		60
	27042800202400	None Given	SF Residence on 212th St.	1	72	2	No	No							Wall At-Grade	N/A	10		
	27042800202200	5522 212th St SW	SF Residence on 212th St.	1	72	2	No	No							Wall on Retaining Wall	N/A	10		
	27042800202100	-	Empty Lot	0	72	--	No	No							Wall on Retaining Wall	N/A	10		
	00619900002102	5610 212th St SW	SF Residence on 212th St.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	10		47
	00619900002700	5602 212th St SW	SF Residence on 212th St.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall At-Grade	N/A	10		53
	2.70428E+13	None Given	old number 00619900002300	1	71	2	No	No							Wall At-Grade	N/A	10		
	2.70421E+13	5615 212th St SW	SF Residence on 212th St.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall At-Grade	N/A	10		47
	2.70421E+13	-	Empty Lot	0	71	--	No	No							Wall At-Grade	N/A	10		
	27042100307700	5605 212th St SW	SF Residence on 212th St.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	10		49
	27042100310500	5525 212th St SW	SF Residence on 212th St.	1	65	2	No	No	65	Ldn	61	67	1	--	Wall on Retaining Wall	N/A	10		55
M-46: 68.35	27042100305400	20908 54th Ave W #1	Zoned Campground on 54th Ave./212th St.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	10		53

Lynnwood Link Extension FEIS LPA Segment B with 220th South Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
620

Impacts:	Moderate	Severe
	133	65

Residual Impacts	
RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
East Side of I-5																			
NE 189th Street to NE 200th Street																			
Begin B1 M30B-65	526049034	None	Athletic Field Zoned Residential	1	65	3	No	No								N/A			
	526049017	-	Empty Lot	0	65	--	No	No							Wall on Retaining Wall	N/A	21		
	5490700080	805 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	21		49
	5490700075	814 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	21		50
	5490700070	812 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	21		48
	5490700005	-	Empty Lot	0	64	--	No	No							Wall on Retaining Wall	N/A	21		
	5490700010	815 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	58	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		47
	5490700015	821 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	48	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		38
	5490700020	827 Ne 195th St	SF Residence on 195th St.	1	65	2	No	No	44	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	21		34
	5490700065	818 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	48	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		38
	5490700060	824 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	44	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		34
	5490700085	817 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	54	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		44
	5490700090	823 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	46	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	21		36
	5490700095	831 Ne 194th St	SF Residence on 194th St.	1	65	2	No	No	42	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	21		33
	3985300331	822 Ne 195th St	SF Residence on 195th St.	1	64	2	Yes	No	65	Ldn	61	66	1	--	Wall on Retaining Wall	Special	21		52
	7805300020	19605 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	64	Ldn	61	66	1	--	Wall on Retaining Wall	Special	21		50
	3985300330	-	Empty Lot	0	64	--	Yes	No							Wall on Retaining Wall	Special	21		
	7805300030	19705 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	73	Ldn	61	66	--	1	Wall on Retaining Wall	Special	21		55
	7805300040	19715 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	74	Ldn	61	66	--	1	Wall on Retaining Wall	Special	21		56
	7805300050	19723 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	68	Ldn	61	66	--	1	Wall on Retaining Wall	Special	16		57
	7805300060	19731 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	Yes	No	65	Ldn	61	66	1	--	Wall on Retaining Wall	Special	14		57
	3971700710	1000 Ne 198th St	SF Residence on 198th St.	1	64	2	Yes	No	66	Ldn	61	66	--	1	Wall on Retaining Wall	Special	16		60
	3971700707	1006 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	66	Ldn	63	68	1	--	Wall on Retaining Wall	N/A	14		62
	3971700540	-	Empty Lot	0	64	--	Yes	No							Wall on Structure	Special	4		
	7805300180	834 Ne 195th St	SF Residence on 195th St.	1	67	2	Yes	No	64	Ldn	63	68	1	--	Wall on Retaining Wall	Special	21		52
	7805300010	840 Ne 195th St	SF Residence on 195th St.	1	65	2	Yes	No	60	Ldn	61	67	--	--	Wall on Retaining Wall	Special	21		49
	7805300130	1003 NE 196th	SF Residence on 196th St.	1	64	2	No	No	48	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	21		39
M-55: 65.4	7805300140	19604 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	Yes	No	53	Ldn	61	67	--	--	Wall on Retaining Wall	Special	21		42
	7805300150	1020 NE 196th	SF Residence on 196th St.	1	64	2	Yes	No	49	Ldn	61	66	--	--	Wall on Retaining Wall	Special	21		40
	7805300160	1010 Ne 197th St	SF Residence on 197th St.	1	65	2	Yes	No	57	Ldn	61	67	--	--	Wall on Retaining Wall	Special	21		44
	7805300170	19728 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	Yes	No	55	Ldn	61	67	--	--	Wall on Retaining Wall	Special	21		44
	7805300100	1036 Ne 197th St	SF Residence on 197th St.	1	65	2	No	No	42	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	16		34
	7805300070	19741 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	45	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	14		38
	3971700705	1002 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	56	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	12		49
	3971700700	1010 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	68	Ldn	61	67	--	1	Wall on Structure	N/A	6		60
	3971700695	1016 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	65	Ldn	61	67	1	--	Wall on Structure	N/A	4		58
	3971700690	1022 NE 198th	SF Residence on 198th St.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	4		56
	3971700551	-	Empty Lot	0	67	--	No	No								N/A			
																			0
NE 200th Street to SR 104																			0
	3971700560	1103 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	71	Ldn	61	66	--	1	Wall on Structure	N/A	6		58
M-56: 63.1	3971700570	1107 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	4		53
	3971700575	1109 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	4		51
	3971700580	1111 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	6		49
	3971700585	1115 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	6		49
	3971700590	1117 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	6		48
	3971700595	1119 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		45
	3971700597	1201 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	6		45
	3971700600	1207 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	54	Ldn	57	63	--	--	Wall on Structure	N/A	6		44
	3971700230	1102 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	71	Ldn	61	66	--	1	Wall on Structure	N/A	6		58
	3971700225	1104 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	64	Ldn	60	66	1	--	Wall on Structure	N/A	6		52
	3971700220	1114 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	6		50
	3971700215	20005 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	6		49
	3971700525	1206 Ne Ballinger Pl	SF Residence on Ballinger Pl	2	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	6		46
	3971700515	1212 NE Ballinger Pl.	SF Residence on Ballinger Pl	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	6		44
	3985300269	1108 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	71	Ldn	60	66	--	1	Wall on Structure	N/A	6		58
	3985300265	1110 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	6		58
	3985300267	1112 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	6		51
	3985300266	20015 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	4		50

Lynnwood Link Extension FEIS LPA Segment B with 220th South Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
620

Impacts:	Moderate	Severe
	133	65

Residual Impacts	
RSIP =	9

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	3985300209	20014 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	4		48
	3985300208	20018 12th Ave.	SF Residence on 12th Ave.	1	58	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	4		45
	3985300268	20017 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	6		57
	3985300264	20019 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	60	Ldn	57	63	1	--	Wall on Structure	N/A	6		50
	3985300206	20026 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		49
	3985300207	20022 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	6		46
	3985300261	20035 12th Ave Ne	SF Residence on 12th Ave.	1	62	2	No	No	71	Ldn	59	65	--	1	Wall on Structure	N/A	6	1	59
M-57: 58.2	3985300263	20039 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	63	Ldn	57	63	--	1	Wall on Structure	N/A	4		53
	3985300198	20038 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		50
	3985300197	20040 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	56	Ldn	57	63	--	--		N/A			56
	3985300262	20041 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	68	Ldn	57	63	--	1	Wall on Structure	N/A	6	1	57
	3985300195	20044 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		50
	3985300196	20042 12th Ave Ne		1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	4		47
	3985300260	20043 12th Ave Ne	SF Residence on 12th Ave.	1	65	2	No	No	70	Ldn	61	67	--	1	Wall on Structure	N/A	4		59
	3985300244	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	6		
	0308000070	20101 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	6		57
	0308000060	20105 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	4		58
	0308000050	20109 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	4		58
	0308000040	20108 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	0308000030	20104 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	6		50
	0308000020	20102 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	61	Ldn	58	64	1	--	Wall on Structure	N/A	6		50
	0308000010	20100 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	6		48
	0308000015	20041 Forest Park Dr Ne	SF Residence on Forest Park D	2	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		46
	3985300175	20107 Forest Park Dr Ne	SF Residence on Forest Park D	2	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		46
	3985300176	20117 Forest Park Dr Ne	SF Residence on Forest Park D	2	60	2	No	No	58	Ldn	58	64	2	--	Wall on Structure	N/A	4		49
	3985300177	20123 Forest Park Dr Ne	SF Residence on Forest Park D	2	60	2	No	No	57	Ldn	58	64	--	--		N/A			57
	3985300178	20131 Forest Park Dr Ne	SF Residence on Forest Park D	2	61	2	No	No	61	Ldn	59	65	2	--	Wall on Structure	N/A	4		51
	3985300147	20149 Forest Park Dr Ne	SF Residence on Forest Park D	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	4		58
	3985300146	20145 Forest Park Dr Ne	SF Residence on Forest Park D	1	63	2	No	No	67	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	3985300145	20141 Forest Park Dr Ne	SF Residence on Forest Park D	1	63	2	No	No	67	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	6792000000	20101 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	3971700175	20121 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	59	Ldn	59	65	4	--	Wall on Structure	N/A	4		50
	3971700165	20125 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	3971700156	20129 14th Ave Ne	SF Residence on 14th Ave.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		56
	3985300135	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700158	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700154	20307 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		57
M-31: 61.7	3971700145	20313 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		57
	3971700130	20317 14th Ave Ne	MF Residence on 14th Ave.	4	62	2	No	No	66	Ldn	59	65	--	4	Wall on Structure	N/A	4		57
	3971700125	20327 14th Ave Ne	MF Residence on 14th Ave.	2	63	2	No	No	66	Ldn	60	66	--	2	Wall on Structure	N/A	4		57
	3971700120	20329 14th Ave Ne	MF Residence on 14th Ave.	4	64	2	No	No	66	Ldn	61	66	--	4	Wall on Structure	N/A	4		57
	3971700104	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	4		
	3971700105	20333 14th Ave Ne	MF Residence on 14th Ave.	3	66	2	No	No	66	Ldn	62	68	3	--	Wall on Structure	N/A	4		57
	3971700100	20343 14th Ave Ne	MF Residence on 14th Ave.	3	67	2	No	No	66	Ldn	63	68	3	--	Wall on Structure	N/A	4		57
	3971700020	20333 15th Ave Ne	Largo Vista Apt. Courtyard	31	66	2	No	No	58	Ldn	62	68	--	--		N/A			58
																			0
SR 104 to 236th Street																			0
	00520500101201	6015 244th St SW	Motel 6 on 244th near 242nd an	45	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	00520500101201	6015 244th St SW	Motel 6 - north bldg.	26	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	00520500102000	23908 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00520500102100	23906 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102200	23904 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102300	23902 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102400	23900 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102500	23810 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		52
	00520500102600	23808 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102700	23806 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		51
	00520500102800	23804 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102900	23802 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00520900200100	5909 238th St SW	SF Residence on 238th St.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Structure	N/A	4		55
	00520900200200	6001 238th St SW	SF Residence on 238th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50

Lynnwood Link Extension FEIS LPA Segment B with 220th South Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
620

Impacts:	Moderate	Severe
	133	65

Residual Impacts	
RSIP =	9

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00520900200300	5907 238th St SW	SF Residence on 238th St.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00520900200600	6002 237th St SW	SF Residence on 237th St.	1	62	2	No	Yes	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		55
	00520900200700	5908 237th St SW	SF Residence on 237th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00520900200900	5904 237th St SW	SF Residence on 237th St.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00520900201300	5909 237th St SW	SF Residence on 237th St.	1	62	2	No	Yes	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		53
	00520900201400	5907 237th St SW	SF Residence on 237th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00520900201800	5906 236th St SW	SF Residence on 236th St.	1	62	2	No	Yes	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00520900201900	5904 236th St SW	SF Residence on 236th St.	1	62	2	No	Yes	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
																			0
236th Street to 230th Street																			0
	00524100001500	23506 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		54
M-33: 67.525	00524100001400	23504 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		54
	00524100001300	23502 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		53
	00524100001200	23501 59th Pl W	SF Residence on 59th Pl.	1	67	2	No	Yes	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	00524100001100	23503 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	00524100001000	23505 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		52
	00524100000900	23507 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		52
	00524100000800	23509 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	00524800001502	6002 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	8		51
	00524800001400	6004 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	8		62
M-34: 73.15	00524800001300	6005 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	8		62
	00524800001200	6003 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	8	1	67
	00524800001100	6001 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	61	Ldn	66	72	--	--	Wall on Structure	N/A	8		53
	00524800001000	6002 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	59	Ldn	66	72	--	--	Wall on Structure	N/A	8		50
	00524800000900	6004 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	8		60
	00524800000800	6006 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	8	1	67
	00524800000700	6005 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	8		65
	00524800000600	6003 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	8		53
	00524800000500	6001 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	58	Ldn	66	72	--	--	Wall on Structure	N/A	8		48
	00524800000100	6102 232nd St SW	SF Residence on 232nd St.	1	73	2	No	No	71	Ldn	66	72	1	--	Wall on Structure	N/A	8		62
	00524800000200	6006 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	65	Ldn	66	72	--	--	Wall on Structure	N/A	8		55
	00524800000300	6004 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	61	Ldn	66	72	--	--	Wall on Structure	N/A	8		50
	00524800000401	6002 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	58	Ldn	66	72	--	--	Wall on Structure	N/A	8		48
	00522000302300	23112 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	69	Ldn	66	73	1	--	Wall on Structure	N/A	8		59
	00522000302400	23110 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	68	Ldn	66	73	1	--	Wall on Structure	N/A	8		59
	00522000302500	23106 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	68	Ldn	66	73	1	--	Wall on Structure	N/A	8		58
	00522000302700	23102 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	8		58
	00522000302800	23010 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	8		57
	00522000302900	23008 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	60	Ldn	66	73	--	--		N/A	8		60
	00522000600100	6008 230th St SW	SF Residence on 230th St.	1	67	2	No	No	52	Ldn	63	68	--	--		N/A	8		52
	00522000600200	23007 61st Ave W	SF Residence on 61st Ave.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A	8		51
	00522000600300	23009 61st Ave W	SF Residence on 61st Ave.	1	63	2	No	No	50	Ldn	60	66	--	--		N/A	8		50
	00522000600400	23101 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000600500	23105 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000600600	23109 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		48
	00522000600800	6007 232nd St SW	SF Residence on 232nd St.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	8		49
	00522000600900	6003 232nd St SW	SF Residence on 232nd St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	00522000601000	23108 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	00522000601100	23106 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000601200	23100 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000601300	23008 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		47
	00522000601400	23006 60st Ave W	SF Residence on 60th Ave.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A	8		50
	00522000601600	6004 230th St SW	SF Residence on 230th St.	1	66	2	No	No	51	Ldn	62	68	--	--		N/A	8		51
																			0
230th Street to 220th Street																			0
	00522000500700	6007 230th St SW	SF Residence on 230th St.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	00522000500600	22909 61st Ave W	SF Residence on 61st Ave.	1	64	2	No	No	42	Ldn	61	66	--	--		N/A			42
M-35: 63.95	00522000500500	22905 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	42	Ldn	59	65	--	--		N/A			42
	00522000500400	22901 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	42	Ldn	59	65	--	--		N/A			42
	00522000500300	22809 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00522000500200	22807 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44

Lynnwood Link Extension FEIS LPA Segment B with 220th South Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
620

Impacts:	Moderate	Severe
	133	65

Residual Impacts	
RSIP =	9

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00522000500100	22803 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300900	22707 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300800	22705 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00523000300700	22703 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00523000300600	22701 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300500	22609 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300400	22607 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00523000300300	22605 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00523000300200	22603 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00523000300100	6004 226th St SW	SF Residence on 226th St.	1	61	2	No	No	51	Ldn	59	65	--	--		N/A			51
	00523000201500	6005 226th St SW	SF Residence on 226th St.	1	59	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000200900	6006 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000200600	6003 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000200200	6004 224th St SW	SF Residence on 224th St.	1	60	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000100900	6003 224th St SW	SF Residence on 224th St.	1	61	2	No	No	54	Ldn	59	65	--	--		N/A			54
	00523000100800	22306 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	54	Ldn	59	65	--	--		N/A			54
	00523000100700	22304 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	Yes	55	Ldn	59	65	--	--		N/A			55
	00523000100600	22302 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	Yes	55	Ldn	59	65	--	--		N/A			55
	00523000100500	22210 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	Yes	53	Ldn	59	65	--	--		N/A			53
	00523000100400	22208 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	Yes	53	Ldn	59	65	--	--		N/A			53
	00523000100300	22206 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	Yes	53	Ldn	60	66	--	--		N/A			53
	00523000100200	22204 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	Yes	53	Ldn	60	66	--	--		N/A			53
	00523000100100	22202 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	Yes	53	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		50
	00524900000500	22111 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	Yes	47	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		46
	00524900000400	22109 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	Yes	47	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		46
	00524900000300	22107 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	Yes	54	Ldn	59	65	--	--	Wall on Structure	N/A	4		46
	00524900000200	22105 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	Yes	54	Ldn	59	65	--	--	Wall on Structure	N/A	4		46
	00524900000100	22103 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	Yes	54	Ldn	61	66	--	--		N/A			54
	00523300002800	5904 221st St SW	SF Residence on 221st St.	1	65	2	No	Yes	53	Ldn	61	67	--	--	Wall on Structure	N/A	4		45
	00523300001700	5905 221st St SW	SF Residence on 221st St.	1	67	2	No	Yes	52	Ldn	63	68	--	--	Wall on Structure	N/A	4		45
	00523300001800	5903 221st St SW	SF Residence on 221st St.	1	67	2	No	Yes	56	Ldn	63	68	--	--	Wall on Structure	N/A	4		48
	00523300001900	5809 221st St SW	SF Residence on 221st St.	1	66	2	No	Yes	56	Ldn	62	68	--	--		N/A			56
																			0
220th Street to 212th Street																			0
	00523300001000	5902 219th St SW	SF Residence on 219th St.	1	73	2	No	Yes	59	Ldn	66	72	--	--	Wall on Structure	N/A	4		50
M-36: 63.325	00523300000700	5905 219th St SW	SF Residence on 219th St.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	4		51
	00523300000600	5901 219th St SW		1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00441000000500	5810 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	Yes	60	Ldn	58	64	1	--	Wall on Structure	N/A	4		51
	00441000000400	5808 218th Pl SW		1	59	2	No	No	61	Ldn	58	64	1	--	Wall on Structure	N/A	4		52
	00441000000600	5811 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	Yes	61	Ldn	58	64	1	--	Wall on Structure	N/A	4		51
	00441000000701	5809 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	Yes	61	Ldn	58	64	1	--	Wall on Structure	N/A	4		51
	00619900005502	21726 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	60	Ldn	61	67	--	--		N/A			60
	00619900005503	21712 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		52
	00619900005300	-	Empty Lot	0	67	--	No	No							Wall on Structure	N/A	4		
	00619900005101	21620 58th Ave W	SF Residence on 58th Ave.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	00619900005103	21616 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
	00619900004900	21530 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
	00619900004700	21528 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
M-37: 65.35	00766700000700	5709 215th Pl SW	SF Residence on 215th Pl.	1	65	2	No	No	56	Ldn	61	67	--	--		N/A			56
	00619900001601	21501 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	56	Ldn	61	67	--	--		N/A			56
	00619900001701	-	Empty Lot	0	65	--	No	No								N/A			
	00619900001702	21404 56th Ave W	SF Residence on 56th Ave.	1	66	2	No	No	56	Ldn	62	68	--	--		N/A			56
	00474800001400	5506 214th Pl SW	SF Residence on 214th Pl.	1	68	2	No	No	55	Ldn	63	69	--	--		N/A			55
	00474800001800	5503 214th Pl SW	SF Residence on 214th Pl.	1	70	2	No	No	50	Ldn	65	70	--	--		N/A			50
	00474800001900	5505 214th Pl SW	SF Residence on 214th Pl.	1	72	2	No	No	50	Ldn	66	72	--	--		N/A			50
	27042800202000	5509 214th Pl SW	SF Residence on 214th Pl.	2	74	2	No	No	56	Ldn	66	73	--	--		N/A			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bl	2	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bl	2	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bl	2	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
M-38: 75.1	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bl	2	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bl	4	75	2	No	No	55	Ldn	66	74	--	--		N/A			55

Lynnwood Link Extension FEIS LPA Segment B with 220th South Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
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Impacts:	Moderate	Severe
	133	65

Residual Impacts	
RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
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	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bl	4	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bl	4	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bl	4	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	2.70428E+13	5302 212th St SW	Duplex on 212th St.	2	74	2	No	No	63	Ldn	66	73	--	--		N/A			63
	2.70428E+13	5228 212th St SW	SF Residence on 212th St.	1	73	2	No	No	62	Ldn	66	72	--	--		N/A			62
	2.70428E+13	5222 212th St SW	Triplex on 212th St.	3	72	2	No	No	62	Ldn	66	72	--	--		N/A			62
																			0
West Side of I-5																			0
SR 104 to 232nd Street																			0
	2.70432E+13	6601 244th St SW	Nile Shrine Golf Course betwee	1	68	3	No	No								N/A			
	00524700001500	6300 234th St SW	SF Residence on 234th St.	1	72	2	No	No	58	Ldn	66	72	--	--		N/A			58
	00524700003400	6301 234th St SW	SF Residence on 234th St.	1	69	2	No	No	58	Ldn	64	70	--	--		N/A			58
	00524700003300	23310 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	61	Ldn	64	70	--	--		N/A			61
	00524700003200	23308 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	61	Ldn	64	70	--	--		N/A			61
	00524700003100	23306 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	61	Ldn	64	70	--	--		N/A			61
	00524700003000	23304 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	4		54
	00524700002900	23302 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		54
	00524700002800	23300 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	00524700002700	23212 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	4		57
	00524700000500	23209 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	66	Ldn	66	75	1	--	Wall on Structure	N/A	4		56
	00524700000400	23207 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	68	Ldn	66	75	1	--	Wall on Structure	N/A	4		58
	00524700000300	23205 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	4		59
	00524700000200	23203 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	4		58
	00524700000100	23201 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	62	Ldn	66	73	--	--	Wall on Structure	N/A	4		53
	2.70432E+13	23117 63rd Ave W	SF Residence on 63rd Ave.	1	77	2	No	No	69	Ldn	66	75	1	--	Wall on Structure	N/A	4		59
																			0
232nd Street to 228th Street																			0
	00522300305300	23115 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	70	Ldn	66	75	1	--	Wall on Structure	N/A	8		58
	00522300305400	23113 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	71	Ldn	66	75	1	--	Wall on Structure	N/A	8		62
	00522300305500	23111 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	8		52
	00522300306400	23014 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	72	Ldn	66	75	1	--	Wall on Structure	N/A	8	1	69
	00522300306500	23015 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	67	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	8		65
	00522300306600	23013 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	66	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	8		64
	00522300306700	23011 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	66	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	8		64
	00522300306800	23009 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	61	Ldn	66	75	--	--		N/A	8		61
	00522300306900	23007 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	61	Ldn	66	75	--	--		N/A	8		61
M-39: 76.45	00522300307000	23005 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	60	Ldn	66	75	--	--		N/A			60
	00522300307100	23003 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	60	Ldn	66	75	--	--		N/A			60
	00522300307200	23001 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	59	Ldn	66	75	--	--		N/A			59
	00522300307201	22909 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	59	Ldn	66	75	--	--		N/A			59
	00522400007301	22905 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	59	Ldn	66	75	--	--		N/A			59
	00522400007300	22903 63rd Ave W	SF Residence on 63rd Ave.	1	75	2	No	No	57	Ldn	66	74	--	--		N/A			57
	00522400007400	22901 63rd Ave W	SF Residence on 63rd Ave.	1	72	2	No	No	56	Ldn	66	72	--	--		N/A			56
	00522300103300	23112 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--		N/A	8		59
	00522300305600	23109 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A	8		62
	00522300306300	23012 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A	8		62
	00522300306200	23010 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	55	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		52
	00522300306100	23008 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	55	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		52
	00522300305700	23107 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	8		49
	00522300305800	23105 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	8		48
	00522300305900	23103 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	8		48
	00522300306000	23101 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	52	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		48
	00522300204600	23002 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		47
	00522300204700	6302 230th St SW	SF Residence on 230th St.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	00522300204500	23004 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	00522300204800	6304 230th St SW	SF Residence on 230th St.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00522400007800	6301 230th St SW	SF Residence on 230th St.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	00522400007700	22906 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	00522400007600	22904 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	00522400007500	22902 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	00522400007900	6303 230th St SW	SF Residence on 230th St.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47

Lynnwood Link Extension FEIS LPA Segment B with 220th South Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
620

Impacts:	Moderate	Severe
	133	65

Residual Impacts	
RSIP =	9

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00522400009200	22807 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00522400009100	22805 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00522400009000	22803 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00522400008900	22801 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
																			0
228th Street to 220th Street																			0
	00524000000500	6101 227th St SW	SF Residence on 227th St.	1	69	2	No	No	62	Ldn	64	70	--	--		N/A			62
M-40: 68.5	00524000000600	6103 227th St SW	SF Residence on 227th St.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	00524000000700	6201 227th St SW	SF Residence on 227th St.	1	68	2	No	No	52	Ldn	63	69	--	--		N/A			52
	00524000000800	6203 227th St SW	SF Residence on 227th St.	1	68	2	No	No	44	Ldn	63	69	--	--		N/A			44
	00524000003501	22611 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00524000003601	22605 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00524000003801	22603 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00524000004000	22601 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	00524000004100	22505 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00524000004200	22503 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	55	Ldn	61	67	--	--		N/A			55
	00524000004300	22501 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	55	Ldn	61	67	--	--		N/A			55
	00524000004400	22407 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	57	Ldn	61	67	--	--		N/A			57
	00524000004500	22405 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--		N/A			60
	00524000004600	22403 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	58	Ldn	61	67	--	--		N/A			58
	00524000004700	22309 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--		N/A			59
	00524000004800	22307 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--		N/A			60
	00524000004900	22305 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--		N/A			60
	00524000005000	-	Empty Lot	0	71	--	No	No								N/A			
	00524000005100	22209 63rd Ave W	SF Residence on 63rd Ave.	1	70	2	No	Yes								N/A			
	00524000005400	22207 62nd Ave W	SF Residence on 62nd Ave.	1	70	2	No	Yes								N/A			
	00524000005500	22205 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	Yes								N/A			
	00524000005600	22203 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	Yes							Wall on Retaining Wall	N/A	4		
	00524000005700	22201 62nd Ave W	SF Residence on 62nd Ave.	1	68	2	No	Yes								N/A			
M-41: 66.9 LEQ	00378200300600	6205 222nd St SW	Empt Lot	0	68	3	No	Yes							Wall on Retaining Wall	N/A	4		
	00524000003400	22610 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	39	Ldn	61	66	--	--		N/A			39
	00524000003300	22608 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	38	Ldn	61	66	--	--		N/A			38
	00524000003200	22606 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	38	Ldn	61	66	--	--		N/A			38
	00524000003100	22604 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	38	Ldn	61	66	--	--		N/A			38
	00524000003000	6202 226th St SW	SF Residence on 226th St.	1	64	2	No	No	44	Ldn	61	66	--	--		N/A			44
	00524000006700	22504 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00524000006800	22502 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00524000007300	22406 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45
	00524000007400	6202 224th St SW	SF Residence on 224th St.	1	64	2	No	No	44	Ldn	61	66	--	--		N/A			44
	00524000008400	6201 224th St SW	SF Residence on 224th St.	1	64	2	No	No	44	Ldn	61	66	--	--		N/A			44
	00524000008500	22302 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	55	Ldn	61	66	--	--		N/A			55
	00524000008600	6202 223rd Pl SW	SF Residence on 223rd Pl.	1	64	2	No	No	49	Ldn	61	66	--	--		N/A			49
	00524000009200	22206 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	Yes	56	Ldn	61	66	--	--		N/A			56
	00524000009301	22204 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	Yes	52	Ldn	61	66	--	--		N/A			52
	00524000009401	22202 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	Yes	50	Ldn	61	66	--	--		N/A			50
	00524000009500	6202 222nd St SW	SF Residence on 222nd St.	1	64	2	No	Yes	53	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		49
	00524000002600	22605 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	35	Ldn	59	65	--	--		N/A			35
	00524000002700	22603 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	35	Ldn	59	65	--	--		N/A			35
	00524000002800	22601 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	34	Ldn	59	65	--	--		N/A			34
	00524000002900	6204 226th St SW	SF Residence on 226th St.	1	62	2	No	No	34	Ldn	59	65	--	--		N/A			34
	00524000006600	6201 226th St SW	SF Residence on 226th St.	1	62	2	No	No	40	Ldn	59	65	--	--		N/A			40
	00524000006900	6202 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	40	Ldn	59	65	--	--		N/A			40
	00524000007200	6201 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	41	Ldn	59	65	--	--		N/A			41
	00524000007500	6204 224th St SW	SF Residence on 224th St.	1	62	2	No	No	39	Ldn	59	65	--	--		N/A			39
	00524000008700	6204 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	No	41	Ldn	59	65	--	--		N/A			41
	00524000009100	6201 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	Yes	45	Ldn	59	65	--	--		N/A			45
	00524000009302	6208 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	Yes	45	Ldn	57	63	--	--		N/A			45
	00524000009402	6207 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	Yes	45	Ldn	57	63	--	--		N/A			45
M-42: 57.4	00524000009700	6206 222nd St S	SF Residence on 222nd St.	2	57	2	No	Yes	47	Ldn	57	63	--	--	Wall on Retaining Wall	N/A	4		46
	00524000009600	6204 222nd St SW	SF Residence on 222nd St.	1	66	2	No	Yes	47	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		46

Lynnwood Link Extension FEIS LPA Segment B with 220th South Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
620

Impacts:	Moderate	Severe
	133	65

Residual Impacts	
RSIP =	9

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00378200300503	6303 222nd St SW	SF Residence on 222nd St.	1	56	2	No	Yes	44	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		44
	00378200300501	6305 222nd St SW	SF Residence on 222nd St.	1	56	2	No	Yes	43	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		42
	00378200300502	6307 222nd St SW	SF Residence on 222nd St.	1	56	2	No	Yes	41	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		41
	00378200300504	22103 64th Ave W	SF Residence on 64th Ave.	1	56	2	No	Yes	40	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		40
M-43: 55.9	00525400001300	6302 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	Yes	44	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		44
	00525400001400	6304 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	Yes	55	Ldn	56	63	--	--		N/A			55
	00525400001500	6306 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	Yes	51	Ldn	56	63	--	--		N/A			51
	00525400001200	6303 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	Yes	55	Ldn	56	63	--	--		N/A			55
	00525400001100	6305 221st Pl SW	SF Residence on 221st PL.	1	58	2	No	Yes	55	Ldn	57	63	--	--		N/A			55
	00525400001000	6307 221st Pl SW		1	58	2	No	Yes	53	Ldn	57	63	--	--		N/A			53
	00525400000900	22007 64th Ave.		1	58	2	No	Yes	51	Ldn	57	63	--	--		N/A			51
	00525400000800	22005 64th Ave.		1	58	2	No	Yes	50	Ldn	57	63	--	--		N/A			50
	00525400000700	6306 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	Yes	52	Ldn	59	65	--	--		N/A			52
	00525400000600	6304 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	Yes	55	Ldn	59	65	--	--		N/A			55
	00525400000500	6302 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	Yes	55	Ldn	59	65	--	--		N/A			55
	00525400000400	6303 220th Pl SW	SF Residence on 220th PL.	1	64	2	No	Yes	55	Ldn	61	66	--	--		N/A			55
	00525400000300	6305 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	Yes	54	Ldn	62	68	--	--	Wall on Structure	N/A	4		47
	00525400000200	6307 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	Yes	56	Ldn	62	68	--	--		N/A			56
	00525400000100	22001 64th Ave.	SF Residence on 220th PL.	1	66	2	No	Yes	54	Ldn	62	68	--	--		N/A			54
																			0
220th Street to 212th Street																			0
M-44: 68.9	27042900100800	6002 St Albion Way-Bldg. E grn	Lakeside Apt. Complex near City	7	69	2	No	No	71	Ldn	64	70	--	7	Wall on Structure	N/A	4		60
	27042900100800	6002 St Albion Way-Bldg. E 2nd	Lakeside Apt. Complex near City	7	69	2	No	No	71	Ldn	64	70	--	7	Wall on Structure	N/A	4		60
	27042900100800	6002 St Albion Way-Bldg. E 3rd	Lakeside Apt. Complex near City	2	69	2	No	No	71	Ldn	64	70	--	2	Wall on Structure	N/A	4		61
	27042900100800	21604 St Albion Way-Bldg. G gr	Lakeside Apt. Complex near City	8	69	2	No	No	65	Ldn	64	70	8	--	Wall on Structure	N/A	4		54
	27042900100800	21604 St Albion Way-Bldg. G 2r	Lakeside Apt. Complex near City	8	69	2	No	No	65	Ldn	64	70	8	--	Wall on Structure	N/A	4		55
	27042900100800	21604 St Albion Way-Bldg. g 3r	Lakeside Apt. Complex near City	8	69	2	No	No	65	Ldn	64	70	8	--	Wall on Structure	N/A	4		56
	27042900100800	6001 St Albion Way-Bldg. F grn	Lakeside Apt. Complex near City	8	69	2	No	Yes	59	Ldn	64	70	--	--	Wall on Structure	N/A	4		50
	27042900100800	6001 St Albion Way-Bldg. F 2nd	Lakeside Apt. Complex near City	8	69	2	No	Yes	59	Ldn	64	70	--	--	Wall on Structure	N/A	4		50
	27042900100800	6001 St Albion Way-Bldg. F 3rd	Lakeside Apt. Complex near City	8	69	2	No	Yes	60	Ldn	64	70	--	--	Wall on Structure	N/A	4		51
																			0
																			0
	00619900005000	-	Empty Lot	0	72	--	No	No							Wall on Structure	N/A	4		
	00619900004800	-	Empty Lot	0	72	--	No	No							Wall on Structure	N/A	4		
	00525100002500	21503 60th Ave W	SF Residence on 60th Ave.	1	72	2	No	No	76	Ldn	66	72	--	1	Wall on Structure	N/A	4		63
	00525100001100	5912 214th St SW	SF Residence on 214th St.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	4		53
	00525100001000	5910 214th St SW	SF Residence on 214th St.	1	67	2	No	No	65	Ldn	63	68	1	--	Wall on Structure	N/A	4		55
	00525100000900	5908 214th St SW	SF Residence on 214th St.	1	69	2	No	No	67	Ldn	64	70	1	--	Wall on Structure	N/A	4		57
	00525100000800	5906 214th St SW	SF Residence on 214th St.	1	72	2	No	No	77	Ldn	66	72	--	1	Wall on Structure	N/A	6		63
	00525100000700	5904 214th St SW	SF Residence on 214th St.	1	67	2	No	No	77	Ldn	63	68	--	1	Wall on Structure	N/A	8	1	63
	00525100000600	5902 214th St SW	SF Residence on 214th St.	1	67	2	No	No	74	Ldn	63	68	--	1	Wall on Retaining Wall	N/A	8		62
	00525100000500	5810 214th St SW	SF Residence on 214th St.	1	67	2	No	No	65	Ldn	63	68	1	--	Wall At-Grade	N/A	4		53
	00525100000400	-	Empty Lot	0	67	--	No	No							Wall At-Grade	N/A	4		
	00525100000300	5806 214th St SW	SF Residence on 214th St.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall At-Grade	N/A	4		54
	00525100000200	5804 214th St SW	SF Residence on 214th St.	1	67	2	Yes	No	64	Ldn	63	68	1	--	Wall At-Grade	Special	4		55
	00525100000100	5802 214th St SW	SF Residence on 214th St.	1	67	2	Yes	No	64	Ldn	63	68	1	--	Wall At-Grade	Special	4		55
	00525100001200	5909 214th St SW	SF Residence on 214th St.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	00525100001300	5907 214th St SW	SF Residence on 214th St.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	4		53
	00525100001400	5905 214th St SW	SF Residence on 214th St.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	8		52
	00525100001500	5903 214th St SW	SF Residence on 214th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	4		55
	00525100001602	5901 214th St SW	SF Residence on 214th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	4		55
	00525100002200	21307 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall At-Grade	N/A	4		55
	00525100002300	5803 214th St SW	SF Residence on 214th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall At-Grade	N/A	4		55
	00525100002400	5801 214th St SW	SF Residence on 214th St.	1	63	2	Yes	No	61	Ldn	60	66	1	--	Wall At-Grade	Special	4		55
	00920100000100	21331 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	55	Ldn	61	66	--	--		N/A			55
	00525100001700	21304 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	56	Ldn	59	65	--	--		N/A			56
	00525100001800	21302 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00525100001900	21301 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00525100002000	21303 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00525100002100	21305 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	56	Ldn	59	65	--	--		N/A			56
	00619900004103	21318 58th Ave W	SF Residence on 58th Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall At-Grade	N/A	4		53

Lynnwood Link Extension FEIS LPA Segment B with 220th South Station Option

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed
620

Impacts:	Moderate	Severe
	133	65

Residual Impacts	
RSIP =	9

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00619900004102	21316 58th Ave W	SF Residence on 58th Ave.	1	61	2	Yes	No	59	Ldn	59	65	1	--	Wall At-Grade	Special	4		54
	00619900004101	21312 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	55	Ldn	59	65	--	--		N/A			55
	00619900003904	21232 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	52	Ldn	59	65	--	--	Wall At-Grade	N/A	10		46
	00619900004104	21314 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	53	Ldn	59	65	--	--	Wall At-Grade	N/A	10		46
	00619900003804	5908 212th Pl SW	SF Residence on 212th Pl.	1	62	2	No	No	50	Ldn	59	65	--	--	Wall At-Grade	N/A	10		44
	00404100000400	21317 58th Ave W	SF Residence on 58th Ave.	1	67	2	No	No	74	Ldn	63	68	--	1	Wall At-Grade	N/A	10		62
	00404100000300	5720 213th St SW	SF Residence on 213th St.	1	64	2	Yes	No	66	Ldn	61	66	--	1	Wall At-Grade	Special	10		53
	00404100000200	5710 213th St SW	SF Residence on 213th St.	1	67	2	Yes	No	80	Ldn	63	68	--	1	Wall At-Grade	Special	10		61
M-45: 66.95	00404100000100	5632 213th St SW	SF Residence on 213th St.	1	67	2	Yes	No	84	Ldn	63	68	--	1	Wall At-Grade	Special	10	1	64
	00619900002602	21229 58th Ave W	Duplex on 58th Ave.	2	60	2	No	No	55	Ldn	58	64	--	--	Wall At-Grade	N/A	10		49
	00619900002501	5723 213th St SW	SF Residence on 213th St.	1	60	2	Yes	No	59	Ldn	58	64	1	--	Wall At-Grade	Special	10		50
	00619900002502	5721 213th St SW	SF Residence on 213th St.	1	60	2	Yes	No	55	Ldn	58	64	--	--	Wall At-Grade	Special	10		48
	00619900002503	5719 213th St SW	SF Residence on 213th St.	1	60	2	No	No	53	Ldn	58	64	--	--	Wall At-Grade	N/A	10		46
	00619900002504	5717 213th St SW	SF Residence on 213th St.	1	60	2	No	No	50	Ldn	58	64	--	--	Wall At-Grade	N/A	10		44
	00619900002402	5711 213th St SW	SF Residence on 213th St.	1	61	2	Yes	No	62	Ldn	59	65	1	--	Wall At-Grade	Special	10		52
	00619900002403	5709 213th St SW	SF Residence on 213th St.	1	61	2	Yes	No	58	Ldn	59	65	--	--	Wall At-Grade	Special	10		49
	00619900002404	5707 213th St SW	SF Residence on 213th St.	1	62	2	Yes	No	55	Ldn	59	65	--	--	Wall At-Grade	Special	10		47
	00619900002303	5627 213th St SW	Duplex on 213th St.	2	61	2	Yes	No	65	Ldn	59	65	--	2	Wall At-Grade	Special	10		53
	00619900002301	5623 213th St SW	SF Residence on 213th St.	1	61	2	Yes	No	61	Ldn	59	65	1	--	Wall At-Grade	Special	10		51
	00619900003000	5700 212th St SW	SF Residence on 213th St.	1	61	2	No	No	55	Ldn	59	65	--	--	Wall At-Grade	N/A	10		48
	00619900002900	5616 212th St SW	SF Residence on 213th St.	1	61	2	No	No	52	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	10		43
	00619900002201	5619 213th St SW	SF Residence on 213th St.	1	61	2	Yes	No	58	Ldn	59	65	--	--	Wall on Retaining Wall	Special	10		48
	00619900002202	5625 213th St SW	SF Residence on 213th St.	1	63	2	Yes	No	75	Ldn	60	66	--	1	Wall At-Grade	Special	10	1	61
	00619900002101	5615 213th St SW	SF Residence on 213th St.	1	63	2	Yes	No	76	Ldn	60	66	--	1	Wall At-Grade	Special	10	1	61
	00619900002000	5604 212th St SW	SF Residence on 212th St.	1	72	2	Yes	No	73	Ldn	66	72	--	1	Wall At-Grade	Special	10		60
	27042800202400	None Given	SF Residence on 212th St.	1	72	2	No	No							Wall At-Grade	N/A	10		
	27042800202200	5522 212th St SW	SF Residence on 212th St.	1	72	2	No	No							Wall on Retaining Wall	N/A	10		
	27042800202100	-	Empty Lot	0	72	--	No	No							Wall on Retaining Wall	N/A	10		
	00619900002102	5610 212th St SW	SF Residence on 212th St.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	10		47
	00619900002700	5602 212th St SW	SF Residence on 212th St.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall At-Grade	N/A	10		53
	27042800202300	None Given	old number 00619900002300	1	71	2	No	No							Wall At-Grade	N/A	10		
	27042100306900	5615 212th St SW	SF Residence on 212th St.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall At-Grade	N/A	10		47
	27042100308400	-	Empty Lot	0	71	--	No	No							Wall At-Grade	N/A	10		
	27042100307700	5605 212th St SW	SF Residence on 212th St.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	10		49
	27042100310500	5525 212th St SW	SF Residence on 212th St.	1	65	2	No	No	65	Ldn	61	67	1	--	Wall on Retaining Wall	N/A	10		55
M-46: 68.35	27042100305400	20908 54th Ave W #1	Zoned Campground on 54th Ave./212th St.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	10		53

ATTACHMENT B

Part 1. Detailed Noise Impact Analysis Sheets: A Alternatives

Lynnwood Link Extension A1

Stations: 145th Option 1
185th Option 1

Total Units Analyzed
837

Impacts:	Moderate	Severe
	190	29

Residual Impacts	
RSIP =	0

Receiver Information				Impact Analysis										Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
Northgate to NE 1																			
M-1: 71.5	2926049011	11200 1st Ave Ne	Southern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	69	Ldn	66	72	8	--	Wall on Structure	N/A	4		61
	2926049011	11200 1st Ave Ne	Southern F. line 2nd floor Apts. on 1st Ave.	4	72	2	No	No	70	Ldn	66	72	4	--	Wall on Structure	N/A	4		61
	2926049011	11200 1st Ave Ne	Northern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	71	Ldn	66	72	8	--	Wall on Structure	N/A	4		63
	2926049011	11200 1st Ave Ne	Northern F. line 2nd floor Apts. on 1st Ave.	8	72	2	No	No	72	Ldn	66	72	--	8	Wall on Structure	N/A	4		63
	2926049011	11200 1st Ave Ne	Front line Apts. on Northgate Way	1	72	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		61
	2926049011	11200 1st Ave Ne	Second line Apts. on Northgate Way	4	72	2	No	No	64	Ldn	66	72	--	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Third line Apts. on Northgate Way	5	72	2	No	No	61	Ldn	66	72	--	--	Wall on Structure	N/A	4		52
M-3: 60.8 LEQ	2926049011	11200 1st Ave Ne	Southern 2nd line ground level Apts. on 1st Ave.	4	65	2	No	No	63	Ldn	61	67	4	--	Wall on Structure	N/A	4		55
	2926049011	11200 1st Ave Ne	Southern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	64	Ldn	61	67	4	--	Wall on Structure	N/A	4		55
	2926049011	11200 1st Ave Ne	Northern 2nd line ground level Apts. on 1st Ave.	8	65	2	No	No	64	Ldn	61	67	8	--	Wall on Structure	N/A	4		55
	2926049011	11200 1st Ave Ne	Northern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	65	Ldn	61	67	4	--	Wall on Structure	N/A	4		55
	2926049011	11200 1st Ave Ne	Southern 3rd line ground level Apts. on 1st Ave.	4	63	2	No	No	61	Ldn	60	66	4	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Southern 3rd line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	62	Ldn	60	66	4	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Northern 3rd line ground level Apts. on 1st Ave.	8	63	2	No	No	62	Ldn	60	66	8	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Northern 3rd line 2nd floor Apts. on 1st Ave.	8	63	2	No	No	63	Ldn	60	66	8	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Southern 4th line ground level Apts. on 1st Ave.	10	63	2	No	No	59	Ldn	60	66	--	--		N/A			59
	2926049011	11200 1st Ave Ne	Southern 4th line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	60	Ldn	60	66	4	--	Wall on Structure	N/A	4		50
	2926049011	11200 1st Ave Ne	Northern 4th line ground level Apts. on 1st Ave.	11	63	2	No	No	60	Ldn	60	66	11	--	Wall on Structure	N/A	4		51
	2926049011	11200 1st Ave Ne	Northern 4th line 2nd floor Apts. on 1st Ave.	11	63	2	No	No	61	Ldn	60	66	11	--	Wall on Structure	N/A	4		51
	2926049011	11200 1st Ave Ne	Southern ground level Apts. E of 2nd Ave.	10	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		50
	2926049011	11200 1st Ave Ne	Southern 2nd floor Apts. E of 2nd Ave.	10	63	2	No	No	59	Ldn	60	66	--	--		N/A			59
	2926049011	11200 1st Ave Ne	Northern ground level Apts. E of 2nd Ave.	6	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
	2926049011	11200 1st Ave Ne	Northern 2nd floor Apts. E of 2nd Ave.	6	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
M-2: 73.5	6174800000	11300 1st Ave Ne	Front line ground level condos on 1st Ave. courtyard	11	74	2	No	No	68	Ldn	66	73	11	--	Wall on Retaining Wall	N/A	4		62
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on 1st Ave. courtyard	11	74	2	No	No	68	Ldn	66	73	11	--	Wall on Retaining Wall	N/A	4		62
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on 1st Ave. courtyard	11	74	2	No	No	68	Ldn	66	73	11	--	Wall on Retaining Wall	N/A	4		62
	6174800000	11300 1st Ave Ne	Front line ground level condos on south side	5	74	2	No	No	67	Ldn	66	73	5	--	Wall on Structure	N/A	4		59
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on south side	5	74	2	No	No	69	Ldn	66	73	5	--	Wall on Structure	N/A	4		59
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on south side	5	74	2	No	No	69	Ldn	66	73	5	--	Wall on Structure	N/A	4		59
										Leq									
	2926049050	11355 3rd Ave Ne-Bldg. E	1st Floor Citigate Apts.=108 unit Apt. complex that would be front line if M-2 is displaced	4	66	2	No	No	57	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		52
	2926049050	11355 3rd Ave Ne-Bldg. E	2nd Floor at Citigate Apts.	4	66	2	No	No	57	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		52
	2926049050	11355 3rd Ave Ne-Bldg. E	3rd Floor at Citigate Apts.	4	66	2	No	No	57	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		52
	2926049050	11355 3rd Ave Ne-East of Bldg. E	1st Floor Citigate Apts.- 2nd line	2	63	2	No	No	52	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		48
	2926049050	11355 3rd Ave Ne-East of Bldg. E	2nd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	52	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		48
	2926049050	11355 3rd Ave Ne-East of Bldg. E	3rd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	52	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		48
M-4: 65.65	2926049529	133 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		54
	2926049530	139 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		48
	2926049531	145 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	50	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		45

Lynnwood Link Extension A1

Stations: 145th Option 1
185th Option 1

Total Units Analyzed
837

Impacts:	Moderate	Severe
	190	29

Residual Impacts	
RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis			
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2926049532	151 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	2926049533	157 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	47	Ldn	60	66	--	--		N/A			47
	2926049192	303 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	2926049418	11352 3rd Ave	SF Residence on 115th St.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	2926049191	315 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	44	Ldn	59	65	--	--		N/A			44
NE 115th Street to 117th Street																			
	6411600161	136 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	59	Ldn	62	68	--	--		N/A			59
	6411600162	142 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	53	Ldn	62	68	--	--		N/A			53
	6411600163	148 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	49	Ldn	61	66	--	--		N/A			49
	6411600164	154 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	46	Ldn	60	66	--	--		N/A			46
	7810300035	147 Ne 116th St	Duplex on 116th St.	2	66	2	No	No	58	Ldn	62	68	--	--		N/A			58
	7810300030	11519 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	7810300025	11523 3rd Ave N	SF Residence on 3rd Ave.	1	66	2	No	No	57	Ldn	62	68	--	--		N/A			57
	6411600147	156 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No	55	Ldn	61	66	--	--		N/A			55
	7810300005	150 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57
	6411600146	157 Ne 117th St	SF Residence on 117th St.	1	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	6411600186	11622 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	6411600185	11610 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	6411600182	11606 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	41	Ldn	59	65	--	--		N/A			41
	6411600188	11600 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	6411600172	11526 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	6411600170	11522 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	6161000031	11514 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	6161000022	11508 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	6161000021	304 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	6411600173	316 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	6411600171	322 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	44	Ldn	59	65	--	--		N/A			44
	6161000015	11515 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	6161000010	11519 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	6161000005	11527 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	49	Ldn	59	65	--	--		N/A			49
	6161000035	11533 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	50	Ldn	59	65	--	--		N/A			50
	6411600181	11539 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	49	Ldn	59	65	--	--		N/A			49
	6411600180	11545 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	49	Ldn	59	65	--	--		N/A			49
	6411600183	325 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	6411600187	321 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	50	Ldn	59	65	--	--		N/A			50
	6411600184	311 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	54	Ldn	59	65	--	--		N/A			54
	6411600200	401 Ne 117th St	SF Residence on 117th St.	1	61	2	No	No	46	Ldn	59	65	--	--		N/A			46
	6411600198	11544 4th Ave Ne	SF Residence on 4th Ave.	1	61	2	No	No	47	Ldn	59	65	--	--		N/A			47
	6411600201	11536 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	46	Ldn	58	64	--	--		N/A			46
	6411600199	11532 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	46	Ldn	58	64	--	--		N/A			46
	6411600207	11524 4th Ave Ne	SF Residence on 4th Ave.	1	58	2	No	No	46	Ldn	57	63	--	--		N/A			46
M-4: 56.775	6411600211	11516 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	44	Ldn	57	63	--	--		N/A			44
	6411600209	11510 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	43	Ldn	57	63	--	--		N/A			43
	6411600213	11529 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	43	Ldn	57	63	--	--		N/A			43
	6411600195	11537 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	44	Ldn	57	63	--	--		N/A			44
	6411600202	11547 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	46	Ldn	57	63	--	--		N/A			46
	6411600196	11545 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	44	Ldn	58	64	--	--		N/A			44
	6411600203	11533 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	43	Ldn	58	64	--	--		N/A			43
	6411600208	11525 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	42	Ldn	58	64	--	--		N/A			42
NE 117th Street to 120th Street																			
	6411600414	308 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		48
	6411600413	11708 3rd Ave Ne	SF Residence	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	4		52
	6411600420	11710 3rd Ave Ne	Church	0	62	3	No	No							Wall on Retaining Wall	N/A	4		
	6411600429	323 Ne 120th St	SF Residence north of the church	0	62	2	No	No							Wall At-Grade	N/A	4		
	6411600430	325 Ne 120th St	SF Residence north of the church	0	62	2	No	No							Wall on Retaining Wall	N/A	4		
	6411600443	11737C 5th Ave Ne	SF Residence north of the church	1	62	2	No	No	56	Ldn	59	65	--	--	Increase I-5 wall height	N/A	4		50
	6411600442	11737 5th Ave Ne Unit B	SF Residence north of the church	1	62	2	No	No	48	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		43
	6411600441	11737 5th Ave Ne Unit A	SF Residence north of the church	1	62	2	No	No	44	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		39
	6411600440	11743 5th Ave Ne	SF Residence north of the church	1	63	2	No	No	40	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		36
	6411600451	11729 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	43	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		39
	6411600452	11727 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	46	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		42
M-6 62.2	6411600450	11725 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	53	Ldn	59	65	--	--	Wall At-Grade	N/A	4		48

Lynnwood Link Extension A1

Stations: 145th Option 1
185th Option 1

Total Units Analyzed
837

Impacts:	Moderate	Severe
	190	29

Residual Impacts	
RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	6411600464	11723 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	52	Ldn	59	65	--	--	Wall At-Grade	N/A	4		48
	6411600463	11721 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	46	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		42
	6411600461	11719 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	36	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		32
	6411600462	11715 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	35	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		31
	6411600412	316 Ne 117th St	SF Residence east of the church	1	64	2	No	No	45	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		40
	6411600410	322 Ne 117th St	SF Residence south of the church	1	64	2	No	No	42	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		37
	6411600411	326 Ne 117th St	SF Residence south of the church	1	62	2	No	No	40	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		35
	6411600471	332 Ne 117th St	SF Residence south of the church	1	62	2	No	No	37	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		33
	6411600472	336 Ne 117th St	SF Residence south of the church	1	62	2	No	No	35	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		31
	6411600473	342 Ne 117th St	SF Residence south of the church	1	63	2	No	No	34	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		30
	6411600470	11707 5th Ave Ne	SF Residence south of the church	1	65	2	No	No	38	Ldn	61	67	--	--	Wall At-Grade	N/A	4		34
	6413100228	11718 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	49	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		46
	6413100229	11714 5th Ave Ne	SF Residence south of the church	1	63	2	No	No	48	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		45
	6413100241	11726 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	49	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		46
	6413100240	11734 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	49	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		46
	6411600428	327 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	61	Ldn	62	68	--	--	Increase I-5 wall height	N/A	4		54
	2238000050	331 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	56	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		49
	2238000045	337 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	50	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		44
	2238000040	343 Ne 120th St	SF Residence on 120th St.	1	62	2	No	No	46	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		41
	2238000035	349 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	43	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		38
	2238000030	11755 5th Ave Ne	SF Residence on 120th St.	1	65	2	No	No	41	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		37
NE 120th Street to NE 125th Street																			
	6412100091	332 Ne 120th St	SF Residence on 120th St.	0	65	2	No	No							Wall on Retaining Wall	N/A	4		
	6412100097	338 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	60	Ldn	61	67	--	--	Increase I-5 wall height	N/A			60
	6412100092	344 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	53	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		47
	6412100095	348 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	47	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		42
	6412100096	12001 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	44	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		40
	2237500025	12004 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	52	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		48
	2237500020	510 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	51	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		47
	2237500015	516 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	50	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		46
	2237500030	12014 5th Ave Ne	SF Residence on 120th St.	1	66	2	No	No	56	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		51
	6412100090	12015 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	55	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		49
	6412100093	12021 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	51	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		45
	6413600015	12016 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	56	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		52
	6413600005	12018 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	52	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		48
	6413600010	12020 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		50
	6413600020	12022 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	58	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		54
	6412100094	12025 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	57	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		51
	6412100085	12027 5th Ave Ne	SF Residence near noise wall	1	65	2	No	No	60	Ldn	61	67	--	--	Increase I-5 wall height	N/A			60
	6412100087	12029 5th Ave Ne	SF Residence next to noise wall	0	65	2	No	No							Wall on Retaining Wall	N/A	4		
	6412100080	12035 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	60	Ldn	63	68	--	--	Increase I-5 wall height	N/A	4		54
	6412100082	12045 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	61	Ldn	63	68	--	--	Increase I-5 wall height	N/A	4		54
	6412100081	12049 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	60	Ldn	63	68	--	--	Wall At-Grade	N/A	4		53
	6412100084	12051 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No							Wall At-Grade	N/A	4		
	6412100280	12301 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No							Wall on Retaining Wall	N/A	4		
	6412100281	12311 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Retaining Wall	N/A	4		
	6412100282	12321 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Retaining Wall	N/A	4		
	6412100283	12327 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Retaining Wall	N/A	4		
	6412100284	12401 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Retaining Wall	N/A	4		
	6412100250	12417 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Retaining Wall	N/A	4		
	6413600026	12030 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	46	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	6413600036	12032 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		50
	6413600072	12035 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	51	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		47
	6413600079	12037 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	51	Ldn	61	67	--	--	Wall At-Grade	N/A	4		48
	6413600034	12034 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		51
	6413600035	12036 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
M-7: 68.27	6413600040	12042 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	6413600041	12044 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--	Wall At-Grade	N/A	4		51

Lynnwood Link Extension A1

Stations: 145th Option 1
185th Option 1

Total Units Analyzed
837

Impacts:	Moderate	Severe
	190	29

Residual Impacts	
RSIP =	0

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	6413600051	521 Ne 123rd St	SF Residence on 123rd	1	65	2	No	No	53	Ldn	61	67	--	--	Wall At-Grade	N/A	4		49
	6413600052	515 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	56	Ldn	62	68	--	--	Wall At-Grade	N/A	4		51
	6413600045	12048 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall At-Grade	N/A	4		43
	6413600050	12054 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	53	Ldn	63	69	--	--	Wall At-Grade	N/A	4		48
	6413600339	12302 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	6413600340	510 Ne 123rd St	SF Residence on 123rd	1	67	2	No	No	53	Ldn	63	68	--	--		N/A			53
	6413600335	518 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	51	Ldn	62	68	--	--		N/A			51
	6413600338	522 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	48	Ldn	62	68	--	--		N/A			48
	6413600337	12308 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	6413600345	12316 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	6413600343	12320 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	6413600347	12312 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	53	Ldn	63	68	--	--		N/A			53
	6413600346	12314 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	50	Ldn	62	68	--	--		N/A			50
	9509900045	521 Ne 124th St	SF Residence on 124th	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
	9509900040	515 Ne 124th St	SF Residence on 124th	1	66	2	No	No	52	Ldn	62	68	--	--		N/A			52
	9509900035	509 Ne 124th St	SF Residence on 124th	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	9509900030	503 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	9509900005	500 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	9509900010	508 Ne 124th St	SF Residence on 124th	1	68	2	No	No	55	Ldn	63	69	--	--		N/A			55
	9509900015	514 Ne 124th St	SF Residence on 124th	1	68	2	No	No	52	Ldn	63	69	--	--		N/A			52
	9509900020	520 Ne 124th St	SF Residence on 124th	1	67	2	No	No	49	Ldn	63	68	--	--		N/A			49
	6413600378	527 Ne 125th St	SF Residence on 125th	1	66	2	No	No	48	Ldn	62	68	--	--		N/A			48
	6413600377	523 Ne 125th St	SF Residence on 125th	1	67	2	No	No	51	Ldn	63	68	--	--		N/A			51
	6413600376	513 Ne 125th St	SF Residence on 125th	1	68	2	No	No	55	Ldn	63	69	--	--		N/A			55
	6413600375	505 Ne 125th St	SF Residence on corner of 5th and 125th	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
NE 125th Street to NE 127th Street																			
	6414100010	502 Ne 125th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100013	510 Ne 125th St	SF Residence on 125th	1	68	2	No	No	43	Ldn	63	69	--	--		N/A			43
	6414100012	514 Ne 125th St	SF Residence on 125th	1	67	2	No	No	40	Ldn	63	68	--	--		N/A			40
	6414100011	516 Ne 125th St	SF Residence on 125th	1	67	2	No	No	49	Ldn	63	68	--	--		N/A			49
	6414100023	12514 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
	6414100024	12512 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	6414100021	12518 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100020	12520 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100028	12528 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100025	12526 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	6414100029	12524 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	49	Ldn	61	67	--	--		N/A			49
	6414100026	12532 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	40	Ldn	62	68	--	--		N/A			40
	6414100027	12534 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100033	12542 5th Ave Ne	Empty Lot	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100030	12542 5th Ave Ne	SF Residence on 5th Ave.	1	69	2	No	No	51	Ldn	64	70	--	--		N/A			51
	6414100032	12546 5th Ave Ne Unit B	SF Residence on 5th Ave.	1	68	2	No	No	41	Ldn	63	69	--	--		N/A			41
	6414100031	12546 5th Ave Ne Unit C	SF Residence on 5th Ave.	1	68	2	No	No	38	Ldn	63	69	--	--		N/A			38
	6414100039	527 NE 127th St	SF Residence on 127th	1	68	2	No	No	36	Ldn	63	69	--	--		N/A			36
	6414100038	521 NE 127th St	SF Residence on 127th	1	68	2	No	No	37	Ldn	63	69	--	--		N/A			37
	6414100037	515 NE 127th St	SF Residence on 127th	1	69	2	No	No	40	Ldn	64	70	--	--		N/A			40
	6414100036	509 NE 127th St	SF Residence on 127th	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	6414100035	503 NE 127th St	SF Residence on corner of 127th and 5th	1	69	2	No	No	51	Ldn	64	70	--	--		N/A			51
NE 127th Street to Roosevelt Way NE Ja																			
M-9: 70.45	6414100732	502 NE 127th St	SF Residence on corner of 127th and 5th	1	70	2	No	No	51	Ldn	65	70	--	--		N/A			51
	6414100731	514 NE 127th St	SF Residence on 127th	1	70	2	No	No	42	Ldn	65	70	--	--		N/A			42
	6414100733	522 NE 127th St	SF Residence on 127th	1	69	2	No	No	39	Ldn	64	70	--	--		N/A			39
	6414100741	Grace Church open area	Empty Lot	0	64	3	No	No								N/A			
	6414100730	12708 5th Ave Ne	SF Residence on 5th Ave.	1	71	2	No	No	51	Ldn	66	71	--	--		N/A			51
	6414100740	12718 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	No	No	57	Ldn	66	72	--	--		N/A			57
	6414100751	12726 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	60	Ldn	66	72	--	--		N/A			60
	6414100750	12732 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	61	Ldn	66	72	--	--		N/A			61
M-10: 73.8	6414100759	12740 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	No	No	62	Ldn	66	73	--	--		N/A			62
	6414100760	12759 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	No	No	56	Ldn	66	72	--	--		N/A			56
	6414100752	12749 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	72	2	No	No	51	Ldn	66	72	--	--		N/A			51
	6414100753	12745 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	No	No	50	Ldn	66	72	--	--		N/A			50
	1854700005	502 Ne 130th St	SF Residence on 130th	1	74	2	No	No	64	Ldn	66	73	--	--		N/A			64
	1854700010	510 Ne 130th St	SF Residence on 130th	1	74	2	No	No	56	Ldn	66	73	--	--		N/A			56

Lynnwood Link Extension A1

Stations: 145th Option 1
185th Option 1

Total Units Analyzed
837

Impacts:	Moderate	Severe
	190	29

Residual Impacts	
RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis			
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	1854700015	516 Ne 130th St	SF Residence on 130th	1	73	2	No	No	52	Ldn	66	72	--	--		N/A			52
	1787600096	519 Ne 131st Pl	SF Residence on 131st Place	1	73	2	No	No	52	Ldn	66	72	--	--		N/A			52
	1787600095	511 Ne 131st Pl	SF Residence on 131st Place	1	74	2	No	No	55	Ldn	66	73	--	--		N/A			55
	1787600098	505 Ne 131st Pl	SF Residence on 131st Place	1	74	2	No	No	64	Ldn	66	73	--	--		N/A			64
	1787600090	N Seattle Church of Naz	Empty Lot that is part of 13130 5th Church	0	72	3	No	No	61	Leq	71	77	--	--		N/A			61
	1787600094	510 Ne 131st Pl	SF Residence on 131st Place	1	72	2	No	No	55	Ldn	66	72	--	--		N/A			55
	1787600093	520 Ne 131st Pl	SF Residence on 131st Place	1	71	2	No	No	52	Ldn	66	71	--	--		N/A			52
	1787600085	13130 5th Ave Ne	Church on 5th Ave.	1	67	2	No	No	56	Ldn	63	68	--	--		N/A			56
M-11: 66.7 & 66.8	1787600085	13130 5th Ave Ne	Church on 5th Ave.	1	68	3	No	No	56	Leq	68	74	--	--		N/A			56
	2026049004	1000 NE 135th		1	70	3	No	No								N/A			
NE 145th Street to NE 148th Street																			
	7568700780	501 Ne 145th St	Water pump station	0	74				0	Leq	66	73	--	--					0
	7568700785	14512 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	No	Yes	67	Ldn	66	73	1	--	Wall on Structure	N/A	4		58
	7568700790	14518 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	Yes	66	Ldn	66	72	1	--	Wall on Structure	N/A	4		58
M-14: 72.8	7568700795	14526 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	Yes	66	Ldn	66	72	1	--	Wall on Structure	N/A	4		58
	7568700800	14532 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	Yes	66	Ldn	66	72	1	--	Wall on Structure	N/A	4		57
	7568700805	14540 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	Yes	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		53
	7568700810	14544 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	Yes	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		53
	7568700815	14552 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	Yes	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		53
	7568700820	14556 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	Yes	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		52
	7568700825	14560 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	No	Yes	61	Ldn	66	72	--	--	Wall on Structure	N/A	4		52
	7568700830	14570 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	Yes	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	7568700835	14574 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	Yes	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	7568700836	14578 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	Yes	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	7568700775	-	Empty Lot	0	74														
	7568700770	516 Ne 145th St	SF Residence on 145th	1	73	2	No	Yes	59	Ldn	66	72	--	--	Wall on Structure	N/A	4		50
	7568700765	522 Ne 145th St	SF Residence on 145th	1	72	2	No	Yes	59	Ldn	66	72	--	--	Wall on Structure	N/A	4		49
	7568700760	14515 6th Ave Ne	SF Residence on 6th Ave.	1	69	2	No	Yes	61	Ldn	64	70	--	--	Wall on Structure	N/A	4		52
	7568700755	14521 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	No	Yes	61	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	7568700745	14525 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	No	Yes	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	7568700740	14535 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	No	Yes	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		51
	7568700734	14541 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	Yes	56	Ldn	60	66	--	--	Wall on Structure	N/A	4		47
M-15: 62.65	7568700730	14549 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	Yes	56	Ldn	60	66	--	--	Wall on Structure	N/A	4		47
	7568700725	14555 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	No	Yes	55	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	7568700720	14565 6th Ave Ne	SF Residence on 6th Ave.	1	61	2	No	Yes	55	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	7568700715	14567 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	No	Yes	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	7568700705	14579 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	No	Yes	53	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	7568700710	515 NE 148th St.	SF Residence on 6th Ave.	1	62	2	No	Yes	55	Ldn	59	65	--	--	Wall on Structure	N/A	4		46
	7568700695	14572 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	No	Yes	51	Ldn	59	65	--	--	Wall on Structure	N/A	4		44
	7568700690	14566 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	No	Yes	52	Ldn	59	65	--	--	Wall on Structure	N/A	4		45
	7568700685	14562 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	Yes	53	Ldn	60	66	--	--	Wall on Structure	N/A	4		45
	7568700680	14550 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	Yes	53	Ldn	60	66	--	--	Wall on Structure	N/A	4		45
	7568700675	14548 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	No	Yes	53	Ldn	61	66	--	--	Wall on Structure	N/A	4		45
	7568700670	14542 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	No	Yes	57	Ldn	61	66	--	--	Wall on Structure	N/A	4		48
	7568700665	14528 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	No	Yes	57	Ldn	61	67	--	--	Wall on Structure	N/A	4		48
	7568700660	14526 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	No	Yes	57	Ldn	61	67	--	--	Wall on Structure	N/A	4		48
	7568700655	14522 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	No	Yes	57	Ldn	62	68	--	--	Wall on Structure	N/A	4		48
	7568700650	14518 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	No	Yes	58	Ldn	62	68	--	--	Wall on Structure	N/A	4		48
NE 148th Street to NE 149th Street																			
	8680300045	327 Ne 148th St	SF Residence on 148th	0	70	2	No	Yes							Wall on Structure	N/A	6		
	8680300050	333 Ne 148th St	SF Residence on 148th	0	70	2	No	Yes							Wall on Structure	N/A	4		
	8680300055	339 Ne 148th St	SF Residence on 148th	0	70	2	No	Yes							Wall on Structure	N/A	4		
	8680300060	345 Ne 148th St	SF Residence on 148th	0	70	2	No	Yes							Wall on Structure	N/A	4		
	2881700402	14727 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	Yes							Wall on Structure	N/A	4		
	2881700400	-	Empty Lot	0	67	2	No	Yes							Wall on Structure	N/A	4		
	8680300040	316 Ne 148th St	SF Residence on 148th	0	70	2	No	Yes							Wall on Structure	N/A	6		
	8680300035	324 Ne 148th St	SF Residence on 148th	1	70	2	No	Yes	73	Ldn	65	70	--	1	Wall on Structure	N/A	6		60
	8680300030	330 Ne 148th St	SF Residence on 148th	1	70	2	No	Yes	70	Ldn	65	70	--	1	Wall on Structure	N/A	6		58
	8680300025	336 Ne 148th St	SF Residence on 148th	1	70	2	No	Yes	63	Ldn	65	70	--	--	Wall on Structure	N/A	6		52
	8680300020	342 Ne 148th St	SF Residence on 148th	1	67	2	No	Yes	62	Ldn	63	68	--	--	Wall on Structure	N/A	6		50
M-16: 66.95	8680300015	348 Ne 148th St	SF Residence on 148th	1	67	2	No	Yes	60	Ldn	63	68	--	--	Wall on Structure	N/A	6		48
	8680300010	358 Ne 148th St	SF Residence on 148th	1	67	2	No	Yes	60	Ldn	63	68	--	--	Wall on Structure	N/A	6		48
	8680300005	14807 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	Yes	59	Ldn	63	68	--	--	Wall on Structure	N/A	6		47
	2004100090	357 Ne 149th St	SF Residence on 149th	1	67	2	No	Yes	59	Ldn	63	68	--	--	Wall on Structure	N/A	6		47
	2004100085	351 Ne 149th St	SF Residence on 149th	1	67	2	No	Yes	59	Ldn	63	68	--	--	Wall on Structure	N/A	6		47

Lynnwood Link Extension A1

Stations: 145th Option 1
185th Option 1

Total Units Analyzed
837

Impacts:	Moderate	Severe
	190	29

Residual Impacts	
RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2004100080	345 Ne 149th St	SF Residence on 149th	1	67	2	No	Yes	60	Ldn	63	68	--	--	Wall on Structure	N/A	6		48
	2004100075	339 Ne 149th St	SF Residence on 149th	1	67	2	No	Yes	60	Ldn	63	68	--	--	Wall on Structure	N/A	6		48
	2004100065	333 Ne 149th St	SF Residence on 149th	1	68	2	No	Yes	62	Ldn	63	69	--	--	Wall on Structure	N/A	6		51
	2004100060	327 Ne 149th St	SF Residence on 149th	1	69	2	No	Yes	63	Ldn	64	70	--	--	Wall on Structure	N/A	6		52
	2004100055	321 Ne 149th St	SF Residence on 149th	1	70	2	No	Yes	71	Ldn	65	70	--	1	Wall on Structure	N/A	6		60
	2004100050	309 Ne 149th St	SF Residence on 149th	1	70	2	No	Yes	75	Ldn	65	70	--	1	Wall on Structure	N/A	6		62
	2004100052	305 Ne 149th St	SF Residence on 149th	0	70	2	No	Yes							Wall on Structure	N/A	6		
	2004100045	308 Ne 149th St	SF Residence on 149th	0	70	2	No	No							Wall on Structure	N/A	4		
M-17: 70.05	2004100040	314 Ne 149th St	SF Residence on 149th	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	2004100035	320 Ne 149th St	SF Residence on 149th	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		62
	2004100030	326 Ne 149th St	SF Residence on 149th	1	68	2	No	Yes	70	Ldn	63	69	--	1	Wall on Structure	N/A	4		61
	2004100025	332 Ne 149th St	SF Residence on 149th	1	68	2	No	Yes	64	Ldn	63	69	1	--	Wall on Structure	N/A	4		55
	2004100020	338 Ne 149th St	SF Residence on 149th	1	67	2	No	Yes	62	Ldn	63	68	--	--		N/A			62
NE 148th Street to NE 152nd Street																			
	7568700355	14802 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	Yes	51	Ldn	61	67	--	--	Wall on Structure	N/A	6		43
	7568700360	14808 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	Yes	51	Ldn	61	67	--	--	Wall on Structure	N/A	6		42
	7568700365	14812 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	Yes	51	Ldn	61	66	--	--	Wall on Structure	N/A	6		42
	7568700370	14818 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	Yes	51	Ldn	61	66	--	--	Wall on Structure	N/A	6		42
	7568700375	14902 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	Yes	50	Ldn	60	66	--	--	Wall on Structure	N/A	6		41
	7568700380	14910 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	50	Ldn	60	66	--	--	Wall on Structure	N/A	6		36
	7568700385	14916 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	52	Ldn	59	65	--	--	Wall on Structure	N/A	6		38
	7568700390	14922 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	53	Ldn	59	65	--	--	Wall on Structure	N/A	6		39
	7568700395	14928 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	6		42
	7568700400	14934 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		46
	7568700405	15100 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	7568700410	15108 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	7568700415	15114 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	7568700420	15124 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
NE 151st Street to NE 155th Street																			
	2881700323	15101 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Structure	N/A	4		
	3222200030	301 Ne 151st St	SF Residence on 151st	0	68	2	No	No							Wall on Structure	N/A	4		
	3222200040	307 Ne 151st St	SF Residence on 151st	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Structure	N/A	4		53
	3222200050	313 Ne 151st St	SF Residence on 151st	1	70	2	No	No	59	Ldn	65	70	--	--	Wall on Structure	N/A	4		50
	802290040	321 Ne 151st St	SF Residence on 151st	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	4		56
	802290041	327 Ne 151st St	SF Residence on 151st	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	4		55
	802290050	335 Ne 151st St	SF Residence on 151st	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	4		54
	802290055	347 Ne 151st St	SF Residence on 151st	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		51
	2881700322	15109 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	2881700321	15117 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	2881700311	15121 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	2881700310	225 Ne 152nd St	Church at end of 152nd St.	1	70	3	No	No	53	Leq	70	75	--	--		N/A			53
	2634500055	304 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	57	Ldn	65	70	--	--		N/A			57
	2634500060	310 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	57	Ldn	65	70	--	--		N/A			57
	2634500065	316 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	2634500070	322 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	2634500035	323 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	55	Ldn	64	70	--	--		N/A			55
	2634500040	317 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	2634500045	311 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	54	Ldn	65	70	--	--		N/A			54
	2634500050	305 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	56	Ldn	65	70	--	--		N/A			56
	3222200010	15112 3rd Ave Ne	SF Residence on 3rd Ave.	1	70	2	No	No	57	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		52
	3222200020	306 Ne 151st St	SF Residence on 151st	1	70	2	No	No	58	Ldn	65	70	--	--	Wall on Structure	N/A	4		49
	802290035	316 Ne 151st St	SF Residence on 151st	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Structure	N/A	4		56
	802290030	324 Ne 151st St	SF Residence on 151st	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
	2881700301	-	Empty Lot	0	70	2	No	No							Wall on Retaining Wall	N/A	6		
	5027800130	411 Ne 153rd St	SF Residence on 153rd St.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	5027800120	407 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	63	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		58
M-18 (63.9 LEQ)	5027800110	405 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	63	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		56
	5027800100	403 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		56
	5027800090	401 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	56	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		50
	2881700300	15240 3rd Ave Ne	SF Residence on 3rd Ave.	1	71	2	No	No	64	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	6		57
	2807600030	15451 4th Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	56	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		50
	0411100005	301 Ne 155th St	SF Residence on 4th Ave.	1	70	2	No	No	54	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		49
	0411100010	15420 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	55	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		49
	0411100015	15414 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	55	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		49
	0411100020	15408 2nd Ave Ne	SF Residence on 2rd Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	6		49

Lynnwood Link Extension A1

Stations: 145th Option 1
185th Option 1

Total Units Analyzed
837

Impacts:	Moderate	Severe
	190	29

Residual Impacts	
RSIP =	0

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0411100025	15404 2nd Ave Ne	SF Residence on 2rd Ave.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Retaining Wall	N/A	6		57
	0411100030	15401 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	No	No	66	Ldn	66	72	1	--	Wall on Retaining Wall	N/A	6		59
	0411100035	15407 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	No	No	67	Ldn	66	72	1	--	Wall on Retaining Wall	N/A	6		59
	0411100040	15419 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	No	No	59	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		52
	0411100045	15425 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	No	No	59	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		53
	0411100050	165 Ne 155th St	SF Residence on 155th St.	1	71	2	No	No	59	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	6		52
	0411100055	145 Ne 155th St	Fire Station	1	76	2	No	No	73	Ldn	66	75	1	--	Wall on Structure	N/A	4		64
NE 155th Street to NE 158th Street																			
	2241700075	157 Ne 156th St	SF Residence on 156th St.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	2241700070	151 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Structure	N/A	4		52
	2241700065	143 Ne 156th St	SF Residence on 156th St.	1	71	2	No	No	62	Ldn	66	71	--	--	Wall on Structure	N/A	4		52
	2241700060	137 Ne 156th St	SF Residence on 156th St.	1	72	2	No	No	65	Ldn	66	72	--	--	Wall on Structure	N/A	4		55
M-19: 73.3	2241700055	132 Ne 155th St	SF Residence on 155th St.	1	73	2	No	No	68	Ldn	66	72	1	--	Wall on Structure	N/A	4		58
	2241700050	125 Ne 156th St	SF Residence on 156th St.	1	74	2	No	No	73	Ldn	66	73	--	1	Wall on Structure	N/A	4		63
	2241700045	110 Ne 155th St	SF Residence on 155th St.	1	75	2	No	No							Wall on Structure	N/A	6		
	2881700240	106 Ne 155th St	SF Residence on 155th St.	1	76	2	No	No							Wall on Structure	N/A	6		
	2241700040	104 Ne 156th St	SF Residence on 156th St.	1	75	2	No	No							Wall on Structure	N/A	6		
	2241700035	108 Ne 156th St	SF Residence on 156th St.	1	73	2	No	No							Wall on Structure	N/A	6		
	2241700030	122 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	6		57
	2241700025	130 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	65	Ldn	65	70	1	--	Wall on Structure	N/A	6		51
	2241700020	136 Ne 156th St	SF Residence on 156th St.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	6		48
	2241700015	142 Ne 156th St	SF Residence on 156th St.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	6		48
	2241700010	148 Ne 156th St	SF Residence on 156th St.	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	6		47
	2241700005	156 Ne 156th St	SF Residence on 156th St.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	6		46
	2881700233	15615 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	6		46
	2881700234	15621 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	6		45
	2881700232	15625 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	58	Ldn	61	67	--	--	Wall on Structure	N/A	6		44
	2881700239	241 Ne 157th St	SF Residence on 157th St.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	6		47
	2881700229	235 Ne 157th St	SF Residence on 157th St.	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	6		47
	2881700226	229 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	6		50
	2881700224	223 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		51
	2881700225	125 Ne 157th St	SF Residence on 157th not =15544 1st Ave Ne	1	69	2	No	No	66	Ldn	64	70	1	--	Wall on Structure	N/A	6		52
	2881700219	117 Ne 157th St	SF Residence on 157th St.	1	69	2	No	No	67	Ldn	64	70	1	--	Wall on Structure	N/A	6		53
	2881700220	111 Ne 157th St	SF Residence on 157th St.	1	71	2	No	No	73	Ldn	66	71	--	1	Wall on Structure	N/A	6		60
	2881700223	101 Ne 157th St	SF Residence on 157th St.	0	72	2	No	No							Wall on Structure	N/A	6		
	2881700230	15618 1st Ave Ne	SF Residence on 1st Ave.	0	72	2	No	No							Wall on Structure	N/A	6		
	2881700227	108 Ne 157th St	SF Residence on 157th St.	1	71	2	No	No	75	Ldn	66	71	--	1	Wall on Structure	N/A	6		62
	2881700218	15710 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	75	Ldn	66	71	--	1	Wall on Structure	N/A	6		61
	8142000180	105 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	69	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	6		61
	8142000170	111 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		54
	2881700222	116 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		51
	2881700221	126 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	4		53
	2881700231	132 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	8142000160	117 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	6		51
M-20: 68.33	8142000150	123 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	6		50
NE 158th Street to NE 165th Street																			
	8142000090	104 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	69	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		63
	8142000080	110 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		56
	8142000070	116 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	8142000060	122 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	6159400080	117 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	2111600075	125 Ne 159th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	6159400085	113 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		56
	6159400090	105 Ne 159th St	SF Residence on 159th St.	1	71	2	No	No	69	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		63
	6159400045	104 Ne 159th St	SF Residence on 159th St.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
	6159400037	114 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	68	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		63
	6159400035	118 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
	6159400030	124 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	6159400025	130 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	55	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	2111600080	129 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	2111600075	139 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	2111600085	123 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
	2111600090	115 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	67	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		62
	2111600095	15924 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
	2111600100	15918 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
M-21: 61.8 LEQ	2881700193	108 Ne 161st St	Ridgecrest Park	1	62	3	No	No							Wall At-Grade	N/A	4		
	2111600040	114 Ne 161st St	SF Residence on 161st St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall At-Grade	N/A	4		64
	2111600035	122 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall At-Grade	N/A	4		57
	2111600030	128 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall At-Grade	N/A	4		53

Lynnwood Link Extension A1

Stations: 145th Option 1
185th Option 1

Total Units Analyzed
837

Impacts:	Moderate	Severe
	190	29

Residual Impacts	
RSIP =	0

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2111600025	134 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	55	Ldn	63	69	--	--	Wall At-Grade	N/A	4		51
	7301300295	303 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	49	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		44
	7301400110	129 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	51	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		45
	7301400120	121 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Retaining Wall	N/A	4		55
	7301400220	128 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		53
	7301300130	304 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	49	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		44
	7301300135	310 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	46	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		41
	7301300120	139 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	46	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	7301300125	135 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		45
	7301400200	127 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	7301400211	124 Ne 163rd St	SF Residence on 163rd St.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	7301400070	-	Empty Lot	0	68	--	No	No							Wall on Retaining Wall	N/A	4		
	7301400060	132 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	7301400040	134 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	51	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		45
	7301400046	140 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	7301300030	141 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	7301300035	135 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	51	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		45
	7301400050	127 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
NE 165th Street to NE 170th Street																			
	5727500330	126 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	7307000050	124 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		50
	5727500355	119 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		50
	5727500350	123 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	7307000040	134 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	46	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	7301500010	132 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	7301500020	140 Ne 165th St	SF Residence on 165th St.	1	66	2	No	No	43	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	7307000030	140 Ne 165th Pl	SF Residence on 165th Place	1	66	2	No	No	43	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500300	131 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	44	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		39
	5727500363	120 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		50
	5727500360	-	Empty Lot	0	68	--	No	No							Wall on Retaining Wall	N/A	4		
	9235900015	111 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		50
	9235900020	117 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	9235900025	123 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	44	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		39
	9235900040	130 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	43	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500361	124 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	5727500086	114 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	5727500103	16719 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	5727500100	16723 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	5727500102	16729 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	5727500111	16731 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	5727500110	16735 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
	5727500113	16741 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	4		56
	5727500120	109 Ne 170th St	SF Residence on 170th St.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	7305900115	119 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	5727500130	121 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	5727500139	16742 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500137	16738 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500148	16728 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500149	16722 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500150	16716 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500155	126 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	45	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		40
	5727500087	118 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	49	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		43
	5727500156	132 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	42	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		37
	5727500157	136 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	40	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		36
	5727500159	16719 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		37
	5727500147	16725 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	41	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		37
	5727500146	-	Empty Lot	0	66	--	No	No							Wall on Retaining Wall	N/A	4		
	5727500145	16735 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	41	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		37
	5727500135	16741 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	41	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		37
	5727500136	16747 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500138	16753 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	43	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500131	16761 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	45	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		40
NE 170th Street to NE 175th Street																			
	7305300205	104 Ne 170th St	SF Residence on 170th St.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		48
	7305300210	17010 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	54	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		48
	7305300215	17016 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	54	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		48
	7305300220	17022 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	54	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		48
	7305300225	17028 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	54	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		48

Lynnwood Link Extension A1

Stations: 145th Option 1
185th Option 1

Total Units Analyzed
837

Impacts:	Moderate	Severe
	190	29

Residual Impacts	
RSIP =	0

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	7305300230	17034 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	54	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		48
	7305300235	17040 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300240	17046 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300245	17052 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	62	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		55
	7305300250	17058 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300255	17204 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300260	17210 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300265	17216 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300270	17222 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300275	105 Ne 174th St	SF Residence on 174th St.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300350	111 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	58	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		52
	7305300345	17223 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	57	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		52
	7305300340	17217 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		51
M-22: 70.2	7305300335	17211 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		51
	7305300330	17205 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		50
	7305300325	17059 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		50
	7305300320	17053 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		50
	7305300315	17047 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	49	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		45
	7305300310	17041 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		39
	7305300305	17035 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		39
	7305300300	17029 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		39
	7305300295	17023 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		39
	7305300290	17017 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		39
	7305300285	17011 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		39
	7305300280	110 Ne 170th St	SF Residence on 170th St.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		39
	7305300425	205 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	47	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		43
	7305300420	17222 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		43
	7305300415	17216 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		42
	7305300410	17210 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		42
	7305300405	17204 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		42
	7305300400	17058 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		42
	7305300395	17052 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		42
	7305300390	17046 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	44	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		40
	7305300385	17040 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300380	17034 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300375	17028 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300370	17022 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300365	17016 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300360	17010 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300355	204 Ne 170th St	SF Residence on 170th St.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300010	110 Ne 174th St	SF Residence on 174th St.	0	??	2	No	No							Wall on Structure	N/A	4		
	7305300015	116 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	64	Ldn	66	71	--	--	Wall on Structure	N/A	4		56
	7305300020	122 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	63	Ldn	66	71	--	--	Wall on Structure	N/A	4		55
	7305300025	128 Ne 174th St	SF Residence on 174th St.	1	70	2	No	No	56	Ldn	65	70	--	--	Wall on Structure	N/A	4		47
	7305300030	204 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	54	Ldn	64	70	--	--	Wall on Structure	N/A	4		44
	7305300035	210 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	54	Ldn	64	70	--	--	Wall on Structure	N/A	4		44
	7305300040	216 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	4		52
M-23: 70.2	7305300085	211 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	60	Ldn	65	70	--	--	Wall on Structure	N/A	4		50
	7305300090	217 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	54	Ldn	65	70	--	--	Wall on Structure	N/A	4		44
	7305300095	223 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	52	Ldn	64	70	--	--	Wall on Structure	N/A	4		42
NE 175th Street to NE 180th Street																			
	1115100230	208 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	1115100232	-	Empty Lot	0	70	--	No	No							Wall on Structure	N/A	4		
	1115100235	206 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	73	Ldn	65	70	--	1	Wall on Structure	N/A	6		61
	1115100210	216 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		63
	1115100208	218 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	6		61
	1115100211	222 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		55
	1115100209	220 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	6		53
	1115100200	230 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
	1115100205	234 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		54
	1115100195	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	6		47
	1115100190	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	1115100182	310 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	1115100175	320 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	6		44
	1115100172	323 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	52	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		48

Lynnwood Link Extension A1

Stations: 145th Option 1
185th Option 1

Total Units Analyzed
837

Impacts:	Moderate	Severe
	190	29

Residual Impacts	
RSIP =	0

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	1115100171	325 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	52	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		49
	1115100176	317 Ne 178th St	SF Residence on 178th St.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	1115100180	308 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	63	Ldn	63	68	1	--	Wall on Structure	N/A	4		54
	1115100181	311 Ne 178th St	SF Residence on 178th St.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	4		56
	7772400110	239 Ne 178th St	SF Residence on 178th St.	1	69	2	No	No	71	Ldn	64	70	--	1	Wall on Structure	N/A	4		62
M-24: 69.15	7772400120	17748 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	71	Ldn	64	70	--	1	Wall on Structure	N/A	4		62
	7772400130	17738 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	69	Ldn	64	70	1	--	Wall on Structure	N/A	4		61
	7772400140	17734 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	6		58
	7772400150	17733 2nd Pl Ne	SF Residence on 2nd Pl.	1	75	2	No	No	77	Ldn	66	74	--	1	Wall on Structure	N/A	6		65
	7772400160	17737 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No							Wall on Structure	N/A	6		
	7772400170	17741 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No							Wall on Structure	N/A	4		
	7772400180	17747 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No							Wall on Structure	N/A	4		
	7772400190	17753 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No							Wall on Structure	N/A	4		
	1115100065	224 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No							Wall on Retaining Wall	N/A	4		
	1115100070	230 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No							Wall on Retaining Wall	N/A	4		
	7772400010	17803 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	4		57
	7772400020	17809 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	4		58
	7772400030	17815 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	Yes	No	63	Ldn	61	67	1	--	Wall on Retaining Wall	Special	4		56
	7772400040	17821 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	Yes	No	63	Ldn	61	67	1	--	Wall At-Grade	Special	4		56
	7772400050	17825 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	Yes	No	60	Ldn	62	68	--	--	Wall At-Grade	Special	4		54
	7772400060	17822 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	Yes	No	51	Ldn	61	66	--	--	Wall At-Grade	Special	4		46
	7772400070	17816 3rd Ave Ne	SF Residence on 3rd Ave.	1	63	2	Yes	No	50	Ldn	60	66	--	--	Wall At-Grade	Special	4		45
	7772400080	17810 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	Yes	No	53	Ldn	61	66	--	--	Wall on Retaining Wall	Special	4		47
	7772400090	17804 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	52	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		47
	7772400100	312 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	48	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		44
	1115100119	330 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	47	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		43
	1115100123	340 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	44	Ldn	59	65	--	--	Wall At-Grade	N/A	4		40
	1115100121	344 Ne 178th St	SF Residence on 178th St.	1	62	2	Yes	No	45	Ldn	59	65	--	--	Wall At-Grade	Special	4		41
	1115100111	337 Ne 180th St	SF Residence on 180th St.	1	63	2	Yes	No	57	Ldn	60	66	--	--	Wall At-Grade	Special	4		50
	1115100113	335 Ne 180th St	SF Residence on 180th St.	1	63	2	Yes	No	62	Ldn	60	66	1	--	Wall At-Grade	Special	4		52
	1115100112	333 Ne 180th St	SF Residence on 180th St.	1	63	2	Yes	No	65	Ldn	60	66	1	--	Wall At-Grade	Special	6		51
	1115100110	331 Ne 180th St	SF Residence on 180th St.	1	63	2	Yes	No	69	Ldn	60	66	--	1	Wall At-Grade	Special	8		49
	1115100120	336 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	42	Ldn	59	65	--	--	Wall At-Grade	N/A	4		38
	1115100122	348 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	43	Ldn	60	66	--	--	Wall At-Grade	N/A	4		39
	1115100125	-	Empty Lot	0	62	--	No	No							Wall At-Grade	N/A	6		
	1115100137	17861 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	Yes	No	48	Ldn	59	65	--	--	Wall At-Grade	Special	8		38
	1115100138	17857 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	Yes	No	48	Ldn	59	65	--	--	Wall At-Grade	Special	8		37
	1115100135	17845 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	Yes	No	46	Ldn	59	65	--	--	Wall At-Grade	Special	6		39
	1115100136	17833 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	Yes	No	45	Ldn	59	65	--	--	Wall At-Grade	Special	4		41
	1115100142	17829 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	Yes	No	56	Ldn	59	65	--	--	Wall At-Grade	Special	4		52
	1115100139	17825 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	Yes	No	52	Ldn	60	66	--	--	Wall At-Grade	Special	4		49
	1115100140	17821 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	50	Ldn	60	66	--	--	Wall At-Grade	N/A	4		46
	1115100146	356 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	50	Ldn	59	65	--	--	Wall At-Grade	N/A	4		46
	0927100187	17822 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	52	Ldn	62	68	--	--	Wall At-Grade	N/A	4		49
	0927100196	17832 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	52	Ldn	62	68	--	--	Wall At-Grade	N/A	4		49
	0927100200	17840 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall At-Grade	N/A	4		49
	0927100199	17844 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	Yes	No	53	Ldn	62	68	--	--	Wall At-Grade	Special	8		45
	0927100205	17852 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	Yes	No	54	Ldn	62	68	--	--	Wall At-Grade	Special	4		50
NE 180th Street to NE 185th Street																			
	6084100118	332 Ne 180th St	SF Residence on 180th St.	0	63	2	No	No							Wall on Retaining Wall	N/A	4		
	6084100117	338 Ne 180th St	SF Residence on 180th St.	1	64	2	Yes	No	65	Ldn	61	66	1	--	Wall on Retaining Wall	Special	4		54
	6084100114	344 Ne 180th St	SF Residence on 180th St.	1	64	2	Yes	No	57	Ldn	61	66	--	--	Wall on Retaining Wall	Special	4		48
M-25: 59.1 LEQ	6084100116	350 Ne 180th St	SF Residence on 180th St.	1	63	2	Yes	No	52	Ldn	60	66	--	--	Wall on Retaining Wall	Special	4		45
	6084100115	356 Ne 180th St	SF Residence on 180th St.	1	64	2	Yes	No	49	Ldn	61	66	--	--	Wall on Retaining Wall	Special	4		43
	6084100110	18017 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	Yes	No	48	Ldn	60	66	--	--	Wall on Retaining Wall	Special	4		42
	6084100113	18019 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	Yes	No	60	Ldn	60	66	1	--	Wall on Retaining Wall	Special	4		53
	6084100105	18023 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	Yes	No	60	Ldn	61	66	--	--	Wall on Retaining Wall	Special	4		53
	6084100100	18027 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	8		50
	6084100095	18031 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	8		52
	6084100086	18041 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No							Wall on Retaining Wall	N/A	8		
	0927100065	506 Ne 180th St	SF Residence on 180th St.	1	64	2	Yes	No	56	Ldn	61	66	--	--	Wall At-Grade	Special	4		52
	0927100066	514 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	53	Ldn	61	66	--	--	Wall At-Grade	N/A	4		49
	0927100067	518 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	52	Ldn	60	66	--	--	Wall At-Grade	N/A	4		48
	0927100068	524 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	50	Ldn	60	66	--	--	Wall At-Grade	N/A	4		46
	5662100015	18015 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	45	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		41
	5662100020	18021 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	45	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		42
	0927100071	18022 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		45
	0927100079	18020 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	52	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		48
	0927100070	18016 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	42	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		32

Lynnwood Link Extension A1

Stations: 145th Option 1
185th Option 1

Total Units Analyzed
837

Impacts:	Moderate	Severe
	190	29

Residual Impacts	
RSIP =	0

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0927100076	18032 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	42	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		32
	5662100025	18027 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		37
	5662100030	18033 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		37
	0927100075	515 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	51	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		42
	0927100073	18034 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	48	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	8		38
	0927100082	18036 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	49	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	8		39
	0927100080	519 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	52	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		42
	5662100035	18039 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	48	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		39
	5662100040	18045 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		40
	0927100084	518 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	53	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		43
	0927100083	504 Ne 182nd Ct	SF Residence on 182nd Ct.	1	66	2	No	No	53	Ldn	62	68	--	--		N/A			53
	0927100085	18210 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	56	Ldn	62	68	--	--		N/A			56
	0927100090	505 Ne 183rd Ct	SF Residence on 183rd Ct.	0	66	2	No	No								N/A			
	0927100094	18310 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No								N/A			
	0927100098	18320 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No								N/A			
	0927100081	514 Ne 182nd Ct	SF Residence on 182nd Ct.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	5662100045	18051 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	5662100050	18057 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	0927100091	515 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	5662100055	18063 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	0927100092	520 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	44	Ldn	61	67	--	--		N/A			44
	0927100093	514 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	0927100105	18326 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No								N/A			
	0927100100	18330 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No								N/A			
	0927100110	-	Empty Lot	0	67	--	No	No								N/A			
	5662100075	18313 7th Ave Ne	SF Residence on 7th Ave.	1	68	2	No	Yes	59	Ldn	63	69	--	--		N/A			59
	5662100080	18316 7th Ave Ne	SF Residence on 7th Ave.	1	70	2	No	Yes	58	Ldn	65	70	--	--		N/A			58
	0927100016	18323 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	No	Yes	57	Ldn	64	70	--	--		N/A			57
	0927100015	18329 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	No	Yes	56	Ldn	64	70	--	--		N/A			56
M-28: 70.97	0927100011	721 Ne 185th St	SF Residence on 185th St.	1	71	2	No	Yes	56	Ldn	66	71	--	--		N/A			56
	5662100060	18069 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	53	Ldn	61	66	--	--		N/A			53
	5662100065	18301 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	54	Ldn	61	66	--	--		N/A			54
	5662100070	18307 7th Ave Ne	SF Residence on 7th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--		N/A			54
	5662100090	18308 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	44	Ldn	61	66	--	--		N/A			44
	5662100085	18317 7th Ave Ne	SF Residence on 7th Ave.	1	69	2	No	Yes	50	Ldn	64	70	--	--		N/A			50
	0927100008	731 Ne 185th St	SF Residence on 185th St.	1	70	2	No	Yes	51	Ldn	65	70	--	--		N/A			51
	6163900092	18342 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	No	Yes	46	Ldn	63	69	--	--		N/A			46
	6163900091	18343 9th Ave Ne	SF Residence on 9th Ave.	1	68	2	No	Yes	48	Ldn	63	69	--	--		N/A			48
	6163900095	18332 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	Yes	48	Ldn	63	68	--	--		N/A			48
	6163900082	18318 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	Yes	47	Ldn	63	68	--	--		N/A			47
	6163900081	18312 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	Yes	47	Ldn	61	67	--	--		N/A			47
	6163900073	18306 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	Yes	47	Ldn	60	66	--	--		N/A			47
	6163900071	18300 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45
	5662100095	18302 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	5662100100	18070 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	48	Ldn	60	66	--	--		N/A			48
	5662100105	18064 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	47	Ldn	60	66	--	--		N/A			47
	5662100110	18058 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	47	Ldn	60	66	--	--		N/A			47
	5662100115	18052 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	5662100120	18046 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	6163900063	18072 8th Ave Ne		1	62	2	No	Yes	46	Ldn	59	65	--	--		N/A			46
	6163900061	18066 8th Ave Ne		1	62	2	No	Yes	46	Ldn	59	65	--	--		N/A			46
	6163900053	18060 8th Ave Ne		1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	6163900050	18054 8th Ave Ne		1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	6163900043	18048 8th Ave Ne		1	62	2	No	No	44	Ldn	59	65	--	--		N/A			44
NE 185th Street to NE 189th Street																			
	0526049029	18510 7th Ave Ne	SF Residence on 7th Ave.	0	69	2	No	No								N/A			
	0526049060	18516 7th Ave Ne	SF Residence on 7th Ave.	0	66	2	No	No								N/A			
	0526049027	18520 7th Ave Ne	SF Residence on 7th Ave.	0	64	2	No	No								N/A			
	0526049044	18528 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	0526049015	18534 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	0526049056	18540 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	0526049061	18546 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	0526049032	18552 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	0526049031	18558 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	3971702321	707 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall on Retaining Wall	N/A	4		
	3971702325	703 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall on Retaining Wall	N/A	4		
	3971702320	715 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		52
	3971702316	719 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	55	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		48
	3971702315	721 Ne 189th St	SF Residence on 189th St.	1	63	2	No	Yes	52	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		48
	3971702311	18807 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	Yes	44	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		44
	3971702310	727 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	45	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		39

Lynnwood Link Extension A1

Stations: 145th Option 1
185th Option 1

Total Units Analyzed
837

Impacts:	Moderate	Severe
	190	29

Residual Impacts	
RSIP =	0

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0526049011	18559 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	Yes	53	Ldn	60	66	--	--		N/A			53
	0526049024	18553 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	Yes	52	Ldn	60	66	--	--		N/A			52
	0526049025	18547 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	Yes	56	Ldn	60	66	--	--		N/A			56
	0526049050	18539 8th Ave Ne	SF Residence on 8th Ave.	0	63	2	No	No								N/A			
	0526049026	-	Empty Lot	0	63	--	No	No								N/A			
	0526049055	18533 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	Yes	56	Ldn	60	66	--	--		N/A			56
	0526049054	18529 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	Yes	56	Ldn	60	66	--	--		N/A			56
	0526049040	18523 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	Yes	56	Ldn	61	67	--	--		N/A			56
	0526049028	18517 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	Yes	55	Ldn	63	68	--	--		N/A			55
	0526049052	18511 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	No	Yes	54	Ldn	64	70	--	--		N/A			54
	0526049030	18509 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	No	Yes	52	Ldn	66	71	--	--		N/A			52
	3235100273	814 Ne 185th St	SF Residence on 185th St.	1	71	2	No	Yes	42	Ldn	66	71	--	--		N/A			42
	3235100270	18504 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	No	Yes	43	Ldn	66	71	--	--		N/A			43
	3235100265	18510 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	No	Yes	45	Ldn	63	69	--	--		N/A			45
	3235100260	18516 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	Yes	45	Ldn	61	67	--	--		N/A			45
	3235100255	18522 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	Yes	46	Ldn	60	66	--	--		N/A			46
M-29: 64.4	3235100249	18528 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	No	Yes	46	Ldn	59	65	--	--		N/A			46
	3235100244	18534 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	No	Yes	46	Ldn	59	65	--	--		N/A			46
	3235100240	18540 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	No	Yes	50	Ldn	59	65	--	--		N/A			50
	3235100205	18554 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	No	Yes	42	Ldn	59	65	--	--		N/A			42
	3235100210	811 Ne 188th St	SF Residence on 188th St.	1	61	2	No	Yes	39	Ldn	59	65	--	--		N/A			39
	3235100215	817 Ne 188th St	SF Residence on 188th St.	1	61	2	No	Yes	38	Ldn	59	65	--	--		N/A			38
	3235100220	823 Ne 188th St	SF Residence on 188th St.	1	60	2	No	Yes	37	Ldn	58	64	--	--		N/A			37
	3235100224	829 Ne 188th St	SF Residence on 188th St.	1	60	2	No	Yes	37	Ldn	58	64	--	--		N/A			37
	3235100230	835 Ne 188th St	SF Residence on 188th St.	1	60	2	No	Yes	36	Ldn	58	64	--	--		N/A			36
	3235100235	841 Ne 188th St	SF Residence on 188th St.	1	60	2	No	Yes	34	Ldn	58	64	--	--		N/A			34
	3235100200	18810 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	No	Yes	39	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		39
	3235100105	18820 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	No	Yes	39	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		39
	3235100110	811 Ne 189th St	SF Residence on 189th St.	1	61	2	No	No	37	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		33
	3235100195	810 Ne 188th St	SF Residence on 188th St.	1	61	2	No	No	36	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		31
	3235100190	816 Ne 188th St	SF Residence on 188th St.	1	61	2	No	Yes	48	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		46
	3235100185	822 Ne 188th St	SF Residence on 188th St.	1	61	2	No	Yes	47	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		45
	3235100120	823 Ne 189th St	SF Residence on 188th St.	1	61	2	No	Yes	47	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		45
	3235100115	817 Ne 188th St	SF Residence on 188th St.	1	61	2	No	Yes	48	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		46
NE 189th Street to NE 194th Street																			
	3971702305	728 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	56	Ldn	60	66	--	--	Wall At-Grade	N/A	4		50
	3971702295	718 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall At-Grade	N/A	4		
	3971702210	18915 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall At-Grade	N/A	4		54
	3971702215	18921 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall At-Grade	N/A	4		54
	0526049063	19011 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	58	Ldn	63	68	--	--	Wall At-Grade	N/A	4		51
	0526049010	19031 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	57	Ldn	63	68	--	--	Wall At-Grade	N/A	4		51
M-30A&B: 59.4 & 6	0526049007	816 Ne 190th St	School on 190th St.	1	65	3	No	No	49	Leq	66	72	--	--	Wall At-Grade	N/A	4		45
	3235100005	18920 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	48	Ldn	59	65	--	--	Wall At-Grade	N/A	4		43
	3235100100	18910 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	42	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		37
	3235100095	810 Ne 189th St	SF Residence on 189th St.	1	60	2	No	No	39	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		35
	3235100010	811 Ne 190th St	SF Residence on 190th St.	1	60	2	No	No	44	Ldn	58	64	--	--	Wall At-Grade	N/A	4		40
	3235100015	817 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall At-Grade	N/A	4		50
	3235100090	816 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	48	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		44
	3235100085	822 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	46	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		42
	3235100080	828 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	45	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		42
	3235100075	834 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	44	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		41
	3235100020	823 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	51	Ldn	58	64	--	--	Wall At-Grade	N/A	4		47
	3235100025	829 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	50	Ldn	58	64	--	--	Wall At-Grade	N/A	4		46
	3235100030	835 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	49	Ldn	58	64	--	--	Wall At-Grade	N/A	4		46

Lynnwood Link Extension A3

Stations: 145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	269	198

Residual Impacts	
RSIP =	27

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
Northgate to NE 115th Street																			
M-1: 71.5	2926049011	11200 1st Ave Ne	Southern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	70	Ldn	66	72	8	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Southern F. line 2nd floor Apts. on 1st Ave.	4	72	2	No	No	71	Ldn	66	72	4	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Northern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	73	Ldn	66	72	--	8	Wall on Structure	N/A	4		65
	2926049011	11200 1st Ave Ne	Northern F. line 2nd floor Apts. on 1st Ave.	8	72	2	No	No	73	Ldn	66	72	--	8	Wall on Structure	N/A	4		65
	2926049011	11200 1st Ave Ne	Front line Apts. on Northgate Way	1	72	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Second line Apts. on Northgate Way	4	72	2	No	No	65	Ldn	66	72	--	--	Wall on Structure	N/A	4		57
	2926049011	11200 1st Ave Ne	Third line Apts. on Northgate Way	5	72	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		53
M-3: 60.8 LEQ	2926049011	11200 1st Ave Ne	Southern 2nd line ground level Apts. on 1st Ave.	4	65	2	No	No	64	Ldn	61	67	4	--	Wall on Structure	N/A	4		55
	2926049011	11200 1st Ave Ne	Southern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	65	Ldn	61	67	4	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Northern 2nd line ground level Apts. on 1st Ave.	8	65	2	No	No	65	Ldn	61	67	8	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Northern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	66	Ldn	61	67	4	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Southern 3rd line ground level Apts. on 1st Ave.	4	63	2	No	No	62	Ldn	60	66	4	--	Wall on Structure	N/A	4		53
	2926049011	11200 1st Ave Ne	Southern 3rd line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	63	Ldn	60	66	4	--	Wall on Structure	N/A	4		53
	2926049011	11200 1st Ave Ne	Northern 3rd line ground level Apts. on 1st Ave.	8	63	2	No	No	63	Ldn	60	66	8	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Northern 3rd line 2nd floor Apts. on 1st Ave.	8	63	2	No	No	64	Ldn	60	66	8	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Southern 4th line ground level Apts. on 1st Ave.	10	63	2	No	No	60	Ldn	60	66	10	--	Wall on Structure	N/A	4		51
	2926049011	11200 1st Ave Ne	Southern 4th line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	60	Ldn	60	66	4	--	Wall on Structure	N/A	4		51
	2926049011	11200 1st Ave Ne	Northern 4th line ground level Apts. on 1st Ave.	11	63	2	No	No	61	Ldn	60	66	11	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Northern 4th line 2nd floor Apts. on 1st Ave.	11	63	2	No	No	61	Ldn	60	66	11	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Southern ground level Apts. E of 2nd Ave.	10	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	2926049011	11200 1st Ave Ne	Southern 2nd floor Apts. E of 2nd Ave.	10	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	2926049011	11200 1st Ave Ne	Northern ground level Apts. E of 2nd Ave.	6	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
	2926049011	11200 1st Ave Ne	Northern 2nd floor Apts. E of 2nd Ave.	6	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
M-2: 73.5	6174800000	11300 1st Ave Ne	Front line ground level condos on 1st Ave. courtyard	11	74	2	No	No	73	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on 1st Ave. courtyard	11	74	2	No	No	74	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on 1st Ave. courtyard	11	74	2	No	No	75	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line ground level condos on south side	5	74	2	No	No	75	Ldn	66	73	--	5	Wall on Structure	N/A	6		63
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on south side	5	74	2	No	No	75	Ldn	66	73	--	5	Wall on Structure	N/A	6		63
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on south side	5	74	2	No	No	77	Ldn	66	73	--	5	Wall on Structure	N/A	6		64
	2926049050	11355 3rd Ave Ne-Bldg. E	1st Floor Citigate Apts.=108 unit Apt. complex that would be front line if M-2 is displaced	4	66	2	No	No	63	Ldn	62	68	4	--	Wall on Structure	N/A	8		50
	2926049050	11355 3rd Ave Ne-Bldg. E	2nd Floor at Citigate Apts. - front line	4	66	2	No	No	63	Ldn	62	68	4	--	Wall on Structure	N/A	8		50
	2926049050	11355 3rd Ave Ne-Bldg. E	3rd Floor at Citigate Apts. - front line	4	66	2	No	No	65	Ldn	62	68	4	--	Wall on Structure	N/A	8		50
	2926049050	11355 3rd Ave Ne-East of Bldg. E	1st Floor Citigate Apts.- 2nd line	2	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	2926049050	11355 3rd Ave Ne-East of Bldg. E	2nd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	2926049050	11355 3rd Ave Ne-East of Bldg. E	3rd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	60	Ldn	60	66	2	--	Wall on Structure	N/A	8		45
M-4: 65.65	2926049529	133 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	75	Ldn	62	68	--	1	Wall on Structure	N/A	8	1	62
	2926049530	139 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	67	Ldn	62	68	1	--	Wall on Structure	N/A	8		54

Lynnwood Link Extension A3

Stations: 145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	269	198

Residual Impacts	
RSIP =	27

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2926049531	145 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	2926049532	151 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	8		48
	2926049533	157 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		46
	2926049192	303 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	2926049418	11352 3rd Ave	SF Residence on 3rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	2926049191	315 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	6		44
NE 115th Street to 117th Street																			
	6411600161	136 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	75	Ldn	62	68	--	1	Wall on Structure	N/A	8	1	63
	6411600162	142 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	70	Ldn	62	68	--	1	Wall on Structure	N/A	8		57
	6411600163	148 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	8		53
	6411600164	154 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall on Structure	N/A	8		49
	7810300035	147 Ne 116th St	Duplex on 116th St.	2	66	2	No	No	75	Ldn	62	68	--	2	Wall on Structure	N/A	8	2	63
	7810300030	11519 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	8		55
	7810300025	11523 3rd Ave N	SF Residence on 3rd Ave.	1	66	2	No	No	74	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	6411600147	156 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No	71	Ldn	61	66	--	1	Wall on Structure	N/A	8		58
	7810300005	150 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No							Wall on Structure	N/A	8		
	6411600146	157 Ne 117th St	SF Residence on 117th St.	1	64	2	No	No							Wall on Structure	N/A	8		
	6411600186	11622 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	72	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	60
	6411600185	11610 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	71	Ldn	59	65	--	1	Wall on Structure	N/A	8		58
	6411600182	11606 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	8		57
	6411600188	11600 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	8		57
	6411600172	11526 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	69	Ldn	59	65	--	1	Wall on Structure	N/A	8		56
	6411600170	11522 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	6161000031	11514 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	6161000022	11508 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6161000021	304 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		46
	6411600173	316 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	6411600171	322 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	6161000015	11515 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		45
	6161000010	11519 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		46
	6161000005	11527 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6161000035	11533 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6411600181	11539 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		47
	6411600180	11545 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		47
	6411600183	325 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		45
	6411600187	321 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6411600184	311 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		51
	6411600200	401 Ne 117th St	SF Residence on 117th St.	1	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	6411600198	11544 4th Ave Ne	SF Residence on 4th Ave.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		45
	6411600201	11536 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	8		45
	6411600199	11532 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	8		44
	6411600207	11524 4th Ave Ne	SF Residence on 4th Ave.	1	58	2	No	No	58	Ldn	57	63	1	--	Wall on Structure	N/A	8		44
M-4: 56.775	6411600211	11516 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	6411600209	11510 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	6411600213	11529 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	6411600195	11537 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	6411600202	11547 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	58	Ldn	57	63	1	--	Wall on Structure	N/A	8		44
	6411600196	11545 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	8		42
	6411600203	11533 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	8		41
	6411600208	11525 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	8		41
NE 117th Street to 120th Street																			
	6411600414	308 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	74	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	62
	6411600413	11708 3rd Ave Ne	SF Residence	1	62	2	No	No	75	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	62
	6411600420	11710 3rd Ave Ne	Latvian Evangelical Church	1	62	3	No	No	70	Leq	64	70	--	1	Wall on Structure	N/A	8		58
	6411600429	323 Ne 120th St	SF Residence north of the church	1	62	2	No	No	75	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	62
	6411600430	325 Ne 120th St	SF Residence north of the church	1	62	2	No	No	73	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	61
	6411600443	11737C 5th Ave Ne	SF Residence north of the church	1	62	2	No	No	71	Ldn	59	65	--	1	Wall on Structure	N/A	8		58
	6411600442	11737 5th Ave Ne Unit B	SF Residence north of the church	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		50
	6411600441	11737 5th Ave Ne Unit A	SF Residence north of the church	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6411600440	11743 5th Ave Ne	SF Residence north of the church	1	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	8		44
	6411600451	11729 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	8		47
	6411600452	11727 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		50
M-6 62.2	6411600450	11725 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	8		57

Lynnwood Link Extension A3

Stations: 145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	269	198

Residual Impacts	
RSIP =	27

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	6411600464	11723 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	8		51
	6411600463	11721 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		50
	6411600461	11719 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	6411600462	11715 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	6411600412	316 Ne 117th St	SF Residence east of the church	1	64	2	No	No	66	Ldn	61	66	--	1	Wall on Structure	N/A	8		53
	6411600410	322 Ne 117th St	SF Residence south of the church	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	8		50
	6411600411	326 Ne 117th St	SF Residence south of the church	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	6411600471	332 Ne 117th St	SF Residence south of the church	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		46
	6411600472	336 Ne 117th St	SF Residence south of the church	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	6411600473	342 Ne 117th St	SF Residence south of the church	1	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	8		44
	6411600470	11707 5th Ave Ne	SF Residence south of the church	1	65	2	No	No	57	Ldn	61	67	--	--	Wall on Structure	N/A	8		43
	6413100228	11718 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Structure	N/A	8		42
	6413100229	11714 5th Ave Ne	SF Residence south of the church	1	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	8		42
	6413100241	11726 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Structure	N/A	8		42
	6413100240	11734 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Structure	N/A	8		43
	6411600428	327 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	75	Ldn	62	68	--	1	Wall on Structure	N/A	8	1	63
	2238000050	331 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	69	Ldn	62	68	--	1	Wall on Structure	N/A	8		57
	2238000045	337 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	8		52
	2238000040	343 Ne 120th St	SF Residence on 120th St.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	2238000035	349 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	8		46
	2238000030	11755 5th Ave Ne	SF Residence on 120th St.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	8		45
NE 120th Street to NE 125th Street																			
	6412100091	332 Ne 120th St	SF Residence on 120th St.	0	65	2	No	No							Wall on Structure	N/A	6		
	6412100097	338 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	75	Ldn	61	67	--	1	Wall on Structure	N/A	8	1	62
	6412100092	344 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	68	Ldn	61	67	--	1	Wall on Structure	N/A	8		55
	6412100095	348 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	8		51
	6412100096	12001 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	8		48
	2237500025	12004 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	8		45
	2237500020	510 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	8		43
	2237500015	516 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	58	Ldn	61	67	--	--	Wall on Structure	N/A	8		43
	2237500030	12014 5th Ave Ne	SF Residence on 120th St.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	8		48
	6412100090	12015 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	71	Ldn	62	68	--	1	Wall on Structure	N/A	8		58
	6412100093	12021 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	66	Ldn	61	67	1	--	Wall on Structure	N/A	8		54
	6413600015	12016 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	8		48
	6413600005	12018 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	8		45
	6413600010	12020 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	8		47
	6413600020	12022 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	8		50
	6412100094	12025 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	72	Ldn	62	68	--	1	Wall on Structure	N/A	8		60
	6412100085	12027 5th Ave Ne	SF Residence near noise wall	1	65	2	No	No	75	Ldn	61	67	--	1	Wall on Structure	N/A	8	1	62
	6412100087	12029 5th Ave Ne	SF Residence next to noise wall	0	65	2	No	No							Wall on Structure	N/A	8		
	6412100080	12035 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	74	Ldn	63	68	--	1	Wall on Structure	N/A	8		61
	6412100082	12045 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	75	Ldn	63	68	--	1	Wall on Structure	N/A	8		62
	6412100081	12049 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	73	Ldn	63	68	--	1	Wall on Structure	N/A	8		61
	6412100084	12051 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No							Wall on Structure	N/A	8		
	6412100280	12301 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No							Wall on Structure	N/A	6		
	6412100281	12311 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6412100282	12321 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6412100283	12327 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6412100284	12401 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6412100250	12417 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6413600026	12030 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	6		51
	6413600036	12032 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	6		48
	6413600072	12035 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	6		45
	6413600079	12037 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	8		44
	6413600034	12034 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	6		48
	6413600035	12036 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		52
M-7: 68.27	6413600040	12042 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		52
	6413600041	12044 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	8		47

Lynnwood Link Extension A3

Stations: 145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	269	198

Residual Impacts	
RSIP =	27

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	6413600051	521 Ne 123rd St	SF Residence on 123rd	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	8		46
	6413600052	515 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	8		48
	6413600045	12048 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	8		51
	6413600050	12054 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	70	Ldn	63	69	--	1	Wall on Structure	N/A	6		58
	6413600339	12302 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	70	Ldn	63	69	--	1	Wall on Structure	N/A	6		58
	6413600340	510 Ne 123rd St	SF Residence on 123rd	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	6		51
	6413600335	518 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	6		49
	6413600338	522 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	6		47
	6413600337	12308 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	71	Ldn	63	69	--	1	Wall on Structure	N/A	6		58
	6413600345	12316 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	71	Ldn	63	69	--	1	Wall on Structure	N/A	6		59
	6413600343	12320 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	71	Ldn	63	69	--	1	Wall on Structure	N/A	6		59
	6413600347	12312 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	6		51
	6413600346	12314 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	6		48
	9509900045	521 Ne 124th St	SF Residence on 124th	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	6		47
	9509900040	515 Ne 124th St	SF Residence on 124th	1	66	2	No	No	63	Ldn	62	68	1	--	Wall on Structure	N/A	6		50
	9509900035	509 Ne 124th St	SF Residence on 124th	1	67	2	No	No	65	Ldn	63	68	1	--	Wall on Structure	N/A	6		52
	9509900030	503 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	71	Ldn	63	69	--	1	Wall on Structure	N/A	6		59
	9509900005	500 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	9509900010	508 Ne 124th St	SF Residence on 124th	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		53
	9509900015	514 Ne 124th St	SF Residence on 124th	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	6		50
	9509900020	520 Ne 124th St	SF Residence on 124th	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	6		47
	6413600378	527 Ne 125th St	SF Residence on 125th	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		46
	6413600377	523 Ne 125th St	SF Residence on 125th	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	8		48
	6413600376	513 Ne 125th St	SF Residence on 125th	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	8		51
	6413600375	505 Ne 125th St	SF Residence on corner of 5th and 125th	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
NE 125th Street to NE 127th Street																			
	6414100010	502 Ne 125th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100013	510 Ne 125th St	SF Residence on 125th	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	6		53
	6414100012	514 Ne 125th St	SF Residence on 125th	1	67	2	No	No	63	Ldn	63	68	1	--	Wall on Structure	N/A	6		50
	6414100011	516 Ne 125th St	SF Residence on 125th	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	6		47
	6414100023	12514 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	6		47
	6414100024	12512 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	65	Ldn	62	68	1	--	Wall on Structure	N/A	6		52
	6414100021	12518 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100020	12520 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100028	12528 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100025	12526 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	65	Ldn	62	68	1	--	Wall on Structure	N/A	6		52
	6414100029	12524 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	6		47
	6414100026	12532 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	64	Ldn	62	68	1	--	Wall on Structure	N/A	6		51
	6414100027	12534 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100033	12542 5th Ave Ne	Empty Lot	1	68	2	No	No							Wall on Structure	N/A	8		
	6414100030	12542 5th Ave Ne	SF Residence on 5th Ave.	1	69	2	No	No	72	Ldn	64	70	--	1	Wall on Structure	N/A	8		59
	6414100032	12546 5th Ave Ne Unit B	SF Residence on 5th Ave.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	8		50
	6414100031	12546 5th Ave Ne Unit C	SF Residence on 5th Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	8		48
	6414100039	527 NE 127th St	SF Residence on 127th	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Structure	N/A	6		47
	6414100038	521 NE 127th St	SF Residence on 127th	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	6		48
	6414100037	515 NE 127th St	SF Residence on 127th	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	6		50
	6414100036	509 NE 127th St	SF Residence on 127th	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	6		53
	6414100035	503 NE 127th St	SF Residence on corner of 127th and 5th	1	69	2	No	No	72	Ldn	64	70	--	1	Wall on Structure	N/A	6		60
NE 127th Street to Roosevelt Way NE Ja																			
M-9: 70.45	6414100732	502 NE 127th St	SF Residence on corner of 127th and 5th	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	6		60
	6414100731	514 NE 127th St	SF Residence on 127th	1	70	2	No	No	64	Ldn	65	70	--	--	Wall on Structure	N/A	6		52
	6414100733	522 NE 127th St	SF Residence on 127th	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	6		49
	6414100741	Grace Church open area	Empty Lot	0	64	3	No	No							Wall on Structure	N/A	6		
	6414100730	12708 5th Ave Ne	SF Residence on 5th Ave.	1	71	2	No	No	72	Ldn	66	71	--	1	Wall on Structure	N/A	6		60
	6414100740	12718 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	6		60
	6414100751	12726 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	6		60
	6414100750	12732 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	6		60
M-10: 73.8	6414100759	12740 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	No	No	72	Ldn	66	73	1	--	Wall on Structure	N/A	6		60
	6414100760	12759 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	No	No	66	Ldn	66	72	1	--	Wall on Structure	N/A	6		54
	6414100752	12749 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	72	2	No	No	64	Ldn	66	72	--	--	Wall on Structure	N/A	6		51
	6414100753	12745 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	No	No	64	Ldn	66	72	--	--	Wall on Structure	N/A	6		51
	1854700005	502 Ne 130th St	SF Residence on 130th	1	74	2	No	No	72	Ldn	66	73	1	--	Wall on Structure	N/A	6		60
	1854700010	510 Ne 130th St	SF Residence on 130th	1	74	2	No	No	65	Ldn	66	73	--	--	Wall on Structure	N/A	6		53

Lynnwood Link Extension A3

Stations: 145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	269	198

Residual Impacts	
RSIP =	27

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	**Parcel**	**Address**	**Description**	**Units**	**Ldn/Leq**	**FTA-CAT**	**X-Over**	**Bell**	**Ldn/Leq**	**Type**	**Mod Imp**	**Sev Imp**	**Mod Imp**	**Sev Imp**	**Sound Wall Type**	**X-Over**	**Height**	**Insulation**	**Ldn w/Mit**
	1854700015	516 Ne 130th St	SF Residence on 130th	1	73	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	6		50
	1787600096	519 Ne 131st Pl	SF Residence on 131st Place	1	73	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	6		50
	1787600095	511 Ne 131st Pl	SF Residence on 131st Place	1	74	2	No	No	65	Ldn	66	73	--	--	Wall on Structure	N/A	6		53
	1787600098	505 Ne 131st Pl	SF Residence on 131st Place	1	74	2	No	No	72	Ldn	66	73	1	--	Wall on Structure	N/A	6		60
	1787600090	North Seattle Church of the Nazarene	Empty Lot that is part of 13130 5th Church	1	72	3	No	No	69	Leq	71	77	--	--	Wall on Structure	N/A	6		57
	1787600094	510 Ne 131st Pl	SF Residence on 131st Place	1	72	2	No	No	65	Ldn	66	72	--	--	Wall on Structure	N/A	6		53
	1787600093	520 Ne 131st Pl	SF Residence on 131st Place	1	71	2	No	No	63	Ldn	66	71	--	--	Wall on Structure	N/A	6		50
	1787600085	13130 5th Ave Ne	Part of Church on 5th Ave.	1	67	2	No	No	68	Ldn	63	68	--	1	Wall on Structure	N/A	6		54
M-11: 66.7 & 66.8	1787600085	13130 5th Ave Ne	North Seattle Church of the Nazarene	0	68	3	No	No	66	Leq	68	74	--	--	Wall on Structure	N/A	6		53
	2026049004	1000 NE 135th		1	70	3	No	No								N/A			
NE 145th Street to NE 148th Street																			
	7568700780	501 Ne 145th St	Water pump station	0	74				0	Leq	66	73	--	--					0
	7568700785	14512 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	Yes	Yes	60	Ldn	66	73	--	--		Special			60
	7568700790	14518 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	Yes	57	Ldn	66	72	--	--		Special			57
M-14: 72.8	7568700795	14526 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	Yes	57	Ldn	66	72	--	--		Special			57
	7568700800	14532 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	Yes	57	Ldn	66	72	--	--		Special			57
	7568700805	14540 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	Yes	57	Ldn	66	72	--	--		Special			57
	7568700810	14544 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	Yes	59	Ldn	66	72	--	--		Special			59
	7568700815	14552 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	62	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	7568700820	14556 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	62	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	7568700825	14560 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	Yes	No	62	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	7568700830	14570 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	Yes	No	62	Ldn	63	69	--	--	Wall on Structure	Special	4		52
	7568700835	14574 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	Yes	No	65	Ldn	61	67	1	--	Wall on Structure	Special	4		56
	7568700836	14578 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	Yes	No	65	Ldn	61	67	1	--	Wall on Structure	Special	4		55
	7568700775	-	Empty Lot	0	74														
	7568700770	516 Ne 145th St	SF Residence on 145th	1	73	2	Yes	No	59	Ldn	66	72	--	--		Special			59
	7568700765	522 Ne 145th St	SF Residence on 145th	1	72	2	Yes	No	59	Ldn	66	72	--	--		Special			59
	7568700760	14515 6th Ave Ne	SF Residence on 6th Ave.	1	69	2	Yes	Yes	61	Ldn	64	70	--	--		Special			61
	7568700755	14521 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	Yes	Yes	57	Ldn	62	68	--	--		Special			57
	7568700745	14525 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	Yes	Yes	57	Ldn	61	67	--	--		Special			57
	7568700740	14535 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	Yes	Yes	56	Ldn	61	66	--	--		Special			56
	7568700734	14541 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	Yes	Yes	56	Ldn	60	66	--	--		Special			56
M-15: 62.65	7568700730	14549 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	Yes	Yes	56	Ldn	60	66	--	--	Wall on Structure	Special	4		47
	7568700725	14555 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	Yes	No	56	Ldn	59	65	--	--	Wall on Structure	Special	4		47
	7568700720	14565 6th Ave Ne	SF Residence on 6th Ave.	1	61	2	Yes	No	56	Ldn	59	65	--	--	Wall on Structure	Special	4		47
	7568700715	14567 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	7568700705	14579 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	7568700710	515 NE 148th St.	SF Residence on 6th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	7568700695	14572 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	Yes	No	51	Ldn	59	65	--	--	Wall on Structure	Special	4		43
	7568700690	14566 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	Yes	No	53	Ldn	59	65	--	--	Wall on Structure	Special	4		44
	7568700685	14562 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	Yes	No	53	Ldn	60	66	--	--		Special			53
	7568700680	14550 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	Yes	No	53	Ldn	60	66	--	--		Special			53
	7568700675	14548 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	Yes	No	53	Ldn	61	66	--	--		Special			53
	7568700670	14542 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	Yes	No	53	Ldn	61	66	--	--		Special			53
	7568700665	14528 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	Yes	No	53	Ldn	61	67	--	--		Special			53
	7568700660	14526 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	Yes	No	54	Ldn	61	67	--	--		Special			54
	7568700655	14522 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	Yes	No	54	Ldn	62	68	--	--		Special			54
	7568700650	14518 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	Yes	No	54	Ldn	62	68	--	--		Special			54
NE 148th Street to NE 149th Street																			
	8680300045	327 Ne 148th St	SF Residence on 148th	1	70	2	No	No							Wall on Structure	N/A	4		
	8680300050	333 Ne 148th St	SF Residence on 148th	1	70	2	No	No							Wall on Structure	N/A	4		
	8680300055	339 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No	74	Ldn	65	70	--	1	Wall on Structure	Special	6		61
	8680300060	345 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No	69	Ldn	65	70	1	--	Wall on Structure	Special	4		60
	2881700402	14727 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	Yes	No	68	Ldn	63	68	--	1	Wall on Structure	Special	4		58
	2881700400	-	Empty Lot	0	67	2	No	No								N/A			
	8680300040	316 Ne 148th St	SF Residence on 148th	1	70	2	No	No								N/A			
	8680300035	324 Ne 148th St	SF Residence on 148th	1	70	2	No	No	75	Ldn	65	70	--	1	Wall on Structure	N/A	6		63
	8680300030	330 Ne 148th St	SF Residence on 148th	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	8680300025	336 Ne 148th St	SF Residence on 148th	1	70	2	No	No	65	Ldn	65	70	1	--	Wall on Structure	N/A	4		57
	8680300020	342 Ne 148th St	SF Residence on 148th	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	4		55
M-16: 66.95	8680300015	348 Ne 148th St	SF Residence on 148th	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		51
	8680300010	358 Ne 148th St	SF Residence on 148th	1	67	2	No	No	60	Ldn	63	68	--	--	Wall on Structure	N/A	4		50
	8680300005	14807 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	60	Ldn	63	68	--	--	Wall on Structure	N/A	4		50
	2004100090	357 Ne 149th St	SF Residence on 149th	1	67	2	No	No	60	Ldn	63	68	--	--	Wall on Structure	N/A	4		50

Lynnwood Link Extension A3

Stations: 145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	269	198

Residual Impacts	
RSIP =	27

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2004100085	351 Ne 149th St	SF Residence on 149th	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		51
	2004100080	345 Ne 149th St	SF Residence on 149th	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	2004100075	339 Ne 149th St	SF Residence on 149th	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		53
	2004100065	333 Ne 149th St	SF Residence on 149th	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	4		55
	2004100060	327 Ne 149th St	SF Residence on 149th	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	4		57
	2004100055	321 Ne 149th St	SF Residence on 149th	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	2004100050	309 Ne 149th St	SF Residence on 149th	1	70	2	No	No	74	Ldn	65	70	--	1	Wall on Structure	N/A	6		62
	2004100052	305 Ne 149th St	SF Residence on 149th	0	70	2	No	No							Wall on Structure	N/A	4		
	2004100045	308 Ne 149th St	SF Residence on 149th	0	70	2	No	No								N/A			
M-17: 70.05	2004100040	314 Ne 149th St	SF Residence on 149th	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	2004100035	320 Ne 149th St	SF Residence on 149th	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		63
	2004100030	326 Ne 149th St	SF Residence on 149th	1	68	2	No	No	69	Ldn	63	69	--	1	Wall on Structure	N/A	4		60
	2004100025	332 Ne 149th St	SF Residence on 149th	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	4		54
	2004100020	338 Ne 149th St	SF Residence on 149th	1	67	2	No	No	62	Ldn	63	68	--	--		N/A			62
NE 148th Street to NE 152nd Street																			
	7568700355	14802 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	Yes	58	Ldn	61	67	--	--	Wall on Structure	N/A	4		48
	7568700360	14808 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	Yes	58	Ldn	61	67	--	--	Wall on Structure	N/A	4		48
	7568700365	14812 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	Yes	58	Ldn	61	66	--	--	Wall on Structure	N/A	4		48
	7568700370	14818 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	Yes	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	7568700375	14902 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	Yes	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
	7568700380	14910 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	7568700385	14916 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	7568700390	14922 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	7568700395	14928 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	7568700400	14934 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	7568700405	15100 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	7568700410	15108 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	7568700415	15114 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	7568700420	15124 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
NE 151st Street to NE 155th Street																			
	2881700323	15101 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Structure	N/A	4		
	3222200030	301 Ne 151st St	SF Residence on 151st	0	68	2	No	No							Wall on Structure	N/A	4		
	3222200040	307 Ne 151st St	SF Residence on 151st	1	70	2	No	No	73	Ldn	65	70	--	1	Wall on Structure	N/A	6		62
	3222200050	313 Ne 151st St	SF Residence on 151st	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		63
	802290040	321 Ne 151st St	SF Residence on 151st	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	4		56
	802290041	327 Ne 151st St	SF Residence on 151st	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	4		55
	802290050	335 Ne 151st St	SF Residence on 151st	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	4		54
	802290055	347 Ne 151st St	SF Residence on 151st	1	67	2	No	No	62	Ldn	63	68	--	--		N/A			62
	2881700322	15109 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No								N/A			
	2881700321	15117 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No								N/A			
	2881700311	15121 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	75	Ldn	63	69	--	1	Wall on Structure	N/A	8		62
	2881700310	225 Ne 152nd St	Church at end of 152nd St.	1	70	3	No	No	65	Leq	70	75	--	--	Wall on Retaining Wall	N/A	4		59
	2634500055	304 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		61
	2634500060	310 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	70	Ldn	65	70	--	1	Wall on Structure	N/A	4		60
	2634500065	316 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		54
	2634500070	322 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	4		52
	2634500035	323 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	8		48
	2634500040	317 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
	2634500045	311 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	8		56
	2634500050	305 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	8		57
	3222200010	15112 3rd Ave Ne	SF Residence on 3rd Ave.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		63
	3222200020	306 Ne 151st St	SF Residence on 151st	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	802290035	316 Ne 151st St	SF Residence on 151st	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Structure	N/A	4		57
	802290030	324 Ne 151st St	SF Residence on 151st	1	69	2	No	No	63	Ldn	64	70	--	--		N/A			63
	2881700301	-	Empty Lot	0	70	2	No	No								N/A			
	5027800130	411 Ne 153rd St	SF Residence on 153rd St.	1	69	2	No	No	57	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		53
	5027800120	407 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	63	Ldn	65	70	--	--		N/A			63
M-18 (63.9 LEQ)	5027800110	405 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	63	Ldn	65	70	--	--		N/A			63
	5027800100	403 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	62	Ldn	65	70	--	--		N/A			62
	5027800090	401 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	57	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		53
	2881700300	15240 3rd Ave Ne	SF Residence on 3rd Ave.	1	71	2	No	No	64	Ldn	66	71	--	--		N/A			64
	2807600030	15451 4th Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	56	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		52
	0411100005	301 Ne 155th St	SF Residence on 4th Ave.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Structure	N/A	4		52
	0411100010	15420 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	55	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		51
	0411100015	15414 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	56	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		51

Lynnwood Link Extension A3

Stations: 145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	269	198

Residual Impacts	
RSIP =	27

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0411100020	15408 2nd Ave Ne	SF Residence on 2rd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		52
	0411100025	15404 2nd Ave Ne	SF Residence on 2rd Ave.	1	72	2	No	No	64	Ldn	66	72	--	--		N/A			64
	0411100030	15401 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	No	No	67	Ldn	66	72	1	--	Wall on Retaining Wall	N/A	4		62
	0411100035	15407 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	No	No	67	Ldn	66	72	1	--	Wall on Retaining Wall	N/A	4		62
	0411100040	15419 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	No	No	61	Ldn	65	70	--	--		N/A			61
	0411100045	15425 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Structure	N/A	4		56
	0411100050	165 Ne 155th St	SF Residence on 155th St.	1	71	2	No	No	66	Ldn	66	71	1	--	Wall on Structure	N/A	4		56
	0411100055	145 Ne 155th St	Fire Station	1	76	2	No	No	73	Ldn	66	75	1	--	Wall on Structure	N/A	4		65
NE 155th Street to NE 158th Street																			
	2241700075	157 Ne 156th St	SF Residence on 156th St.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	2241700070	151 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Structure	N/A	4		52
	2241700065	143 Ne 156th St	SF Residence on 156th St.	1	71	2	No	No	63	Ldn	66	71	--	--	Wall on Structure	N/A	4		53
	2241700060	137 Ne 156th St	SF Residence on 156th St.	1	72	2	No	No	65	Ldn	66	72	--	--	Wall on Structure	N/A	4		55
M-19: 73.3	2241700055	132 Ne 155th St	SF Residence on 155th St.	1	73	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	4		62
	2241700050	125 Ne 156th St	SF Residence on 156th St.	1	74	2	No	No	73	Ldn	66	73	--	1	Wall on Structure	N/A	4		64
	2241700045	110 Ne 155th St	SF Residence on 155th St.	1	75	2	No	No	78	Ldn	66	74	--	1	Wall on Structure	N/A	6		65
	2881700240	106 Ne 155th St	SF Residence on 155th St.	1	76	2	No	No	77	Ldn	66	75	--	1	Wall on Structure	N/A	6		65
	2241700040	104 Ne 156th St	SF Residence on 156th St.	1	75	2	No	No	74	Ldn	66	74	--	1	Wall on Structure	N/A	4		65
	2241700035	108 Ne 156th St	SF Residence on 156th St.	1	73	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	4		63
	2241700030	122 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		61
	2241700025	130 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Structure	N/A	4		56
	2241700020	136 Ne 156th St	SF Residence on 156th St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
	2241700015	142 Ne 156th St	SF Residence on 156th St.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	2241700010	148 Ne 156th St	SF Residence on 156th St.	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		51
	2241700005	156 Ne 156th St	SF Residence on 156th St.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	2881700233	15615 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	2881700234	15621 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	4		49
	2881700232	15625 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	4		49
	2881700239	241 Ne 157th St	SF Residence on 157th St.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	2881700229	235 Ne 157th St	SF Residence on 157th St.	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	2881700226	229 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	4		54
	2881700224	223 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	4		55
	2881700225	125 Ne 157th St	SF Residence on 157th not =15544 1st Ave Ne	1	69	2	No	No	66	Ldn	64	70	1	--	Wall on Structure	N/A	4		56
	2881700219	117 Ne 157th St	SF Residence on 157th St.	1	69	2	No	No	67	Ldn	64	70	1	--	Wall on Structure	N/A	4		57
	2881700220	111 Ne 157th St	SF Residence on 157th St.	1	71	2	No	No	74	Ldn	66	71	--	1	Wall on Structure	N/A	4		64
	2881700223	101 Ne 157th St	SF Residence on 157th St.	0	72	2	No	No							Wall on Structure	N/A	4		
	2881700230	15618 1st Ave Ne	SF Residence on 1st Ave.	0	72	2	No	No							Wall on Structure	N/A	4		
	2881700227	108 Ne 157th St	SF Residence on 157th St.	1	71	2	No	No	75	Ldn	66	71	--	1	Wall on Structure	N/A	6		62
	2881700218	15710 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	75	Ldn	66	71	--	1	Wall on Structure	N/A	6		62
	8142000180	105 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		64
	8142000170	111 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	61	Ldn	65	70	--	--		N/A			61
	2881700222	116 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	4		56
	2881700221	126 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	4		53
	2881700231	132 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	8142000160	117 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
M-20: 68.33	8142000150	123 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
NE 158th Street to NE 165th Street																			
	8142000090	104 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		64
	8142000080	110 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	61	Ldn	65	70	--	--		N/A			61
	8142000070	116 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	8142000060	122 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	6159400080	117 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	6159400075	125 Ne 159th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	6159400085	113 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		56
	6159400090	105 Ne 159th St	SF Residence on 159th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		64
	6159400045	104 Ne 159th St	SF Residence on 159th St.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
	6159400037	114 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	69	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		63
	6159400035	118 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	6159400030	124 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	6159400025	130 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	56	Ldn	63	69	--	--		N/A			56
	2111600080	129 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	2111600075	139 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	56	Ldn	63	69	--	--		N/A			56
	2111600085	123 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	2111600090	115 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	68	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		62
	2111600095	15924 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
	2111600100	15918 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
M-21: 61.8 LEQ	2881700193	108 Ne 161st St	Ridgecrest Park	1	62	3	No	No							Wall At-Grade	N/A	4		
	2111600040	114 Ne 161st St	SF Residence on 161st St.	1	71	2	No	No	71	Ldn	66	71	--	1	Wall At-Grade	N/A	6		62
	2111600035	122 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	62	Ldn	65	70	--	--		N/A			62

Lynnwood Link Extension A3

Stations: 145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	269	198

Residual Impacts	
RSIP =	27

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2111600030	128 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59
	2111600025	134 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	56	Ldn	63	69	--	--		N/A			56
	7301300295	303 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	50	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		44
	7301400110	129 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	51	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		46
	7301400120	121 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Retaining Wall	N/A	4		55
	7301400220	128 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	60	Ldn	62	68	--	--		N/A			60
	7301300130	304 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	50	Ldn	62	68	--	--		N/A			50
	7301300135	310 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	46	Ldn	62	68	--	--		N/A			46
	7301300120	139 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301300125	135 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	7301400200	127 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	7301400211	124 Ne 163rd St	SF Residence on 163rd St.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	7301400070	-	Empty Lot	0	68	--	No	No								N/A			
	7301400060	132 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	60	Ldn	63	69	--	--		N/A			60
	7301400040	134 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	7301400046	140 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301300030	141 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301300035	135 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	7301400050	127 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
NE 165th Street to NE 170th Street																			
	5727500330	126 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59
	7307000050	124 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	58	Ldn	63	69	--	--		N/A			58
	5727500355	119 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	5727500350	123 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	7307000040	134 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301500010	132 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	7301500020	140 Ne 165th St	SF Residence on 165th St.	1	66	2	No	No	44	Ldn	62	68	--	--		N/A			44
	7307000030	140 Ne 165th Pl	SF Residence on 165th Place	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	5727500300	131 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	45	Ldn	62	68	--	--		N/A			45
	5727500363	120 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	58	Ldn	63	69	--	--		N/A			58
	5727500360	-	Empty Lot	0	68	--	No	No								N/A			
	9235900015	111 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	58	Ldn	63	69	--	--		N/A			58
	9235900020	117 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	9235900025	123 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	45	Ldn	62	68	--	--		N/A			45
	9235900040	130 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	44	Ldn	62	68	--	--		N/A			44
	5727500361	124 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	5727500086	114 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	60	Ldn	63	69	--	--		N/A			60
	5727500103	16719 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500100	16723 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500102	16729 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500111	16731 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500110	16735 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	5727500113	16741 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	5727500120	109 Ne 170th St	SF Residence on 170th St.	0	68	2	No	No								N/A			
	7305900115	119 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59
	5727500130	121 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	5727500139	16742 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	5727500137	16738 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	5727500148	16728 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	5727500149	16722 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--		N/A			46
	5727500150	16716 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--		N/A			46
	5727500155	126 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	45	Ldn	63	69	--	--		N/A			45
	5727500087	118 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	5727500156	132 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500157	136 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	41	Ldn	62	68	--	--		N/A			41
	5727500159	16719 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500147	16725 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500146	-	Empty Lot	0	66	--	No	No								N/A			
	5727500145	16735 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500135	16741 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500136	16747 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	5727500138	16753 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	5727500131	16761 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	45	Ldn	63	69	--	--		N/A			45
NE 170th Street to NE 175th Street																			
	7305300205	104 Ne 170th St	SF Residence on 170th St.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300210	17010 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300215	17016 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300220	17022 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55

Lynnwood Link Extension A3

Stations: 145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	269	198

Residual Impacts	
RSIP =	27

Receiver Information							Impact Analysis						Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	7305300225	17028 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300230	17034 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300235	17040 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300240	17046 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300245	17052 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	62	Ldn	66	71	--	--		N/A			62
	7305300250	17058 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300255	17204 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300260	17210 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300265	17216 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300270	17222 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300275	105 Ne 174th St	SF Residence on 174th St.	0	70	2	No	No								N/A			
	7305300350	111 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	63	Ldn	66	71	--	--		N/A			63
	7305300345	17223 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	58	Ldn	66	71	--	--		N/A			58
	7305300340	17217 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	57	Ldn	66	71	--	--		N/A			57
M-22: 70.2	7305300335	17211 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300330	17205 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300325	17059 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300320	17053 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300315	17047 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	50	Ldn	64	70	--	--		N/A			50
	7305300310	17041 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	45	Ldn	64	70	--	--		N/A			45
	7305300305	17035 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300300	17029 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300295	17023 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300290	17017 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300285	17011 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300280	110 Ne 170th St	SF Residence on 170th St.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300425	205 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	55	Ldn	64	70	--	--		N/A			55
	7305300420	17222 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	7305300415	17216 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--		N/A			47
	7305300410	17210 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--		N/A			47
	7305300405	17204 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--		N/A			47
	7305300400	17058 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--		N/A			46
	7305300395	17052 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--		N/A			46
	7305300390	17046 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	44	Ldn	63	68	--	--		N/A			44
	7305300385	17040 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300380	17034 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300375	17028 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300370	17022 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300365	17016 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300360	17010 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300355	204 Ne 170th St	SF Residence on 170th St.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300010	110 Ne 174th St	SF Residence on 174th St.	0	??	2	No	No								N/A			
	7305300015	116 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	77	Ldn	66	71	--	1	Wall on Structure	N/A	6		65
	7305300020	122 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	73	Ldn	66	71	--	1	Wall on Structure	N/A	4		65
	7305300025	128 Ne 174th St	SF Residence on 174th St.	1	70	2	No	No	67	Ldn	65	70	1	--	Wall on Structure	N/A	4		58
	7305300030	204 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	4		55
	7305300035	210 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		54
	7305300040	216 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
M-23: 70.2	7305300085	211 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	70	Ldn	65	70	--	1	Wall on Structure	N/A	4		61
	7305300090	217 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	64	Ldn	65	70	--	--	Wall on Structure	N/A	4		55
	7305300095	223 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
NE 175th Street to NE 180th Street																			
	1115100230	208 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	1115100232	-	Empty Lot	0	70	--	No	No							Wall on Structure	N/A	4		
	1115100235	206 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	75	Ldn	65	70	--	1	Wall on Structure	N/A	6		64
	1115100210	216 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		63
	1115100208	218 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	6		61
	1115100211	222 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		55
	1115100209	220 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	4		58
	1115100200	230 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	62	Ldn	64	70	--	--		N/A			62
	1115100205	234 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	63	Ldn	64	70	--	--		N/A			63
	1115100195	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Structure	N/A	6		47
	1115100190	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	1115100182	310 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	1115100175	320 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	4		49

Lynnwood Link Extension A3

Stations: 145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	269	198

Residual Impacts	
RSIP =	27

Receiver Information									Impact Analysis					Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	1115100172	323 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	4		50
	1115100171	325 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	4		50
	1115100176	317 Ne 178th St	SF Residence on 178th St.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	6		48
	1115100180	308 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	63	Ldn	63	68	1	--	Wall on Structure	N/A	4		55
	1115100181	311 Ne 178th St	SF Residence on 178th St.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	4		56
	7772400110	239 Ne 178th St	SF Residence on 178th St.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	4		63
M-24: 69.15	7772400120	17748 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	4		63
	7772400130	17738 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	69	Ldn	64	70	1	--	Wall on Structure	N/A	4		61
	7772400140	17734 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	4		62
	7772400150	17733 2nd Pl Ne	SF Residence on 2nd Pl.	1	75	2	No	No	72	Ldn	66	74	1	--	Wall on Structure	N/A	4		64
	7772400160	17737 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	7772400170	17741 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	7772400180	17747 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	7772400190	17753 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	1115100065	224 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No								N/A			
	1115100070	230 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No								N/A			
	7772400010	17803 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	73	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	61
	7772400020	17809 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	73	Ldn	61	66	--	1	Wall on Structure	N/A	8		60
	7772400030	17815 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	75	Ldn	61	67	--	1	Wall on Structure	N/A	8	1	62
	7772400040	17821 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	75	Ldn	61	67	--	1	Wall on Structure	N/A	8	1	62
	7772400050	17825 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	72	Ldn	62	68	--	1	Wall on Structure	N/A	8		60
	7772400060	17822 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	8		52
	7772400070	17816 3rd Ave Ne	SF Residence on 3rd Ave.	1	63	2	No	No	64	Ldn	60	66	1	--	Wall on Structure	N/A	8		51
	7772400080	17810 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	8		52
	7772400090	17804 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	7772400100	312 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	8		48
	1115100119	330 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	1115100123	340 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	1115100121	344 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	1115100111	337 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	72	Ldn	60	66	--	1	Wall on Structure	N/A	8		59
	1115100113	335 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	76	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	60
	1115100112	333 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	78	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	61
	1115100110	331 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	82	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	62
	1115100120	336 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		47
	1115100122	348 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	8		48
	1115100125	-	Empty Lot	0	62	--	No	No							Wall on Structure	N/A	8		
	1115100137	17861 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Structure	N/A	8		51
	1115100138	17857 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Structure	N/A	8		50
	1115100135	17845 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		50
	1115100136	17833 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	1115100142	17829 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	1115100139	17825 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	1115100140	17821 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No							Wall on Structure	N/A	8		
	1115100146	356 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	8		42
	0927100187	17822 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		45
	0927100196	17832 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		46
	0927100200	17840 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		46
	0927100199	17844 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		46
	0927100205	17852 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--		N/A	8		60
NE 180th Street to NE 185th Street																			
	6084100118	332 Ne 180th St	SF Residence on 180th St.	0	63	2	No	No							Wall on Structure	N/A	8		
	6084100117	338 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	80	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	62
	6084100114	344 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	76	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	61
M-25: 59.1 LEQ	6084100116	350 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	72	Ldn	60	66	--	1	Wall on Structure	N/A	8		58
	6084100115	356 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	70	Ldn	61	66	--	1	Wall on Structure	N/A	8		57
	6084100110	18017 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	67	Ldn	60	66	--	1	Wall on Structure	N/A	8		55
	6084100113	18019 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	75	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	63
	6084100105	18023 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	74	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	61
	6084100100	18027 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	74	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	61
	6084100095	18031 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	74	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	62
	6084100086	18041 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No							Wall on Structure	N/A	8		
	0927100065	506 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		48
	0927100066	514 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	8		46
	0927100067	518 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	0927100068	524 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	8		43
	5662100015	18015 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	5662100020	18021 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	0927100071	18022 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	8		47
	0927100079	18020 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	8		49

Lynnwood Link Extension A3

Stations: 145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	269	198

Residual Impacts	
RSIP =	27

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0927100070	18016 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	0927100076	18032 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	5662100025	18027 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	5662100030	18033 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	0927100075	515 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		48
	0927100073	18034 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	69	Ldn	62	68	--	1	Wall on Structure	N/A	8		56
	0927100082	18036 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	70	Ldn	62	68	--	1	Wall on Structure	N/A	8		57
	0927100080	519 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	5662100035	18039 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		46
	5662100040	18045 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		46
	0927100084	518 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	0927100083	504 Ne 182nd Ct	SF Residence on 182nd Ct.	1	66	2	No	No	72	Ldn	62	68	--	1	Wall on Structure	N/A	8		59
	0927100085	18210 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	73	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	0927100090	505 Ne 183rd Ct	SF Residence on 183rd Ct.	1	66	2	No	No	73	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	0927100094	18310 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	74	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	0927100098	18320 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	74	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	0927100081	514 Ne 182nd Ct	SF Residence on 182nd Ct.	1	65	2	No	No	69	Ldn	61	67	--	1	Wall on Structure	N/A	8		57
	5662100045	18051 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		48
	5662100050	18057 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		48
	0927100091	515 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	69	Ldn	61	67	--	1	Wall on Structure	N/A	8		57
	5662100055	18063 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	0927100092	520 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	8		52
	0927100093	514 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	71	Ldn	61	67	--	1	Wall on Structure	N/A	8		59
	0927100105	18326 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	73	Ldn	62	68	--	1	Wall on Structure	N/A	8		60
	0927100100	18330 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	72	Ldn	62	68	--	1	Wall on Structure	N/A	8		59
	0927100110	-	Empty Lot	0	67	--	No	No							Wall on Structure	N/A	8		
	5662100075	18313 7th Ave Ne	SF Residence on 7th Ave.	1	68	2	Yes	No	68	Ldn	63	69	1	--	Wall on Structure	Special	4		60
	5662100080	18316 7th Ave Ne	SF Residence on 7th Ave.	1	70	2	Yes	No	67	Ldn	65	70	1	--	Wall on Structure	Special	4		59
	0927100016	18323 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No	66	Ldn	64	70	1	--	Wall on Structure	Special	4		58
	0927100015	18329 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No	65	Ldn	64	70	1	--	Wall on Structure	Special	4		58
M-28: 70.97	0927100011	721 Ne 185th St	SF Residence on 185th St.	1	71	2	Yes	No	65	Ldn	66	71	--	--		Special			65
	5662100060	18069 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	5662100065	18301 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	5662100070	18307 7th Ave Ne	SF Residence on 7th Ave.	1	65	2	No	No	69	Ldn	61	67	--	1	Wall on Structure	N/A	8		56
	5662100090	18308 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	5662100085	18317 7th Ave Ne	SF Residence on 7th Ave.	1	69	2	Yes	Yes	60	Ldn	64	70	--	--	Wall on Structure	Special	4		52
	0927100008	731 Ne 185th St	SF Residence on 185th St.	1	70	2	Yes	No	60	Ldn	65	70	--	--	Wall on Structure	Special	4		53
	6163900092	18342 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	Yes	Yes	57	Ldn	63	69	--	--	Wall on Structure	Special	4		49
	6163900091	18343 9th Ave Ne	SF Residence on 9th Ave.	1	68	2	Yes	No	58	Ldn	63	69	--	--	Wall on Structure	Special	4		50
	6163900095	18332 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No	58	Ldn	63	68	--	--	Wall on Structure	Special	4		50
	6163900082	18318 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No	57	Ldn	63	68	--	--	Wall on Structure	Special	4		50
	6163900081	18312 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	No	58	Ldn	61	67	--	--	Wall on Structure	Special	8		46
	6163900073	18306 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	58	Ldn	60	66	--	--	Wall on Structure	Special	8		46
	6163900071	18300 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	8		44
	5662100095	18302 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	5662100100	18070 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	5662100105	18064 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	5662100110	18058 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	5662100115	18052 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	5662100120	18046 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	6163900063	18072 8th Ave Ne		1	62	2	Yes	No	58	Ldn	59	65	--	--	Wall on Structure	Special	8		45
	6163900061	18066 8th Ave Ne		1	62	2	Yes	No	58	Ldn	59	65	--	--	Wall on Structure	Special	8		45
	6163900053	18060 8th Ave Ne		1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	6163900050	18054 8th Ave Ne		1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	6163900043	18048 8th Ave Ne		1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
NE 185th Street to NE 189th Street																			
	0526049029	18510 7th Ave Ne	SF Residence on 7th Ave.	0	69	2	No	No							Wall on Structure	N/A	4		
	0526049060	18516 7th Ave Ne	SF Residence on 7th Ave.	0	66	2	No	No							Wall on Structure	N/A	4		
	0526049027	18520 7th Ave Ne	SF Residence on 7th Ave.	0	64	2	No	No							Wall on Structure	N/A	4		
	0526049044	18528 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049015	18534 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049056	18540 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049061	18546 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049032	18552 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049031	18558 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	3971702321	707 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall on Structure	N/A	4		
	3971702325	703 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall on Structure	N/A	8		
	3971702320	715 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	73	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	60
	3971702316	719 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	73	Ldn	60	66	--	1	Wall on Structure	N/A	8		59
	3971702315	721 Ne 189th St	SF Residence on 189th St.	1	63	2	Yes	Yes	71	Ldn	60	66	--	1	Wall on Structure	Special	6		59
	3971702311	18807 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	63	Ldn	60	66	1	--	Wall on Structure	Special	8		51

Lynnwood Link Extension A3

Stations: 145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	269	198

Residual Impacts	
RSIP =	27

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	3971702310	727 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	65	Ldn	60	66	1	--	Wall on Structure	N/A	8		52
	0526049011	18559 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	70	Ldn	60	66	--	1	Wall on Structure	Special	6		58
	0526049024	18553 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	69	Ldn	60	66	--	1	Wall on Structure	Special	6		57
	0526049025	18547 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	64	Ldn	60	66	1	--	Wall on Structure	Special	4		56
	0526049050	18539 8th Ave Ne	SF Residence on 8th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049026	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	0526049055	18533 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No							Wall on Structure	Special	4		
	0526049054	18529 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No							Wall on Structure	Special	4		
	0526049040	18523 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	No							Wall on Structure	Special	4		
	0526049028	18517 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No							Wall on Structure	Special	4		
	0526049052	18511 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No							Wall on Structure	Special	4		
	0526049030	18509 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	Yes	No							Wall on Structure	Special	4		
	3235100273	814 Ne 185th St	SF Residence on 185th St.	1	71	2	Yes	Yes	54	Ldn	66	71	--	--	Wall on Structure	Special	4		46
	3235100270	18504 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	Yes	Yes	59	Ldn	66	71	--	--	Wall on Structure	Special	4		51
	3235100265	18510 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	Yes	Yes	59	Ldn	63	69	--	--	Wall on Structure	Special	4		52
	3235100260	18516 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	Yes	60	Ldn	61	67	--	--		Special			60
	3235100255	18522 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	60	Ldn	60	66	1	--	Wall on Structure	Special	4		52
M-29: 64.4	3235100249	18528 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	60	Ldn	59	65	1	--	Wall on Structure	Special	4		52
	3235100244	18534 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	60	Ldn	59	65	1	--	Wall on Structure	Special	4		52
	3235100240	18540 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	60	Ldn	59	65	1	--	Wall on Structure	Special	4		52
	3235100205	18554 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	60	Ldn	59	65	1	--	Wall on Structure	Special	4		52
	3235100210	811 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	Yes	58	Ldn	59	65	--	--	Wall on Structure	Special	4		50
	3235100215	817 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	Yes	57	Ldn	59	65	--	--	Wall on Structure	Special	4		49
	3235100220	823 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	57	Ldn	58	64	--	--	Wall on Structure	Special	4		48
	3235100224	829 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	57	Ldn	58	64	--	--	Wall on Structure	Special	4		48
	3235100230	835 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	56	Ldn	58	64	--	--	Wall on Structure	Special	4		47
	3235100235	841 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	56	Ldn	58	64	--	--	Wall on Structure	Special	4		47
	3235100200	18810 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	Yes	Yes	59	Ldn	61	66	--	--	Wall on Structure	Special	4		51
	3235100105	18820 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	Yes	Yes	60	Ldn	61	66	--	--	Wall on Structure	Special	8		47
	3235100110	811 Ne 189th St	SF Residence on 189th St.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		46
	3235100195	810 Ne 188th St	SF Residence on 188th St.	1	61	2	No	No	58	Ldn	59	65	--	--		N/A			58
	3235100190	816 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	56	Ldn	59	65	--	--	Wall on Structure	Special	4		49
	3235100185	822 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	56	Ldn	59	65	--	--	Wall on Structure	Special	4		48
	3235100120	823 Ne 189th St	SF Residence on 188th St.	1	61	2	Yes	No	56	Ldn	59	65	--	--	Wall on Structure	Special	4		49
	3235100115	817 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	57	Ldn	59	65	--	--	Wall on Structure	Special	4		49
NE 189th Street to NE 200th Street																			
	3971702305	728 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	73	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	60
	3971702295	718 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall on Structure	N/A	8		
	3971702210	18915 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	72	Ldn	60	66	--	1	Wall on Structure	N/A	8		59
	3971702215	18921 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	73	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	60
	0526049063	19011 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	73	Ldn	63	68	--	1	Wall on Structure	N/A	6		61
	0526049010	19031 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	73	Ldn	63	68	--	1	Wall on Structure	N/A	6		61
M-30A&B: 59.4 & 6	0526049007	816 Ne 190th St	School on 190th St.	1	65	3	No	No	68	Leq	66	72	1	--	Wall on Structure	N/A	4		58
	3235100005	18920 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	8		51
	3235100100	18910 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		56
	3235100095	810 Ne 189th St	SF Residence on 189th St.	1	60	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	4		53
	3235100010	811 Ne 190th St	SF Residence on 190th St.	1	60	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	8		48
	3235100015	817 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	8		46
	3235100090	816 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	4		51
	3235100085	822 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	3235100080	828 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	3235100075	834 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	3235100020	823 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	8		44
	3235100025	829 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	8		43
	3235100030	835 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	8		

Lynnwood Link Extension A5

Stations: 130th Option 1
155th Station
185th Option 3

Total Units Analyzed
845

Impacts:	Moderate	Severe
	181	105

Residual I		
RSIP =	RSIP =	8

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
Street to Street																			
Northgate to NE 1																			
M-1: 71.5	2926049011	11200 1st Ave Ne	Southern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	70	Ldn	66	72	8	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Southern F. line 2nd floor Apts. on 1st Ave.	4	72	2	No	No	71	Ldn	66	72	4	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Northern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	73	Ldn	66	72	--	8	Wall on Structure	N/A	4		65
	2926049011	11200 1st Ave Ne	Northern F. line 2nd floor Apts. on 1st Ave.	8	72	2	No	No	74	Ldn	66	72	--	8	Wall on Structure	N/A	4		65
	2926049011	11200 1st Ave Ne	Front line Apts. on Northgate Way	1	72	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Second line Apts. on Northgate Way	4	72	2	No	No	65	Ldn	66	72	--	--	Wall on Structure	N/A	4		57
	2926049011	11200 1st Ave Ne	Third line Apts. on Northgate Way	5	72	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		53
M-3: 60.8 LEQ	2926049011	11200 1st Ave Ne	Southern 2nd line ground level Apts. on 1st Ave.	4	65	2	No	No	64	Ldn	61	67	4	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Southern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	65	Ldn	61	67	4	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Northern 2nd line ground level Apts. on 1st Ave.	8	65	2	No	No	65	Ldn	61	67	8	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Northern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	66	Ldn	61	67	4	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Southern 3rd line ground level Apts. on 1st Ave.	4	63	2	No	No	62	Ldn	60	66	4	--	Wall on Structure	N/A	4		53
	2926049011	11200 1st Ave Ne	Southern 3rd line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	63	Ldn	60	66	4	--	Wall on Structure	N/A	4		53
	2926049011	11200 1st Ave Ne	Northern 3rd line ground level Apts. on 1st Ave.	8	63	2	No	No	63	Ldn	60	66	8	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Northern 3rd line 2nd floor Apts. on 1st Ave.	8	63	2	No	No	64	Ldn	60	66	8	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Southern 4th line ground level Apts. on 1st Ave.	10	63	2	No	No	60	Ldn	60	66	10	--	Wall on Structure	N/A	4		51
	2926049011	11200 1st Ave Ne	Southern 4th line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	60	Ldn	60	66	4	--	Wall on Structure	N/A	4		51
	2926049011	11200 1st Ave Ne	Northern 4th line ground level Apts. on 1st Ave.	11	63	2	No	No	61	Ldn	60	66	11	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Northern 4th line 2nd floor Apts. on 1st Ave.	11	63	2	No	No	61	Ldn	60	66	11	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Southern ground level Apts. E of 2nd Ave.	10	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	2926049011	11200 1st Ave Ne	Southern 2nd floor Apts. E of 2nd Ave.	10	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	2926049011	11200 1st Ave Ne	Northern ground level Apts. E of 2nd Ave.	6	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
	2926049011	11200 1st Ave Ne	Northern 2nd floor Apts. E of 2nd Ave.	6	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
M-2: 73.5	6174800000	11300 1st Ave Ne	Front line ground level condos on 1st Ave. courtyard	11	74	2	No	No	74	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on 1st Ave. courtyard	11	74	2	No	No	75	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on 1st Ave. courtyard	11	74	2	No	No	76	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line ground level condos on south side	5	74	2	No	No	75	Ldn	66	73	--	5	Wall on Structure	N/A	6		63
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on south side	5	74	2	No	No	76	Ldn	66	73	--	5	Wall on Structure	N/A	6		64
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on south side	5	74	2	No	No	78	Ldn	66	73	--	5	Wall on Structure	N/A	6		64
	2926049050	11355 3rd Ave Ne-Bldg. E	1st Floor Citigate Apts.=108 unit Apt. complex that would be front line if M-2 is displaced	4	66	2	No	No	67	Ldn	62	68	4	--	Wall on Structure	N/A	4		58
	2926049050	11355 3rd Ave Ne-Bldg. E	2nd Floor at Citigate Apts.	4	66	2	No	No	68	Ldn	62	68	--	4	Wall on Structure	N/A	4		58
	2926049050	11355 3rd Ave Ne-Bldg. E	3rd Floor at Citigate Apts.	4	66	2	No	No	68	Ldn	62	68	--	4	Wall on Structure	N/A	4		58
	2926049050	11355 3rd Ave Ne-East of Bldg. E	1st Floor Citigate Apts.- 2nd line	2	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		50
	2926049050	11355 3rd Ave Ne-East of Bldg. E	2nd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	60	Ldn	60	66	2	--	Wall on Structure	N/A	4		50
	2926049050	11355 3rd Ave Ne-East of Bldg. E	3rd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	60	Ldn	60	66	2	--	Wall on Structure	N/A	4		50
M-4: 65.65	2926049529	133 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	74	Ldn	62	68	--	1	Wall on Retaining Wall	N/A	8	1	62
	2926049530	139 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	64	Ldn	62	68	1	--	Wall on Retaining Wall	N/A	8		53
	2926049531	145 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		50

Lynnwood Link Extension A5

Stations: 130th Option 1
155th Station
185th Option 3

Total Units Analyzed
845

Impacts:	Moderate	Severe
	181	105

Residual I		
RSIP =	RSIP =	8

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2926049532	151 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	57	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		52
	2926049533	157 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	54	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		50
	2926049192	303 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	52	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		48
	2926049418	11352 3rd Ave	SF Residence on 3rd Ave.	1	62	2	No	No	51	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		47
	2926049191	315 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	50	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		47
NE 115th Street to																			
	6411600161	136 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	77	Ldn	62	68	--	1	Wall on Retaining Wall	N/A	8	1	65
	6411600162	142 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	71	Ldn	62	68	--	1	Wall on Retaining Wall	N/A	8		59
	6411600163	148 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	8		52
	6411600164	154 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	58	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		48
	7810300035	147 Ne 116th St	Duplex on 116th St.	2	66	2	No	No	76	Ldn	62	68	--	2	Wall At-Grade	N/A	8	2	64
	7810300030	11519 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	66	Ldn	61	66	--	1	Wall At-Grade	N/A	8		54
	7810300025	11523 3rd Ave N	SF Residence on 3rd Ave.	1	66	2	No	No	70	Ldn	62	68	--	1	Wall At-Grade	N/A	8		59
	6411600147	156 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No	77	Ldn	61	66	--	1	Wall At-Grade	N/A	8	1	65
	7810300005	150 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No							Wall At-Grade	N/A	8		
	6411600146	157 Ne 117th St	SF Residence on 117th St.	1	64	2	No	No							Wall At-Grade	N/A	8		
	6411600186	11622 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall At-Grade	N/A	8		47
	6411600185	11610 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall At-Grade	N/A	8		45
	6411600182	11606 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	50	Ldn	59	65	--	--	Wall At-Grade	N/A	8		39
	6411600188	11600 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall At-Grade	N/A	8		56
	6411600172	11526 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall At-Grade	N/A	8		55
	6411600170	11522 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall At-Grade	N/A	8		48
	6161000031	11514 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall At-Grade	N/A	8		48
	6161000022	11508 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		47
	6161000021	304 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		45
	6411600173	316 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	51	Ldn	59	65	--	--	Wall At-Grade	N/A	8		43
	6411600171	322 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	51	Ldn	59	65	--	--	Wall At-Grade	N/A	8		42
	6161000015	11515 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	53	Ldn	59	65	--	--	Wall At-Grade	N/A	8		44
	6161000010	11519 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	54	Ldn	59	65	--	--	Wall At-Grade	N/A	8		45
	6161000005	11527 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall At-Grade	N/A	8		47
	6161000035	11533 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall At-Grade	N/A	8		47
	6411600181	11539 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall At-Grade	N/A	8		46
	6411600180	11545 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall At-Grade	N/A	8		46
	6411600183	325 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	54	Ldn	59	65	--	--	Wall At-Grade	N/A	8		44
	6411600187	321 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall At-Grade	N/A	8		47
	6411600184	311 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall At-Grade	N/A	8		50
	6411600200	401 Ne 117th St	SF Residence on 117th St.	1	61	2	No	No	52	Ldn	59	65	--	--	Wall At-Grade	N/A	8		43
	6411600198	11544 4th Ave Ne	SF Residence on 4th Ave.	1	61	2	No	No	53	Ldn	59	65	--	--	Wall At-Grade	N/A	8		44
	6411600201	11536 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	52	Ldn	58	64	--	--	Wall At-Grade	N/A	8		44
	6411600199	11532 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	52	Ldn	58	64	--	--	Wall At-Grade	N/A	8		43
	6411600207	11524 4th Ave Ne	SF Residence on 4th Ave.	1	58	2	No	No	52	Ldn	57	63	--	--	Wall At-Grade	N/A	8		43
M-4: 56.775	6411600211	11516 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	50	Ldn	57	63	--	--	Wall At-Grade	N/A	8		41
	6411600209	11510 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	50	Ldn	57	63	--	--	Wall At-Grade	N/A	8		41
	6411600213	11529 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	49	Ldn	57	63	--	--	Wall At-Grade	N/A	8		41
	6411600195	11537 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	49	Ldn	57	63	--	--	Wall At-Grade	N/A	8		41
	6411600202	11547 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	52	Ldn	57	63	--	--	Wall At-Grade	N/A	8		43
	6411600196	11545 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	49	Ldn	58	64	--	--	Wall At-Grade	N/A	8		41
	6411600203	11533 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	48	Ldn	58	64	--	--	Wall At-Grade	N/A	8		40
	6411600208	11525 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	48	Ldn	58	64	--	--	Wall At-Grade	N/A	8		40
NE 117th Street to																			
	6411600414	308 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall At-Grade	N/A	4		55
	6411600413	11708 3rd Ave Ne	SF Residence	1	62	2	No	No	63	Ldn	59	65	1	--	Wall At-Grade	N/A	4		56
	6411600420	11710 3rd Ave Ne	Church	0	62	3	No	No								N/A			
	6411600429	323 Ne 120th St	SF Residence north of the church	0	62	2	No	No							Wall on Retaining Wall	N/A	4		
	6411600430	325 Ne 120th St	SF Residence north of the church	0	62	2	No	No							Wall on Retaining Wall	N/A	4		
	6411600443	11737C 5th Ave Ne	SF Residence north of the church	1	62	2	No	No	56	Ldn	59	65	--	--	Increase I-5 wall height	N/A			56
	6411600442	11737 5th Ave Ne Unit B	SF Residence north of the church	1	62	2	No	No	49	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		44
	6411600441	11737 5th Ave Ne Unit A	SF Residence north of the church	1	62	2	No	No	56	Ldn	59	65	--	--		N/A			56
	6411600440	11743 5th Ave Ne	SF Residence north of the church	1	63	2	No	No	53	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		48
	6411600451	11729 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	56	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		51
	6411600452	11727 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	4		54
M-6 62.2	6411600450	11725 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	54	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		49

Lynnwood Link Extension A5

Stations: 130th Option 1
155th Station
185th Option 3

Total Units Analyzed
845

Impacts:	Moderate	Severe
	181	105

Residual I		
RSIP =	RSIP =	8

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	6411600464	11723 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	53	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		48
	6411600463	11721 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	51	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		47
	6411600461	11719 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	53	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		49
	6411600462	11715 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	52	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		49
	6411600412	316 Ne 117th St	SF Residence east of the church	1	64	2	No	No	51	Ldn	61	66	--	--	Wall At-Grade	N/A	4		45
	6411600410	322 Ne 117th St	SF Residence south of the church	1	64	2	No	No	47	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		42
	6411600411	326 Ne 117th St	SF Residence south of the church	1	62	2	No	No	46	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		41
	6411600471	332 Ne 117th St	SF Residence south of the church	1	62	2	No	No	55	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		50
	6411600472	336 Ne 117th St	SF Residence south of the church	1	62	2	No	No	52	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		48
	6411600473	342 Ne 117th St	SF Residence south of the church	1	63	2	No	No	52	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		48
	6411600470	11707 5th Ave Ne	SF Residence south of the church	1	65	2	No	No	50	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		47
	6413100228	11718 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		46
	6413100229	11714 5th Ave Ne	SF Residence south of the church	1	63	2	No	No	49	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		46
	6413100241	11726 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		46
	6413100240	11734 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		47
	6411600428	327 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	63	Ldn	62	68	1	--	Increase I-5 wall height	N/A	4		56
	2238000050	331 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	56	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		49
	2238000045	337 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	50	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		45
	2238000040	343 Ne 120th St	SF Residence on 120th St.	1	62	2	No	No	58	Ldn	59	65	--	--		N/A			58
	2238000035	349 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	55	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		50
	2238000030	11755 5th Ave Ne	SF Residence on 120th St.	1	65	2	No	No	54	Ldn	61	67	--	--		N/A			54
NE 120th Street to																			
	6412100091	332 Ne 120th St	SF Residence on 120th St.	0	65	2	No	No							Wall on Retaining Wall	N/A	4		
	6412100097	338 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	63	Ldn	61	67	1	--	Increase I-5 wall height	N/A	4		56
	6412100092	344 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	53	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		47
	6412100095	348 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	60	Ldn	61	67	--	--		N/A			60
	6412100096	12001 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	57	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		52
	2237500025	12004 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		49
	2237500020	510 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	51	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		47
	2237500015	516 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	51	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		47
	2237500030	12014 5th Ave Ne	SF Residence on 120th St.	1	66	2	No	No	56	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		52
	6412100090	12015 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	55	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		50
	6412100093	12021 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	51	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		46
	6413600015	12016 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	57	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		52
	6413600005	12018 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	53	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		49
	6413600010	12020 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		51
	6413600020	12022 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	58	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		54
	6412100094	12025 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		52
	6412100085	12027 5th Ave Ne	SF Residence near noise wall	1	65	2	No	No	63	Ldn	61	67	1	--	Increase I-5 wall height	N/A	4		56
	6412100087	12029 5th Ave Ne	SF Residence next to noise wall	0	65	2	No	No							Wall on Retaining Wall	N/A	4		
	6412100080	12035 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	61	Ldn	63	68	--	--	Increase I-5 wall height	N/A			61
	6412100082	12045 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	62	Ldn	63	68	--	--	Increase I-5 wall height	N/A			62
	6412100081	12049 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	60	Ldn	63	68	--	--	Wall At-Grade	N/A	4		54
	6412100084	12051 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No								N/A			
	6412100280	12301 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No								N/A			
	6412100281	12311 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6412100282	12321 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6412100283	12327 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6412100284	12401 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6412100250	12417 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6413600026	12030 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	6413600036	12032 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		51
	6413600072	12035 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	51	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		48
	6413600079	12037 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	52	Ldn	61	67	--	--	Wall At-Grade	N/A	4		48
	6413600034	12034 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		51
	6413600035	12036 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		43
M-7: 68.27	6413600040	12042 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		43
	6413600041	12044 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--	Wall At-Grade	N/A	4		51

Lynnwood Link Extension A5

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185th Option 3

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Residual I		
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Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	6413600051	521 Ne 123rd St	SF Residence on 123rd	1	65	2	No	No	54	Ldn	61	67	--	--	Wall At-Grade	N/A	4		50
	6413600052	515 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	56	Ldn	62	68	--	--	Wall At-Grade	N/A	4		52
	6413600045	12048 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall At-Grade	N/A	4		43
	6413600050	12054 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	54	Ldn	63	69	--	--	Wall At-Grade	N/A	4		49
	6413600339	12302 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	54	Ldn	63	69	--	--	Wall At-Grade	N/A	4		49
	6413600340	510 Ne 123rd St	SF Residence on 123rd	1	67	2	No	No	54	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		49
	6413600335	518 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	51	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		47
	6413600338	522 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	49	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		45
	6413600337	12308 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	55	Ldn	63	69	--	--	Wall At-Grade	N/A	4		50
	6413600345	12316 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		45
	6413600343	12320 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		45
	6413600347	12312 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	53	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		49
	6413600346	12314 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	50	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		46
	9509900045	521 Ne 124th St	SF Residence on 124th	1	66	2	No	No	49	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		45
	9509900040	515 Ne 124th St	SF Residence on 124th	1	66	2	No	No	52	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		48
	9509900035	509 Ne 124th St	SF Residence on 124th	1	67	2	No	No	55	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		50
	9509900030	503 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	51	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		45
	9509900005	500 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	51	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		46
	9509900010	508 Ne 124th St	SF Residence on 124th	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	9509900015	514 Ne 124th St	SF Residence on 124th	1	68	2	No	No	52	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		48
	9509900020	520 Ne 124th St	SF Residence on 124th	1	67	2	No	No	50	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		45
	6413600378	527 Ne 125th St	SF Residence on 125th	1	66	2	No	No	49	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		45
	6413600377	523 Ne 125th St	SF Residence on 125th	1	67	2	No	No	52	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		47
	6413600376	513 Ne 125th St	SF Residence on 125th	1	68	2	No	No	55	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		50
	6413600375	505 Ne 125th St	SF Residence on corner of 5th and 125th	1	68	2	No	No	52	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		46
NE 125th Street to																			
	6414100010	502 Ne 125th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100013	510 Ne 125th St	SF Residence on 125th	1	68	2	No	No	44	Ldn	63	69	--	--		N/A			44
	6414100012	514 Ne 125th St	SF Residence on 125th	1	67	2	No	No	41	Ldn	63	68	--	--		N/A			41
	6414100011	516 Ne 125th St	SF Residence on 125th	1	67	2	No	No	50	Ldn	63	68	--	--		N/A			50
	6414100023	12514 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	50	Ldn	62	68	--	--		N/A			50
	6414100024	12512 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	6414100021	12518 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100020	12520 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100028	12528 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100025	12526 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	6414100029	12524 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	37	Ldn	61	67	--	--		N/A			37
	6414100026	12532 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	41	Ldn	62	68	--	--		N/A			41
	6414100027	12534 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100033	12542 5th Ave Ne	Empty Lot	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100030	12542 5th Ave Ne	SF Residence on 5th Ave.	1	69	2	No	No	51	Ldn	64	70	--	--		N/A			51
	6414100032	12546 5th Ave Ne Unit B	SF Residence on 5th Ave.	1	68	2	No	No	42	Ldn	63	69	--	--		N/A			42
	6414100031	12546 5th Ave Ne Unit C	SF Residence on 5th Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100039	527 NE 127th St	SF Residence on 127th	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	6414100038	521 NE 127th St	SF Residence on 127th	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	6414100037	515 NE 127th St	SF Residence on 127th	1	69	2	No	No	41	Ldn	64	70	--	--		N/A			41
	6414100036	509 NE 127th St	SF Residence on 127th	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	6414100035	503 NE 127th St	SF Residence on corner of 127th and 5th	1	69	2	No	No	51	Ldn	64	70	--	--		N/A			51
NE 127th Street to																			
M-9: 70.45	6414100732	502 NE 127th St	SF Residence on corner of 127th and 5th	1	70	2	No	No	52	Ldn	65	70	--	--		N/A			52
	6414100731	514 NE 127th St	SF Residence on 127th	1	70	2	No	No	42	Ldn	65	70	--	--		N/A			42
	6414100733	522 NE 127th St	SF Residence on 127th	1	69	2	No	No	39	Ldn	64	70	--	--		N/A			39
	6414100741	Grace Church open area	Empty Lot	0	64	3	No	No	38	Leq	66	71	--	--		N/A			38
	6414100730	12708 5th Ave Ne	SF Residence on 5th Ave.	1	71	2	No	No	51	Ldn	66	71	--	--		N/A			51
	6414100740	12718 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	Yes	Yes	52	Ldn	66	72	--	--		Special			52
	6414100751	12726 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	Yes	50	Ldn	66	72	--	--		Special			50
	6414100750	12732 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	Yes	51	Ldn	66	72	--	--		Special			51
M-10: 73.8	6414100759	12740 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	Yes	Yes	51	Ldn	66	73	--	--		Special			51
	6414100760	12759 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	Yes	Yes	46	Ldn	66	72	--	--		Special			46
	6414100752	12749 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	72	2	Yes	Yes	43	Ldn	66	72	--	--		Special			43
	6414100753	12745 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	Yes	Yes	42	Ldn	66	72	--	--		Special			42
	1854700005	502 Ne 130th St	SF Residence on 130th	1	74	2	Yes	Yes	54	Ldn	66	73	--	--		Special			54
	1854700010	510 Ne 130th St	SF Residence on 130th	1	74	2	Yes	Yes	48	Ldn	66	73	--	--		Special			48

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Receiver Information							Impact Analysis								Mitigation Analysis				
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	1854700015	516 Ne 130th St	SF Residence on 130th	1	73	2	Yes	Yes	44	Ldn	66	72	--	--		Special			44
	1787600096	519 Ne 131st Pl	SF Residence on 131st Place	1	73	2	Yes	Yes	43	Ldn	66	72	--	--		Special			43
	1787600095	511 Ne 131st Pl	SF Residence on 131st Place	1	74	2	Yes	Yes	47	Ldn	66	73	--	--		Special			47
	1787600098	505 Ne 131st Pl	SF Residence on 131st Place	1	74	2	Yes	Yes	54	Ldn	66	73	--	--		Special			54
	1787600090	N Seattle Church of Naz	Empty Lot that is part of 13130 5th Church	0	72	3	Yes	Yes	53	Leq	71	77	--	--		Special			53
	1787600094	510 Ne 131st Pl	SF Residence on 131st Place	1	72	2	Yes	Yes	47	Ldn	66	72	--	--		Special			47
	1787600093	520 Ne 131st Pl	SF Residence on 131st Place	1	71	2	Yes	Yes	44	Ldn	66	71	--	--		Special			44
	1787600085	13130 5th Ave Ne	Church on 5th Ave.	1	67	2	Yes	Yes	43	Ldn	63	68	--	--		Special			43
M-11: 66.7 & 66.8	1787600085	13130 5th Ave Ne	Church on 5th Ave.	1	68	3	Yes	Yes	45	Leq	68	74	--	--		Special			45
	2026049004	1000 NE 135th		1	70	3	No	No								N/A			
NE 145th Street to																			
	7568700780	501 Ne 145th St	Water pump station	0	74				0	Leq	66	73	--	--					0
	7568700785	14512 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	No	No	70	Ldn	66	73	1	--	Wall on Structure	N/A	4		61
	7568700790	14518 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	4		61
M-14: 72.8	7568700795	14526 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	4		60
	7568700800	14532 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		60
	7568700805	14540 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	4		60
	7568700810	14544 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		59
	7568700815	14552 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		59
	7568700820	14556 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		59
	7568700825	14560 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	No	No	68	Ldn	66	72	1	--	Wall on Structure	N/A	4		58
	7568700830	14570 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	68	Ldn	63	69	1	--	Wall on Structure	N/A	4		58
	7568700835	14574 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		53
	7568700836	14578 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		53
	7568700775	-	Empty Lot	0	74				0	Leq	66	73	--	--					0
	7568700770	516 Ne 145th St	SF Residence on 145th	1	73	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		53
	7568700765	522 Ne 145th St	SF Residence on 145th	1	72	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		52
	7568700760	14515 6th Ave Ne	SF Residence on 6th Ave.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		54
	7568700755	14521 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	No	No	64	Ldn	62	68	1	--	Wall on Structure	N/A	4		54
	7568700745	14525 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
	7568700740	14535 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	4		53
	7568700734	14541 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	4		53
M-15: 62.65	7568700730	14549 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	4		53
	7568700725	14555 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	4		53
	7568700720	14565 6th Ave Ne	SF Residence on 6th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	7568700715	14567 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	7568700705	14579 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		48
	7568700710	515 NE 148th St.	SF Residence on 6th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	7568700695	14572 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	7568700690	14566 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	7568700685	14562 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
	7568700680	14550 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	4		50
	7568700675	14548 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	7568700670	14542 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	7568700665	14528 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	7568700660	14526 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	7568700655	14522 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		50
	7568700650	14518 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
NE 148th Street to																			
	8680300045	327 Ne 148th St	SF Residence on 148th	1	70	2	No	No								N/A			
	8680300050	333 Ne 148th St	SF Residence on 148th	1	70	2	No	No	76	Ldn	65	70	--	1	Wall on Structure	N/A	6		64
	8680300055	339 Ne 148th St	SF Residence on 148th	1	70	2	No	No	74	Ldn	65	70	--	1	Wall on Structure	N/A	6		60
	8680300060	345 Ne 148th St	SF Residence on 148th	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		62
	2881700402	14727 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	70	Ldn	63	68	--	1	Wall on Structure	N/A	4		60
	2881700400	-	Empty Lot	1	67	2	No	No	71	Ldn	63	68	--	1	Wall on Structure	N/A	4		61
	8680300040	316 Ne 148th St	SF Residence on 148th	1	70	2	No	No							Wall on Retaining Wall	N/A	4		
	8680300035	324 Ne 148th St	SF Residence on 148th	1	70	2	No	No	67	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		60
	8680300030	330 Ne 148th St	SF Residence on 148th	1	70	2	No	No	63	Ldn	65	70	--	--		N/A			63
	8680300025	336 Ne 148th St	SF Residence on 148th	1	70	2	No	No	55	Ldn	65	70	--	--		N/A			55
	8680300020	342 Ne 148th St	SF Residence on 148th	1	67	2	No	No	53	Ldn	63	68	--	--		N/A			53
M-16: 66.95	8680300015	348 Ne 148th St	SF Residence on 148th	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	4		54
	8680300010	358 Ne 148th St	SF Residence on 148th	1	67	2	No	No	63	Ldn	63	68	1	--	Wall on Structure	N/A	4		53
	8680300005	14807 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	62	Ldn	63	68	--	--		N/A			62
	2004100090	357 Ne 149th St	SF Residence on 149th	1	67	2	No	No	47	Ldn	63	68	--	--		N/A			47
	2004100085	351 Ne 149th St	SF Residence on 149th	1	67	2	No	No	48	Ldn	63	68	--	--		N/A			48

Lynnwood Link Extension A5

Stations: 130th Option 1
155th Station
185th Option 3

Total Units Analyzed
845

Impacts:	Moderate	Severe
	181	105

Residual I		
RSIP =	RSIP =	8

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2004100080	345 Ne 149th St	SF Residence on 149th	1	67	2	No	No	49	Ldn	63	68	--	--		N/A			49
	2004100075	339 Ne 149th St	SF Residence on 149th	1	67	2	No	No	51	Ldn	63	68	--	--		N/A			51
	2004100065	333 Ne 149th St	SF Residence on 149th	1	68	2	No	No	54	Ldn	63	69	--	--		N/A			54
	2004100060	327 Ne 149th St	SF Residence on 149th	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	2004100055	321 Ne 149th St	SF Residence on 149th	1	70	2	No	No	62	Ldn	65	70	--	--		N/A			62
	2004100050	309 Ne 149th St	SF Residence on 149th	1	70	2	No	No	65	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		58
	2004100052	305 Ne 149th St	SF Residence on 149th	0	70	2	No	No								N/A			
	2004100045	308 Ne 149th St	SF Residence on 149th	0	70	2	No	No								N/A			
M-17: 70.05	2004100040	314 Ne 149th St	SF Residence on 149th	1	70	2	No	No	57	Ldn	65	70	--	--		N/A			57
	2004100035	320 Ne 149th St	SF Residence on 149th	1	70	2	No	No	55	Ldn	65	70	--	--		N/A			55
	2004100030	326 Ne 149th St	SF Residence on 149th	1	68	2	No	No	68	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	6		61
	2004100025	332 Ne 149th St	SF Residence on 149th	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	6		55
	2004100020	338 Ne 149th St	SF Residence on 149th	1	67	2	No	No	59	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	6		53
NE 148th Street to																			
	7568700355	14802 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	7568700360	14808 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	7568700365	14812 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	7568700370	14818 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	46	Ldn	61	66	--	--		N/A			46
	7568700375	14902 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	45	Ldn	60	66	--	--		N/A			45
	7568700380	14910 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	45	Ldn	60	66	--	--		N/A			45
	7568700385	14916 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	7568700390	14922 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	7568700395	14928 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	7568700400	14934 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	39	Ldn	59	65	--	--		N/A			39
	7568700405	15100 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	39	Ldn	59	65	--	--		N/A			39
	7568700410	15108 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	39	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		36
	7568700415	15114 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	39	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		36
	7568700420	15124 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	39	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		36
NE 151st Street to																			
	2881700323	15101 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	3222200030	301 Ne 151st St	SF Residence on 151st	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	3222200040	307 Ne 151st St	SF Residence on 151st	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		60
	3222200050	313 Ne 151st St	SF Residence on 151st	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		57
	802290040	321 Ne 151st St	SF Residence on 151st	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
	802290041	327 Ne 151st St	SF Residence on 151st	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	802290050	335 Ne 151st St	SF Residence on 151st	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	802290055	347 Ne 151st St	SF Residence on 151st	1	67	2	No	No	55	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		51
	2881700322	15109 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	2881700321	15117 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	2881700311	15121 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	68	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	6		59
	2881700310	225 Ne 152nd St	Church at end of 152nd St.	1	70	3	No	No	69	Leq	70	75	--	--		N/A			69
	2634500055	304 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		61
	2634500060	310 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	70	Ldn	65	70	--	1	Wall on Structure	N/A	4		60
	2634500065	316 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		54
	2634500070	322 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	4		52
	2634500035	323 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	56	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		52
	2634500040	317 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
	2634500045	311 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	60	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		55
	2634500050	305 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	61	Ldn	65	70	--	--		N/A			61
	3222200010	15112 3rd Ave Ne	SF Residence on 3rd Ave.	1	70	2	No	No	63	Ldn	65	70	--	--		N/A			63
	3222200020	306 Ne 151st St	SF Residence on 151st	1	70	2	No	No	59	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		53
	802290035	316 Ne 151st St	SF Residence on 151st	1	70	2	No	No	55	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		50
	802290030	324 Ne 151st St	SF Residence on 151st	1	69	2	No	No	52	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		47
	2881700301	-	Empty Lot	0	70	2	No	No							Wall on Structure	N/A	4		
	5027800130	411 Ne 153rd St	SF Residence on 153rd St.	1	69	2	Yes	Yes	64	Ldn	64	70	1	--	Wall on Structure	Special	4		54
	5027800120	407 Ne 153rd St	SF Residence on 153rd St.	1	70	2	Yes	Yes	68	Ldn	65	70	1	--	Wall on Structure	Special	4		58
M-18 (63.9 LEQ)	5027800110	405 Ne 153rd St	SF Residence on 153rd St.	1	70	2	Yes	Yes	67	Ldn	65	70	1	--	Wall on Structure	Special	4		57
	5027800100	403 Ne 153rd St	SF Residence on 153rd St.	1	70	2	Yes	Yes	67	Ldn	65	70	1	--	Wall on Structure	Special	4		57
	5027800090	401 Ne 153rd St	SF Residence on 153rd St.	1	70	2	Yes	Yes	61	Ldn	65	70	--	--	Wall on Structure	Special	4		51
	2881700300	15240 3rd Ave Ne	SF Residence on 3rd Ave.	1	71	2	Yes	Yes	68	Ldn	66	71	1	--	Wall on Structure	Special	4		58
	2807600030	15451 4th Ave Ne	SF Residence on 4th Ave.	1	70	2	Yes	Yes	61	Ldn	65	70	--	--	Wall on Structure	Special	4		51
	0411100005	301 Ne 155th St	SF Residence on 4th Ave.	1	70	2	Yes	No	56	Ldn	65	70	--	--	Wall on Structure	Special	4		48
	0411100010	15420 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	Yes	No	56	Ldn	65	70	--	--	Wall on Structure	Special	4		49
	0411100015	15414 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	Yes	No	56	Ldn	65	70	--	--	Wall on Structure	Special	4		49
	0411100020	15408 2nd Ave Ne	SF Residence on 2rd Ave.	1	71	2	Yes	Yes	60	Ldn	66	71	--	--	Wall on Structure	Special	4		51

Lynnwood Link Extension A5

Stations: 130th Option 1
155th Station
185th Option 3

Total Units Analyzed
845

Impacts:	Moderate	Severe
	181	105

Residual I		
RSIP =	RSIP =	8

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0411100025	15404 2nd Ave Ne	SF Residence on 2rd Ave.	1	72	2	Yes	Yes	68	Ldn	66	72	1	--	Wall on Structure	Special	4		58
	0411100030	15401 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	Yes	Yes	69	Ldn	66	72	1	--	Wall on Structure	Special	4		60
	0411100035	15407 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	Yes	Yes	65	Ldn	66	72	--	--		Special			65
	0411100040	15419 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	Yes	Yes	60	Ldn	65	70	--	--	Wall on Structure	Special	4		53
	0411100045	15425 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	Yes	Yes	60	Ldn	65	70	--	--	Wall on Structure	Special	4		52
	0411100050	165 Ne 155th St	SF Residence on 155th St.	1	71	2	Yes	Yes	59	Ldn	66	71	--	--	Wall on Structure	Special	4		52
	0411100055	145 Ne 155th St	Fire Station	1	76	2	Yes	No	68	Ldn	66	75	1	--	Wall on Structure	Special	4		62
NE 155th Street to																			
	2241700075	157 Ne 156th St	SF Residence on 156th St.	1	68	2	Yes	No	61	Ldn	63	69	--	--		Special			61
	2241700070	151 Ne 156th St	SF Residence on 156th St.	1	70	2	Yes	No	62	Ldn	65	70	--	--		Special			62
	2241700065	143 Ne 156th St	SF Residence on 156th St.	1	71	2	Yes	No	63	Ldn	66	71	--	--		Special			63
	2241700060	137 Ne 156th St	SF Residence on 156th St.	1	72	2	No	No								N/A			
M-19: 73.3	2241700055	132 Ne 155th St	SF Residence on 155th St.	1	73	2	No	No								N/A			
	2241700050	125 Ne 156th St	SF Residence on 156th St.	1	74	2	No	No								N/A			
	2241700045	110 Ne 155th St	SF Residence on 155th St.	1	75	2	No	No								N/A			
	2881700240	106 Ne 155th St	SF Residence on 155th St.	1	76	2	No	No								N/A			
	2241700040	104 Ne 156th St	SF Residence on 156th St.	1	75	2	No	No								N/A			
	2241700035	108 Ne 156th St	SF Residence on 156th St.	1	73	2	No	No								N/A			
	2241700030	122 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No								N/A			
	2241700025	130 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No								N/A			
	2241700020	136 Ne 156th St	SF Residence on 156th St.	1	69	2	No	No								N/A			
	2241700015	142 Ne 156th St	SF Residence on 156th St.	1	68	2	Yes	Yes	57	Ldn	63	69	--	--		Special			57
	2241700010	148 Ne 156th St	SF Residence on 156th St.	1	67	2	Yes	Yes	52	Ldn	63	68	--	--		Special			52
	2241700005	156 Ne 156th St	SF Residence on 156th St.	1	66	2	Yes	Yes	51	Ldn	62	68	--	--		Special			51
	2881700233	15615 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	Yes	Yes	58	Ldn	61	67	--	--		Special			58
	2881700234	15621 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	Yes	Yes	56	Ldn	61	67	--	--		Special			56
	2881700232	15625 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	Yes	Yes	56	Ldn	61	67	--	--		Special			56
	2881700239	241 Ne 157th St	SF Residence on 157th St.	1	66	2	Yes	Yes	58	Ldn	62	68	--	--		Special			58
	2881700229	235 Ne 157th St	SF Residence on 157th St.	1	67	2	Yes	Yes	59	Ldn	63	68	--	--		Special			59
	2881700226	229 Ne 157th St	SF Residence on 157th St.	1	68	2	Yes	Yes	62	Ldn	63	69	--	--		Special			62
	2881700224	223 Ne 157th St	SF Residence on 157th St.	1	68	2	Yes	Yes	62	Ldn	63	69	--	--		Special			62
	2881700225	125 Ne 157th St	SF Residence on 157th not =15544 1st Ave Ne	1	69	2	Yes	Yes	69	Ldn	64	70	1	--	Wall on Structure	Special	4		59
	2881700219	117 Ne 157th St	SF Residence on 157th St.	1	69	2	Yes	Yes	71	Ldn	64	70	--	1	Wall on Structure	Special	4		61
	2881700220	111 Ne 157th St	SF Residence on 157th St.	1	71	2	Yes	Yes	72	Ldn	66	71	--	1	Wall on Structure	Special	4		63
	2881700223	101 Ne 157th St	SF Residence on 157th St.	0	72	2	No	No							Wall on Structure	N/A	4		
	2881700230	15618 1st Ave Ne	SF Residence on 1st Ave.	0	72	2	No	No							Wall on Structure	N/A	4		
	2881700227	108 Ne 157th St	SF Residence on 157th St.	1	71	2	Yes	Yes	76	Ldn	66	71	--	1	Wall on Structure	Special	4	1	67
	2881700218	15710 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	72	Ldn	66	71	--	1	Wall on Retaining Wall	N/A	6		63
	8142000180	105 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		64
	8142000170	111 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	62	Ldn	65	70	--	--		N/A			62
	2881700222	116 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	60	Ldn	63	69	--	--		N/A			60
	2881700221	126 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	8		49
	2881700231	132 Ne 157th St	SF Residence on 157th St.	1	68	2	Yes	No	63	Ldn	63	69	1	--	Wall on Structure	Special	8		49
	8142000160	117 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
M-20: 68.33	8142000150	123 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
NE 158th Street to																			
	8142000090	104 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		64
	8142000080	110 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	61	Ldn	65	70	--	--		N/A			61
	8142000070	116 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	8142000060	122 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--		N/A			56
	6159400080	117 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	6159400075	125 Ne 159th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	6159400085	113 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		56
	6159400090	105 Ne 159th St	SF Residence on 159th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		64
	6159400045	104 Ne 159th St	SF Residence on 159th St.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
	6159400037	114 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	69	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		63
	6159400035	118 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	6159400030	124 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	6159400025	130 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	2111600080	129 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	2111600075	139 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	2111600085	123 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	2111600090	115 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	68	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		62
	2111600095	15924 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
	2111600100	15918 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
M-21: 61.8 LEQ	2881700193	108 Ne 161st St	Ridgecrest Park	1	62	3	No	No							Wall At-Grade	N/A	4		
	2111600040	114 Ne 161st St	SF Residence on 161st St.	1	71	2	No	No	71	Ldn	66	71	--	1	Wall At-Grade	N/A	6		62
	2111600035	122 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	62	Ldn	65	70	--	--		N/A			62
	2111600030	128 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59

Lynnwood Link Extension A5

Stations: 130th Option 1
155th Station
185th Option 3

Total Units Analyzed
845

Impacts:	Moderate	Severe
	181	105

Residual I		
RSIP =	RSIP =	8

Receiver Information							Impact Analysis								Mitigation Analysis			
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2111600025	134 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	56	Ldn	63	69	--	--		N/A			56
	7301300295	303 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
	7301400110	129 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	51	Ldn	62	68	--	--		N/A			51
	7301400120	121 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Retaining Wall	N/A	4		55
	7301400220	128 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	60	Ldn	62	68	--	--		N/A			60
	7301300130	304 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	50	Ldn	62	68	--	--		N/A			50
	7301300135	310 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	46	Ldn	62	68	--	--		N/A			46
	7301300120	139 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301300125	135 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	7301400200	127 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	7301400211	124 Ne 163rd St	SF Residence on 163rd St.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	7301400070	-	Empty Lot	0	68	--	No	No								N/A			
	7301400060	132 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	60	Ldn	63	69	--	--		N/A			60
	7301400040	134 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	7301400046	140 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301300030	141 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301300035	135 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	7301400050	127 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
NE 165th Street to																			
	5727500330	126 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59
	7307000050	124 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	58	Ldn	63	69	--	--		N/A			58
	5727500355	119 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	5727500350	123 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	7307000040	134 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301500010	132 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	7301500020	140 Ne 165th St	SF Residence on 165th St.	1	66	2	No	No	44	Ldn	62	68	--	--		N/A			44
	7307000030	140 Ne 165th Pl	SF Residence on 165th Place	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	5727500300	131 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	45	Ldn	62	68	--	--		N/A			45
	5727500363	120 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	5727500360	-	Empty Lot	0	68	--	No	No								N/A			
	9235900015	111 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	58	Ldn	63	69	--	--		N/A			58
	9235900020	117 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	9235900025	123 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	45	Ldn	62	68	--	--		N/A			45
	9235900040	130 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	44	Ldn	62	68	--	--		N/A			44
	5727500361	124 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	5727500086	114 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	60	Ldn	63	69	--	--		N/A			60
	5727500103	16719 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	60	Ldn	63	69	--	--		N/A			60
	5727500100	16723 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500102	16729 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500111	16731 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500110	16735 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	5727500113	16741 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	4		56
	5727500120	109 Ne 170th St	SF Residence on 170th St.	0	68	2	No	No								N/A			
	7305900115	119 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59
	5727500130	121 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	5727500139	16742 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	5727500137	16738 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	5727500148	16728 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	5727500149	16722 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--		N/A			46
	5727500150	16716 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--		N/A			46
	5727500155	126 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	45	Ldn	63	69	--	--		N/A			45
	5727500087	118 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	5727500156	132 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500157	136 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	41	Ldn	62	68	--	--		N/A			41
	5727500159	16719 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500147	16725 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500146	-	Empty Lot	0	66	--	No	No								N/A			
	5727500145	16735 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500135	16741 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500136	16747 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	5727500138	16753 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	5727500131	16761 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	45	Ldn	63	69	--	--		N/A			45
NE 170th Street to																			
	7305300205	104 Ne 170th St	SF Residence on 170th St.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300210	17010 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300215	17016 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300220	17022 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300225	17028 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55

Lynnwood Link Extension A5

Stations: 130th Option 1
155th Station
185th Option 3

Total Units Analyzed
845

Impacts:	Moderate	Severe
	181	105

Residual I		
RSIP =	RSIP =	8

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	7305300230	17034 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300235	17040 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300240	17046 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300245	17052 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	62	Ldn	66	71	--	--		N/A			62
	7305300250	17058 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300255	17204 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300260	17210 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300265	17216 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300270	17222 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300275	105 Ne 174th St	SF Residence on 174th St.	0	70	2	No	No								N/A			
	7305300350	111 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	59	Ldn	66	71	--	--		N/A			59
	7305300345	17223 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	58	Ldn	66	71	--	--		N/A			58
	7305300340	17217 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	57	Ldn	66	71	--	--		N/A			57
M-22: 70.2	7305300335	17211 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300330	17205 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300325	17059 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300320	17053 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300315	17047 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	50	Ldn	64	70	--	--		N/A			50
	7305300310	17041 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	45	Ldn	64	70	--	--		N/A			45
	7305300305	17035 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300300	17029 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300295	17023 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300290	17017 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300285	17011 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300280	110 Ne 170th St	SF Residence on 170th St.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300425	205 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	48	Ldn	64	70	--	--		N/A			48
	7305300420	17222 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--		N/A			47
	7305300415	17216 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--		N/A			47
	7305300410	17210 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--		N/A			47
	7305300405	17204 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--		N/A			47
	7305300400	17058 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--		N/A			46
	7305300395	17052 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--		N/A			46
	7305300390	17046 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	44	Ldn	63	68	--	--		N/A			44
	7305300385	17040 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300380	17034 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300375	17028 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300370	17022 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300365	17016 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300360	17010 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300355	204 Ne 170th St	SF Residence on 170th St.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300010	110 Ne 174th St	SF Residence on 174th St.	0	??	2	No	No								N/A			
	7305300015	116 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	65	Ldn	66	71	--	--		N/A			65
	7305300020	122 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	63	Ldn	66	71	--	--		N/A			63
	7305300025	128 Ne 174th St	SF Residence on 174th St.	1	70	2	No	No	57	Ldn	65	70	--	--		N/A			57
	7305300030	204 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	55	Ldn	64	70	--	--		N/A			55
	7305300035	210 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	7305300040	216 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	63	Ldn	64	70	--	--		N/A			63
M-23: 70.2	7305300085	211 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	60	Ldn	65	70	--	--		N/A			60
	7305300090	217 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	55	Ldn	65	70	--	--		N/A			55
	7305300095	223 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	53	Ldn	64	70	--	--		N/A			53
NE 175th Street to																			
	1115100230	208 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	6		60
	1115100232	-	Empty Lot	0	70	--	No	No							Wall on Structure	N/A	6		
	1115100235	206 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	73	Ldn	65	70	--	1	Wall on Structure	N/A	6		62
	1115100210	216 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	6		59
	1115100208	218 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	73	Ldn	65	70	--	1	Wall on Structure	N/A	6		61
	1115100211	222 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	6		51
	1115100209	220 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	66	Ldn	64	70	1	--	Wall on Structure	N/A	6		54
	1115100200	230 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	6		50
	1115100205	234 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	6		50
	1115100195	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	6		47
	1115100190	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	6		48
	1115100182	310 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	1115100175	320 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
	1115100172	323 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	52	Ldn	62	68	--	--		N/A			52

Lynnwood Link Extension A5

Stations: 130th Option 1
155th Station
185th Option 3

Total Units Analyzed
845

Impacts:	Moderate	Severe
	181	105

Residual I		
RSIP =	RSIP =	8

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	1115100171	325 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	53	Ldn	62	68	--	--		N/A			53
	1115100176	317 Ne 178th St	SF Residence on 178th St.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	4		52
	1115100180	308 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	4		55
	1115100181	311 Ne 178th St	SF Residence on 178th St.	1	67	2	No	No	65	Ldn	63	68	1	--	Wall on Structure	N/A	4		56
	7772400110	239 Ne 178th St	SF Residence on 178th St.	1	69	2	No	No	71	Ldn	64	70	--	1	Wall on Structure	N/A	4		63
M-24: 69.15	7772400120	17748 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	71	Ldn	64	70	--	1	Wall on Structure	N/A	4		63
	7772400130	17738 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	4		61
	7772400140	17734 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	71	Ldn	64	70	--	1	Wall on Structure	N/A	4		63
	7772400150	17733 2nd Pl Ne	SF Residence on 2nd Pl.	1	75	2	No	No	78	Ldn	66	74	--	1	Wall on Structure	N/A	8	1	67
	7772400160	17737 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No							Wall on Structure	N/A	4		
	7772400170	17741 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No							Wall on Structure	N/A	4		
	7772400180	17747 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No							Wall on Structure	N/A	4		
	7772400190	17753 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No							Wall on Structure	N/A	4		
	1115100065	224 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No							Wall on Retaining Wall	N/A	4		
	1115100070	230 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No							Wall on Retaining Wall	N/A	4		
	7772400010	17803 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	4		57
	7772400020	17809 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	4		58
	7772400030	17815 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Retaining Wall	N/A	4		56
	7772400040	17821 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall At-Grade	N/A	4		56
	7772400050	17825 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	60	Ldn	62	68	--	--		N/A			60
	7772400060	17822 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--	Wall At-Grade	N/A	4		46
	7772400070	17816 3rd Ave Ne	SF Residence on 3rd Ave.	1	63	2	No	No	50	Ldn	60	66	--	--	Wall At-Grade	N/A	4		45
	7772400080	17810 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	53	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		48
	7772400090	17804 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	52	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		47
	7772400100	312 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	49	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		44
	1115100119	330 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	48	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		44
	1115100123	340 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	45	Ldn	59	65	--	--	Wall At-Grade	N/A	4		40
	1115100121	344 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	46	Ldn	59	65	--	--	Wall At-Grade	N/A	4		41
	1115100111	337 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	58	Ldn	60	66	--	--		N/A			58
	1115100113	335 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall At-Grade	N/A	4		53
	1115100112	333 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	65	Ldn	60	66	1	--	Wall At-Grade	N/A	6		52
	1115100110	331 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	70	Ldn	60	66	--	1	Wall At-Grade	N/A	8		50
	1115100120	336 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	43	Ldn	59	65	--	--	Wall At-Grade	N/A	4		39
	1115100122	348 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	44	Ldn	60	66	--	--	Wall At-Grade	N/A	4		40
	1115100125	-	Empty Lot	0	62	--	No	No							Wall At-Grade	N/A	4		
	1115100137	17861 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	49	Ldn	59	65	--	--	Wall At-Grade	N/A	4		43
	1115100138	17857 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	48	Ldn	59	65	--	--	Wall At-Grade	N/A	4		42
	1115100135	17845 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--	Wall At-Grade	N/A	4		42
	1115100136	17833 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	45	Ldn	59	65	--	--	Wall At-Grade	N/A	4		41
	1115100142	17829 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--		N/A			57
	1115100139	17825 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	53	Ldn	60	66	--	--	Wall At-Grade	N/A	4		49
	1115100140	17821 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	50	Ldn	60	66	--	--	Wall At-Grade	N/A	4		47
	1115100146	356 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	50	Ldn	59	65	--	--	Wall At-Grade	N/A	4		46
	0927100187	17822 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall At-Grade	N/A	4		49
	0927100196	17832 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall At-Grade	N/A	4		50
	0927100200	17840 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall At-Grade	N/A	4		50
	0927100199	17844 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	54	Ldn	62	68	--	--	Wall At-Grade	N/A	4		50
	0927100205	17852 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	55	Ldn	62	68	--	--	Wall At-Grade	N/A	4		51
NE 180th Street to																			
	6084100118	332 Ne 180th St	SF Residence on 180th St.	0	63	2	No	No							Wall on Retaining Wall	N/A	4		
	6084100117	338 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	4		54
	6084100114	344 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		48
M-25: 59.1 LEQ	6084100116	350 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	53	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		46
	6084100115	356 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	49	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		44
	6084100110	18017 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		42
	6084100113	18019 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Retaining Wall	N/A	4		53
	6084100105	18023 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		53
	6084100100	18027 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	4		55
	6084100095	18031 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	4		56
	6084100086	18041 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No								N/A			
	0927100065	506 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	57	Ldn	61	66	--	--	Wall At-Grade	N/A	4		52
	0927100066	514 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	54	Ldn	61	66	--	--	Wall At-Grade	N/A	4		50
	0927100067	518 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	53	Ldn	60	66	--	--	Wall At-Grade	N/A	4		49
	0927100068	524 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	51	Ldn	60	66	--	--	Wall At-Grade	N/A	4		47
	5662100015	18015 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	5662100020	18021 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	0927100071	18022 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	50	Ldn	60	66	--	--		N/A			50
	0927100079	18020 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	53	Ldn	61	66	--	--		N/A			53
	0927100070	18016 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	42	Ldn	61	66	--	--		N/A			42

Lynnwood Link Extension A5

Stations: 130th Option 1
155th Station
185th Option 3

Total Units Analyzed
845

Impacts:	Moderate	Severe
	181	105

Residual I		
RSIP =	RSIP =	8

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0927100076	18032 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	42	Ldn	61	66	--	--		N/A			42
	5662100025	18027 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	5662100030	18033 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	0927100075	515 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	0927100073	18034 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
	0927100082	18036 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	50	Ldn	62	68	--	--		N/A			50
	0927100080	519 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	53	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		43
	5662100035	18039 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		40
	5662100040	18045 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		40
	0927100084	518 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	54	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		44
	0927100083	504 Ne 182nd Ct	SF Residence on 182nd Ct.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	8		42
	0927100085	18210 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	56	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	8		44
	0927100090	505 Ne 183rd Ct	SF Residence on 183rd Ct.	0	66	2	No	No							Wall on Retaining Wall	N/A	8		
	0927100094	18310 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No							Wall on Retaining Wall	N/A	8		
	0927100098	18320 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No							Wall on Retaining Wall	N/A	8		
	0927100081	514 Ne 182nd Ct	SF Residence on 182nd Ct.	1	65	2	No	No	47	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		37
	5662100045	18051 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	51	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		41
	5662100050	18057 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	50	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		41
	0927100091	515 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	48	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		38
	5662100055	18063 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	51	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		42
	0927100092	520 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	44	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		33
	0927100093	514 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	53	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		42
	0927100105	18326 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No							Wall on Retaining Wall	N/A	8		
	0927100100	18330 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No							Wall on Retaining Wall	N/A	8		
	0927100110	-	Empty Lot	0	67	--	No	No							Wall on Retaining Wall	N/A	8		
	5662100075	18313 7th Ave Ne	SF Residence on 7th Ave.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	8		49
	5662100080	18316 7th Ave Ne	SF Residence on 7th Ave.	1	70	2	No	No	58	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	8		48
	0927100016	18323 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No	59	Ldn	64	70	--	--	Wall on Retaining Wall	Special	8		49
	0927100015	18329 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No	58	Ldn	64	70	--	--	Wall on Retaining Wall	Special	8		49
M-28: 70.97	0927100011	721 Ne 185th St	SF Residence on 185th St.	1	71	2	Yes	No	57	Ldn	66	71	--	--	Wall on Retaining Wall	Special	8		49
	5662100060	18069 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	53	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		43
	5662100065	18301 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	53	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		43
	5662100070	18307 7th Ave Ne	SF Residence on 7th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		43
	5662100090	18308 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	43	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		34
	5662100085	18317 7th Ave Ne	SF Residence on 7th Ave.	1	69	2	No	No	50	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	8		41
	0927100008	731 Ne 185th St	SF Residence on 185th St.	1	70	2	Yes	No	52	Ldn	65	70	--	--	Wall on Retaining Wall	Special	8		45
	6163900092	18342 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	Yes	No	45	Ldn	63	69	--	--		Special			45
	6163900091	18343 9th Ave Ne	SF Residence on 9th Ave.	1	68	2	Yes	No	49	Ldn	63	69	--	--	Wall on Retaining Wall	Special	8		44
	6163900095	18332 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No	49	Ldn	63	68	--	--	Wall on Retaining Wall	Special	8		44
	6163900082	18318 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No	47	Ldn	63	68	--	--	Wall on Retaining Wall	Special	8		44
	6163900081	18312 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	No	47	Ldn	61	67	--	--	Wall on Retaining Wall	Special	8		43
	6163900073	18306 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	47	Ldn	60	66	--	--	Wall on Retaining Wall	Special	8		43
	6163900071	18300 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	Yes	No	46	Ldn	61	66	--	--	Wall on Retaining Wall	Special	8		43
	5662100095	18302 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	Yes	No	51	Ldn	61	66	--	--	Wall on Retaining Wall	Special	8		45
	5662100100	18070 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	47	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		38
	5662100105	18064 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	46	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		38
	5662100110	18058 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	46	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		37
	5662100115	18052 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		37
	5662100120	18046 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	47	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		38
	6163900063	18072 8th Ave Ne		1	62	2	Yes	No	46	Ldn	59	65	--	--		Special			46
	6163900061	18066 8th Ave Ne		1	62	2	Yes	No	46	Ldn	59	65	--	--		Special			46
	6163900053	18060 8th Ave Ne		1	62	2	Yes	No	45	Ldn	59	65	--	--		Special			45
	6163900050	18054 8th Ave Ne		1	62	2	No	No	44	Ldn	59	65	--	--		N/A			44
	6163900043	18048 8th Ave Ne		1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
NE 185th Street to																			
	0526049029	18510 7th Ave Ne	SF Residence on 7th Ave.	0	69	2	No	No								N/A			
	0526049060	18516 7th Ave Ne	SF Residence on 7th Ave.	0	66	2	No	No								N/A			
	0526049027	18520 7th Ave Ne	SF Residence on 7th Ave.	0	64	2	No	No								N/A			
	0526049044	18528 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	0526049015	18534 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	0526049056	18540 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	0526049061	18546 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Retaining Wall	N/A	4		
	0526049032	18552 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Retaining Wall	N/A	4		
	0526049031	18558 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Retaining Wall	N/A	4		
	3971702321	707 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall on Retaining Wall	N/A	4		
	3971702325	703 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall At-Grade	N/A	4		
	3971702320	715 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	78	Ldn	60	66	--	1	Wall At-Grade	N/A	8	1	66
	3971702316	719 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall At-Grade	N/A	8		47
	3971702315	721 Ne 189th St	SF Residence on 189th St.	1	63	2	Yes	No	50	Ldn	60	66	--	--	Wall on Retaining Wall	Special	4		46
	3971702311	18807 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	53	Ldn	60	66	--	--	Wall At-Grade	Special	4		48
	3971702310	727 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	55	Ldn	60	66	--	--	Wall At-Grade	N/A	8		45

Lynnwood Link Extension A5

Stations: 130th Option 1
155th Station
185th Option 3

Total Units Analyzed
845

Impacts:	Moderate	Severe
	181	105

Residual I		
RSIP =	RSIP =	8

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0526049011	18559 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	51	Ldn	60	66	--	--	Wall on Retaining Wall	Special	4		48
	0526049024	18553 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	51	Ldn	60	66	--	--	Wall on Retaining Wall	Special	4		48
	0526049025	18547 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	60	Ldn	60	66	1	--	Wall on Retaining Wall	Special	4		55
	0526049050	18539 8th Ave Ne	SF Residence on 8th Ave.	0	63	2	No	No								N/A			
	0526049026	-	Empty Lot	0	63	--	No	No								N/A			
	0526049055	18533 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No								N/A			
	0526049054	18529 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No								N/A			
	0526049040	18523 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No								N/A			
	0526049028	18517 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No								N/A			
	0526049052	18511 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	No	No								N/A			
	0526049030	18509 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	No	No								N/A			
	3235100273	814 Ne 185th St	SF Residence on 185th St.	1	71	2	Yes	No	46	Ldn	66	71	--	--		Special			46
	3235100270	18504 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	Yes	No	50	Ldn	66	71	--	--		Special			50
	3235100265	18510 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	Yes	No	50	Ldn	63	69	--	--		Special			50
	3235100260	18516 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	No	50	Ldn	61	67	--	--		Special			50
	3235100255	18522 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	51	Ldn	60	66	--	--		Special			51
M-29: 64.4	3235100249	18528 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	No	55	Ldn	59	65	--	--		Special			55
	3235100244	18534 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	No	54	Ldn	59	65	--	--		Special			54
	3235100240	18540 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	No	55	Ldn	59	65	--	--		Special			55
	3235100205	18554 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	No	45	Ldn	59	65	--	--	Wall on Retaining Wall	Special	4		44
	3235100210	811 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	Yes	40	Ldn	59	65	--	--	Wall on Retaining Wall	Special	4		40
	3235100215	817 Ne 188th St	SF Residence on 188th St.	1	61	2	No	No	36	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		32
	3235100220	823 Ne 188th St	SF Residence on 188th St.	1	60	2	No	No	35	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		32
	3235100224	829 Ne 188th St	SF Residence on 188th St.	1	60	2	No	No	35	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		31
	3235100230	835 Ne 188th St	SF Residence on 188th St.	1	60	2	No	No	34	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		31
	3235100235	841 Ne 188th St	SF Residence on 188th St.	1	60	2	No	No	32	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		29
	3235100200	18810 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	No	No	44	Ldn	61	66	--	--	Wall At-Grade	N/A	4		40
	3235100105	18820 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	No	No	46	Ldn	61	66	--	--	Wall At-Grade	N/A	8		37
	3235100110	811 Ne 189th St	SF Residence on 189th St.	1	61	2	No	No	44	Ldn	59	65	--	--	Wall At-Grade	N/A	8		35
	3235100195	810 Ne 188th St	SF Residence on 188th St.	1	61	2	No	No	41	Ldn	59	65	--	--	Wall At-Grade	N/A	4		37
	3235100190	816 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	52	Ldn	59	65	--	--	Wall At-Grade	Special	4		49
	3235100185	822 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	51	Ldn	59	65	--	--	Wall At-Grade	Special	4		48
	3235100120	823 Ne 189th St	SF Residence on 188th St.	1	61	2	Yes	No	51	Ldn	59	65	--	--	Wall At-Grade	Special	4		48
	3235100115	817 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	52	Ldn	59	65	--	--	Wall At-Grade	Special	4		49
NE 189th Street to	3971702305	728 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	57	Ldn	60	66	--	--	Wall At-Grade	N/A	4		51
	3971702295	718 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall At-Grade	N/A	4		55
	3971702210	18915 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall At-Grade	N/A	4		55
	3971702215	18921 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall At-Grade	N/A	4		55
	0526049063	19011 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	57	Ldn	63	68	--	--	Wall At-Grade	N/A	4		51
	0526049010	19031 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	57	Ldn	63	68	--	--	Wall At-Grade	N/A	4		51
M-30A&B: 59.4 & 6	0526049007	816 Ne 190th St	School on 190th St.	1	65	3	No	No	44	Leq	66	72	--	--	Wall on Retaining Wall	N/A	4		40
	3235100005	18920 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	48	Ldn	59	65	--	--	Wall At-Grade	N/A	4		43
	3235100100	18910 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	43	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		39
	3235100095	810 Ne 189th St	SF Residence on 189th St.	1	60	2	No	No	41	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		37
	3235100010	811 Ne 190th St	SF Residence on 190th St.	1	60	2	No	No	48	Ldn	58	64	--	--	Wall At-Grade	N/A	4		43
	3235100015	817 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall At-Grade	N/A	4		50
	3235100090	816 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	49	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		45
	3235100085	822 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	46	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		42
	3235100080	828 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	45	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		42
	3235100075	834 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	44	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		41
	3235100020	823 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	51	Ldn	58	64	--	--	Wall At-Grade	N/A	4		48
	3235100025	829 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	50	Ldn	58	64	--	--	Wall At-Grade	N/A	4		47
	3235100030	835 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	50	Ldn	58	64	--	--	Wall At-Grade	N/A	4		46

Lynnwood Link Extension A7

Stations: 130th Option 2
155th
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	296	183

Residual	
RSIP =	29

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
Northgate to NE 115th Street																			
M-1: 71.5	2926049011	11200 1st Ave Ne	Southern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	70	Ldn	66	72	8	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Southern F. line 2nd floor Apts. on 1st Ave.	4	72	2	No	No	71	Ldn	66	72	4	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Northern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	73	Ldn	66	72	--	8	Wall on Structure	N/A	4		65
	2926049011	11200 1st Ave Ne	Northern F. line 2nd floor Apts. on 1st Ave.	8	72	2	No	No	73	Ldn	66	72	--	8	Wall on Structure	N/A	4		65
	2926049011	11200 1st Ave Ne	Front line Apts. on Northgate Way	1	72	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Second line Apts. on Northgate Way	4	72	2	No	No	65	Ldn	66	72	--	--	Wall on Structure	N/A	4		57
	2926049011	11200 1st Ave Ne	Third line Apts. on Northgate Way	5	72	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		53
M-3: 60.8 LEQ	2926049011	11200 1st Ave Ne	Southern 2nd line ground level Apts. on 1st Ave.	4	65	2	No	No	64	Ldn	61	67	4	--	Wall on Structure	N/A	4		55
	2926049011	11200 1st Ave Ne	Southern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	65	Ldn	61	67	4	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Northern 2nd line ground level Apts. on 1st Ave.	8	65	2	No	No	65	Ldn	61	67	8	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Northern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	66	Ldn	61	67	4	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Southern 3rd line ground level Apts. on 1st Ave.	4	63	2	No	No	62	Ldn	60	66	4	--	Wall on Structure	N/A	4		53
	2926049011	11200 1st Ave Ne	Southern 3rd line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	63	Ldn	60	66	4	--	Wall on Structure	N/A	4		53
	2926049011	11200 1st Ave Ne	Northern 3rd line ground level Apts. on 1st Ave.	8	63	2	No	No	63	Ldn	60	66	8	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Northern 3rd line 2nd floor Apts. on 1st Ave.	8	63	2	No	No	64	Ldn	60	66	8	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Southern 4th line ground level Apts. on 1st Ave.	10	63	2	No	No	60	Ldn	60	66	10	--	Wall on Structure	N/A	4		51
	2926049011	11200 1st Ave Ne	Southern 4th line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	60	Ldn	60	66	4	--	Wall on Structure	N/A	4		51
	2926049011	11200 1st Ave Ne	Northern 4th line ground level Apts. on 1st Ave.	11	63	2	No	No	61	Ldn	60	66	11	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Northern 4th line 2nd floor Apts. on 1st Ave.	11	63	2	No	No	61	Ldn	60	66	11	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Southern ground level Apts. E of 2nd Ave.	10	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	2926049011	11200 1st Ave Ne	Southern 2nd floor Apts. E of 2nd Ave.	10	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	2926049011	11200 1st Ave Ne	Northern ground level Apts. E of 2nd Ave.	6	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
	2926049011	11200 1st Ave Ne	Northern 2nd floor Apts. E of 2nd Ave.	6	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
M-2: 73.5	6174800000	11300 1st Ave Ne	Front line ground level condos on 1st Ave. courtyard	11	74	2	No	No	73	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on 1st Ave. courtyard	11	74	2	No	No	74	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on 1st Ave. courtyard	11	74	2	No	No	75	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line ground level condos on south side	5	74	2	No	No	75	Ldn	66	73	--	5	Wall on Structure	N/A	6		63
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on south side	5	74	2	No	No	75	Ldn	66	73	--	5	Wall on Structure	N/A	6		63
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on south side	5	74	2	No	No	77	Ldn	66	73	--	5	Wall on Structure	N/A	6		64
	2926049050	11355 3rd Ave Ne-Bldg. E	1st Floor Citigate Apts.=108 unit Apt. complex that would be front line if M-2 is displaced	4	66	2	No	No	63	Ldn	62	68	4	--	Wall on Structure	N/A	6		51
	2926049050	11355 3rd Ave Ne-Bldg. E	2nd Floor at Citigate Apts.	4	66	2	No	No	63	Ldn	62	68	4	--	Wall on Structure	N/A	6		51
	2926049050	11355 3rd Ave Ne-Bldg. E	3rd Floor at Citigate Apts.	4	66	2	No	No	65	Ldn	62	68	4	--	Wall on Structure	N/A	6		51
	2926049050	11355 3rd Ave Ne-East of Bldg. E	1st Floor Citigate Apts.- 2nd line	2	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	6		46
	2926049050	11355 3rd Ave Ne-East of Bldg. E	2nd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	6		46
	2926049050	11355 3rd Ave Ne-East of Bldg. E	3rd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	60	Ldn	60	66	2	--	Wall on Structure	N/A	6		46
M-4: 65.65	2926049529	133 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	75	Ldn	62	68	--	1	Wall on Structure	N/A	8	1	62
	2926049530	139 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	67	Ldn	62	68	1	--	Wall on Structure	N/A	4		59
	2926049531	145 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	4		56

Lynnwood Link Extension A7

Stations: 130th Option 2
155th
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	296	183

Residual	
RSIP =	29

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2926049532	151 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	4		53
	2926049533	157 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		51
	2926049192	303 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	2926049418	11352 3rd Ave	SF Residence on 3rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	2926049191	315 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
NE 115th Street to 117th Street																			
	6411600161	136 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	75	Ldn	62	68	--	1	Wall on Structure	N/A	8	1	63
	6411600162	142 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	70	Ldn	62	68	--	1	Wall on Structure	N/A	8		57
	6411600163	148 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	8		53
	6411600164	154 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall on Structure	N/A	8		49
	7810300035	147 Ne 116th St	Duplex on 116th St.	2	66	2	No	No	75	Ldn	62	68	--	2	Wall on Structure	N/A	8	2	63
	7810300030	11519 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	8		55
	7810300025	11523 3rd Ave N	SF Residence on 3rd Ave.	1	66	2	No	No	74	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	6411600147	156 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No	71	Ldn	61	66	--	1	Wall on Structure	N/A	8		58
	7810300005	150 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No							Wall on Structure	N/A	8		
	6411600146	157 Ne 117th St	SF Residence on 117th St.	1	64	2	No	No							Wall on Structure	N/A	8		
	6411600186	11622 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	72	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	60
	6411600185	11610 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	71	Ldn	59	65	--	1	Wall on Structure	N/A	8		58
	6411600182	11606 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	8		57
	6411600188	11600 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	8		57
	6411600172	11526 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	69	Ldn	59	65	--	1	Wall on Structure	N/A	8		56
	6411600170	11522 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	6161000031	11514 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	6161000022	11508 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6161000021	304 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		46
	6411600173	316 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	6411600171	322 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	6161000015	11515 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		45
	6161000010	11519 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		46
	6161000005	11527 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6161000035	11533 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6411600181	11539 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		47
	6411600180	11545 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		47
	6411600183	325 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		45
	6411600187	321 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6411600184	311 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		51
	6411600200	401 Ne 117th St	SF Residence on 117th St.	1	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	6411600198	11544 4th Ave Ne	SF Residence on 4th Ave.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		45
	6411600201	11536 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	8		45
	6411600199	11532 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	8		44
	6411600207	11524 4th Ave Ne	SF Residence on 4th Ave.	1	58	2	No	No	58	Ldn	57	63	1	--	Wall on Structure	N/A	8		44
M-4: 56.775	6411600211	11516 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	6411600209	11510 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	6411600213	11529 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	6411600195	11537 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	6411600202	11547 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	58	Ldn	57	63	1	--	Wall on Structure	N/A	8		44
	6411600196	11545 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	8		42
	6411600203	11533 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	8		41
	6411600208	11525 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	8		41
NE 117th Street to 120th Street																			
	6411600414	308 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	74	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	62
	6411600413	11708 3rd Ave Ne	SF Residence	1	62	2	No	No	75	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	62
	6411600420	11710 3rd Ave Ne	Church	1	62	3	No	No	70	Leq	64	70	--	1	Wall on Structure	N/A	8		58
	6411600429	323 Ne 120th St	SF Residence north of the church	1	62	2	No	No	75	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	62
	6411600430	325 Ne 120th St	SF Residence north of the church	1	62	2	No	No	73	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	61
	6411600443	11737C 5th Ave Ne	SF Residence north of the church	1	62	2	No	No	71	Ldn	59	65	--	1	Wall on Structure	N/A	8		58
	6411600442	11737 5th Ave Ne Unit B	SF Residence north of the church	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		50
	6411600441	11737 5th Ave Ne Unit A	SF Residence north of the church	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6411600440	11743 5th Ave Ne	SF Residence north of the church	1	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	8		44
	6411600451	11729 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	8		47
	6411600452	11727 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		50
M-6 62.2	6411600450	11725 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	8		57

Lynnwood Link Extension A7

Stations: 130th Option 2
155th
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	296	183

Residual	
RSIP =	29

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	6411600464	11723 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	8		51
	6411600463	11721 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		50
	6411600461	11719 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	6411600462	11715 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	6411600412	316 Ne 117th St	SF Residence east of the church	1	64	2	No	No	66	Ldn	61	66	--	1	Wall on Structure	N/A	8		53
	6411600410	322 Ne 117th St	SF Residence south of the church	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	8		50
	6411600411	326 Ne 117th St	SF Residence south of the church	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	6411600471	332 Ne 117th St	SF Residence south of the church	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		46
	6411600472	336 Ne 117th St	SF Residence south of the church	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	6411600473	342 Ne 117th St	SF Residence south of the church	1	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	8		44
	6411600470	11707 5th Ave Ne	SF Residence south of the church	1	65	2	No	No	57	Ldn	61	67	--	--	Wall on Structure	N/A	8		43
	6413100228	11718 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Structure	N/A	8		42
	6413100229	11714 5th Ave Ne	SF Residence south of the church	1	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	8		42
	6413100241	11726 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Structure	N/A	8		42
	6413100240	11734 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Structure	N/A	8		43
	6411600428	327 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	75	Ldn	62	68	--	1	Wall on Structure	N/A	8	1	63
	2238000050	331 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	69	Ldn	62	68	--	1	Wall on Structure	N/A	8		57
	2238000045	337 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	8		52
	2238000040	343 Ne 120th St	SF Residence on 120th St.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	2238000035	349 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	8		46
	2238000030	11755 5th Ave Ne	SF Residence on 120th St.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	8		45
NE 120th Street to NE 125th Street																			
	6412100091	332 Ne 120th St	SF Residence on 120th St.	0	65	2	No	No								N/A			
	6412100097	338 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	75	Ldn	61	67	--	1	Wall on Structure	N/A	6	1	63
	6412100092	344 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	68	Ldn	61	67	--	1	Wall on Structure	N/A	8		55
	6412100095	348 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	8		51
	6412100096	12001 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	8		48
	2237500025	12004 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	8		45
	2237500020	510 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	8		43
	2237500015	516 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	58	Ldn	61	67	--	--	Wall on Structure	N/A	8		43
	2237500030	12014 5th Ave Ne	SF Residence on 120th St.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	8		48
	6412100090	12015 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	71	Ldn	62	68	--	1	Wall on Structure	N/A	8		58
	6412100093	12021 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	66	Ldn	61	67	1	--	Wall on Structure	N/A	8		54
	6413600015	12016 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	8		48
	6413600005	12018 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	8		45
	6413600010	12020 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	8		47
	6413600020	12022 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	8		50
	6412100094	12025 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	72	Ldn	62	68	--	1	Wall on Structure	N/A	8		60
	6412100085	12027 5th Ave Ne	SF Residence near noise wall	1	65	2	No	No	75	Ldn	61	67	--	1	Wall on Structure	N/A	8	1	62
	6412100087	12029 5th Ave Ne	SF Residence next to noise wall	0	65	2	No	No							Wall on Structure	N/A	8		
	6412100080	12035 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	74	Ldn	63	68	--	1	Wall on Structure	N/A	8		61
	6412100082	12045 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	75	Ldn	63	68	--	1	Wall on Structure	N/A	8		62
	6412100081	12049 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	73	Ldn	63	68	--	1	Wall on Structure	N/A	8		61
	6412100084	12051 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No							Wall on Structure	N/A	8		
	6412100280	12301 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No							Wall on Structure	N/A	8		
	6412100281	12311 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6412100282	12321 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6412100283	12327 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6412100284	12401 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6412100250	12417 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6413600026	12030 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	6		51
	6413600036	12032 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	6		48
	6413600072	12035 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	6		45
	6413600079	12037 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	8		44
	6413600034	12034 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	6		48
	6413600035	12036 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		52
M-7: 68.27	6413600040	12042 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		52
	6413600041	12044 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	8		47

Lynnwood Link Extension A7

Stations: 130th Option 2
155th
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	296	183

Residual	
RSIP =	29

Receiver Information					Impact Analysis									Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	6413600051	521 Ne 123rd St	SF Residence on 123rd	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	8		46
	6413600052	515 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	8		48
	6413600045	12048 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	8		51
	6413600050	12054 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	70	Ldn	63	69	--	1	Wall on Structure	N/A	6		58
	6413600339	12302 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	70	Ldn	63	69	--	1	Wall on Structure	N/A	6		58
	6413600340	510 Ne 123rd St	SF Residence on 123rd	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	6		51
	6413600335	518 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	6		49
	6413600338	522 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	6		47
	6413600337	12308 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	71	Ldn	63	69	--	1	Wall on Structure	N/A	6		58
	6413600345	12316 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	71	Ldn	63	69	--	1	Wall on Structure	N/A	6		59
	6413600343	12320 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	71	Ldn	63	69	--	1	Wall on Structure	N/A	6		59
	6413600347	12312 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	6		51
	6413600346	12314 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	6		48
	9509900045	521 Ne 124th St	SF Residence on 124th	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	6		47
	9509900040	515 Ne 124th St	SF Residence on 124th	1	66	2	No	No	63	Ldn	62	68	1	--	Wall on Structure	N/A	6		50
	9509900035	509 Ne 124th St	SF Residence on 124th	1	67	2	No	No	65	Ldn	63	68	1	--	Wall on Structure	N/A	6		52
	9509900030	503 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	71	Ldn	63	69	--	1	Wall on Structure	N/A	6		59
	9509900005	500 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	9509900010	508 Ne 124th St	SF Residence on 124th	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		53
	9509900015	514 Ne 124th St	SF Residence on 124th	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	6		50
	9509900020	520 Ne 124th St	SF Residence on 124th	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	6		47
	6413600378	527 Ne 125th St	SF Residence on 125th	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		46
	6413600377	523 Ne 125th St	SF Residence on 125th	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	8		48
	6413600376	513 Ne 125th St	SF Residence on 125th	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	8		51
	6413600375	505 Ne 125th St	SF Residence on corner of 5th and 125th	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
NE 125th Street to NE 127th Street																			
	6414100010	502 Ne 125th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100013	510 Ne 125th St	SF Residence on 125th	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	6		53
	6414100012	514 Ne 125th St	SF Residence on 125th	1	67	2	No	No	63	Ldn	63	68	1	--	Wall on Structure	N/A	6		50
	6414100011	516 Ne 125th St	SF Residence on 125th	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	6		47
	6414100023	12514 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	6		47
	6414100024	12512 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	65	Ldn	62	68	1	--	Wall on Structure	N/A	6		52
	6414100021	12518 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100020	12520 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100028	12528 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100025	12526 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	65	Ldn	62	68	1	--	Wall on Structure	N/A	6		52
	6414100029	12524 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	6414100026	12532 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	64	Ldn	62	68	1	--	Wall on Structure	N/A	4		55
	6414100027	12534 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100033	12542 5th Ave Ne	Empty Lot	1	68	2	No	No							Wall on Structure	N/A	6		
	6414100030	12542 5th Ave Ne	SF Residence on 5th Ave.	1	69	2	No	No	72	Ldn	64	70	--	1	Wall on Structure	N/A	6		60
	6414100032	12546 5th Ave Ne Unit B	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		51
	6414100031	12546 5th Ave Ne Unit C	SF Residence on 5th Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	6		48
	6414100039	527 NE 127th St	SF Residence on 127th	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Structure	N/A	6		47
	6414100038	521 NE 127th St	SF Residence on 127th	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	6		48
	6414100037	515 NE 127th St	SF Residence on 127th	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	6		50
	6414100036	509 NE 127th St	SF Residence on 127th	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	6		53
	6414100035	503 NE 127th St	SF Residence on corner of 127th and 5th	1	69	2	No	No	72	Ldn	64	70	--	1	Wall on Structure	N/A	6		60
NE 127th Street to Roosevelt Way NE Ja																			
M-9: 70.45	6414100732	502 NE 127th St	SF Residence on corner of 127th and 5th	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	6414100731	514 NE 127th St	SF Residence on 127th	1	70	2	No	No	65	Ldn	65	70	1	--	Wall on Structure	N/A	4		56
	6414100733	522 NE 127th St	SF Residence on 127th	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
	6414100741	Grace Church open area	Empty Lot	0	64	3	No	No							Wall on Structure	N/A	4		
	6414100730	12708 5th Ave Ne	SF Residence on 5th Ave.	1	71	2	No	No	72	Ldn	66	71	--	1	Wall on Structure	N/A	4		64
	6414100740	12718 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	Yes	No	72	Ldn	66	72	--	1	Wall on Structure	Special	4		64
	6414100751	12726 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	70	Ldn	66	72	1	--	Wall on Structure	Special	4		62
	6414100750	12732 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	70	Ldn	66	72	1	--	Wall on Structure	Special	4		63
M-10: 73.8	6414100759	12740 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	Yes	No	70	Ldn	66	73	1	--	Wall on Structure	Special	4		62
	6414100760	12759 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	Yes	No	63	Ldn	66	72	--	--	Wall on Structure	Special	4		55
	6414100752	12749 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	72	2	Yes	No	61	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	6414100753	12745 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	Yes	No	62	Ldn	66	72	--	--	Wall on Structure	Special	4		54
	1854700005	502 Ne 130th St	SF Residence on 130th	1	74	2	Yes	No	66	Ldn	66	73	1	--	Wall on Structure	Special	4		61
	1854700010	510 Ne 130th St	SF Residence on 130th	1	74	2	Yes	No	59	Ldn	66	73	--	--	Wall on Structure	Special	4		53

Lynnwood Link Extension A7

Stations: 130th Option 2
155th
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	296	183

Residual	
RSIP =	29

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	**Parcel**	**Address**	**Description**	**Units**	**Ldn/Leq**	**FTA-CAT**	**X-Over**	**Bell**	**Ldn/Leq**	**Type**	**Mod Imp**	**Sev Imp**	**Mod Imp**	**Sev Imp**	**Sound Wall Type**	**X-Over**	**Height**	**Insulation**	**Ldn w/Mit**
	1854700015	516 Ne 130th St	SF Residence on 130th	1	73	2	Yes	No	57	Ldn	66	72	--	--	Wall on Structure	Special	4		51
	1787600096	519 Ne 131st Pl	SF Residence on 131st Place	1	73	2	Yes	No	56	Ldn	66	72	--	--	Wall on Structure	Special	4		50
	1787600095	511 Ne 131st Pl	SF Residence on 131st Place	1	74	2	Yes	No	59	Ldn	66	73	--	--	Wall on Structure	Special	4		54
	1787600098	505 Ne 131st Pl	SF Residence on 131st Place	1	74	2	Yes	No	66	Ldn	66	73	1	--	Wall on Structure	Special	4		61
	1787600090	N Seattle Church of Naz	Empty Lot that is part of 13130 5th Church	1	72	3	Yes	No	64	Leq	71	77	--	--	Wall on Structure	Special	4		60
	1787600094	510 Ne 131st Pl	SF Residence on 131st Place	1	72	2	Yes	No	59	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	1787600093	520 Ne 131st Pl	SF Residence on 131st Place	1	71	2	Yes	No	56	Ldn	66	71	--	--	Wall on Structure	Special	4		50
	1787600085	13130 5th Ave Ne	Church on 5th Ave.	1	67	2	Yes	No	64	Ldn	63	68	1	--	Wall on Structure	Special	4		56
M-11: 66.7 & 66.8	1787600085	13130 5th Ave Ne	Church on 5th Ave.	0	68	3	Yes	No	63	Leq	68	74	--	--	Wall on Structure	Special	4		55
	2026049004	1000 NE 135th		1	70	3	No	No							Wall on Structure	N/A	4		
NE 145th Street to NE 148th Street																			
	7568700780	501 Ne 145th St	Water pump station	0	74				0	Leq	66	73	--	--					0
	7568700785	14512 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	No	No	69	Ldn	66	73	1	--	Wall on Structure	N/A	4		61
	7568700790	14518 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		61
M-14: 72.8	7568700795	14526 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		60
	7568700800	14532 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		60
	7568700805	14540 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		60
	7568700810	14544 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		59
	7568700815	14552 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		59
	7568700820	14556 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		59
	7568700825	14560 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	No	No	68	Ldn	66	72	1	--	Wall on Structure	N/A	4		58
	7568700830	14570 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	68	Ldn	63	69	1	--	Wall on Structure	N/A	4		58
	7568700835	14574 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	7568700836	14578 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	68	Ldn	61	67	--	1	Wall on Structure	N/A	4		58
	7568700775	-	Empty Lot	0	74										#N/A		4		
	7568700770	516 Ne 145th St	SF Residence on 145th	1	73	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		53
	7568700765	522 Ne 145th St	SF Residence on 145th	1	72	2	No	No	61	Ldn	66	72	--	--	Wall on Structure	N/A	4		52
	7568700760	14515 6th Ave Ne	SF Residence on 6th Ave.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		54
	7568700755	14521 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	No	No	63	Ldn	62	68	1	--	Wall on Structure	N/A	4		54
	7568700745	14525 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		53
	7568700740	14535 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	4		53
	7568700734	14541 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	4		53
M-15: 62.65	7568700730	14549 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	4		53
	7568700725	14555 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	7568700720	14565 6th Ave Ne	SF Residence on 6th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	7568700715	14567 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	4		50
	7568700705	14579 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		48
	7568700710	515 NE 148th St.	SF Residence on 6th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	7568700695	14572 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	7568700690	14566 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	7568700685	14562 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
	7568700680	14550 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	4		50
	7568700675	14548 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	7568700670	14542 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	7568700665	14528 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	7568700660	14526 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	7568700655	14522 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		50
	7568700650	14518 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
NE 148th Street to NE 149th Street																			
	8680300045	327 Ne 148th St	SF Residence on 148th	1	70	2	No	No							Wall on Structure	N/A	4		
	8680300050	333 Ne 148th St	SF Residence on 148th	1	70	2	No	No	76	Ldn	65	70	--	1	Wall on Structure	N/A	6		64
	8680300055	339 Ne 148th St	SF Residence on 148th	1	70	2	No	No	68	Ldn	65	70	1	--	Wall on Structure	N/A	6		55
	8680300060	345 Ne 148th St	SF Residence on 148th	1	70	2	No	No	67	Ldn	65	70	1	--	Wall on Structure	N/A	6		53
	2881700402	14727 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	6		50
	2881700400	-	Empty Lot	0	67	2	No	No							Wall on Structure	N/A	6		
	8680300040	316 Ne 148th St	SF Residence on 148th	1	70	2	No	No							Wall on Retaining Wall	N/A	4		
	8680300035	324 Ne 148th St	SF Residence on 148th	1	70	2	No	No	74	Ldn	65	70	--	1	Wall on Retaining Wall	N/A	8		62
	8680300030	330 Ne 148th St	SF Residence on 148th	1	70	2	No	No	70	Ldn	65	70	--	1	Wall on Retaining Wall	N/A	8		59
	8680300025	336 Ne 148th St	SF Residence on 148th	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	8		52
	8680300020	342 Ne 148th St	SF Residence on 148th	1	67	2	No	No	60	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	8		50
M-16: 66.95	8680300015	348 Ne 148th St	SF Residence on 148th	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	4		54
	8680300010	358 Ne 148th St	SF Residence on 148th	1	67	2	No	No	63	Ldn	63	68	1	--	Wall on Structure	N/A	4		53
	8680300005	14807 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	2004100090	357 Ne 149th St	SF Residence on 149th	1	67	2	No	No	54	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	8		46
	2004100085	351 Ne 149th St	SF Residence on 149th	1	67	2	No	No	55	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		51

Lynnwood Link Extension A7

Stations: 130th Option 2
155th
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	296	183

Residual	
RSIP =	29

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2004100080	345 Ne 149th St	SF Residence on 149th	1	67	2	No	No	59	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		55
	2004100075	339 Ne 149th St	SF Residence on 149th	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		56
	2004100065	333 Ne 149th St	SF Residence on 149th	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	4		59
	2004100060	327 Ne 149th St	SF Residence on 149th	1	69	2	No	No	66	Ldn	64	70	1	--	Wall on Retaining Wall	N/A	4		60
	2004100055	321 Ne 149th St	SF Residence on 149th	1	70	2	No	No	74	Ldn	65	70	--	1	Wall on Retaining Wall	N/A	8		63
	2004100050	309 Ne 149th St	SF Residence on 149th	1	70	2	No	No	78	Ldn	65	70	--	1	Wall on Retaining Wall	N/A	8	1	66
	2004100052	305 Ne 149th St	SF Residence on 149th	0	70	2	No	No							Wall on Retaining Wall	N/A	6		
	2004100045	308 Ne 149th St	SF Residence on 149th	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
M-17: 70.05	2004100040	314 Ne 149th St	SF Residence on 149th	1	70	2	No	No	69	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		63
	2004100035	320 Ne 149th St	SF Residence on 149th	1	70	2	No	No	67	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		62
	2004100030	326 Ne 149th St	SF Residence on 149th	1	68	2	No	No	68	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	6		61
	2004100025	332 Ne 149th St	SF Residence on 149th	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	6		55
	2004100020	338 Ne 149th St	SF Residence on 149th	1	67	2	No	No	59	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	6		53
NE 148th Street to NE 152nd Street																			
	7568700355	14802 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	7568700360	14808 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	67	Ldn	61	67	--	1	Wall on Structure	N/A	4		57
	7568700365	14812 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	67	Ldn	61	66	--	1	Wall on Structure	N/A	4		57
	7568700370	14818 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		51
	7568700375	14902 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		51
	7568700380	14910 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall on Retaining Wall	N/A	4		58
	7568700385	14916 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	4		58
	7568700390	14922 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		52
	7568700395	14928 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	55	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		52
	7568700400	14934 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	51	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		48
	7568700405	15100 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		55
	7568700410	15108 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		55
	7568700415	15114 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		54
	7568700420	15124 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		54
NE 151st Street to NE 155th Street																			
	2881700323	15101 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	3222200030	301 Ne 151st St	SF Residence on 151st	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	3222200040	307 Ne 151st St	SF Residence on 151st	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Retaining Wall	N/A	6		63
	3222200050	313 Ne 151st St	SF Residence on 151st	1	70	2	No	No	67	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		62
	802290040	321 Ne 151st St	SF Residence on 151st	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
	802290041	327 Ne 151st St	SF Residence on 151st	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	802290050	335 Ne 151st St	SF Residence on 151st	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	802290055	347 Ne 151st St	SF Residence on 151st	1	67	2	No	No	55	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		51
	2881700322	15109 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	2881700321	15117 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	2881700311	15121 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	76	Ldn	63	69	--	1	Wall on Retaining Wall	N/A	8	1	64
	2881700310	225 Ne 152nd St	Church at end of 152nd St.	1	70	3	Yes	No	68	Leq	70	75	--	--	Wall on Structure	Special	4		60
	2634500055	304 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	70	Ldn	65	70	--	1	Wall on Structure	N/A	4		61
	2634500060	310 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	70	Ldn	65	70	--	1	Wall on Structure	N/A	4		60
	2634500065	316 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		54
	2634500070	322 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	4		52
	2634500035	323 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	56	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	8		47
	2634500040	317 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
	2634500045	311 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	65	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	8		55
	2634500050	305 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	8		56
	3222200010	15112 3rd Ave Ne	SF Residence on 3rd Ave.	1	70	2	No	No	68	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		62
	3222200020	306 Ne 151st St	SF Residence on 151st	1	70	2	No	No	64	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		58
	802290035	316 Ne 151st St	SF Residence on 151st	1	70	2	No	No	60	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		55
	802290030	324 Ne 151st St	SF Residence on 151st	1	69	2	No	No	57	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		52
	2881700301	-	Empty Lot	0	70	2	No	No								N/A			
	5027800130	411 Ne 153rd St	SF Residence on 153rd St.	1	69	2	Yes	Yes	64	Ldn	64	70	1	--	Wall on Structure	Special	4		54
	5027800120	407 Ne 153rd St	SF Residence on 153rd St.	1	70	2	Yes	Yes	68	Ldn	65	70	1	--	Wall on Structure	Special	4		58
M-18 (63.9 LEQ)	5027800110	405 Ne 153rd St	SF Residence on 153rd St.	1	70	2	Yes	Yes	67	Ldn	65	70	1	--	Wall on Structure	Special	4		57
	5027800100	403 Ne 153rd St	SF Residence on 153rd St.	1	70	2	Yes	Yes	67	Ldn	65	70	1	--	Wall on Structure	Special	4		57
	5027800090	401 Ne 153rd St	SF Residence on 153rd St.	1	70	2	Yes	Yes	61	Ldn	65	70	--	--	Wall on Structure	Special	4		51
	2881700300	15240 3rd Ave Ne	SF Residence on 3rd Ave.	1	71	2	Yes	Yes	68	Ldn	66	71	1	--	Wall on Structure	Special	4		58
	2807600030	15451 4th Ave Ne	SF Residence on 4th Ave.	1	70	2	Yes	Yes	61	Ldn	65	70	--	--	Wall on Structure	Special	4		51
	0411100005	301 Ne 155th St	SF Residence on 4th Ave.	1	70	2	Yes	No	56	Ldn	65	70	--	--	Wall on Structure	Special	4		48
	0411100010	15420 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	Yes	No	56	Ldn	65	70	--	--	Wall on Structure	Special	4		49
	0411100015	15414 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	Yes	No	56	Ldn	65	70	--	--	Wall on Structure	Special	4		49
	0411100020	15408 2nd Ave Ne	SF Residence on 2rd Ave.	1	71	2	Yes	Yes	60	Ldn	66	71	--	--	Wall on Structure	Special	4		50

Lynnwood Link Extension A7

Stations: 130th Option 2
155th
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	296	183

Residual	
RSIP =	29

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0411100025	15404 2nd Ave Ne	SF Residence on 2rd Ave.	1	72	2	Yes	Yes	68	Ldn	66	72	1	--	Wall on Structure	Special	4		58
	0411100030	15401 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	Yes	Yes	69	Ldn	66	72	1	--	Wall on Structure	Special	4		60
	0411100035	15407 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	Yes	Yes	65	Ldn	66	72	--	--	Wall on Structure	Special	4		57
	0411100040	15419 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	Yes	Yes	60	Ldn	65	70	--	--	Wall on Structure	Special	4		51
	0411100045	15425 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	Yes	Yes	59	Ldn	65	70	--	--	Wall on Structure	Special	4		50
	0411100050	165 Ne 155th St	SF Residence on 155th St.	1	71	2	Yes	Yes	59	Ldn	66	71	--	--	Wall on Structure	Special	4		50
	0411100055	145 Ne 155th St	Fire Station	1	76	2	Yes	No	68	Ldn	66	75	1	--	Wall on Structure	Special	4		62
NE 155th Street to NE 158th Street																			
	2241700075	157 Ne 156th St	SF Residence on 156th St.	1	68	2	Yes	No	55	Ldn	63	69	--	--	Wall on Structure	Special	4		47
	2241700070	151 Ne 156th St	SF Residence on 156th St.	1	70	2	Yes	No	56	Ldn	65	70	--	--	Wall on Structure	Special	4		48
	2241700065	143 Ne 156th St	SF Residence on 156th St.	1	71	2	Yes	No	57	Ldn	66	71	--	--	Wall on Structure	Special	4		50
	2241700060	137 Ne 156th St	SF Residence on 156th St.	1	72	2	No	No							Wall on Structure	N/A	4		
M-19: 73.3	2241700055	132 Ne 155th St	SF Residence on 155th St.	1	73	2	No	No							Wall on Structure	N/A	4		
	2241700050	125 Ne 156th St	SF Residence on 156th St.	1	74	2	No	No							Wall on Structure	N/A	4		
	2241700045	110 Ne 155th St	SF Residence on 155th St.	1	75	2	No	No							Wall on Structure	N/A	4		
	2881700240	106 Ne 155th St	SF Residence on 155th St.	1	76	2	No	No							Wall on Structure	N/A	4		
	2241700040	104 Ne 156th St	SF Residence on 156th St.	1	75	2	No	No							Wall on Structure	N/A	4		
	2241700035	108 Ne 156th St	SF Residence on 156th St.	1	73	2	No	No							Wall on Structure	N/A	4		
	2241700030	122 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No							Wall on Structure	N/A	4		
	2241700025	130 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No							Wall on Structure	N/A	4		
	2241700020	136 Ne 156th St	SF Residence on 156th St.	1	69	2	No	No							Wall on Structure	N/A	4		
	2241700015	142 Ne 156th St	SF Residence on 156th St.	1	68	2	Yes	Yes	60	Ldn	63	69	--	--	Wall on Structure	Special	4		50
	2241700010	148 Ne 156th St	SF Residence on 156th St.	1	67	2	Yes	Yes	55	Ldn	63	68	--	--	Wall on Structure	Special	4		45
	2241700005	156 Ne 156th St	SF Residence on 156th St.	1	66	2	Yes	Yes	54	Ldn	62	68	--	--	Wall on Structure	Special	4		45
	2881700233	15615 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	Yes	Yes	58	Ldn	61	67	--	--	Wall on Structure	Special	4		48
	2881700234	15621 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	Yes	Yes	56	Ldn	61	67	--	--	Wall on Structure	Special	4		47
	2881700232	15625 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	Yes	Yes	56	Ldn	61	67	--	--	Wall on Structure	Special	4		46
	2881700239	241 Ne 157th St	SF Residence on 157th St.	1	66	2	Yes	Yes	58	Ldn	62	68	--	--	Wall on Structure	Special	4		49
	2881700229	235 Ne 157th St	SF Residence on 157th St.	1	67	2	Yes	Yes	59	Ldn	63	68	--	--	Wall on Structure	Special	4		49
	2881700226	229 Ne 157th St	SF Residence on 157th St.	1	68	2	Yes	Yes	62	Ldn	63	69	--	--	Wall on Structure	Special	4		52
	2881700224	223 Ne 157th St	SF Residence on 157th St.	1	68	2	Yes	Yes	62	Ldn	63	69	--	--	Wall on Structure	Special	4		53
	2881700225	125 Ne 157th St	SF Residence on 157th not =15544 1st Ave Ne	1	69	2	Yes	Yes	69	Ldn	64	70	1	--	Wall on Structure	Special	4		59
	2881700219	117 Ne 157th St	SF Residence on 157th St.	1	69	2	Yes	Yes	71	Ldn	64	70	--	1	Wall on Structure	Special	4		61
	2881700220	111 Ne 157th St	SF Residence on 157th St.	1	71	2	Yes	Yes	72	Ldn	66	71	--	1	Wall on Structure	Special	4		63
	2881700223	101 Ne 157th St	SF Residence on 157th St.	0	72	2	No	No							Wall on Structure	N/A	4		
	2881700230	15618 1st Ave Ne	SF Residence on 1st Ave.	0	72	2	No	No							Wall on Structure	N/A	4		
	2881700227	108 Ne 157th St	SF Residence on 157th St.	1	71	2	Yes	Yes	76	Ldn	66	71	--	1	Wall on Structure	Special	6		63
	2881700218	15710 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	72	Ldn	66	71	--	1	Wall on Retaining Wall	N/A	6		63
	8142000180	105 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		64
	8142000170	111 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		56
	2881700222	116 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
	2881700221	126 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	4		54
	2881700231	132 Ne 157th St	SF Residence on 157th St.	1	68	2	Yes	No	63	Ldn	63	69	1	--	Wall on Structure	Special	4		53
	8142000160	117 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
M-20: 68.33	8142000150	123 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
NE 158th Street to NE 165th Street																			
	8142000090	104 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		64
	8142000080	110 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		56
	8142000070	116 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	8142000060	122 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	6159400080	117 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	6159400075	125 Ne 159th St	SF Residence on 158th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	6159400085	113 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		56
	6159400090	105 Ne 159th St	SF Residence on 159th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		64
	6159400045	104 Ne 159th St	SF Residence on 159th St.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
	6159400037	114 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	69	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		63
	6159400035	118 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		56
	6159400030	124 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	6159400025	130 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	2111600080	129 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	2111600075	139 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	2111600085	123 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		56
	2111600090	115 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	68	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		62
	2111600095	15924 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
	2111600100	15918 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
M-21: 61.8 LEQ	2881700193	108 Ne 161st St	Ridgecrest Park	1	62	3	No	No							Wall At-Grade	N/A	4		
	2111600040	114 Ne 161st St	SF Residence on 161st St.	1	71	2	No	No	71	Ldn	66	71	--	1	Wall At-Grade	N/A	6		62
	2111600035	122 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall At-Grade	N/A	4		57
	2111600030	128 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall At-Grade	N/A	4		54

Lynnwood Link Extension A7

Stations: 130th Option 2
155th
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	296	183

Residual	
RSIP =	29

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2111600025	134 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall At-Grade	N/A	4		51
	7301300295	303 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	50	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		44
	7301400110	129 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	51	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		46
	7301400120	121 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Retaining Wall	N/A	4		55
	7301400220	128 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		53
	7301300130	304 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	50	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		45
	7301300135	310 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	46	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		42
	7301300120	139 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	7301300125	135 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	51	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		45
	7301400200	127 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	7301400211	124 Ne 163rd St	SF Residence on 163rd St.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
	7301400070	-	Empty Lot	0	68	--	No	No							Wall on Retaining Wall	N/A	4		
	7301400060	132 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	7301400040	134 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	51	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		45
	7301400046	140 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	7301300030	141 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	7301300035	135 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	51	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		45
	7301400050	127 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
NE 165th Street to NE 170th Street																			
	5727500330	126 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	7307000050	124 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	5727500355	119 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	5727500350	123 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	7307000040	134 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	7301500010	132 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		43
	7301500020	140 Ne 165th St	SF Residence on 165th St.	1	66	2	No	No	44	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		39
	7307000030	140 Ne 165th Pl	SF Residence on 165th Place	1	66	2	No	No	43	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500300	131 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	45	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		40
	5727500363	120 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	5727500360	-	Empty Lot	0	68	--	No	No							Wall on Retaining Wall	N/A	4		
	9235900015	111 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	9235900020	117 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	49	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		43
	9235900025	123 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	45	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		40
	9235900040	130 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	44	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		39
	5727500361	124 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	5727500086	114 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	5727500103	16719 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	5727500100	16723 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	5727500102	16729 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	5727500111	16731 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	5727500110	16735 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	5727500113	16741 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	5727500120	109 Ne 170th St	SF Residence on 170th St.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	7305900115	119 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	5727500130	121 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		43
	5727500139	16742 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	5727500137	16738 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500148	16728 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500149	16722 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500150	16716 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500155	126 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	45	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500087	118 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		44
	5727500156	132 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	42	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500157	136 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	41	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		37
	5727500159	16719 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500147	16725 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		37
	5727500146	-	Empty Lot	0	66	--	No	No							Wall on Retaining Wall	N/A	4		
	5727500145	16735 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		37
	5727500135	16741 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500136	16747 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	43	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500138	16753 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	43	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500131	16761 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	45	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		40
NE 170th Street to NE 175th Street																			
	7305300205	104 Ne 170th St	SF Residence on 170th St.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300210	17010 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300215	17016 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300220	17022 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300225	17028 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49

Lynnwood Link Extension A7

Stations: 130th Option 2
155th
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	296	183

Residual	
RSIP =	29

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	7305300230	17034 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300235	17040 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300240	17046 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	56	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		50
	7305300245	17052 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	62	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		55
	7305300250	17058 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300255	17204 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300260	17210 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300265	17216 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300270	17222 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300275	105 Ne 174th St	SF Residence on 174th St.	0	70	2	No	No							Wall on Structure	N/A	4		
	7305300350	111 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	63	Ldn	66	71	--	--	Wall on Structure	N/A	4		54
	7305300345	17223 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	58	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		52
	7305300340	17217 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	57	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		52
M-22: 70.2	7305300335	17211 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		51
	7305300330	17205 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		51
	7305300325	17059 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		51
	7305300320	17053 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		50
	7305300315	17047 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	50	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		45
	7305300310	17041 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	45	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300305	17035 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300300	17029 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300295	17023 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300290	17017 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300285	17011 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300280	110 Ne 170th St	SF Residence on 170th St.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300425	205 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	55	Ldn	64	70	--	--	Wall on Structure	N/A	4		45
	7305300420	17222 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	54	Ldn	64	70	--	--	Wall on Structure	N/A	4		44
	7305300415	17216 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		43
	7305300410	17210 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		43
	7305300405	17204 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		43
	7305300400	17058 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		42
	7305300395	17052 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		42
	7305300390	17046 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	44	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		41
	7305300385	17040 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		36
	7305300380	17034 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		36
	7305300375	17028 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300370	17022 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300365	17016 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300360	17010 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300355	204 Ne 170th St	SF Residence on 170th St.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		36
	7305300010	110 Ne 174th St	SF Residence on 174th St.	0	??	2	No	No								N/A			
	7305300015	116 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	77	Ldn	66	71	--	1	Wall on Structure	N/A	6		65
	7305300020	122 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	73	Ldn	66	71	--	1	Wall on Structure	N/A	4		65
	7305300025	128 Ne 174th St	SF Residence on 174th St.	1	70	2	No	No	67	Ldn	65	70	1	--	Wall on Structure	N/A	4		58
	7305300030	204 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	4		55
	7305300035	210 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		54
	7305300040	216 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
M-23: 70.2	7305300085	211 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	70	Ldn	65	70	--	1	Wall on Structure	N/A	4		61
	7305300090	217 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	64	Ldn	65	70	--	--	Wall on Structure	N/A	4		55
	7305300095	223 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
NE 175th Street to NE 180th Street																			
	1115100230	208 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	1115100232	-	Empty Lot	0	70	--	No	No							Wall on Structure	N/A	4		
	1115100235	206 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	75	Ldn	65	70	--	1	Wall on Structure	N/A	6		64
	1115100210	216 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		63
	1115100208	218 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	6		61
	1115100211	222 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		55
	1115100209	220 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	4		58
	1115100200	230 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	62	Ldn	64	70	--	--		N/A			62
	1115100205	234 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	63	Ldn	64	70	--	--		N/A			63
	1115100195	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	1115100190	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	1115100182	310 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	1115100175	320 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
	1115100172	323 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	4		50

Lynnwood Link Extension A7

Stations: 130th Option 2
155th
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	296	183

Residual	
RSIP =	29

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	1115100171	325 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	4		50
	1115100176	317 Ne 178th St	SF Residence on 178th St.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		52
	1115100180	308 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	63	Ldn	63	68	1	--	Wall on Structure	N/A	4		55
	1115100181	311 Ne 178th St	SF Residence on 178th St.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	4		56
	7772400110	239 Ne 178th St	SF Residence on 178th St.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	4		63
M-24: 69.15	7772400120	17748 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	4		63
	7772400130	17738 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	69	Ldn	64	70	1	--	Wall on Structure	N/A	4		61
	7772400140	17734 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	4		62
	7772400150	17733 2nd Pl Ne	SF Residence on 2nd Pl.	1	75	2	No	No	72	Ldn	66	74	1	--	Wall on Structure	N/A	4		64
	7772400160	17737 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	7772400170	17741 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	7772400180	17747 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	7772400190	17753 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	1115100065	224 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No								N/A			
	1115100070	230 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No								N/A			
	7772400010	17803 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	73	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	61
	7772400020	17809 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	73	Ldn	61	66	--	1	Wall on Structure	N/A	8		60
	7772400030	17815 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	75	Ldn	61	67	--	1	Wall on Structure	N/A	8	1	62
	7772400040	17821 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	75	Ldn	61	67	--	1	Wall on Structure	N/A	8	1	62
	7772400050	17825 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	72	Ldn	62	68	--	1	Wall on Structure	N/A	8		60
	7772400060	17822 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	8		52
	7772400070	17816 3rd Ave Ne	SF Residence on 3rd Ave.	1	63	2	No	No	64	Ldn	60	66	1	--	Wall on Structure	N/A	8		51
	7772400080	17810 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	8		52
	7772400090	17804 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	7772400100	312 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	8		48
	1115100119	330 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	1115100123	340 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	1115100121	344 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	1115100111	337 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	72	Ldn	60	66	--	1	Wall on Structure	N/A	8		59
	1115100113	335 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	76	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	60
	1115100112	333 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	78	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	61
	1115100110	331 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	82	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	62
	1115100120	336 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		47
	1115100122	348 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	8		48
	1115100125	-	Empty Lot	0	62	--	No	No							Wall on Structure	N/A	8		
	1115100137	17861 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Structure	N/A	8		51
	1115100138	17857 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Structure	N/A	8		50
	1115100135	17845 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		50
	1115100136	17833 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	1115100142	17829 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	1115100139	17825 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	1115100140	17821 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	8		43
	1115100146	356 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	8		42
	0927100187	17822 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		45
	0927100196	17832 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		46
	0927100200	17840 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		46
	0927100199	17844 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		46
	0927100205	17852 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		47
NE 180th Street to NE 185th Street																			
	6084100118	332 Ne 180th St	SF Residence on 180th St.	0	63	2	No	No							Wall on Structure	N/A	8		
	6084100117	338 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	80	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	62
	6084100114	344 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	76	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	61
M-25: 59.1 LEQ	6084100116	350 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	72	Ldn	60	66	--	1	Wall on Structure	N/A	8		58
	6084100115	356 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	70	Ldn	61	66	--	1	Wall on Structure	N/A	8		57
	6084100110	18017 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	67	Ldn	60	66	--	1	Wall on Structure	N/A	8		55
	6084100113	18019 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	75	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	63
	6084100105	18023 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	74	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	61
	6084100100	18027 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	74	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	61
	6084100095	18031 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	74	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	62
	6084100086	18041 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No							Wall on Structure	N/A	8		
	0927100065	506 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		48
	0927100066	514 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	8		46
	0927100067	518 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	0927100068	524 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	8		43
	5662100015	18015 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	5662100020	18021 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	0927100071	18022 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	8		47
	0927100079	18020 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	0927100070	18016 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	8		51

Lynnwood Link Extension A7

Stations: 130th Option 2
155th
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	296	183

Residual	
RSIP =	29

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0927100076	18032 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	5662100025	18027 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	5662100030	18033 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	0927100075	515 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		48
	0927100073	18034 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	69	Ldn	62	68	--	1	Wall on Structure	N/A	8		56
	0927100082	18036 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	70	Ldn	62	68	--	1	Wall on Structure	N/A	8		57
	0927100080	519 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	5662100035	18039 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		46
	5662100040	18045 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		46
	0927100084	518 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	0927100083	504 Ne 182nd Ct	SF Residence on 182nd Ct.	1	66	2	No	No	72	Ldn	62	68	--	1	Wall on Structure	N/A	8		59
	0927100085	18210 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	73	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	0927100090	505 Ne 183rd Ct	SF Residence on 183rd Ct.	1	66	2	No	No	73	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	0927100094	18310 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	74	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	0927100098	18320 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	74	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	0927100081	514 Ne 182nd Ct	SF Residence on 182nd Ct.	1	65	2	No	No	69	Ldn	61	67	--	1	Wall on Structure	N/A	8		57
	5662100045	18051 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		48
	5662100050	18057 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		48
	0927100091	515 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	69	Ldn	61	67	--	1	Wall on Structure	N/A	8		57
	5662100055	18063 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	0927100092	520 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	8		52
	0927100093	514 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	71	Ldn	61	67	--	1	Wall on Structure	N/A	8		59
	0927100105	18326 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	73	Ldn	62	68	--	1	Wall on Structure	N/A	8		60
	0927100100	18330 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	72	Ldn	62	68	--	1	Wall on Structure	N/A	8		59
	0927100110	-	Empty Lot	0	67	--	No	No							Wall on Structure	N/A	8		
	5662100075	18313 7th Ave Ne	SF Residence on 7th Ave.	1	68	2	Yes	No	68	Ldn	63	69	1	--	Wall on Structure	Special	4		60
	5662100080	18316 7th Ave Ne	SF Residence on 7th Ave.	1	70	2	Yes	No	67	Ldn	65	70	1	--	Wall on Structure	Special	4		59
	0927100016	18323 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No	66	Ldn	64	70	1	--	Wall on Structure	Special	4		58
	0927100015	18329 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No	65	Ldn	64	70	1	--	Wall on Structure	Special	4		58
M-28: 70.97	0927100011	721 Ne 185th St	SF Residence on 185th St.	1	71	2	Yes	No	65	Ldn	66	71	--	--		Special			65
	5662100060	18069 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	5662100065	18301 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	5662100070	18307 7th Ave Ne	SF Residence on 7th Ave.	1	65	2	No	No	69	Ldn	61	67	--	1	Wall on Structure	N/A	8		56
	5662100090	18308 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	5662100085	18317 7th Ave Ne	SF Residence on 7th Ave.	1	69	2	Yes	Yes	60	Ldn	64	70	--	--	Wall on Structure	Special	4		52
	0927100008	731 Ne 185th St	SF Residence on 185th St.	1	70	2	Yes	No	60	Ldn	65	70	--	--	Wall on Structure	Special	4		53
	6163900092	18342 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	Yes	Yes	57	Ldn	63	69	--	--	Wall on Structure	Special	4		49
	6163900091	18343 9th Ave Ne	SF Residence on 9th Ave.	1	68	2	Yes	No	58	Ldn	63	69	--	--	Wall on Structure	Special	4		50
	6163900095	18332 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No	58	Ldn	63	68	--	--	Wall on Structure	Special	4		50
	6163900082	18318 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No	57	Ldn	63	68	--	--	Wall on Structure	Special	4		50
	6163900081	18312 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	No	58	Ldn	61	67	--	--	Wall on Structure	Special	8		46
	6163900073	18306 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	58	Ldn	60	66	--	--	Wall on Structure	Special	8		46
	6163900071	18300 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	8		44
	5662100095	18302 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	5662100100	18070 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		50
	5662100105	18064 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		50
	5662100110	18058 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		50
	5662100115	18052 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--		N/A			58
	5662100120	18046 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	6163900063	18072 8th Ave Ne		1	62	2	Yes	No	58	Ldn	59	65	--	--	Wall on Structure	Special	8		45
	6163900061	18066 8th Ave Ne		1	62	2	Yes	No	58	Ldn	59	65	--	--	Wall on Structure	Special	8		45
	6163900053	18060 8th Ave Ne		1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	6163900050	18054 8th Ave Ne		1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	6163900043	18048 8th Ave Ne		1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
NE 185th Street to NE 189th Street																			
	0526049029	18510 7th Ave Ne	SF Residence on 7th Ave.	0	69	2	No	No							Wall on Structure	N/A	4		
	0526049060	18516 7th Ave Ne	SF Residence on 7th Ave.	0	66	2	No	No							Wall on Structure	N/A	4		
	0526049027	18520 7th Ave Ne	SF Residence on 7th Ave.	0	64	2	No	No							Wall on Structure	N/A	4		
	0526049044	18528 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049015	18534 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049056	18540 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049061	18546 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049032	18552 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049031	18558 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	3971702321	707 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall on Structure	N/A	4		
	3971702325	703 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall on Structure	N/A	8		
	3971702320	715 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	73	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	60
	3971702316	719 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	73	Ldn	60	66	--	1	Wall on Structure	N/A	8		59
	3971702315	721 Ne 189th St	SF Residence on 189th St.	1	63	2	Yes	Yes	71	Ldn	60	66	--	1	Wall on Structure	Special	6		59
	3971702311	18807 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	63	Ldn	60	66	1	--	Wall on Structure	Special	8		51
	3971702310	727 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	65	Ldn	60	66	1	--	Wall on Structure	N/A	8		52

Lynnwood Link Extension A7

Stations: 130th Option 2
155th
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	296	183

Residual	
RSIP =	29

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0526049011	18559 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	70	Ldn	60	66	--	1	Wall on Structure	Special	6		58
	0526049024	18553 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	69	Ldn	60	66	--	1	Wall on Structure	Special	6		57
	0526049025	18547 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	64	Ldn	60	66	1	--	Wall on Structure	Special	4		56
	0526049050	18539 8th Ave Ne	SF Residence on 8th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049026	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	0526049055	18533 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No							Wall on Structure	Special	4		
	0526049054	18529 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No							Wall on Structure	Special	4		
	0526049040	18523 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	No							Wall on Structure	Special	4		
	0526049028	18517 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No							Wall on Structure	Special	4		
	0526049052	18511 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No							Wall on Structure	Special	4		
	0526049030	18509 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	Yes	No							Wall on Structure	Special	4		
	3235100273	814 Ne 185th St	SF Residence on 185th St.	1	71	2	Yes	Yes	54	Ldn	66	71	--	--	Wall on Structure	Special	4		46
	3235100270	18504 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	Yes	Yes	59	Ldn	66	71	--	--	Wall on Structure	Special	4		51
	3235100265	18510 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	Yes	Yes	59	Ldn	63	69	--	--	Wall on Structure	Special	4		52
	3235100260	18516 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	Yes	60	Ldn	61	67	--	--		Special			60
	3235100255	18522 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	60	Ldn	60	66	1	--	Wall on Structure	Special	4		52
M-29: 64.4	3235100249	18528 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	60	Ldn	59	65	1	--	Wall on Structure	Special	4		52
	3235100244	18534 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	60	Ldn	59	65	1	--	Wall on Structure	Special	4		52
	3235100240	18540 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	60	Ldn	59	65	1	--	Wall on Structure	Special	4		52
	3235100205	18554 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	60	Ldn	59	65	1	--	Wall on Structure	Special	4		52
	3235100210	811 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	Yes	58	Ldn	59	65	--	--	Wall on Structure	Special	4		50
	3235100215	817 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	Yes	57	Ldn	59	65	--	--	Wall on Structure	Special	4		49
	3235100220	823 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	57	Ldn	58	64	--	--	Wall on Structure	Special	4		48
	3235100224	829 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	57	Ldn	58	64	--	--	Wall on Structure	Special	4		48
	3235100230	835 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	56	Ldn	58	64	--	--	Wall on Structure	Special	4		47
	3235100235	841 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	56	Ldn	58	64	--	--	Wall on Structure	Special	4		47
	3235100200	18810 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	Yes	Yes	59	Ldn	61	66	--	--	Wall on Structure	Special	4		51
	3235100105	18820 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	Yes	Yes	60	Ldn	61	66	--	--		Special			60
	3235100110	811 Ne 189th St	SF Residence on 189th St.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	3235100195	810 Ne 188th St	SF Residence on 188th St.	1	61	2	No	No	58	Ldn	59	65	--	--		N/A			58
	3235100190	816 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	56	Ldn	59	65	--	--	Wall on Structure	Special	4		49
	3235100185	822 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	56	Ldn	59	65	--	--	Wall on Structure	Special	4		48
	3235100120	823 Ne 189th St	SF Residence on 188th St.	1	61	2	Yes	No	56	Ldn	59	65	--	--	Wall on Structure	Special	4		49
	3235100115	817 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	57	Ldn	59	65	--	--	Wall on Structure	Special	4		49
NE 189th Street to NE 194th Street																			
	3971702305	728 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	73	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	60
	3971702295	718 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall on Structure	N/A	8		
	3971702210	18915 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	72	Ldn	60	66	--	1	Wall on Structure	N/A	8		59
	3971702215	18921 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	73	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	60
	0526049063	19011 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	73	Ldn	63	68	--	1	Wall on Structure	N/A	6		61
	0526049010	19031 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	73	Ldn	63	68	--	1	Wall on Structure	N/A	6		61
	0526049007	816 Ne 190th St	School on 190th St.	1	65	3	No	No	68	Leq	66	72	1	--	Wall on Structure	N/A	4		58
M-30A&B: 59.4 & 6	3235100005	18920 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	8		51
	3235100100	18910 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		56
	3235100095	810 Ne 189th St	SF Residence on 189th St.	1	60	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	4		53
	3235100010	811 Ne 190th St	SF Residence on 190th St.	1	60	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	8		48
	3235100015	817 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	8		46
	3235100090	816 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	4		51
	3235100085	822 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	3235100080	828 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	3235100075	834 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	3235100020	823 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	3235100025	829 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	8		43
	3235100030	835 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	8		42

Lynnwood Link Extension A10

Stations: 130th Option 1
145th Option 1
185th Option 3

Total Units Analyzed
837

Impacts:	Moderate	Severe
	161	110

Residual Impacts	
RSIP =	3

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
Northgate to NE 115th Street																			
M-1: 71.5	2926049011	11200 1st Ave Ne	Southern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	70	Ldn	66	72	8	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Southern F. line 2nd floor Apts. on 1st Ave.	4	72	2	No	No	71	Ldn	66	72	4	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Northern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	73	Ldn	66	72	--	8	Wall on Structure	N/A	4		65
	2926049011	11200 1st Ave Ne	Northern F. line 2nd floor Apts. on 1st Ave.	8	72	2	No	No	74	Ldn	66	72	--	8	Wall on Structure	N/A	4		65
	2926049011	11200 1st Ave Ne	Front line Apts. on Northgate Way	1	72	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Second line Apts. on Northgate Way	4	72	2	No	No	65	Ldn	66	72	--	--	Wall on Structure	N/A	4		57
	2926049011	11200 1st Ave Ne	Third line Apts. on Northgate Way	5	72	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		53
M-3: 60.8 LEQ	2926049011	11200 1st Ave Ne	Southern 2nd line ground level Apts. on 1st Ave.	4	65	2	No	No	64	Ldn	61	67	4	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Southern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	65	Ldn	61	67	4	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Northern 2nd line ground level Apts. on 1st Ave.	8	65	2	No	No	65	Ldn	61	67	8	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Northern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	66	Ldn	61	67	4	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Southern 3rd line ground level Apts. on 1st Ave.	4	63	2	No	No	62	Ldn	60	66	4	--	Wall on Structure	N/A	4		53
	2926049011	11200 1st Ave Ne	Southern 3rd line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	63	Ldn	60	66	4	--	Wall on Structure	N/A	4		53
	2926049011	11200 1st Ave Ne	Northern 3rd line ground level Apts. on 1st Ave.	8	63	2	No	No	63	Ldn	60	66	8	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Northern 3rd line 2nd floor Apts. on 1st Ave.	8	63	2	No	No	64	Ldn	60	66	8	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Southern 4th line ground level Apts. on 1st Ave.	10	63	2	No	No	60	Ldn	60	66	10	--	Wall on Structure	N/A	4		51
	2926049011	11200 1st Ave Ne	Southern 4th line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	60	Ldn	60	66	4	--	Wall on Structure	N/A	4		51
	2926049011	11200 1st Ave Ne	Northern 4th line ground level Apts. on 1st Ave.	11	63	2	No	No	61	Ldn	60	66	11	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Northern 4th line 2nd floor Apts. on 1st Ave.	11	63	2	No	No	61	Ldn	60	66	11	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Southern ground level Apts. E of 2nd Ave.	10	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	2926049011	11200 1st Ave Ne	Southern 2nd floor Apts. E of 2nd Ave.	10	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	2926049011	11200 1st Ave Ne	Northern ground level Apts. E of 2nd Ave.	6	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
	2926049011	11200 1st Ave Ne	Northern 2nd floor Apts. E of 2nd Ave.	6	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
M-2: 73.5	6174800000	11300 1st Ave Ne	Front line ground level condos on 1st Ave. courtyard	11	74	2	No	No	74	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on 1st Ave. courtyard	11	74	2	No	No	75	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on 1st Ave. courtyard	11	74	2	No	No	76	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line ground level condos on south side	5	74	2	No	No	75	Ldn	66	73	--	5	Wall on Structure	N/A	6		63
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on south side	5	74	2	No	No	76	Ldn	66	73	--	5	Wall on Structure	N/A	6		64
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on south side	5	74	2	No	No	78	Ldn	66	73	--	5	Wall on Structure	N/A	6		64
										Leq									
	2926049050	11355 3rd Ave Ne-Bldg. E	1st Floor Citigate Apts.=108 unit Apt. complex that would be front line if M-2 is displaced	4	66	2	No	No	67	Ldn	62	68	4	--	Wall on Structure	N/A	4		58
	2926049050	11355 3rd Ave Ne-Bldg. E	2nd Floor at Citigate Apts.	4	66	2	No	No	68	Ldn	62	68	--	4	Wall on Structure	N/A	4		58
	2926049050	11355 3rd Ave Ne-Bldg. E	3rd Floor at Citigate Apts.	4	66	2	No	No	68	Ldn	62	68	--	4	Wall on Structure	N/A	4		58
	2926049050	11355 3rd Ave Ne-East of Bldg. E	1st Floor Citigate Apts.- 2nd line	2	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		50
	2926049050	11355 3rd Ave Ne-East of Bldg. E	2nd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	60	Ldn	60	66	2	--	Wall on Structure	N/A	4		50
	2926049050	11355 3rd Ave Ne-East of Bldg. E	3rd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	60	Ldn	60	66	2	--	Wall on Structure	N/A	4		50
M-4: 65.65	2926049529	133 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	71	Ldn	62	68	--	1	Wall on Retaining Wall	N/A	8		59
	2926049530	139 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	8		50
	2926049531	145 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57

Lynnwood Link Extension A10

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185th Option 3

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RSIP =	3

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2926049532	151 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	57	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		52
	2926049533	157 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	54	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		50
	2926049192	303 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	52	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		48
	2926049418	11352 3rd Ave	SF Residence on 115th St.	1	62	2	No	No	51	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		47
	2926049191	315 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	50	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		47
NE 115th Street to 117th Street																			
	6411600161	136 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	72	Ldn	62	68	--	1	Wall on Retaining Wall	N/A	8		60
	6411600162	142 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	66	Ldn	62	68	1	--	Wall on Retaining Wall	N/A	8		54
	6411600163	148 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		47
	6411600164	154 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	53	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		43
	7810300035	147 Ne 116th St	Duplex on 116th St.	2	66	2	No	No	71	Ldn	62	68	--	2	Wall At-Grade	N/A	8		59
	7810300030	11519 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall At-Grade	N/A	8		49
	7810300025	11523 3rd Ave N	SF Residence on 3rd Ave.	1	66	2	No	No	65	Ldn	62	68	1	--	Wall At-Grade	N/A	8		54
	6411600147	156 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No	72	Ldn	61	66	--	1	Wall At-Grade	N/A	8		60
	7810300005	150 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No	70	Ldn	61	66	--	1	Wall At-Grade	N/A	8		58
	6411600146	157 Ne 117th St	SF Residence on 117th St.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall At-Grade	N/A	8		57
	6411600186	11622 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall At-Grade	N/A	8		47
	6411600185	11610 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall At-Grade	N/A	8		45
	6411600182	11606 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	50	Ldn	59	65	--	--	Wall At-Grade	N/A	8		39
	6411600188	11600 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall At-Grade	N/A	8		51
	6411600172	11526 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall At-Grade	N/A	8		50
	6411600170	11522 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	53	Ldn	59	65	--	--	Wall At-Grade	N/A	8		43
	6161000031	11514 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	52	Ldn	59	65	--	--	Wall At-Grade	N/A	8		43
	6161000022	11508 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	52	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		42
	6161000021	304 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	50	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		40
	6411600173	316 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	51	Ldn	59	65	--	--	Wall At-Grade	N/A	8		43
	6411600171	322 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	51	Ldn	59	65	--	--	Wall At-Grade	N/A	8		42
	6161000015	11515 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	53	Ldn	59	65	--	--	Wall At-Grade	N/A	8		44
	6161000010	11519 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	54	Ldn	59	65	--	--	Wall At-Grade	N/A	8		45
	6161000005	11527 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall At-Grade	N/A	8		47
	6161000035	11533 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall At-Grade	N/A	8		47
	6411600181	11539 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall At-Grade	N/A	8		46
	6411600180	11545 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall At-Grade	N/A	8		46
	6411600183	325 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	54	Ldn	59	65	--	--	Wall At-Grade	N/A	8		44
	6411600187	321 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall At-Grade	N/A	8		47
	6411600184	311 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall At-Grade	N/A	8		50
	6411600200	401 Ne 117th St	SF Residence on 117th St.	1	61	2	No	No	52	Ldn	59	65	--	--	Wall At-Grade	N/A	8		43
	6411600198	11544 4th Ave Ne	SF Residence on 4th Ave.	1	61	2	No	No	53	Ldn	59	65	--	--	Wall At-Grade	N/A	8		44
	6411600201	11536 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	52	Ldn	58	64	--	--	Wall At-Grade	N/A	8		44
	6411600199	11532 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	52	Ldn	58	64	--	--	Wall At-Grade	N/A	8		43
	6411600207	11524 4th Ave Ne	SF Residence on 4th Ave.	1	58	2	No	No	52	Ldn	57	63	--	--	Wall At-Grade	N/A	8		43
M-4: 56.775	6411600211	11516 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	50	Ldn	57	63	--	--	Wall At-Grade	N/A	8		41
	6411600209	11510 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	50	Ldn	57	63	--	--	Wall At-Grade	N/A	8		41
	6411600213	11529 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	49	Ldn	57	63	--	--	Wall At-Grade	N/A	8		41
	6411600195	11537 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	49	Ldn	57	63	--	--	Wall At-Grade	N/A	8		41
	6411600202	11547 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	52	Ldn	57	63	--	--	Wall At-Grade	N/A	8		43
	6411600196	11545 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	49	Ldn	58	64	--	--	Wall At-Grade	N/A	8		41
	6411600203	11533 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	48	Ldn	58	64	--	--	Wall At-Grade	N/A	8		40
	6411600208	11525 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	48	Ldn	58	64	--	--	Wall At-Grade	N/A	8		40
NE 117th Street to 120th Street																			
	6411600414	308 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall At-Grade	N/A	4		55
	6411600413	11708 3rd Ave Ne	SF Residence	1	62	2	No	No	63	Ldn	59	65	1	--	Wall At-Grade	N/A	4		56
	6411600420	11710 3rd Ave Ne	Church	0	62	3	No	No								N/A			
	6411600429	323 Ne 120th St	SF Residence north of the church	0	62	2	No	No								N/A			
	6411600430	325 Ne 120th St	SF Residence north of the church	0	62	2	No	No								N/A			
	6411600443	11737C 5th Ave Ne	SF Residence north of the church	1	62	2	No	No	56	Ldn	59	65	--	--	Increase I-5 wall height	N/A			56
	6411600442	11737 5th Ave Ne Unit B	SF Residence north of the church	1	62	2	No	No	49	Ldn	59	65	--	--		N/A			49
	6411600441	11737 5th Ave Ne Unit A	SF Residence north of the church	1	62	2	No	No	44	Ldn	59	65	--	--		N/A			44
	6411600440	11743 5th Ave Ne	SF Residence north of the church	1	63	2	No	No	41	Ldn	60	66	--	--		N/A			41
	6411600451	11729 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	44	Ldn	60	66	--	--		N/A			44
	6411600452	11727 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
M-6 62.2	6411600450	11725 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	54	Ldn	59	65	--	--		N/A			54

Lynnwood Link Extension A10

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	161	110

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Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	6411600464	11723 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	53	Ldn	59	65	--	--		N/A			53
	6411600463	11721 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	51	Ldn	59	65	--	--		N/A			51
	6411600461	11719 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	41	Ldn	60	66	--	--		N/A			41
	6411600462	11715 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	40	Ldn	60	66	--	--		N/A			40
	6411600412	316 Ne 117th St	SF Residence east of the church	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	6411600410	322 Ne 117th St	SF Residence south of the church	1	64	2	No	No	47	Ldn	61	66	--	--		N/A			47
	6411600411	326 Ne 117th St	SF Residence south of the church	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	6411600471	332 Ne 117th St	SF Residence south of the church	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	6411600472	336 Ne 117th St	SF Residence south of the church	1	62	2	No	No	40	Ldn	59	65	--	--		N/A			40
	6411600473	342 Ne 117th St	SF Residence south of the church	1	63	2	No	No	40	Ldn	60	66	--	--		N/A			40
	6411600470	11707 5th Ave Ne	SF Residence south of the church	1	65	2	No	No	38	Ldn	61	67	--	--		N/A			38
	6413100228	11718 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	6413100229	11714 5th Ave Ne	SF Residence south of the church	1	63	2	No	No	49	Ldn	60	66	--	--		N/A			49
	6413100241	11726 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	6413100240	11734 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	6411600428	327 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	63	Ldn	62	68	1	--	Increase I-5 wall height	N/A	4		56
	2238000050	331 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	56	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		49
	2238000045	337 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	50	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		45
	2238000040	343 Ne 120th St	SF Residence on 120th St.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	2238000035	349 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	2238000030	11755 5th Ave Ne	SF Residence on 120th St.	1	65	2	No	No	42	Ldn	61	67	--	--		N/A			42
NE 120th Street to NE 125th Street																			
	6412100091	332 Ne 120th St	SF Residence on 120th St.	0	65	2	No	No							Wall on Retaining Wall	N/A	4		
	6412100097	338 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	63	Ldn	61	67	1	--	Increase I-5 wall height	N/A	4		56
	6412100092	344 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	53	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		47
	6412100095	348 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	6412100096	12001 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	45	Ldn	61	67	--	--		N/A			45
	2237500025	12004 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--		N/A			53
	2237500020	510 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	51	Ldn	62	68	--	--		N/A			51
	2237500015	516 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	2237500030	12014 5th Ave Ne	SF Residence on 120th St.	1	66	2	No	No	56	Ldn	62	68	--	--		N/A			56
	6412100090	12015 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	55	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		50
	6412100093	12021 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	51	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		46
	6413600015	12016 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	57	Ldn	63	68	--	--		N/A			57
	6413600005	12018 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	6413600010	12020 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--		N/A			54
	6413600020	12022 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	58	Ldn	63	68	--	--		N/A			58
	6412100094	12025 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		52
	6412100085	12027 5th Ave Ne	SF Residence near noise wall	1	65	2	No	No	63	Ldn	61	67	1	--	Increase I-5 wall height	N/A	4		56
	6412100087	12029 5th Ave Ne	SF Residence next to noise wall	0	65	2	No	No							Wall on Retaining Wall	N/A	4		
	6412100080	12035 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	61	Ldn	63	68	--	--	Increase I-5 wall height	N/A			61
	6412100082	12045 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	62	Ldn	63	68	--	--	Increase I-5 wall height	N/A			62
	6412100081	12049 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	60	Ldn	63	68	--	--	Wall At-Grade	N/A	4		54
	6412100084	12051 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No								N/A			
	6412100280	12301 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No								N/A			
	6412100281	12311 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6412100282	12321 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6412100283	12327 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6412100284	12401 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6412100250	12417 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No								N/A			
	6413600026	12030 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	6413600036	12032 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--		N/A			55
	6413600072	12035 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	6413600079	12037 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	6413600034	12034 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--		N/A			55
	6413600035	12036 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		43
M-7: 68.27	6413600040	12042 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		43
	6413600041	12044 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--		N/A			55

Lynnwood Link Extension A10

Stations: 130th Option 1
145th Option 1
185th Option 3

Total Units Analyzed
837

Impacts:	Moderate	Severe
	161	110

Residual Impacts	
RSIP =	3

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	6413600051	521 Ne 123rd St	SF Residence on 123rd	1	65	2	No	No	54	Ldn	61	67	--	--		N/A			54
	6413600052	515 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	56	Ldn	62	68	--	--		N/A			56
	6413600045	12048 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall At-Grade	N/A	4		43
	6413600050	12054 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	54	Ldn	63	69	--	--	Wall At-Grade	N/A	4		49
	6413600339	12302 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	54	Ldn	63	69	--	--		N/A			54
	6413600340	510 Ne 123rd St	SF Residence on 123rd	1	67	2	No	No	54	Ldn	63	68	--	--		N/A			54
	6413600335	518 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	51	Ldn	62	68	--	--		N/A			51
	6413600338	522 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
	6413600337	12308 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	55	Ldn	63	69	--	--		N/A			55
	6413600345	12316 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	6413600343	12320 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	6413600347	12312 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	53	Ldn	63	68	--	--		N/A			53
	6413600346	12314 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	50	Ldn	62	68	--	--		N/A			50
	9509900045	521 Ne 124th St	SF Residence on 124th	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
	9509900040	515 Ne 124th St	SF Residence on 124th	1	66	2	No	No	52	Ldn	62	68	--	--		N/A			52
	9509900035	509 Ne 124th St	SF Residence on 124th	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	9509900030	503 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	9509900005	500 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	9509900010	508 Ne 124th St	SF Residence on 124th	1	68	2	No	No	56	Ldn	63	69	--	--		N/A			56
	9509900015	514 Ne 124th St	SF Residence on 124th	1	68	2	No	No	52	Ldn	63	69	--	--		N/A			52
	9509900020	520 Ne 124th St	SF Residence on 124th	1	67	2	No	No	50	Ldn	63	68	--	--		N/A			50
	6413600378	527 Ne 125th St	SF Residence on 125th	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
	6413600377	523 Ne 125th St	SF Residence on 125th	1	67	2	No	No	52	Ldn	63	68	--	--		N/A			52
	6413600376	513 Ne 125th St	SF Residence on 125th	1	68	2	No	No	55	Ldn	63	69	--	--		N/A			55
	6413600375	505 Ne 125th St	SF Residence on corner of 5th and 125th	1	68	2	No	No	52	Ldn	63	69	--	--		N/A			52
NE 125th Street to NE 127th Street																			
	6414100010	502 Ne 125th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100013	510 Ne 125th St	SF Residence on 125th	1	68	2	No	No	44	Ldn	63	69	--	--		N/A			44
	6414100012	514 Ne 125th St	SF Residence on 125th	1	67	2	No	No	41	Ldn	63	68	--	--		N/A			41
	6414100011	516 Ne 125th St	SF Residence on 125th	1	67	2	No	No	50	Ldn	63	68	--	--		N/A			50
	6414100023	12514 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	50	Ldn	62	68	--	--		N/A			50
	6414100024	12512 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	6414100021	12518 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100020	12520 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100028	12528 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100025	12526 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	6414100029	12524 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	49	Ldn	61	67	--	--		N/A			49
	6414100026	12532 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	41	Ldn	62	68	--	--		N/A			41
	6414100027	12534 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100033	12542 5th Ave Ne	Empty Lot	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	6414100030	12542 5th Ave Ne	SF Residence on 5th Ave.	1	69	2	No	No	51	Ldn	64	70	--	--		N/A			51
	6414100032	12546 5th Ave Ne Unit B	SF Residence on 5th Ave.	1	68	2	No	No	42	Ldn	63	69	--	--		N/A			42
	6414100031	12546 5th Ave Ne Unit C	SF Residence on 5th Ave.	1	68	2	No	No	39	Ldn	63	69	--	--		N/A			39
	6414100039	527 NE 127th St	SF Residence on 127th	1	68	2	No	No	37	Ldn	63	69	--	--		N/A			37
	6414100038	521 NE 127th St	SF Residence on 127th	1	68	2	No	No	38	Ldn	63	69	--	--		N/A			38
	6414100037	515 NE 127th St	SF Residence on 127th	1	69	2	No	No	41	Ldn	64	70	--	--		N/A			41
	6414100036	509 NE 127th St	SF Residence on 127th	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	6414100035	503 NE 127th St	SF Residence on corner of 127th and 5th	1	69	2	No	No	51	Ldn	64	70	--	--		N/A			51
NE 127th Street to Roosevelt Way NE Ja																			
M-9: 70.45	6414100732	502 NE 127th St	SF Residence on corner of 127th and 5th	1	70	2	No	No	52	Ldn	65	70	--	--		N/A			52
	6414100731	514 NE 127th St	SF Residence on 127th	1	70	2	No	No	42	Ldn	65	70	--	--		N/A			42
	6414100733	522 NE 127th St	SF Residence on 127th	1	69	2	No	No	39	Ldn	64	70	--	--		N/A			39
	6414100741	Grace Church open area	Empty Lot	0	64	3	No	No	38	Leq	66	71	--	--		N/A			38
	6414100730	12708 5th Ave Ne	SF Residence on 5th Ave.	1	71	2	No	No	51	Ldn	66	71	--	--		N/A			51
	6414100740	12718 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	Yes	No	58	Ldn	66	72	--	--		Special			58
	6414100751	12726 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	59	Ldn	66	72	--	--		Special			59
	6414100750	12732 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	61	Ldn	66	72	--	--		Special			61
M-10: 73.8	6414100759	12740 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	Yes	No	61	Ldn	66	73	--	--		Special			61
	6414100760	12759 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	Yes	No	55	Ldn	66	72	--	--		Special			55
	6414100752	12749 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	72	2	Yes	No	51	Ldn	66	72	--	--		Special			51
	6414100753	12745 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	Yes	No	50	Ldn	66	72	--	--		Special			50
	1854700005	502 Ne 130th St	SF Residence on 130th	1	74	2	Yes	No	62	Ldn	66	73	--	--		Special			62
	1854700010	510 Ne 130th St	SF Residence on 130th	1	74	2	Yes	No	55	Ldn	66	73	--	--		Special			55

Lynnwood Link Extension A10

Stations: 130th Option 1
145th Option 1
185th Option 3

Total Units Analyzed
837

Impacts:	Moderate	Severe
	161	110

Residual Impacts	
RSIP =	3

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	1854700015	516 Ne 130th St	SF Residence on 130th	1	73	2	Yes	No	52	Ldn	66	72	--	--		Special			52
	1787600096	519 Ne 131st Pl	SF Residence on 131st Place	1	73	2	Yes	No	51	Ldn	66	72	--	--		Special			51
	1787600095	511 Ne 131st Pl	SF Residence on 131st Place	1	74	2	Yes	No	54	Ldn	66	73	--	--		Special			54
	1787600098	505 Ne 131st Pl	SF Residence on 131st Place	1	74	2	Yes	No	62	Ldn	66	73	--	--		Special			62
	1787600090	N Seattle Church of Naz	Empty Lot that is part of 13130 5th Church	0	72	3	Yes	No	60	Leq	71	77	--	--		Special			60
	1787600094	510 Ne 131st Pl	SF Residence on 131st Place	1	72	2	Yes	No	54	Ldn	66	72	--	--		Special			54
	1787600093	520 Ne 131st Pl	SF Residence on 131st Place	1	71	2	Yes	No	51	Ldn	66	71	--	--		Special			51
	1787600085	13130 5th Ave Ne	Church on 5th Ave.	1	67	2	Yes	No	54	Ldn	63	68	--	--		Special			54
M-11: 66.7 & 66.8	1787600085	13130 5th Ave Ne	Church on 5th Ave.	1	68	3	Yes	No	55	Leq	68	74	--	--		Special			55
	2026049004	1000 NE 135th		1	70	3	No	No								N/A			
NE 145th Street to NE 148th Street																			
	7568700780	501 Ne 145th St	Water pump station	0	74				0	Leq	66	73	--	--					0
	7568700785	14512 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	Yes	No	67	Ldn	66	73	1	--	Wall on Structure	Special	4		58
	7568700790	14518 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	66	Ldn	66	72	1	--	Wall on Structure	Special	4		58
M-14: 72.8	7568700795	14526 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	66	Ldn	66	72	1	--	Wall on Structure	Special	4		58
	7568700800	14532 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	66	Ldn	66	72	1	--	Wall on Structure	Special	4		57
	7568700805	14540 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	62	Ldn	66	72	--	--	Wall on Structure	Special	4		54
	7568700810	14544 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	62	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	7568700815	14552 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	62	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	7568700820	14556 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	Yes	62	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	7568700825	14560 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	Yes	Yes	62	Ldn	66	72	--	--	Wall on Structure	Special	4		52
	7568700830	14570 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	Yes	Yes	61	Ldn	63	69	--	--	Wall on Structure	Special	4		52
	7568700835	14574 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	Yes	Yes	56	Ldn	61	67	--	--	Wall on Structure	Special	4		48
	7568700836	14578 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	Yes	Yes	56	Ldn	61	67	--	--	Wall on Structure	Special	4		47
	7568700775	-	Empty Lot	0	74				0	Leq	66	73	--	--					0
	7568700770	516 Ne 145th St	SF Residence on 145th	1	73	2	Yes	Yes	59	Ldn	66	72	--	--	Wall on Structure	Special	4		51
	7568700765	522 Ne 145th St	SF Residence on 145th	1	72	2	Yes	Yes	59	Ldn	66	72	--	--	Wall on Structure	Special	4		50
	7568700760	14515 6th Ave Ne	SF Residence on 6th Ave.	1	69	2	Yes	Yes	61	Ldn	64	70	--	--	Wall on Structure	Special	4		52
	7568700755	14521 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	Yes	Yes	61	Ldn	62	68	--	--	Wall on Structure	Special	4		51
	7568700745	14525 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	Yes	Yes	61	Ldn	61	67	1	--	Wall on Structure	Special	4		51
	7568700740	14535 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	Yes	Yes	60	Ldn	61	66	--	--	Wall on Structure	Special	4		51
	7568700734	14541 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	Yes	Yes	56	Ldn	60	66	--	--	Wall on Structure	Special	4		48
M-15: 62.65	7568700730	14549 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	Yes	Yes	56	Ldn	60	66	--	--	Wall on Structure	Special	4		47
	7568700725	14555 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	Yes	Yes	56	Ldn	59	65	--	--	Wall on Structure	Special	4		47
	7568700720	14565 6th Ave Ne	SF Residence on 6th Ave.	1	61	2	Yes	Yes	54	Ldn	59	65	--	--	Wall on Structure	Special	4		46
	7568700715	14567 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	Yes	Yes	52	Ldn	58	64	--	--	Wall on Structure	Special	4		45
	7568700705	14579 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	Yes	Yes	52	Ldn	58	64	--	--	Wall on Structure	Special	4		44
	7568700710	515 NE 148th St.	SF Residence on 6th Ave.	1	62	2	Yes	Yes	52	Ldn	59	65	--	--	Wall on Structure	Special	4		45
	7568700695	14572 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	Yes	No	51	Ldn	59	65	--	--	Wall on Structure	Special	4		44
	7568700690	14566 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	Yes	No	53	Ldn	59	65	--	--	Wall on Structure	Special	4		45
	7568700685	14562 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	Yes	No	53	Ldn	60	66	--	--	Wall on Structure	Special	4		45
	7568700680	14550 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	Yes	No	53	Ldn	60	66	--	--	Wall on Structure	Special	4		45
	7568700675	14548 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	Yes	No	53	Ldn	61	66	--	--	Wall on Structure	Special	4		45
	7568700670	14542 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	Yes	No	57	Ldn	61	66	--	--	Wall on Structure	Special	4		48
	7568700665	14528 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	Yes	No	57	Ldn	61	67	--	--	Wall on Structure	Special	4		48
	7568700660	14526 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	Yes	No	58	Ldn	61	67	--	--	Wall on Structure	Special	4		48
	7568700655	14522 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	Yes	No	58	Ldn	62	68	--	--	Wall on Structure	Special	4		48
	7568700650	14518 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	Yes	No	58	Ldn	62	68	--	--	Wall on Structure	Special	4		49
NE 148th Street to NE 149th Street																			
	8680300045	327 Ne 148th St	SF Residence on 148th	0	70	2	Yes	No							Wall on Structure	Special	6		
	8680300050	333 Ne 148th St	SF Residence on 148th	0	70	2	Yes	No							Wall on Structure	Special	4		
	8680300055	339 Ne 148th St	SF Residence on 148th	0	70	2	Yes	No							Wall on Structure	Special	4		
	8680300060	345 Ne 148th St	SF Residence on 148th	0	70	2	Yes	No							Wall on Structure	Special	4		
	2881700402	14727 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	Yes	No							Wall on Structure	Special	4		
	2881700400	-	Empty Lot	0	67	2	Yes	No							Wall on Structure	Special	4		
	8680300040	316 Ne 148th St	SF Residence on 148th	0	70	2	Yes	No							Wall on Structure	Special	6		
	8680300035	324 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No	73	Ldn	65	70	--	1	Wall on Structure	Special	6		61
	8680300030	330 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No	70	Ldn	65	70	--	1	Wall on Structure	Special	4		62
	8680300025	336 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No	63	Ldn	65	70	--	--	Wall on Structure	Special	6		52
	8680300020	342 Ne 148th St	SF Residence on 148th	1	67	2	Yes	Yes	62	Ldn	63	68	--	--		Special			62
M-16: 66.95	8680300015	348 Ne 148th St	SF Residence on 148th	1	67	2	Yes	Yes	60	Ldn	63	68	--	--	Wall on Structure	Special	6		49
	8680300010	358 Ne 148th St	SF Residence on 148th	1	67	2	Yes	Yes	60	Ldn	63	68	--	--	Wall on Structure	Special	6		48
	8680300005	14807 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	Yes	Yes	60	Ldn	63	68	--	--	Wall on Structure	Special	6		47
	2004100090	357 Ne 149th St	SF Residence on 149th	1	67	2	Yes	Yes	59	Ldn	63	68	--	--	Wall on Structure	Special	6		47
	2004100085	351 Ne 149th St	SF Residence on 149th	1	67	2	Yes	Yes	60	Ldn	63	68	--	--	Wall on Structure	Special	6		48

Lynnwood Link Extension A10

Stations: 130th Option 1
145th Option 1
185th Option 3

Total Units Analyzed
837

Impacts:	Moderate	Severe
	161	110

Residual Impacts	
RSIP =	3

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2004100080	345 Ne 149th St	SF Residence on 149th	1	67	2	Yes	Yes	60	Ldn	63	68	--	--	Wall on Structure	Special	6		48
	2004100075	339 Ne 149th St	SF Residence on 149th	1	67	2	Yes	Yes	61	Ldn	63	68	--	--	Wall on Structure	Special	6		49
	2004100065	333 Ne 149th St	SF Residence on 149th	1	68	2	Yes	Yes	63	Ldn	63	69	1	--	Wall on Structure	Special	6		51
	2004100060	327 Ne 149th St	SF Residence on 149th	1	69	2	Yes	Yes	63	Ldn	64	70	--	--	Wall on Structure	Special	6		52
	2004100055	321 Ne 149th St	SF Residence on 149th	1	70	2	Yes	Yes	72	Ldn	65	70	--	1	Wall on Structure	Special	6		60
	2004100050	309 Ne 149th St	SF Residence on 149th	1	70	2	Yes	Yes	75	Ldn	65	70	--	1	Wall on Structure	Special	6		63
	2004100052	305 Ne 149th St	SF Residence on 149th	0	70	2	Yes	Yes							Wall on Structure	Special	6		
	2004100045	308 Ne 149th St	SF Residence on 149th	0	70	2	No	No							Wall on Structure	N/A	4		
M-17: 70.05	2004100040	314 Ne 149th St	SF Residence on 149th	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	2004100035	320 Ne 149th St	SF Residence on 149th	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		63
	2004100030	326 Ne 149th St	SF Residence on 149th	1	68	2	Yes	No	70	Ldn	63	69	--	1	Wall on Structure	Special	4		61
	2004100025	332 Ne 149th St	SF Residence on 149th	1	68	2	Yes	No	65	Ldn	63	69	1	--	Wall on Structure	Special	4		55
	2004100020	338 Ne 149th St	SF Residence on 149th	1	67	2	Yes	No	63	Ldn	63	68	1	--	Wall on Structure	Special	4		53
NE 148th Street to NE 152nd Street																			
	7568700355	14802 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	Yes	Yes	52	Ldn	61	67	--	--	Wall on Structure	Special	6		43
	7568700360	14808 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	Yes	Yes	52	Ldn	61	67	--	--	Wall on Structure	Special	6		43
	7568700365	14812 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	Yes	Yes	51	Ldn	61	66	--	--	Wall on Structure	Special	6		42
	7568700370	14818 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	Yes	Yes	51	Ldn	61	66	--	--	Wall on Structure	Special	6		42
	7568700375	14902 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	Yes	Yes	51	Ldn	60	66	--	--	Wall on Structure	Special	6		41
	7568700380	14910 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	51	Ldn	60	66	--	--	Wall on Structure	N/A	6		37
	7568700385	14916 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	53	Ldn	59	65	--	--	Wall on Structure	N/A	6		39
	7568700390	14922 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	53	Ldn	59	65	--	--	Wall on Structure	N/A	6		39
	7568700395	14928 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	6		42
	7568700400	14934 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	7568700405	15100 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	7568700410	15108 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	7568700415	15114 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	7568700420	15124 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
NE 151st Street to NE 155th Street																			
	2881700323	15101 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Structure	N/A	4		
	3222200030	301 Ne 151st St	SF Residence on 151st	0	68	2	No	No							Wall on Structure	N/A	4		
	3222200040	307 Ne 151st St	SF Residence on 151st	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Structure	N/A	4		54
	3222200050	313 Ne 151st St	SF Residence on 151st	1	70	2	No	No	60	Ldn	65	70	--	--	Wall on Structure	N/A	4		51
	802290040	321 Ne 151st St	SF Residence on 151st	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	4		56
	802290041	327 Ne 151st St	SF Residence on 151st	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	4		55
	802290050	335 Ne 151st St	SF Residence on 151st	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	4		54
	802290055	347 Ne 151st St	SF Residence on 151st	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	2881700322	15109 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	2881700321	15117 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	2881700311	15121 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	2881700310	225 Ne 152nd St	Church at end of 152nd St.	1	70	3	No	No	53	Leq	70	75	--	--	Wall on Retaining Wall	N/A	4		47
	2634500055	304 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	57	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		53
	2634500060	310 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	58	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		54
	2634500065	316 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	57	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		53
	2634500070	322 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	54	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		51
	2634500035	323 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	56	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		52
	2634500040	317 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	57	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		53
	2634500045	311 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	55	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		50
	2634500050	305 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	56	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		51
	3222200010	15112 3rd Ave Ne	SF Residence on 3rd Ave.	1	70	2	No	No	58	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		52
	3222200020	306 Ne 151st St	SF Residence on 151st	1	70	2	No	No	58	Ldn	65	70	--	--	Wall on Structure	N/A	4		49
	802290035	316 Ne 151st St	SF Residence on 151st	1	70	2	No	No	67	Ldn	65	70	1	--	Wall on Structure	N/A	4		57
	802290030	324 Ne 151st St	SF Residence on 151st	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
	2881700301	-	Empty Lot	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	5027800130	411 Ne 153rd St	SF Residence on 153rd St.	1	69	2	No	No	57	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		53
	5027800120	407 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	63	Ldn	65	70	--	--		N/A			63
M-18 (63.9 LEQ)	5027800110	405 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	63	Ldn	65	70	--	--		N/A			63
	5027800100	403 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		56
	5027800090	401 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	57	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		51
	2881700300	15240 3rd Ave Ne	SF Residence on 3rd Ave.	1	71	2	No	No	64	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	6		58
	2807600030	15451 4th Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	56	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		50
	0411100005	301 Ne 155th St	SF Residence on 4th Ave.	1	70	2	No	No	55	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		51
	0411100010	15420 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	55	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		51
	0411100015	15414 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	56	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		51
	0411100020	15408 2nd Ave Ne	SF Residence on 2rd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	6		50

Lynnwood Link Extension A10

Stations: 130th Option 1
145th Option 1
185th Option 3

Total Units Analyzed
837

Impacts:	Moderate	Severe
	161	110

Residual Impacts	
RSIP =	3

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0411100025	15404 2nd Ave Ne	SF Residence on 2rd Ave.	1	72	2	No	No	64	Ldn	66	72	--	--	Wall on Retaining Wall	N/A	6		57
	0411100030	15401 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	No	No	67	Ldn	66	72	1	--	Wall on Retaining Wall	N/A	6		60
	0411100035	15407 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	No	No	67	Ldn	66	72	1	--	Wall on Retaining Wall	N/A	6		60
	0411100040	15419 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	No	No	59	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		52
	0411100045	15425 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	No	No	60	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		53
	0411100050	165 Ne 155th St	SF Residence on 155th St.	1	71	2	No	No	59	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	6		53
	0411100055	145 Ne 155th St	Fire Station	1	76	2	No	No	74	Ldn	66	75	1	--	Wall on Structure	N/A	4		65
NE 155th Street to NE 158th Street																			
	2241700075	157 Ne 156th St	SF Residence on 156th St.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	2241700070	151 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Structure	N/A	4		52
	2241700065	143 Ne 156th St	SF Residence on 156th St.	1	71	2	No	No	63	Ldn	66	71	--	--	Wall on Structure	N/A	4		53
	2241700060	137 Ne 156th St	SF Residence on 156th St.	1	72	2	No	No	65	Ldn	66	72	--	--	Wall on Structure	N/A	4		55
M-19: 73.3	2241700055	132 Ne 155th St	SF Residence on 155th St.	1	73	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	4		62
	2241700050	125 Ne 156th St	SF Residence on 156th St.	1	74	2	No	No	74	Ldn	66	73	--	1	Wall on Structure	N/A	4		64
	2241700045	110 Ne 155th St	SF Residence on 155th St.	1	75	2	No	No								N/A			
	2881700240	106 Ne 155th St	SF Residence on 155th St.	1	76	2	No	No								N/A			
	2241700040	104 Ne 156th St	SF Residence on 156th St.	1	75	2	No	No								N/A			
	2241700035	108 Ne 156th St	SF Residence on 156th St.	1	73	2	No	No								N/A			
	2241700030	122 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	6		57
	2241700025	130 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Structure	N/A	6		52
	2241700020	136 Ne 156th St	SF Residence on 156th St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	6		49
	2241700015	142 Ne 156th St	SF Residence on 156th St.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	6		48
	2241700010	148 Ne 156th St	SF Residence on 156th St.	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	6		47
	2241700005	156 Ne 156th St	SF Residence on 156th St.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	6		47
	2881700233	15615 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	6		46
	2881700234	15621 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	6		45
	2881700232	15625 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	6		45
	2881700239	241 Ne 157th St	SF Residence on 157th St.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	6		47
	2881700229	235 Ne 157th St	SF Residence on 157th St.	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	6		48
	2881700226	229 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	6		50
	2881700224	223 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		51
	2881700225	125 Ne 157th St	SF Residence on 157th not =15544 1st Ave Ne	1	69	2	No	No	66	Ldn	64	70	1	--	Wall on Structure	N/A	6		52
	2881700219	117 Ne 157th St	SF Residence on 157th St.	1	69	2	No	No	67	Ldn	64	70	1	--	Wall on Structure	N/A	6		53
	2881700220	111 Ne 157th St	SF Residence on 157th St.	1	71	2	No	No	74	Ldn	66	71	--	1	Wall on Structure	N/A	6		60
	2881700223	101 Ne 157th St	SF Residence on 157th St.	0	72	2	No	No							Wall on Structure	N/A	6		
	2881700230	15618 1st Ave Ne	SF Residence on 1st Ave.	0	72	2	No	No							Wall on Structure	N/A	6		
	2881700227	108 Ne 157th St	SF Residence on 157th St.	1	71	2	No	No	75	Ldn	66	71	--	1	Wall on Structure	N/A	6		62
	2881700218	15710 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	75	Ldn	66	71	--	1	Wall on Structure	N/A	6		62
	8142000180	105 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	6		62
	8142000170	111 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		54
	2881700222	116 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	4		56
	2881700221	126 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	4		53
	2881700231	132 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	8142000160	117 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	6		51
M-20: 68.33	8142000150	123 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	6		50
NE 158th Street to NE 165th Street																			
	8142000090	104 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	6		62
	8142000080	110 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	6		54
	8142000070	116 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	6		51
	8142000060	122 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	6159400080	117 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	2111600075	125 Ne 159th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	6159400085	113 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	61	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		56
	6159400090	105 Ne 159th St	SF Residence on 159th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	6		62
	6159400045	104 Ne 159th St	SF Residence on 159th St.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
	6159400037	114 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	69	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	6		61
	6159400035	118 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		56
	6159400030	124 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	6159400025	130 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	2111600080	129 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	2111600075	139 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	2111600085	123 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		56
	2111600090	115 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	68	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	6		60
	2111600095	15924 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
	2111600100	15918 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
M-21: 61.8 LEQ	2881700193	108 Ne 161st St	Ridgecrest Park	1	62	3	No	No							Wall At-Grade	N/A	4		
	2111600040	114 Ne 161st St	SF Residence on 161st St.	1	71	2	No	No	71	Ldn	66	71	--	1	Wall At-Grade	N/A	6		62
	2111600035	122 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall At-Grade	N/A	4		57
	2111600030	128 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall At-Grade	N/A	4		54

Lynnwood Link Extension A10

Stations: 130th Option 1
145th Option 1
185th Option 3

Total Units Analyzed
837

Impacts:	Moderate	Severe
	161	110

Residual Impacts	
RSIP =	3

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2111600025	134 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall At-Grade	N/A	4		51
	7301300295	303 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	50	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		44
	7301400110	129 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	51	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		46
	7301400120	121 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Retaining Wall	N/A	4		55
	7301400220	128 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		53
	7301300130	304 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	50	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		45
	7301300135	310 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	46	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		42
	7301300120	139 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	7301300125	135 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	51	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		45
	7301400200	127 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	7301400211	124 Ne 163rd St	SF Residence on 163rd St.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
	7301400070	-	Empty Lot	0	68	--	No	No							Wall on Retaining Wall	N/A	4		
	7301400060	132 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	7301400040	134 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	51	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		45
	7301400046	140 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	7301300030	141 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	7301300035	135 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	51	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		45
	7301400050	127 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
NE 165th Street to NE 170th Street																			
	5727500330	126 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	7307000050	124 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	5727500355	119 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	5727500350	123 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	7307000040	134 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	7301500010	132 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		43
	7301500020	140 Ne 165th St	SF Residence on 165th St.	1	66	2	No	No	44	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		39
	7307000030	140 Ne 165th Pl	SF Residence on 165th Place	1	66	2	No	No	43	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500300	131 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	45	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		40
	5727500363	120 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	5727500360	-	Empty Lot	0	68	--	No	No							Wall on Retaining Wall	N/A	4		
	9235900015	111 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	9235900020	117 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	49	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		43
	9235900025	123 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	45	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		40
	9235900040	130 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	44	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		39
	5727500361	124 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	5727500086	114 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	5727500103	16719 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	5727500100	16723 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	5727500102	16729 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	5727500111	16731 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		54
	5727500110	16735 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	4		56
	5727500113	16741 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Retaining Wall	N/A	4		56
	5727500120	109 Ne 170th St	SF Residence on 170th St.	0	68	2	No	No							Wall on Retaining Wall	N/A	4		
	7305900115	119 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	5727500130	121 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	48	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		43
	5727500139	16742 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		42
	5727500137	16738 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500148	16728 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500149	16722 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500150	16716 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500155	126 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	45	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		41
	5727500087	118 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	50	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		44
	5727500156	132 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	42	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500157	136 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	41	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		37
	5727500159	16719 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500147	16725 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		37
	5727500146	-	Empty Lot	0	66	--	No	No							Wall on Retaining Wall	N/A	4		
	5727500145	16735 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		37
	5727500135	16741 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500136	16747 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	43	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500138	16753 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	43	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		38
	5727500131	16761 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	45	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		40
NE 170th Street to NE 175th Street																			
	7305300205	104 Ne 170th St	SF Residence on 170th St.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300210	17010 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300215	17016 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300220	17022 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300225	17028 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49

Lynnwood Link Extension A10

Stations: 130th Option 1
145th Option 1
185th Option 3

Total Units Analyzed
837

Impacts:	Moderate	Severe
	161	110

Residual Impacts	
RSIP =	3

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	7305300230	17034 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300235	17040 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		49
	7305300240	17046 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	56	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		50
	7305300245	17052 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	62	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		55
	7305300250	17058 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300255	17204 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300260	17210 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300265	17216 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300270	17222 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300275	105 Ne 174th St	SF Residence on 174th St.	0	70	2	No	No							Wall on Retaining Wall	N/A	4		
	7305300350	111 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	59	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		53
	7305300345	17223 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	58	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		52
	7305300340	17217 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	57	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		52
M-22: 70.2	7305300335	17211 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		51
	7305300330	17205 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		51
	7305300325	17059 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		51
	7305300320	17053 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		50
	7305300315	17047 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	50	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		45
	7305300310	17041 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	45	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300305	17035 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300300	17029 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300295	17023 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300290	17017 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300285	17011 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300280	110 Ne 170th St	SF Residence on 170th St.	1	69	2	No	No	44	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		40
	7305300425	205 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	48	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		44
	7305300420	17222 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		43
	7305300415	17216 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		43
	7305300410	17210 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		43
	7305300405	17204 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		43
	7305300400	17058 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		42
	7305300395	17052 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		42
	7305300390	17046 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	44	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		41
	7305300385	17040 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		36
	7305300380	17034 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		36
	7305300375	17028 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300370	17022 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300365	17016 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300360	17010 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		35
	7305300355	204 Ne 170th St	SF Residence on 170th St.	1	67	2	No	No	39	Ldn	63	68	--	--	Wall on Retaining Wall	N/A	4		36
	7305300010	110 Ne 174th St	SF Residence on 174th St.	0	??	2	No	No							Wall on Structure	N/A	4		
	7305300015	116 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	65	Ldn	66	71	--	--	Wall on Structure	N/A	4		57
	7305300020	122 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	63	Ldn	66	71	--	--	Wall on Structure	N/A	4		55
	7305300025	128 Ne 174th St	SF Residence on 174th St.	1	70	2	No	No	57	Ldn	65	70	--	--	Wall on Structure	N/A	4		48
	7305300030	204 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	55	Ldn	64	70	--	--	Wall on Structure	N/A	4		45
	7305300035	210 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	54	Ldn	64	70	--	--	Wall on Structure	N/A	4		44
	7305300040	216 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
M-23: 70.2	7305300085	211 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	60	Ldn	65	70	--	--	Wall on Structure	N/A	4		51
	7305300090	217 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	55	Ldn	65	70	--	--	Wall on Structure	N/A	4		45
	7305300095	223 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	53	Ldn	64	70	--	--	Wall on Structure	N/A	4		43
NE 175th Street to NE 180th Street																			
	1115100230	208 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	1115100232	-	Empty Lot	0	70	--	No	No							Wall on Structure	N/A	4		
	1115100235	206 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	73	Ldn	65	70	--	1	Wall on Structure	N/A	6		62
	1115100210	216 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		63
	1115100208	218 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	73	Ldn	65	70	--	1	Wall on Structure	N/A	6		61
	1115100211	222 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	4		55
	1115100209	220 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	66	Ldn	64	70	1	--	Wall on Structure	N/A	4		58
	1115100200	230 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		54
	1115100205	234 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		54
	1115100195	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	1115100190	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	1115100182	310 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	1115100175	320 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
	1115100172	323 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	52	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		49

Lynnwood Link Extension A10

Stations: 130th Option 1
145th Option 1
185th Option 3

Total Units Analyzed
837

Impacts:	Moderate	Severe
	161	110

Residual Impacts	
RSIP =	3

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	1115100171	325 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		49
	1115100176	317 Ne 178th St	SF Residence on 178th St.	1	66	2	No	No	61	Ldn	62	68	--	--		N/A			61
	1115100180	308 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	4		55
	1115100181	311 Ne 178th St	SF Residence on 178th St.	1	67	2	No	No	65	Ldn	63	68	1	--	Wall on Structure	N/A	4		56
	7772400110	239 Ne 178th St	SF Residence on 178th St.	1	69	2	No	No	71	Ldn	64	70	--	1	Wall on Structure	N/A	4		63
M-24: 69.15	7772400120	17748 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	71	Ldn	64	70	--	1	Wall on Structure	N/A	4		63
	7772400130	17738 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	4		61
	7772400140	17734 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	71	Ldn	64	70	--	1	Wall on Structure	N/A	6		59
	7772400150	17733 2nd Pl Ne	SF Residence on 2nd Pl.	1	75	2	No	No	78	Ldn	66	74	--	1	Wall on Structure	N/A	6	1	66
	7772400160	17737 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No							Wall on Structure	N/A	6		
	7772400170	17741 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No							Wall on Structure	N/A	4		
	7772400180	17747 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No							Wall on Structure	N/A	4		
	7772400190	17753 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No							Wall on Structure	N/A	4		
	1115100065	224 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No							Wall on Retaining Wall	N/A	4		
	1115100070	230 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No							Wall on Retaining Wall	N/A	4		
	7772400010	17803 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	6		55
	7772400020	17809 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	6		56
	7772400030	17815 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Retaining Wall	N/A	4		56
	7772400040	17821 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall At-Grade	N/A	4		56
	7772400050	17825 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall At-Grade	N/A	4		54
	7772400060	17822 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--	Wall At-Grade	N/A	4		46
	7772400070	17816 3rd Ave Ne	SF Residence on 3rd Ave.	1	63	2	No	No	50	Ldn	60	66	--	--	Wall At-Grade	N/A	4		45
	7772400080	17810 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	53	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		48
	7772400090	17804 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	52	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		47
	7772400100	312 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	49	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		44
	1115100119	330 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	48	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		44
	1115100123	340 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	45	Ldn	59	65	--	--	Wall At-Grade	N/A	4		40
	1115100121	344 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	46	Ldn	59	65	--	--	Wall At-Grade	N/A	4		41
	1115100111	337 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	58	Ldn	60	66	--	--	Wall At-Grade	N/A	4		51
	1115100113	335 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall At-Grade	N/A	6		51
	1115100112	333 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	65	Ldn	60	66	1	--	Wall At-Grade	N/A	6		52
	1115100110	331 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	70	Ldn	60	66	--	1	Wall At-Grade	N/A	8		50
	1115100120	336 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	43	Ldn	59	65	--	--	Wall At-Grade	N/A	4		39
	1115100122	348 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	44	Ldn	60	66	--	--	Wall At-Grade	N/A	4		40
	1115100125	-	Empty Lot	0	62	--	No	No							Wall At-Grade	N/A	4		
	1115100137	17861 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	49	Ldn	59	65	--	--	Wall At-Grade	N/A	8		38
	1115100138	17857 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	48	Ldn	59	65	--	--	Wall At-Grade	N/A	8		37
	1115100135	17845 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--	Wall At-Grade	N/A	4		42
	1115100136	17833 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	45	Ldn	59	65	--	--	Wall At-Grade	N/A	4		41
	1115100142	17829 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall At-Grade	N/A	4		53
	1115100139	17825 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	53	Ldn	60	66	--	--	Wall At-Grade	N/A	4		49
	1115100140	17821 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	50	Ldn	60	66	--	--	Wall At-Grade	N/A	4		47
	1115100146	356 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	50	Ldn	59	65	--	--	Wall At-Grade	N/A	4		46
	0927100187	17822 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall At-Grade	N/A	4		49
	0927100196	17832 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall At-Grade	N/A	4		50
	0927100200	17840 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall At-Grade	N/A	4		50
	0927100199	17844 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	54	Ldn	62	68	--	--	Wall At-Grade	N/A	8		45
	0927100205	17852 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	55	Ldn	62	68	--	--	Wall At-Grade	N/A	4		51
NE 180th Street to NE 185th Street																			
	6084100118	332 Ne 180th St	SF Residence on 180th St.	0	63	2	No	No							Wall on Retaining Wall	N/A	4		
	6084100117	338 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	4		54
	6084100114	344 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		48
M-25: 59.1 LEQ	6084100116	350 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	53	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		46
	6084100115	356 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	49	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		44
	6084100110	18017 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	4		42
	6084100113	18019 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Retaining Wall	N/A	4		54
	6084100105	18023 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		53
	6084100100	18027 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	4		55
	6084100095	18031 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	4		56
	6084100086	18041 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No							Wall on Retaining Wall	N/A	4		
	0927100065	506 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	57	Ldn	61	66	--	--	Wall At-Grade	N/A	4		52
	0927100066	514 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	54	Ldn	61	66	--	--	Wall At-Grade	N/A	4		50
	0927100067	518 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	53	Ldn	60	66	--	--	Wall At-Grade	N/A	4		49
	0927100068	524 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	51	Ldn	60	66	--	--	Wall At-Grade	N/A	4		47
	5662100015	18015 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	5662100020	18021 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	0927100071	18022 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	50	Ldn	60	66	--	--		N/A			50
	0927100079	18020 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	53	Ldn	61	66	--	--		N/A			53
	0927100070	18016 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	42	Ldn	61	66	--	--		N/A			42

Lynnwood Link Extension A10

Stations: 130th Option 1
145th Option 1
185th Option 3

Total Units Analyzed
837

Impacts:	Moderate	Severe
	161	110

Residual Impacts	
RSIP =	3

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0927100076	18032 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	42	Ldn	61	66	--	--		N/A			42
	5662100025	18027 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		37
	5662100030	18033 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	47	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		38
	0927100075	515 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	0927100073	18034 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
	0927100082	18036 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	50	Ldn	62	68	--	--		N/A			50
	0927100080	519 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	53	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		43
	5662100035	18039 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		40
	5662100040	18045 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		40
	0927100084	518 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	54	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		44
	0927100083	504 Ne 182nd Ct	SF Residence on 182nd Ct.	1	66	2	No	No	53	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	8		42
	0927100085	18210 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	56	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	8		44
	0927100090	505 Ne 183rd Ct	SF Residence on 183rd Ct.	0	66	2	No	No							Wall on Retaining Wall	N/A	8		
	0927100094	18310 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No							Wall on Retaining Wall	N/A	8		
	0927100098	18320 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No							Wall on Retaining Wall	N/A	8		
	0927100081	514 Ne 182nd Ct	SF Residence on 182nd Ct.	1	65	2	No	No	47	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		37
	5662100045	18051 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	51	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		41
	5662100050	18057 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	50	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		41
	0927100091	515 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	48	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		38
	5662100055	18063 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	51	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		42
	0927100092	520 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	44	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		33
	0927100093	514 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	53	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		42
	0927100105	18326 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	Yes	No							Wall on Retaining Wall	Special	8		
	0927100100	18330 5th Ave Ne	SF Residence on 5th Ave.	0	66	2	No	No							Wall on Retaining Wall	N/A	8		
	0927100110	-	Empty Lot	0	67	--	No	No							Wall on Retaining Wall	N/A	8		
	5662100075	18313 7th Ave Ne	SF Residence on 7th Ave.	1	68	2	Yes	No	59	Ldn	63	69	--	--	Wall on Retaining Wall	Special	8		50
	5662100080	18316 7th Ave Ne	SF Residence on 7th Ave.	1	70	2	Yes	No	59	Ldn	65	70	--	--	Wall on Retaining Wall	Special	8		49
	0927100016	18323 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No	59	Ldn	64	70	--	--	Wall on Retaining Wall	Special	8		49
	0927100015	18329 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No	58	Ldn	64	70	--	--	Wall on Retaining Wall	Special	8		49
M-28: 70.97	0927100011	721 Ne 185th St	SF Residence on 185th St.	1	71	2	Yes	No	57	Ldn	66	71	--	--	Wall on Retaining Wall	Special	8		49
	5662100060	18069 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	Yes	No	53	Ldn	61	66	--	--	Wall on Retaining Wall	Special	8		45
	5662100065	18301 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	Yes	No	53	Ldn	61	66	--	--	Wall on Retaining Wall	Special	8		45
	5662100070	18307 7th Ave Ne	SF Residence on 7th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	8		43
	5662100090	18308 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	43	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		34
	5662100085	18317 7th Ave Ne	SF Residence on 7th Ave.	1	69	2	Yes	Yes	50	Ldn	64	70	--	--	Wall on Retaining Wall	Special	8		43
	0927100008	731 Ne 185th St	SF Residence on 185th St.	1	70	2	Yes	No	52	Ldn	65	70	--	--	Wall on Retaining Wall	Special	8		46
	6163900092	18342 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	Yes	Yes	43	Ldn	63	69	--	--		Special			43
	6163900091	18343 9th Ave Ne	SF Residence on 9th Ave.	1	68	2	Yes	No	49	Ldn	63	69	--	--	Wall on Retaining Wall	Special	8		44
	6163900095	18332 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No	49	Ldn	63	68	--	--	Wall on Retaining Wall	Special	8		44
	6163900082	18318 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No	47	Ldn	63	68	--	--	Wall on Retaining Wall	Special	8		44
	6163900081	18312 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	No	47	Ldn	61	67	--	--	Wall on Retaining Wall	Special	8		43
	6163900073	18306 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	47	Ldn	60	66	--	--	Wall on Retaining Wall	Special	8		43
	6163900071	18300 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	Yes	No	46	Ldn	61	66	--	--	Wall on Retaining Wall	Special	8		43
	5662100095	18302 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	Yes	No	51	Ldn	61	66	--	--	Wall on Retaining Wall	Special	8		45
	5662100100	18070 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	47	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		38
	5662100105	18064 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	46	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		38
	5662100110	18058 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	46	Ldn	60	66	--	--	Wall on Retaining Wall	N/A	8		37
	5662100115	18052 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		37
	5662100120	18046 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	47	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		38
	6163900063	18072 8th Ave Ne		1	62	2	Yes	No	46	Ldn	59	65	--	--	Wall on Retaining Wall	Special	8		42
	6163900061	18066 8th Ave Ne		1	62	2	Yes	No	46	Ldn	59	65	--	--	Wall on Retaining Wall	Special	8		42
	6163900053	18060 8th Ave Ne		1	62	2	Yes	No	45	Ldn	59	65	--	--	Wall on Retaining Wall	Special	8		42
	6163900050	18054 8th Ave Ne		1	62	2	No	No	44	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		35
	6163900043	18048 8th Ave Ne		1	62	2	No	No	43	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		35
NE 185th Street to NE 189th Street																			
	0526049029	18510 7th Ave Ne	SF Residence on 7th Ave.	0	69	2	No	No								N/A			
	0526049060	18516 7th Ave Ne	SF Residence on 7th Ave.	0	66	2	No	No								N/A			
	0526049027	18520 7th Ave Ne	SF Residence on 7th Ave.	0	64	2	No	No								N/A			
	0526049044	18528 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	0526049015	18534 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	0526049056	18540 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	0526049061	18546 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	0526049032	18552 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	0526049031	18558 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No								N/A			
	3971702321	707 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No								N/A			
	3971702325	703 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No								N/A			
	3971702320	715 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	71	Ldn	60	66	--	1	Wall At-Grade	N/A	8		59
	3971702316	719 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall At-Grade	N/A	8		47
	3971702315	721 Ne 189th St	SF Residence on 189th St.	1	63	2	Yes	Yes	50	Ldn	60	66	--	--		Special			50
	3971702311	18807 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	53	Ldn	60	66	--	--		Special			53
	3971702310	727 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	55	Ldn	60	66	--	--	Wall At-Grade	N/A	8		45

Lynnwood Link Extension A10

Stations: 130th Option 1
145th Option 1
185th Option 3

Total Units Analyzed
837

Impacts:	Moderate	Severe
	161	110

Residual Impacts	
RSIP =	3

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0526049011	18559 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	51	Ldn	60	66	--	--		Special			51
	0526049024	18553 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	51	Ldn	60	66	--	--		Special			51
	0526049025	18547 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	59	Ldn	60	66	--	--		Special			59
	0526049050	18539 8th Ave Ne	SF Residence on 8th Ave.	0	63	2	No	No								N/A			
	0526049026	-	Empty Lot	0	63	--	No	No								N/A			
	0526049055	18533 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	74	Ldn	60	66	--	1	Wall At-Grade	Special	8	1	63
	0526049054	18529 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	76	Ldn	60	66	--	1	Wall At-Grade	Special	8	1	64
	0526049040	18523 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	No	72	Ldn	61	67	--	1	Wall on Retaining Wall	Special	8		60
	0526049028	18517 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No	73	Ldn	63	68	--	1	Wall on Retaining Wall	Special	8		62
	0526049052	18511 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No	75	Ldn	64	70	--	1	Wall on Retaining Wall	Special	8		63
	0526049030	18509 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	Yes	No	75	Ldn	66	71	--	1	Wall on Retaining Wall	Special	8		63
	3235100273	814 Ne 185th St	SF Residence on 185th St.	1	71	2	Yes	Yes	44	Ldn	66	71	--	--		Special			44
	3235100270	18504 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	Yes	Yes	49	Ldn	66	71	--	--		Special			49
	3235100265	18510 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	Yes	Yes	50	Ldn	63	69	--	--		Special			50
	3235100260	18516 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	Yes	50	Ldn	61	67	--	--		Special			50
	3235100255	18522 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	50	Ldn	60	66	--	--		Special			50
M-29: 64.4	3235100249	18528 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	55	Ldn	59	65	--	--		Special			55
	3235100244	18534 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	54	Ldn	59	65	--	--	Wall on Retaining Wall	Special	4		51
	3235100240	18540 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	54	Ldn	59	65	--	--	Wall on Retaining Wall	Special	4		51
	3235100205	18554 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	42	Ldn	59	65	--	--	Wall on Retaining Wall	Special	4		42
	3235100210	811 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	Yes	39	Ldn	59	65	--	--	Wall on Retaining Wall	Special	4		39
	3235100215	817 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	Yes	38	Ldn	59	65	--	--	Wall on Retaining Wall	Special	4		38
	3235100220	823 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	38	Ldn	58	64	--	--	Wall on Retaining Wall	Special	4		38
	3235100224	829 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	37	Ldn	58	64	--	--	Wall on Retaining Wall	Special	4		37
	3235100230	835 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	36	Ldn	58	64	--	--	Wall on Retaining Wall	Special	4		36
	3235100235	841 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	34	Ldn	58	64	--	--	Wall on Retaining Wall	Special	4		34
	3235100200	18810 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	Yes	Yes	45	Ldn	61	66	--	--	Wall At-Grade	Special	4		44
	3235100105	18820 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	Yes	Yes	47	Ldn	61	66	--	--	Wall At-Grade	Special	8		41
	3235100110	811 Ne 189th St	SF Residence on 189th St.	1	61	2	No	No	44	Ldn	59	65	--	--	Wall At-Grade	N/A	8		35
	3235100195	810 Ne 188th St	SF Residence on 188th St.	1	61	2	No	No	41	Ldn	59	65	--	--	Wall At-Grade	N/A	4		37
	3235100190	816 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	52	Ldn	59	65	--	--	Wall At-Grade	Special	4		49
	3235100185	822 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	51	Ldn	59	65	--	--	Wall At-Grade	Special	4		48
	3235100120	823 Ne 189th St	SF Residence on 188th St.	1	61	2	Yes	No	51	Ldn	59	65	--	--	Wall At-Grade	Special	4		48
	3235100115	817 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	52	Ldn	59	65	--	--	Wall At-Grade	Special	4		49
NE 189th Street to NE 194th Street																			
	3971702305	728 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	55	Ldn	60	66	--	--	Wall At-Grade	N/A	4		49
	3971702295	718 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall At-Grade	N/A	4		
	3971702210	18915 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall At-Grade	N/A	4		55
	3971702215	18921 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall At-Grade	N/A	4		55
	0526049063	19011 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	57	Ldn	63	68	--	--	Wall At-Grade	N/A	4		51
	0526049010	19031 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	57	Ldn	63	68	--	--	Wall At-Grade	N/A	4		51
M-30A&B: 59.4 & 6	0526049007	816 Ne 190th St	School on 190th St.	1	65	3	No	No	44	Leq	66	72	--	--	Wall on Retaining Wall	N/A	4		40
	3235100005	18920 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	48	Ldn	59	65	--	--	Wall At-Grade	N/A	4		43
	3235100100	18910 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	42	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		38
	3235100095	810 Ne 189th St	SF Residence on 189th St.	1	60	2	No	No	39	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		35
	3235100010	811 Ne 190th St	SF Residence on 190th St.	1	60	2	No	No	45	Ldn	58	64	--	--	Wall At-Grade	N/A	4		40
	3235100015	817 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall At-Grade	N/A	4		50
	3235100090	816 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	49	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		45
	3235100085	822 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	46	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		42
	3235100080	828 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	45	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		42
	3235100075	834 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	44	Ldn	58	64	--	--	Wall on Retaining Wall	N/A	4		41
	3235100020	823 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	51	Ldn	58	64	--	--	Wall At-Grade	N/A	4		48
	3235100025	829 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	50	Ldn	58	64	--	--	Wall At-Grade	N/A	4		47
	3235100030	835 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	50	Ldn	58	64	--	--	Wall At-Grade	N/A	4		46

Lynnwood Link Extension A11

Stations: 130th Option 2
145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	272	195

Residual Impacts	
RSIP =	28

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
Northgate to NE 1																			
M-1: 71.5	2926049011	11200 1st Ave Ne	Southern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	70	Ldn	66	72	8	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Southern F. line 2nd floor Apts. on 1st Ave.	4	72	2	No	No	71	Ldn	66	72	4	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Northern F. line ground level Apts. on 1st Ave.	8	72	2	No	No	73	Ldn	66	72	--	8	Wall on Structure	N/A	4		65
	2926049011	11200 1st Ave Ne	Northern F. line 2nd floor Apts. on 1st Ave.	8	72	2	No	No	73	Ldn	66	72	--	8	Wall on Structure	N/A	4		65
	2926049011	11200 1st Ave Ne	Front line Apts. on Northgate Way	1	72	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	4		62
	2926049011	11200 1st Ave Ne	Second line Apts. on Northgate Way	4	72	2	No	No	65	Ldn	66	72	--	--	Wall on Structure	N/A	4		57
	2926049011	11200 1st Ave Ne	Third line Apts. on Northgate Way	5	72	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		53
M-3: 60.8 LEQ	2926049011	11200 1st Ave Ne	Southern 2nd line ground level Apts. on 1st Ave.	4	65	2	No	No	64	Ldn	61	67	4	--	Wall on Structure	N/A	4		55
	2926049011	11200 1st Ave Ne	Southern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	65	Ldn	61	67	4	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Northern 2nd line ground level Apts. on 1st Ave.	8	65	2	No	No	65	Ldn	61	67	8	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Northern 2nd line 2nd floor Apts. on 1st Ave.	4	65	2	No	No	66	Ldn	61	67	4	--	Wall on Structure	N/A	4		56
	2926049011	11200 1st Ave Ne	Southern 3rd line ground level Apts. on 1st Ave.	4	63	2	No	No	62	Ldn	60	66	4	--	Wall on Structure	N/A	4		53
	2926049011	11200 1st Ave Ne	Southern 3rd line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	63	Ldn	60	66	4	--	Wall on Structure	N/A	4		53
	2926049011	11200 1st Ave Ne	Northern 3rd line ground level Apts. on 1st Ave.	8	63	2	No	No	63	Ldn	60	66	8	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Northern 3rd line 2nd floor Apts. on 1st Ave.	8	63	2	No	No	64	Ldn	60	66	8	--	Wall on Structure	N/A	4		54
	2926049011	11200 1st Ave Ne	Southern 4th line ground level Apts. on 1st Ave.	10	63	2	No	No	60	Ldn	60	66	10	--	Wall on Structure	N/A	4		51
	2926049011	11200 1st Ave Ne	Southern 4th line 2nd floor Apts. on 1st Ave.	4	63	2	No	No	60	Ldn	60	66	4	--	Wall on Structure	N/A	4		51
	2926049011	11200 1st Ave Ne	Northern 4th line ground level Apts. on 1st Ave.	11	63	2	No	No	61	Ldn	60	66	11	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Northern 4th line 2nd floor Apts. on 1st Ave.	11	63	2	No	No	61	Ldn	60	66	11	--	Wall on Structure	N/A	4		52
	2926049011	11200 1st Ave Ne	Southern ground level Apts. E of 2nd Ave.	10	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	2926049011	11200 1st Ave Ne	Southern 2nd floor Apts. E of 2nd Ave.	10	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	2926049011	11200 1st Ave Ne	Northern ground level Apts. E of 2nd Ave.	6	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
	2926049011	11200 1st Ave Ne	Northern 2nd floor Apts. E of 2nd Ave.	6	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
M-2: 73.5	6174800000	11300 1st Ave Ne	Front line ground level condos on 1st Ave. courtyard	11	74	2	No	No	73	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on 1st Ave. courtyard	11	74	2	No	No	74	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on 1st Ave. courtyard	11	74	2	No	No	75	Ldn	66	73	--	11	Wall on Structure	N/A	6		62
	6174800000	11300 1st Ave Ne	Front line ground level condos on south side	5	74	2	No	No	75	Ldn	66	73	--	5	Wall on Structure	N/A	6		63
	6174800000	11300 1st Ave Ne	Front line 2nd floor condos on south side	5	74	2	No	No	75	Ldn	66	73	--	5	Wall on Structure	N/A	6		63
	6174800000	11300 1st Ave Ne	Front line 3rd floor condos on south side	5	74	2	No	No	77	Ldn	66	73	--	5	Wall on Structure	N/A	6		64
	2926049050	11355 3rd Ave Ne-Bldg. E	1st Floor Citigate Apts.=108 unit Apt. complex that would be front line if M-2 is displaced	4	66	2	No	No	63	Ldn	62	68	4	--	Wall on Structure	N/A	4		55
	2926049050	11355 3rd Ave Ne-Bldg. E	2nd Floor at Citigate Apts.	4	66	2	No	No	63	Ldn	62	68	4	--	Wall on Structure	N/A	4		55
	2926049050	11355 3rd Ave Ne-Bldg. E	3rd Floor at Citigate Apts.	4	66	2	No	No	65	Ldn	62	68	4	--	Wall on Structure	N/A	4		55
	2926049050	11355 3rd Ave Ne-East of Bldg. E	1st Floor Citigate Apts.- 2nd line	2	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		50
	2926049050	11355 3rd Ave Ne-East of Bldg. E	2nd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		50
	2926049050	11355 3rd Ave Ne-East of Bldg. E	3rd Floor at Citigate Apts. - 2nd line	2	63	2	No	No	60	Ldn	60	66	2	--	Wall on Structure	N/A	4		50
M-4: 65.65	2926049529	133 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	75	Ldn	62	68	--	1	Wall on Structure	N/A	6	1	63
	2926049530	139 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	67	Ldn	62	68	1	--	Wall on Structure	N/A	4		59
	2926049531	145 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	4		56

Lynnwood Link Extension A11

Stations: 130th Option 2
145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	272	195

Residual Impacts	
RSIP =	28

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2926049532	151 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	4		53
	2926049533	157 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		51
	2926049192	303 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	2926049418	11352 3rd Ave	SF Residence on 3rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	2926049191	315 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
NE 115th Street to																			
	6411600161	136 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	75	Ldn	62	68	--	1	Wall on Structure	N/A	8	1	63
	6411600162	142 Ne 115th St	SF Residence on 115th St.	1	66	2	No	No	70	Ldn	62	68	--	1	Wall on Structure	N/A	8		57
	6411600163	148 Ne 115th St	SF Residence on 115th St.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	8		53
	6411600164	154 Ne 115th St	SF Residence on 115th St.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall on Structure	N/A	8		49
	7810300035	147 Ne 116th St	Duplex on 116th St.	2	66	2	No	No	75	Ldn	62	68	--	2	Wall on Structure	N/A	8	2	63
	7810300030	11519 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	8		55
	7810300025	11523 3rd Ave N	SF Residence on 3rd Ave.	1	66	2	No	No	74	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	6411600147	156 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No	71	Ldn	61	66	--	1	Wall on Structure	N/A	8		58
	7810300005	150 Ne 116th St	SF Residence on 116th St.	1	64	2	No	No							Wall on Structure	N/A	8		
	6411600146	157 Ne 117th St	SF Residence on 117th St.	1	64	2	No	No							Wall on Structure	N/A	8		
	6411600186	11622 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	72	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	60
	6411600185	11610 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	71	Ldn	59	65	--	1	Wall on Structure	N/A	8		58
	6411600182	11606 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	8		57
	6411600188	11600 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	8		57
	6411600172	11526 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	69	Ldn	59	65	--	1	Wall on Structure	N/A	8		56
	6411600170	11522 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	6161000031	11514 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	6161000022	11508 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6161000021	304 3rd Ave Ne	SF Residence on 3rd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		46
	6411600173	316 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	6411600171	322 Ne 115th St	SF Residence on 115th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	6161000015	11515 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		45
	6161000010	11519 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		46
	6161000005	11527 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6161000035	11533 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6411600181	11539 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		47
	6411600180	11545 4th Ave Ne	SF Residence on 4th Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		47
	6411600183	325 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		45
	6411600187	321 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6411600184	311 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		51
	6411600200	401 Ne 117th St	SF Residence on 117th St.	1	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	6411600198	11544 4th Ave Ne	SF Residence on 4th Ave.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	8		45
	6411600201	11536 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	8		45
	6411600199	11532 4th Ave Ne	SF Residence on 4th Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	8		44
	6411600207	11524 4th Ave Ne	SF Residence on 4th Ave.	1	58	2	No	No	58	Ldn	57	63	1	--	Wall on Structure	N/A	8		44
M-4: 56.775	6411600211	11516 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	6411600209	11510 4th Ave Ne	SF Residence on 4th Ave.	1	57	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	6411600213	11529 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	6411600195	11537 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	6411600202	11547 5th Ave Ne	SF Residence on 5th Ave.	1	57	2	No	No	58	Ldn	57	63	1	--	Wall on Structure	N/A	8		44
	6411600196	11545 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	8		42
	6411600203	11533 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	8		41
	6411600208	11525 5th Ave Ne	SF Residence on 5th Ave.	1	60	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	8		41
NE 117th Street to																			
	6411600414	308 Ne 117th St	SF Residence on 117th St.	1	62	2	No	No	74	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	62
	6411600413	11708 3rd Ave Ne	SF Residence	1	62	2	No	No	75	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	62
	6411600420	11710 3rd Ave Ne	Church	1	62	3	No	No	70	Leq	64	70	--	1	Wall on Structure	N/A	8		58
	6411600429	323 Ne 120th St	SF Residence north of the church	1	62	2	No	No	75	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	62
	6411600430	325 Ne 120th St	SF Residence north of the church	1	62	2	No	No	73	Ldn	59	65	--	1	Wall on Structure	N/A	8	1	61
	6411600443	11737C 5th Ave Ne	SF Residence north of the church	1	62	2	No	No	71	Ldn	59	65	--	1	Wall on Structure	N/A	8		58
	6411600442	11737 5th Ave Ne Unit B	SF Residence north of the church	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		50
	6411600441	11737 5th Ave Ne Unit A	SF Residence north of the church	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	6411600440	11743 5th Ave Ne	SF Residence north of the church	1	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	8		44
	6411600451	11729 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	8		47
	6411600452	11727 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		50
M-6 62.2	6411600450	11725 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	8		57

Lynnwood Link Extension A11

Stations: 130th Option 2
145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	272	195

Residual Impacts	
RSIP =	28

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	6411600464	11723 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	8		51
	6411600463	11721 5th Ave Ne	SF Residence east of the church	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		50
	6411600461	11719 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	6411600462	11715 5th Ave Ne	SF Residence east of the church	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	6411600412	316 Ne 117th St	SF Residence east of the church	1	64	2	No	No	66	Ldn	61	66	--	1	Wall on Structure	N/A	8		53
	6411600410	322 Ne 117th St	SF Residence south of the church	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	8		50
	6411600411	326 Ne 117th St	SF Residence south of the church	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	6411600471	332 Ne 117th St	SF Residence south of the church	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	8		46
	6411600472	336 Ne 117th St	SF Residence south of the church	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	6411600473	342 Ne 117th St	SF Residence south of the church	1	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	8		44
	6411600470	11707 5th Ave Ne	SF Residence south of the church	1	65	2	No	No	57	Ldn	61	67	--	--	Wall on Structure	N/A	8		43
	6413100228	11718 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Structure	N/A	8		42
	6413100229	11714 5th Ave Ne	SF Residence south of the church	1	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	8		42
	6413100241	11726 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Structure	N/A	8		42
	6413100240	11734 5th Ave Ne	SF Residence south of the church	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Structure	N/A	8		43
	6411600428	327 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	75	Ldn	62	68	--	1	Wall on Structure	N/A	8	1	63
	2238000050	331 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	69	Ldn	62	68	--	1	Wall on Structure	N/A	8		57
	2238000045	337 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	8		52
	2238000040	343 Ne 120th St	SF Residence on 120th St.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	2238000035	349 Ne 120th St	SF Residence on 120th St.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	8		46
	2238000030	11755 5th Ave Ne	SF Residence on 120th St.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	8		45
NE 120th Street to																			
	6412100091	332 Ne 120th St	SF Residence on 120th St.	0	65	2	No	No								N/A			
	6412100097	338 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	75	Ldn	61	67	--	1	Wall on Structure	N/A	6	1	63
	6412100092	344 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	68	Ldn	61	67	--	1	Wall on Structure	N/A	8		55
	6412100095	348 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	8		51
	6412100096	12001 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	8		48
	2237500025	12004 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	8		45
	2237500020	510 Ne 120th St	SF Residence on 120th St.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	8		43
	2237500015	516 Ne 120th St	SF Residence on 120th St.	1	65	2	No	No	58	Ldn	61	67	--	--	Wall on Structure	N/A	8		43
	2237500030	12014 5th Ave Ne	SF Residence on 120th St.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	8		48
	6412100090	12015 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	71	Ldn	62	68	--	1	Wall on Structure	N/A	8		58
	6412100093	12021 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	66	Ldn	61	67	1	--	Wall on Structure	N/A	8		54
	6413600015	12016 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	8		48
	6413600005	12018 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	8		45
	6413600010	12020 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	8		47
	6413600020	12022 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	8		50
	6412100094	12025 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	72	Ldn	62	68	--	1	Wall on Structure	N/A	8		60
	6412100085	12027 5th Ave Ne	SF Residence near noise wall	1	65	2	No	No	75	Ldn	61	67	--	1	Wall on Structure	N/A	8	1	62
	6412100087	12029 5th Ave Ne	SF Residence next to noise wall	0	65	2	No	No							Wall on Structure	N/A	8		
	6412100080	12035 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	74	Ldn	63	68	--	1	Wall on Structure	N/A	8		61
	6412100082	12045 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	75	Ldn	63	68	--	1	Wall on Structure	N/A	8		62
	6412100081	12049 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	73	Ldn	63	68	--	1	Wall on Structure	N/A	8		61
	6412100084	12051 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No							Wall on Structure	N/A	8		
	6412100280	12301 5th Ave Ne	SF Residence on 5th Ave.	0	67	2	No	No							Wall on Structure	N/A	8		
	6412100281	12311 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6412100282	12321 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6412100283	12327 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6412100284	12401 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6412100250	12417 5th Ave Ne	New Apt. Bldg.	0	67	2	No	No							Wall on Structure	N/A	6		
	6413600026	12030 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	6		51
	6413600036	12032 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	6		48
	6413600072	12035 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	6		45
	6413600079	12037 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	8		44
	6413600034	12034 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	6		48
	6413600035	12036 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		52
M-7: 68.27	6413600040	12042 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		52
	6413600041	12044 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	8		47

Lynnwood Link Extension A11

Stations: 130th Option 2
145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	272	195

Residual Impacts	
RSIP =	28

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	6413600051	521 Ne 123rd St	SF Residence on 123rd	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	8		46
	6413600052	515 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	8		48
	6413600045	12048 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	8		51
	6413600050	12054 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	70	Ldn	63	69	--	1	Wall on Structure	N/A	6		58
	6413600339	12302 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	70	Ldn	63	69	--	1	Wall on Structure	N/A	6		58
	6413600340	510 Ne 123rd St	SF Residence on 123rd	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	6		51
	6413600335	518 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	6		49
	6413600338	522 Ne 123rd St	SF Residence on 123rd	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	6		47
	6413600337	12308 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	71	Ldn	63	69	--	1	Wall on Structure	N/A	6		58
	6413600345	12316 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	71	Ldn	63	69	--	1	Wall on Structure	N/A	6		59
	6413600343	12320 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	71	Ldn	63	69	--	1	Wall on Structure	N/A	6		59
	6413600347	12312 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	6		51
	6413600346	12314 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	6		48
	9509900045	521 Ne 124th St	SF Residence on 124th	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	6		47
	9509900040	515 Ne 124th St	SF Residence on 124th	1	66	2	No	No	63	Ldn	62	68	1	--	Wall on Structure	N/A	6		50
	9509900035	509 Ne 124th St	SF Residence on 124th	1	67	2	No	No	65	Ldn	63	68	1	--	Wall on Structure	N/A	6		52
	9509900030	503 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	71	Ldn	63	69	--	1	Wall on Structure	N/A	6		59
	9509900005	500 Ne 124th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	9509900010	508 Ne 124th St	SF Residence on 124th	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		53
	9509900015	514 Ne 124th St	SF Residence on 124th	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	6		50
	9509900020	520 Ne 124th St	SF Residence on 124th	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	6		47
	6413600378	527 Ne 125th St	SF Residence on 125th	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		46
	6413600377	523 Ne 125th St	SF Residence on 125th	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	8		48
	6413600376	513 Ne 125th St	SF Residence on 125th	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	8		51
	6413600375	505 Ne 125th St	SF Residence on corner of 5th and 125th	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
NE 125th Street to																			
	6414100010	502 Ne 125th St	SF Residence on corner of 5th and 124th	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100013	510 Ne 125th St	SF Residence on 125th	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	6		53
	6414100012	514 Ne 125th St	SF Residence on 125th	1	67	2	No	No	63	Ldn	63	68	1	--	Wall on Structure	N/A	6		50
	6414100011	516 Ne 125th St	SF Residence on 125th	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	6		47
	6414100023	12514 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	6		47
	6414100024	12512 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	65	Ldn	62	68	1	--	Wall on Structure	N/A	6		52
	6414100021	12518 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100020	12520 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100028	12528 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100025	12526 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	65	Ldn	62	68	1	--	Wall on Structure	N/A	6		52
	6414100029	12524 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	6414100026	12532 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	64	Ldn	62	68	1	--	Wall on Structure	N/A	4		55
	6414100027	12534 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	No	No	72	Ldn	63	69	--	1	Wall on Structure	N/A	6		60
	6414100033	12542 5th Ave Ne	Empty Lot	1	68	2	No	No							Wall on Structure	N/A	6		
	6414100030	12542 5th Ave Ne	SF Residence on 5th Ave.	1	69	2	No	No	72	Ldn	64	70	--	1	Wall on Structure	N/A	6		60
	6414100032	12546 5th Ave Ne Unit B	SF Residence on 5th Ave.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		51
	6414100031	12546 5th Ave Ne Unit C	SF Residence on 5th Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	6		48
	6414100039	527 NE 127th St	SF Residence on 127th	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Structure	N/A	6		47
	6414100038	521 NE 127th St	SF Residence on 127th	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	6		48
	6414100037	515 NE 127th St	SF Residence on 127th	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	6		50
	6414100036	509 NE 127th St	SF Residence on 127th	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	6		53
	6414100035	503 NE 127th St	SF Residence on corner of 127th and 5th	1	69	2	No	No	72	Ldn	64	70	--	1	Wall on Structure	N/A	6		60
NE 127th Street to																			
M-9: 70.45	6414100732	502 NE 127th St	SF Residence on corner of 127th and 5th	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	6414100731	514 NE 127th St	SF Residence on 127th	1	70	2	No	No	65	Ldn	65	70	1	--	Wall on Structure	N/A	4		56
	6414100733	522 NE 127th St	SF Residence on 127th	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
	6414100741	Grace Church open area	Empty Lot	0	64	3	No	No							Wall on Structure	N/A	4		
	6414100730	12708 5th Ave Ne	SF Residence on 5th Ave.	1	71	2	No	No	72	Ldn	66	71	--	1	Wall on Structure	N/A	4		64
	6414100740	12718 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	Yes	No	72	Ldn	66	72	--	1	Wall on Structure	Special	4		64
	6414100751	12726 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	70	Ldn	66	72	1	--	Wall on Structure	Special	4		62
	6414100750	12732 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	70	Ldn	66	72	1	--	Wall on Structure	Special	4		63
M-10: 73.8	6414100759	12740 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	Yes	No	70	Ldn	66	73	1	--	Wall on Structure	Special	4		62
	6414100760	12759 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	Yes	No	63	Ldn	66	72	--	--	Wall on Structure	Special	4		55
	6414100752	12749 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	72	2	Yes	No	61	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	6414100753	12745 Roosevelt Way Ne	SF Residence on Roosevelt Way	1	73	2	Yes	No	62	Ldn	66	72	--	--	Wall on Structure	Special	4		54
	1854700005	502 Ne 130th St	SF Residence on 130th	1	74	2	Yes	No	66	Ldn	66	73	1	--	Wall on Structure	Special	4		61
	1854700010	510 Ne 130th St	SF Residence on 130th	1	74	2	Yes	No	59	Ldn	66	73	--	--	Wall on Structure	Special	4		53

Lynnwood Link Extension A11

Stations: 130th Option 2
145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	272	195

Residual Impacts	
RSIP =	28

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	1854700015	516 Ne 130th St	SF Residence on 130th	1	73	2	Yes	No	57	Ldn	66	72	--	--	Wall on Structure	Special	4		51
	1787600096	519 Ne 131st Pl	SF Residence on 131st Place	1	73	2	Yes	No	56	Ldn	66	72	--	--	Wall on Structure	Special	4		50
	1787600095	511 Ne 131st Pl	SF Residence on 131st Place	1	74	2	Yes	No	59	Ldn	66	73	--	--	Wall on Structure	Special	4		54
	1787600098	505 Ne 131st Pl	SF Residence on 131st Place	1	74	2	Yes	No	66	Ldn	66	73	1	--	Wall on Structure	Special	4		61
	1787600090	N Seattle Church of Naz	Empty Lot that is part of 13130 5th Church	1	72	3	Yes	No	64	Leq	71	77	--	--	Wall on Structure	Special	4		60
	1787600094	510 Ne 131st Pl	SF Residence on 131st Place	1	72	2	Yes	No	59	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	1787600093	520 Ne 131st Pl	SF Residence on 131st Place	1	71	2	Yes	No	56	Ldn	66	71	--	--	Wall on Structure	Special	4		50
	1787600085	13130 5th Ave Ne	Church on 5th Ave.	1	67	2	Yes	No	64	Ldn	63	68	1	--	Wall on Structure	Special	4		56
M-11: 66.7 & 66.8	1787600085	13130 5th Ave Ne	Church on 5th Ave.	0	68	3	Yes	No	63	Leq	68	74	--	--	Wall on Structure	Special	4		55
	2026049004	1000 NE 135th	Not Noise Sensitive	1	70	3	No	No							Wall on Structure	N/A	4		
NE 145th Street to																			
	7568700780	501 Ne 145th St	Water pump station	0	74				0	Leq	66	73	--	--					0
	7568700785	14512 5th Ave Ne	SF Residence on 5th Ave.	1	74	2	Yes	Yes	60	Ldn	66	73	--	--		Special			60
	7568700790	14518 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	Yes	57	Ldn	66	72	--	--		Special			57
M-14: 72.8	7568700795	14526 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	Yes	57	Ldn	66	72	--	--		Special			57
	7568700800	14532 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	Yes	57	Ldn	66	72	--	--		Special			57
	7568700805	14540 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	Yes	57	Ldn	66	72	--	--		Special			57
	7568700810	14544 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	Yes	59	Ldn	66	72	--	--		Special			59
	7568700815	14552 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	62	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	7568700820	14556 5th Ave Ne	SF Residence on 5th Ave.	1	73	2	Yes	No	62	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	7568700825	14560 5th Ave Ne	SF Residence on 5th Ave.	1	72	2	Yes	No	62	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	7568700830	14570 5th Ave Ne	SF Residence on 5th Ave.	1	68	2	Yes	No	62	Ldn	63	69	--	--	Wall on Structure	Special	4		52
	7568700835	14574 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	Yes	No	65	Ldn	61	67	1	--	Wall on Structure	Special	4		56
	7568700836	14578 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	Yes	No	65	Ldn	61	67	1	--	Wall on Structure	Special	4		55
	7568700775	-	Empty Lot	0	74														
	7568700770	516 Ne 145th St	SF Residence on 145th	1	73	2	Yes	No	59	Ldn	66	72	--	--		Special			59
	7568700765	522 Ne 145th St	SF Residence on 145th	1	72	2	Yes	No	59	Ldn	66	72	--	--		Special			59
	7568700760	14515 6th Ave Ne	SF Residence on 6th Ave.	1	69	2	Yes	Yes	61	Ldn	64	70	--	--		Special			61
	7568700755	14521 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	Yes	Yes	57	Ldn	62	68	--	--		Special			57
	7568700745	14525 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	Yes	Yes	57	Ldn	61	67	--	--		Special			57
	7568700740	14535 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	Yes	Yes	56	Ldn	61	66	--	--		Special			56
	7568700734	14541 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	Yes	Yes	56	Ldn	60	66	--	--		Special			56
M-15: 62.65	7568700730	14549 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	Yes	Yes	56	Ldn	60	66	--	--	Wall on Structure	Special	4		47
	7568700725	14555 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	Yes	No	56	Ldn	59	65	--	--	Wall on Structure	Special	4		47
	7568700720	14565 6th Ave Ne	SF Residence on 6th Ave.	1	61	2	Yes	No	56	Ldn	59	65	--	--	Wall on Structure	Special	4		47
	7568700715	14567 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	7568700705	14579 6th Ave Ne	SF Residence on 6th Ave.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	7568700710	515 NE 148th St.	SF Residence on 6th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	7568700695	14572 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	No	No	51	Ldn	59	65	--	--	Wall on Structure	N/A	4		41
	7568700690	14566 6th Ave Ne	SF Residence on 6th Ave.	1	62	2	No	No	53	Ldn	59	65	--	--	Wall on Structure	N/A	4		43
	7568700685	14562 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	No	53	Ldn	60	66	--	--		N/A			53
	7568700680	14550 6th Ave Ne	SF Residence on 6th Ave.	1	63	2	No	No	53	Ldn	60	66	--	--		N/A			53
	7568700675	14548 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	No	No	53	Ldn	61	66	--	--		N/A			53
	7568700670	14542 6th Ave Ne	SF Residence on 6th Ave.	1	64	2	No	No	53	Ldn	61	66	--	--		N/A			53
	7568700665	14528 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	7568700660	14526 6th Ave Ne	SF Residence on 6th Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	7568700655	14522 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	No	No	54	Ldn	62	68	--	--		N/A			54
	7568700650	14518 6th Ave Ne	SF Residence on 6th Ave.	1	66	2	No	No	54	Ldn	62	68	--	--		N/A			54
NE 148th Street to																			
	8680300045	327 Ne 148th St	SF Residence on 148th	1	70	2	No	No							Wall on Structure	N/A	4		
	8680300050	333 Ne 148th St	SF Residence on 148th	1	70	2	No	No							Wall on Structure	N/A	4		
	8680300055	339 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No	74	Ldn	65	70	--	1	Wall on Structure	Special	6		61
	8680300060	345 Ne 148th St	SF Residence on 148th	1	70	2	Yes	No	69	Ldn	65	70	1	--	Wall on Structure	Special	4		60
	2881700402	14727 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	Yes	No	68	Ldn	63	68	--	1	Wall on Structure	Special	4		58
	2881700400	-	Empty Lot	0	67	2	No	No								N/A			
	8680300040	316 Ne 148th St	SF Residence on 148th	1	70	2	No	No								N/A			
	8680300035	324 Ne 148th St	SF Residence on 148th	1	70	2	No	No	75	Ldn	65	70	--	1	Wall on Structure	N/A	6		63
	8680300030	330 Ne 148th St	SF Residence on 148th	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	8680300025	336 Ne 148th St	SF Residence on 148th	1	70	2	No	No	65	Ldn	65	70	1	--	Wall on Structure	N/A	4		57
	8680300020	342 Ne 148th St	SF Residence on 148th	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	4		55
M-16: 66.95	8680300015	348 Ne 148th St	SF Residence on 148th	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		51
	8680300010	358 Ne 148th St	SF Residence on 148th	1	67	2	No	No	60	Ldn	63	68	--	--	Wall on Structure	N/A	4		50
	8680300005	14807 5th Ave Ne	SF Residence on 5th Ave.	1	67	2	No	No	60	Ldn	63	68	--	--	Wall on Structure	N/A	4		50
	2004100090	357 Ne 149th St	SF Residence on 149th	1	67	2	No	No	60	Ldn	63	68	--	--	Wall on Structure	N/A	4		50
	2004100085	351 Ne 149th St	SF Residence on 149th	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		51

Lynnwood Link Extension A11

Stations: 130th Option 2
145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	272	195

Residual Impacts	
RSIP =	28

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2004100080	345 Ne 149th St	SF Residence on 149th	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	2004100075	339 Ne 149th St	SF Residence on 149th	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		53
	2004100065	333 Ne 149th St	SF Residence on 149th	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	4		55
	2004100060	327 Ne 149th St	SF Residence on 149th	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	4		57
	2004100055	321 Ne 149th St	SF Residence on 149th	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	2004100050	309 Ne 149th St	SF Residence on 149th	1	70	2	No	No	74	Ldn	65	70	--	1	Wall on Structure	N/A	6		62
	2004100052	305 Ne 149th St	SF Residence on 149th	0	70	2	No	No							Wall on Structure	N/A	4		
	2004100045	308 Ne 149th St	SF Residence on 149th	0	70	2	No	No								N/A			
M-17: 70.05	2004100040	314 Ne 149th St	SF Residence on 149th	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	2004100035	320 Ne 149th St	SF Residence on 149th	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		63
	2004100030	326 Ne 149th St	SF Residence on 149th	1	68	2	No	No	69	Ldn	63	69	--	1	Wall on Structure	N/A	4		60
	2004100025	332 Ne 149th St	SF Residence on 149th	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	4		54
	2004100020	338 Ne 149th St	SF Residence on 149th	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
NE 148th Street to																			
	7568700355	14802 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	Yes	58	Ldn	61	67	--	--	Wall on Structure	N/A	4		48
	7568700360	14808 5th Ave Ne	SF Residence on 5th Ave.	1	65	2	No	Yes	58	Ldn	61	67	--	--	Wall on Structure	N/A	4		48
	7568700365	14812 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	Yes	58	Ldn	61	66	--	--	Wall on Structure	N/A	4		48
	7568700370	14818 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	Yes	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	7568700375	14902 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	Yes	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		49
	7568700380	14910 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	7568700385	14916 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	7568700390	14922 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	7568700395	14928 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	7568700400	14934 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	7568700405	15100 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	7568700410	15108 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	7568700415	15114 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	7568700420	15124 5th Ave Ne	SF Residence on 5th Ave. (too far away?)	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
NE 151st Street to																			
	2881700323	15101 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No							Wall on Structure	N/A	4		
	3222200030	301 Ne 151st St	SF Residence on 151st	0	68	2	No	No							Wall on Structure	N/A	4		
	3222200040	307 Ne 151st St	SF Residence on 151st	1	70	2	No	No	73	Ldn	65	70	--	1	Wall on Structure	N/A	6		62
	3222200050	313 Ne 151st St	SF Residence on 151st	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	6		59
	802290040	321 Ne 151st St	SF Residence on 151st	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	6		52
	802290041	327 Ne 151st St	SF Residence on 151st	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	6		51
	802290050	335 Ne 151st St	SF Residence on 151st	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	6		50
	802290055	347 Ne 151st St	SF Residence on 151st	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	6		48
	2881700322	15109 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No								N/A			
	2881700321	15117 3rd Ave Ne	SF Residence on 3rd Ave.	0	68	2	No	No								N/A			
	2881700311	15121 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	75	Ldn	63	69	--	1	Wall on Structure	N/A	8		62
	2881700310	225 Ne 152nd St	Church at end of 152nd St.	1	70	3	No	No	65	Leq	70	75	--	--	Wall on Retaining Wall	N/A	4		59
	2634500055	304 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		61
	2634500060	310 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	70	Ldn	65	70	--	1	Wall on Structure	N/A	4		60
	2634500065	316 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		54
	2634500070	322 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	4		52
	2634500035	323 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	8		48
	2634500040	317 Ne 152nd St	SF Residence on 152nd St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
	2634500045	311 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	8		56
	2634500050	305 Ne 152nd St	SF Residence on 152nd St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	8		57
	3222200010	15112 3rd Ave Ne	SF Residence on 3rd Ave.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		63
	3222200020	306 Ne 151st St	SF Residence on 151st	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	802290035	316 Ne 151st St	SF Residence on 151st	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Structure	N/A	4		57
	802290030	324 Ne 151st St	SF Residence on 151st	1	69	2	No	No	63	Ldn	64	70	--	--		N/A			63
	2881700301	-	Empty Lot	0	70	2	No	No								N/A			
	5027800130	411 Ne 153rd St	SF Residence on 153rd St.	1	69	2	No	No	57	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		53
	5027800120	407 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	63	Ldn	65	70	--	--		N/A			63
M-18 (63.9 LEQ)	5027800110	405 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	63	Ldn	65	70	--	--		N/A			63
	5027800100	403 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	62	Ldn	65	70	--	--		N/A			62
	5027800090	401 Ne 153rd St	SF Residence on 153rd St.	1	70	2	No	No	57	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		53
	2881700300	15240 3rd Ave Ne	SF Residence on 3rd Ave.	1	71	2	No	No	64	Ldn	66	71	--	--		N/A			64
	2807600030	15451 4th Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	56	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		52
	0411100005	301 Ne 155th St	SF Residence on 4th Ave.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Structure	N/A	4		52
	0411100010	15420 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	55	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		51
	0411100015	15414 2nd Ave Ne	SF Residence on 4th Ave.	1	70	2	No	No	56	Ldn	65	70	--	--	Wall on Retaining Wall	N/A	4		51
	0411100020	15408 2nd Ave Ne	SF Residence on 2rd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--	Wall on Retaining Wall	N/A	4		52

Lynnwood Link Extension A11

Stations: 130th Option 2
145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	272	195

Residual Impacts	
RSIP =	28

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0411100025	15404 2nd Ave Ne	SF Residence on 2rd Ave.	1	72	2	No	No	64	Ldn	66	72	--	--		N/A			64
	0411100030	15401 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	No	No	67	Ldn	66	72	1	--	Wall on Retaining Wall	N/A	4		62
	0411100035	15407 2nd Ave Ne	SF Residence on 2rd Ave.	1	73	2	No	No	67	Ldn	66	72	1	--	Wall on Retaining Wall	N/A	4		62
	0411100040	15419 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	No	No	61	Ldn	65	70	--	--		N/A			61
	0411100045	15425 2nd Ave Ne	SF Residence on 2rd Ave.	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Structure	N/A	4		56
	0411100050	165 Ne 155th St	SF Residence on 155th St.	1	71	2	No	No	66	Ldn	66	71	1	--	Wall on Structure	N/A	4		56
	0411100055	145 Ne 155th St	Fire Station	1	76	2	No	No	73	Ldn	66	75	1	--	Wall on Structure	N/A	4		65
NE 155th Street to																			
	2241700075	157 Ne 156th St	SF Residence on 156th St.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	2241700070	151 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Structure	N/A	4		52
	2241700065	143 Ne 156th St	SF Residence on 156th St.	1	71	2	No	No	63	Ldn	66	71	--	--	Wall on Structure	N/A	4		53
	2241700060	137 Ne 156th St	SF Residence on 156th St.	1	72	2	No	No	65	Ldn	66	72	--	--	Wall on Structure	N/A	4		55
M-19: 73.3	2241700055	132 Ne 155th St	SF Residence on 155th St.	1	73	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	4		62
	2241700050	125 Ne 156th St	SF Residence on 156th St.	1	74	2	No	No	73	Ldn	66	73	--	1	Wall on Structure	N/A	4		64
	2241700045	110 Ne 155th St	SF Residence on 155th St.	1	75	2	No	No	78	Ldn	66	74	--	1	Wall on Structure	N/A	6		65
	2881700240	106 Ne 155th St	SF Residence on 155th St.	1	76	2	No	No	77	Ldn	66	75	--	1	Wall on Structure	N/A	6		65
	2241700040	104 Ne 156th St	SF Residence on 156th St.	1	75	2	No	No	74	Ldn	66	74	--	1	Wall on Structure	N/A	4		65
	2241700035	108 Ne 156th St	SF Residence on 156th St.	1	73	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	4		63
	2241700030	122 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		61
	2241700025	130 Ne 156th St	SF Residence on 156th St.	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Structure	N/A	4		56
	2241700020	136 Ne 156th St	SF Residence on 156th St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
	2241700015	142 Ne 156th St	SF Residence on 156th St.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	2241700010	148 Ne 156th St	SF Residence on 156th St.	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		51
	2241700005	156 Ne 156th St	SF Residence on 156th St.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	2881700233	15615 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	2881700234	15621 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	4		49
	2881700232	15625 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	4		49
	2881700239	241 Ne 157th St	SF Residence on 157th St.	1	66	2	No	No	61	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	2881700229	235 Ne 157th St	SF Residence on 157th St.	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	2881700226	229 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	4		54
	2881700224	223 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	65	Ldn	63	69	1	--	Wall on Structure	N/A	4		55
	2881700225	125 Ne 157th St	SF Residence on 157th not =15544 1st Ave Ne	1	69	2	No	No	66	Ldn	64	70	1	--	Wall on Structure	N/A	4		56
	2881700219	117 Ne 157th St	SF Residence on 157th St.	1	69	2	No	No	67	Ldn	64	70	1	--	Wall on Structure	N/A	4		57
	2881700220	111 Ne 157th St	SF Residence on 157th St.	1	71	2	No	No	74	Ldn	66	71	--	1	Wall on Structure	N/A	4		64
	2881700223	101 Ne 157th St	SF Residence on 157th St.	0	72	2	No	No							Wall on Structure	N/A	4		
	2881700230	15618 1st Ave Ne	SF Residence on 1st Ave.	0	72	2	No	No							Wall on Structure	N/A	4		
	2881700227	108 Ne 157th St	SF Residence on 157th St.	1	71	2	No	No	75	Ldn	66	71	--	1	Wall on Structure	N/A	6		62
	2881700218	15710 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	75	Ldn	66	71	--	1	Wall on Structure	N/A	6		62
	8142000180	105 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	70	Ldn	66	71	1	--		N/A		1	70
	8142000170	111 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	61	Ldn	65	70	--	--		N/A			61
	2881700222	116 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	4		56
	2881700221	126 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	4		53
	2881700231	132 Ne 157th St	SF Residence on 157th St.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	8142000160	117 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
M-20: 68.33	8142000150	123 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
NE 158th Street to																			
	8142000090	104 Ne 158th St	SF Residence on 158th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		64
	8142000080	110 Ne 158th St	SF Residence on 158th St.	1	70	2	No	No	61	Ldn	65	70	--	--		N/A			61
	8142000070	116 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	8142000060	122 Ne 158th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	6159400080	117 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	58	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	6159400075	125 Ne 159th St	SF Residence on 158th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	6159400085	113 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	61	Ldn	65	70	--	--		N/A			61
	6159400090	105 Ne 159th St	SF Residence on 159th St.	1	71	2	No	No	70	Ldn	66	71	1	--	Wall on Retaining Wall	N/A	4		64
	6159400045	104 Ne 159th St	SF Residence on 159th St.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
	6159400037	114 Ne 159th St	SF Residence on 159th St.	1	70	2	No	No	69	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		63
	6159400035	118 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	6159400030	124 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	6159400025	130 Ne 159th St	SF Residence on 159th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	2111600080	129 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		53
	2111600075	139 Ne 161st St	SF Residence on 159th St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		52
	2111600085	123 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	2111600090	115 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	68	Ldn	65	70	1	--	Wall on Retaining Wall	N/A	4		62
	2111600095	15924 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
	2111600100	15918 1st Ave Ne	SF Residence on 1st Ave.	0	71	2	No	No							Wall on Retaining Wall	N/A	4		
M-21: 61.8 LEQ	2881700193	108 Ne 161st St	Ridgecrest Park - Not Noise Sensitive	1	62	3	No	No							Wall At-Grade	N/A	4		
	2111600040	114 Ne 161st St	SF Residence on 161st St.	1	71	2	No	No	71	Ldn	66	71	--	1	Wall At-Grade	N/A	6		62
	2111600035	122 Ne 161st St	SF Residence on 161st St.	1	70	2	No	No	62	Ldn	65	70	--	--		N/A			62

Lynnwood Link Extension A11

Stations: 130th Option 2
145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	272	195

Residual Impacts	
RSIP =	28

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	2111600030	128 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59
	2111600025	134 Ne 161st St	SF Residence on 161st St.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall At-Grade	N/A	4		51
	7301300295	303 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	50	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		44
	7301400110	129 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	51	Ldn	62	68	--	--	Wall on Retaining Wall	N/A	4		46
	7301400120	121 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Retaining Wall	N/A	4		55
	7301400220	128 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	60	Ldn	62	68	--	--		N/A			60
	7301300130	304 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	50	Ldn	62	68	--	--		N/A			50
	7301300135	310 Ne 163rd St	SF Residence on 163rd St.	1	66	2	No	No	46	Ldn	62	68	--	--		N/A			46
	7301300120	139 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301300125	135 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	7301400200	127 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	7301400211	124 Ne 163rd St	SF Residence on 163rd St.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	7301400070	-	Empty Lot	0	68	--	No	No								N/A			
	7301400060	132 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	60	Ldn	63	69	--	--		N/A			60
	7301400040	134 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	7301400046	140 Ne 164th St	SF Residence on 164th St.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301300030	141 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301300035	135 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	7301400050	127 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
NE 165th Street to																			
	5727500330	126 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59
	7307000050	124 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	58	Ldn	63	69	--	--		N/A			58
	5727500355	119 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	5727500350	123 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	7307000040	134 Ne 165th Pl	SF Residence on 165th Place	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	7301500010	132 Ne 165th St	SF Residence on 165th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	7301500020	140 Ne 165th St	SF Residence on 165th St.	1	66	2	No	No	44	Ldn	62	68	--	--		N/A			44
	7307000030	140 Ne 165th Pl	SF Residence on 165th Place	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	5727500300	131 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	45	Ldn	62	68	--	--		N/A			45
	5727500363	120 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	58	Ldn	63	69	--	--		N/A			58
	5727500360	-	Empty Lot	0	68	--	No	No								N/A			
	9235900015	111 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	58	Ldn	63	69	--	--		N/A			58
	9235900020	117 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	49	Ldn	63	69	--	--		N/A			49
	9235900025	123 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	45	Ldn	62	68	--	--		N/A			45
	9235900040	130 Ne 166th St	SF Residence on 166th St.	1	66	2	No	No	44	Ldn	62	68	--	--		N/A			44
	5727500361	124 Ne 166th St	SF Residence on 166th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	5727500086	114 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	60	Ldn	63	69	--	--		N/A			60
	5727500103	16719 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500100	16723 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500102	16729 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500111	16731 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	5727500110	16735 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	5727500113	16741 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	5727500120	109 Ne 170th St	SF Residence on 170th St.	0	68	2	No	No								N/A			
	7305900115	119 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59
	5727500130	121 Ne 170th St	SF Residence on 170th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	5727500139	16742 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	5727500137	16738 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	5727500148	16728 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	47	Ldn	63	69	--	--		N/A			47
	5727500149	16722 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--		N/A			46
	5727500150	16716 2nd Ave Ne	SF Residence on 2nd Ave.	1	68	2	No	No	46	Ldn	63	69	--	--		N/A			46
	5727500155	126 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	45	Ldn	63	69	--	--		N/A			45
	5727500087	118 Ne 167th St	SF Residence on 167th St.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	5727500156	132 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500157	136 Ne 167th St	SF Residence on 167th St.	1	66	2	No	No	41	Ldn	62	68	--	--		N/A			41
	5727500159	16719 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500147	16725 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500146	-	Empty Lot	0	66	--	No	No								N/A			
	5727500145	16735 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500135	16741 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
	5727500136	16747 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	5727500138	16753 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	43	Ldn	62	68	--	--		N/A			43
	5727500131	16761 3rd Ave Ne	SF Residence on 3rd Ave.	1	68	2	No	No	45	Ldn	63	69	--	--		N/A			45
NE 170th Street to																			
	7305300205	104 Ne 170th St	SF Residence on 170th St.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300210	17010 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300215	17016 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300220	17022 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55

Lynnwood Link Extension A11

Stations: 130th Option 2
145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	272	195

Residual Impacts	
RSIP =	28

Receiver Information							Impact Analysis						Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	7305300225	17028 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300230	17034 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300235	17040 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300240	17046 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300245	17052 1st Ave Ne	SF Residence on 1st Ave.	1	71	2	No	No	62	Ldn	66	71	--	--		N/A			62
	7305300250	17058 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300255	17204 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300260	17210 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300265	17216 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300270	17222 1st Ave Ne	SF Residence on 1st Ave.	0	70	2	No	No								N/A			
	7305300275	105 Ne 174th St	SF Residence on 174th St.	0	70	2	No	No								N/A			
	7305300350	111 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	63	Ldn	66	71	--	--		N/A			63
	7305300345	17223 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	58	Ldn	66	71	--	--		N/A			58
	7305300340	17217 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	57	Ldn	66	71	--	--		N/A			57
M-22: 70.2	7305300335	17211 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300330	17205 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300325	17059 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	7305300320	17053 2nd Ave Ne	SF Residence on 2nd Ave.	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	7305300315	17047 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	50	Ldn	64	70	--	--		N/A			50
	7305300310	17041 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	45	Ldn	64	70	--	--		N/A			45
	7305300305	17035 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300300	17029 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300295	17023 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300290	17017 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300285	17011 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300280	110 Ne 170th St	SF Residence on 170th St.	1	69	2	No	No	44	Ldn	64	70	--	--		N/A			44
	7305300425	205 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	55	Ldn	64	70	--	--		N/A			55
	7305300420	17222 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	7305300415	17216 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--		N/A			47
	7305300410	17210 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--		N/A			47
	7305300405	17204 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	47	Ldn	64	70	--	--		N/A			47
	7305300400	17058 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--		N/A			46
	7305300395	17052 2nd Ave Ne	SF Residence on 2nd Ave.	1	69	2	No	No	46	Ldn	64	70	--	--		N/A			46
	7305300390	17046 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	44	Ldn	63	68	--	--		N/A			44
	7305300385	17040 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300380	17034 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300375	17028 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300370	17022 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300365	17016 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300360	17010 2nd Ave Ne	SF Residence on 2nd Ave.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300355	204 Ne 170th St	SF Residence on 170th St.	1	67	2	No	No	39	Ldn	63	68	--	--		N/A			39
	7305300010	110 Ne 174th St	SF Residence on 174th St.	0	??	2	No	No								N/A			
	7305300015	116 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	77	Ldn	66	71	--	1	Wall on Structure	N/A	6		65
	7305300020	122 Ne 174th St	SF Residence on 174th St.	1	71	2	No	No	73	Ldn	66	71	--	1	Wall on Structure	N/A	4		65
	7305300025	128 Ne 174th St	SF Residence on 174th St.	1	70	2	No	No	67	Ldn	65	70	1	--	Wall on Structure	N/A	4		58
	7305300030	204 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	4		55
	7305300035	210 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		54
	7305300040	216 Ne 174th St	SF Residence on 174th St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
M-23: 70.2	7305300085	211 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	70	Ldn	65	70	--	1	Wall on Structure	N/A	4		61
	7305300090	217 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	64	Ldn	65	70	--	--	Wall on Structure	N/A	4		55
	7305300095	223 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
NE 175th Street to																			
	1115100230	208 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	1115100232	-	Empty Lot	0	70	--	No	No							Wall on Structure	N/A	4		
	1115100235	206 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	75	Ldn	65	70	--	1	Wall on Structure	N/A	6		64
	1115100210	216 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	71	Ldn	65	70	--	1	Wall on Structure	N/A	4		63
	1115100208	218 Ne 175th St	SF Residence on 175th St.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	6		61
	1115100211	222 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		55
	1115100209	220 Ne 175th St	SF Residence on 175th St.	1	69	2	No	No	65	Ldn	64	70	1	--	Wall on Structure	N/A	4		58
	1115100200	230 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	62	Ldn	64	70	--	--		N/A			62
	1115100205	234 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	69	2	No	No	63	Ldn	64	70	--	--		N/A			63
	1115100195	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Structure	N/A	6		47
	1115100190	300 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	1115100182	310 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	6		48
	1115100175	320 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	4		49

Lynnwood Link Extension A11

Stations: 130th Option 2
145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	272	195

Residual Impacts	
RSIP =	28

Receiver Information								Impact Analysis						Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	1115100172	323 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	4		50
	1115100171	325 Ne 178th St	SF Residence on Serpentine Pl.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	4		50
	1115100176	317 Ne 178th St	SF Residence on 178th St.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	6		48
	1115100180	308 Ne Serpentine Pl	SF Residence on Serpentine Pl.	1	67	2	No	No	63	Ldn	63	68	1	--	Wall on Structure	N/A	4		55
	1115100181	311 Ne 178th St	SF Residence on 178th St.	1	67	2	No	No	64	Ldn	63	68	1	--	Wall on Structure	N/A	6		52
	7772400110	239 Ne 178th St	SF Residence on 178th St.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	6		59
M-24: 69.15	7772400120	17748 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	4		63
	7772400130	17738 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	69	Ldn	64	70	1	--	Wall on Structure	N/A	4		61
	7772400140	17734 2nd Pl Ne	SF Residence on 2nd Pl.	1	69	2	No	No	70	Ldn	64	70	--	1	Wall on Structure	N/A	4		62
	7772400150	17733 2nd Pl Ne	SF Residence on 2nd Pl.	1	75	2	No	No	72	Ldn	66	74	1	--	Wall on Structure	N/A	4		64
	7772400160	17737 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	7772400170	17741 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	7772400180	17747 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	7772400190	17753 2nd Pl Ne	SF Residence on 2nd Pl.	0	75	2	No	No								N/A			
	1115100065	224 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No								N/A			
	1115100070	230 Ne 178th St	SF Residence on 178th St.	0	65	2	No	No								N/A			
	7772400010	17803 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	73	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	61
	7772400020	17809 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	73	Ldn	61	66	--	1	Wall on Structure	N/A	8		60
	7772400030	17815 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	75	Ldn	61	67	--	1	Wall on Structure	N/A	8	1	62
	7772400040	17821 3rd Ave Ne	SF Residence on 3rd Ave.	1	65	2	No	No	75	Ldn	61	67	--	1	Wall on Structure	N/A	8	1	62
	7772400050	17825 3rd Ave Ne	SF Residence on 3rd Ave.	1	66	2	No	No	72	Ldn	62	68	--	1	Wall on Structure	N/A	8		60
	7772400060	17822 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	8		52
	7772400070	17816 3rd Ave Ne	SF Residence on 3rd Ave.	1	63	2	No	No	64	Ldn	60	66	1	--	Wall on Structure	N/A	8		51
	7772400080	17810 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	8		52
	7772400090	17804 3rd Ave Ne	SF Residence on 3rd Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	7772400100	312 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	8		48
	1115100119	330 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	1115100123	340 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	1115100121	344 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	1115100111	337 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	72	Ldn	60	66	--	1	Wall on Structure	N/A	8		59
	1115100113	335 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	76	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	60
	1115100112	333 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	78	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	61
	1115100110	331 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	82	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	62
	1115100120	336 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		47
	1115100122	348 Ne 178th St	SF Residence on 178th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	8		48
	1115100125	-	Empty Lot	0	62	--	No	No							Wall on Structure	N/A	8		
	1115100137	17861 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Structure	N/A	8		51
	1115100138	17857 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Structure	N/A	8		50
	1115100135	17845 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	63	Ldn	59	65	1	--	Wall on Structure	N/A	8		50
	1115100136	17833 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	1115100142	17829 5th Ave Ne	SF Residence on 5th Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	1115100139	17825 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	1115100140	17821 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	8		43
	1115100146	356 Ne 178th St	SF Residence on 178th St.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	8		42
	0927100187	17822 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		45
	0927100196	17832 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		46
	0927100200	17840 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		46
	0927100199	17844 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		46
	0927100205	17852 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	8		47
NE 180th Street to																			
	6084100118	332 Ne 180th St	SF Residence on 180th St.	0	63	2	No	No								N/A			
	6084100117	338 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	80	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	62
	6084100114	344 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	76	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	61
M-25: 59.1 LEQ	6084100116	350 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	72	Ldn	60	66	--	1	Wall on Structure	N/A	8		58
	6084100115	356 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	70	Ldn	61	66	--	1	Wall on Structure	N/A	8		57
	6084100110	18017 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	67	Ldn	60	66	--	1	Wall on Structure	N/A	8		55
	6084100113	18019 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	75	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	63
	6084100105	18023 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	74	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	61
	6084100100	18027 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	74	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	61
	6084100095	18031 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	74	Ldn	61	66	--	1	Wall on Structure	N/A	8	1	62
	6084100086	18041 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No							Wall on Structure	N/A	8		
	0927100065	506 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		48
	0927100066	514 Ne 180th St	SF Residence on 180th St.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	8		46
	0927100067	518 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	0927100068	524 Ne 180th St	SF Residence on 180th St.	1	63	2	No	No	57	Ldn	60	66	--	--	Wall on Structure	N/A	8		43
	5662100015	18015 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	5662100020	18021 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	0927100071	18022 5th Ave Ne	SF Residence on 5th Ave.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	8		47
	0927100079	18020 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	8		49

Lynnwood Link Extension A11

Stations: 130th Option 2
145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	272	195

Residual Impacts	
RSIP =	28

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	0927100070	18016 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	0927100076	18032 5th Ave Ne	SF Residence on 5th Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	5662100025	18027 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	5662100030	18033 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	0927100075	515 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		48
	0927100073	18034 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	69	Ldn	62	68	--	1	Wall on Structure	N/A	8		56
	0927100082	18036 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	70	Ldn	62	68	--	1	Wall on Structure	N/A	8		57
	0927100080	519 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	5662100035	18039 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		46
	5662100040	18045 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		46
	0927100084	518 Ne 182nd Ct	SF Residence on 182nd Ct.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	0927100083	504 Ne 182nd Ct	SF Residence on 182nd Ct.	1	66	2	No	No	72	Ldn	62	68	--	1	Wall on Structure	N/A	8		59
	0927100085	18210 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	73	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	0927100090	505 Ne 183rd Ct	SF Residence on 183rd Ct.	1	66	2	No	No	73	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	0927100094	18310 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	74	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	0927100098	18320 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	74	Ldn	62	68	--	1	Wall on Structure	N/A	8		61
	0927100081	514 Ne 182nd Ct	SF Residence on 182nd Ct.	1	65	2	No	No	69	Ldn	61	67	--	1	Wall on Structure	N/A	8		57
	5662100045	18051 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		48
	5662100050	18057 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		48
	0927100091	515 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	69	Ldn	61	67	--	1	Wall on Structure	N/A	8		57
	5662100055	18063 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	0927100092	520 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	8		52
	0927100093	514 Ne 183rd Ct	SF Residence on 183rd Ct.	1	65	2	No	No	71	Ldn	61	67	--	1	Wall on Structure	N/A	8		59
	0927100105	18326 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	73	Ldn	62	68	--	1	Wall on Structure	N/A	8		60
	0927100100	18330 5th Ave Ne	SF Residence on 5th Ave.	1	66	2	No	No	72	Ldn	62	68	--	1	Wall on Structure	N/A	8		59
	0927100110	-	Empty Lot	0	67	--	No	No							Wall on Structure	N/A	8		
	5662100075	18313 7th Ave Ne	SF Residence on 7th Ave.	1	68	2	Yes	No	68	Ldn	63	69	1	--	Wall on Structure	Special	4		60
	5662100080	18316 7th Ave Ne	SF Residence on 7th Ave.	1	70	2	Yes	No	67	Ldn	65	70	1	--	Wall on Structure	Special	4		59
	0927100016	18323 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No	66	Ldn	64	70	1	--	Wall on Structure	Special	4		58
	0927100015	18329 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No	65	Ldn	64	70	1	--	Wall on Structure	Special	4		58
M-28: 70.97	0927100011	721 Ne 185th St	SF Residence on 185th St.	1	71	2	Yes	No	65	Ldn	66	71	--	--		Special			65
	5662100060	18069 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	5662100065	18301 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	8		51
	5662100070	18307 7th Ave Ne	SF Residence on 7th Ave.	1	65	2	No	No	69	Ldn	61	67	--	1	Wall on Structure	N/A	8		56
	5662100090	18308 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	5662100085	18317 7th Ave Ne	SF Residence on 7th Ave.	1	69	2	Yes	Yes	60	Ldn	64	70	--	--	Wall on Structure	Special	4		52
	0927100008	731 Ne 185th St	SF Residence on 185th St.	1	70	2	Yes	No	60	Ldn	65	70	--	--	Wall on Structure	Special	4		53
	6163900092	18342 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	Yes	Yes	57	Ldn	63	69	--	--	Wall on Structure	Special	4		49
	6163900091	18343 9th Ave Ne	SF Residence on 9th Ave.	1	68	2	Yes	No	58	Ldn	63	69	--	--	Wall on Structure	Special	4		50
	6163900095	18332 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No	58	Ldn	63	68	--	--	Wall on Structure	Special	4		50
	6163900082	18318 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No	57	Ldn	63	68	--	--	Wall on Structure	Special	4		50
	6163900081	18312 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	No	58	Ldn	61	67	--	--	Wall on Structure	Special	8		46
	6163900073	18306 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No	58	Ldn	60	66	--	--	Wall on Structure	Special	8		46
	6163900071	18300 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	8		44
	5662100095	18302 7th Ave Ne	SF Residence on 7th Ave.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	5662100100	18070 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	5662100105	18064 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	5662100110	18058 7th Ave Ne	SF Residence on 7th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	8		45
	5662100115	18052 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	5662100120	18046 7th Ave Ne	SF Residence on 7th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		44
	6163900063	18072 8th Ave Ne		1	62	2	Yes	No	58	Ldn	59	65	--	--	Wall on Structure	Special	8		45
	6163900061	18066 8th Ave Ne		1	62	2	Yes	No	58	Ldn	59	65	--	--	Wall on Structure	Special	8		45
	6163900053	18060 8th Ave Ne		1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	6163900050	18054 8th Ave Ne		1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	6163900043	18048 8th Ave Ne		1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
NE 185th Street to																			
	0526049029	18510 7th Ave Ne	SF Residence on 7th Ave.	0	69	2	No	No							Wall on Structure	N/A	4		
	0526049060	18516 7th Ave Ne	SF Residence on 7th Ave.	0	66	2	No	No							Wall on Structure	N/A	4		
	0526049027	18520 7th Ave Ne	SF Residence on 7th Ave.	0	64	2	No	No							Wall on Structure	N/A	4		
	0526049044	18528 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049015	18534 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049056	18540 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049061	18546 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049032	18552 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049031	18558 7th Ave Ne	SF Residence on 7th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	3971702321	707 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall on Structure	N/A	4		
	3971702325	703 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall on Structure	N/A	8		
	3971702320	715 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	73	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	60
	3971702316	719 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	73	Ldn	60	66	--	1	Wall on Structure	N/A	8		59
	3971702315	721 Ne 189th St	SF Residence on 189th St.	1	63	2	Yes	Yes	71	Ldn	60	66	--	1	Wall on Structure	Special	6		59
	3971702311	18807 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	63	Ldn	60	66	1	--	Wall on Structure	Special	8		51

Lynnwood Link Extension A11

Stations: 130th Option 2
145th Option 2
185th Option 2

Total Units Analyzed
851

Impacts:	Moderate	Severe
	272	195

Residual Impacts	
RSIP =	28

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	3971702310	727 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	65	Ldn	60	66	1	--	Wall on Structure	N/A	8		52
	0526049011	18559 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	70	Ldn	60	66	--	1	Wall on Structure	Special	6		58
	0526049024	18553 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	69	Ldn	60	66	--	1	Wall on Structure	Special	6		57
	0526049025	18547 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	64	Ldn	60	66	1	--	Wall on Structure	Special	4		56
	0526049050	18539 8th Ave Ne	SF Residence on 8th Ave.	0	63	2	No	No							Wall on Structure	N/A	4		
	0526049026	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	0526049055	18533 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No							Wall on Structure	Special	4		
	0526049054	18529 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	No							Wall on Structure	Special	4		
	0526049040	18523 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	No							Wall on Structure	Special	4		
	0526049028	18517 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	Yes	No							Wall on Structure	Special	4		
	0526049052	18511 8th Ave Ne	SF Residence on 8th Ave.	1	69	2	Yes	No							Wall on Structure	Special	4		
	0526049030	18509 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	Yes	No							Wall on Structure	Special	4		
	3235100273	814 Ne 185th St	SF Residence on 185th St.	1	71	2	Yes	Yes	54	Ldn	66	71	--	--	Wall on Structure	Special	4		46
	3235100270	18504 8th Ave Ne	SF Residence on 8th Ave.	1	71	2	Yes	Yes	59	Ldn	66	71	--	--	Wall on Structure	Special	4		51
	3235100265	18510 8th Ave Ne	SF Residence on 8th Ave.	1	68	2	Yes	Yes	59	Ldn	63	69	--	--	Wall on Structure	Special	4		52
	3235100260	18516 8th Ave Ne	SF Residence on 8th Ave.	1	65	2	Yes	Yes	60	Ldn	61	67	--	--		Special			60
	3235100255	18522 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	Yes	Yes	60	Ldn	60	66	1	--	Wall on Structure	Special	4		52
M-29: 64.4	3235100249	18528 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	60	Ldn	59	65	1	--	Wall on Structure	Special	4		52
	3235100244	18534 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	60	Ldn	59	65	1	--	Wall on Structure	Special	4		52
	3235100240	18540 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	60	Ldn	59	65	1	--	Wall on Structure	Special	4		52
	3235100205	18554 8th Ave Ne	SF Residence on 8th Ave.	1	61	2	Yes	Yes	60	Ldn	59	65	1	--	Wall on Structure	Special	4		52
	3235100210	811 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	Yes	58	Ldn	59	65	--	--	Wall on Structure	Special	4		50
	3235100215	817 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	Yes	57	Ldn	59	65	--	--	Wall on Structure	Special	4		49
	3235100220	823 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	57	Ldn	58	64	--	--	Wall on Structure	Special	4		48
	3235100224	829 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	57	Ldn	58	64	--	--	Wall on Structure	Special	4		48
	3235100230	835 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	56	Ldn	58	64	--	--	Wall on Structure	Special	4		47
	3235100235	841 Ne 188th St	SF Residence on 188th St.	1	60	2	Yes	Yes	56	Ldn	58	64	--	--	Wall on Structure	Special	4		47
	3235100200	18810 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	Yes	Yes	59	Ldn	61	66	--	--	Wall on Structure	Special	4		51
	3235100105	18820 8th Ave Ne	SF Residence on 8th Ave.	1	64	2	Yes	Yes	60	Ldn	61	66	--	--		Special			60
	3235100110	811 Ne 189th St	SF Residence on 189th St.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	3235100195	810 Ne 188th St	SF Residence on 188th St.	1	61	2	No	No	58	Ldn	59	65	--	--		N/A			58
	3235100190	816 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	56	Ldn	59	65	--	--	Wall on Structure	Special	4		49
	3235100185	822 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	56	Ldn	59	65	--	--	Wall on Structure	Special	4		48
	3235100120	823 Ne 189th St	SF Residence on 188th St.	1	61	2	Yes	No	56	Ldn	59	65	--	--	Wall on Structure	Special	4		49
	3235100115	817 Ne 188th St	SF Residence on 188th St.	1	61	2	Yes	No	57	Ldn	59	65	--	--	Wall on Structure	Special	4		49
NE 189th Street to	3971702305	728 Ne 189th St	SF Residence on 189th St.	1	63	2	No	No	73	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	60
	3971702295	718 Ne 189th St	SF Residence on 189th St.	0	63	2	No	No							Wall on Structure	N/A	8		
	3971702210	18915 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	72	Ldn	60	66	--	1	Wall on Structure	N/A	8		59
	3971702215	18921 8th Ave Ne	SF Residence on 8th Ave.	1	63	2	No	No	73	Ldn	60	66	--	1	Wall on Structure	N/A	8	1	60
	0526049063	19011 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	73	Ldn	63	68	--	1	Wall on Structure	N/A	6		61
	0526049010	19031 8th Ave Ne	SF Residence on 8th Ave.	1	67	2	No	No	73	Ldn	63	68	--	1	Wall on Structure	N/A	6		61
M-30A&B: 59.4 & 6	0526049007	816 Ne 190th St	School on 190th St.	1	65	3	No	No	68	Leq	66	72	1	--	Wall on Structure	N/A	4		58
	3235100005	18920 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	8		51
	3235100100	18910 8th Ave Ne	SF Residence on 8th Ave.	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		56
	3235100095	810 Ne 189th St	SF Residence on 189th St.	1	60	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	4		53
	3235100010	811 Ne 190th St	SF Residence on 190th St.	1	60	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	8		48
	3235100015	817 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	8		46
	3235100090	816 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	4		51
	3235100085	822 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	3235100080	828 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	3235100075	834 Ne 189th St	SF Residence on 189th St.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	3235100020	823 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	8		44
	3235100025	829 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	8		43
	3235100030	835 Ne 190th St	SF Residence on 190th St.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	8		42

ATTACHMENT B

Part 1. Detailed Noise Impact Analysis Sheets: B Alternatives

Lynnwood Link Extension B1

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		89	29	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
East Side of I-5																			
NE 189th Street to NE 200th Street																			
Begin B1 M30B-65	526049034	None	Athletic Field	1	65	3	No	No								N/A			
	526049017	-	Empty Lot	0	65	--	No	No								N/A			
	5490700080	805 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	56	Ldn	61	66	--	--		N/A			56
	5490700075	814 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	56	Ldn	61	66	--	--		N/A			56
	5490700070	812 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	55	Ldn	61	66	--	--		N/A			55
	5490700005	-	Empty Lot	0	64	--	No	No								N/A			
	5490700010	815 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	5490700015	821 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	47	Ldn	63	68	--	--		N/A			47
	5490700020	827 Ne 195th St	SF Residence on 195th St.	1	65	2	No	No	43	Ldn	61	67	--	--		N/A			43
	5490700065	818 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	47	Ldn	63	68	--	--		N/A			47
	5490700060	824 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	43	Ldn	63	68	--	--		N/A			43
	5490700085	817 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	53	Ldn	63	68	--	--		N/A			53
	5490700090	823 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	45	Ldn	63	68	--	--		N/A			45
	5490700095	831 Ne 194th St	SF Residence on 194th St.	1	65	2	No	No	42	Ldn	61	67	--	--		N/A			42
	3985300331	822 Ne 195th St	SF Residence on 195th St.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57
	7805300020	19605 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--		N/A			56
	3985300330	-	Empty Lot	0	64	--	No	No								N/A			
	7805300030	19705 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57
	7805300040	19715 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57
	7805300050	19723 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	7805300060	19731 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	54	Ldn	61	66	--	--		N/A			54
	3971700710	1000 Ne 198th St	SF Residence on 198th St.	1	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	3971700707	1006 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	62	Ldn	63	68	--	--		N/A			62
	3971700540	-	Empty Lot	0	64	--	No	No								N/A			
	7805300180	834 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	53	Ldn	63	68	--	--		N/A			53
	7805300010	840 Ne 195th St	SF Residence on 195th St.	1	65	2	No	No	50	Ldn	61	67	--	--		N/A			50
	7805300130	1003 NE 196th	SF Residence on 196th St.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
M-55: 65.4	7805300140	19604 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	43	Ldn	61	67	--	--		N/A			43
	7805300150	1020 NE 196th	SF Residence on 196th St.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	7805300160	1010 Ne 197th St	SF Residence on 197th St.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	7805300170	19728 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	7805300100	1036 Ne 197th St	SF Residence on 197th St.	1	65	2	No	No	50	Ldn	61	67	--	--		N/A			50
	7805300070	19741 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	3971700705	1002 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	51	Ldn	63	68	--	--		N/A			51
	3971700700	1010 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	67	Ldn	61	67	--	1	Wall on Structure	N/A	4		57
	3971700695	1016 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
	3971700690	1022 NE 198th	SF Residence on 198th St.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		53
	3971700551	-	Empty Lot	0	67	--	No	No							Wall on Structure	N/A	4		
NE 200th Street to SR 104																			
	3971700560	1103 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	70	Ldn	61	66	--	1	Wall on Structure	N/A	6		59
M-56: 63.1	3971700570	1107 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	6		51
	3971700575	1109 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	6		49
	3971700580	1111 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	6		48
	3971700585	1115 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	6		48
	3971700590	1117 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	6		47
	3971700595	1119 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	6		43
	3971700597	1201 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	6		43
	3971700600	1207 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	54	Ldn	57	63	--	--	Wall on Structure	N/A	6		42
	3971700230	1102 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	70	Ldn	61	66	--	1	Wall on Structure	N/A	6		59
	3971700225	1104 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	64	Ldn	60	66	1	--	Wall on Structure	N/A	6		52
	3971700220	1114 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		53
	3971700215	20005 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	6		48
	3971700525	1206 Ne Ballinger Pl	SF Residence on Ballinger Pl	2	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	6		45
	3971700515	1212 NE Ballinger Pl.	SF Residence on Ballinger Pl	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	6		42
	3985300269	1108 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	70	Ldn	60	66	--	1	Wall on Structure	N/A	6		59
	3985300265	1110 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	69	Ldn	59	65	--	1	Wall on Structure	N/A	6		58
	3985300267	1112 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	6		50
	3985300266	20015 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	6		48
	3985300209	20014 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	6		45
	3985300208	20018 12th Ave.	SF Residence on 12th Ave.	1	58	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	6		43
	3985300268	20017 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	6		56
	3985300264	20019 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	60	Ldn	57	63	1	--	Wall on Structure	N/A	6		48
	3985300206	20026 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	6		47
	3985300207	20022 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	6		45
	3985300261	20035 12th Ave Ne	SF Residence on 12th Ave.	1	62	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	8		58
M-57: 58.2	3985300263	20039 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	62	Ldn	57	63	1	--	Wall on Structure	N/A	8		50

Lynnwood Link Extension B1

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		89	29	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	3985300198	20038 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	8		46
	3985300197	20040 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		43
	3985300262	20041 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	68	Ldn	57	63	--	1	Wall on Structure	N/A	8		55
	3985300195	20044 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	8		46
	3985300196	20042 12th Ave Ne		1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	8		44
	3985300260	20043 12th Ave Ne	SF Residence on 12th Ave.	1	65	2	No	No	70	Ldn	61	67	--	1	Wall on Structure	N/A	6		59
	3985300244	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	6		
	0308000070	20101 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	6		56
	0308000060	20105 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	6		57
	0308000050	20109 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	6		56
	0308000040	20108 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	6		49
	0308000030	20104 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	6		49
	0308000020	20102 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	61	Ldn	58	64	1	--	Wall on Structure	N/A	6		49
	0308000010	20100 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	6		46
	0308000015	20041 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		44
	3985300175	20107 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		44
	3985300176	20117 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	58	Ldn	58	64	2	--	Wall on Structure	N/A	6		46
	3985300177	20123 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	6		45
	3985300178	20131 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	61	2	No	No	61	Ldn	59	65	2	--	Wall on Structure	N/A	4		53
	3985300147	20149 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	6		56
	3985300146	20145 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		59
	3985300145	20141 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		59
	6792000000	20101 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	6		44
	3971700175	20121 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	59	Ldn	59	65	4	--	Wall on Structure	N/A	4		50
	3971700165	20125 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	3971700156	20129 14th Ave Ne	SF Residence on 14th Ave.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	3985300135	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700158	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700154	20307 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		58
M-31: 61.7	3971700145	20313 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		58
	3971700130	20317 14th Ave Ne	MF Residence on 14th Ave.	4	62	2	No	No	66	Ldn	59	65	--	4	Wall on Structure	N/A	4		58
	3971700125	20327 14th Ave Ne	MF Residence on 14th Ave.	2	63	2	No	No	66	Ldn	60	66	--	2	Wall on Structure	N/A	4		58
	3971700120	20329 14th Ave Ne	MF Residence on 14th Ave.	4	64	2	No	No	66	Ldn	61	66	--	4	Wall on Structure	N/A	4		58
	3971700104	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	4		
	3971700105	20333 14th Ave Ne	MF Residence on 14th Ave.	3	66	2	No	No	66	Ldn	62	68	3	--	Wall on Structure	N/A	4		58
	3971700100	20343 14th Ave Ne	MF Residence on 14th Ave.	3	67	2	No	No	66	Ldn	63	68	3	--	Wall on Structure	N/A	4		58
	397170020	20333 15th Ave Ne	Largo Vista Apt. Courtyard	31	66	2	No	No	59	Ldn	62	68	--	--		N/A			59
SR 104 to 236th Street																			
	00520500101201	6015 244th St SW	Motel 6 on 244th near 242nd and Gateway - south bldg.	45	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00520500101201	6015 244th St SW	Motel 6 - north bldg.	26	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00520500102000	23908 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102100	23905 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102200	23904 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102300	23902 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		52
	00520500102400	23900 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	4		52
	00520500102500	23810 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	4		52
	00520500102600	23808 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	4		52
	00520500102700	23806 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102800	23804 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102900	23802 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00520900200100	5909 238th St SW	SF Residence on 238th St.	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		55
	00520900200200	6001 238th St SW	SF Residence on 238th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00520900200300	5907 238th St SW	SF Residence on 238th St.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00520900200600	6002 237th St SW	SF Residence on 237th St.	1	62	2	No	Yes	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		56
	00520900200700	5908 237th St SW	SF Residence on 237th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00520900200900	5904 237th St SW	SF Residence on 237th St.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00520900201300	5909 237th St SW	SF Residence on 237th St.	1	62	2	No	Yes	63	Ldn	59	65	1	--	Wall on Structure	N/A	4		54
	00520900201400	5907 237th St SW	SF Residence on 237th St.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00520900201800	5906 236th St SW	SF Residence on 236th St.	1	62	2	No	Yes	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00520900201900	5904 236th St SW	SF Residence on 236th St.	1	62	2	No	Yes	55	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
236th Street to 230th Street																			
	00524100001500	23506 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--		N/A			62
M-33: 67.525	00524100001400	23504 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--		N/A			62

Lynnwood Link Extension B1

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		89	29	RSIP =	0

Receiver Information								Impact Analysis						Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524100001300	23502 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--		N/A			62
	00524100001200	23501 59th Pl W	SF Residence on 59th Pl.	1	67	2	No	Yes	61	Ldn	63	68	--	--		N/A			61
	00524100001100	23503 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--		N/A			60
	00524100001000	23505 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--		N/A			60
	00524100000900	23507 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--		N/A			60
	00524100000800	23509 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--		N/A			60
	00524800001502	6002 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	6		48
	00524800001400	6004 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	6		58
M-34: 73.15	00524800001300	6005 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	71	Ldn	66	72	1	--	Wall on Structure	N/A	6		57
	00524800001200	6003 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	6		55
	00524800001100	6001 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	61	Ldn	66	72	--	--	Wall on Structure	N/A	6		47
	00524800001000	6002 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	59	Ldn	66	72	--	--	Wall on Structure	N/A	6		45
	00524800000900	6004 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	6		48
	00524800000800	6006 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	No	No	71	Ldn	66	72	1	--	Wall on Structure	N/A	6		57
	00524800000700	6005 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	6		56
	00524800000600	6003 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	6		48
	00524800000500	6001 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	60	Ldn	66	72	--	--	Wall on Structure	N/A	6		46
	00524800000100	6102 232nd St SW	SF Residence on 232nd St.	1	73	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	6		55
	00524800000200	6006 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	6		49
	00524800000300	6004 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	60	Ldn	66	72	--	--	Wall on Structure	N/A	6		46
	00524800000401	6002 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	58	Ldn	66	72	--	--	Wall on Structure	N/A	6		44
	00522000302300	23112 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	70	Ldn	66	73	1	--	Wall on Structure	N/A	6		56
	00522000302400	23110 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	69	Ldn	66	73	1	--	Wall on Structure	N/A	6		55
	00522000302500	23106 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	69	Ldn	66	73	1	--	Wall on Structure	N/A	6		55
	00522000302700	23102 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	69	Ldn	66	73	1	--	Wall on Structure	N/A	6		55
	00522000302800	23010 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	68	Ldn	66	73	1	--	Wall on Structure	N/A	6		54
	00522000302900	23008 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	70	Ldn	66	73	1	--	Wall on Structure	N/A	6		56
	00522000600100	6008 230th St SW	SF Residence on 230th St.	1	67	2	No	No	63	Ldn	63	68	1	--	Wall on Structure	N/A	6		49
	00522000600200	23007 61st Ave W	SF Residence on 61st Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	6		47
	00522000600300	23009 61st Ave W	SF Residence on 61st Ave.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	6		46
	00522000600400	23101 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	6		44
	00522000600500	23105 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	6		44
	00522000600600	23109 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	6		44
	00522000600800	6007 232nd St SW	SF Residence on 232nd St.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	6		46
	00522000600900	6003 232nd St SW	SF Residence on 232nd St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	6		45
	00522000601000	23108 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	6		45
	00522000601100	23106 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	6		45
	00522000601200	23100 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	6		45
	00522000601300	23008 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	6		44
	00522000601400	23006 60st Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	6		46
	00522000601600	6004 230th St SW	SF Residence on 230th St.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	6		48
230th Street to 220th Street																			
	00522000500700	6007 230th St SW	SF Residence on 230th St.	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
	00522000500600	22909 61st Ave W	SF Residence on 61st Ave.	1	64	2	No	No	49	Ldn	61	66	--	--		N/A			49
M-35: 63.95	00522000500500	22905 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00522000500400	22901 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00522000500300	22809 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00522000500200	22807 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00522000500100	22803 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00523000300900	22707 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00523000300800	22705 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00523000300700	22703 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	48	Ldn	59	65	--	--	Wall At-Grade	N/A	6		42
	00523000300600	22701 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	48	Ldn	59	65	--	--	Wall At-Grade	N/A	6		42
	00523000300500	22609 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	48	Ldn	59	65	--	--	Wall At-Grade	N/A	6		42
	00523000300400	22607 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	49	Ldn	59	65	--	--	Wall At-Grade	N/A	6		42
	00523000300300	22605 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	49	Ldn	59	65	--	--	Wall At-Grade	N/A	6		43
	00523000300200	22603 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	49	Ldn	59	65	--	--	Wall At-Grade	N/A	6		43
	00523000300100	6004 226th St SW	SF Residence on 226th St.	1	61	2	No	No	50	Ldn	59	65	--	--	Wall At-Grade	N/A	6		44
	00523000201500	6005 226th St SW	SF Residence on 226th St.	1	59	2	No	No	52	Ldn	58	64	--	--	Wall At-Grade	N/A	6		45
	00523000200900	6006 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	50	Ldn	58	64	--	--		N/A			50
	00523000200600	6003 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	47	Ldn	58	64	--	--		N/A			47
	00523000200200	6004 224th St SW	SF Residence on 224th St.	1	60	2	No	No	47	Ldn	58	64	--	--		N/A			47
	00523000100900	6003 224th St SW	SF Residence on 224th St.	1	61	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00523000100800	22306 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00523000100700	22304 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00523000100600	22302 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00523000100500	22210 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00523000100400	22208 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00523000100300	22206 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	48	Ldn	60	66	--	--		N/A			48
	00523000100200	22204 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--		N/A			49
	00523000100100	22202 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--		N/A			49

Lynnwood Link Extension B1

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		89	29	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524900000500	22111 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00524900000400	22109 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00524900000300	22107 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	49	Ldn	59	65	--	--	Wall At-Grade	N/A	6		43
	00524900000200	22105 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	51	Ldn	59	65	--	--	Wall At-Grade	N/A	6		45
	00524900000100	22103 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	52	Ldn	61	66	--	--	Wall At-Grade	N/A	6		45
	00523300002800	5904 221st St SW	SF Residence on 221st St.	1	65	2	No	No	52	Ldn	61	67	--	--	Wall At-Grade	N/A	6		46
	00523300001700	5905 221st St SW	SF Residence on 221st St.	1	67	2	No	No	55	Ldn	63	68	--	--	Wall At-Grade	N/A	6		50
	00523300001800	5903 221st St SW	SF Residence on 221st St.	1	67	2	No	No	55	Ldn	63	68	--	--	Wall At-Grade	N/A	6		49
	00523300001900	5809 221st St SW	SF Residence on 221st St.	1	66	2	No	No	54	Ldn	62	68	--	--	Wall At-Grade	N/A	6		49
220th Street to 212th Street																			
	00523300001000	5902 219th St SW	SF Residence on 219th St.	1	73	2	No	No	51	Ldn	66	72	--	--	Wall At-Grade	N/A	6		45
M-36: 63.325	00523300000700	5905 219th St SW	SF Residence on 219th St.	1	63	2	No	No	53	Ldn	60	66	--	--	Wall At-Grade	N/A	6		46
	00523300000600	5901 219th St SW		1	61	2	No	No	54	Ldn	59	65	--	--	Wall At-Grade	N/A	6		48
	00441000000500	5810 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	No	51	Ldn	58	64	--	--	Wall At-Grade	N/A	6		45
	00441000000400	5808 218th Pl SW		1	59	2	No	No	53	Ldn	58	64	--	--	Wall At-Grade	N/A	6		47
	00441000000600	5811 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	No	52	Ldn	58	64	--	--	Wall At-Grade	N/A	6		45
	00441000000701	5809 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	No	52	Ldn	58	64	--	--	Wall At-Grade	N/A	6		45
	00619900005502	21726 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	53	Ldn	61	67	--	--	Wall At-Grade	N/A	6		46
	00619900005503	21712 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	52	Ldn	61	67	--	--	Wall At-Grade	N/A	6		46
	00619900005300	-	Empty Lot	0	67	--	No	No							Wall At-Grade	N/A	6		
	00619900005101	21620 58th Ave W	SF Residence on 58th Ave.	1	68	2	No	No	53	Ldn	63	69	--	--	Wall At-Grade	N/A	6		46
	00619900005103	21616 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall At-Grade	N/A	6		47
	00619900004900	21530 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall At-Grade	N/A	6		47
	00619900004700	21528 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall At-Grade	N/A	6		47
M-37: 65.35	00766700000700	5709 215th Pl SW	SF Residence on 215th Pl.	1	65	2	No	No	53	Ldn	61	67	--	--	Wall At-Grade	N/A	6		47
	00619900001601	21501 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall At-Grade	N/A	6		47
	00619900001701	-	Empty Lot	0	65	--	No	No							Wall At-Grade	N/A	6		
	00619900001702	21404 56th Ave W	SF Residence on 56th Ave.	1	66	2	No	No	54	Ldn	62	68	--	--	Wall At-Grade	N/A	6		47
	00474800001400	5506 214th Pl SW	SF Residence on 214th Pl.	1	68	2	No	No	53	Ldn	63	69	--	--	Wall At-Grade	N/A	6		46
	00474800001800	5503 214th Pl SW	SF Residence on 214th Pl.	1	70	2	No	No	52	Ldn	65	70	--	--	Wall At-Grade	N/A	6		46
	00474800001900	5505 214th Pl SW	SF Residence on 214th Pl.	1	72	2	No	No	53	Ldn	66	72	--	--	Wall At-Grade	N/A	6		46
	27042800202000	5509 214th Pl SW	SF Residence on 214th Pl.	2	74	2	No	No	55	Ldn	66	73	--	--	Wall At-Grade	N/A	6		48
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. D Grnd. Floor	2	75	2	No	No	52	Ldn	66	74	--	--	Wall At-Grade	N/A	6		46
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. D 1st Floor	2	75	2	No	No	52	Ldn	66	74	--	--	Wall At-Grade	N/A	6		46
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. C Grnd. Floor	2	75	2	No	No	54	Ldn	66	74	--	--	Wall At-Grade	N/A	6		47
M-38: 75.1	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. C 1st Floor	2	75	2	No	No	54	Ldn	66	74	--	--	Wall At-Grade	N/A	6		47
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. B Grnd. Floor	4	75	2	Yes	No	54	Ldn	66	74	--	--	Wall on Retaining Wall	Special	6		46
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. B 1st Floor	4	75	2	Yes	No	54	Ldn	66	74	--	--	Wall on Retaining Wall	Special	6		46
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. A Grnd. Floor	4	75	2	Yes	No	56	Ldn	66	74	--	--		Special			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. A 1st Floor	4	75	2	Yes	No	56	Ldn	66	74	--	--		Special			56
	27042800201600	5302 212th St SW	Duplex on 212th St.	2	74	2	Yes	No	63	Ldn	66	73	--	--		Special			63
	27042800200600	5228 212th St SW	SF Residence on 212th St.	1	73	2	No	No	63	Ldn	66	72	--	--		N/A			63
	27042800200700	5222 212th St SW	Triplex on 212th St.	3	72	2	No	No	63	Ldn	66	72	--	--		N/A			63
West Side of I-5																			
SR 104 to 232nd Street																			
	27043200400200	6601 244th St SW	Nile Shrine Golf Course between SR104 &236th	1	68	3	No	No								N/A			
	00524700001500	6300 234th St SW	SF Residence on 234th St.	1	72	2	No	No	53	Ldn	66	72	--	--		N/A			53
	00524700003400	6301 234th St SW	SF Residence on 234th St.	1	69	2	No	No	53	Ldn	64	70	--	--		N/A			53
	00524700003300	23310 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00524700003200	23308 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00524700003100	23306 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	57	Ldn	64	70	--	--		N/A			57
	00524700003000	23304 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	57	Ldn	64	70	--	--		N/A			57
	00524700002900	23302 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	00524700002800	23300 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59
	00524700002700	23212 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	00524700000500	23209 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	63	Ldn	66	75	--	--		N/A			63
	00524700000400	23207 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	66	Ldn	66	75	1	--	Wall on Structure	N/A	4		56
	00524700000300	23205 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	66	Ldn	66	73	1	--	Wall on Structure	N/A	4		56
	00524700000200	23203 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	66	Ldn	66	73	1	--	Wall on Structure	N/A	4		56
	00524700000100	23201 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	61	Ldn	66	73	--	--	Wall on Structure	N/A	4		51
	27043200100100	23117 63rd Ave W	SF Residence on 63rd Ave.	1	77	2	No	No	68	Ldn	66	75	1	--	Wall on Structure	N/A	4		58

Lynnwood Link Extension B1

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		89	29	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
232nd Street to 228th Street																			
	00522300305300	23115 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	68	Ldn	66	75	1	--	Wall on Structure	N/A	4		58
	00522300305400	23113 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	68	Ldn	66	75	1	--	Wall on Structure	N/A	4		58
	00522300305500	23111 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	00522300306400	23014 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	68	Ldn	66	75	1	--	Wall on Structure	N/A	4		58
	00522300306500	23015 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	69	Ldn	66	75	1	--	Wall on Structure	N/A	4		59
	00522300306600	23013 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	69	Ldn	66	75	1	--	Wall on Structure	N/A	4		59
	00522300306700	23011 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	69	Ldn	66	75	1	--	Wall on Structure	N/A	4		59
	00522300306800	23009 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	69	Ldn	66	75	1	--	Wall on Structure	N/A	4		59
	00522300306900	23007 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	69	Ldn	66	75	1	--	Wall on Structure	N/A	4		59
M-39: 76.45	00522300307000	23005 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	63	Ldn	66	75	--	--	Wall on Retaining Wall	N/A	4		58
	00522300307100	23003 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	63	Ldn	66	75	--	--	Wall on Retaining Wall	N/A	4		58
	00522300307200	23001 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	63	Ldn	66	75	--	--	Wall on Retaining Wall	N/A	4		58
	00522300307201	22909 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	63	Ldn	66	75	--	--	Wall on Retaining Wall	N/A	4		58
	00522400007301	22905 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	63	Ldn	66	75	--	--	Wall on Retaining Wall	N/A	4		58
	00522400007300	22903 63rd Ave W	SF Residence on 63rd Ave.	1	75	2	No	No	62	Ldn	66	74	--	--	Wall on Retaining Wall	N/A	4		57
	00522400007400	22901 63rd Ave W	SF Residence on 63rd Ave.	1	72	2	No	No	60	Ldn	66	72	--	--	Wall on Retaining Wall	N/A	4		56
	00522300103300	23112 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	58	Ldn	61	67	--	--	Wall on Structure	N/A	4		48
	00522300305600	23109 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Structure	N/A	4		50
	00522300306300	23012 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	00522300306200	23010 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	00522300306100	23008 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	00522300305700	23107 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	58	Ldn	61	67	--	--	Wall on Structure	N/A	4		48
	00522300305800	23105 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	58	Ldn	61	67	--	--	Wall on Structure	N/A	4		48
	00522300305900	23103 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	58	Ldn	61	67	--	--	Wall on Structure	N/A	4		48
	00522300306000	23101 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00522300204600	23002 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	00522300204700	6302 230th St SW	SF Residence on 230th St.	1	68	2	No	No	55	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		51
	00522300204500	23004 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00522300204800	6304 230th St SW	SF Residence on 230th St.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	00522400007800	6301 230th St SW	SF Residence on 230th St.	1	68	2	No	No	54	Ldn	63	69	--	--		N/A			54
	00522400007700	22906 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	54	Ldn	63	69	--	--		N/A			54
	00522400007600	22904 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	54	Ldn	63	69	--	--		N/A			54
	00522400007500	22902 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	54	Ldn	63	69	--	--		N/A			54
	00522400007900	6303 230th St SW	SF Residence on 230th St.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	00522400009200	22807 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	00522400009100	22805 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	00522400009000	22803 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	00522400008900	22801 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
228th Street to 220th Street																			
	00524000000500	6101 227th St SW	SF Residence on 227th St.	1	69	2	No	No	61	Ldn	64	70	--	--		N/A			61
M-40: 68.5	00524000000600	6103 227th St SW	SF Residence on 227th St.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	00524000000700	6201 227th St SW	SF Residence on 227th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	00524000000800	6203 227th St SW	SF Residence on 227th St.	1	68	2	No	No	53	Ldn	63	69	--	--		N/A			53
	00524000003501	22611 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00524000003601	22605 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	00524000003801	22603 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	00524000004000	22601 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	00524000004100	22505 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	00524000004200	22503 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	00524000004300	22501 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	00524000004400	22407 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00524000004500	22405 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00524000004600	22403 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00524000004700	22309 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00524000004800	22307 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	54	Ldn	61	67	--	--		N/A			54
	00524000004900	22305 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	54	Ldn	61	67	--	--		N/A			54
	00524000005000	-	Empty Lot	0	71	--	No	No								N/A			
	00524000005100	22209 63rd Ave W	SF Residence on 63rd Ave.	1	70	2	No	No	54	Ldn	65	70	--	--		N/A			54
	00524000005400	22207 62nd Ave W	SF Residence on 62nd Ave.	1	70	2	No	No	54	Ldn	65	70	--	--		N/A			54
	00524000005500	22205 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	00524000005600	22203 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	No	57	Ldn	64	70	--	--		N/A			57
	00524000005700	22201 62nd Ave W	SF Residence on 62nd Ave.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59
M-41: 66.9 LEQ	00378200300600	6205 222nd St SW	School on 222nd St.	1	68	3	No	No								N/A			
	00524000003400	22610 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00524000003300	22608 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00524000003200	22606 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00524000003100	22604 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	00524000003000	6202 226th St SW	SF Residence on 226th St.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	00524000006700	22504 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50

Lynnwood Link Extension B1

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		89	29	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524000006800	22502 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	00524000007300	22406 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	00524000007400	6202 224th St SW	SF Residence on 224th St.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	00524000008400	6201 224th St SW	SF Residence on 224th St.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	00524000008500	22302 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00524000008600	6202 223rd Pl SW	SF Residence on 223rd Pl.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	00524000009200	22206 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	00524000009301	22204 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00524000009401	22202 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00524000009500	6202 222nd St SW	SF Residence on 222nd St.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00524000002600	22605 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00524000002700	22603 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00524000002800	22601 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00524000002900	6204 226th St SW	SF Residence on 226th St.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00524000006600	6201 226th St SW	SF Residence on 226th St.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00524000006900	6202 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00524000007200	6201 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00524000007500	6204 224th St SW	SF Residence on 224th St.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00524000008700	6204 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00524000009100	6201 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00524000009302	6208 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	No	46	Ldn	57	63	--	--		N/A			46
	00524000009402	6207 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	No	46	Ldn	57	63	--	--		N/A			46
M-42: 57.4	00524000009700	6206 222nd St S	SF Residence on 222nd St.	2	57	2	No	No	47	Ldn	57	63	--	--		N/A			47
	00524000009600	6204 222nd St SW	SF Residence on 222nd St.	1	66	2	No	No	47	Ldn	62	68	--	--		N/A			47
	00378200300503	6303 222nd St SW	SF Residence on 222nd St.	1	56	2	No	No	52	Ldn	56	63	--	--		N/A			52
	00378200300501	6305 222nd St SW	SF Residence on 222nd St.	1	56	2	No	No	52	Ldn	56	63	--	--	Wall At-Grade	N/A	4		49
	00378200300502	6307 222nd St SW	SF Residence on 222nd St.	1	56	2	No	No	50	Ldn	56	63	--	--	Wall At-Grade	N/A	4		47
	00378200300504	22103 64th Ave W	SF Residence on 64th Ave.	1	56	2	No	No	48	Ldn	56	63	--	--	Wall At-Grade	N/A	4		45
M-43: 55.9	00525400001300	6302 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	57	Ldn	56	63	1	--	Wall At-Grade	N/A	4		54
	00525400001400	6304 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	51	Ldn	56	63	--	--	Wall At-Grade	N/A	4		49
	00525400001500	6306 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	48	Ldn	56	63	--	--		N/A			48
	00525400001200	6303 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	57	Ldn	56	63	1	--	Wall At-Grade	N/A	4		54
	00525400001100	6305 221st Pl SW	SF Residence on 221st PL.	1	58	2	No	No	52	Ldn	57	63	--	--	Wall At-Grade	N/A	4		49
	00525400001000	6307 221st Pl SW		1	58	2	No	No	49	Ldn	57	63	--	--	Wall At-Grade	N/A	4		47
	00525400000900	22007 64th Ave.		1	58	2	No	No	47	Ldn	57	63	--	--	Wall At-Grade	N/A	4		45
	00525400000800	22005 64th Ave.		1	58	2	No	No	47	Ldn	57	63	--	--	Wall At-Grade	N/A	4		45
	00525400000700	6306 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00525400000600	6304 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00525400000500	6302 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	No	52	Ldn	59	65	--	--		N/A			52
	00525400000400	6303 220th Pl SW	SF Residence on 220th PL.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	00525400000300	6305 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	No	46	Ldn	62	68	--	--		N/A			46
	00525400000200	6307 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
	00525400000100	22001 64th Ave.	SF Residence on 220th PL.	1	66	2	No	No	47	Ldn	62	68	--	--		N/A			47
220th Street to 212th Street																			
	27042900100800	6002 St Albion Way-Bldg. E grnd. Floor	Lakeside Apt. Complex near City Hall	7	69	2	No	No	58	Ldn	64	70	--	--		N/A			58
	27042900100800	6002 St Albion Way-Bldg. E 2nd Floor	Lakeside Apt. Complex near City Hall	7	69	2	No	No	58	Ldn	64	70	--	--		N/A			58
	27042900100800	6002 St Albion Way-Bldg. E 3rd Floor	Lakeside Apt. Complex near City Hall	2	69	2	No	No	58	Ldn	64	70	--	--		N/A			58
	27042900100800	21604 St Albion Way-Bldg. G grnd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	59	Ldn	64	70	--	--		N/A			59
	27042900100800	21604 St Albion Way-Bldg. G 2nd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	59	Ldn	64	70	--	--		N/A			59
	27042900100800	21604 St Albion Way-Bldg. g 3rd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	59	Ldn	64	70	--	--		N/A			59
	27042900100800	6001 St Albion Way-Bldg. F grnd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	27042900100800	6001 St Albion Way-Bldg. F 2nd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	27042900100800	6001 St Albion Way-Bldg. F 3rd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00619900005000	-	Empty Lot	0	72	--	No	No								N/A			
	00619900004800	-	Empty Lot	0	72	--	No	No								N/A			
	00525100002500	21503 60th Ave W	SF Residence on 60th Ave.	1	72	2	No	No	65	Ldn	66	72	--	--		N/A			65
	00525100001100	5912 214th St SW	SF Residence on 214th St.	1	65	2	No	No	54	Ldn	61	67	--	--		N/A			54
	00525100001000	5910 214th St SW	SF Residence on 214th St.	1	67	2	No	No	57	Ldn	63	68	--	--		N/A			57
	00525100000900	5908 214th St SW	SF Residence on 214th St.	1	69	2	No	No	55	Ldn	64	70	--	--		N/A			55
	00525100000800	5906 214th St SW	SF Residence on 214th St.	1	72	2	No	No	58	Ldn	66	72	--	--		N/A			58
	00525100000700	5904 214th St SW	SF Residence on 214th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00525100000600	5902 214th St SW	SF Residence on 214th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55

Lynnwood Link Extension B1

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		89	29	RSIP =	0

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00525100000500	5810 214th St SW	SF Residence on 214th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00525100000400	-	Empty Lot	0	67	--	No	No								N/A			
	00525100000300	5806 214th St SW	SF Residence on 214th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00525100000200	5804 214th St SW	SF Residence on 214th St.	1	67	2	No	No	54	Ldn	63	68	--	--		N/A			54
	00525100000100	5802 214th St SW	SF Residence on 214th St.	1	67	2	No	No	54	Ldn	63	68	--	--		N/A			54
	00525100001200	5909 214th St SW	SF Residence on 214th St.	1	65	2	No	No	42	Ldn	61	67	--	--		N/A			42
	00525100001300	5907 214th St SW	SF Residence on 214th St.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45
	00525100001400	5905 214th St SW	SF Residence on 214th St.	1	63	2	No	No	45	Ldn	60	66	--	--		N/A			45
	00525100001500	5903 214th St SW	SF Residence on 214th St.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00525100001602	5901 214th St SW	SF Residence on 214th St.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00525100002200	21307 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00525100002300	5803 214th St SW	SF Residence on 214th St.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00525100002400	5801 214th St SW	SF Residence on 214th St.	1	63	2	No	No	47	Ldn	60	66	--	--		N/A			47
	00920100000100	21331 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00525100001700	21304 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00525100001800	21302 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	51	Ldn	59	65	--	--		N/A			51
	00525100001900	21301 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	51	Ldn	59	65	--	--		N/A			51
	00525100002000	21303 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	51	Ldn	59	65	--	--		N/A			51
	00525100002100	21305 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00619900004103	21318 58th Ave W	SF Residence on 58th Ave.	1	60	2	No	No	45	Ldn	58	64	--	--		N/A			45
	00619900004102	21316 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00619900004101	21312 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00619900003904	21232 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	50	Ldn	59	65	--	--		N/A			50
	00619900004104	21314 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	51	Ldn	59	65	--	--		N/A			51
	00619900003804	5908 212th Pl SW	SF Residence on 212th Pl.	1	62	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00404100000400	21317 58th Ave W	SF Residence on 58th Ave.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00404100000300	5720 213th St SW	SF Residence on 213th St.	1	64	2	No	No	47	Ldn	61	66	--	--		N/A			47
	00404100000200	5710 213th St SW	SF Residence on 213th St.	1	67	2	No	No	54	Ldn	63	68	--	--		N/A			54
M-45: 66.95	00404100000100	5632 213th St SW	SF Residence on 213th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00619900002602	21229 58th Ave W	Duplex on 58th Ave.	2	60	2	No	No	43	Ldn	58	64	--	--		N/A			43
	00619900002501	5723 213th St SW	SF Residence on 213th St.	1	60	2	No	No	45	Ldn	58	64	--	--		N/A			45
	00619900002502	5721 213th St SW	SF Residence on 213th St.	1	60	2	No	No	43	Ldn	58	64	--	--		N/A			43
	00619900002503	5719 213th St SW	SF Residence on 213th St.	1	60	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00619900002504	5717 213th St SW	SF Residence on 213th St.	1	60	2	No	No	49	Ldn	58	64	--	--		N/A			49
	00619900002402	5711 213th St SW	SF Residence on 213th St.	1	61	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00619900002403	5709 213th St SW	SF Residence on 213th St.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00619900002404	5707 213th St SW	SF Residence on 213th St.	1	62	2	No	No	52	Ldn	59	65	--	--		N/A			52
	00619900002303	5627 213th St SW	Duplex on 213th St.	2	61	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00619900002301	5623 213th St SW	SF Residence on 213th St.	1	61	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00619900003000	5700 212th St SW	SF Residence on 213th St.	1	61	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00619900002900	5616 212th St SW	SF Residence on 213th St.	1	61	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00619900002201	5619 213th St SW	SF Residence on 213th St.	1	61	2	No	No	52	Ldn	59	65	--	--		N/A			52
	00619900002202	5625 213th St SW	SF Residence on 213th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall At-Grade	N/A	4		56
	00619900002101	5615 213th St SW	SF Residence on 213th St.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall At-Grade	N/A	4		57
	00619900002000	5604 212th St SW	SF Residence on 212th St.	1	72	2	No	No	62	Ldn	66	72	--	--	Wall At-Grade	N/A	4		57
	27042800202400	None Given	SF Residence on 212th St.	1	72	2	No	No	62	Ldn	66	72	--	--	Wall At-Grade	N/A	4		57
	27042800202200	5522 212th St SW	SF Residence on 212th St.	1	72	2	No	No	61	Ldn	66	72	--	--	Wall on Retaining Wall	N/A	4		57
	27042800202100	-	Empty Lot	0	72	--	Yes	No							Wall on Retaining Wall	Special	4		
	00619900002102	5610 212th St SW	SF Residence on 212th St.	1	61	2	No	No	54	Ldn	59	65	--	--	Wall At-Grade	N/A	4		50
	00619900002700	5602 212th St SW	SF Residence on 212th St.	1	67	2	No	No	55	Ldn	63	68	--	--	Wall At-Grade	N/A	4		51
	27042800202300	None Given	old number 00619900002300	1	71	2	No	No	55	Ldn	66	71	--	--	Wall At-Grade	N/A	4		51
	27042100306900	5615 212th St SW	SF Residence on 212th St.	1	71	2	No	No	52	Ldn	66	71	--	--	Wall At-Grade	N/A	4		49
	27042100308400	-	Empty Lot	0	71	--	No	No							Wall At-Grade	N/A	4		
	27042100307700	5605 212th St SW	SF Residence on 212th St.	1	64	2	No	No	52	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		48
	27042100310500	5525 212th St SW	SF Residence on 212th St.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		50
M-46: 68.35	27042100305400	20908 54th Ave W #1	Zoned Campground on 54th Ave./212th St.	1	61	2	No	No	52	Ldn	59	65	--	--	Wall on Structure	N/A	4		43

Lynnwood Link Extension B2

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		160	44	RSIP =	3

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
East Side of I-5																			
NE 189th Street to NE 200th Street																			
Begin B1 M30B-65	526049034	None	Athletic Field	1	65	3	No	No								N/A			
	526049017	-	Empty Lot	0	65	--	No	No								N/A			
	5490700080	805 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	56	Ldn	61	66	--	--		N/A			56
	5490700075	814 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	56	Ldn	61	66	--	--		N/A			56
	5490700070	812 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	55	Ldn	61	66	--	--		N/A			55
	5490700005	-	Empty Lot	0	64	--	No	No								N/A			
	5490700010	815 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	5490700015	821 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	47	Ldn	63	68	--	--		N/A			47
	5490700020	827 Ne 195th St	SF Residence on 195th St.	1	65	2	No	No	43	Ldn	61	67	--	--		N/A			43
	5490700065	818 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	47	Ldn	63	68	--	--		N/A			47
	5490700060	824 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	43	Ldn	63	68	--	--		N/A			43
	5490700085	817 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	53	Ldn	63	68	--	--		N/A			53
	5490700090	823 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	45	Ldn	63	68	--	--		N/A			45
	5490700095	831 Ne 194th St	SF Residence on 194th St.	1	65	2	No	No	42	Ldn	61	67	--	--		N/A			42
	3985300331	822 Ne 195th St	SF Residence on 195th St.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57
	7805300020	19605 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--		N/A			56
	3985300330	-	Empty Lot	0	64	--	No	No								N/A			
	7805300030	19705 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57
	7805300040	19715 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57
	7805300050	19723 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	7805300060	19731 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	54	Ldn	61	66	--	--		N/A			54
	3971700710	1000 Ne 198th St	SF Residence on 198th St.	1	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	3971700707	1006 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	62	Ldn	63	68	--	--		N/A			62
	3971700540	-	Empty Lot	0	64	--	No	No								N/A			
	7805300180	834 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	53	Ldn	63	68	--	--		N/A			53
	7805300010	840 Ne 195th St	SF Residence on 195th St.	1	65	2	No	No	50	Ldn	61	67	--	--		N/A			50
	7805300130	1003 NE 196th	SF Residence on 196th St.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
M-55: 65.4	7805300140	19604 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	43	Ldn	61	67	--	--		N/A			43
	7805300150	1020 NE 196th	SF Residence on 196th St.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	7805300160	1010 Ne 197th St	SF Residence on 197th St.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	7805300170	19728 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	7805300100	1036 Ne 197th St	SF Residence on 197th St.	1	65	2	No	No	50	Ldn	61	67	--	--		N/A			50
	7805300070	19741 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	3971700705	1002 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	51	Ldn	63	68	--	--		N/A			51
	3971700700	1010 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	67	Ldn	61	67	--	1	Wall on Structure	N/A	4		57
	3971700695	1016 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
	3971700690	1022 NE 198th	SF Residence on 198th St.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		53
	3971700551	-	Empty Lot	0	67	--	No	No							Wall on Structure	N/A	4		
NE 200th Street to SR 104																			
	3971700560	1103 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	70	Ldn	61	66	--	1	Wall on Structure	N/A	6		59
M-56: 63.1	3971700570	1107 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	6		51
	3971700575	1109 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	6		49
	3971700580	1111 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	6		48
	3971700585	1115 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	6		48
	3971700590	1117 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	6		47
	3971700595	1119 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	6		43
	3971700597	1201 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	6		43
	3971700600	1207 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	54	Ldn	57	63	--	--	Wall on Structure	N/A	6		42
	3971700230	1102 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	70	Ldn	61	66	--	1	Wall on Structure	N/A	6		59
	3971700225	1104 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	64	Ldn	60	66	1	--	Wall on Structure	N/A	6		52
	3971700220	1114 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		53
	3971700215	20005 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		52
	3971700525	1206 Ne Ballinger Pl	SF Residence on Ballinger Pl	2	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	6		45
	3971700515	1212 NE Ballinger Pl.	SF Residence on Ballinger Pl	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	3985300269	1108 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	70	Ldn	60	66	--	1	Wall on Structure	N/A	6		59
	3985300265	1110 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	69	Ldn	59	65	--	1	Wall on Structure	N/A	6		58
	3985300267	1112 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	6		50
	3985300266	20015 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	8		47
	3985300209	20014 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	8		44
	3985300208	20018 12th Ave.	SF Residence on 12th Ave.	1	58	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	3985300268	20017 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	6		56
	3985300264	20019 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	60	Ldn	57	63	1	--	Wall on Structure	N/A	6		48
	3985300206	20026 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		51
	3985300207	20022 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	6		45
	3985300261	20035 12th Ave Ne	SF Residence on 12th Ave.	1	62	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	8		58
M-57: 58.2	3985300263	20039 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	62	Ldn	57	63	1	--	Wall on Structure	N/A	8		50

Lynnwood Link Extension B2

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		160	44	RSIP =	3

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	3985300198	20038 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	8		46
	3985300197	20040 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		43
	3985300262	20041 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	68	Ldn	57	63	--	1	Wall on Structure	N/A	8		55
	3985300195	20044 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	8		46
	3985300196	20042 12th Ave Ne		1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	8		44
	3985300260	20043 12th Ave Ne	SF Residence on 12th Ave.	1	65	2	No	No	70	Ldn	61	67	--	1	Wall on Structure	N/A	4	1	63
	3985300244	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	6		
	0308000070	20101 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	6		56
	0308000060	20105 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	6		57
	0308000050	20109 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	6		56
	0308000040	20108 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	6		49
	0308000030	20104 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	6		49
	0308000020	20102 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	61	Ldn	58	64	1	--	Wall on Structure	N/A	6		49
	0308000010	20100 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	6		46
	0308000015	20041 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		44
	3985300175	20107 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		44
	3985300176	20117 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	58	Ldn	58	64	2	--	Wall on Structure	N/A	6		46
	3985300177	20123 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	6		45
	3985300178	20131 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	61	2	No	No	61	Ldn	59	65	2	--	Wall on Structure	N/A	6		49
	3985300147	20149 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	6		56
	3985300146	20145 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	6		55
	3985300145	20141 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		59
	6792000000	20101 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	6		44
	3971700175	20121 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	59	Ldn	59	65	4	--	Wall on Structure	N/A	6		46
	3971700165	20125 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	3971700156	20129 14th Ave Ne	SF Residence on 14th Ave.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	3985300135	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700158	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700154	20307 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		58
M-31: 61.7	3971700145	20313 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		58
	3971700130	20317 14th Ave Ne	MF Residence on 14th Ave.	4	62	2	No	No	66	Ldn	59	65	--	4	Wall on Structure	N/A	4		58
	3971700125	20327 14th Ave Ne	MF Residence on 14th Ave.	2	63	2	No	No	66	Ldn	60	66	--	2	Wall on Structure	N/A	4		58
	3971700120	20329 14th Ave Ne	MF Residence on 14th Ave.	4	64	2	No	No	66	Ldn	61	66	--	4	Wall on Structure	N/A	4		58
	3971700104	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	4		
	3971700105	20333 14th Ave Ne	MF Residence on 14th Ave.	3	66	2	No	No	66	Ldn	62	68	3	--	Wall on Structure	N/A	4		58
	3971700100	20343 14th Ave Ne	MF Residence on 14th Ave.	3	67	2	No	No	66	Ldn	63	68	3	--	Wall on Structure	N/A	4		58
	3971700020	20333 15th Ave Ne	Largo Vista Apt. Courtyard	31	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
SR 104 to 236th Street																			
	00520500101201	6015 244th St SW	Motel 6 on 244th near 242nd and Gateway - south bldg.	45	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	00520500101201	6015 244th St SW	Motel 6 - north bldg.	26	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	00520500102000	23908 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--		N/A			59
	00520500102100	23906 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--		N/A			59
	00520500102200	23904 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00520500102300	23902 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00520500102400	23900 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102500	23810 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102600	23808 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102700	23806 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00520500102800	23804 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102900	23802 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00520900200100	5909 238th St SW	SF Residence on 238th St.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Structure	N/A	4		55
	00520900200200	6001 238th St SW	SF Residence on 238th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00520900200300	5907 238th St SW	SF Residence on 238th St.	1	60	2	No	No	57	Ldn	58	64	--	--		N/A			57
	00520900200600	6002 237th St SW	SF Residence on 237th St.	1	62	2	No	Yes	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		56
	00520900200700	5908 237th St SW	SF Residence on 237th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00520900200900	5904 237th St SW	SF Residence on 237th St.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00520900201300	5909 237th St SW	SF Residence on 237th St.	1	62	2	No	Yes	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		53
	00520900201400	5907 237th St SW	SF Residence on 237th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00520900201800	5906 236th St SW	SF Residence on 236th St.	1	62	2	No	Yes	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00520900201900	5904 236th St SW	SF Residence on 236th St.	1	62	2	No	Yes	55	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
236th Street to 230th Street																			
	00524100001500	23506 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--		N/A			62
M-33: 67.525	00524100001400	23504 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--		N/A			62

Lynnwood Link Extension B2

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622		160	44	RSIP =	3

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524100001300	23502 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--		N/A			62
	00524100001200	23501 59th Pl W	SF Residence on 59th Pl.	1	67	2	No	Yes	61	Ldn	63	68	--	--		N/A			61
	00524100001100	23503 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--		N/A			60
	00524100001000	23505 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--		N/A			60
	00524100000900	23507 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--		N/A			60
	00524100000800	23509 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--		N/A			60
	00524800001502	6002 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	4		53
	00524800001400	6004 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	74	Ldn	66	72	--	1	Wall on Structure	N/A	4		64
M-34: 73.15	00524800001300	6005 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	4		63
	00524800001200	6003 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	71	Ldn	66	72	1	--	Wall on Structure	N/A	4		61
	00524800001100	6001 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		52
	00524800001000	6002 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	60	Ldn	66	72	--	--	Wall on Structure	N/A	4		50
	00524800000900	6004 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	Yes	No	64	Ldn	66	72	--	--	Wall on Structure	Special	4		54
	00524800000800	6006 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	Yes	No	72	Ldn	66	72	--	1	Wall on Structure	Special	4		61
	00524800000700	6005 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	Yes	No	73	Ldn	66	72	--	1	Wall on Structure	Special	4		61
	00524800000600	6003 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	Yes	No	64	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	00524800000500	6001 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	58	Ldn	66	72	--	--	Wall on Structure	N/A	4		48
	00524800000100	6102 232nd St SW	SF Residence on 232nd St.	1	73	2	Yes	No	74	Ldn	66	72	--	1	Wall on Structure	Special	4		62
	00524800000200	6006 232nd St SW	SF Residence on 232nd St.	1	72	2	Yes	No	67	Ldn	66	72	1	--	Wall on Structure	Special	4		55
	00524800000300	6004 232nd St SW	SF Residence on 232nd St.	1	72	2	Yes	No	61	Ldn	66	72	--	--	Wall on Structure	Special	4		51
	00524800000401	6002 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	58	Ldn	66	72	--	--	Wall on Structure	N/A	4		48
	00522000302300	23112 61st Ave W	SF Residence on 61st Ave.	1	74	2	Yes	No	71	Ldn	66	73	1	--	Wall on Structure	Special	4		59
	00522000302400	23110 61st Ave W	SF Residence on 61st Ave.	1	74	2	Yes	No	69	Ldn	66	73	1	--	Wall on Structure	Special	4		58
	00522000302500	23106 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	68	Ldn	66	73	1	--	Wall on Structure	N/A	4		58
	00522000302700	23102 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	4		57
	00522000302800	23010 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	4		57
	00522000302900	23008 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	59	Ldn	66	73	--	--		N/A			59
	00522000600100	6008 230th St SW	SF Residence on 230th St.	1	67	2	No	No	51	Ldn	63	68	--	--		N/A			51
	00522000600200	23007 61st Ave W	SF Residence on 61st Ave.	1	65	2	No	No	50	Ldn	61	67	--	--		N/A			50
	00522000600300	23009 61st Ave W	SF Residence on 61st Ave.	1	63	2	No	No	49	Ldn	60	66	--	--		N/A			49
	00522000600400	23101 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00522000600500	23105 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00522000600600	23109 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--		N/A			58
	00522000600800	6007 232nd St SW	SF Residence on 232nd St.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	4		50
	00522000600900	6003 232nd St SW	SF Residence on 232nd St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00522000601000	23108 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00522000601100	23106 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--		N/A			58
	00522000601200	23100 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00522000601300	23008 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00522000601400	23006 60st Ave W	SF Residence on 60th Ave.	1	64	2	No	No	49	Ldn	61	66	--	--		N/A			49
	00522000601600	6004 230th St SW	SF Residence on 230th St.	1	66	2	No	No	51	Ldn	62	68	--	--		N/A			51
230th Street to 220th Street																			
	00522000500700	6007 230th St SW	SF Residence on 230th St.	1	66	2	No	No	41	Ldn	62	68	--	--		N/A			41
	00522000500600	22909 61st Ave W	SF Residence on 61st Ave.	1	64	2	No	No	41	Ldn	61	66	--	--		N/A			41
M-35: 63.95	00522000500500	22905 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	41	Ldn	59	65	--	--		N/A			41
	00522000500400	22901 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	41	Ldn	59	65	--	--		N/A			41
	00522000500300	22809 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	42	Ldn	59	65	--	--		N/A			42
	00522000500200	22807 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00522000500100	22803 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300900	22707 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300800	22705 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00523000300700	22703 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00523000300600	22701 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300500	22609 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300400	22607 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300300	22605 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300200	22603 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00523000300100	6004 226th St SW	SF Residence on 226th St.	1	61	2	No	No	51	Ldn	59	65	--	--		N/A			51
	00523000201500	6005 226th St SW	SF Residence on 226th St.	1	59	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000200900	6006 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00523000200600	6003 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	50	Ldn	58	64	--	--		N/A			50
	00523000200200	6004 224th St SW	SF Residence on 224th St.	1	60	2	No	No	50	Ldn	58	64	--	--		N/A			50
	00523000100900	6003 224th St SW	SF Residence on 224th St.	1	61	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00523000100800	22306 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00523000100700	22304 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00523000100600	22302 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	52	Ldn	59	65	--	--		N/A			52
	00523000100500	22210 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	52	Ldn	59	65	--	--		N/A			52
	00523000100400	22208 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	52	Ldn	59	65	--	--		N/A			52
	00523000100300	22206 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	53	Ldn	60	66	--	--		N/A			53
	00523000100200	22204 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	54	Ldn	60	66	--	--		N/A			54
	00523000100100	22202 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	54	Ldn	60	66	--	--		N/A			54

Lynnwood Link Extension B2

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		160	44	RSIP =	3

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524900000500	22111 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00524900000400	22109 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00524900000300	22107 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00524900000200	22105 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00524900000100	22103 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00523300002800	5904 221st St SW	SF Residence on 221st St.	1	65	2	No	No	59	Ldn	61	67	--	--		N/A			59
	00523300001700	5905 221st St SW	SF Residence on 221st St.	1	67	2	No	No	59	Ldn	63	68	--	--		N/A			59
	00523300001800	5903 221st St SW	SF Residence on 221st St.	1	67	2	No	No	57	Ldn	63	68	--	--		N/A			57
	00523300001900	5809 221st St SW	SF Residence on 221st St.	1	66	2	No	No	56	Ldn	62	68	--	--		N/A			56
220th Street to 212th Street																			
	00523300001000	5902 219th St SW	SF Residence on 219th St.	1	73	2	No	No	58	Ldn	66	72	--	--		N/A			58
M-36: 63.325	00523300000700	5905 219th St SW	SF Residence on 219th St.	1	63	2	No	No	56	Ldn	60	66	--	--		N/A			56
	00523300000600	5901 219th St SW		1	61	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00441000000500	5810 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	No	55	Ldn	58	64	--	--		N/A			55
	00441000000400	5808 218th Pl SW		1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		48
	00441000000600	5811 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	No	53	Ldn	58	64	--	--		N/A			53
	00441000000701	5809 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	No	53	Ldn	58	64	--	--		N/A			53
	00619900005502	21726 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	60	Ldn	61	67	--	--		N/A			60
	00619900005503	21712 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	00619900005300	-	Empty Lot	0	67	--	No	No								N/A			
	00619900005101	21620 58th Ave W	SF Residence on 58th Ave.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	00619900005103	21616 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	58	Ldn	61	67	--	--		N/A			58
	00619900004900	21530 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	58	Ldn	61	67	--	--		N/A			58
	00619900004700	21528 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	57	Ldn	61	67	--	--		N/A			57
M-37: 65.35	00766700000700	5709 215th Pl SW	SF Residence on 215th Pl.	1	65	2	No	No	49	Ldn	61	67	--	--		N/A			49
	00619900001601	21501 58th Ave W	SF Residence on 58th Ave.	1	65	2	Yes	No	49	Ldn	61	67	--	--		Special			49
	00619900001701	-	Empty Lot	0	65	--	Yes	No								Special			
	00619900001702	21404 56th Ave W	SF Residence on 56th Ave.	1	66	2	Yes	No	52	Ldn	62	68	--	--		Special			52
	00474800001400	5506 214th Pl SW	SF Residence on 214th Pl.	1	68	2	Yes	No	53	Ldn	63	69	--	--		Special			53
	00474800001800	5503 214th Pl SW	SF Residence on 214th Pl.	1	70	2	Yes	No	48	Ldn	65	70	--	--		Special			48
	00474800001900	5505 214th Pl SW	SF Residence on 214th Pl.	1	72	2	Yes	No	50	Ldn	66	72	--	--		Special			50
	27042800202000	5509 214th Pl SW	SF Residence on 214th Pl.	2	74	2	Yes	No	57	Ldn	66	73	--	--		Special			57
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. D Grnd. Floor	2	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. D 1st Floor	2	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. C Grnd. Floor	2	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
M-38: 75.1	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. C 1st Floor	2	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. B Grnd. Floor	4	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. B 1st Floor	4	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. A Grnd. Floor	4	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. A 1st Floor	4	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	27042800201600	5302 212th St SW	Duplex on 212th St.	2	74	2	No	No	63	Ldn	66	73	--	--		N/A			63
	27042800200600	5228 212th St SW	SF Residence on 212th St.	1	73	2	No	No	62	Ldn	66	72	--	--		N/A			62
	27042800200700	5222 212th St SW	Triplex on 212th St.	3	72	2	No	No	62	Ldn	66	72	--	--		N/A			62
West Side of I-5																			
SR 104 to 232nd Street																			
	27043200400200	6601 244th St SW	Nile Shrine Golf Course between SR104 &236th	1	68	3	No	No								N/A			
	00524700001500	6300 234th St SW	SF Residence on 234th St.	1	72	2	No	No	53	Ldn	66	72	--	--		N/A			53
	00524700003400	6301 234th St SW	SF Residence on 234th St.	1	69	2	No	No	53	Ldn	64	70	--	--		N/A			53
	00524700003300	23310 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00524700003200	23308 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00524700003100	23306 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00524700003000	23304 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	57	Ldn	64	70	--	--		N/A			57
	00524700002900	23302 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	00524700002800	23300 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	00524700002700	23212 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	00524700000500	23209 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	63	Ldn	66	75	--	--		N/A			63
	00524700000400	23207 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	65	Ldn	66	75	--	--		N/A			65
	00524700000300	23205 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	64	Ldn	66	73	--	--		N/A			64
	00524700000200	23203 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	64	Ldn	66	73	--	--	Wall on Structure	N/A	4		54
	00524700000100	23201 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	62	Ldn	66	73	--	--	Wall on Structure	N/A	4		52
	27043200100100	23117 63rd Ave W	SF Residence on 63rd Ave.	1	77	2	No	No	67	Ldn	66	75	1	--	Wall on Structure	N/A	4		57

Lynnwood Link Extension B2

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		160	44	RSIP =	3

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
232nd Street to 228th Street																			
	00522300305300	23115 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	70	Ldn	66	75	1	--	Wall on Structure	N/A	4		60
	00522300305400	23113 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	71	Ldn	66	75	1	--	Wall on Structure	N/A	4		61
	00522300305500	23111 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	4		53
	00522300306400	23014 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	73	Ldn	66	75	1	--	Wall on Structure	N/A	4		63
	00522300306500	23015 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	70	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	4		63
	00522300306600	23013 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	70	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	4		63
	00522300306700	23011 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	69	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	6		61
	00522300306800	23009 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	65	Ldn	66	75	--	--		N/A			65
	00522300306900	23007 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	66	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	4		59
M-39: 76.45	00522300307000	23005 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	65	Ldn	66	75	--	--		N/A			65
	00522300307100	23003 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	65	Ldn	66	75	--	--		N/A			65
	00522300307200	23001 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	64	Ldn	66	75	--	--		N/A			64
	00522300307201	22909 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	64	Ldn	66	75	--	--		N/A			64
	00522400007301	22905 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	63	Ldn	66	75	--	--		N/A			63
	00522400007300	22903 63rd Ave W	SF Residence on 63rd Ave.	1	75	2	No	No	59	Ldn	66	74	--	--		N/A			59
	00522400007400	22901 63rd Ave W	SF Residence on 63rd Ave.	1	72	2	No	No	58	Ldn	66	72	--	--		N/A			58
	00522300103300	23112 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	4		49
	00522300305600	23109 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	00522300306300	23012 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	4		53
	00522300306200	23010 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	6		50
	00522300306100	23008 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	6		49
	00522300305700	23107 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--		N/A			60
	00522300305800	23105 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00522300305900	23103 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00522300306000	23101 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	52	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	6		47
	00522300204600	23002 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	52	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		47
	00522300204700	6302 230th St SW	SF Residence on 230th St.	1	68	2	No	No	51	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		47
	00522300204500	23004 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	49	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		45
	00522300204800	6304 230th St SW	SF Residence on 230th St.	1	65	2	No	No	49	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		45
	00522400007800	6301 230th St SW	SF Residence on 230th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	00522400007700	22906 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	00522400007600	22904 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	00522400007500	22902 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	00522400007900	6303 230th St SW	SF Residence on 230th St.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	00522400009200	22807 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00522400009100	22805 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00522400009000	22803 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00522400008900	22801 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
228th Street to 220th Street																			
	00524000000500	6101 227th St SW	SF Residence on 227th St.	1	69	2	No	No							Wall on Retaining Wall	N/A	4		
M-40: 68.5	00524000000600	6103 227th St SW	SF Residence on 227th St.	1	69	2	No	No	63	Ldn	64	70	--	--		N/A			63
	00524000000700	6201 227th St SW	SF Residence on 227th St.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
	00524000000800	6203 227th St SW	SF Residence on 227th St.	1	68	2	No	No	52	Ldn	63	69	--	--		N/A			52
	00524000003501	22611 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	49	Ldn	61	67	--	--		N/A			49
	00524000003601	22605 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00524000003801	22603 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00524000004000	22601 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	00524000004100	22505 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	00524000004200	22503 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	00524000004300	22501 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	00524000004400	22407 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00524000004500	22405 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	54	Ldn	61	67	--	--		N/A			54
	00524000004600	22403 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--		N/A			59
	00524000004700	22309 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--		N/A			60
	00524000004800	22307 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		53
	00524000004900	22305 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Retaining Wall	N/A	4		55
	00524000005000	-	Empty Lot	0	71	--	No	No								N/A			
	00524000005100	22209 63rd Ave W	SF Residence on 63rd Ave.	1	70	2	No	No							Wall on Retaining Wall	N/A	4		
	00524000005400	22207 62nd Ave W	SF Residence on 62nd Ave.	1	70	2	No	No								N/A			
	00524000005500	22205 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	No								N/A			
	00524000005600	22203 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	No								N/A			
	00524000005700	22201 62nd Ave W	SF Residence on 62nd Ave.	1	68	2	No	No								N/A			
M-41: 66.9 LEQ	00378200300600	6205 222nd St SW	School on 222nd St.	1	68	3	No	No							Wall on Retaining Wall	N/A	6		
	00524000003400	22610 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	39	Ldn	61	66	--	--		N/A			39
	00524000003300	22608 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	39	Ldn	61	66	--	--		N/A			39
	00524000003200	22606 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	39	Ldn	61	66	--	--		N/A			39
	00524000003100	22604 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	38	Ldn	61	66	--	--		N/A			38
	00524000003000	6202 226th St SW	SF Residence on 226th St.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00524000006700	22504 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	42	Ldn	61	66	--	--		N/A			42

Lynnwood Link Extension B2

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		160	44	RSIP =	3

Receiver Information								Impact Analysis						Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524000006800	22502 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	42	Ldn	61	66	--	--		N/A			42
	00524000007300	22406 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	44	Ldn	61	66	--	--		N/A			44
	00524000007400	6202 224th St SW	SF Residence on 224th St.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00524000008400	6201 224th St SW	SF Residence on 224th St.	1	64	2	No	No	41	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		37
	00524000008500	22302 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	43	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	4		38
	00524000008600	6202 223rd Pl SW	SF Residence on 223rd Pl.	1	64	2	No	No	55	Ldn	61	66	--	--		N/A			55
	00524000009200	22206 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00524000009301	22204 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00524000009401	22202 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	00524000009500	6202 222nd St SW	SF Residence on 222nd St.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Retaining Wall	N/A	4		55
	00524000002600	22605 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	35	Ldn	59	65	--	--		N/A			35
	00524000002700	22603 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	36	Ldn	59	65	--	--		N/A			36
	00524000002800	22601 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	37	Ldn	59	65	--	--		N/A			37
	00524000002900	6204 226th St SW	SF Residence on 226th St.	1	62	2	No	No	38	Ldn	59	65	--	--		N/A			38
	00524000006600	6201 226th St SW	SF Residence on 226th St.	1	62	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00524000006900	6202 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00524000007200	6201 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00524000007500	6204 224th St SW	SF Residence on 224th St.	1	62	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00524000008700	6204 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00524000009100	6201 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	No	49	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		45
	00524000009302	6208 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	No	47	Ldn	57	63	--	--		N/A			47
	00524000009402	6207 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	No	47	Ldn	57	63	--	--		N/A			47
M-42: 57.4	00524000009700	6206 222nd St S	SF Residence on 222nd St.	2	57	2	No	No	49	Ldn	57	63	--	--		N/A			49
	00524000009600	6204 222nd St SW	SF Residence on 222nd St.	1	66	2	No	No	56	Ldn	62	68	--	--		N/A			56
	00378200300503	6303 222nd St SW	SF Residence on 222nd St.	1	56	2	No	No	60	Ldn	56	63	1	--	Wall on Retaining Wall	N/A	6		54
	00378200300501	6305 222nd St SW	SF Residence on 222nd St.	1	56	2	No	No	54	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		49
	00378200300502	6307 222nd St SW	SF Residence on 222nd St.	1	56	2	No	No	52	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		47
	00378200300504	22103 64th Ave W	SF Residence on 64th Ave.	1	56	2	No	No	50	Ldn	56	63	--	--	Wall on Retaining Wall	N/A	6		45
M-43: 55.9	00525400001300	6302 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	60	Ldn	56	63	1	--	Wall on Retaining Wall	N/A	6		54
	00525400001400	6304 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	61	Ldn	56	63	1	--	Wall on Structure	N/A	4		51
	00525400001500	6306 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	57	Ldn	56	63	1	--	Wall on Structure	N/A	4		48
	00525400001200	6303 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	67	Ldn	56	63	--	1	Wall on Structure	N/A	6		53
	00525400001100	6305 221st Pl SW	SF Residence on 221st PL.	1	58	2	No	No	62	Ldn	57	63	1	--	Wall on Structure	N/A	4		52
	00525400001000	6307 221st Pl SW		1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		49
	00525400000900	22007 64th Ave.		1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	4		47
	00525400000800	22005 64th Ave.		1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	4		47
	00525400000700	6306 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00525400000600	6304 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00525400000500	6302 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	No	67	Ldn	59	65	--	1	Wall on Structure	N/A	4		57
	00525400000400	6303 220th Pl SW	SF Residence on 220th PL.	1	64	2	No	No	66	Ldn	61	66	--	1	Wall on Structure	N/A	4		57
	00525400000300	6305 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	No	61	Ldn	62	68	--	--		N/A			61
	00525400000200	6307 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	No	57	Ldn	62	68	--	--		N/A			57
	00525400000100	22001 64th Ave.	SF Residence on 220th PL.	1	66	2	No	No	55	Ldn	62	68	--	--		N/A			55
220th Street to 212th Street																			
M-44: 68.9	27042900100800	6002 St Albion Way-Bldg. E grnd. Floor	Lakeside Apt. Complex near City Hall	7	69	2	No	No	67	Ldn	64	70	7	--	Wall on Structure	N/A	4		59
M-44: 68.9	27042900100800	6002 St Albion Way-Bldg. E 2nd Floor	Lakeside Apt. Complex near City Hall	7	69	2	No	No	67	Ldn	64	70	7	--	Wall on Structure	N/A	4		59
M-44: 68.9	27042900100800	6002 St Albion Way-Bldg. E 3rd Floor	Lakeside Apt. Complex near City Hall	2	69	2	No	No	67	Ldn	64	70	2	--	Wall on Structure	N/A	4		60
M-44: 68.9	27042900100800	21604 St Albion Way-Bldg. G grnd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	68	Ldn	64	70	8	--	Wall on Structure	N/A	4		60
M-44: 68.9	27042900100800	21604 St Albion Way-Bldg. G 2nd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	68	Ldn	64	70	8	--	Wall on Structure	N/A	4		60
M-44: 68.9	27042900100800	21604 St Albion Way-Bldg. g 3rd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	68	Ldn	64	70	8	--	Wall on Structure	N/A	4		60
M-44: 68.9	27042900100800	6001 St Albion Way-Bldg. F grnd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	64	Ldn	64	70	8	--	Wall on Structure	N/A	4		56
M-44: 68.9	27042900100800	6001 St Albion Way-Bldg. F 2nd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	64	Ldn	64	70	8	--	Wall on Structure	N/A	4		56
M-44: 68.9	27042900100800	6001 St Albion Way-Bldg. F 3rd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	64	Ldn	64	70	8	--	Wall on Structure	N/A	4		56
	00619900005000	-	Empty Lot	0	72	--	No	No								N/A			
	00619900004800	-	Empty Lot	0	72	--	No	No								N/A			
	00525100002500	21503 60th Ave W	SF Residence on 60th Ave.	1	72	2	No	No	78	Ldn	66	72	--	1	Wall on Structure	N/A	8		65
	00525100001100	5912 214th St SW	SF Residence on 214th St.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	8		49
	00525100001000	5910 214th St SW	SF Residence on 214th St.	1	67	2	No	No	65	Ldn	63	68	1	--	Wall on Structure	N/A	8		52
	00525100000900	5908 214th St SW	SF Residence on 214th St.	1	69	2	No	No	67	Ldn	64	70	1	--	Wall on Structure	N/A	8		54
	00525100000800	5906 214th St SW	SF Residence on 214th St.	1	72	2	No	No	78	Ldn	66	72	--	1	Wall on Structure	N/A	8		65
	00525100000700	5904 214th St SW	SF Residence on 214th St.	1	67	2	No	No	78	Ldn	63	68	--	1	Wall on Structure	N/A	8	1	65
	00525100000600	5902 214th St SW	SF Residence on 214th St.	1	67	2	No	No	73	Ldn	63	68	--	1	Wall on Retaining Wall	N/A	8		61

Lynnwood Link Extension B2

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		160	44	RSIP =	3

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00525100000500	5810 214th St SW	SF Residence on 214th St.	1	67	2	No	No	63	Ldn	63	68	1	--	Wall At-Grade	N/A	8		51
	00525100000400	-	Empty Lot	0	67	--	No	No							Wall At-Grade	N/A	8		
	00525100000300	5806 214th St SW	SF Residence on 214th St.	1	67	2	No	No	62	Ldn	63	68	--	--	Wall At-Grade	N/A	8		50
	00525100000200	5804 214th St SW	SF Residence on 214th St.	1	67	2	No	No	62	Ldn	63	68	--	--		N/A			62
	00525100000100	5802 214th St SW	SF Residence on 214th St.	1	67	2	No	No	61	Ldn	63	68	--	--		N/A			61
	00525100001200	5909 214th St SW	SF Residence on 214th St.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	8		47
	00525100001300	5907 214th St SW	SF Residence on 214th St.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	8		49
	00525100001400	5905 214th St SW	SF Residence on 214th St.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	8		49
	00525100001500	5903 214th St SW	SF Residence on 214th St.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		48
	00525100001602	5901 214th St SW	SF Residence on 214th St.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		48
	00525100002200	21307 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall At-Grade	N/A	8		48
	00525100002300	5803 214th St SW	SF Residence on 214th St.	1	62	2	No	No	58	Ldn	59	65	--	--		N/A			58
	00525100002400	5801 214th St SW	SF Residence on 214th St.	1	63	2	No	No	58	Ldn	60	66	--	--		N/A			58
	00920100000100	21331 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	53	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		44
	00525100001700	21304 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		45
	00525100001800	21302 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	52	Ldn	59	65	--	--		N/A			52
	00525100001900	21301 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	51	Ldn	59	65	--	--		N/A			51
	00525100002000	21303 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	51	Ldn	59	65	--	--		N/A			51
	00525100002100	21305 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	55	Ldn	59	65	--	--		N/A			55
	00619900004103	21318 58th Ave W	SF Residence on 58th Ave.	1	60	2	No	No	56	Ldn	58	64	--	--		N/A			56
	00619900004102	21316 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00619900004101	21312 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	54	Ldn	59	65	--	--		N/A			54
	00619900003904	21232 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	51	Ldn	59	65	--	--	Wall At-Grade	N/A	4		47
	00619900004104	21314 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	52	Ldn	59	65	--	--	Wall At-Grade	N/A	4		48
	00619900003804	5908 212th Pl SW	SF Residence on 212th Pl.	1	62	2	No	No	48	Ldn	59	65	--	--	Wall At-Grade	N/A	4		45
	00404100000400	21317 58th Ave W	SF Residence on 58th Ave.	1	67	2	No	No	61	Ldn	63	68	--	--		N/A			61
	00404100000300	5720 213th St SW	SF Residence on 213th St.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	00404100000200	5710 213th St SW	SF Residence on 213th St.	1	67	2	No	No	60	Ldn	63	68	--	--	Wall At-Grade	N/A	4		53
M-45: 66.95	00404100000100	5632 213th St SW	SF Residence on 213th St.	1	67	2	No	No	63	Ldn	63	68	1	--	Wall At-Grade	N/A	4		56
	00619900002602	21229 58th Ave W	Duplex on 58th Ave.	2	60	2	No	No	44	Ldn	58	64	--	--	Wall At-Grade	N/A	4		39
	00619900002501	5723 213th St SW	SF Residence on 213th St.	1	60	2	No	No	56	Ldn	58	64	--	--	Wall At-Grade	N/A	4		52
	00619900002502	5721 213th St SW	SF Residence on 213th St.	1	60	2	No	No	53	Ldn	58	64	--	--	Wall At-Grade	N/A	4		49
	00619900002503	5719 213th St SW	SF Residence on 213th St.	1	60	2	No	No	53	Ldn	58	64	--	--	Wall At-Grade	N/A	6		47
	00619900002504	5717 213th St SW	SF Residence on 213th St.	1	60	2	No	No	50	Ldn	58	64	--	--	Wall At-Grade	N/A	6		45
	00619900002402	5711 213th St SW	SF Residence on 213th St.	1	61	2	No	No	54	Ldn	59	65	--	--	Wall At-Grade	N/A	4		49
	00619900002403	5709 213th St SW	SF Residence on 213th St.	1	61	2	No	No	56	Ldn	59	65	--	--	Wall At-Grade	N/A	4		51
	00619900002404	5707 213th St SW	SF Residence on 213th St.	1	62	2	No	No	54	Ldn	59	65	--	--	Wall At-Grade	N/A	8		45
	00619900002303	5627 213th St SW	Duplex on 213th St.	2	61	2	No	No	61	Ldn	59	65	2	--	Wall At-Grade	N/A	4		56
	00619900002301	5623 213th St SW	SF Residence on 213th St.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall At-Grade	N/A	8		50
	00619900003000	5700 212th St SW	SF Residence on 213th St.	1	61	2	No	No	55	Ldn	59	65	--	--		N/A			55
	00619900002900	5616 212th St SW	SF Residence on 213th St.	1	61	2	No	No	51	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	6		45
	00619900002201	5619 213th St SW	SF Residence on 213th St.	1	61	2	No	No	57	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	6		49
	00619900002202	5625 213th St SW	SF Residence on 213th St.	1	63	2	Yes	No	69	Ldn	60	66	--	1	Wall At-Grade	Special	8		57
	00619900002101	5615 213th St SW	SF Residence on 213th St.	1	63	2	Yes	No	76	Ldn	60	66	--	1	Wall At-Grade	Special	8	1	61
	00619900002000	5604 212th St SW	SF Residence on 212th St.	1	72	2	Yes	No	78	Ldn	66	72	--	1	Wall At-Grade	Special	8		61
	27042800202400	None Given	SF Residence on 212th St.	1	72	2	Yes	No							Wall At-Grade	Special	4		
	27042800202200	5522 212th St SW	SF Residence on 212th St.	1	72	2	Yes	No							Wall on Retaining Wall	Special	6		
	27042800202100	-	Empty Lot	0	72	--	Yes	No							Wall on Retaining Wall	Special	6		
	00619900002102	5610 212th St SW	SF Residence on 212th St.	1	61	2	Yes	No	59	Ldn	59	65	1	--	Wall on Retaining Wall	Special	4		52
	00619900002700	5602 212th St SW	SF Residence on 212th St.	1	67	2	Yes	No	67	Ldn	63	68	1	--	Wall At-Grade	Special	8		53
	27042800202300	None Given	old number 00619900002300	1	71	2	Yes	No							Wall At-Grade	Special	6		
	27042100306900	5615 212th St SW	SF Residence on 212th St.	1	71	2	Yes	No	55	Ldn	66	71	--	--	Wall At-Grade	Special	6		49
	27042100308400	-	Empty Lot	0	71	--	Yes	No							Wall At-Grade	Special	6		
	27042100307700	5605 212th St SW	SF Residence on 212th St.	1	64	2	Yes	No	58	Ldn	61	66	--	--	Wall on Retaining Wall	Special	6		51
	27042100310500	5525 212th St SW	SF Residence on 212th St.	1	65	2	Yes	No	65	Ldn	61	67	1	--	Wall on Retaining Wall	Special	4		60
M-46: 68.35	27042100305400	20908 54th Ave W #1	Zoned Campground on 54th Ave./212th St.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Retaining Wall	N/A	4		56

Lynnwood Link Extension B2A

Stations: 220th St SW Station
Mountlake Terrace Transit Center Station

Total Units Analyzed
622

Impacts:	Moderate	Severe
	138	50

Residual Impacts	
RSIP =	3

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
East Side of I-5																			
NE 189th Street to NE 200th Street																			
Begin B1 M30B-65	526049034	None	Athletic Field	1	65	3	No	No								N/A			
	526049017	-	Empty Lot	0	65	--	No	No								N/A			
	5490700080	805 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	56	Ldn	61	66	--	--		N/A			56
	5490700075	814 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	56	Ldn	61	66	--	--		N/A			56
	5490700070	812 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	55	Ldn	61	66	--	--		N/A			55
	5490700005	-	Empty Lot	0	64	--	No	No								N/A			
	5490700010	815 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	5490700015	821 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	47	Ldn	63	68	--	--		N/A			47
	5490700020	827 Ne 195th St	SF Residence on 195th St.	1	65	2	No	No	43	Ldn	61	67	--	--		N/A			43
	5490700065	818 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	47	Ldn	63	68	--	--		N/A			47
	5490700060	824 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	43	Ldn	63	68	--	--		N/A			43
	5490700085	817 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	53	Ldn	63	68	--	--		N/A			53
	5490700090	823 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	45	Ldn	63	68	--	--		N/A			45
	5490700095	831 Ne 194th St	SF Residence on 194th St.	1	65	2	No	No	42	Ldn	61	67	--	--		N/A			42
	3985300331	822 Ne 195th St	SF Residence on 195th St.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57
	7805300020	19605 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--		N/A			56
	3985300330	-	Empty Lot	0	64	--	No	No								N/A			
	7805300030	19705 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57
	7805300040	19715 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57
	7805300050	19723 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	7805300060	19731 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	54	Ldn	61	66	--	--		N/A			54
	3971700710	1000 Ne 198th St	SF Residence on 198th St.	1	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	3971700707	1006 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	62	Ldn	63	68	--	--		N/A			62
	3971700540	-	Empty Lot	0	64	--	No	No								N/A			
	7805300180	834 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	53	Ldn	63	68	--	--		N/A			53
	7805300010	840 Ne 195th St	SF Residence on 195th St.	1	65	2	No	No	50	Ldn	61	67	--	--		N/A			50
	7805300130	1003 NE 196th	SF Residence on 196th St.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	7805300140	19604 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	43	Ldn	61	67	--	--		N/A			43
	7805300150	1020 NE 196th	SF Residence on 196th St.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	7805300160	1010 Ne 197th St	SF Residence on 197th St.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	7805300170	19728 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	7805300100	1036 Ne 197th St	SF Residence on 197th St.	1	65	2	No	No	50	Ldn	61	67	--	--		N/A			50
	7805300070	19741 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	3971700705	1002 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	51	Ldn	63	68	--	--		N/A			51
	3971700700	1010 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	67	Ldn	61	67	--	1	Wall on Structure	N/A	4		57
	3971700695	1016 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
	3971700690	1022 NE 198th	SF Residence on 198th St.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		53
	3971700551	-	Empty Lot	0	67	--	No	No							Wall on Structure	N/A	4		
NE 200th Street to SR 104																			
	3971700560	1103 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	70	Ldn	61	66	--	1	Wall on Structure	N/A	6		59
	3971700570	1107 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	4		55
	3971700575	1109 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	4		53
	3971700580	1111 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	6		48
	3971700585	1115 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	6		48
	3971700590	1117 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	6		47
	3971700595	1119 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	6		43
	3971700597	1201 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	6		43
	3971700600	1207 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	54	Ldn	57	63	--	--	Wall on Structure	N/A	6		42
	3971700230	1102 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	70	Ldn	61	66	--	1	Wall on Structure	N/A	6		59
	3971700225	1104 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	64	Ldn	60	66	1	--	Wall on Structure	N/A	6		52
	3971700220	1114 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		53
	3971700215	20005 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		52
	3971700525	1206 Ne Ballinger Pl	SF Residence on Ballinger Pl	2	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	6		45
	3971700515	1212 NE Ballinger Pl.	SF Residence on Ballinger Pl	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	3985300269	1108 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	70	Ldn	60	66	--	1	Wall on Structure	N/A	6		59
	3985300265	1110 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	69	Ldn	59	65	--	1	Wall on Structure	N/A	6		58
	3985300267	1112 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	6		50
	3985300266	20015 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	4		52
	3985300209	20014 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	4		49
	3985300208	20018 12th Ave.	SF Residence on 12th Ave.	1	58	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	4		47
	3985300268	20017 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	6		56
	3985300264	20019 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	60	Ldn	57	63	1	--	Wall on Structure	N/A	6		48
	3985300206	20026 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		51
	3985300207	20022 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	6		45
	3985300261	20035 12th Ave Ne	SF Residence on 12th Ave.	1	62	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	6	1	59
	3985300263	20039 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	62	Ldn	57	63	1	--	Wall on Structure	N/A	4		55

Lynnwood Link Extension B2A

Stations: 220th St SW Station
Mountlake Terrace Transit Center Station

Total Units Analyzed
622

Impacts:	Moderate	Severe
	138	50

Residual Impacts	
RSIP =	3

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	3985300198	20038 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	4		51
	3985300197	20040 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	4		48
	3985300262	20041 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	68	Ldn	57	63	--	1	Wall on Structure	N/A	6		56
	3985300195	20044 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	6		47
	3985300196	20042 12th Ave Ne		1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	6		45
	3985300260	20043 12th Ave Ne	SF Residence on 12th Ave.	1	65	2	No	No	70	Ldn	61	67	--	1	Wall on Structure	N/A	6		59
	3985300244	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	6		
	0308000070	20101 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	6		56
	0308000060	20105 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	6		57
	0308000050	20109 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	6		56
	0308000040	20108 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	6		49
	0308000030	20104 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	6		49
	0308000020	20102 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	61	Ldn	58	64	1	--	Wall on Structure	N/A	6		49
	0308000010	20100 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	6		46
	0308000015	20041 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		44
	3985300175	20107 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		44
	3985300176	20117 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	58	Ldn	58	64	2	--	Wall on Structure	N/A	6		46
	3985300177	20123 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	6		45
	3985300178	20131 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	61	2	No	No	61	Ldn	59	65	2	--	Wall on Structure	N/A	6		49
	3985300147	20149 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	6		56
	3985300146	20145 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	6		55
	3985300145	20141 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		59
	6792000000	20101 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	6		44
	3971700175	20121 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	59	Ldn	59	65	4	--	Wall on Structure	N/A	6		46
	3971700165	20125 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	3971700156	20129 14th Ave Ne	SF Residence on 14th Ave.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	3985300135	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700158	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700154	20307 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		58
M-31: 61.7	3971700145	20313 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		58
	3971700130	20317 14th Ave Ne	MF Residence on 14th Ave.	4	62	2	No	No	66	Ldn	59	65	--	4	Wall on Structure	N/A	4		58
	3971700125	20327 14th Ave Ne	MF Residence on 14th Ave.	2	63	2	No	No	66	Ldn	60	66	--	2	Wall on Structure	N/A	4		58
	3971700120	20329 14th Ave Ne	MF Residence on 14th Ave.	4	64	2	No	No	66	Ldn	61	66	--	4	Wall on Structure	N/A	4		58
	3971700104	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	4		
	3971700105	20333 14th Ave Ne	MF Residence on 14th Ave.	3	66	2	No	No	66	Ldn	62	68	3	--	Wall on Structure	N/A	4		58
	3971700100	20343 14th Ave Ne	MF Residence on 14th Ave.	3	67	2	No	No	66	Ldn	63	68	3	--	Wall on Structure	N/A	4		58
	397170020	20333 15th Ave Ne	Largo Vista Apt. Courtyard	31	66	2	No	No	59	Ldn	62	68	--	--		N/A			59
SR 104 to 236th Street																			
	00520500101201	6015 244th St SW	Motel 6 on 244th near 242nd and Gateway - south bldg.	45	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	00520500101201	6015 244th St SW	Motel 6 - north bldg.	26	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	00520500102000	23908 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--		N/A			59
	00520500102100	23905 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--		N/A			59
	00520500102200	23904 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00520500102300	23902 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00520500102400	23900 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102500	23810 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102600	23808 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102700	23806 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102800	23804 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520500102900	23802 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00520900200100	5909 238th St SW	SF Residence on 238th St.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Structure	N/A	4		55
	00520900200200	6001 238th St SW	SF Residence on 238th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00520900200300	5907 238th St SW	SF Residence on 238th St.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00520900200600	6002 237th St SW	SF Residence on 237th St.	1	62	2	No	Yes	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		56
	00520900200700	5908 237th St SW	SF Residence on 237th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00520900200900	5904 237th St SW	SF Residence on 237th St.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00520900201300	5909 237th St SW	SF Residence on 237th St.	1	62	2	No	Yes	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		53
	00520900201400	5907 237th St SW	SF Residence on 237th St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00520900201800	5906 236th St SW	SF Residence on 236th St.	1	62	2	No	Yes	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00520900201900	5904 236th St SW	SF Residence on 236th St.	1	62	2	No	Yes	55	Ldn	59	65	--	--	Wall on Structure	N/A	4		45
236th Street to 230th Street																			
	00524100001500	23506 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--		N/A			62
M-33: 67.525	00524100001400	23504 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--		N/A			62

Lynnwood Link Extension B2A

Stations: 220th St SW Station
Mountlake Terrace Transit Center Station

Total Units Analyzed
622

Impacts:	Moderate	Severe
	138	50

Residual Impacts	
RSIP =	3

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524100001300	23502 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	Yes	62	Ldn	63	69	--	--		N/A			62
	00524100001200	23501 59th Pl W	SF Residence on 59th Pl.	1	67	2	No	Yes	61	Ldn	63	68	--	--		N/A			61
	00524100001100	23503 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--		N/A			60
	00524100001000	23505 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--		N/A			60
	00524100000900	23507 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--		N/A			60
	00524100000800	23509 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	Yes	60	Ldn	62	68	--	--		N/A			60
	00524800001502	6002 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	63	Ldn	66	72	--	--	Wall on Structure	N/A	4		53
	00524800001400	6004 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	74	Ldn	66	72	--	1	Wall on Structure	N/A	4		64
M-34: 73.15	00524800001300	6005 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	4		63
	00524800001200	6003 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	No	71	Ldn	66	72	1	--	Wall on Structure	N/A	4		61
	00524800001100	6001 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	62	Ldn	66	72	--	--	Wall on Structure	N/A	4		52
	00524800001000	6002 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	60	Ldn	66	72	--	--	Wall on Structure	N/A	4		50
	00524800000900	6004 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	Yes	No	64	Ldn	66	72	--	--	Wall on Structure	Special	4		54
	00524800000800	6006 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	Yes	No	72	Ldn	66	72	--	1	Wall on Structure	Special	4		61
	00524800000700	6005 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	Yes	No	73	Ldn	66	72	--	1	Wall on Structure	Special	4		61
	00524800000600	6003 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	Yes	No	64	Ldn	66	72	--	--	Wall on Structure	Special	4		53
	00524800000500	6001 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	58	Ldn	66	72	--	--	Wall on Structure	N/A	4		48
	00524800000100	6102 232nd St SW	SF Residence on 232nd St.	1	73	2	Yes	No	74	Ldn	66	72	--	1	Wall on Structure	Special	4		62
	00524800000200	6006 232nd St SW	SF Residence on 232nd St.	1	72	2	Yes	No	67	Ldn	66	72	1	--	Wall on Structure	Special	4		55
	00524800000300	6004 232nd St SW	SF Residence on 232nd St.	1	72	2	Yes	No	61	Ldn	66	72	--	--	Wall on Structure	Special	4		51
	00524800000401	6002 232nd St SW	SF Residence on 232nd St.	1	72	2	No	No	58	Ldn	66	72	--	--	Wall on Structure	N/A	4		48
	00522000302300	23112 61st Ave W	SF Residence on 61st Ave.	1	74	2	Yes	No	71	Ldn	66	73	1	--	Wall on Structure	Special	4		59
	00522000302400	23110 61st Ave W	SF Residence on 61st Ave.	1	74	2	Yes	No	69	Ldn	66	73	1	--	Wall on Structure	Special	4		58
	00522000302500	23106 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	68	Ldn	66	73	1	--	Wall on Structure	N/A	4		58
	00522000302700	23102 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	4		57
	00522000302800	23010 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	67	Ldn	66	73	1	--	Wall on Structure	N/A	4		57
	00522000302900	23008 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	59	Ldn	66	73	--	--		N/A			59
	00522000600100	6008 230th St SW	SF Residence on 230th St.	1	67	2	No	No	51	Ldn	63	68	--	--		N/A			51
	00522000600200	23007 61st Ave W	SF Residence on 61st Ave.	1	65	2	No	No	50	Ldn	61	67	--	--		N/A			50
	00522000600300	23009 61st Ave W	SF Residence on 61st Ave.	1	63	2	No	No	49	Ldn	60	66	--	--		N/A			49
	00522000600400	23101 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00522000600500	23105 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00522000600600	23109 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00522000600800	6007 232nd St SW	SF Residence on 232nd St.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	4		50
	00522000600900	6003 232nd St SW	SF Residence on 232nd St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00522000601000	23108 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00522000601100	23106 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00522000601200	23100 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00522000601300	23008 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00522000601400	23006 60st Ave W	SF Residence on 60th Ave.	1	64	2	No	No	49	Ldn	61	66	--	--		N/A			49
	00522000601600	6004 230th St SW	SF Residence on 230th St.	1	66	2	No	No	51	Ldn	62	68	--	--		N/A			51
230th Street to 220th Street																			
	00522000500700	6007 230th St SW	SF Residence on 230th St.	1	66	2	No	No	41	Ldn	62	68	--	--		N/A			41
	00522000500600	22909 61st Ave W	SF Residence on 61st Ave.	1	64	2	No	No	41	Ldn	61	66	--	--		N/A			41
M-35: 63.95	00522000500500	22905 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	41	Ldn	59	65	--	--		N/A			41
	00522000500400	22901 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	41	Ldn	59	65	--	--		N/A			41
	00522000500300	22809 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	42	Ldn	59	65	--	--		N/A			42
	00522000500200	22807 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00522000500100	22803 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300900	22707 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300800	22705 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00523000300700	22703 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00523000300600	22701 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300500	22609 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300400	22607 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300300	22605 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300200	22603 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00523000300100	6004 226th St SW	SF Residence on 226th St.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00523000201500	6005 226th St SW	SF Residence on 226th St.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		48
	00523000200900	6006 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		48
	00523000200600	6003 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		48
	00523000200200	6004 224th St SW	SF Residence on 224th St.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		48
	00523000100900	6003 224th St SW	SF Residence on 224th St.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00523000100800	22306 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00523000100700	22304 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00523000100600	22302 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00523000100500	22210 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00523000100400	22208 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00523000100300	22206 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	4		52
	00523000100200	22204 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	4		52
	00523000100100	22202 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	Yes	61	Ldn	60	66	1	--	Wall on Structure	N/A	4		52

Lynnwood Link Extension B2A

Stations: 220th St SW Station
Mountlake Terrace Transit Center Station

Total Units Analyzed
622

Impacts:	Moderate	Severe
	138	50

Residual Impacts	
RSIP =	3

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524900000500	22111 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	Yes	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00524900000400	22109 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	Yes	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00524900000300	22107 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	Yes	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00524900000200	22105 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	Yes	58	Ldn	59	65	--	--		N/A			58
	00524900000100	22103 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	Yes	58	Ldn	61	66	--	--		N/A			58
	00523300002800	5904 221st St SW	SF Residence on 221st St.	1	65	2	No	Yes	57	Ldn	61	67	--	--		N/A			57
	00523300001700	5905 221st St SW	SF Residence on 221st St.	1	67	2	No	Yes	53	Ldn	63	68	--	--		N/A			52
	00523300001800	5903 221st St SW	SF Residence on 221st St.	1	67	2	No	Yes	52	Ldn	63	68	--	--		N/A			52
	00523300001900	5809 221st St SW	SF Residence on 221st St.	1	66	2	No	Yes	52	Ldn	62	68	--	--		N/A			52
220th Street to 212th Street																			
	00523300001000	5902 219th St SW	SF Residence on 219th St.	1	73	2	No	Yes	54	Ldn	66	72	--	--		N/A			54
M-36: 63.325	00523300000700	5905 219th St SW	SF Residence on 219th St.	1	63	2	No	Yes	54	Ldn	60	66	--	--		N/A			54
	00523300000600	5901 219th St SW		1	61	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00441000000500	5810 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	Yes	52	Ldn	58	64	--	--		N/A			52
	00441000000400	5808 218th Pl SW		1	59	2	No	No	57	Ldn	58	64	--	--		N/A			57
	00441000000600	5811 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	Yes	51	Ldn	58	64	--	--		N/A			51
	00441000000701	5809 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	Yes	51	Ldn	58	64	--	--		N/A			51
	00619900005502	21726 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	58	Ldn	61	67	--	--		N/A			58
	00619900005503	21712 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	58	Ldn	61	67	--	--		N/A			58
	00619900005300	-	Empty Lot	0	67	--	No	No								N/A			
	00619900005101	21620 58th Ave W	SF Residence on 58th Ave.	1	68	2	No	No	58	Ldn	63	69	--	--		N/A			58
	00619900005103	21616 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--		N/A			54
	00619900004900	21530 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--		N/A			55
	00619900004700	21528 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--		N/A			55
M-37: 65.35	00766700000700	5709 215th Pl SW	SF Residence on 215th Pl.	1	65	2	No	No	49	Ldn	61	67	--	--		N/A			49
	00619900001601	21501 58th Ave W	SF Residence on 58th Ave.	1	65	2	Yes	No	49	Ldn	61	67	--	--		Special			49
	00619900001701	-	Empty Lot	0	65	--	Yes	No								Special			
	00619900001702	21404 56th Ave W	SF Residence on 56th Ave.	1	66	2	Yes	No	52	Ldn	62	68	--	--		Special			52
	00474800001400	5506 214th Pl SW	SF Residence on 214th Pl.	1	68	2	Yes	No	53	Ldn	63	69	--	--		Special			53
	00474800001800	5503 214th Pl SW	SF Residence on 214th Pl.	1	70	2	Yes	No	48	Ldn	65	70	--	--		Special			48
	00474800001900	5505 214th Pl SW	SF Residence on 214th Pl.	1	72	2	Yes	No	50	Ldn	66	72	--	--		Special			50
	27042800202000	5509 214th Pl SW	SF Residence on 214th Pl.	2	74	2	Yes	No	57	Ldn	66	73	--	--		Special			57
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. D Grnd. Floor	2	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. D 1st Floor	2	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. C Grnd. Floor	2	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
M-38: 75.1	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. C 1st Floor	2	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. B Grnd. Floor	4	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. B 1st Floor	4	75	2	No	No	55	Ldn	66	74	--	--		N/A			55
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. A Grnd. Floor	4	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. A 1st Floor	4	75	2	No	No	56	Ldn	66	74	--	--		N/A			56
	27042800201600	5302 212th St SW	Duplex on 212th St.	2	74	2	No	No	63	Ldn	66	73	--	--		N/A			63
	27042800200600	5228 212th St SW	SF Residence on 212th St.	1	73	2	No	No	62	Ldn	66	72	--	--		N/A			62
	27042800200700	5222 212th St SW	Triplex on 212th St.	3	72	2	No	No	62	Ldn	66	72	--	--		N/A			62
West Side of I-5																			
SR 104 to 232nd Street																			
	27043200400200	6601 244th St SW	Nile Shrine Golf Course between SR104 &236th	1	68	3	No	No								N/A			
	00524700001500	6300 234th St SW	SF Residence on 234th St.	1	72	2	No	No	53	Ldn	66	72	--	--		N/A			53
	00524700003400	6301 234th St SW	SF Residence on 234th St.	1	69	2	No	No	53	Ldn	64	70	--	--		N/A			53
	00524700003300	23310 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00524700003200	23308 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00524700003100	23306 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00524700003000	23304 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	57	Ldn	64	70	--	--		N/A			57
	00524700002900	23302 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	00524700002800	23300 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	57	Ldn	63	69	--	--		N/A			57
	00524700002700	23212 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	00524700000500	23209 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	63	Ldn	66	75	--	--		N/A			63
	00524700000400	23207 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	65	Ldn	66	75	--	--		N/A			65
	00524700000300	23205 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	64	Ldn	66	73	--	--		N/A			64
	00524700000200	23203 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	64	Ldn	66	73	--	--	Wall on Structure	N/A	4		54
	00524700000100	23201 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	No	62	Ldn	66	73	--	--	Wall on Structure	N/A	4		52
	27043200100100	23117 63rd Ave W	SF Residence on 63rd Ave.	1	77	2	No	No	67	Ldn	66	75	1	--	Wall on Structure	N/A	4		57

Lynnwood Link Extension B2A

Stations: 220th St SW Station
Mountlake Terrace Transit Center Station

Total Units Analyzed
622

Impacts:	Moderate	Severe
	138	50

Residual Impacts	
RSIP =	3

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
232nd Street to 228th Street																			
	00522300305300	23115 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	70	Ldn	66	75	1	--	Wall on Structure	N/A	4		60
	00522300305400	23113 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	71	Ldn	66	75	1	--	Wall on Structure	N/A	4		61
	00522300305500	23111 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	4		53
	00522300306400	23014 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	73	Ldn	66	75	1	--	Wall on Structure	N/A	4		63
	00522300306500	23015 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	70	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	6		61
	00522300306600	23013 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	70	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	6		61
	00522300306700	23011 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	69	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	6		61
	00522300306800	23009 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	65	Ldn	66	75	--	--	Wall on Retaining Wall	N/A	4		59
	00522300306900	23007 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	66	Ldn	66	75	1	--	Wall on Retaining Wall	N/A	4		59
M-39: 76.45	00522300307000	23005 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	65	Ldn	66	75	--	--	Wall on Retaining Wall	N/A	4		59
	00522300307100	23003 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	65	Ldn	66	75	--	--		N/A			65
	00522300307200	23001 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	64	Ldn	66	75	--	--		N/A			64
	00522300307201	22909 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	64	Ldn	66	75	--	--		N/A			64
	00522400007301	22905 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	63	Ldn	66	75	--	--		N/A			63
	00522400007300	22903 63rd Ave W	SF Residence on 63rd Ave.	1	75	2	No	No	59	Ldn	66	74	--	--		N/A			59
	00522400007400	22901 63rd Ave W	SF Residence on 63rd Ave.	1	72	2	No	No	58	Ldn	66	72	--	--		N/A			58
	00522300103300	23112 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--	Wall on Structure	N/A	4		49
	00522300305600	23109 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	00522300306300	23012 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	4		53
	00522300306200	23010 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	6		50
	00522300306100	23008 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	56	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	6		49
	00522300305700	23107 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00522300305800	23105 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00522300305900	23103 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00522300306000	23101 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	52	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	6		47
	00522300204600	23002 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	52	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		47
	00522300204700	6302 230th St SW	SF Residence on 230th St.	1	68	2	No	No	51	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		47
	00522300204500	23004 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	49	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		45
	00522300204800	6304 230th St SW	SF Residence on 230th St.	1	65	2	No	No	49	Ldn	61	67	--	--	Wall on Retaining Wall	N/A	4		45
	00522400007800	6301 230th St SW	SF Residence on 230th St.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	00522400007700	22906 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	00522400007600	22904 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	50	Ldn	63	69	--	--		N/A			50
	00522400007500	22902 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	51	Ldn	63	69	--	--		N/A			51
	00522400007900	6303 230th St SW	SF Residence on 230th St.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	00522400009200	22807 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00522400009100	22805 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00522400009000	22803 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00522400008900	22801 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
228th Street to 220th Street																			
	00524000000500	6101 227th St SW	SF Residence on 227th St.	1	69	2	No	No							Wall on Retaining Wall	N/A	4		
M-40: 68.5	00524000000600	6103 227th St SW	SF Residence on 227th St.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Retaining Wall	N/A	4		56
	00524000000700	6201 227th St SW	SF Residence on 227th St.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Retaining Wall	N/A	4		55
	00524000000800	6203 227th St SW	SF Residence on 227th St.	1	68	2	No	No	52	Ldn	63	69	--	--		N/A			52
	00524000003501	22611 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	49	Ldn	61	67	--	--		N/A			49
	00524000003601	22605 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00524000003801	22603 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	00524000004000	22601 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	57	Ldn	61	67	--	--		N/A			57
	00524000004100	22505 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	57	Ldn	61	67	--	--		N/A			57
	00524000004200	22503 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	57	Ldn	61	67	--	--		N/A			57
	00524000004300	22501 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	58	Ldn	61	67	--	--		N/A			58
	00524000004400	22407 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	58	Ldn	61	67	--	--		N/A			58
	00524000004500	22405 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	59	Ldn	61	67	--	--		N/A			59
	00524000004600	22403 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	65	Ldn	61	67	1	--	Wall on Structure	N/A	4		55
	00524000004700	22309 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	65	Ldn	61	67	1	--	Wall on Structure	N/A	4		55
	00524000004800	22307 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	66	Ldn	61	67	1	--	Wall on Structure	N/A	4		56
	00524000004900	22305 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	67	Ldn	61	67	--	1	Wall on Structure	N/A	4		57
	00524000005000	-	Empty Lot	0	71	--	No	No								N/A			
	00524000005100	22209 63rd Ave W	SF Residence on 63rd Ave.	1	70	2	No	No	76	Ldn	65	70	--	1	Wall on Structure	N/A	6		63
	00524000005400	22207 62nd Ave W	SF Residence on 62nd Ave.	1	70	2	No	No	76	Ldn	65	70	--	1	Wall on Structure	N/A	6		63
	00524000005500	22205 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	No	76	Ldn	64	70	--	1	Wall on Structure	N/A	8		63
	00524000005600	22203 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	No	76	Ldn	64	70	--	1	Wall on Structure	N/A	8		63
	00524000005700	22201 62nd Ave W	SF Residence on 62nd Ave.	1	68	2	No	No	76	Ldn	63	69	--	1	Wall on Structure	N/A	8	1	63
M-41: 66.9 LEQ	00378200300600	6205 222nd St SW	School on 222nd St.	1	68	3	No	Yes								N/A			
	00524000003400	22610 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	39	Ldn	61	66	--	--		N/A			39
	00524000003300	22608 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	39	Ldn	61	66	--	--		N/A			39
	00524000003200	22606 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	39	Ldn	61	66	--	--		N/A			39
	00524000003100	22604 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	38	Ldn	61	66	--	--		N/A			38
	00524000003000	6202 226th St SW	SF Residence on 226th St.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	00524000006700	22504 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	49	Ldn	61	66	--	--		N/A			49

Lynnwood Link Extension B2A

Stations: 220th St SW Station
Mountlake Terrace Transit Center Station

Total Units Analyzed
622

Impacts:	Moderate	Severe
	138	50

Residual Impacts	
RSIP =	3

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524000006800	22502 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	49	Ldn	61	66	--	--		N/A			49
	00524000007300	22406 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	00524000007400	6202 224th St SW	SF Residence on 224th St.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	00524000008400	6201 224th St SW	SF Residence on 224th St.	1	64	2	No	No	49	Ldn	61	66	--	--		N/A			49
	00524000008500	22302 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00524000008600	6202 223rd Pl SW	SF Residence on 223rd Pl.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	4		52
	00524000009200	22206 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	62	Ldn	61	66	1	--	Wall on Structure	N/A	4		52
	00524000009301	22204 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	8		46
	00524000009401	22202 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	8		45
	00524000009500	6202 222nd St SW	SF Residence on 222nd St.	1	64	2	No	Yes	60	Ldn	61	66	--	--	Wall on Structure	N/A	8		45
	00524000002600	22605 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	35	Ldn	59	65	--	--		N/A			35
	00524000002700	22603 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	36	Ldn	59	65	--	--		N/A			36
	00524000002800	22601 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	37	Ldn	59	65	--	--		N/A			37
	00524000002900	6204 226th St SW	SF Residence on 226th St.	1	62	2	No	No	38	Ldn	59	65	--	--		N/A			38
	00524000006600	6201 226th St SW	SF Residence on 226th St.	1	62	2	No	No	51	Ldn	59	65	--	--		N/A			51
	00524000006900	6202 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	52	Ldn	59	65	--	--		N/A			52
	00524000007200	6201 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	53	Ldn	59	65	--	--		N/A			53
	00524000007500	6204 224th St SW	SF Residence on 224th St.	1	62	2	No	No	52	Ldn	59	65	--	--		N/A			52
	00524000008700	6204 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00524000009100	6201 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00524000009302	6208 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	8		40
	00524000009402	6207 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	8		40
M-42: 57.4	00524000009700	6206 222nd St S	SF Residence on 222nd St.	2	57	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		41
	00524000009600	6204 222nd St SW	SF Residence on 222nd St.	1	66	2	No	Yes	62	Ldn	62	68	1	--	Wall on Structure	N/A	8		47
	00378200300503	6303 222nd St SW	SF Residence on 222nd St.	1	56	2	No	Yes	66	Ldn	56	63	--	1	Wall on Structure	N/A	6		53
	00378200300501	6305 222nd St SW	SF Residence on 222nd St.	1	56	2	No	Yes	59	Ldn	56	63	1	--	Wall on Structure	N/A	4		49
	00378200300502	6307 222nd St SW	SF Residence on 222nd St.	1	56	2	No	Yes	57	Ldn	56	63	1	--	Wall on Structure	N/A	4		47
	00378200300504	22103 64th Ave W	SF Residence on 64th Ave.	1	56	2	No	Yes	55	Ldn	56	63	--	--		N/A			55
M-43: 55.9	00525400001300	6302 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	Yes	64	Ldn	56	63	--	1	Wall on Structure	N/A	4		55
	00525400001400	6304 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	Yes	58	Ldn	56	63	1	--	Wall on Structure	N/A	4		49
	00525400001500	6306 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	Yes	54	Ldn	56	63	--	--		N/A			54
	00525400001200	6303 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	Yes	63	Ldn	56	63	--	1	Wall on Structure	N/A	4		54
	00525400001100	6305 221st Pl SW	SF Residence on 221st PL.	1	58	2	No	Yes	58	Ldn	57	63	1	--	Wall on Structure	N/A	4		49
	00525400001000	6307 221st Pl SW		1	58	2	No	Yes	56	Ldn	57	63	--	--		N/A			56
	00525400000900	22007 64th Ave.		1	58	2	No	Yes	54	Ldn	57	63	--	--		N/A			54
	00525400000800	22005 64th Ave.		1	58	2	No	Yes	50	Ldn	57	63	--	--		N/A			50
	00525400000700	6306 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	Yes	56	Ldn	59	65	--	--		N/A			56
	00525400000600	6304 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	Yes	58	Ldn	59	65	--	--		N/A			58
	00525400000500	6302 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	Yes	63	Ldn	59	65	1	--	Wall on Structure	N/A	4		54
	00525400000400	6303 220th Pl SW	SF Residence on 220th PL.	1	64	2	No	Yes	63	Ldn	61	66	1	--	Wall on Structure	N/A	4		53
	00525400000300	6305 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	Yes	58	Ldn	62	68	--	--		N/A			58
	00525400000200	6307 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	Yes	52	Ldn	62	68	--	--		N/A			52
	00525400000100	22001 64th Ave.	SF Residence on 220th PL.	1	66	2	No	Yes	50	Ldn	62	68	--	--		N/A			50
220th Street to 212th Street																			
M-44: 68.9	27042900100800	6002 St Albion Way-Bldg. E grnd. Floor	Lakeside Apt. Complex near City Hall	7	69	2	No	Yes	64	Ldn	64	70	7	--	Wall on Structure	N/A	4		57
	27042900100800	6002 St Albion Way-Bldg. E 2nd Floor	Lakeside Apt. Complex near City Hall	7	69	2	No	Yes	64	Ldn	64	70	7	--	Wall on Structure	N/A	4		57
	27042900100800	6002 St Albion Way-Bldg. E 3rd Floor	Lakeside Apt. Complex near City Hall	2	69	2	No	Yes	65	Ldn	64	70	2	--	Wall on Structure	N/A	4		57
	27042900100800	21604 St Albion Way-Bldg. G grnd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	63	Ldn	64	70	--	--		N/A			63
	27042900100800	21604 St Albion Way-Bldg. G 2nd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	64	Ldn	64	70	8	--	Wall on Structure	N/A	4		56
	27042900100800	21604 St Albion Way-Bldg. g 3rd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	64	Ldn	64	70	8	--	Wall on Structure	N/A	4		56
	27042900100800	6001 St Albion Way-Bldg. F grnd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	Yes	61	Ldn	64	70	--	--		N/A			61
	27042900100800	6001 St Albion Way-Bldg. F 2nd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	Yes	61	Ldn	64	70	--	--		N/A			61
	27042900100800	6001 St Albion Way-Bldg. F 3rd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	Yes	61	Ldn	64	70	--	--		N/A			61
	00619900005000	-	Empty Lot	0	72	--	No	No								N/A			
	00619900004800	-	Empty Lot	0	72	--	No	No								N/A			
	00525100002500	21503 60th Ave W	SF Residence on 60th Ave.	1	72	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	4		64
	00525100001100	5912 214th St SW	SF Residence on 214th St.	1	65	2	No	No	58	Ldn	61	67	--	--		N/A			58
	00525100001000	5910 214th St SW	SF Residence on 214th St.	1	67	2	No	No	61	Ldn	63	68	--	--		N/A			61
	00525100000900	5908 214th St SW	SF Residence on 214th St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	6		52
	00525100000800	5906 214th St SW	SF Residence on 214th St.	1	72	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	6		61
	00525100000700	5904 214th St SW	SF Residence on 214th St.	1	67	2	No	No	74	Ldn	63	68	--	1	Wall on Structure	N/A	6		62
	00525100000600	5902 214th St SW	SF Residence on 214th St.	1	67	2	No	No	72	Ldn	63	68	--	1	Wall on Retaining Wall	N/A	8		60

Lynnwood Link Extension B2A

Stations: 220th St SW Station
Mountlake Terrace Transit Center Station

Total Units Analyzed
622

Impacts:	Moderate	Severe
	138	50

Residual Impacts	
RSIP =	3

Receiver Information					Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00525100000500	5810 214th St SW	SF Residence on 214th St.	1	67	2	No	No	63	Ldn	63	68	1	--	Wall At-Grade	N/A	4		56
	00525100000400	-	Empty Lot	0	67	--	No	No							Wall At-Grade	N/A	4		
	00525100000300	5806 214th St SW	SF Residence on 214th St.	1	67	2	No	No	62	Ldn	63	68	--	--		N/A			62
	00525100000200	5804 214th St SW	SF Residence on 214th St.	1	67	2	No	No	62	Ldn	63	68	--	--		N/A			62
	00525100000100	5802 214th St SW	SF Residence on 214th St.	1	67	2	No	No	61	Ldn	63	68	--	--		N/A			61
	00525100001200	5909 214th St SW	SF Residence on 214th St.	1	65	2	No	No	58	Ldn	61	67	--	--	Wall on Structure	N/A	6		45
	00525100001300	5907 214th St SW	SF Residence on 214th St.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	6		47
	00525100001400	5905 214th St SW	SF Residence on 214th St.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	6		48
	00525100001500	5903 214th St SW	SF Residence on 214th St.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		48
	00525100001602	5901 214th St SW	SF Residence on 214th St.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		48
	00525100002200	21307 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	58	Ldn	59	65	--	--		N/A			58
	00525100002300	5803 214th St SW	SF Residence on 214th St.	1	62	2	No	No	58	Ldn	59	65	--	--		N/A			58
	00525100002400	5801 214th St SW	SF Residence on 214th St.	1	63	2	No	No	58	Ldn	60	66	--	--		N/A			58
	00920100000100	21331 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	53	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	8		44
	00525100001700	21304 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	8		45
	00525100001800	21302 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	52	Ldn	59	65	--	--		N/A			52
	00525100001900	21301 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	51	Ldn	59	65	--	--		N/A			51
	00525100002000	21303 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	51	Ldn	59	65	--	--		N/A			51
	00525100002100	21305 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	55	Ldn	59	65	--	--		N/A			55
	00619900004103	21318 58th Ave W	SF Residence on 58th Ave.	1	60	2	No	No	56	Ldn	58	64	--	--		N/A			56
	00619900004102	21316 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00619900004101	21312 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	54	Ldn	59	65	--	--		N/A			54
	00619900003904	21232 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	51	Ldn	59	65	--	--	Wall At-Grade	N/A	4		47
	00619900004104	21314 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	52	Ldn	59	65	--	--	Wall At-Grade	N/A	4		48
	00619900003804	5908 212th Pl SW	SF Residence on 212th Pl.	1	62	2	No	No	48	Ldn	59	65	--	--	Wall At-Grade	N/A	4		45
	00404100000400	21317 58th Ave W	SF Residence on 58th Ave.	1	67	2	No	No	61	Ldn	63	68	--	--		N/A			61
	00404100000300	5720 213th St SW	SF Residence on 213th St.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	00404100000200	5710 213th St SW	SF Residence on 213th St.	1	67	2	No	No	60	Ldn	63	68	--	--	Wall At-Grade	N/A	4		53
M-45: 66.95	00404100000100	5632 213th St SW	SF Residence on 213th St.	1	67	2	No	No	63	Ldn	63	68	1	--	Wall At-Grade	N/A	4		56
	00619900002602	21229 58th Ave W	Duplex on 58th Ave.	2	60	2	No	No	44	Ldn	58	64	--	--	Wall At-Grade	N/A	4		39
	00619900002501	5723 213th St SW	SF Residence on 213th St.	1	60	2	No	No	56	Ldn	58	64	--	--	Wall At-Grade	N/A	4		52
	00619900002502	5721 213th St SW	SF Residence on 213th St.	1	60	2	No	No	53	Ldn	58	64	--	--	Wall At-Grade	N/A	4		49
	00619900002503	5719 213th St SW	SF Residence on 213th St.	1	60	2	No	No	53	Ldn	58	64	--	--	Wall At-Grade	N/A	6		47
	00619900002504	5717 213th St SW	SF Residence on 213th St.	1	60	2	No	No	50	Ldn	58	64	--	--	Wall At-Grade	N/A	6		45
	00619900002402	5711 213th St SW	SF Residence on 213th St.	1	61	2	No	No	54	Ldn	59	65	--	--	Wall At-Grade	N/A	4		49
	00619900002403	5709 213th St SW	SF Residence on 213th St.	1	61	2	No	No	56	Ldn	59	65	--	--	Wall At-Grade	N/A	4		51
	00619900002404	5707 213th St SW	SF Residence on 213th St.	1	62	2	No	No	54	Ldn	59	65	--	--	Wall At-Grade	N/A	8		45
	00619900002303	5627 213th St SW	Duplex on 213th St.	2	61	2	No	No	61	Ldn	59	65	2	--	Wall At-Grade	N/A	4		56
	00619900002301	5623 213th St SW	SF Residence on 213th St.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall At-Grade	N/A	8		50
	00619900003000	5700 212th St SW	SF Residence on 213th St.	1	61	2	No	No	55	Ldn	59	65	--	--		N/A			55
	00619900002900	5616 212th St SW	SF Residence on 213th St.	1	61	2	No	No	51	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	6		45
	00619900002201	5619 213th St SW	SF Residence on 213th St.	1	61	2	No	No	57	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	6		49
	00619900002202	5625 213th St SW	SF Residence on 213th St.	1	63	2	Yes	No	69	Ldn	60	66	--	1	Wall At-Grade	Special	8		57
	00619900002101	5615 213th St SW	SF Residence on 213th St.	1	63	2	Yes	No	75	Ldn	60	66	--	1	Wall At-Grade	Special	8	1	61
	00619900002000	5604 212th St SW	SF Residence on 212th St.	1	72	2	Yes	No	78	Ldn	66	72	--	1	Wall At-Grade	Special	8		61
	27042800202400	None Given	SF Residence on 212th St.	1	72	2	Yes	No							Wall At-Grade	Special	4		
	27042800202200	5522 212th St SW	SF Residence on 212th St.	1	72	2	Yes	No							Wall on Retaining Wall	Special	6		
	27042800202100	-	Empty Lot	0	72	--	Yes	No							Wall on Retaining Wall	Special	6		
	00619900002102	5610 212th St SW	SF Residence on 212th St.	1	61	2	Yes	No	59	Ldn	59	65	1	--	Wall on Retaining Wall	Special	4		52
	00619900002700	5602 212th St SW	SF Residence on 212th St.	1	67	2	Yes	No	67	Ldn	63	68	1	--	Wall At-Grade	Special	8		52
	27042800202300	None Given	old number 00619900002300	1	71	2	Yes	No							Wall At-Grade	Special	6		
	27042100306900	5615 212th St SW	SF Residence on 212th St.	1	71	2	No	No	55	Ldn	66	71	--	--	Wall At-Grade	N/A	6		49
	27042100308400	-	Empty Lot	0	71	--	No	No							Wall At-Grade	N/A	6		
	27042100307700	5605 212th St SW	SF Residence on 212th St.	1	64	2	Yes	No	58	Ldn	61	66	--	--	Wall on Retaining Wall	Special	6		51
	27042100310500	5525 212th St SW	SF Residence on 212th St.	1	65	2	Yes	No	65	Ldn	61	67	1	--	Wall on Retaining Wall	Special	6		58
M-46: 68.35	27042100305400	20908 54th Ave W #1	Zoned Campground on 54th Ave./212th St.	1	61	2	No	No	48	Ldn	59	65	--	--	Wall on Retaining Wall	N/A	4		45

Lynnwood Link Extension B4

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		73	33	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
East Side of I-5																			
NE 189th Street to NE 200th Street																			
Begin B1 M30B-65	526049034	None	Athletic Field	1	65	3	No	No								N/A			
	526049017	-	Empty Lot	0	65	--	No	No								N/A			
	5490700080	805 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57
	5490700075	814 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57
	5490700070	812 Ne 194th St	SF Residence on 194th St.	1	64	2	No	No	56	Ldn	61	66	--	--		N/A			56
	5490700005	-	Empty Lot	0	64	--	No	No								N/A			
	5490700010	815 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	56	Ldn	63	68	--	--		N/A			56
	5490700015	821 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	47	Ldn	63	68	--	--		N/A			47
	5490700020	827 Ne 195th St	SF Residence on 195th St.	1	65	2	No	No	43	Ldn	61	67	--	--		N/A			43
	5490700065	818 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	47	Ldn	63	68	--	--		N/A			47
	5490700060	824 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	43	Ldn	63	68	--	--		N/A			43
	5490700085	817 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	53	Ldn	63	68	--	--		N/A			53
	5490700090	823 Ne 194th St	SF Residence on 194th St.	1	67	2	No	No	45	Ldn	63	68	--	--		N/A			45
	5490700095	831 Ne 194th St	SF Residence on 194th St.	1	65	2	No	No	42	Ldn	61	67	--	--		N/A			42
	3985300331	822 Ne 195th St	SF Residence on 195th St.	1	64	2	No	No	58	Ldn	61	66	--	--		N/A			58
	7805300020	19605 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	66	Ldn	61	66	--	1	Wall on Retaining Wall	N/A	6		57
	3985300330	-	Empty Lot	0	64	--	No	No								N/A			
	7805300030	19705 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Retaining Wall	N/A	6		49
	7805300040	19715 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	57	Ldn	61	66	--	--		N/A			57
	7805300050	19723 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--		N/A			59
	7805300060	19731 10th Ave Ne	SF Residence on 10th Ave.	1	64	2	No	No	55	Ldn	61	66	--	--		N/A			55
	3971700710	1000 Ne 198th St	SF Residence on 198th St.	1	64	2	No	No	59	Ldn	61	66	--	--		N/A			59
	3971700707	1006 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	62	Ldn	63	68	--	--		N/A			62
	3971700540	-	Empty Lot	0	64	--	No	No								N/A			
	7805300180	834 Ne 195th St	SF Residence on 195th St.	1	67	2	No	No	53	Ldn	63	68	--	--		N/A			53
	7805300010	840 Ne 195th St	SF Residence on 195th St.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	7805300130	1003 NE 196th	SF Residence on 196th St.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
M-55: 65.4	7805300140	19604 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	43	Ldn	61	67	--	--		N/A			43
	7805300150	1020 NE 196th	SF Residence on 196th St.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	7805300160	1010 Ne 197th St	SF Residence on 197th St.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	7805300170	19728 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	7805300100	1036 Ne 197th St	SF Residence on 197th St.	1	65	2	No	No	50	Ldn	61	67	--	--		N/A			50
	7805300070	19741 10th Ave Ne	SF Residence on 10th Ave.	1	65	2	No	No	46	Ldn	61	67	--	--		N/A			46
	3971700705	1002 Ne 198th St	SF Residence on 198th St.	1	67	2	No	No	52	Ldn	63	68	--	--		N/A			52
	3971700700	1010 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	67	Ldn	61	67	--	1	Wall on Structure	N/A	4		57
	3971700695	1016 NE 198th St.	SF Residence on 198th St.	1	65	2	No	No	64	Ldn	61	67	1	--	Wall on Structure	N/A	4		54
	3971700690	1022 NE 198th	SF Residence on 198th St.	1	65	2	No	No	63	Ldn	61	67	1	--	Wall on Structure	N/A	4		53
	3971700551	-	Empty Lot	0	67	--	No	No								N/A			
NE 200th Street to SR 104																			
	3971700560	1103 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	70	Ldn	61	66	--	1	Wall on Structure	N/A	6		58
M-56: 63.1	3971700570	1107 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	63	Ldn	60	66	1	--	Wall on Structure	N/A	6		51
	3971700575	1109 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	6		49
	3971700580	1111 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	6		48
	3971700585	1115 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	6		48
	3971700590	1117 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	6		47
	3971700595	1119 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	6		43
	3971700597	1201 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	55	Ldn	57	63	--	--	Wall on Structure	N/A	6		43
	3971700600	1207 NE Ballinger Pl.	SF Residence on Ballinger Pl.	1	58	2	No	No	54	Ldn	57	63	--	--	Wall on Structure	N/A	4		46
	3971700230	1102 Ne 200th St	SF Residence on 200th St.	1	64	2	No	No	70	Ldn	61	66	--	1	Wall on Structure	N/A	6		58
	3971700225	1104 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	64	Ldn	60	66	1	--	Wall on Structure	N/A	6		52
	3971700220	1114 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	6		49
	3971700215	20005 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		52
	3971700525	1206 Ne Ballinger Pl	SF Residence on Ballinger Pl	2	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	6		45
	3971700515	1212 NE Ballinger Pl.	SF Residence on Ballinger Pl	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	3985300269	1108 Ne 200th St	SF Residence on 200th St.	1	63	2	No	No	70	Ldn	60	66	--	1	Wall on Structure	N/A	6		59
	3985300265	1110 Ne 200th St	SF Residence on 200th St.	1	61	2	No	No	69	Ldn	59	65	--	1	Wall on Structure	N/A	6		58
	3985300267	1112 Ne 200th St	SF Residence on 200th St.	1	59	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	4		54
	3985300266	20015 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	60	Ldn	58	64	1	--	Wall on Structure	N/A	8		47
	3985300209	20014 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	57	Ldn	57	63	1	--	Wall on Structure	N/A	8		44
	3985300208	20018 12th Ave.	SF Residence on 12th Ave.	1	58	2	No	No	54	Ldn	57	63	--	--	Wall on Structure	N/A	8		42
	3985300268	20017 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	6		56
	3985300264	20019 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	61	Ldn	57	63	1	--	Wall on Structure	N/A	6		50
	3985300206	20026 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	8		46
	3985300207	20022 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	6		45
	3985300261	20035 12th Ave Ne	SF Residence on 12th Ave.	1	62	2	No	No	70	Ldn	59	65	--	1	Wall on Structure	N/A	8		58
M-57: 58.2	3985300263	20039 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	62	Ldn	57	63	1	--	Wall on Structure	N/A	8		50

Lynnwood Link Extension B4

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		73	33	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	3985300198	20038 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	8		46
	3985300197	20040 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		43
	3985300262	20041 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	68	Ldn	57	63	--	1	Wall on Structure	N/A	8		55
	3985300195	20044 12th Ave Ne	SF Residence on 12th Ave.	1	58	2	No	No	59	Ldn	57	63	1	--	Wall on Structure	N/A	8		46
	3985300196	20042 12th Ave Ne		1	58	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	8		44
	3985300260	20043 12th Ave Ne	SF Residence on 12th Ave.	1	65	2	No	No	70	Ldn	61	67	--	1	Wall on Structure	N/A	8		57
	3985300244	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	8		
	0308000070	20101 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	68	Ldn	58	64	--	1	Wall on Structure	N/A	8		55
	0308000060	20105 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	8		56
	0308000050	20109 12th Ave Ne	SF Residence on 12th Ave.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	8		55
	0308000040	20108 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		49
	0308000030	20104 12th Ave Ne	SF Residence on 12th Ave.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	8		48
	0308000020	20102 12th Ave Ne	SF Residence on 12th Ave.	1	60	2	No	No	61	Ldn	58	64	1	--	Wall on Structure	N/A	8		48
	0308000010	20100 12th Ave Ne	SF Residence on 12th Ave.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	8		45
	0308000015	20041 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	8		43
	3985300175	20107 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	8		44
	3985300176	20117 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	58	Ldn	58	64	2	--	Wall on Structure	N/A	8		46
	3985300177	20123 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	8		44
	3985300178	20131 Forest Park Dr Ne	SF Residence on Forest Park Dr.	2	61	2	No	No	60	Ldn	59	65	2	--	Wall on Structure	N/A	4		53
	3985300147	20149 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	68	Ldn	60	66	--	1	Wall on Structure	N/A	8		55
	3985300146	20145 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		59
	3985300145	20141 Forest Park Dr Ne	SF Residence on Forest Park Dr.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		59
	6792000000	20101 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	8		43
	3971700175	20121 14th Ave Ne	MF Residence on 14th Ave.	4	61	2	No	No	59	Ldn	59	65	4	--	Wall on Structure	N/A	4		50
	3971700165	20125 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		53
	3971700156	20129 14th Ave Ne	SF Residence on 14th Ave.	1	63	2	No	No	65	Ldn	60	66	1	--	Wall on Structure	N/A	4		58
	3985300135	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700158	-	Empty Lot	0	63	--	No	No							Wall on Structure	N/A	4		
	3971700154	20307 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		58
M-31: 61.7	3971700145	20313 14th Ave Ne	SF Residence on 14th Ave.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		58
	3971700130	20317 14th Ave Ne	MF Residence on 14th Ave.	4	62	2	No	No	66	Ldn	59	65	--	4	Wall on Structure	N/A	4		58
	3971700125	20327 14th Ave Ne	MF Residence on 14th Ave.	2	63	2	No	No	66	Ldn	60	66	--	2	Wall on Structure	N/A	4		58
	3971700120	20329 14th Ave Ne	MF Residence on 14th Ave.	4	64	2	No	No	66	Ldn	61	66	--	4	Wall on Structure	N/A	4		58
	3971700104	-	Empty Lot	0	65	--	No	No							Wall on Structure	N/A	4		
	3971700105	20333 14th Ave Ne	MF Residence on 14th Ave.	3	66	2	No	No	66	Ldn	62	68	3	--	Wall on Structure	N/A	4		58
	3971700100	20343 14th Ave Ne	MF Residence on 14th Ave.	3	67	2	No	No	66	Ldn	63	68	3	--	Wall on Structure	N/A	4		59
	397170020	20333 15th Ave Ne	Largo Vista Apt. Courtyard	31	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
SR 104 to 236th Street																			
	00520500101201	6015 244th St SW	Motel 6 on 244th near 242nd and Gateway - south bldg.	45	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00520500101201	6015 244th St SW	Motel 6 - north bldg.	26	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00520500102000	23908 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--		N/A			59
	00520500102100	23905 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--		N/A			59
	00520500102200	23904 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--		N/A			59
	00520500102300	23902 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--		N/A			59
	00520500102400	23900 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--		N/A			59
	00520500102500	23810 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	59	Ldn	61	66	--	--		N/A			59
	00520500102600	23808 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--		N/A			60
	00520500102700	23806 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102800	23804 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		51
	00520500102900	23802 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00520900200100	5909 238th St SW	SF Residence on 238th St.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		56
	00520900200200	6001 238th St SW	SF Residence on 238th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00520900200300	5907 238th St SW	SF Residence on 238th St.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		48
	00520900200600	6002 237th St SW	SF Residence on 237th St.	1	62	2	No	No	66	Ldn	59	65	--	1	Wall on Structure	N/A	4		56
	00520900200700	5908 237th St SW	SF Residence on 237th St.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00520900200900	5904 237th St SW	SF Residence on 237th St.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		48
	00520900201300	5909 237th St SW	SF Residence on 237th St.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Structure	N/A	4		55
	00520900201400	5907 237th St SW	SF Residence on 237th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00520900201800	5906 236th St SW	SF Residence on 236th St.	1	62	2	No	No	65	Ldn	59	65	--	1	Wall on Structure	N/A	4		55
	00520900201900	5904 236th St SW	SF Residence on 236th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
236th Street to 230th Street																			
	00524100001500	23506 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	No	56	Ldn	63	69	--	--		N/A			56
M-33: 67.525	00524100001400	23504 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	No	56	Ldn	63	69	--	--		N/A			56

Lynnwood Link Extension B4

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		73	33	RSIP =	0

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524100001300	23502 59th Pl W	SF Residence on 59th Pl.	1	68	2	No	No	56	Ldn	63	69	--	--		N/A			56
	00524100001200	23501 59th Pl W	SF Residence on 59th Pl.	1	67	2	No	No	56	Ldn	63	68	--	--		N/A			56
	00524100001100	23503 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	No	55	Ldn	62	68	--	--		N/A			55
	00524100001000	23505 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	No	55	Ldn	62	68	--	--		N/A			55
	00524100000900	23507 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	No	55	Ldn	62	68	--	--		N/A			55
	00524100000800	23509 59th Pl W	SF Residence on 59th Pl.	1	66	2	No	No	55	Ldn	62	68	--	--		N/A			55
	00524800001502	6002 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	47	Ldn	66	72	--	--		N/A			47
	00524800001400	6004 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	Yes	54	Ldn	66	72	--	--		N/A			54
M-34: 73.15	00524800001300	6005 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	Yes	62	Ldn	66	72	--	--		N/A			62
	00524800001200	6003 233rd Pl SW	SF Residence on 233rd Pl.	1	73	2	No	Yes	62	Ldn	66	72	--	--		N/A			62
	00524800001100	6001 233rd Pl SW	SF Residence on 233rd Pl.	1	72	2	No	No	47	Ldn	66	72	--	--		N/A			47
	00524800001000	6002 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	53	Ldn	66	72	--	--		N/A			53
	00524800000900	6004 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	Yes	56	Ldn	66	72	--	--		N/A			56
	00524800000800	6006 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	No	Yes	62	Ldn	66	72	--	--		N/A			62
	00524800000700	6005 232nd Pl SW	SF Residence on 232nd Pl.	1	73	2	No	Yes	62	Ldn	66	72	--	--		N/A			62
	00524800000600	6003 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	Yes	56	Ldn	66	72	--	--		N/A			56
	00524800000500	6001 232nd Pl SW	SF Residence on 232nd Pl.	1	72	2	No	No	53	Ldn	66	72	--	--		N/A			53
	00524800000100	6102 232nd St SW	SF Residence on 232nd St.	1	73	2	No	Yes	62	Ldn	66	72	--	--		N/A			62
	00524800000200	6006 232nd St SW	SF Residence on 232nd St.	1	72	2	No	Yes	56	Ldn	66	72	--	--		N/A			56
	00524800000300	6004 232nd St SW	SF Residence on 232nd St.	1	72	2	No	Yes	54	Ldn	66	72	--	--		N/A			54
	00524800000401	6002 232nd St SW	SF Residence on 232nd St.	1	72	2	No	Yes	52	Ldn	66	72	--	--		N/A			52
	00522000302300	23112 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	Yes	67	Ldn	66	73	1	--	Wall on Structure	N/A	4		57
	00522000302400	23110 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	Yes	67	Ldn	66	73	1	--	Wall on Structure	N/A	4		57
	00522000302500	23106 61st Ave W	SF Residence on 61st Ave.	1	74	2	No	No	68	Ldn	66	73	1	--	Wall on Structure	N/A	4		58
	00522000302700	23102 61st Ave W	SF Residence on 61st Ave.	1	74	2	Yes	No	70	Ldn	66	73	1	--	Wall on Structure	Special	4		60
	00522000302800	23010 61st Ave W	SF Residence on 61st Ave.	1	74	2	Yes	No	70	Ldn	66	73	1	--	Wall on Structure	Special	4		60
	00522000302900	23008 61st Ave W	SF Residence on 61st Ave.	1	74	2	Yes	No	71	Ldn	66	73	1	--	Wall on Structure	Special	4		60
	00522000600100	6008 230th St SW	SF Residence on 230th St.	1	67	2	Yes	No	68	Ldn	63	68	--	1	Wall on Structure	Special	4		58
	00522000600200	23007 61st Ave W	SF Residence on 61st Ave.	1	65	2	Yes	No	61	Ldn	61	67	1	--	Wall on Structure	Special	4		51
	00522000600300	23009 61st Ave W	SF Residence on 61st Ave.	1	63	2	Yes	No	60	Ldn	60	66	1	--	Wall on Structure	Special	4		50
	00522000600400	23101 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00522000600500	23105 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00522000600600	23109 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00522000600800	6007 232nd St SW	SF Residence on 232nd St.	1	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	00522000600900	6003 232nd St SW	SF Residence on 232nd St.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00522000601000	23108 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00522000601100	23106 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00522000601200	23100 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00522000601300	23008 60st Ave W	SF Residence on 60th Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00522000601400	23006 60st Ave W	SF Residence on 60th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00522000601600	6004 230th St SW	SF Residence on 230th St.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	4		52
230th Street to 220th Street																			
	00522000500700	6007 230th St SW	SF Residence on 230th St.	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
	00522000500600	22909 61st Ave W	SF Residence on 61st Ave.	1	64	2	No	No	49	Ldn	61	66	--	--		N/A			49
M-35: 63.95	00522000500500	22905 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00522000500400	22901 61st Ave W	SF Residence on 61st Ave.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00522000500300	22809 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00522000500200	22807 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00522000500100	22803 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00523000300900	22707 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00523000300800	22705 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00523000300700	22703 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00523000300600	22701 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00523000300500	22609 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00523000300400	22607 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300300	22605 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300200	22603 61st Ave W	SF Residence on 61st Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00523000300100	6004 226th St SW	SF Residence on 226th St.	1	61	2	No	No	45	Ldn	59	65	--	--		N/A			45
	00523000201500	6005 226th St SW	SF Residence on 226th St.	1	59	2	No	No	47	Ldn	58	64	--	--		N/A			47
	00523000200900	6006 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	45	Ldn	58	64	--	--		N/A			45
	00523000200600	6003 225th Pl SW	SF Residence on 225th Pl.	1	59	2	No	No	47	Ldn	58	64	--	--		N/A			47
	00523000200200	6004 224th St SW	SF Residence on 224th St.	1	60	2	No	No	42	Ldn	58	64	--	--		N/A			42
	00523000100900	6003 224th St SW	SF Residence on 224th St.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00523000100800	22306 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00523000100700	22304 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00523000100600	22302 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00523000100500	22210 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00523000100400	22208 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00523000100300	22206 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--		N/A			49
	00523000100200	22204 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--		N/A			49
	00523000100100	22202 60th Ave W	SF Residence on 60th Ave.	1	63	2	No	No	44	Ldn	60	66	--	--		N/A			44

Lynnwood Link Extension B4

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		73	33	RSIP =	0

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524900000500	22111 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	41	Ldn	59	65	--	--		N/A			41
	00524900000400	22109 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	41	Ldn	59	65	--	--		N/A			41
	00524900000300	22107 60th Ave W	SF Residence on 60th Ave.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00524900000200	22105 60th Ave W	SF Residence on 60th Ave.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00524900000100	22103 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	47	Ldn	61	66	--	--		N/A			47
	00523300002800	5904 221st St SW	SF Residence on 221st St.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00523300001700	5905 221st St SW	SF Residence on 221st St.	1	67	2	No	No	50	Ldn	63	68	--	--		N/A			50
	00523300001800	5903 221st St SW	SF Residence on 221st St.	1	67	2	No	No	50	Ldn	63	68	--	--		N/A			50
	00523300001900	5809 221st St SW	SF Residence on 221st St.	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
220th Street to 212th Street																			
	00523300001000	5902 219th St SW	SF Residence on 219th St.	1	73	2	No	No	46	Ldn	66	72	--	--		N/A			46
M-36: 63.325	00523300000700	5905 219th St SW	SF Residence on 219th St.	1	63	2	No	No	48	Ldn	60	66	--	--		N/A			48
	00523300000600	5901 219th St SW		1	61	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00441000000500	5810 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	No	46	Ldn	58	64	--	--		N/A			46
	00441000000400	5808 218th Pl SW		1	59	2	No	No	48	Ldn	58	64	--	--		N/A			48
	00441000000600	5811 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	No	47	Ldn	58	64	--	--		N/A			47
	00441000000701	5809 218th Pl SW	SF Residence on 218th Pl.	1	59	2	No	No	47	Ldn	58	64	--	--		N/A			47
	00619900005502	21726 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	00619900005503	21712 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00619900005300	-	Empty Lot	0	67	--	No	No								N/A			
	00619900005101	21620 58th Ave W	SF Residence on 58th Ave.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	00619900005103	21616 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	49	Ldn	61	67	--	--		N/A			49
	00619900004900	21530 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	49	Ldn	61	67	--	--		N/A			49
	00619900004700	21528 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	49	Ldn	61	67	--	--		N/A			49
M-37: 65.35	00766700000700	5709 215th Pl SW	SF Residence on 215th Pl.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	00619900001601	21501 58th Ave W	SF Residence on 58th Ave.	1	65	2	No	No	49	Ldn	61	67	--	--		N/A			49
	00619900001701	-	Empty Lot	0	65	--	No	No								N/A			
	00619900001702	21404 56th Ave W	SF Residence on 56th Ave.	1	66	2	No	No	49	Ldn	62	68	--	--		N/A			49
	00474800001400	5506 214th Pl SW	SF Residence on 214th Pl.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	00474800001800	5503 214th Pl SW	SF Residence on 214th Pl.	1	70	2	No	No	47	Ldn	65	70	--	--		N/A			47
	00474800001900	5505 214th Pl SW	SF Residence on 214th Pl.	1	72	2	No	No	48	Ldn	66	72	--	--		N/A			48
	27042800202000	5509 214th Pl SW	SF Residence on 214th Pl.	2	74	2	No	No	50	Ldn	66	73	--	--		N/A			50
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. D Grnd. Floor	2	75	2	No	No	52	Ldn	66	74	--	--		N/A			52
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. D 1st Floor	2	75	2	No	No	52	Ldn	66	74	--	--		N/A			52
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. C Grnd. Floor	2	75	2	No	No	54	Ldn	66	74	--	--		N/A			54
M-38: 75.1	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. C 1st Floor	2	75	2	No	No	54	Ldn	66	74	--	--		N/A			54
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. B Grnd. Floor	4	75	2	Yes	No	54	Ldn	66	74	--	--		Special			54
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. B 1st Floor	4	75	2	Yes	No	54	Ldn	66	74	--	--		Special			54
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. A Grnd. Floor	4	75	2	Yes	No	56	Ldn	66	74	--	--		Special			56
	27042800201700	5402 212th St SW	Maple Glen Apts on 212th St. Bldg. A 1st Floor	4	75	2	Yes	No	56	Ldn	66	74	--	--		Special			56
	27042800201600	5302 212th St SW	Duplex on 212th St.	2	74	2	Yes	No	63	Ldn	66	73	--	--		Special			63
	27042800200600	5228 212th St SW	SF Residence on 212th St.	1	73	2	No	No	63	Ldn	66	72	--	--		N/A			63
	27042800200700	5222 212th St SW	Triplex on 212th St.	3	72	2	No	No	63	Ldn	66	72	--	--		N/A			63
West Side of I-5																			
SR 104 to 232nd Street																			
	27043200400200	6601 244th St SW	Nile Shrine Golf Course between SR104 &236th	1	68	3	No	No								N/A			
	00524700001500	6300 234th St SW	SF Residence on 234th St.	1	72	2	No	No	64	Ldn	66	72	--	--		N/A			64
	00524700003400	6301 234th St SW	SF Residence on 234th St.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		54
	00524700003300	23310 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	62	Ldn	64	70	--	--		N/A			62
	00524700003200	23308 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	61	Ldn	64	70	--	--		N/A			61
	00524700003100	23306 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	00524700003000	23304 63rd Ave W	SF Residence on 63rd Ave.	1	69	2	No	No	50	Ldn	64	70	--	--		N/A			50
	00524700002900	23302 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	Yes	57	Ldn	63	69	--	--		N/A			57
	00524700002800	23300 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	Yes	57	Ldn	63	69	--	--		N/A			57
	00524700002700	23212 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	Yes	58	Ldn	63	69	--	--		N/A			58
	00524700000500	23209 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	Yes	60	Ldn	66	75	--	--		N/A			60
	00524700000400	23207 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	Yes	61	Ldn	66	75	--	--		N/A			61
	00524700000300	23205 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	Yes	64	Ldn	66	73	--	--		N/A			64
	00524700000200	23203 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	Yes	66	Ldn	66	73	1	--	Wall on Structure	N/A	4		56
	00524700000100	23201 63rd Ave W	SF Residence on 63rd Ave.	1	74	2	No	Yes	61	Ldn	66	73	--	--	Wall on Structure	N/A	4		52
	27043200100100	23117 63rd Ave W	SF Residence on 63rd Ave.	1	77	2	No	Yes	68	Ldn	66	75	1	--	Wall on Structure	N/A	4		58

Lynnwood Link Extension B4

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		73	33	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
232nd Street to 228th Street																			
	00522300305300	23115 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	Yes	67	Ldn	66	75	1	--	Wall on Structure	N/A	4		57
	00522300305400	23113 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	Yes	68	Ldn	66	75	1	--	Wall on Structure	N/A	4		58
	00522300305500	23111 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	Yes	68	Ldn	63	69	1	--	Wall on Structure	N/A	4		58
	00522300306400	23014 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	No	No	69	Ldn	66	75	1	--	Wall on Structure	N/A	4		59
	00522300306500	23015 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	Yes	No	70	Ldn	66	75	1	--	Wall on Structure	Special	4		59
	00522300306600	23013 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	Yes	No	70	Ldn	66	75	1	--	Wall on Structure	Special	4		59
	00522300306700	23011 63rd Pl W	SF Residence on 63rd Pl.	1	76	2	Yes	No	69	Ldn	66	75	1	--	Wall on Structure	Special	4		59
	00522300306800	23009 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	Yes	No	70	Ldn	66	75	1	--	Wall on Structure	Special	4		59
	00522300306900	23007 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	Yes	No	69	Ldn	66	75	1	--	Wall on Structure	Special	4		59
M-39: 76.45	00522300307000	23005 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	Yes	No	63	Ldn	66	75	--	--		Special			63
	00522300307100	23003 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	Yes	No	63	Ldn	66	75	--	--		Special			63
	00522300307200	23001 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	63	Ldn	66	75	--	--		N/A			63
	00522300307201	22909 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	63	Ldn	66	75	--	--		N/A			63
	00522400007301	22905 63rd Ave W	SF Residence on 63rd Ave.	1	76	2	No	No	63	Ldn	66	75	--	--		N/A			63
	00522400007300	22903 63rd Ave W	SF Residence on 63rd Ave.	1	75	2	No	No	61	Ldn	66	74	--	--		N/A			61
	00522400007400	22901 63rd Ave W	SF Residence on 63rd Ave.	1	72	2	No	No	60	Ldn	66	72	--	--		N/A			60
	00522300103300	23112 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	Yes	65	Ldn	61	67	1	--	Wall on Structure	N/A	4		55
	00522300305600	23109 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	Yes	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	00522300306300	23012 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	00522300306200	23010 63rd Pl W	SF Residence on 63rd Pl.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	00522300306100	23008 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	00522300305700	23107 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00522300305800	23105 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00522300305900	23103 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00522300306000	23101 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00522300204600	23002 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	00522300204700	6302 230th St SW	SF Residence on 230th St.	1	68	2	No	No	55	Ldn	63	69	--	--		N/A			55
	00522300204500	23004 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00522300204800	6304 230th St SW	SF Residence on 230th St.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	00522400007800	6301 230th St SW	SF Residence on 230th St.	1	68	2	No	No	54	Ldn	63	69	--	--		N/A			54
	00522400007700	22906 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	54	Ldn	63	69	--	--		N/A			54
	00522400007600	22904 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	54	Ldn	63	69	--	--		N/A			54
	00522400007500	22902 63rd Ave W	SF Residence on 63rd Ave.	1	68	2	No	No	54	Ldn	63	69	--	--		N/A			54
	00522400007900	6303 230th St SW	SF Residence on 230th St.	1	65	2	No	No	52	Ldn	61	67	--	--		N/A			52
	00522400009200	22807 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	00522400009100	22805 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	00522400009000	22803 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
	00522400008900	22801 64th Pl W	SF Residence on 64th Pl.	1	65	2	No	No	51	Ldn	61	67	--	--		N/A			51
228th Street to 220th Street																			
	00524000000500	6101 227th St SW	SF Residence on 227th St.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
M-40: 68.5	00524000000600	6103 227th St SW	SF Residence on 227th St.	1	69	2	No	No	49	Ldn	64	70	--	--		N/A			49
	00524000000700	6201 227th St SW	SF Residence on 227th St.	1	68	2	No	No	46	Ldn	63	69	--	--		N/A			46
	00524000000800	6203 227th St SW	SF Residence on 227th St.	1	68	2	No	No	48	Ldn	63	69	--	--		N/A			48
	00524000003501	22611 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	00524000003601	22605 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	00524000003801	22603 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00524000004000	22601 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00524000004100	22505 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00524000004200	22503 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00524000004300	22501 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	47	Ldn	61	67	--	--		N/A			47
	00524000004400	22407 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	00524000004500	22405 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	48	Ldn	61	67	--	--		N/A			48
	00524000004600	22403 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00524000004700	22309 62nd Ave W	SF Residence on 62nd Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00524000004800	22307 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	49	Ldn	61	67	--	--		N/A			49
	00524000004900	22305 63rd Ave W	SF Residence on 63rd Ave.	1	65	2	No	No	49	Ldn	61	67	--	--		N/A			49
	00524000005000	-	Empty Lot	0	71	--	No	No								N/A			
	00524000005100	22209 63rd Ave W	SF Residence on 63rd Ave.	1	70	2	No	No	49	Ldn	65	70	--	--		N/A			49
	00524000005400	22207 62nd Ave W	SF Residence on 62nd Ave.	1	70	2	No	No	54	Ldn	65	70	--	--		N/A			54
	00524000005500	22205 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	00524000005600	22203 62nd Ave W	SF Residence on 62nd Ave.	1	69	2	No	No	57	Ldn	64	70	--	--		N/A			57
	00524000005700	22201 62nd Ave W	SF Residence on 62nd Ave.	1	68	2	No	No	59	Ldn	63	69	--	--		N/A			59
M-41: 66.9 LEQ	00378200300600	6205 222nd St SW	School on 222nd St.	1	68	3	No	No								N/A			
	00524000003400	22610 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	46	Ldn	61	66	--	--		N/A			46
	00524000003300	22608 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	46	Ldn	61	66	--	--		N/A			46
	00524000003200	22606 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	46	Ldn	61	66	--	--		N/A			46
	00524000003100	22604 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45
	00524000003000	6202 226th St SW	SF Residence on 226th St.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45
	00524000006700	22504 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45

Lynnwood Link Extension B4

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		73	33	RSIP =	0

Receiver Information							Impact Analysis							Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00524000006800	22502 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45
	00524000007300	22406 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45
	00524000007400	6202 224th St SW	SF Residence on 224th St.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45
	00524000008400	6201 224th St SW	SF Residence on 224th St.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45
	00524000008500	22302 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	46	Ldn	61	66	--	--		N/A			46
	00524000008600	6202 223rd Pl SW	SF Residence on 223rd Pl.	1	64	2	No	No	47	Ldn	61	66	--	--		N/A			47
	00524000009200	22206 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	47	Ldn	61	66	--	--		N/A			47
	00524000009301	22204 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00524000009401	22202 62nd Ave W	SF Residence on 62nd Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00524000009500	6202 222nd St SW	SF Residence on 222nd St.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00524000002600	22605 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00524000002700	22603 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00524000002800	22601 63rd Pl W	SF Residence on 63rd Pl.	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00524000002900	6204 226th St SW	SF Residence on 226th St.	1	62	2	No	No	42	Ldn	59	65	--	--		N/A			42
	00524000006600	6201 226th St SW	SF Residence on 226th St.	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00524000006900	6202 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	42	Ldn	59	65	--	--		N/A			42
	00524000007200	6201 225th Pl SW	SF Residence on 225th Pl.	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00524000007500	6204 224th St SW	SF Residence on 224th St.	1	62	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00524000008700	6204 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	No	42	Ldn	59	65	--	--		N/A			42
	00524000009100	6201 223rd Pl SW	SF Residence on 223rd Pl.	1	62	2	No	No	42	Ldn	59	65	--	--		N/A			42
	00524000009302	6208 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	No	46	Ldn	57	63	--	--		N/A			46
	00524000009402	6207 222nd Ln SW	SF Residence on 222nd Ln.	1	57	2	No	No	46	Ldn	57	63	--	--		N/A			46
M-42: 57.4	00524000009700	6206 222nd St S	SF Residence on 222nd St.	2	57	2	No	No	47	Ldn	57	63	--	--		N/A			47
	00524000009600	6204 222nd St SW	SF Residence on 222nd St.	1	66	2	No	No	47	Ldn	62	68	--	--		N/A			47
	00378200300503	6303 222nd St SW	SF Residence on 222nd St.	1	56	2	No	No	47	Ldn	56	63	--	--		N/A			47
	00378200300501	6305 222nd St SW	SF Residence on 222nd St.	1	56	2	No	No	47	Ldn	56	63	--	--		N/A			47
	00378200300502	6307 222nd St SW	SF Residence on 222nd St.	1	56	2	No	No	45	Ldn	56	63	--	--		N/A			45
	00378200300504	22103 64th Ave W	SF Residence on 64th Ave.	1	56	2	No	No	43	Ldn	56	63	--	--		N/A			43
M-43: 55.9	00525400001300	6302 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	52	Ldn	56	63	--	--		N/A			52
	00525400001400	6304 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	51	Ldn	56	63	--	--		N/A			51
	00525400001500	6306 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	48	Ldn	56	63	--	--		N/A			48
	00525400001200	6303 221st Pl SW	SF Residence on 221st PL.	1	56	2	No	No	52	Ldn	56	63	--	--		N/A			52
	00525400001100	6305 221st Pl SW	SF Residence on 221st PL.	1	58	2	No	No	47	Ldn	57	63	--	--		N/A			47
	00525400001000	6307 221st Pl SW		1	58	2	No	No	44	Ldn	57	63	--	--		N/A			44
	00525400000900	22007 64th Ave.		1	58	2	No	No	42	Ldn	57	63	--	--		N/A			42
	00525400000800	22005 64th Ave.		1	58	2	No	No	42	Ldn	57	63	--	--		N/A			42
	00525400000700	6306 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00525400000600	6304 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	No	42	Ldn	59	65	--	--		N/A			42
	00525400000500	6302 220th Pl SW	SF Residence on 220th PL.	1	62	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00525400000400	6303 220th Pl SW	SF Residence on 220th PL.	1	64	2	No	No	47	Ldn	61	66	--	--		N/A			47
	00525400000300	6305 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	No	41	Ldn	62	68	--	--		N/A			41
	00525400000200	6307 220th Pl SW	SF Residence on 220th PL.	1	66	2	No	No	44	Ldn	62	68	--	--		N/A			44
	00525400000100	22001 64th Ave.	SF Residence on 220th PL.	1	66	2	No	No	42	Ldn	62	68	--	--		N/A			42
220th Street to 212th Street																			
	27042900100800	6002 St Albion Way-Bldg. E grnd. Floor	Lakeside Apt. Complex near City Hall	7	69	2	No	No	58	Ldn	64	70	--	--		N/A			58
	27042900100800	6002 St Albion Way-Bldg. E 2nd Floor	Lakeside Apt. Complex near City Hall	7	69	2	No	No	58	Ldn	64	70	--	--		N/A			58
	27042900100800	6002 St Albion Way-Bldg. E 3rd Floor	Lakeside Apt. Complex near City Hall	2	69	2	No	No	58	Ldn	64	70	--	--		N/A			58
	27042900100800	21604 St Albion Way-Bldg. G grnd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	59	Ldn	64	70	--	--		N/A			59
	27042900100800	21604 St Albion Way-Bldg. G 2nd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	59	Ldn	64	70	--	--		N/A			59
	27042900100800	21604 St Albion Way-Bldg. g 3rd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	59	Ldn	64	70	--	--		N/A			59
	27042900100800	6001 St Albion Way-Bldg. F grnd. Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	27042900100800	6001 St Albion Way-Bldg. F 2nd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	27042900100800	6001 St Albion Way-Bldg. F 3rd Floor	Lakeside Apt. Complex near City Hall	8	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00619900005000	-	Empty Lot	0	72	--	No	No								N/A			
	00619900004800	-	Empty Lot	0	72	--	No	No								N/A			
	00525100002500	21503 60th Ave W	SF Residence on 60th Ave.	1	72	2	No	No	65	Ldn	66	72	--	--		N/A			65
	00525100001100	5912 214th St SW	SF Residence on 214th St.	1	65	2	No	No	54	Ldn	61	67	--	--		N/A			54
	00525100001000	5910 214th St SW	SF Residence on 214th St.	1	67	2	No	No	57	Ldn	63	68	--	--		N/A			57
	00525100000900	5908 214th St SW	SF Residence on 214th St.	1	69	2	No	No	55	Ldn	64	70	--	--		N/A			55
	00525100000800	5906 214th St SW	SF Residence on 214th St.	1	72	2	No	No	58	Ldn	66	72	--	--		N/A			58
	00525100000700	5904 214th St SW	SF Residence on 214th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00525100000600	5902 214th St SW	SF Residence on 214th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55

Lynnwood Link Extension B4

Stations: Mountlake Terrace Transit Center Station

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
622		73	33	RSIP =	0

Receiver Information								Impact Analysis						Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00525100000500	5810 214th St SW	SF Residence on 214th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00525100000400	-	Empty Lot	0	67	--	No	No								N/A			
	00525100000300	5806 214th St SW	SF Residence on 214th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00525100000200	5804 214th St SW	SF Residence on 214th St.	1	67	2	No	No	54	Ldn	63	68	--	--		N/A			54
	00525100000100	5802 214th St SW	SF Residence on 214th St.	1	67	2	No	No	54	Ldn	63	68	--	--		N/A			54
	00525100001200	5909 214th St SW	SF Residence on 214th St.	1	65	2	No	No	42	Ldn	61	67	--	--		N/A			42
	00525100001300	5907 214th St SW	SF Residence on 214th St.	1	64	2	No	No	45	Ldn	61	66	--	--		N/A			45
	00525100001400	5905 214th St SW	SF Residence on 214th St.	1	63	2	No	No	45	Ldn	60	66	--	--		N/A			45
	00525100001500	5903 214th St SW	SF Residence on 214th St.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00525100001602	5901 214th St SW	SF Residence on 214th St.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00525100002200	21307 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00525100002300	5803 214th St SW	SF Residence on 214th St.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00525100002400	5801 214th St SW	SF Residence on 214th St.	1	63	2	No	No	47	Ldn	60	66	--	--		N/A			47
	00920100000100	21331 60th Ave W	SF Residence on 60th Ave.	1	64	2	No	No	43	Ldn	61	66	--	--		N/A			43
	00525100001700	21304 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00525100001800	21302 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00525100001900	21301 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00525100002000	21303 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00525100002100	21305 59th Pl W	SF Residence on 59th Pl.	1	62	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00619900004103	21318 58th Ave W	SF Residence on 58th Ave.	1	60	2	No	No	45	Ldn	58	64	--	--		N/A			45
	00619900004102	21316 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00619900004101	21312 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	43	Ldn	59	65	--	--		N/A			43
	00619900003904	21232 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00619900004104	21314 58th Ave W	SF Residence on 58th Ave.	1	61	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00619900003804	5908 212th Pl SW	SF Residence on 212th Pl.	1	62	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00404100000400	21317 58th Ave W	SF Residence on 58th Ave.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00404100000300	5720 213th St SW	SF Residence on 213th St.	1	64	2	No	No	47	Ldn	61	66	--	--		N/A			47
	00404100000200	5710 213th St SW	SF Residence on 213th St.	1	67	2	No	No	54	Ldn	63	68	--	--		N/A			54
M-45: 66.95	00404100000100	5632 213th St SW	SF Residence on 213th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00619900002602	21229 58th Ave W	Duplex on 58th Ave.	2	60	2	No	No	43	Ldn	58	64	--	--		N/A			43
	00619900002501	5723 213th St SW	SF Residence on 213th St.	1	60	2	No	No	45	Ldn	58	64	--	--		N/A			45
	00619900002502	5721 213th St SW	SF Residence on 213th St.	1	60	2	No	No	43	Ldn	58	64	--	--		N/A			43
	00619900002503	5719 213th St SW	SF Residence on 213th St.	1	60	2	No	No	51	Ldn	58	64	--	--		N/A			51
	00619900002504	5717 213th St SW	SF Residence on 213th St.	1	60	2	No	No	49	Ldn	58	64	--	--		N/A			49
	00619900002402	5711 213th St SW	SF Residence on 213th St.	1	61	2	No	No	46	Ldn	59	65	--	--		N/A			46
	00619900002403	5709 213th St SW	SF Residence on 213th St.	1	61	2	No	No	44	Ldn	59	65	--	--		N/A			44
	00619900002404	5707 213th St SW	SF Residence on 213th St.	1	62	2	No	No	52	Ldn	59	65	--	--		N/A			52
	00619900002303	5627 213th St SW	Duplex on 213th St.	2	61	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00619900002301	5623 213th St SW	SF Residence on 213th St.	1	61	2	No	No	46	Ldn	59	65	--	--	Wall At-Grade	N/A	4		42
	00619900003000	5700 212th St SW	SF Residence on 213th St.	1	61	2	No	No	53	Ldn	59	65	--	--	Wall At-Grade	N/A	4		49
	00619900002900	5616 212th St SW	SF Residence on 213th St.	1	61	2	No	No	47	Ldn	59	65	--	--		N/A			47
	00619900002201	5619 213th St SW	SF Residence on 213th St.	1	61	2	No	No	52	Ldn	59	65	--	--		N/A			52
	619900002202	5625 213th St SW	SF Residence on 213th St.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall At-Grade	N/A	4		56
	00619900002101	5615 213th St SW	SF Residence on 213th St.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall At-Grade	N/A	4		57
	00619900002000	5604 212th St SW	SF Residence on 212th St.	1	72	2	No	No	62	Ldn	66	72	--	--		N/A			62
	27042800202400	None Given	SF Residence on 212th St.	1	72	2	No	No	62	Ldn	66	72	--	--		N/A			62
	27042800202200	5522 212th St SW	SF Residence on 212th St.	1	72	2	No	No	61	Ldn	66	72	--	--		N/A			61
	27042800202100	-	Empty Lot	0	72	--	Yes	No								Special			
	00619900002102	5610 212th St SW	SF Residence on 212th St.	1	61	2	No	No	54	Ldn	59	65	--	--		N/A			54
	00619900002700	5602 212th St SW	SF Residence on 212th St.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	27042800202300	None Given	old number 00619900002300	1	71	2	No	No	55	Ldn	66	71	--	--		N/A			55
	27042100306900	5615 212th St SW	SF Residence on 212th St.	1	71	2	No	No	49	Ldn	66	71	--	--		N/A			49
	27042100308400	-	Empty Lot	0	71	--	No	No								N/A			
	27042100307700	5605 212th St SW	SF Residence on 212th St.	1	64	2	No	No	52	Ldn	61	66	--	--		N/A			52
	27042100310500	5525 212th St SW	SF Residence on 212th St.	1	65	2	No	No	54	Ldn	61	67	--	--		N/A			54
M-46: 68.35	27042100305400	20908 54th Ave W #1	Zoned Campground on 54th Ave./212th St.	1	61	2	No	No	52	Ldn	59	65	--	--		N/A			52

ATTACHMENT B

Part 1. Detailed Noise Impact Analysis Sheets: C Alternatives

Lynnwood Link Extension C1M

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
378		171	59	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
I-5 to 52nd Ave and 208th St																			
Begin C1	00462601501000	21031 54th Ave W	SF Residence on 54th Ave.	1	72	2	No	No	68	Ldn	66	72	1	--	Wall on Structure	N/A	4		58
	00462601500700	21031 54th Ave W	SF Residence on 54th Ave.	0	72	2	No	No	67	Ldn	66	72	0	--	Wall on Structure	N/A	4		57
	00462601500600	21019 54th Ave W	SF Residence on 54th Ave.	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Structure	N/A	4		57
	00462601500300	21011 54th Ave W	SF Residence on 54th Ave.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	00462601500200	21007 54th Ave W	SF Residence on 54th Ave.	1	67	2	No	No	60	Ldn	63	68	--	--	Wall on Structure	N/A	4		51
	00462400401000	20927 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
	00462400400701	20921 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
	00462400400600	20919 54th Ave W	SF Residence on 54th Ave.	1	65	2	No	No	57	Ldn	61	67	--	--	Wall on Structure	N/A	4		47
	00462400400300	20913 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462400400200	20903 54th Ave W	SF Residence on 54th Ave.	1	63	2	No	No	56	Ldn	60	66	--	--	Wall on Structure	N/A	4		47
	00462400500900	20829 54th Ave W	SF Residence on 54th Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462400500600	20825 54th Ave W	SF Residence on 54th Ave.	1	61	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462400500500	20819 54th Ave W	SF Residence on 54th Ave.	1	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462400500200	20811 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462500500301	20804 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00462500500302	20826 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00462500500701	20828 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00462500500702	20830 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00462400400100	20902 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400400400	20908 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00462400400500	20914 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
	00462400400800	20922 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall on Structure	N/A	4		49
	00666500000100	20926 53rd Ave W	SF Residence on 53rd Ave.	1	70	2	No	No	60	Ldn	65	70	--	--	Wall on Structure	N/A	4		51
	00666500000200	20928 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	66	Ldn	66	72	1	--	Wall on Structure	N/A	4		57
	00666500000300	20932 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	67	Ldn	66	72	1	--	Wall on Structure	N/A	4		57
M-47: 72.35	00666500000400	20929 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	68	Ldn	66	72	1	--	Wall on Structure	N/A	4		58
	00666500000500	20925 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	68	Ldn	66	72	1	--	Wall on Structure	N/A	4		57
	00462601300700	20923 53rd Ave W	SF Residence on 53rd Ave.	1	70	2	No	No	63	Ldn	65	70	--	--	Wall on Structure	N/A	4		53
	00462601300600	20915 53rd Ave W	SF Residence on 53rd Ave.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	4		52
	00462601300300	20911 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	00462601300200	20901 53rd Ave W	SF Residence on 53rd Ave.	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	00462601201000	20829 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	4		53
	00462601200700	20825 53rd Ave W	SF Residence on 53rd Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	4		53
	00462601200600	20819 53rd Ave W	SF Residence on 53rd Ave.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall on Structure	N/A	4		52
	00462601200300	20813 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462601200200	20807 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		52
	00462601200100	20806 52nd Ave W	SF Residence on 52nd Ave.	1	65	2	No	No	69	Ldn	61	67	--	1	Wall on Structure	N/A	4		59
	00462601200400	20812 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462601200500	20818 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462601200800	20830 52nd Ave W	(World Harvester) Church on 52nd Ave.	1	67	3	No	No	66	Leq	68	73	--	--	Wall on Structure	N/A	4		56
	00462601300100	20830 52nd Ave W	Part of Church	2nd	67	3	No	No	66	Leq	68	73	--	--	Wall on Structure	N/A	4		56
	00462601300400	20918 52nd Ave W	Apartment Building on 52nd Ave.	2	69	2	No	No	66	Ldn	64	70	2	--	Wall on Structure	N/A	4		54
	00462601300800	20924 52nd Ave W	SF Residence on 52nd Ave.	1	70	2	No	No							Wall on Structure	N/A	4		
	27042100403800	20909 52nd Ave W	SF Residence on 52nd Ave.	1	72	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	4		59
208th Street to 206th Street																			
	00462500700000	5211 208th St SW	SF Residence on 208th St.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	27042100403700	0	Interurban Trail	0	62	3	No	No							Wall on Structure	N/A	4		
M-48: 63.5	00462500800000	20706 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900900	20628 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900800	20624 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900400	20618 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900100	5210 206th St SW	SF Residence on 206th St.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900200	20601 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600900300	20609 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600900700	20623 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600901000	20629 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462400100101	5306 206th St SW	SF Residence on 206th St.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400100500	20612 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400100800	20618 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400100900	20628 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100100	20706 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100400	20712 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100500	20718 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100800	20726 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00462500101000	20731 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100701	20731 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100702	20729 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100602	20729 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47

Lynnwood Link Extension C1M

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
378		171	59	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00462500100601	20723 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100300	20723 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100200	20717 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500101000	20629 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500100700	20623 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500100600	20617 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500100200	20603 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	55	Ldn	61	66	--	--	Wall on Structure	N/A	4		45
	00462400100102	5312 206th St SW	SF Residence on 54th Ave.	1	64	2	No	No	57	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
206th Street to 204th Street																			
M-49, 64 Leq	00462600800400	20526 52nd Ave W	Cedar Valley Grange Square Dance & Concert Facility	1	64	3	No	No							Wall on Structure	N/A	4		
	00462600800100	20504 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600400800	20430 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600400500	20416 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600400400	20410 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	4		58
	00462600400100	20406 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	4		57
	00462600400200	20403 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600400300	20411 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00462600400600	20419 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00462600400700	20425 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600401000	20429 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600800200	20505 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600800300	20511 53rd Ave W	SF Residence on 53rd Ave.	1	63	2	No	No	67	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	00462600800600	20517 53rd Ave W	SF Residence on 53rd Ave.	1	63	2	No	No	67	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	00462600800700	20523 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600700801	5303 206th St SW	SF Residence on 206th St.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600700500	20510 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462600700400	20506 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462600700100	20502 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462600300900	20428 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462600300800	20424 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600300500	20416 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600300400	20412 53rd Ave W	Duplex on 53rd Ave.	2	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600300100	20406 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00462600300200	5328 204th St. SW	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462600300300	20405 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462600300600	20411 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462600300700	20415 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462600301000	20425 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700200	20453 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700300	20453 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700600	20517 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700702	20525 54th Ave W	Duplex on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600701000	20525 54th Ave W	Duplex on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
204th Street to 201st Place																			
	00401200000400	5207 204th St SW	SF Residence on 204th St.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	4		58
	00401200000300	20316 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	4		58
	00401200000200	20306 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	4		58
	00401200000100	20302 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	4		58
	00401200000500	5215 204th St SW	SF Residence on 204th St.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00401200000600	5225 204th St SW	SF Residence on 204th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00401200000700	20317 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00401200000800	20309 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00401200000900	20303 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00401200001000	20304 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	00401200001100	20310 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	00401200001200	20318 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	00401200001300	5309 204th St SW	SF Residence on 204th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00462700100102	5319 204th St SW	SF Residence on 204th St.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462700100103	5327 204th St SW	SF Residence on 204th St.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462700100104	20313 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462700100101	20305 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462700100201	20220 52nd Ave W	SF Residence on 52nd Ave.	1	62	2	No	No	68	Ldn	59	65	--	1	Wall on Structure	N/A	4		58
	00462700100202	20210 52nd Ave W	SF Residence on 52nd Ave.	1	62	2	No	No	68	Ldn	59	65	--	1	Wall on Structure	N/A	4		58
	00462700100203	20212 52nd Ave W	SF Residence on 52nd Ave.	1	60	2	No	No	61	Ldn	58	64	1	--	Wall on Structure	N/A	4		52
	00462700100200	20218 52nd Ave W	SF Residence on 52nd Ave.	1	60	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	4		52
	00462300001000	5312 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		44
	00462300000900	5308 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462300000800	5306 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462300000700	5304 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		49

Lynnwood Link Extension C1M

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
378		171	59	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00462300000600	5302 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		50
	00462300000500	5301 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		50
	00462300000400	5303 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462300000300	5313 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462200001600	5208 201st Pl SW	SF Residence on 201st Pl.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00462200000800	5201 201st Pl SW	SF Residence on 201st Pl.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462200000700	5217 201st Pl SW	SF Residence on 201st Pl.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00462200001500	5214 201st Pl SW	SF Residence on 201st Pl.	1	60	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	00462200001400	5220 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	00462200001300	5228 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462200000500	5229 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462200000600	5223 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
Approach to the Lynnwood Transit Center																			
	00608400100300	19816 50th Ave.	236 Unit Apt. Bldg.	6	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00608400300101	20015 Cedar Valley Rd	Scriber Creek Park	1	53	3	No	No							Wall on Structure	N/A	4		
M-50: 62.3	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C grnd	6	62	2	No	Yes	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C 1st Floor	6	62	2	No	Yes	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. B grnd	6	53	2	No	Yes	57	Ldn	55	61	6	--	Wall on Structure	N/A	4		49
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. B 1st Floor	6	53	2	No	Yes	58	Ldn	55	61	6	--	Wall on Structure	N/A	4		49
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. A 1st Floor	6	62	2	No	Yes	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		50
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. A 1st Floor	6	62	2	No	Yes	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		50
M-51: 56.7	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. C	18	57	2	No	No	67	Ldn	57	63	--	18	Wall on Structure	N/A	4		56
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. D	12	62	2	No	Yes	60	Ldn	59	65	12	--	Wall on Structure	N/A	4		51
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. A	18	67	2	No	Yes							Wall on Structure	N/A	4		
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. B	6	68	2	No	Yes	70	Ldn	63	69	--	6	Wall on Structure	N/A	4		56
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. E	12	69	2	No	Yes	70	Ldn	64	70	--	12	Wall on Structure	N/A	4		56
	00608400200401	4807 200th St SW	Oxford Square Apt. Complex ground floor	27	67	2	No	Yes	67	Ldn	63	68	27	--	Wall on Structure	N/A	4		56
	00608400200401	4807 200th St SW	Oxford Square Apt. Complex 2nd floor	27	67	2	No	Yes	67	Ldn	63	68	27	--	Wall on Structure	N/A	4		57
M-52: 69.2	00372600600600	4727 200th St SW	Cambridge Square Apartments ground floor	22	69	2	No	Yes	65	Ldn	64	70	22	--	Wall on Structure	N/A	4		59
	00372600600600	4727 200th St SW	Cambridge Square Apartments1st floor	22	69	2	No	Yes	65	Ldn	64	70	22	--	Wall on Structure	N/A	4		59
M-53: 70.3	00372600702108	4220 200th St SW	Marriott Courtyard Hotel	1	70	2	No	No	54	Ldn	65	70	--	--	Wall on Structure	N/A	4		45
	00372600702106	4220 Alderwood Mall Blvd	La Quinta Motel	1	67	2	No	No	55	Ldn	63	68	--	--	Wall on Structure	N/A	4		46

Lynnwood Link Extension C1M

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
378		171	59	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
Eastside of I-5																			
212th Street to 49th Avenue																			
	27042100400700	5123 212th St	SF Residence on 212th St.	1	72	2	No	No	64	Ldn	66	72	--	--		N/A			64
	27042100401000	5113 212th St	SF Residence on 212th St.	1	72	2	No	No	63	Ldn	66	72	--	--		N/A			63
	27042100400900	5107 212th St	SF Residence on 212th St.	1	71	2	No	No	58	Ldn	66	71	--	--		N/A			58
	00453500001100	5031 212th St	SF Residence on 212th St.	1	68	2	No	No	56	Ldn	63	69	--	--		N/A			56
	00453500001000	5035 212th St	SF Residence on 212th St.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00453500000500	21019 50th Pl	SF Residence on 50th Pl.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	00453500000600	5019 211th St	SF Residence on 211th St.	1	75	2	No	No	63	Ldn	66	74	--	--		N/A			63
	00453500000700	5025 211th St	SF Residence on 211th St.	1	71	2	No	No	63	Ldn	66	71	--	--		N/A			63
	27042100401200	5101 211th St	SF Residence on 211th St.	1	73	2	No	No	65	Ldn	66	72	--	--		N/A			65
	27042100405500	5121 211th St	SF Residence on 211th St.	1	75	2	No	No	65	Ldn	66	74	--	--		N/A			65
	27042100405400	5131 211th St	SF Residence on 211th St.	1	74	2	No	No	65	Ldn	66	73	--	--		N/A			65
	27042100402800	5126 211th St	SF Residence on 211th St.	1	73	2	No	No	65	Ldn	66	72	--	--		N/A			65
	27042100401100	5106 211th St	SF Residence on 211th St.	1	72	2	No	No	58	Ldn	66	72	--	--		N/A			58
	00453500001202	5030 211th St	SF Residence on 211th St.	1	69	2	No	No	58	Ldn	64	70	--	--		N/A			58
	00453500000800	21124 50th Pl	SF Residence on 50th Pl.	1	67	2	No	No	57	Ldn	63	68	--	--		N/A			57
	00453500000900	21128 50th Pl	SF Residence on 50th Pl.	1	66	2	No	No	55	Ldn	62	68	--	--		N/A			55
	27042100401300	21002 49th Ave.	SF Residence on 49th Ave.	1	71	2	No	No	63	Ldn	66	71	--	--		N/A			63
	27042100401900	20932 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	62	Ldn	66	74	--	--		N/A			62
	27042100403300	20910 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	62	Ldn	66	74	--	--		N/A			62
	00516600000702	20924 49th Ave.	SF Residence on 49th Ave.	1	74	2	No	No	62	Ldn	66	73	--	--		N/A			62
	00516600000600	20930 49th Ave.	SF Residence on 49th Ave.	1	73	2	No	No	57	Ldn	66	72	--	--		N/A			57
	00516600000500	21004 49th Ave.	SF Residence on 49th Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	00516600000400	21010 49th Ave.	SF Residence on 49th Ave.	1	70	2	No	No	56	Ldn	65	70	--	--		N/A			56
	00516600000300	21016 49th Ave.	SF Residence on 49th Ave.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56

Lynnwood Link Extension C1W

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
342		164	59	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
I-5 to 52nd Ave and 208th St																			
Begin C1	00462601501000	21031 54th Ave W	SF Residence on 54th Ave.	1	72	2	No	No	71	Ldn	66	72	1	--	Wall on Structure	N/A	4		59
	00462601500700	21031 54th Ave W	SF Residence on 54th Ave.	0	72	2	No	No	69	Ldn	66	72	0	--	Wall on Structure	N/A	4		57
	00462601500600	21019 54th Ave W	SF Residence on 54th Ave.	1	70	2	No	No	67	Ldn	65	70	1	--	Wall on Structure	N/A	4		56
	00462601500300	21011 54th Ave W	SF Residence on 54th Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	00462601500200	21007 54th Ave W	SF Residence on 54th Ave.	1	67	2	No	No	59	Ldn	63	68	--	--	Wall on Structure	N/A	4		50
	00462400401000	20927 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	57	Ldn	62	68	--	--	Wall on Structure	N/A	4		48
	00462400400701	20921 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	51	Ldn	62	68	--	--	Wall on Structure	N/A	4		42
	00462400400600	20919 54th Ave W	SF Residence on 54th Ave.	1	65	2	No	No	51	Ldn	61	67	--	--	Wall on Structure	N/A	4		42
	00462400400300	20913 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	54	Ldn	61	66	--	--	Wall on Structure	N/A	4		45
	00462400400200	20903 54th Ave W	SF Residence on 54th Ave.	1	63	2	No	No	54	Ldn	60	66	--	--	Wall on Structure	N/A	4		45
	00462400500900	20829 54th Ave W	SF Residence on 54th Ave.	1	62	2	No	No	54	Ldn	59	65	--	--	Wall on Structure	N/A	4		44
	00462400500600	20825 54th Ave W	SF Residence on 54th Ave.	1	61	2	No	No	54	Ldn	59	65	--	--	Wall on Structure	N/A	4		44
	00462400500500	20819 54th Ave W	SF Residence on 54th Ave.	1	60	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		44
	00462400500200	20811 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		44
	00462500500301	20804 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462500500302	20826 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462500500701	20828 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462500500702	20830 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462400400100	20902 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462400400400	20908 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	57	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462400400500	20914 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	57	Ldn	62	68	--	--	Wall on Structure	N/A	4		48
	00462400400800	20922 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Structure	N/A	4		48
	00666500000100	20926 53rd Ave W	SF Residence on 53rd Ave.	1	70	2	No	No	59	Ldn	65	70	--	--	Wall on Structure	N/A	4		50
	00666500000200	20928 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	67	Ldn	66	72	1	--	Wall on Structure	N/A	4		56
	00666500000300	20932 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	68	Ldn	66	72	1	--	Wall on Structure	N/A	4		56
M-47: 72.35	00666500000400	20929 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	68	Ldn	66	72	1	--	Wall on Structure	N/A	4		56
	00666500000500	20925 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	68	Ldn	66	72	1	--	Wall on Structure	N/A	4		56
	00462601300700	20923 53rd Ave W	SF Residence on 53rd Ave.	1	70	2	No	No	62	Ldn	65	70	--	--	Wall on Structure	N/A	4		51
	00462601300600	20915 53rd Ave W	SF Residence on 53rd Ave.	1	69	2	No	No	61	Ldn	64	70	--	--	Wall on Structure	N/A	4		51
	00462601300300	20911 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Structure	N/A	4		50
	00462601300200	20901 53rd Ave W	SF Residence on 53rd Ave.	1	67	2	No	No	60	Ldn	63	68	--	--	Wall on Structure	N/A	4		50
	00462601201000	20829 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		50
	00462601200700	20825 53rd Ave W	SF Residence on 53rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00462601200600	20819 53rd Ave W	SF Residence on 53rd Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		50
	00462601200300	20813 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462601200200	20807 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00462601200100	20806 52nd Ave W	SF Residence on 52nd Ave.	1	65	2	No	No	67	Ldn	61	67	--	1	Wall on Structure	N/A	4		57
	00462601200400	20812 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	67	Ldn	61	66	--	1	Wall on Structure	N/A	4		57
	00462601200500	20818 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	66	Ldn	61	66	--	1	Wall on Structure	N/A	4		57
	00462601200800	20830 52nd Ave W	(World Harvester) Church on 52nd Ave.	1	67	3	No	No	64	Leq	68	73	--	--	Wall on Structure	N/A	4		54
	00462601300100	20830 52nd Ave W	Part of Church	2nd	67	3	No	No	65	Leq	68	73	--	--	Wall on Structure	N/A	4		54
	00462601300400	20918 52nd Ave W	Apartment Building on 52nd Ave.	2	69	2	No	No	64	Ldn	64	70	2	--	Wall on Structure	N/A	4		52
	00462601300800	20924 52nd Ave W	SF Residence on 52nd Ave.	0	70	2	No	No							Wall on Structure	N/A	4		
	27042100403800	20909 52nd Ave W	SF Residence on 52nd Ave.	1	72	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		57
208th Street to 206th Street																			
	00462500700000	5211 208th St SW	SF Residence on 208th St.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	27042100403700	0	Interurban Trail	0	62	3	No	No	69	Leq	64	70	0	--	Wall on Structure	N/A	4		58
M-48: 63.5	00462500800000	20706 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900900	20628 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900800	20624 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900400	20618 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900100	5210 206th St SW	SF Residence on 206th St.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900200	20601 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600900300	20609 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600900700	20623 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600901000	20629 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462400100101	5306 206th St SW	SF Residence on 206th St.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400100500	20612 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400100800	20618 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400100900	20628 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100100	20706 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100400	20712 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100500	20718 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100800	20726 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00462500101000	20731 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100701	20731 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100702	20729 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100602	20729 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47

Lynnwood Link Extension C1W

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
342		164	59	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00462500100601	20723 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100300	20723 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100200	20717 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500101000	20629 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500100700	20623 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500100600	20617 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500100200	20603 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	55	Ldn	61	66	--	--	Wall on Structure	N/A	4		45
	00462400100102	5312 206th St SW	SF Residence on 54th Ave.	1	64	2	No	No	57	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
206th Street to 204th Street																			
M-49, 64 Leq	00462600800400	20526 52nd Ave W	Cedar Valley Grange Square Dance & Concert Facility	1	64	3	No	No	65	Leq	66	71	--	--	Wall on Structure	N/A	4		56
	00462600800100	20504 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600400800	20430 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600400500	20416 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600400400	20410 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	4		58
	00462600400100	20406 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	4		57
	00462600400200	20403 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600400300	20411 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00462600400600	20419 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00462600400700	20425 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600401000	20429 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600800200	20505 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600800300	20511 53rd Ave W	SF Residence on 53rd Ave.	1	63	2	No	No	67	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	00462600800600	20517 53rd Ave W	SF Residence on 53rd Ave.	1	63	2	No	No	67	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	00462600800700	20523 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600700801	5303 206th St SW	SF Residence on 206th St.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600700500	20510 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462600700400	20506 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462600700100	20502 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462600300900	20428 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462600300800	20424 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600300500	20416 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600300400	20412 53rd Ave W	Duplex on 53rd Ave.	2	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600300100	20406 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00462600300200	5328 204th St. SW	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462600300300	20405 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462600300600	20411 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462600300700	20415 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600301000	20425 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700200	20453 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700300	20453 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700600	20517 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700702	20525 54th Ave W	Duplex on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600701000	20525 54th Ave W	Duplex on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
204th Street to 201st Place																			
	00401200000400	5207 204th St SW	SF Residence on 204th St.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	4		58
	00401200000300	20316 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	4		58
	00401200000200	20306 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	4		58
	00401200000100	20302 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	4		58
	00401200000500	5215 204th St SW	SF Residence on 204th St.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00401200000600	5225 204th St SW	SF Residence on 204th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00401200000700	20317 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00401200000800	20309 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00401200000900	20303 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00401200001000	20304 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	00401200001100	20310 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	00401200001200	20318 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	00401200001300	5309 204th St SW	SF Residence on 204th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00462700100102	5319 204th St SW	SF Residence on 204th St.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462700100103	5327 204th St SW	SF Residence on 204th St.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462700100104	20313 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462700100101	20305 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462700100201	20220 52nd Ave W	SF Residence on 52nd Ave.	1	62	2	No	No	68	Ldn	59	65	--	1	Wall on Structure	N/A	4		58
	00462700100202	20210 52nd Ave W	SF Residence on 52nd Ave.	1	62	2	No	No	68	Ldn	59	65	--	1	Wall on Structure	N/A	4		58
	00462700100203	20212 52nd Ave W	SF Residence on 52nd Ave.	1	60	2	No	No	61	Ldn	58	64	1	--	Wall on Structure	N/A	4		52
	00462700100200	20218 52nd Ave W	SF Residence on 52nd Ave.	1	60	2	No	No	62	Ldn	58	64	1	--	Wall on Structure	N/A	4		52
	00462300001000	5312 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		44
	00462300000900	5308 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462300000800	5306 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462300000700	5304 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		49

Lynnwood Link Extension C1W

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
342		164	59	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00462300000600	5302 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	00462300000500	5301 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		50
	00462300000400	5303 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462300000300	5313 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462200001600	5208 201st Pl SW	SF Residence on 201st Pl.	1	61	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00462200000800	5201 201st Pl SW	SF Residence on 201st Pl.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462200000700	5217 201st Pl SW	SF Residence on 201st Pl.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00462200001500	5214 201st Pl SW	SF Residence on 201st Pl.	1	60	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	00462200001400	5220 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	00462200001300	5228 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462200000500	5229 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462200000600	5223 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
Approach to the Lynnwood Transit Center																			
	00608400100300	19816 50th Ave.	236 Unit Apt. Bldg.	6	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00608400300101	20015 Cedar Valley Rd	Scriber Creek Park	1	53	3	No	No	66	Leq	60	66	--	1	Wall on Structure	N/A	4		53
M-50: 62.3	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C grnd	6	62	2	No	Yes	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C 1st Floor	6	62	2	No	Yes	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. B grnd	6	53	2	No	Yes	57	Ldn	55	61	6	--	Wall on Structure	N/A	4		49
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. B 1st Floor	6	53	2	No	Yes	58	Ldn	55	61	6	--	Wall on Structure	N/A	4		49
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. A 1st Floor	6	62	2	No	Yes	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		50
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. A 1st Floor	6	62	2	No	Yes	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		50
M-51: 56.7	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. C	18	57	2	No	No	67	Ldn	57	63	--	18	Wall on Structure	N/A	4		56
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. D	12	62	2	No	Yes	60	Ldn	59	65	12	--	Wall on Structure	N/A	4		51
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. A	0	67	2	No	Yes							Wall on Structure	N/A	4		
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. B	6	68	2	No	Yes	70	Ldn	63	69	--	6	Wall on Structure	N/A	4		56
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. E	12	69	2	No	Yes	70	Ldn	64	70	--	12	Wall on Structure	N/A	4		57
	00608400200401	4807 200th St SW	Oxford Square Apt. Complex ground floor	27	67	2	No	Yes	67	Ldn	63	68	27	--	Wall on Structure	N/A	4		56
	00608400200401	4807 200th St SW	Oxford Square Apt. Complex 2nd floor	27	67	2	No	Yes	67	Ldn	63	68	27	--	Wall on Structure	N/A	4		57
M-52: 69.2	00372600600600	4727 200th St SW	Cambridge Square Apartments ground floor	22	69	2	No	Yes	65	Ldn	64	70	22	--	Wall on Structure	N/A	4		59
	00372600600600	4727 200th St SW	Cambridge Square Apartments1st floor	22	69	2	No	Yes	65	Ldn	64	70	22	--	Wall on Structure	N/A	4		59
M-53: 70.3	00372600702108	4220 200th St SW	Marriott Courtyard Hotel	1	70	2	No	No	54	Ldn	65	70	--	--	Wall on Structure	N/A	4		45
	00372600702106	4220 Alderwood Mall Blvd	La Quinta Motel	1	67	2	No	No	55	Ldn	63	68	--	--	Wall on Structure	N/A	4		46
Eastside of I-5																			
212th Street to 49th Avenue																			
	27042100400700	5123 212th St	SF Residence on 212th St.	1	72	2	No	No	61	Ldn	66	72	--	--		N/A			61
	27042100401000	5113 212th St	SF Residence on 212th St.	1	72	2	No	No	60	Ldn	66	72	--	--		N/A			60
	27042100401200	5101 211th St	SF Residence on 211th St.	1	73	2	No	No	62	Ldn	66	72	--	--		N/A			62
	27042100405500	5121 211th St	SF Residence on 211th St.	1	75	2	No	No	62	Ldn	66	74	--	--		N/A			62
	27042100405400	5131 211th St	SF Residence on 211th St.	1	74	2	No	No	62	Ldn	66	73	--	--		N/A			62
	27042100402800	5126 211th St	SF Residence on 211th St.	1	73	2	No	No	61	Ldn	66	72	--	--		N/A			61
	27042100401100	5106 211th St	SF Residence on 211th St.	1	72	2	No	No	55	Ldn	66	72	--	--		N/A			55

Lynnwood Link Extension C2M

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
387		52	41	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
I-5 to 52nd Ave and 208th St																			
Begin C2	00462601501000	21031 54th Ave W	SF Residence on 54th Ave.	1	72	2	No	No	68	Ldn	66	72	1	--	Wall on Structure	N/A	4		58
	00462601500700	21031 54th Ave W	SF Residence on 54th Ave.	0	72	2	No	No	67	Ldn	66	72	0	--	Wall on Structure	N/A	4		57
	00462601500600	21019 54th Ave W	SF Residence on 54th Ave.	1	70	2	No	No	66	Ldn	65	70	1	--	Wall on Structure	N/A	4		57
	00462601500300	21011 54th Ave W	SF Residence on 54th Ave.	1	68	2	No	No	60	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	00462601500200	21007 54th Ave W	SF Residence on 54th Ave.	1	67	2	No	No	60	Ldn	63	68	--	--	Wall on Structure	N/A	4		51
	00462400401000	20927 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
	00462400400701	20921 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
	00462400400600	20919 54th Ave W	SF Residence on 54th Ave.	1	65	2	No	No	57	Ldn	61	67	--	--	Wall on Structure	N/A	4		47
	00462400400300	20913 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462400400200	20903 54th Ave W	SF Residence on 54th Ave.	1	63	2	No	No	56	Ldn	60	66	--	--	Wall on Structure	N/A	4		47
	00462400500900	20829 54th Ave W	SF Residence on 54th Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462400500600	20825 54th Ave W	SF Residence on 54th Ave.	1	61	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462400500500	20819 54th Ave W	SF Residence on 54th Ave.	1	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462400500200	20811 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462500500301	20804 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500500302	20826 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500500701	20828 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500500702	20830 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00462400400100	20902 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400400400	20908 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00462400400500	20914 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
	00462400400800	20922 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall on Structure	N/A	4		49
	00666500000100	20926 53rd Ave W	SF Residence on 53rd Ave.	1	70	2	No	No	60	Ldn	65	70	--	--	Wall on Structure	N/A	4		51
	00666500000200	20928 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	66	Ldn	66	72	1	--	Wall on Structure	N/A	4		57
	00666500000300	20932 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	67	Ldn	66	72	1	--	Wall on Structure	N/A	4		57
M-47: 72.35	00666500000400	20929 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	68	Ldn	66	72	1	--	Wall on Structure	N/A	4		58
	00666500000500	20925 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	68	Ldn	66	72	1	--	Wall on Structure	N/A	4		57
	00462601300700	20923 53rd Ave W	SF Residence on 53rd Ave.	1	70	2	No	No	63	Ldn	65	70	--	--	Wall on Structure	N/A	4		53
	00462601300600	20915 53rd Ave W	SF Residence on 53rd Ave.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	4		52
	00462601300300	20911 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	00462601300200	20901 53rd Ave W	SF Residence on 53rd Ave.	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	00462601201000	20829 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	4		53
	00462601200700	20825 53rd Ave W	SF Residence on 53rd Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	4		52
	00462601200600	20819 53rd Ave W	SF Residence on 53rd Ave.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall on Structure	N/A	4		52
	00462601200300	20813 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	62	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462601200200	20807 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	61	Ldn	61	66	1	--	Wall on Structure	N/A	4		52
	00462601200100	20806 52nd Ave W	SF Residence on 52nd Ave.	1	65	2	No	No	69	Ldn	61	67	--	1	Wall on Structure	N/A	4		59
	00462601200400	20812 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462601200500	20818 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462601200800	20830 52nd Ave W	(World Harvester) Church on 52nd Ave.	1	67	3	No	No	66	Leq	68	73	--	--	Wall on Structure	N/A	4		56
	00462601300100	20830 52nd Ave W	Part of Church	2nd	67	3	No	No	66	Leq	68	73	--	--	Wall on Structure	N/A	4		56
	00462601300400	20918 52nd Ave W	Apartment Building on 52nd Ave.	2	69	2	No	No	66	Ldn	64	70	2	--	Wall on Structure	N/A	4		54
	00462601300800	20924 52nd Ave W	SF Residence on 52nd Ave.	0	70	2	No	No							Wall on Structure	N/A	4		
	27042100403800	20909 52nd Ave W	SF Residence on 52nd Ave.	1	72	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	4		59
208th Street to 206th Street																			
	00462500700000	5211 208th St SW	SF Residence on 208th St.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	27042100403700	0	Interurban Trail	0	62	3	No	No	69	Leq	64	70	0	--	Wall on Structure	N/A	4		57
M-48: 63.5	00462500800000	20706 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900900	20628 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900800	20624 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900400	20618 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900100	5210 206th St SW	SF Residence on 206th St.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900200	20601 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600900300	20609 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600900700	20623 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600901000	20629 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462400100101	5306 206th St SW	SF Residence on 206th St.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400100500	20612 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400100800	20618 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400100900	20628 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100100	20706 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100400	20712 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100500	20718 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100800	20726 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00462500101000	20731 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		46
	00462500100701	20731 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		46
	00462500100702	20729 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		46
	00462500100602	20729 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		46

Lynnwood Link Extension C2M

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
387		52	41	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00462500100601	20723 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100300	20723 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100200	20717 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500101000	20629 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500100700	20623 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500100600	20617 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500100200	20603 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	55	Ldn	61	66	--	--	Wall on Structure	N/A	4		45
	00462400100102	5312 206th St SW	SF Residence on 54th Ave.	1	64	2	No	No	57	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
206th Street to 204th Street																			
M-49, 64 Leq	00462600800400	20526 52nd Ave W	Cedar Valley Grange Square Dance & Concert Facility	1	64	3	No	No	65	Leq	66	71	--	--	Wall on Structure	N/A	4		55
	00462600800100	20504 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600400800	20430 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	68	Ldn	61	66	--	1	Wall on Structure	N/A	4		58
	00462600400500	20416 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	66	Ldn	61	66	--	1	Wall on Structure	N/A	4		56
	00462600400400	20410 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	66	Ldn	61	66	--	1	Wall on Structure	N/A	4		56
	00462600400100	20406 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	4		54
	00462600400200	20403 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600400300	20411 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600400600	20419 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600400700	20425 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00462600401000	20429 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600800200	20505 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600800300	20511 53rd Ave W	SF Residence on 53rd Ave.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	00462600800600	20517 53rd Ave W	SF Residence on 53rd Ave.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	00462600800700	20523 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00462600700801	5303 206th St SW	SF Residence on 206th St.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600700500	20510 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462600700400	20506 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462600700100	20502 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462600300900	20428 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462600300800	20424 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462600300500	20416 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462600300400	20412 53rd Ave W	Duplex on 53rd Ave.	2	61	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462600300100	20406 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462600300200	5328 204th St. SW	SF Residence on 54th Ave.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462600300300	20405 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		44
	00462600300600	20411 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		44
	00462600300700	20415 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462600301000	20425 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700200	20453 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700300	20453 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700600	20517 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700702	20525 54th Ave W	Duplex on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600701000	20525 54th Ave W	Duplex on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
204th Street to 201st Place																			
	00401200000400	5207 204th St SW	SF Residence on 204th St.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	4		55
	00401200000300	20316 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	4		55
	00401200000200	20306 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	4		54
	00401200000100	20302 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	4		54
	00401200000500	5215 204th St SW	SF Residence on 204th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00401200000600	5225 204th St SW	SF Residence on 204th St.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00401200000700	20317 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00401200000800	20309 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00401200000900	20303 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00401200001000	20304 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00401200001100	20310 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00401200001200	20318 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00401200001300	5309 204th St SW	SF Residence on 204th St.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		46
	00462700100102	5319 204th St SW	SF Residence on 204th St.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462700100103	5327 204th St SW	SF Residence on 204th St.	1	59	2	No	No	52	Ldn	58	64	--	--	Wall on Structure	N/A	4		43
	00462700100104	20313 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462700100101	20305 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462700100201	20220 52nd Ave W	SF Residence on 52nd Ave.	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		55
	00462700100202	20210 52nd Ave W	SF Residence on 52nd Ave.	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		55
	00462700100203	20212 52nd Ave W	SF Residence on 52nd Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	00462700100200	20218 52nd Ave W	SF Residence on 52nd Ave.	1	60	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		50
	00462300001000	5312 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	51	Ldn	58	64	--	--	Wall on Structure	N/A	4		42
	00462300000900	5308 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	52	Ldn	58	64	--	--	Wall on Structure	N/A	4		43
	00462300000800	5306 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462300000700	5304 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47

Lynnwood Link Extension C2M

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
387		52	41	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00462300000600	5302 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00462300000500	5301 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00462300000400	5303 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462300000300	5313 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	52	Ldn	58	64	--	--	Wall on Structure	N/A	4		43
	00462200001600	5208 201st Pl SW	SF Residence on 201st Pl.	1	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462200000800	5201 201st Pl SW	SF Residence on 201st Pl.	1	61	2	No	No	55	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462200000700	5217 201st Pl SW	SF Residence on 201st Pl.	1	60	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462200001500	5214 201st Pl SW	SF Residence on 201st Pl.	1	60	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462200001400	5220 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462200001300	5228 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462200000500	5229 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	53	Ldn	58	64	--	--	Wall on Structure	N/A	4		44
	00462200000600	5223 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
Approach to the Lynnwood Transit Center																			
	00608400100300	19816 50th Ave.	236 Unit Apt. Bldg.	6	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		47
	00608400300101	20015 Cedar Valley Rd	Scriber Creek Park	1	53	3	No	No	66	Leq	60	66	--	1	Wall on Structure	N/A	4		53
M-50	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C grnd	6	62	2	No	No	68	Ldn	59	65	--	6	Wall on Structure	N/A	6		55
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C 1st Floor	6	62	2	No	No	69	Ldn	59	65	--	6	Wall on Structure	N/A	6		56
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. B grnd	6	53	2	No	No	65	Ldn	55	61	--	6	Wall on Structure	N/A	8		53
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. B 1st Floor	6	53	2	No	No	66	Ldn	55	61	--	6	Wall on Structure	N/A	8		54
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. A 1st Floor	6	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	6		48
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg.A 1st Floor	6	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	6		48
M-51	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. C	18	57	2	No	No	62	Ldn	56	63	18	--	Wall on Structure	N/A	4		53
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. D	12	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	6		47
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. A	18	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. B	10	68	2	No	No	55	Ldn	63	69	--	--	Wall on Structure	N/A	8		44
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. E	18	69	2	No	No	55	Ldn	64	70	--	--	Wall on Structure	N/A	6		45
	00608400200401	4807 200th St SW	Oxford Square Apt. Complex ground floor	27	67	2	No	No	56	Ldn	63	68	--	--	Wall on Structure	N/A	8		44
	00608400200401	4807 200th St SW	Oxford Square Apt. Complex 2nd floor	27	67	2	No	No	56	Ldn	63	68	--	--	Wall on Structure	N/A	8		45
M-52	00372600600600	4727 200th St SW	Cambridge Square Apartments ground floor	22	69	2	No	Yes	56	Ldn	64	70	--	--	Wall on Structure	N/A	4		48
	00372600600600	4727 200th St SW	Cambridge Square Apartments1st floor	22	69	2	No	Yes	56	Ldn	64	70	--	--	Wall on Structure	N/A	4		56
M-53	00372600702108	4220 200th St SW	Marriott Courtyard Hotel	1	70	2	No	No	55	Ldn	65	70	--	--	Wall on Structure	N/A	4		47
	00372600702106	4220 Alderwood Mall Blvd	La Quinta Motel	1	67	2	No	No	55	Ldn	63	68	--	--	Wall on Structure	N/A	4		46

Lynnwood Link Extension C2M

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
387		52	41	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
Eastside of I-5																			
212th Street to 49th Avenue																			
	27042100400700	5123 212th St	SF Residence on 212th St.	1	72	2	No	No	64	Ldn	66	72	--	--		N/A			64
	27042100401000	5113 212th St	SF Residence on 212th St.	1	72	2	No	No	63	Ldn	66	72	--	--		N/A			63
	27042100400900	5107 212th St	SF Residence on 212th St.	1	71	2	No	No	58	Ldn	66	71	--	--		N/A			58
	00453500001100	5031 212th St	SF Residence on 212th St.	1	68	2	No	No	56	Ldn	63	69	--	--		N/A			56
	00453500001000	5035 212th St	SF Residence on 212th St.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00453500000500	21019 50th Pl	SF Residence on 50th Pl.	1	68	2	No	No	62	Ldn	63	69	--	--		N/A			62
	00453500000600	5019 211th St	SF Residence on 211th St.	1	75	2	No	No	63	Ldn	66	74	--	--		N/A			63
	00453500000700	5025 211th St	SF Residence on 211th St.	1	71	2	No	No	63	Ldn	66	71	--	--		N/A			63
	27042100401200	5101 211th St	SF Residence on 211th St.	1	73	2	No	No	65	Ldn	66	72	--	--		N/A			65
	27042100405500	5121 211th St	SF Residence on 211th St.	1	75	2	No	No	65	Ldn	66	74	--	--		N/A			65
	27042100405400	5131 211th St	SF Residence on 211th St.	1	74	2	No	No	65	Ldn	66	73	--	--		N/A			65
	27042100402800	5126 211th St	SF Residence on 211th St.	1	73	2	No	No	65	Ldn	66	72	--	--		N/A			65
	27042100401100	5106 211th St	SF Residence on 211th St.	1	72	2	No	No	58	Ldn	66	72	--	--		N/A			58
	00453500001202	5030 211th St	SF Residence on 211th St.	1	69	2	No	No	58	Ldn	64	70	--	--		N/A			58
	00453500000800	21124 50th Pl	SF Residence on 50th Pl.	1	67	2	No	No	57	Ldn	63	68	--	--		N/A			57
	00453500000900	21128 50th Pl	SF Residence on 50th Pl.	1	66	2	No	No	55	Ldn	62	68	--	--		N/A			55
	27042100401300	21002 49th Ave.	SF Residence on 49th Ave.	1	71	2	No	No	63	Ldn	66	71	--	--		N/A			63
	27042100401900	20932 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	62	Ldn	66	74	--	--		N/A			62
	27042100403300	20910 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	62	Ldn	66	74	--	--		N/A			62
	00516600000702	20924 49th Ave.	SF Residence on 49th Ave.	1	74	2	No	No	62	Ldn	66	73	--	--		N/A			62
	00516600000600	20930 49th Ave.	SF Residence on 49th Ave.	1	73	2	No	No	57	Ldn	66	72	--	--		N/A			57
	00516600000500	21004 49th Ave.	SF Residence on 49th Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	00516600000400	21010 49th Ave.	SF Residence on 49th Ave.	1	70	2	No	No	56	Ldn	65	70	--	--		N/A			56
	00516600000300	21016 49th Ave.	SF Residence on 49th Ave.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56

Lynnwood Link Extension C2W

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
370		49	41	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
I-5 to 52nd Ave and 208th St																			
Begin C2	00462601501000	21031 54th Ave W	SF Residence on 54th Ave.	1	72	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	4		62
	00462601500700	21031 54th Ave W	SF Residence on 54th Ave.	0	72	2	No	No	71	Ldn	66	72	0	--	Wall on Structure	N/A	4		60
	00462601500600	21019 54th Ave W	SF Residence on 54th Ave.	1	70	2	No	No	68	Ldn	65	70	1	--	Wall on Structure	N/A	4		59
	00462601500300	21011 54th Ave W	SF Residence on 54th Ave.	1	68	2	No	No	62	Ldn	63	69	--	--	Wall on Structure	N/A	4		53
	00462601500200	21007 54th Ave W	SF Residence on 54th Ave.	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	00462400401000	20927 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
	00462400400701	20921 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	57	Ldn	62	68	--	--	Wall on Structure	N/A	4		48
	00462400400600	20919 54th Ave W	SF Residence on 54th Ave.	1	65	2	No	No	55	Ldn	61	67	--	--	Wall on Structure	N/A	4		46
	00462400400300	20913 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	55	Ldn	61	66	--	--	Wall on Structure	N/A	4		45
	00462400400200	20903 54th Ave W	SF Residence on 54th Ave.	1	63	2	No	No	55	Ldn	60	66	--	--	Wall on Structure	N/A	4		45
	00462400500900	20829 54th Ave W	SF Residence on 54th Ave.	1	62	2	No	No	55	Ldn	59	65	--	--	Wall on Structure	N/A	4		45
	00462400500600	20825 54th Ave W	SF Residence on 54th Ave.	1	61	2	No	No	54	Ldn	59	65	--	--	Wall on Structure	N/A	4		45
	00462400500500	20819 54th Ave W	SF Residence on 54th Ave.	1	60	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462400500200	20811 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462500500301	20804 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462500500302	20826 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462500500701	20828 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462500500702	20830 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00462400400100	20902 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462400400400	20908 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	4		48
	00462400400500	20914 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	58	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
	00462400400800	20922 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	59	Ldn	63	69	--	--	Wall on Structure	N/A	4		49
	00666500000100	20926 53rd Ave W	SF Residence on 53rd Ave.	1	70	2	No	No	60	Ldn	65	70	--	--	Wall on Structure	N/A	4		51
	00666500000200	20928 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	68	Ldn	66	72	1	--	Wall on Structure	N/A	4		58
	00666500000300	20932 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		58
M-47: 72.35	00666500000400	20929 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		58
	00666500000500	20925 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	69	Ldn	66	72	1	--	Wall on Structure	N/A	4		58
	00462601300700	20923 53rd Ave W	SF Residence on 53rd Ave.	1	70	2	No	No	63	Ldn	65	70	--	--	Wall on Structure	N/A	4		53
	00462601300600	20915 53rd Ave W	SF Residence on 53rd Ave.	1	69	2	No	No	62	Ldn	64	70	--	--	Wall on Structure	N/A	4		52
	00462601300300	20911 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	00462601300200	20901 53rd Ave W	SF Residence on 53rd Ave.	1	67	2	No	No	60	Ldn	63	68	--	--	Wall on Structure	N/A	4		51
	00462601201000	20829 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	61	Ldn	62	68	--	--		N/A			61
	00462601200700	20825 53rd Ave W	SF Residence on 53rd Ave.	1	65	2	No	No	61	Ldn	61	67	1	--	Wall on Structure	N/A	4		51
	00462601200600	20819 53rd Ave W	SF Residence on 53rd Ave.	1	63	2	No	No	60	Ldn	60	66	1	--	Wall on Structure	N/A	4		51
	00462601200300	20813 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462601200200	20807 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	59	Ldn	61	66	--	--		N/A			59
	00462601200100	20806 52nd Ave W	SF Residence on 52nd Ave.	1	65	2	No	No	67	Ldn	61	67	--	1	Wall on Structure	N/A	4		57
	00462601200400	20812 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	67	Ldn	61	66	--	1	Wall on Structure	N/A	4		58
	00462601200500	20818 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	67	Ldn	61	66	--	1	Wall on Structure	N/A	4		57
	00462601200800	20830 52nd Ave W	(World Harvester) Church on 52nd Ave.	1	67	3	No	No	65	Leq	68	73	--	--	Wall on Structure	N/A	4		55
	00462601300100	20830 52nd Ave W	Part of Church	2nd	67	3	No	No	66	Leq	68	73	--	--	Wall on Structure	N/A	4		56
	00462601300400	20918 52nd Ave W	Apartment Building on 52nd Ave.	2	69	2	No	No	65	Ldn	64	70	2	--	Wall on Structure	N/A	4		55
	00462601300800	20924 52nd Ave W	SF Residence on 52nd Ave.	0	70	2	No	No							Wall on Structure	N/A	4		
	27042100403800	20909 52nd Ave W	SF Residence on 52nd Ave.	1	72	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	4		59
208th Street to 206th Street																			
	00462500700000	5211 208th St SW	SF Residence on 208th St.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	27042100403700	0	Interurban Trail	0	62	3	No	No	69	Leq	64	70	0	--	Wall on Structure	N/A	4		57
M-48: 63.5	00462500800000	20706 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900900	20628 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900800	20624 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900400	20618 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900100	5210 206th St SW	SF Residence on 206th St.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600900200	20601 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600900300	20609 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600900700	20623 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600901000	20629 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462400100101	5306 206th St SW	SF Residence on 206th St.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400100500	20612 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400100800	20618 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462400100900	20628 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100100	20706 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100400	20712 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100500	20718 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462500100800	20726 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00462500101000	20731 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100701	20731 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100702	20729 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100602	20729 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47

Lynnwood Link Extension C2W

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
370		49	41	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00462500100601	20723 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100300	20723 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462500100200	20717 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500101000	20629 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500100700	20623 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500100600	20617 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	56	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	004624500100200	20603 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	55	Ldn	61	66	--	--	Wall on Structure	N/A	4		45
	00462400100102	5312 206th St SW	SF Residence on 54th Ave.	1	64	2	No	No	57	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
206th Street to 204th Street																			
M-49, 64 Leq	00462600800400	20526 52nd Ave W	Cedar Valley Grange Square Dance & Concert Facility	1	64	3	No	No	65	Leq	66	71	--	--	Wall on Structure	N/A	4		55
	00462600800100	20504 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600400800	20430 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	69	Ldn	61	66	--	1	Wall on Structure	N/A	4		59
	00462600400500	20416 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	66	Ldn	61	66	--	1	Wall on Structure	N/A	4		56
	00462600400400	20410 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	66	Ldn	61	66	--	1	Wall on Structure	N/A	4		56
	00462600400100	20406 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	4		54
	00462600400200	20403 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600400300	20411 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600400600	20419 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600400700	20425 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600401000	20429 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600800200	20505 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		52
	00462600800300	20511 53rd Ave W	SF Residence on 53rd Ave.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	00462600800600	20517 53rd Ave W	SF Residence on 53rd Ave.	1	63	2	No	No	66	Ldn	60	66	--	1	Wall on Structure	N/A	4		57
	00462600800700	20523 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	61	Ldn	59	65	1	--	Wall on Structure	N/A	4		51
	00462600700801	5303 206th St SW	SF Residence on 206th St.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600700500	20510 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462600700400	20506 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462600700100	20502 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462600300900	20428 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462600300800	20424 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462600300500	20416 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00462600300400	20412 53rd Ave W	Duplex on 53rd Ave.	2	61	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462600300100	20406 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462600300200	5328 204th St. SW	SF Residence on 54th Ave.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462600300300	20405 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		44
	00462600300600	20411 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		44
	00462600300700	20415 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600301000	20425 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700200	20453 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700300	20453 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700600	20517 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600700702	20525 54th Ave W	Duplex on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462600701000	20525 54th Ave W	Duplex on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
204th Street to 201st Place																			
	00401200000400	5207 204th St SW	SF Residence on 204th St.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	4		55
	00401200000300	20316 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	65	Ldn	61	66	1	--	Wall on Structure	N/A	4		55
	00401200000200	20306 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	64	Ldn	61	66	1	--	Wall on Structure	N/A	4		54
	00401200000100	20302 52nd Ave W	SF Residence on 52nd Ave.	1	64	2	No	No	63	Ldn	61	66	1	--	Wall on Structure	N/A	4		54
	00401200000500	5215 204th St SW	SF Residence on 204th St.	1	62	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		49
	00401200000600	5225 204th St SW	SF Residence on 204th St.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00401200000700	20317 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00401200000800	20309 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		49
	00401200000900	20303 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00401200001000	20304 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00401200001100	20310 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00401200001200	20318 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00401200001300	5309 204th St SW	SF Residence on 204th St.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		46
	00462700100102	5319 204th St SW	SF Residence on 204th St.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462700100103	5327 204th St SW	SF Residence on 204th St.	1	59	2	No	No	52	Ldn	58	64	--	--	Wall on Structure	N/A	4		43
	00462700100104	20313 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462700100101	20305 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462700100201	20220 52nd Ave W	SF Residence on 52nd Ave.	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		55
	00462700100202	20210 52nd Ave W	SF Residence on 52nd Ave.	1	62	2	No	No	64	Ldn	59	65	1	--	Wall on Structure	N/A	4		55
	00462700100203	20212 52nd Ave W	SF Residence on 52nd Ave.	1	60	2	No	No	58	Ldn	58	64	1	--	Wall on Structure	N/A	4		49
	00462700100200	20218 52nd Ave W	SF Residence on 52nd Ave.	1	60	2	No	No	59	Ldn	58	64	1	--	Wall on Structure	N/A	4		50
	00462300001000	5312 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	51	Ldn	58	64	--	--	Wall on Structure	N/A	4		42
	00462300000900	5308 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	52	Ldn	58	64	--	--	Wall on Structure	N/A	4		43
	00462300000800	5306 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462300000700	5304 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47

Lynnwood Link Extension C2W

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
370		49	41	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00462300000600	5302 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00462300000500	5301 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		48
	00462300000400	5303 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462300000300	5313 202nd Pl SW	SF Residence on 202nd Pl.	1	59	2	No	No	52	Ldn	58	64	--	--	Wall on Structure	N/A	4		43
	00462200001600	5208 201st Pl SW	SF Residence on 201st Pl.	1	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462200000800	5201 201st Pl SW	SF Residence on 201st Pl.	1	61	2	No	No	55	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462200000700	5217 201st Pl SW	SF Residence on 201st Pl.	1	60	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462200001500	5214 201st Pl SW	SF Residence on 201st Pl.	1	60	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
	00462200001400	5220 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	55	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462200001300	5228 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		45
	00462200000500	5229 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	53	Ldn	58	64	--	--	Wall on Structure	N/A	4		44
	00462200000600	5223 201st Pl SW	SF Residence on 201st Pl.	1	59	2	No	No	54	Ldn	58	64	--	--	Wall on Structure	N/A	4		46
Approach to the Lynnwood Transit Center																			
	00608400100300	19816 50th Ave.	236 Unit Apt. Bldg.	6	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	6		47
	00608400300101	20015 Cedar Valley Rd	Scriber Creek Park	1	53	3	No	No	66	Leq	60	66	--	1	Wall on Structure	N/A	4		53
M-50: 62.3	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C grnd	6	62	2	No	No	68	Ldn	59	65	--	6	Wall on Structure	N/A	6		55
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C 1st Floor	6	62	2	No	No	69	Ldn	59	65	--	6	Wall on Structure	N/A	6		56
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. B grnd	6	53	2	No	No	65	Ldn	55	61	--	6	Wall on Structure	N/A	8		53
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. B 1st Floor	6	53	2	No	No	66	Ldn	55	61	--	6	Wall on Structure	N/A	8		54
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. A 1st Floor	6	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	6		48
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg.A 1st Floor	6	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	6		48
M-51: 56.7	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. C	18	57	2	No	No	62	Ldn	56	63	18	--	Wall on Structure	N/A	4		53
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. D	12	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	6		47
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. A	18	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. B	10	68	2	No	No	55	Ldn	63	69	--	--	Wall on Structure	N/A	8		44
	00682500100100	4800-4920 200th St. SW	Cedar Creek Condo Complex Bldg. E	18	69	2	No	No	55	Ldn	64	70	--	--	Wall on Structure	N/A	6		45
	00608400200401	4807 200th St SW	Oxford Square Apt. Complex ground floor	27	67	2	No	No	56	Ldn	63	68	--	--	Wall on Structure	N/A	8		44
	00608400200401	4807 200th St SW	Oxford Square Apt. Complex 2nd floor	27	67	2	No	No	56	Ldn	63	68	--	--	Wall on Structure	N/A	8		45
M-52: 69.2	00372600600600	4727 200th St SW	Cambridge Square Apartments ground floor	22	69	2	No	Yes	56	Ldn	64	70	--	--	Wall on Structure	N/A	4		48
	00372600600600	4727 200th St SW	Cambridge Square Apartments1st floor	22	69	2	No	Yes	56	Ldn	64	70	--	--	Wall on Structure	N/A	4		56
M-53: 70.3	00372600702108	4220 200th St SW	Marriott Courtyard Hotel	1	70	2	No	No	55	Ldn	65	70	--	--	Wall on Structure	N/A	4		46
	00372600702106	4220 Alderwood Mall Blvd	La Quinta Motel	1	67	2	No	No	55	Ldn	63	68	--	--	Wall on Structure	N/A	4		46
Eastside of I-5																			
212th Street to 49th Avenue																			
	27042100400700	5123 212th St	SF Residence on 212th St.	1	72	2	No	No	63	Ldn	66	72	--	--		N/A			63
	27042100401000	5113 212th St	SF Residence on 212th St.	1	72	2	No	No	62	Ldn	66	72	--	--		N/A			62
	27042100401200	5101 211th St	SF Residence on 211th St.	1	73	2	No	No	64	Ldn	66	72	--	--		N/A			64
	27042100405500	5121 211th St	SF Residence on 211th St.	1	75	2	No	No	65	Ldn	66	74	--	--		N/A			65
	27042100405400	5131 211th St	SF Residence on 211th St.	1	74	2	No	No	64	Ldn	66	73	--	--		N/A			64
	27042100402800	5126 211th St	SF Residence on 211th St.	1	73	2	No	No	63	Ldn	66	72	--	--		N/A			63
	27042100401100	5106 211th St	SF Residence on 211th St.	1	72	2	No	No	57	Ldn	66	72	--	--		N/A			57

Lynnwood Link Extension C3M

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
107		16	1	RSIP =	0

Receiver Information				Impact Analysis											Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
I-5 to 52nd Ave and 208th St																			
Begin C3	00462601501000	-	Lot that shares SF home at 21031 54th Ave	0	72	2	No	No	65	Ldn	66	72	--	--		N/A			65
	00462601500700	21031 54th Ave W	SF Residence on 54th Ave.	1	72	2	No	No	65	Ldn	66	72	--	--		N/A			65
	00462601500600	21019 54th Ave W	SF Residence on 54th Ave.	1	70	2	No	No	64	Ldn	65	70	--	--		N/A			64
	00462601500300	21011 54th Ave W	SF Residence on 54th Ave.	1	68	2	No	No	58	Ldn	63	69	--	--		N/A			58
	00462601500200	21007 54th Ave W	SF Residence on 54th Ave.	1	67	2	No	No	57	Ldn	63	68	--	--		N/A			57
	00462400401000	20927 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	54	Ldn	62	68	--	--		N/A			54
	00462400400701	20921 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	53	Ldn	62	68	--	--		N/A			53
	00462400400600	20919 54th Ave W	SF Residence on 54th Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00462400400300	20913 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51
	00462400400200	20903 54th Ave W	SF Residence on 54th Ave.	1	63	2	No	No	50	Ldn	60	66	--	--		N/A			50
	00462400500900	20829 54th Ave W	SF Residence on 54th Ave.	1	62	2	No	No	48	Ldn	59	65	--	--		N/A			48
	00462400500600	20825 54th Ave W	SF Residence on 54th Ave.	1	61	2	No	No	39	Ldn	59	65	--	--		N/A			39
	00462400500500	20819 54th Ave W	SF Residence on 54th Ave.	1	60	2	No	No	56	Ldn	58	64	--	--		N/A			56
	00462400500200	20811 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	55	Ldn	58	64	--	--		N/A			55
	00462500500301	20804 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		46
	00462500500302	20826 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	56	Ldn	59	65	--	--		N/A			56
	00462500500701	20828 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	56	Ldn	59	65	--	--		N/A			56
	00462500500702	20830 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00462400400100	20902 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	49	Ldn	59	65	--	--		N/A			49
	00462400400400	20908 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	50	Ldn	61	66	--	--		N/A			50
	00462400400500	20914 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	51	Ldn	62	68	--	--		N/A			51
	00462400400800	20922 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	53	Ldn	63	69	--	--		N/A			53
	00666500000100	20926 53rd Ave W	SF Residence on 53rd Ave.	1	69	2	No	No	54	Ldn	64	70	--	--		N/A			54
	00666500000200	20928 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	65	Ldn	66	72	--	--		N/A			65
	00666500000300	20932 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	65	Ldn	66	72	--	--		N/A			65
M-47: 72.35	00666500000400	20929 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	65	Ldn	66	72	--	--		N/A			65
	00666500000500	20925 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	65	Ldn	66	72	--	--		N/A			65
	00462601300700	20923 53rd Ave W	SF Residence on 53rd Ave.	1	71	2	No	No	64	Ldn	66	71	--	--		N/A			64
	00462601300600	20915 53rd Ave W	SF Residence on 53rd Ave.	1	69	2	No	No	63	Ldn	64	70	--	--		N/A			63
	00462601300300	20911 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		52
	00462601300200	20901 53rd Ave W	SF Residence on 53rd Ave.	1	67	2	No	No	61	Ldn	63	68	--	--	Wall on Structure	N/A	4		51
	00462601201000	20829 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	59	Ldn	62	68	--	--	Wall on Structure	N/A	4		49
	00462601200700	20825 53rd Ave W	SF Residence on 53rd Ave.	1	65	2	No	No	57	Ldn	61	67	--	--	Wall on Structure	N/A	4		47
	00462601200600	20819 53rd Ave W	SF Residence on 53rd Ave.	1	63	2	No	No	61	Ldn	60	66	1	--	Wall on Structure	N/A	4		51
	00462601200300	20813 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462601200200	20807 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	4		48
	00462601200100	20806 52nd Ave W	SF Residence on 52nd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00462601200400	20812 52nd Ave W	SF Residence on 52nd Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462601200500	20818 52nd Ave W	SF Residence on 52nd Ave.	1	63	2	No	No	58	Ldn	60	66	--	--	Wall on Structure	N/A	4		48
	00462601200800	20830 52nd Ave W	(World Harvester) Church on 52nd Ave.	1	65	3	No	No	57	Leq	66	72	--	--	Wall on Structure	N/A	4		48
	00462601300100	0	Part of Church	2nd	68	3	No	No	59	Leq	68	74	--	--	Wall on Structure	N/A	4		50
	00462601300400	20918 52nd Ave W	Apartment Building on 52nd Ave.	2	69	2	No	No	65	Ldn	64	70	2	--	Wall on Structure	N/A	4		55
	00462601300800	20924 52nd Ave W	SF Residence on 52nd Ave.	1	70	2	No	No	70	Ldn	65	70	--	1	Wall on Structure	N/A	4		61
	27042100403800	20909 52nd Ave W	SF Residence on 52nd Ave.	1	72	2	No	No	70	Ldn	66	72	1	--	Wall on Structure	N/A	4		61
208th Street to 206th Street																			
	00462500700000	5211 208th St SW	SF Residence on 208th St.	1	61	2	No	No	54	Ldn	59	65	--	--		N/A			54
	27042100403700	0	Interurban Trail	1	61	3	No	No								N/A			
M-48: 63.5	00462500800000	20706 52nd Ave W	SF Residence on 52nd Ave.	1	61	2	No	No	52	Ldn	59	65	--	--		N/A			52
Approach to the Lynnwood Transit Center																			
	00608400300101	20015 Cedar Valley Rd	Scriber Creek Park	1	53	3	No	No								N/A			
M-50: 62.3	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C grnd	6	62	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C 1st Floor	6	62	2	No	No	57	Ldn	59	65	--	--		N/A			57
M-53: 70.3	00372600702108	4220 200th St SW	Marriott Courtyard Hotel	1	70	2	No	No	57	Ldn	65	70	--	--		N/A			57
	00372600702106	4220 Alderwood Mall Blvd	La Quinta Motel	1	67	2	No	No	58	Ldn	63	68	--	--		N/A			58
Eastside of I-5																			
212th Street to 49th Avenue																			
	27042100400700	5123 212th St	SF Residence on 212th St.	1	72	2	No	No	54	Ldn	66	72	--	--		N/A			54
	27042100401000	5113 212th St	SF Residence on 212th St.	1	72	2	No	No	53	Ldn	66	72	--	--		N/A			53
	27042100400900	5107 212th St	SF Residence on 212th St.	1	71	2	No	No	47	Ldn	66	71	--	--		N/A			47
	00453500001100	5031 212th St	SF Residence on 212th St.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Structure	N/A	4		50
	00453500001000	5035 212th St	SF Residence on 212th St.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Structure	N/A	4		48

Lynnwood Link Extension C3M

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
107		16	1	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00453500000100	5005 212th St	SF Residence on 212th St.	1	64	2	No	No	52	Ldn	61	66	--	--	Wall on Structure	N/A	4		46
	00453500000200	21115 50th Pl	SF Residence on 50th Pl.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Structure	N/A	4		48
	00453500000300	21105 50th Pl	SF Residence on 50th Pl.	1	66	2	No	No	56	Ldn	62	68	--	--	Wall on Structure	N/A	4		50
	00453500000400	21029 50th Pl	SF Residence on 50th Pl.	1	67	2	No	No	58	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	00453500000500	21019 50th Pl	SF Residence on 50th Pl.	1	68	2	No	No	63	Ldn	63	69	1	--	Wall on Structure	N/A	4		56
	00453500000600	5019 211th St	SF Residence on 211th St.	1	75	2	No	No	68	Ldn	66	74	1	--	Wall on Structure	N/A	4		60
	00453500000700	5025 211th St	SF Residence on 211th St.	1	71	2	No	No	65	Ldn	66	71	--	--	Wall on Structure	N/A	4		57
	27042100401200	5101 211th St	SF Residence on 211th St.	1	73	2	No	No	67	Ldn	66	72	1	--	Wall on Structure	N/A	4		59
	27042100405500	5121 211th St	SF Residence on 211th St.	1	75	2	No	No	67	Ldn	66	74	1	--	Wall on Structure	N/A	4		59
	27042100405400	5131 211th St	SF Residence on 211th St.	1	74	2	No	No	58	Ldn	66	73	--	--		N/A			58
																			54
																			51
	00453500001202	5030 211th St	SF Residence on 211th St.	1	69	2	No	No	57	Ldn	64	70	--	--	Wall on Structure	N/A	4		51
	00453500000800	21124 50th Pl	SF Residence on 50th Pl.	1	67	2	No	No	57	Ldn	63	68	--	--	Wall on Structure	N/A	4		50
	00453500000900	21128 50th Pl	SF Residence on 50th Pl.	1	66	2	No	No	54	Ldn	62	68	--	--	Wall on Structure	N/A	4		48
	27042100401300	21002 49th Ave.	SF Residence on 49th Ave.	1	71	2	No	No	64	Ldn	66	71	--	--	Wall on Structure	N/A	4		57
	27042100401900	20932 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	66	Ldn	66	74	1	--	Wall on Structure	N/A	4		58
	27042100403300	20910 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	66	Ldn	66	74	1	--	Wall on Structure	N/A	4		58
	00516600000702	20924 49th Ave.	SF Residence on 49th Ave.	1	74	2	No	No	66	Ldn	66	73	1	--	Wall on Structure	N/A	4		58
	00516600000600	20930 49th Ave.	SF Residence on 49th Ave.	1	73	2	No	No	59	Ldn	66	72	--	--	Wall on Structure	N/A	4		52
	00516600000500	21004 49th Ave.	SF Residence on 49th Ave.	1	71	2	No	No	58	Ldn	66	71	--	--	Wall on Structure	N/A	4		51
	00516600000400	21010 49th Ave.	SF Residence on 49th Ave.	1	70	2	No	No	57	Ldn	65	70	--	--	Wall on Structure	N/A	4		50
	00516600000300	21016 49th Ave.	SF Residence on 49th Ave.	1	69	2	No	No	56	Ldn	64	70	--	--	Wall on Structure	N/A	4		50
	00516600000200	21022 49th Ave.	SF Residence on 49th Ave.	1	67	2	No	No	57	Ldn	63	68	--	--	Wall on Structure	N/A	4		50
	00516600000100	21028 49th Ave.	SF Residence on 49th Ave.	1	65	2	No	No	54	Ldn	61	67	--	--	Wall on Structure	N/A	4		48
	27042100401600	21106 49th Ave.	SF Residence on 49th Ave.	1	63	2	No	No	52	Ldn	60	66	--	--	Wall on Structure	N/A	4		46
	27042100401800	21120 49th Ave.	SF Residence on 49th Ave.	1	63	2	No	No	50	Ldn	60	66	--	--	Wall on Structure	N/A	4		44
	27042100401400	21128 49th Ave.	SF Residence on 49th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--	Wall on Structure	N/A	4		43
	27042100401700	21132 49th Ave.	SF Residence on 49th Ave.	1	63	2	No	No	48	Ldn	60	66	--	--	Wall on Structure	N/A	4		43
49th Avenue to 48th Avenue																			
	00516600001100	20931 49th Ave.	SF Residence on 49th Ave.	1	69	2	No	No	57	Ldn	64	70	--	--	Wall on Structure	N/A	4		51
	00516600001000	20929 49th Ave.	SF Residence on 49th Ave.	1	71	2	No	No	59	Ldn	66	71	--	--	Wall on Structure	N/A	4		53
	00516600000900	20923 49th Ave.	SF Residence on 49th Ave.	1	73	2	No	No	60	Ldn	66	72	--	--	Wall on Structure	N/A	4		53
	27042100403000	20839 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	66	Ldn	66	74	1	--	Wall on Structure	N/A	4		59
	27042100402900	20823 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	66	Ldn	66	74	1	--	Wall on Structure	N/A	4		59
	27042100403100	20821 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	66	Ldn	66	74	1	--	Wall on Structure	N/A	4		59
	27042100402000	20801 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	66	Ldn	66	74	1	--	Wall on Structure	N/A	4		59
	27042100402400	20818 48th Ave.	SF Residence on 48th Ave.	1	75	2	No	No	65	Ldn	66	74	--	--		N/A			65
	27042100402100	20828 48th Ave.	SF Residence on 48th Ave.	1	73	2	No	No	59	Ldn	66	72	--	--		N/A			59
	27042100402300	20832 48th Ave.	SF Residence on 48th Ave.	1	70	2	No	No	58	Ldn	65	70	--	--		N/A			58
	27042100408100	20908 48th Ave.	SF Residence on 48th Ave.	1	68	2	No	No	55	Ldn	63	69	--	--		N/A			55
	27042100408200	20916 48th Ave.	SF Residence on 48th Ave.	1	68	2	No	No	57	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	27042100403200	20827 49th Ave.	SF Residence on 49th Ave.	1	70	2	No	No	60	Ldn	65	70	--	--	Wall on Structure	N/A	4		53
	01000000003800	4829 211th St	SF Residence on 211th St.	1	70	2	No	No	57	Ldn	65	70	--	--	Wall on Structure	N/A	4		51

Lynnwood Link Extension C3W

Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
107		13	8	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
I-5 to 52nd Ave and 208th St																			
Begin C3	00462601501000	-	SF Residence on 54th Ave.	1	72	2	No	No	75	Ldn	66	72	--	1	Wall on Structure	N/A	4		64
	00462601500700	21031 54th Ave W	SF Residence on 54th Ave.	0	72	2	No	No	75	Ldn	66	72	--	0	Wall on Structure	N/A	4		64
	00462601500600	21019 54th Ave W	SF Residence on 54th Ave.	1	70	2	No	No	72	Ldn	65	70	--	1	Wall on Structure	N/A	4		62
	00462601500300	21011 54th Ave W	SF Residence on 54th Ave.	1	68	2	No	No	66	Ldn	63	69	1	--	Wall on Structure	N/A	4		56
	00462601500200	21007 54th Ave W	SF Residence on 54th Ave.	1	67	2	No	No	65	Ldn	63	68	1	--	Wall on Structure	N/A	4		55
	00462400401000	20927 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	63	Ldn	62	68	1	--	Wall on Structure	N/A	4		53
	00462400400701	20921 54th Ave W	SF Residence on 54th Ave.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	4		53
	00462400400600	20919 54th Ave W	SF Residence on 54th Ave.	1	65	2	No	No	62	Ldn	61	67	1	--	Wall on Structure	N/A	4		52
	00462400400300	20913 54th Ave W	SF Residence on 54th Ave.	1	64	2	No	No	60	Ldn	61	66	--	--	Wall on Structure	N/A	4		50
	00462400400200	20903 54th Ave W	SF Residence on 54th Ave.	1	63	2	No	No	59	Ldn	60	66	--	--	Wall on Structure	N/A	4		50
	00462400500900	20829 54th Ave W	SF Residence on 54th Ave.	1	62	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462400500600	20825 54th Ave W	SF Residence on 54th Ave.	1	61	2	No	No	57	Ldn	59	65	--	--	Wall on Structure	N/A	4		47
	00462400500500	20819 54th Ave W	SF Residence on 54th Ave.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462400500200	20811 54th Ave W	SF Residence on 54th Ave.	1	59	2	No	No	56	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462500500301	20804 53rd Ave W	SF Residence on 53rd Ave.	1	58	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	4		46
	00462500500302	20826 53rd Ave W	SF Residence on 53rd Ave.	1	58	2	No	No	56	Ldn	57	63	--	--	Wall on Structure	N/A	4		46
	00462500500701	20828 53rd Ave W	SF Residence on 53rd Ave.	1	60	2	No	No	57	Ldn	58	64	--	--	Wall on Structure	N/A	4		47
	00462500500702	20830 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462400400100	20902 53rd Ave W	SF Residence on 53rd Ave.	1	62	2	No	No	58	Ldn	59	65	--	--	Wall on Structure	N/A	4		48
	00462400400400	20908 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	59	Ldn	61	66	--	--	Wall on Structure	N/A	4		49
	00462400400500	20914 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	60	Ldn	62	68	--	--	Wall on Structure	N/A	4		51
	00462400400800	20922 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	61	Ldn	63	69	--	--	Wall on Structure	N/A	4		51
	00666500000100	20926 53rd Ave W	SF Residence on 53rd Ave.	1	69	2	No	No	63	Ldn	64	70	--	--	Wall on Structure	N/A	4		53
	00666500000200	20928 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	72	Ldn	66	72	--	1	Wall on Structure	N/A	4		62
	00666500000300	20932 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	4		62
M-47: 72.35	00666500000400	20929 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	6		62
	00666500000500	20925 53rd Ave W	SF Residence on 53rd Ave.	1	72	2	No	No	73	Ldn	66	72	--	1	Wall on Structure	N/A	4		62
	00462601300700	20923 53rd Ave W	SF Residence on 53rd Ave.	1	71	2	No	No	65	Ldn	66	71	--	--	Wall on Structure	N/A	4		56
	00462601300600	20915 53rd Ave W	SF Residence on 53rd Ave.	1	69	2	No	No	64	Ldn	64	70	1	--	Wall on Structure	N/A	4		55
	00462601300300	20911 53rd Ave W	SF Residence on 53rd Ave.	1	68	2	No	No	64	Ldn	63	69	1	--	Wall on Structure	N/A	4		54
	00462601300200	20901 53rd Ave W	SF Residence on 53rd Ave.	1	67	2	No	No	62	Ldn	63	68	--	--	Wall on Structure	N/A	4		52
	00462601201000	20829 53rd Ave W	SF Residence on 53rd Ave.	1	66	2	No	No	62	Ldn	62	68	1	--	Wall on Structure	N/A	4		52
	00462601200700	20825 53rd Ave W	SF Residence on 53rd Ave.	1	65	2	No	No	60	Ldn	61	67	--	--	Wall on Structure	N/A	4		50
	00462601200600	20819 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	58	Ldn	61	66	--	--	Wall on Structure	N/A	4		48
	00462601200300	20813 53rd Ave W	SF Residence on 53rd Ave.	1	64	2	No	No	57	Ldn	61	66	--	--	Wall on Structure	N/A	4		47
	00462601200200	20807 53rd Ave W	SF Residence on 53rd Ave.	1	61	2	No	No	56	Ldn	59	65	--	--	Wall on Structure	N/A	4		46
	00462601200100	20806 52nd Ave W	SF Residence on 52nd Ave.	1	61	2	No	No	59	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462601200400	20812 52nd Ave W	SF Residence on 52nd Ave.	1	62	2	No	No	60	Ldn	59	65	1	--	Wall on Structure	N/A	4		50
	00462601200500	20818 52nd Ave W	SF Residence on 52nd Ave.	1	63	2	No	No	62	Ldn	60	66	1	--	Wall on Structure	N/A	4		52
	00462601200800	20830 52nd Ave W	(World Harvester) Church on 52nd Ave.	1	65	3	No	No	61	Leq	66	72	--	--	Wall on Structure	N/A	4		52
	00462601300100		Part of Church	2nd	68	3	No	No	62	Leq	68	74	--	--	Wall on Structure	N/A	4		52
	00462601300400	20918 52nd Ave W	Apartment Building on 52nd Ave.	2	69	2	No	No	67	Ldn	64	70	2	--	Wall on Structure	N/A	4		57
	00462601300800	20924 52nd Ave W	SF Residence on 52nd Ave.	1	70	2	No	No	74	Ldn	65	70	--	1	Wall on Structure	N/A	4		64
	27042100403800	20909 52nd Ave W	SF Residence on 52nd Ave.	1	72	2	No	No	75	Ldn	66	72	--	1	Wall on Structure	N/A	4		63
208th Street to 206th Street																			
	00462500700000	5211 208th St SW	SF Residence on 208th St.	1	61	2	No	No	54	Ldn	59	65	--	--		N/A			54
	27042100403700	0	Interurban Trail	1	61	3	No	No								N/A			
M-48: 63.5	00462500800000	20706 52nd Ave W	SF Residence on 52nd Ave.	1	61	2	No	No	52	Ldn	59	65	--	--		N/A			52
Approach to the Lynnwood Transit Center																			
	00608400300101	20015 Cedar Valley Rd	Scriber Creek Park	1	53	3	No	No	55	Leq	60	66	--	--		N/A			55
M-50: 62.3	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C grnd	6	62	2	No	No	57	Ldn	59	65	--	--		N/A			57
	00785800100100	20104 48th Ave. W	Park Five Apartment Complex Bldg. C 1st Floor	6	62	2	No	No	57	Ldn	59	65	--	--		N/A			57
M-53: 70.3	00372600702108	4220 200th St SW	Marriott Courtyard Hotel	1	70	2	No	No	57	Ldn	65	70	--	--		N/A			57
	00372600702106	4220 Alderwood Mall Blvd	La Quinta Motel	1	67	2	No	No	58	Ldn	63	68	--	--		N/A			58
Eastside of I-5																			
212th Street to 49th Avenue																			
	27042100400700	5123 212th St	SF Residence on 212th St.	1	72	2	No	No	63	Ldn	66	72	--	--		N/A			63
	27042100401000	5113 212th St	SF Residence on 212th St.	1	72	2	No	No	63	Ldn	66	72	--	--		N/A			63
	27042100400900	5107 212th St	SF Residence on 212th St.	1	71	2	No	No	57	Ldn	66	71	--	--		N/A			57
	00453500001100	5031 212th St	SF Residence on 212th St.	1	68	2	No	No	55	Ldn	63	69	--	--		N/A			55
	00453500001000	5035 212th St	SF Residence on 212th St.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00453500000100	5005 212th St	SF Residence on 212th St.	1	64	2	No	No	51	Ldn	61	66	--	--		N/A			51

Lynnwood Link Extension C3W

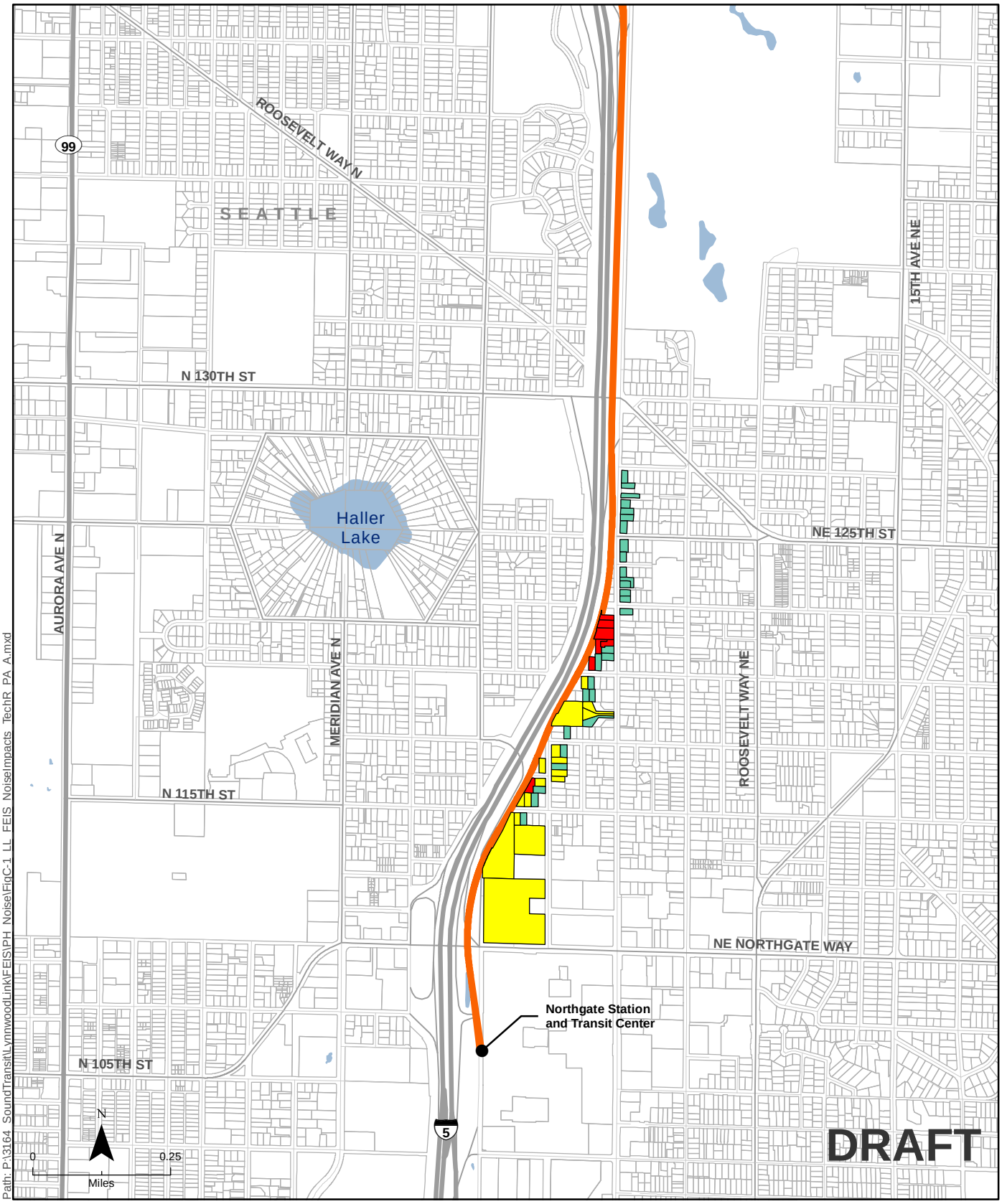
Stations: Lynwood Station at 200th

Total Units Analyzed	Impacts:	Moderate	Severe	Residual Impacts	
107		13	8	RSIP =	0

Receiver Information							Impact Analysis								Mitigation Analysis				
Area/Mon Site	Parcel	Address	Description	Units	Ldn/Leq	FTA-CAT	X-Over	Bell	Ldn/Leq	Type	Mod Imp	Sev Imp	Mod Imp	Sev Imp	Sound Wall Type	X-Over	Height	Insulation	Ldn w/Mit
	00453500000200	21115 50th Pl	SF Residence on 50th Pl.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	00453500000300	21105 50th Pl	SF Residence on 50th Pl.	1	66	2	No	No	55	Ldn	62	68	--	--		N/A			55
	00453500000400	21029 50th Pl	SF Residence on 50th Pl.	1	67	2	No	No	57	Ldn	63	68	--	--		N/A			57
	00453500000500	21019 50th Pl	SF Residence on 50th Pl.	1	68	2	No	No	61	Ldn	63	69	--	--		N/A			61
	00453500000600	5019 211th St	SF Residence on 211th St.	1	75	2	No	No	64	Ldn	66	74	--	--		N/A			64
	00453500000700	5025 211th St	SF Residence on 211th St.	1	71	2	No	No	62	Ldn	66	71	--	--		N/A			62
	27042100401200	5101 211th St	SF Residence on 211th St.	1	73	2	No	No	64	Ldn	66	72	--	--		N/A			64
	27042100405500	5121 211th St	SF Residence on 211th St.	1	75	2	No	No	64	Ldn	66	74	--	--		N/A			64
	27042100405400	5131 211th St	SF Residence on 211th St.	1	74	2	No	No	64	Ldn	66	73	--	--		N/A			64
																			62
																			56
	00453500001202	5030 211th St	SF Residence on 211th St.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00453500000800	21124 50th Pl	SF Residence on 50th Pl.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00453500000900	21128 50th Pl	SF Residence on 50th Pl.	1	66	2	No	No	53	Ldn	62	68	--	--		N/A			53
	27042100401300	21002 49th Ave.	SF Residence on 49th Ave.	1	71	2	No	No	62	Ldn	66	71	--	--		N/A			62
	27042100401900	20932 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	63	Ldn	66	74	--	--		N/A			63
	27042100403300	20910 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	63	Ldn	66	74	--	--		N/A			63
	00516600000702	20924 49th Ave.	SF Residence on 49th Ave.	1	74	2	No	No	63	Ldn	66	73	--	--		N/A			63
	00516600000600	20930 49th Ave.	SF Residence on 49th Ave.	1	73	2	No	No	57	Ldn	66	72	--	--		N/A			57
	00516600000500	21004 49th Ave.	SF Residence on 49th Ave.	1	71	2	No	No	56	Ldn	66	71	--	--		N/A			56
	00516600000400	21010 49th Ave.	SF Residence on 49th Ave.	1	70	2	No	No	56	Ldn	65	70	--	--		N/A			56
	00516600000300	21016 49th Ave.	SF Residence on 49th Ave.	1	69	2	No	No	55	Ldn	64	70	--	--		N/A			55
	00516600000200	21022 49th Ave.	SF Residence on 49th Ave.	1	67	2	No	No	55	Ldn	63	68	--	--		N/A			55
	00516600000100	21028 49th Ave.	SF Residence on 49th Ave.	1	65	2	No	No	53	Ldn	61	67	--	--		N/A			53
	27042100401600	21106 49th Ave.	SF Residence on 49th Ave.	1	63	2	No	No	51	Ldn	60	66	--	--		N/A			51
	27042100401800	21120 49th Ave.	SF Residence on 49th Ave.	1	63	2	No	No	49	Ldn	60	66	--	--		N/A			49
	27042100401400	21128 49th Ave.	SF Residence on 49th Ave.	1	63	2	No	No	48	Ldn	60	66	--	--		N/A			48
	27042100401700	21132 49th Ave.	SF Residence on 49th Ave.	1	63	2	No	No	48	Ldn	60	66	--	--		N/A			48
49th Avenue to 48th Avenue																			
	00516600001100	20931 49th Ave.	SF Residence on 49th Ave.	1	69	2	No	No	56	Ldn	64	70	--	--		N/A			56
	00516600001000	20929 49th Ave.	SF Residence on 49th Ave.	1	71	2	No	No	58	Ldn	66	71	--	--		N/A			58
	00516600000900	20923 49th Ave.	SF Residence on 49th Ave.	1	73	2	No	No	58	Ldn	66	72	--	--		N/A			58
	27042100403000	20839 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	64	Ldn	66	74	--	--		N/A			64
	27042100402900	20823 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	64	Ldn	66	74	--	--		N/A			64
	27042100403100	20821 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	64	Ldn	66	74	--	--		N/A			64
	27042100402000	20801 49th Ave.	SF Residence on 49th Ave.	1	75	2	No	No	63	Ldn	66	74	--	--		N/A			63
	27042100402400	20818 48th Ave.	SF Residence on 48th Ave.	1	75	2	No	No	62	Ldn	66	74	--	--		N/A			62
	27042100402100	20828 48th Ave.	SF Residence on 48th Ave.	1	73	2	No	No	57	Ldn	66	72	--	--		N/A			57
	27042100402300	20832 48th Ave.	SF Residence on 48th Ave.	1	70	2	No	No	57	Ldn	65	70	--	--		N/A			57
	27042100408100	20908 48th Ave.	SF Residence on 48th Ave.	1	68	2	No	No	54	Ldn	63	69	--	--		N/A			54
	27042100408200	20916 48th Ave.	SF Residence on 48th Ave.	1	68	2	No	No	56	Ldn	63	69	--	--		N/A			56
	27042100403200	20827 49th Ave.	SF Residence on 49th Ave.	1	70	2	No	No	58	Ldn	65	70	--	--		N/A			58
	01000000003800	4829 211th St	SF Residence on 211th St.	1	70	2	No	No	56	Ldn	65	70	--	--		N/A			56

ATTACHMENT C

Detailed Noise Analysis Maps



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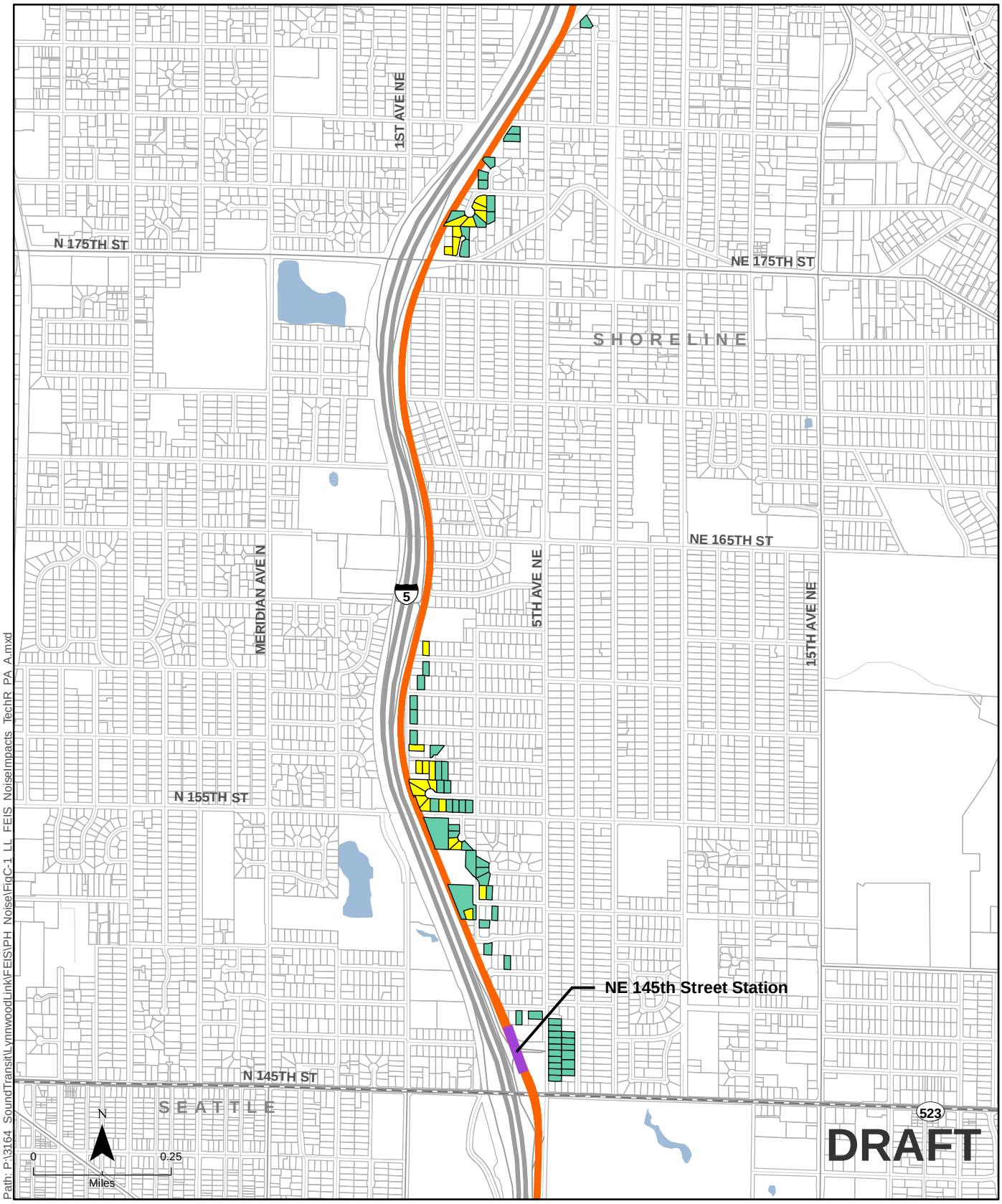
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Preferred Alternative (Segment A)
- Preferred Alternative Station Location
- Parcel Boundary

Figure C-1a
Potential Noise Impacts
Alternative PA-A

Lynnwood Link Extension

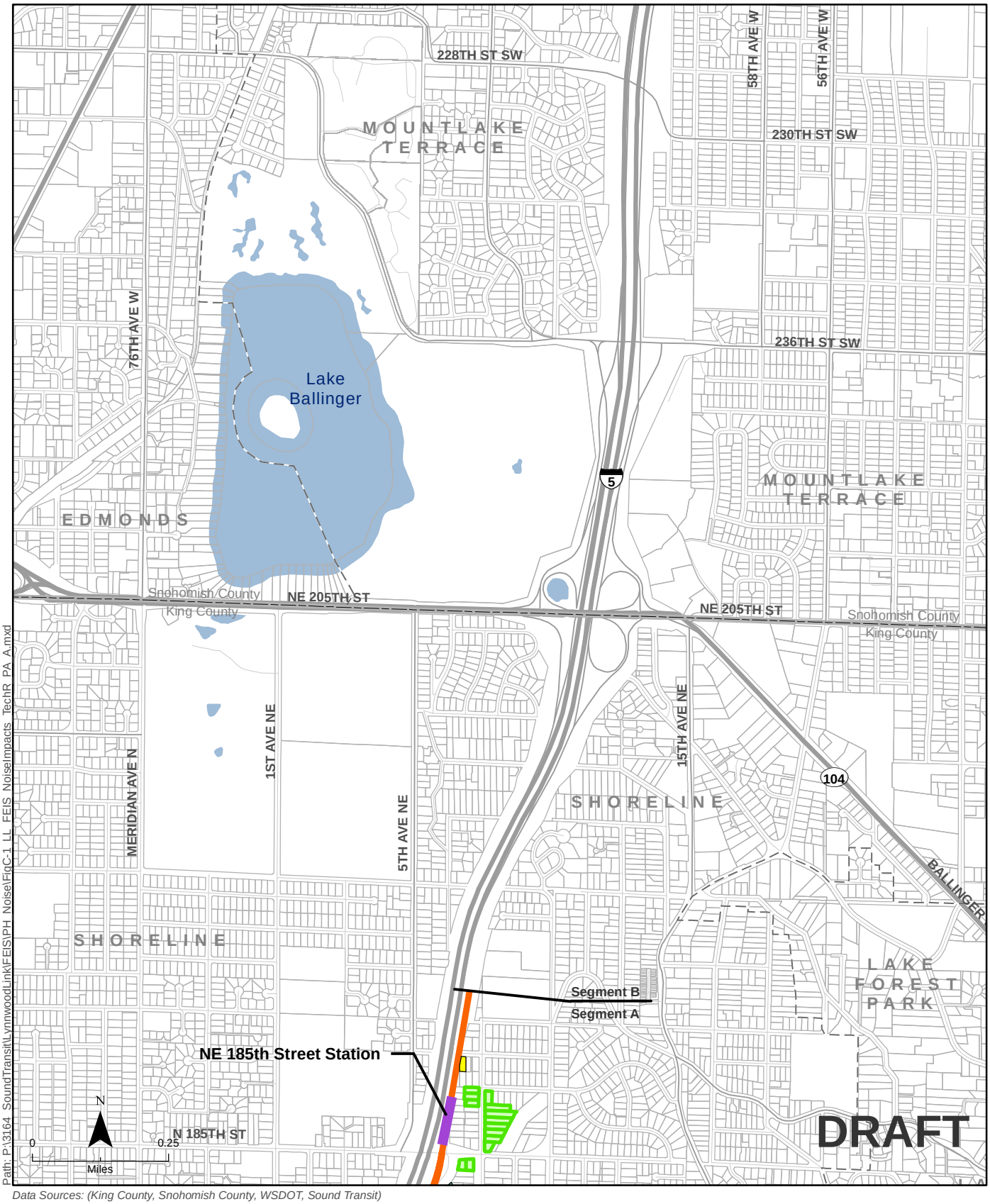


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Preferred Alternative (Segment A)
- Preferred Alternative Station Location
- Parcel Boundary

Figure C-1b
Potential Noise Impacts
Alternative PA-A

Lynnwood Link Extension



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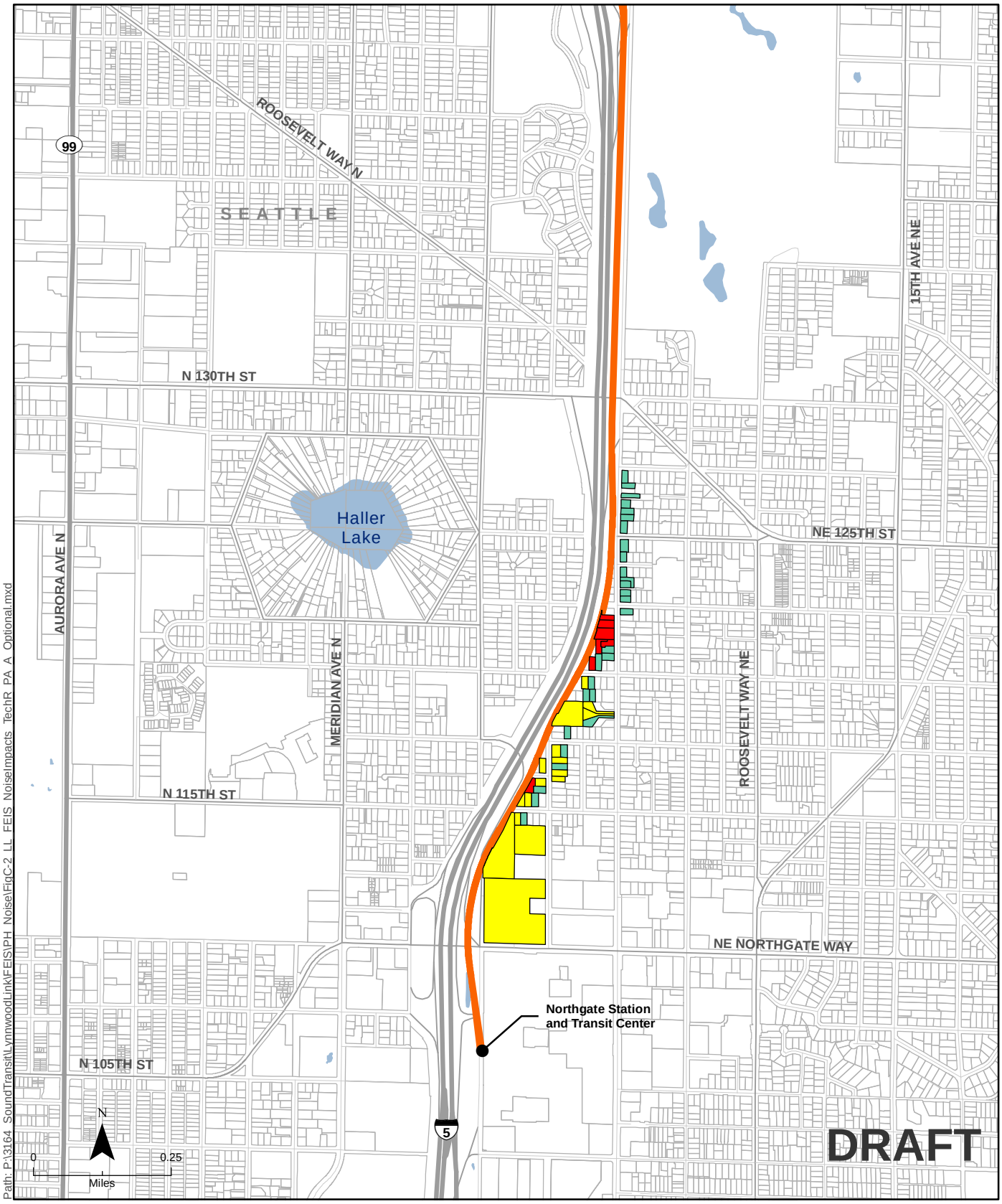
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Preferred Alternative (Segment A)
- Preferred Alternative Station Location
- Parcel Boundary

Figure C-1c
Potential Noise Impacts
Alternative PA-A

Lynnwood Link Extension



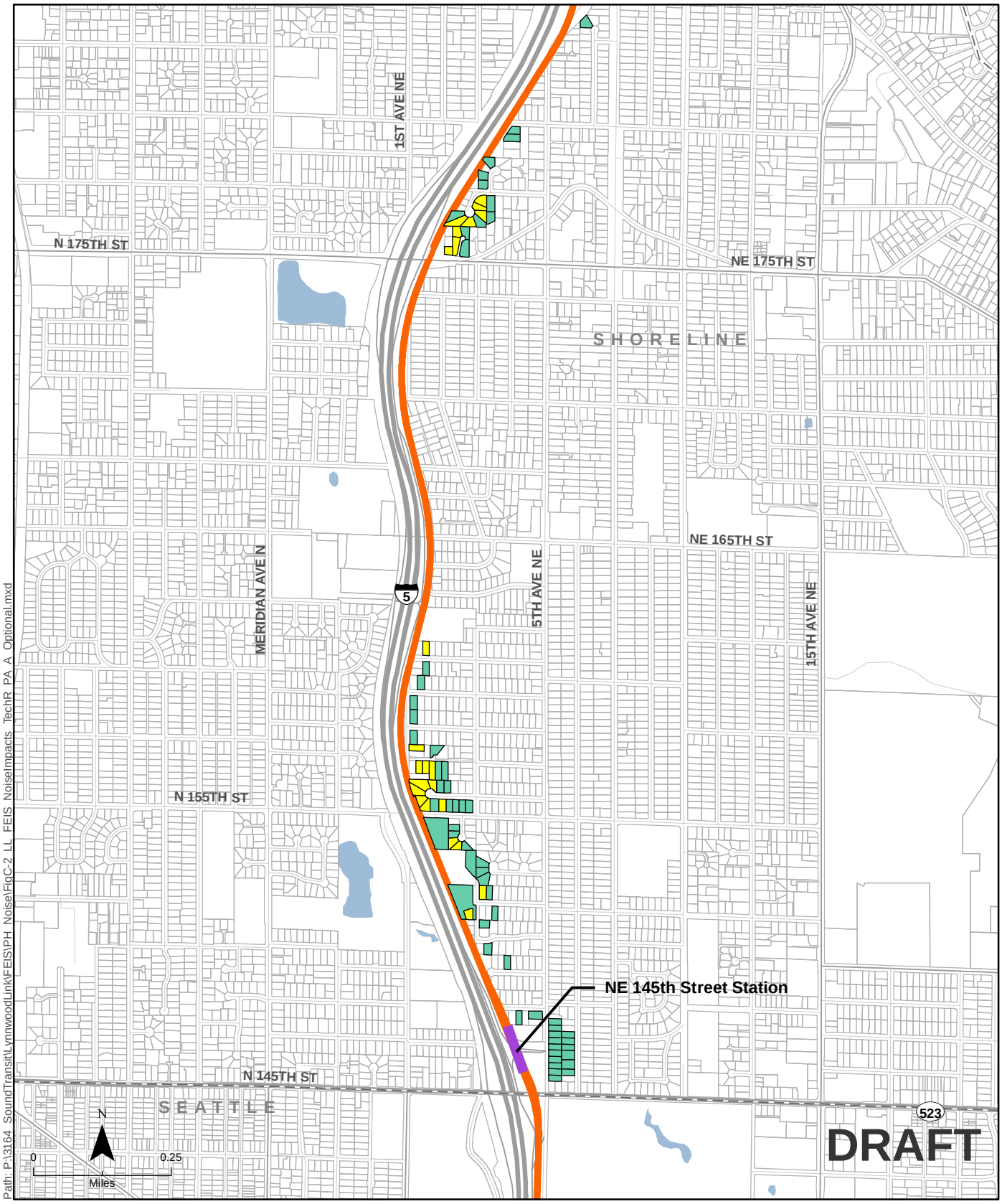
Path: P:\3164 SoundTransit\LynnwoodLink\FEIS\PH Noise\FigC-2 LL FEIS NoiseImpacts TechR PA A Optional.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Preferred Alternative (Segment A)
- Preferred Alternative Station Location
- Parcel Boundary

Figure C-2a
Potential Noise Impacts
Alternative PA-A
185th Shoreline Stadium Garage Option

Lynnwood Link Extension

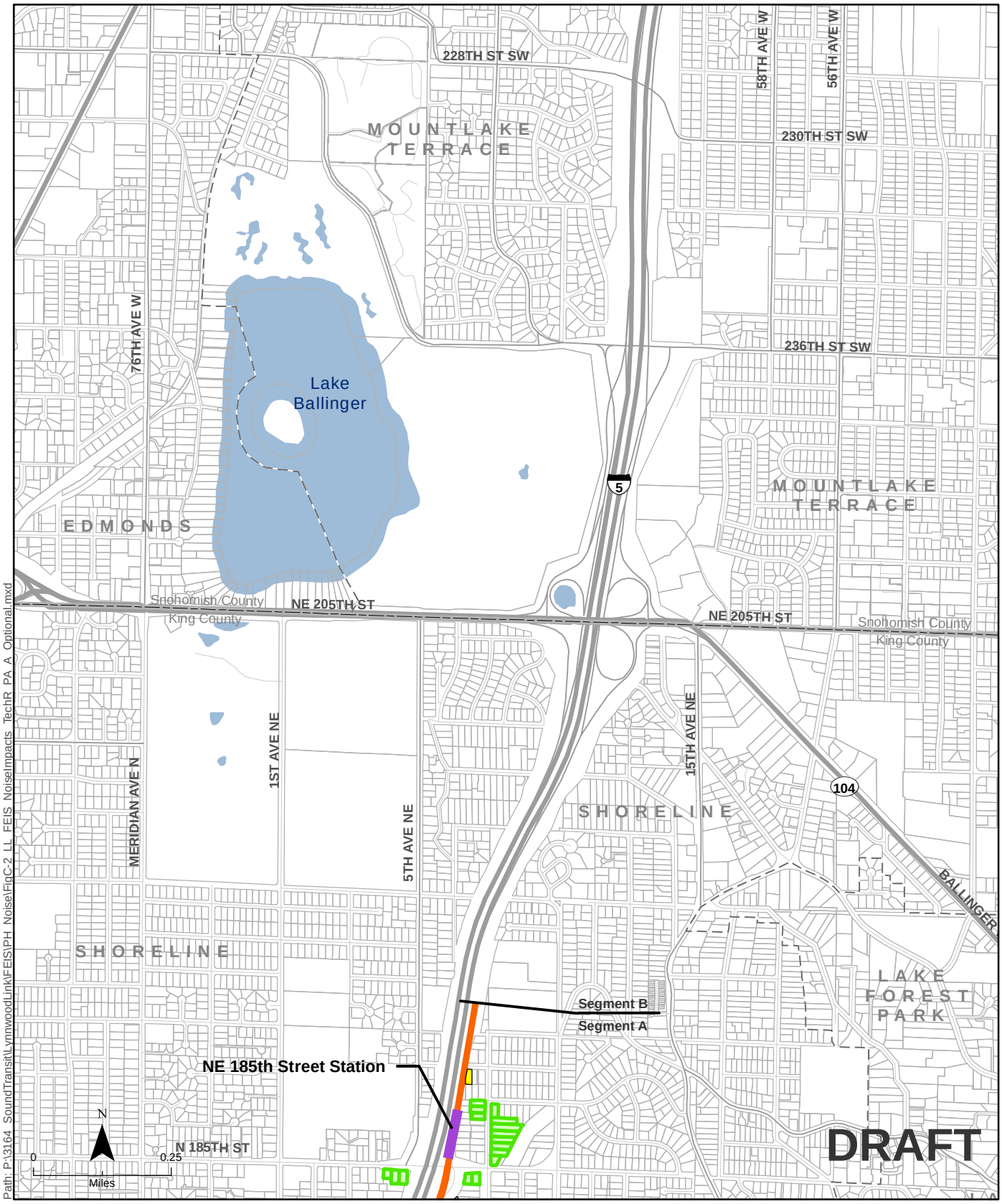


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Preferred Alternative (Segment A)
- Preferred Alternative Station Location
- Parcel Boundary

Figure C-2b
Potential Noise Impacts
Alternative PA-A
185th Shoreline Stadium Garage Option

Lynnwood Link Extension



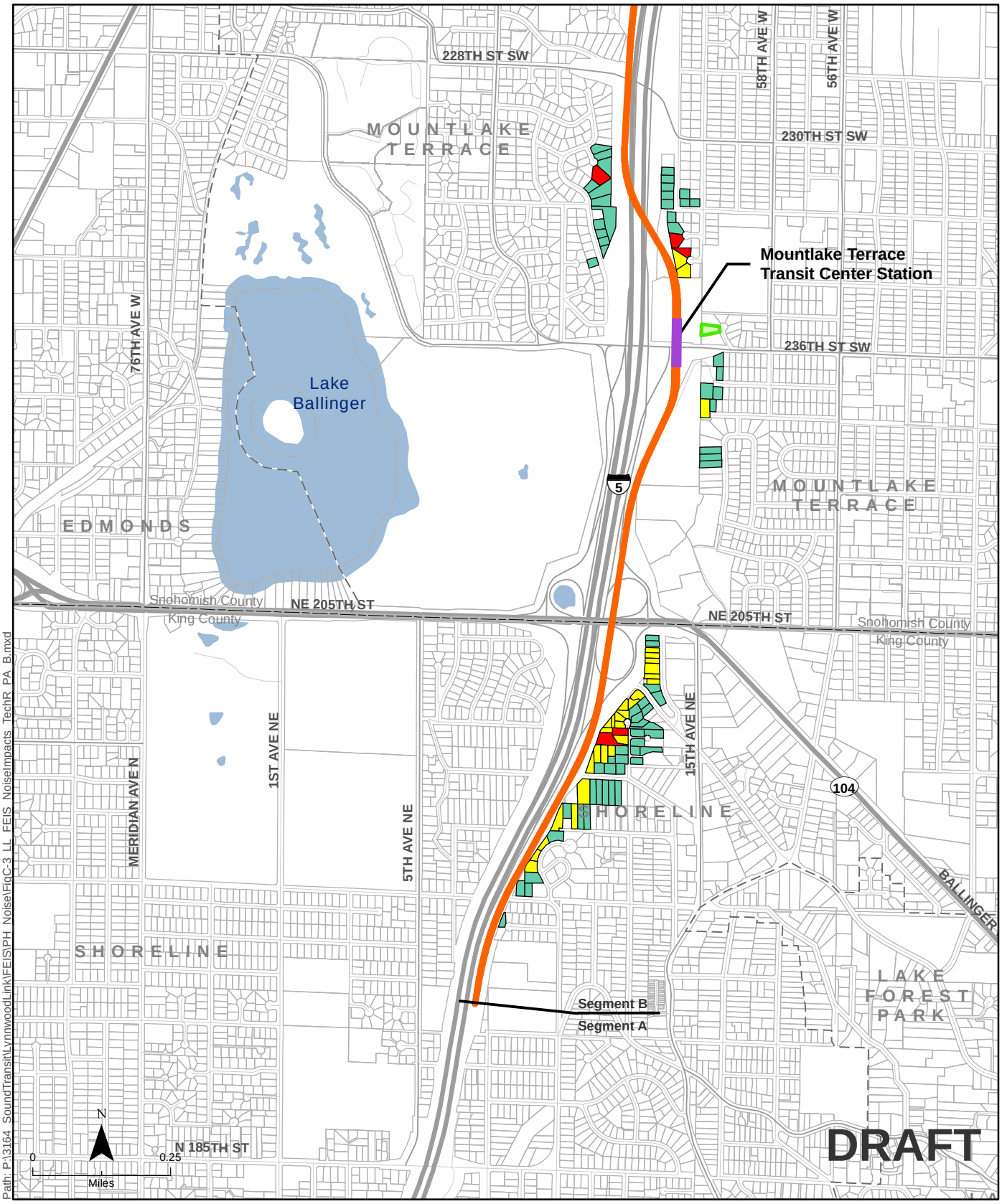
Path: P:\3164 SoundTransit\LynnwoodLink\FEIS\PH Noise\FigC-2 LL FEIS NoiseImpacts TechR PA A Optional.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Preferred Alternative (Segment A)
- Preferred Alternative Station Location
- Parcel Boundary

Figure C-2c
Potential Noise Impacts
Alternative PA-A
185th Shoreline Stadium Garage Option

Lynnwood Link Extension

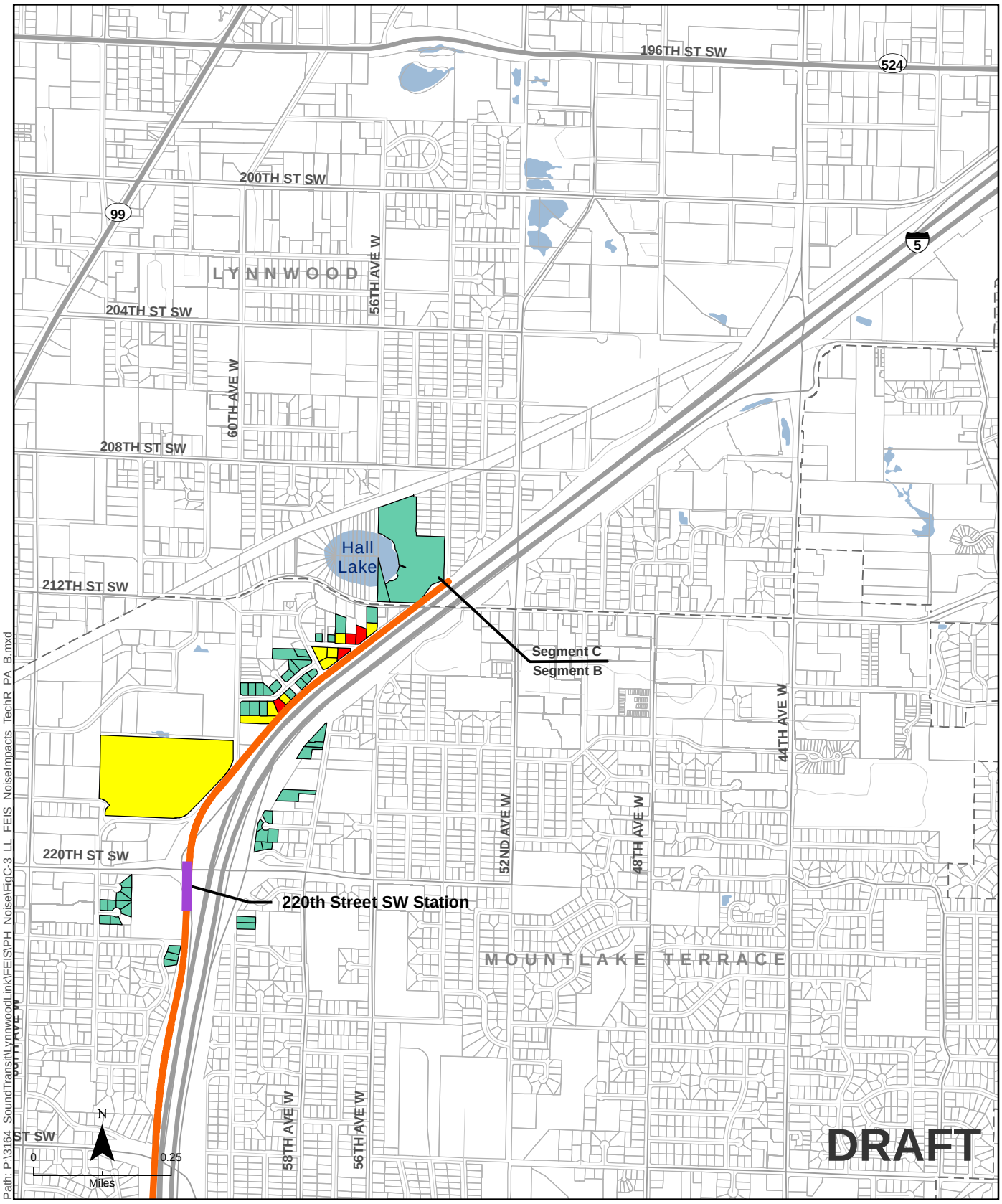


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Preferred Alternative (Segment A)
- Preferred Alternative Station Location
- Parcel Boundary

Figure C-3a
Potential Noise Impacts
Alternative PA-B

Lynnwood Link Extension

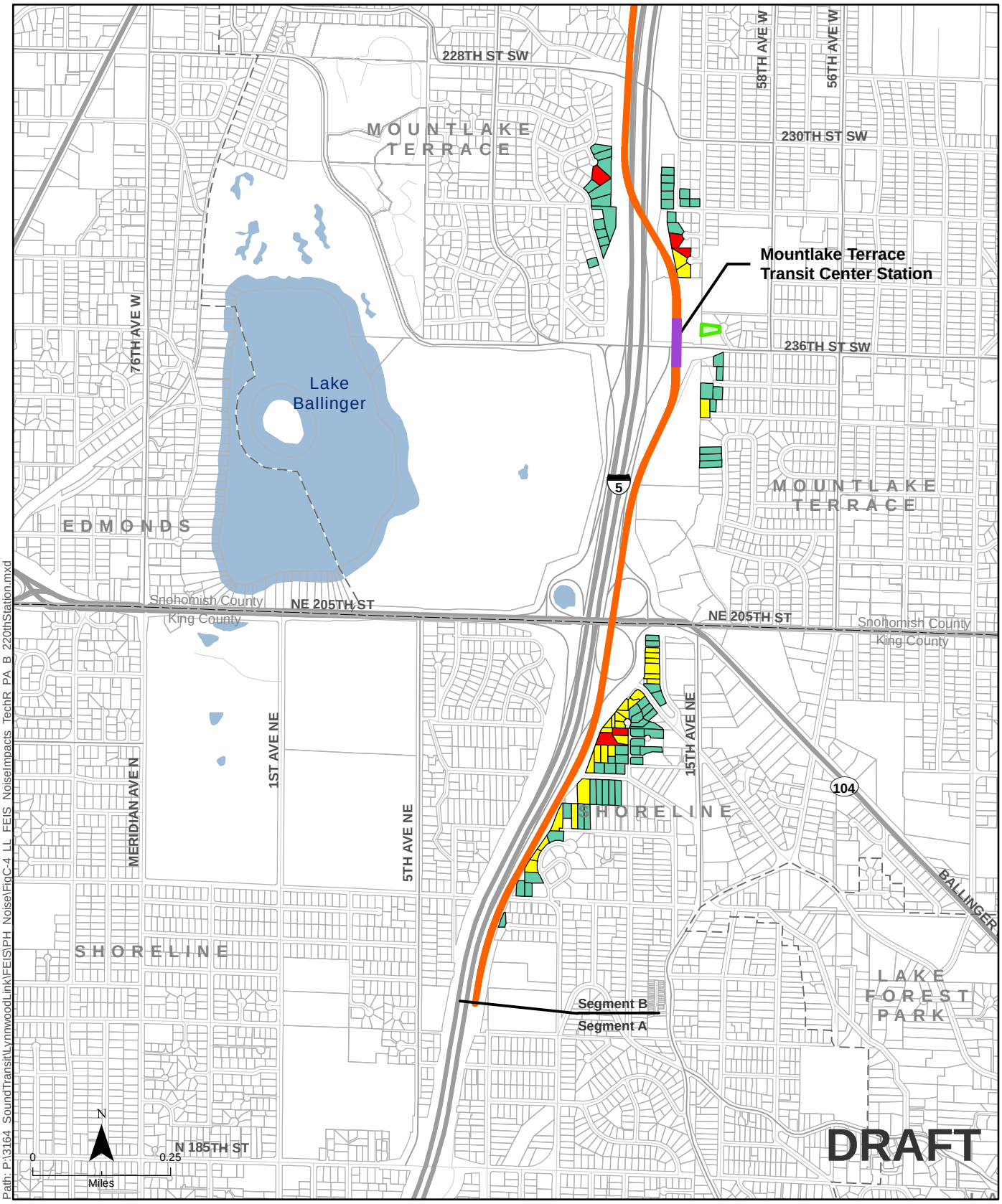


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Preferred Alternative (Segment A)
- Preferred Alternative Station Location
- Parcel Boundary

Figure C-3b
Potential Noise Impacts
Alternative PA-B

Lynnwood Link Extension

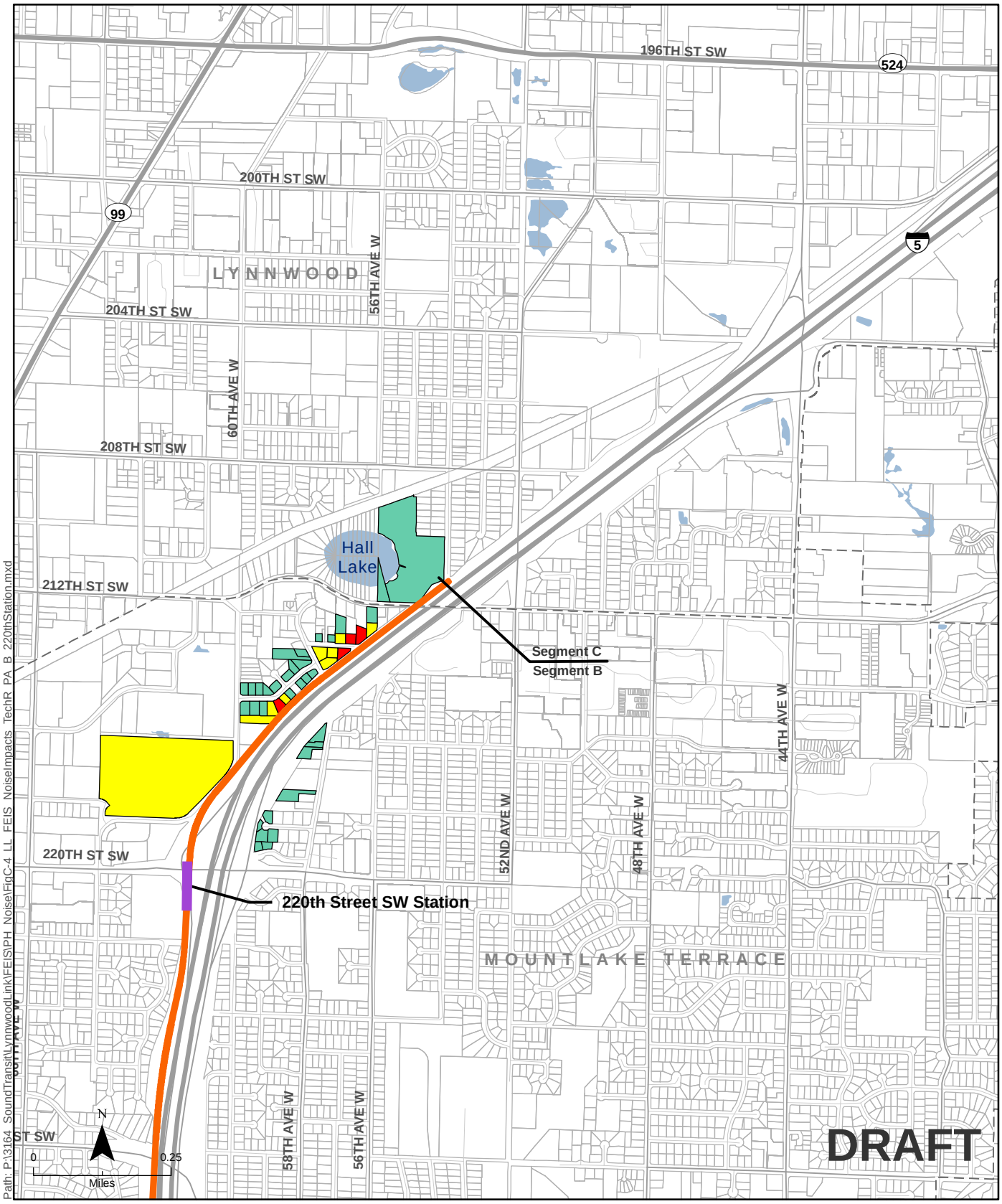


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Preferred Alternative (Segment A)
- Preferred Alternative Station Location
- Parcel Boundary

Figure C-4a
Potential Noise Impacts
Alternative PA-B
220th South Station Option

Lynnwood Link Extension



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Preferred Alternative (Segment A)
- Preferred Alternative Station Location
- Parcel Boundary

Figure C-4b
Potential Noise Impacts
Alternative PA-B
220th South Station Option

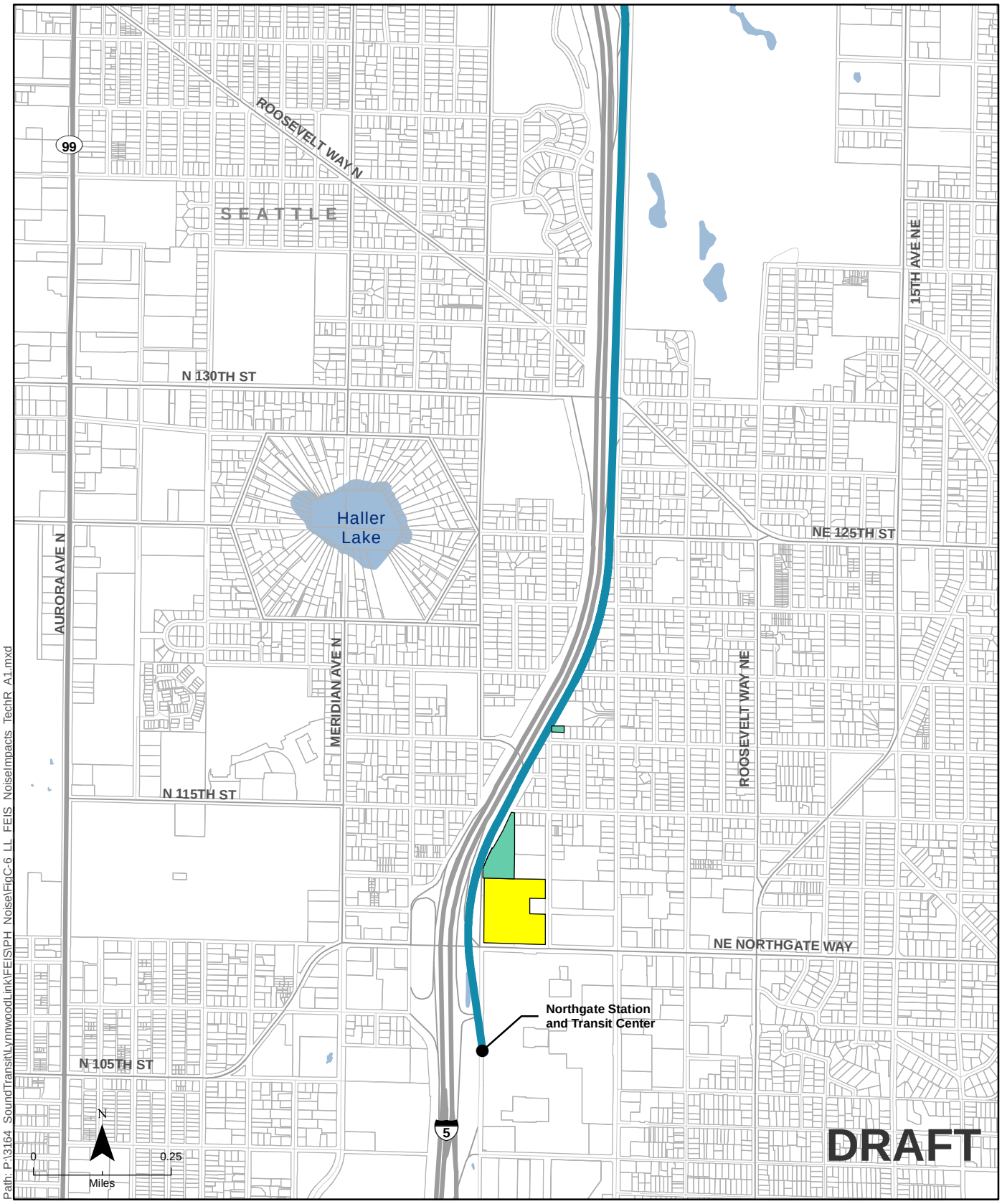
Lynnwood Link Extension

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Preferred Alternative (Segment A)
- Preferred Alternative Station Location
- Parcel Boundary

Figure C-5
Potential Noise Impacts
Alternative PA-C

Lynnwood Link Extension



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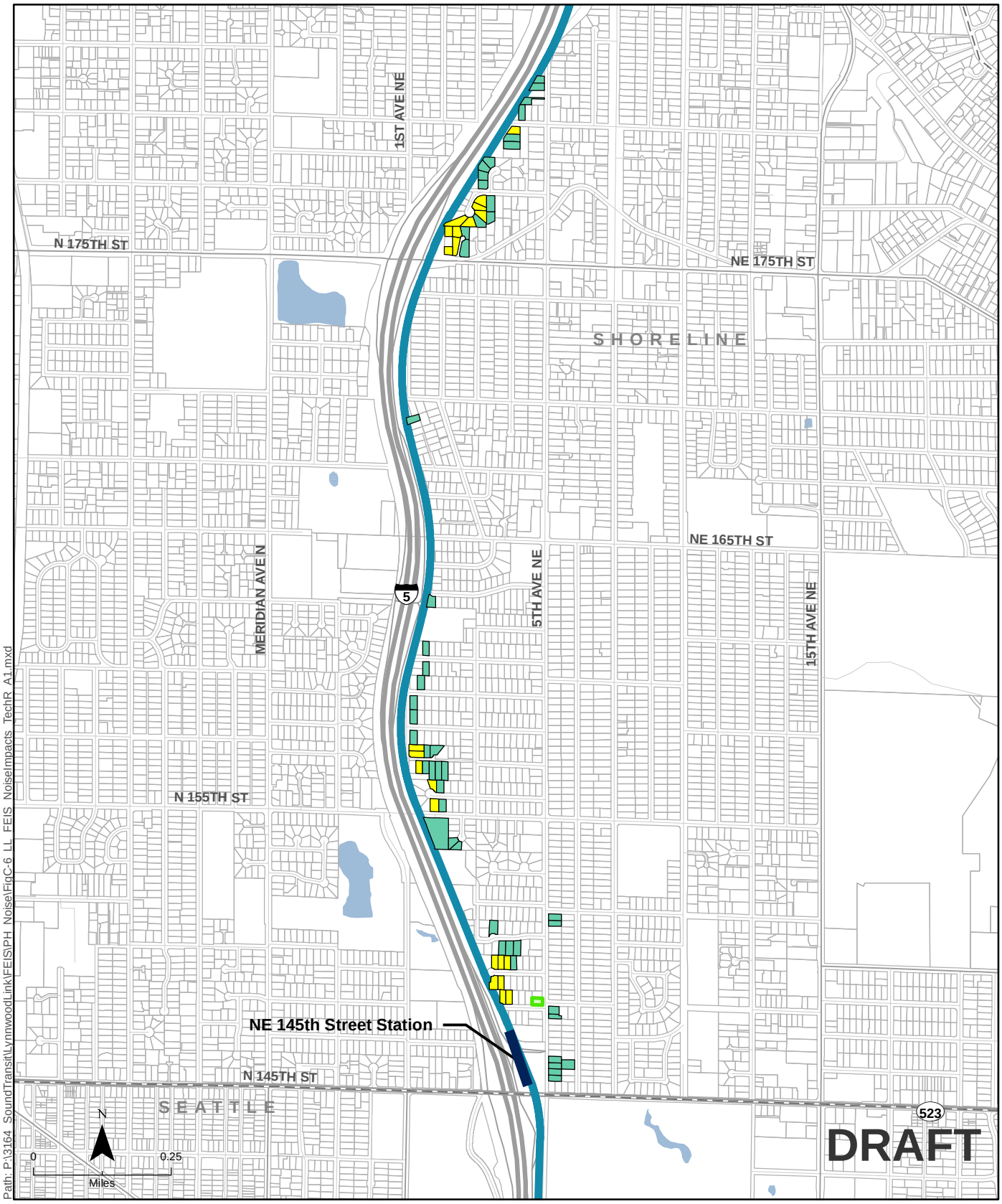
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A1
- Station Location
- Parcel Boundary

Figure C-6a
Potential Noise Impacts
Alternative A1

Lynnwood Link Extension

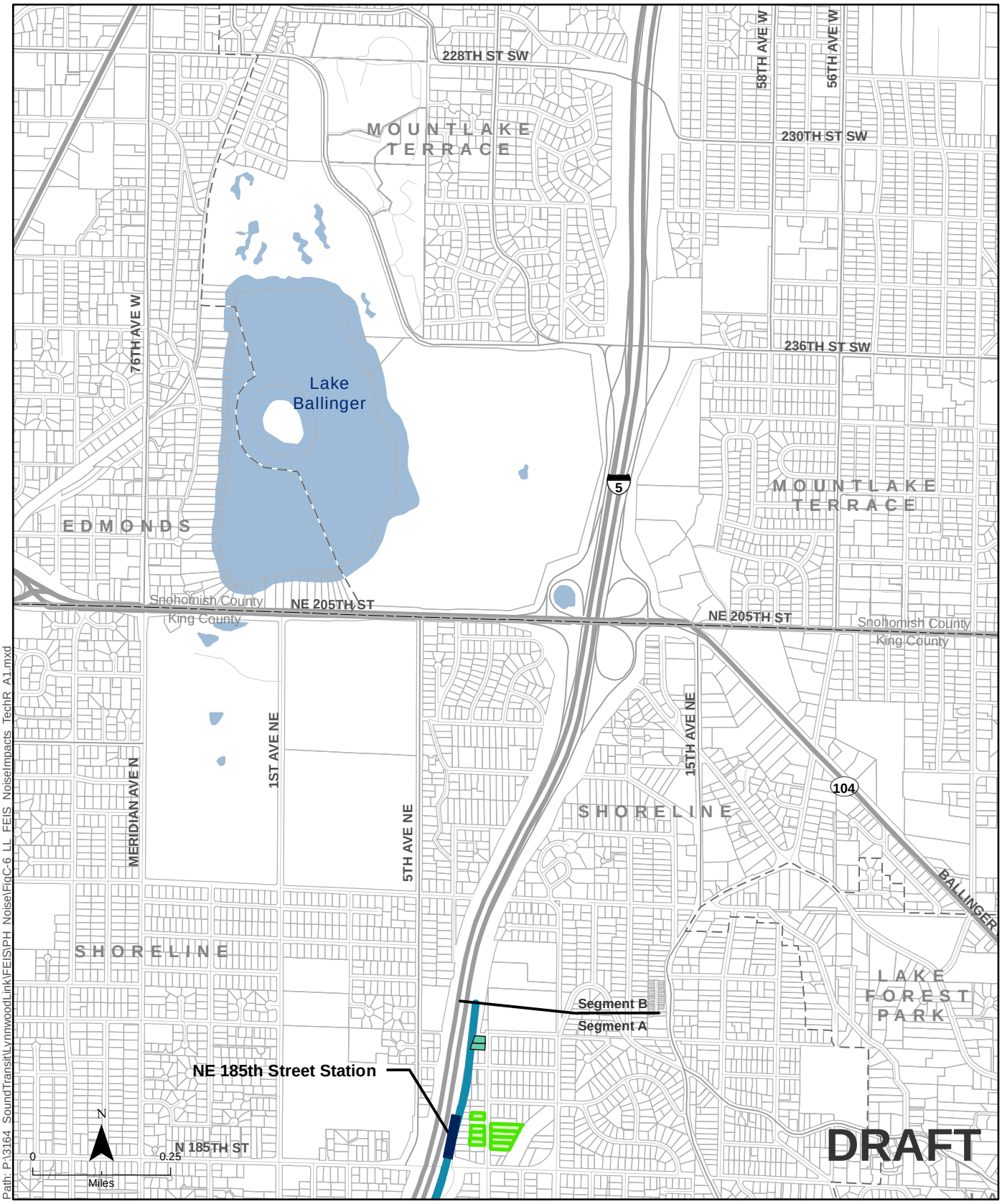


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A1
- Station Location
- Parcel Boundary

Figure C-6b
Potential Noise Impacts
Alternative A1

Lynnwood Link Extension

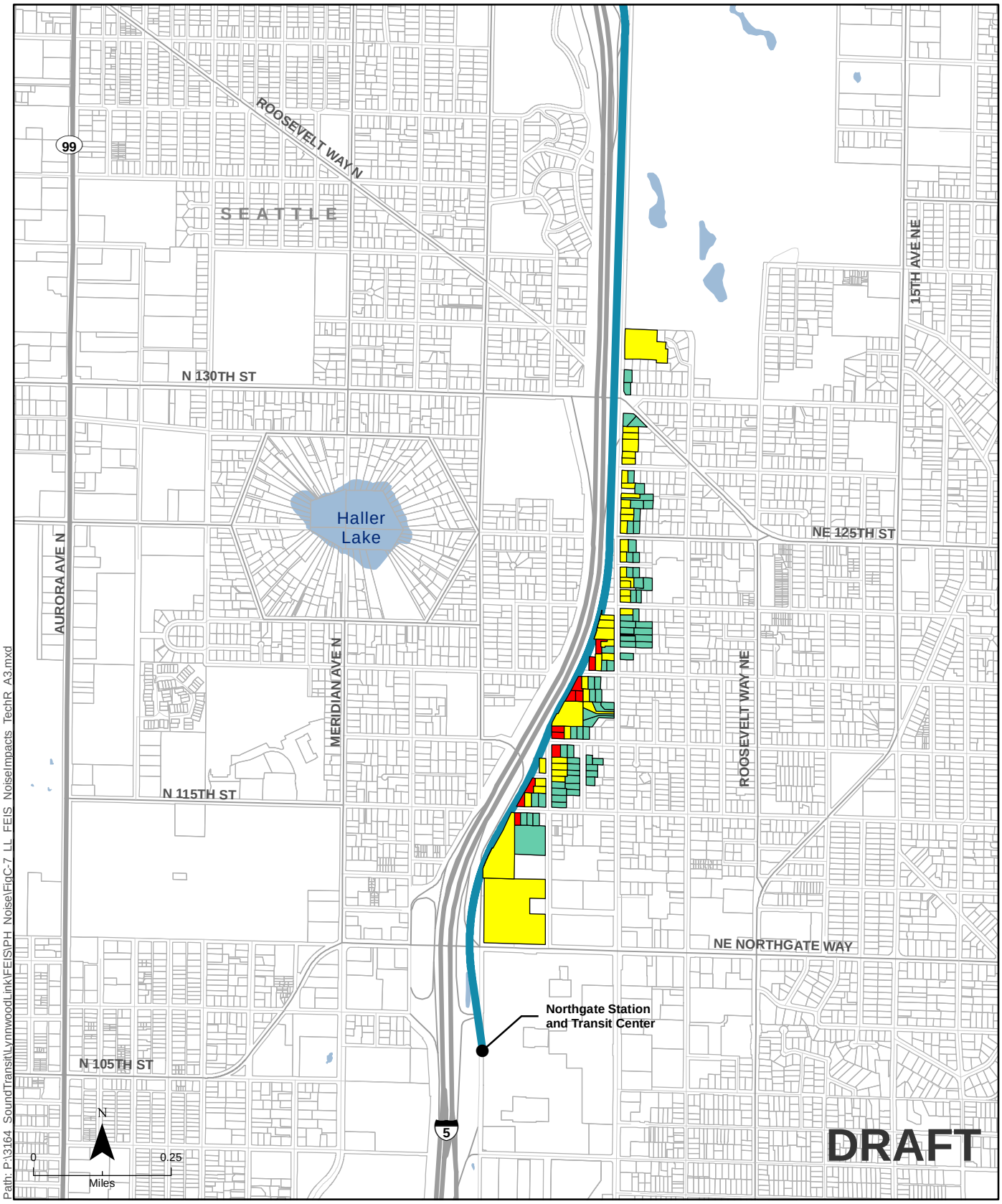


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A1
- Station Location
- Parcel Boundary

Figure C-6c
Potential Noise Impacts
Alternative A1

Lynnwood Link Extension



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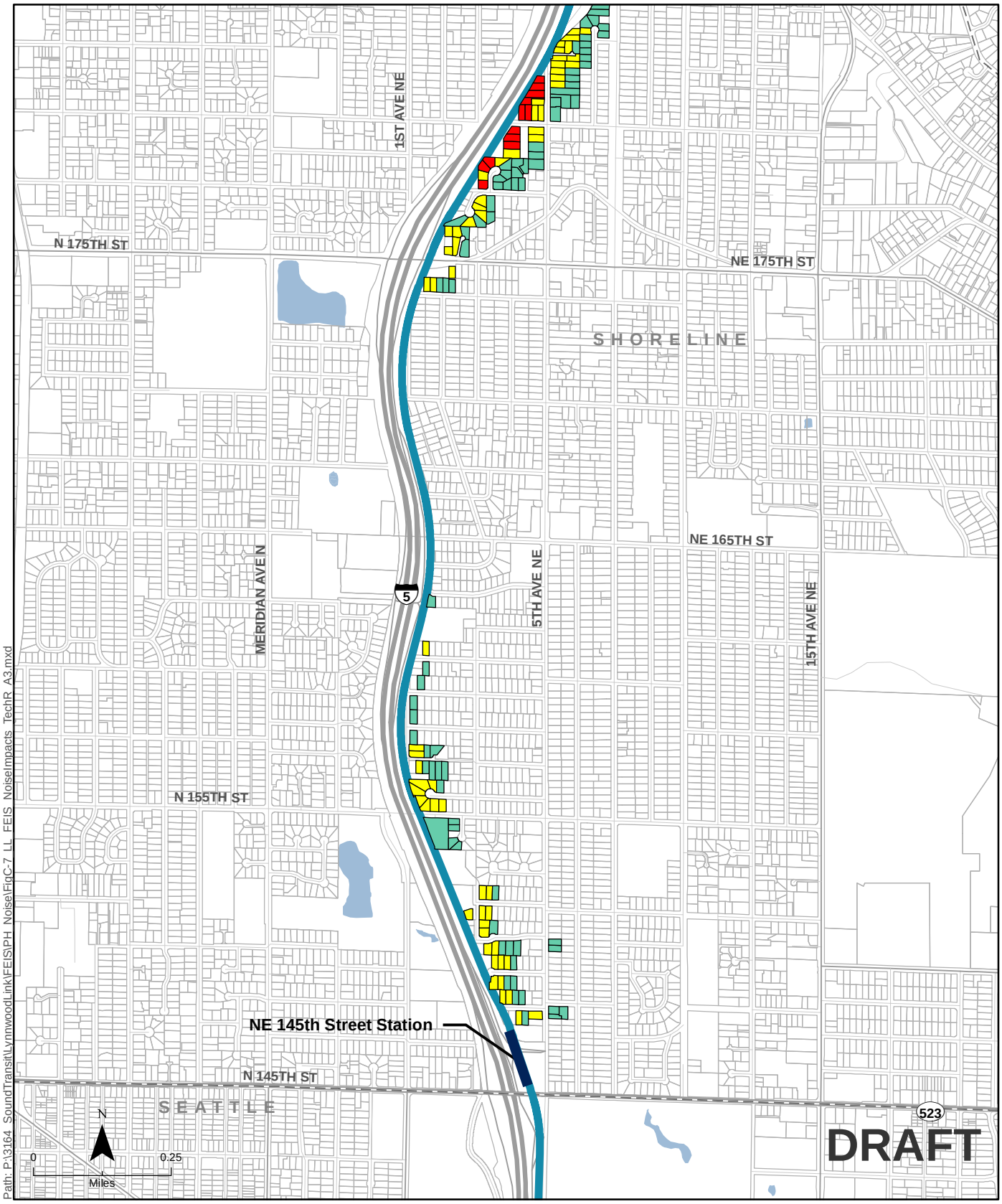
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A3
- Station Location
- Parcel Boundary

Figure C-7a
Potential Noise Impacts
Alternative A3

Lynnwood Link Extension

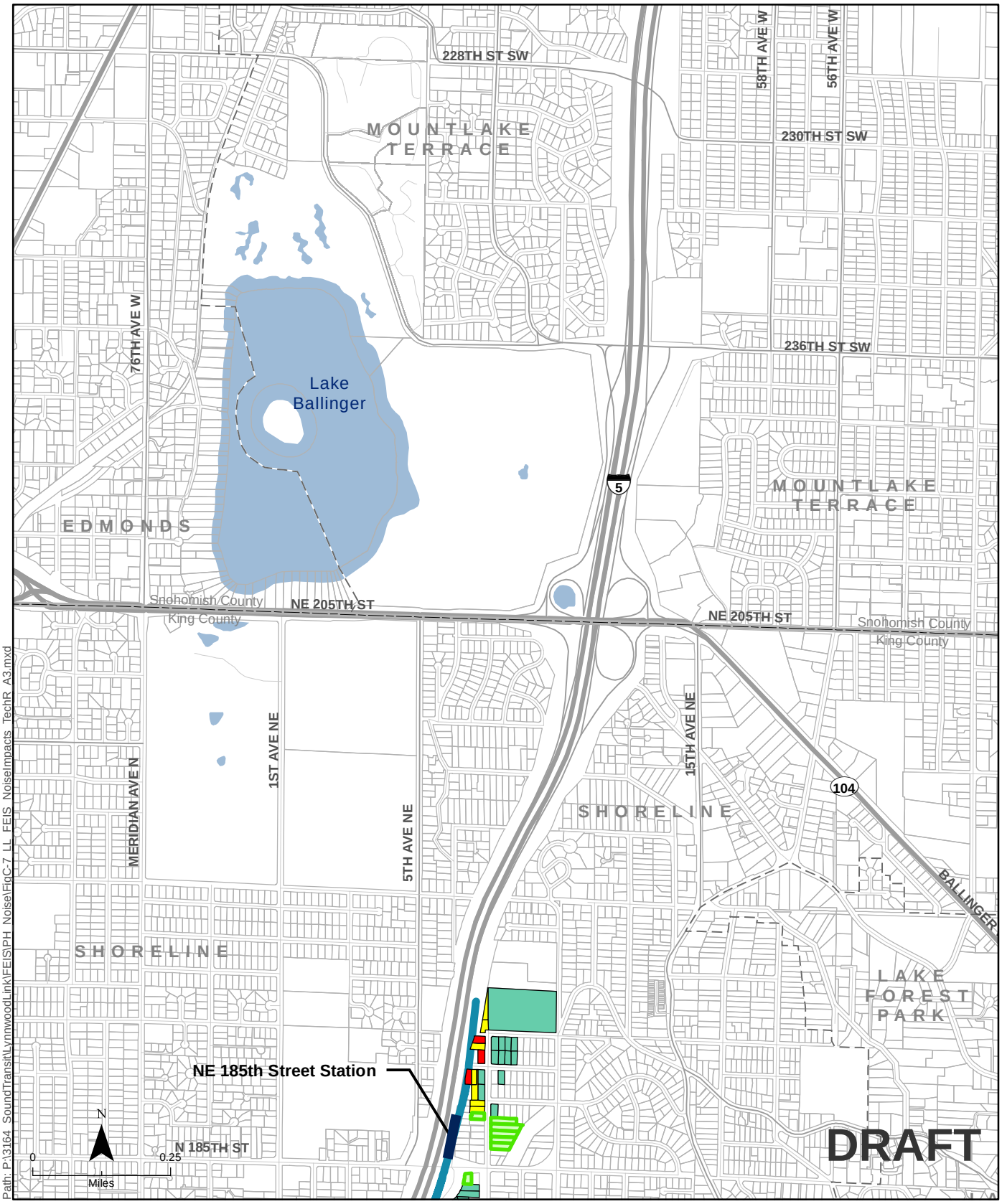


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A3
- Station Location
- Parcel Boundary

Figure C-7b
Potential Noise Impacts
Alternative A3

Lynnwood Link Extension



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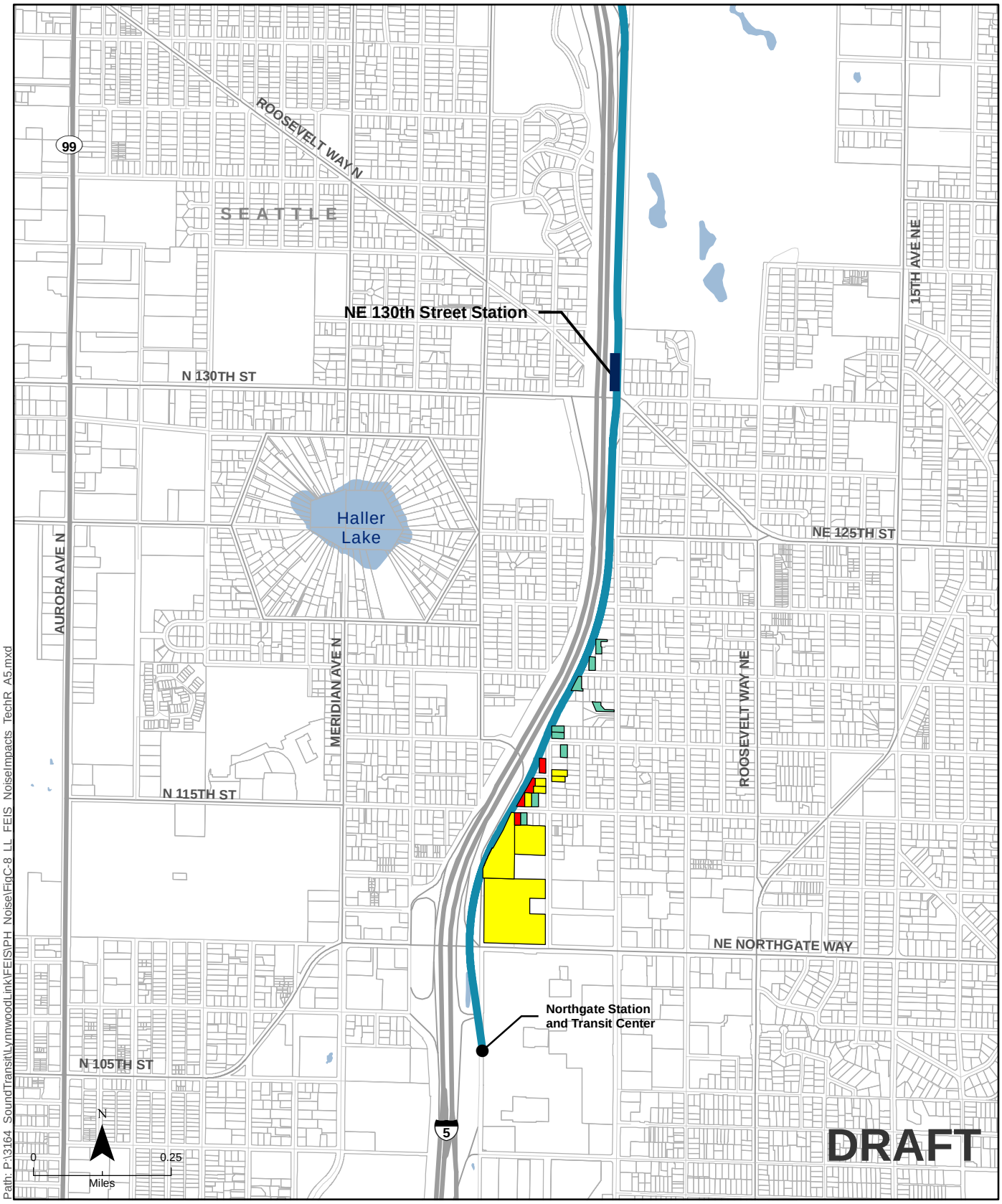
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A3
- Station Location
- Parcel Boundary

Figure C-7c
Potential Noise Impacts
Alternative A3

Lynnwood Link Extension



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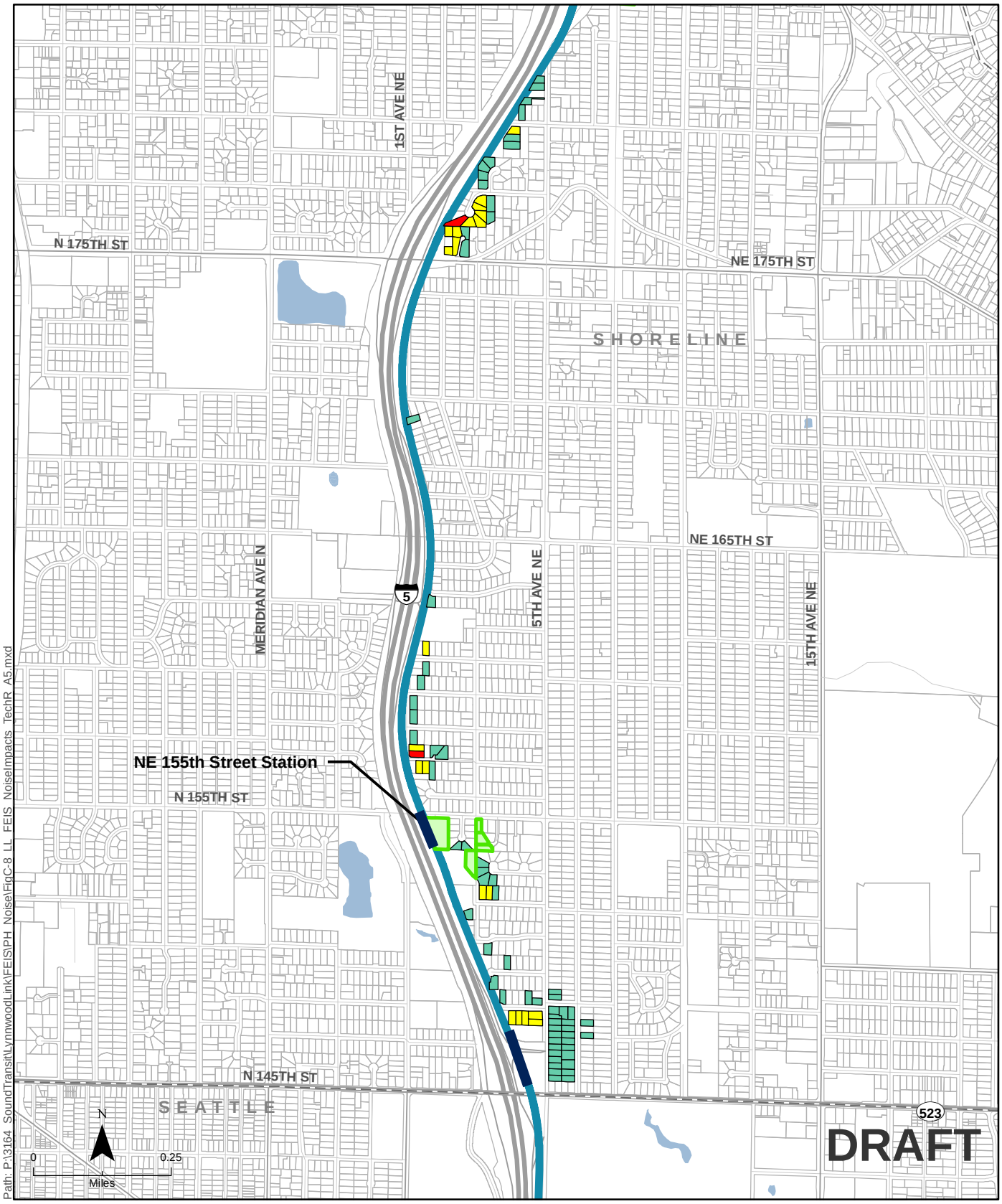
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A5
- Station Location
- Parcel Boundary

Figure C-8a
Potential Noise Impacts
Alternative A5

Lynnwood Link Extension

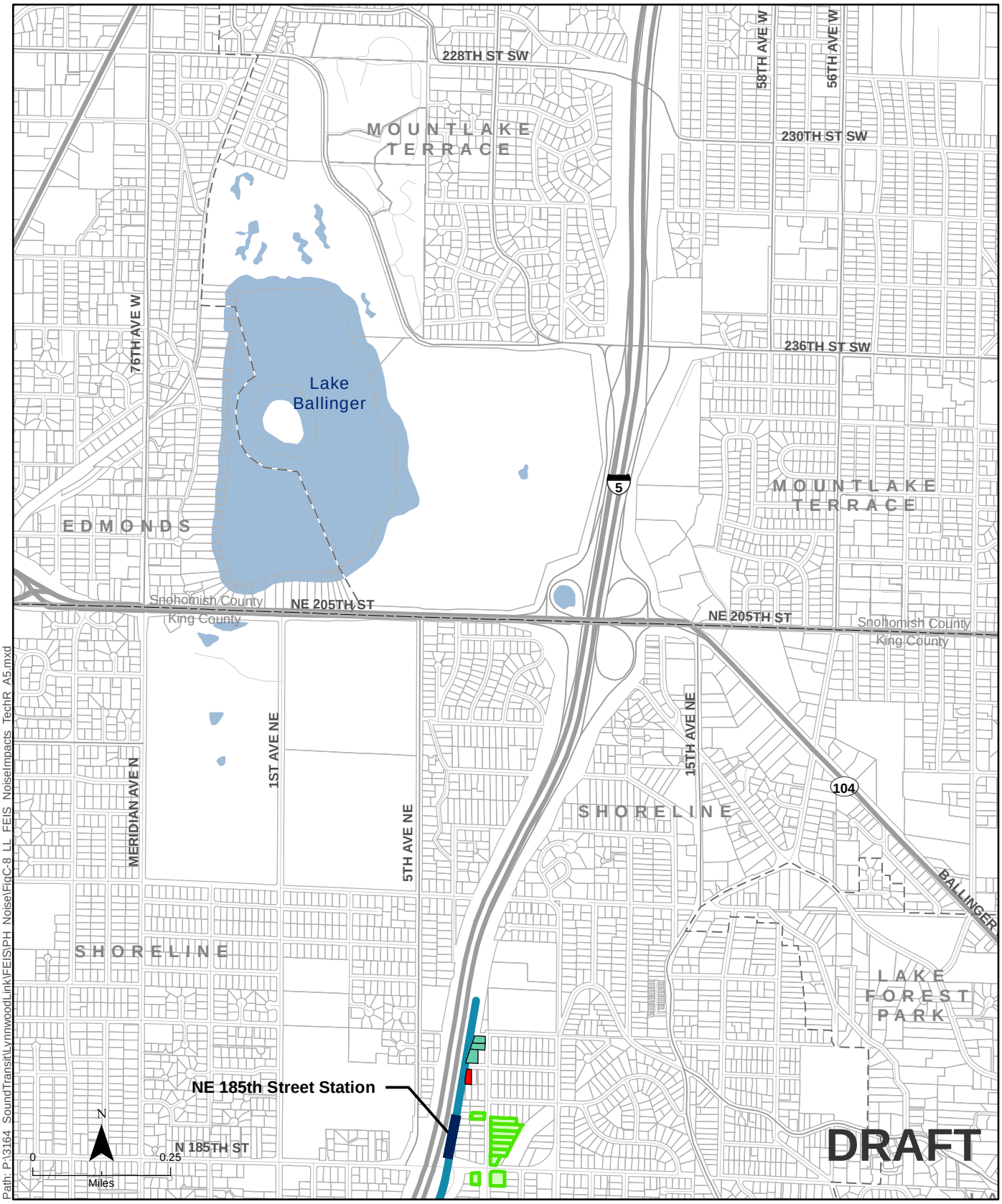


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A5
- Station Location
- Parcel Boundary

Figure C-8b
Potential Noise Impacts
Alternative A5

Lynnwood Link Extension



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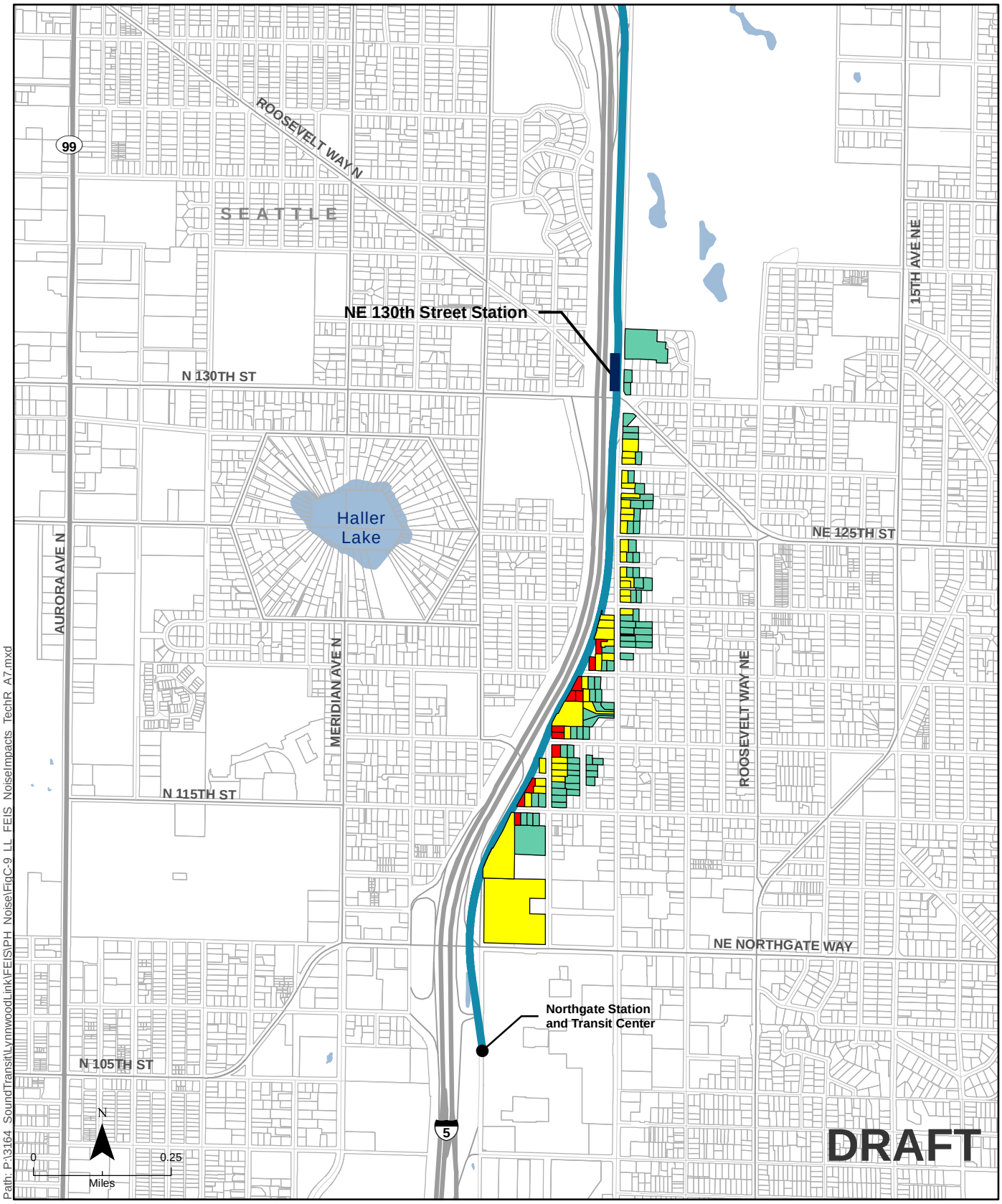
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A5
- Station Location
- Parcel Boundary

Figure C-8c
Potential Noise Impacts
Alternative A5

Lynnwood Link Extension



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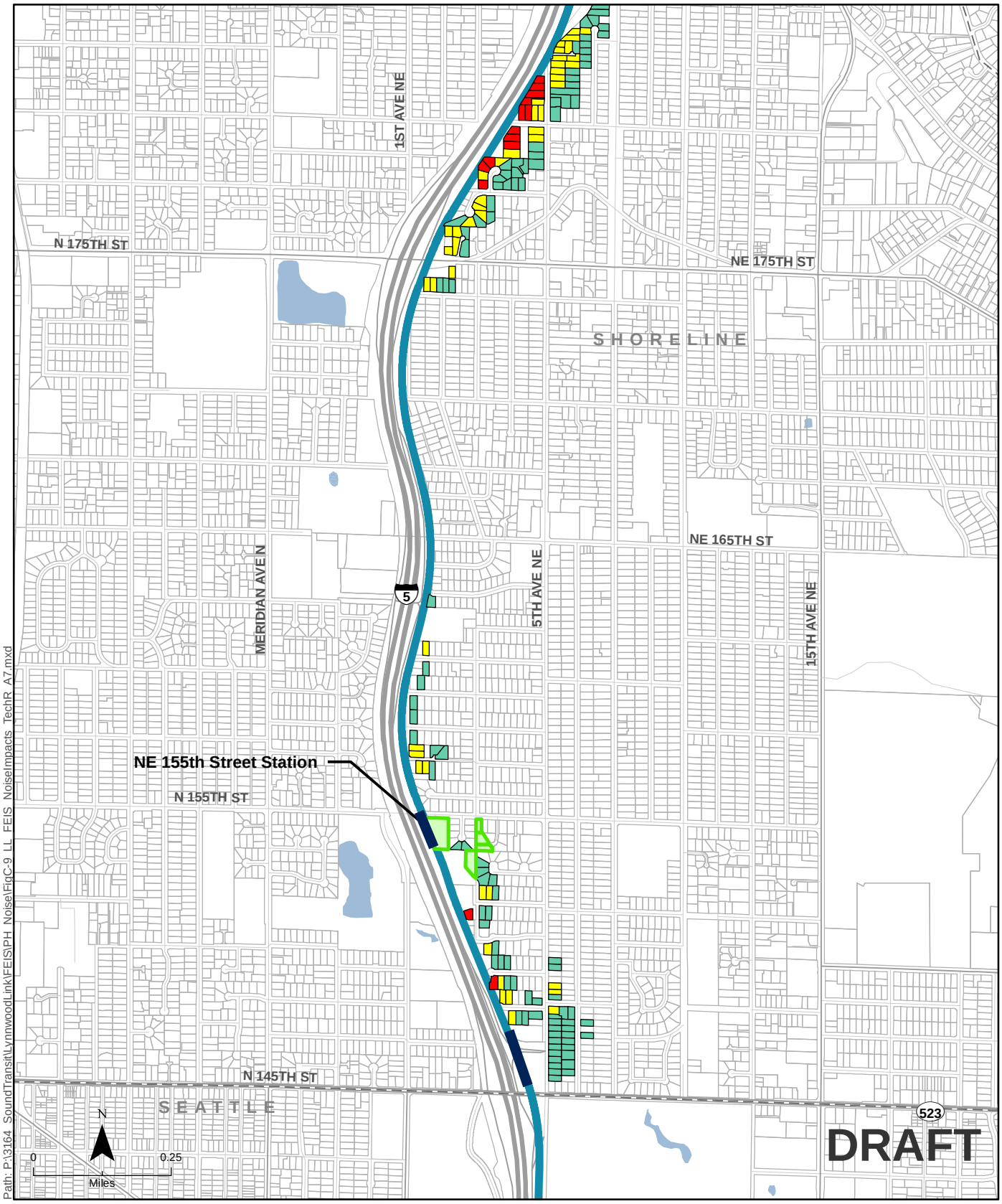
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A7
- Station Location
- Parcel Boundary

Figure C-9a
Potential Noise Impacts
Alternative A7

Lynnwood Link Extension

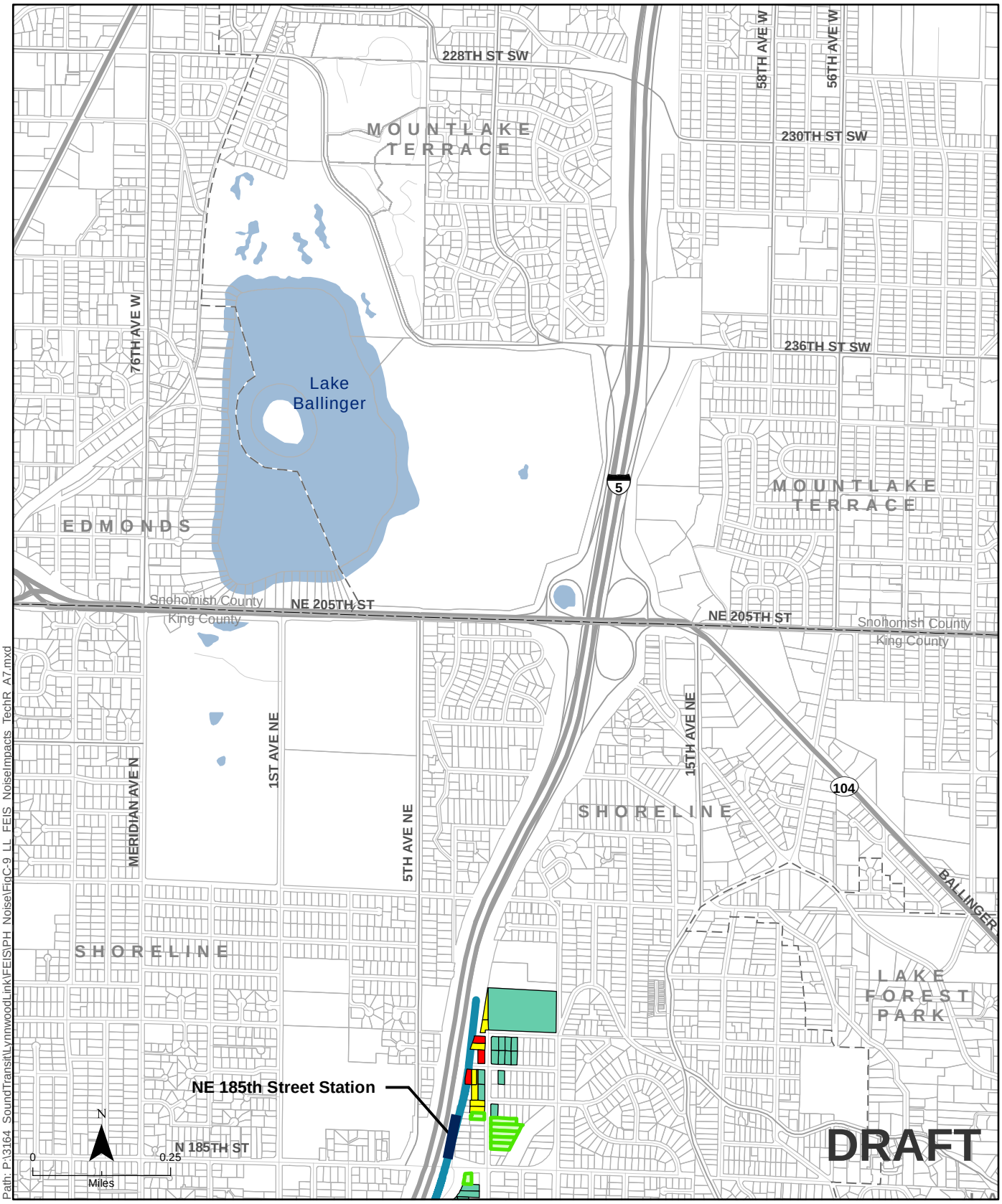


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A7
- Station Location
- Parcel Boundary

Figure C-9b
Potential Noise Impacts
Alternative A7

Lynnwood Link Extension



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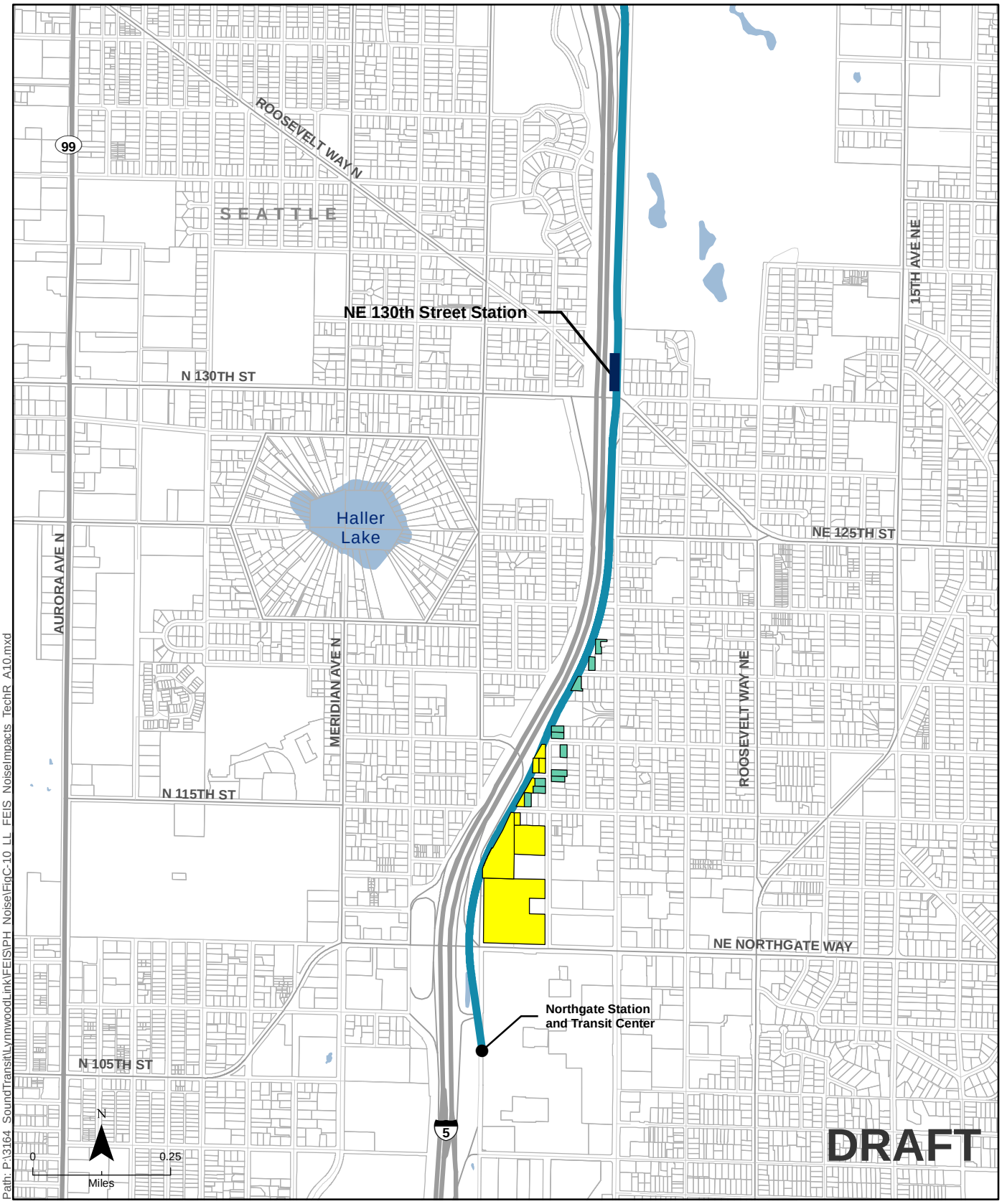
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A7
- Station Location
- Parcel Boundary

Figure C-9c
Potential Noise Impacts
Alternative A7

Lynnwood Link Extension



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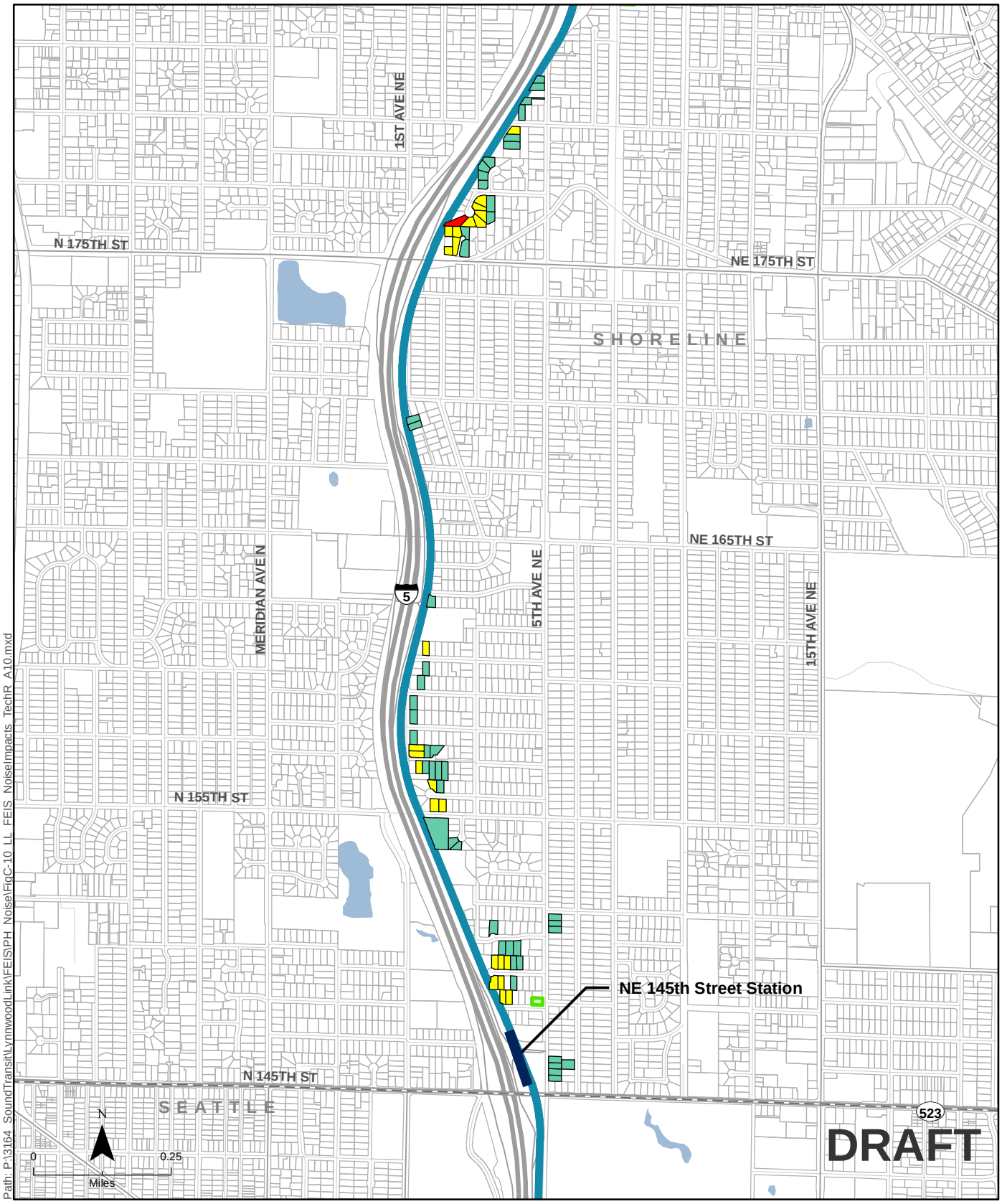
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A10
- Station Location
- Parcel Boundary

Figure C-10a
Potential Noise Impacts
Alternative A10

Lynnwood Link Extension

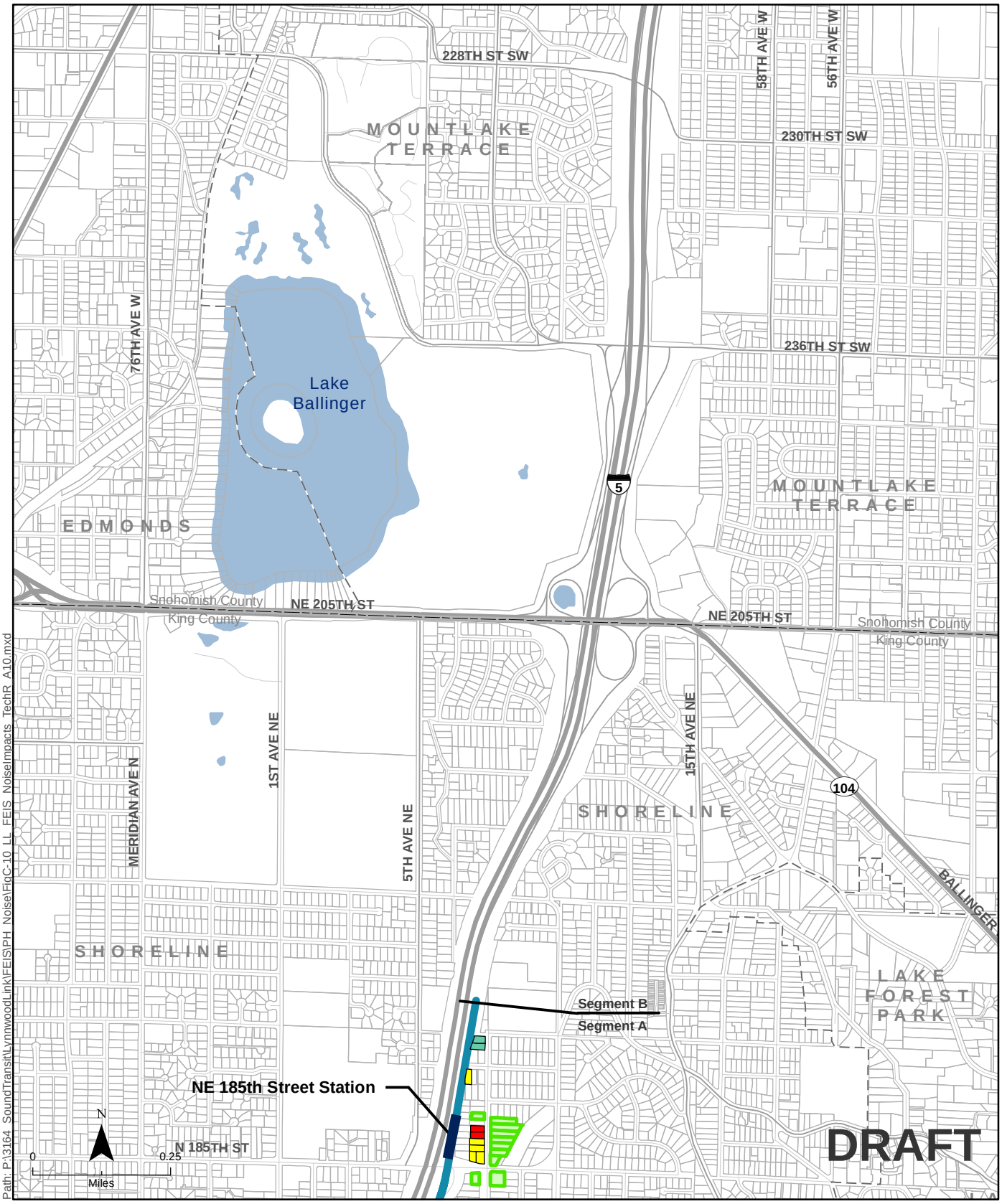


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A10
- Station Location
- Parcel Boundary

Figure C-10b
Potential Noise Impacts
Alternative A10

Lynnwood Link Extension

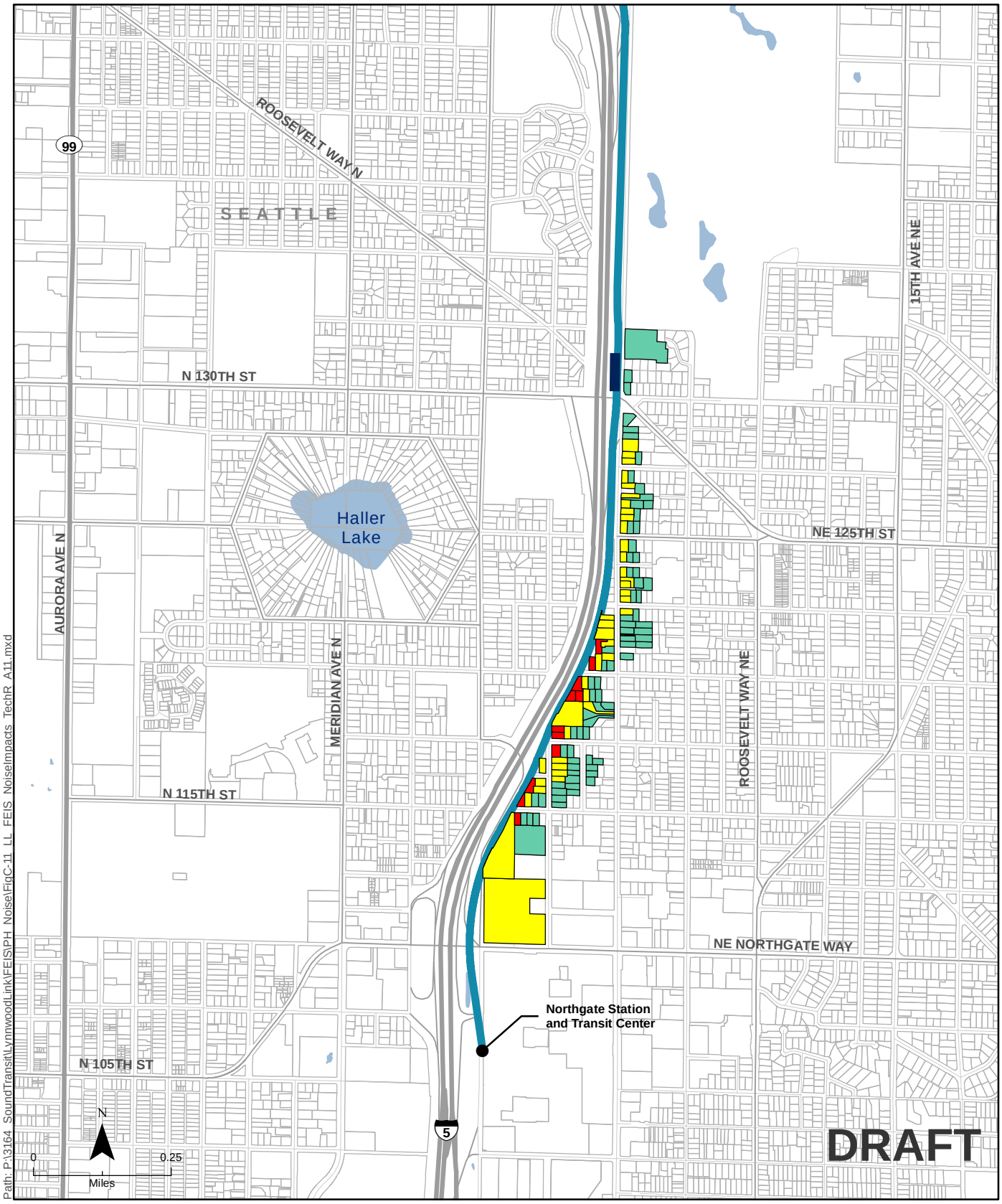


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A10
- Station Location
- Parcel Boundary

Figure C-10c
Potential Noise Impacts
Alternative A10

Lynnwood Link Extension



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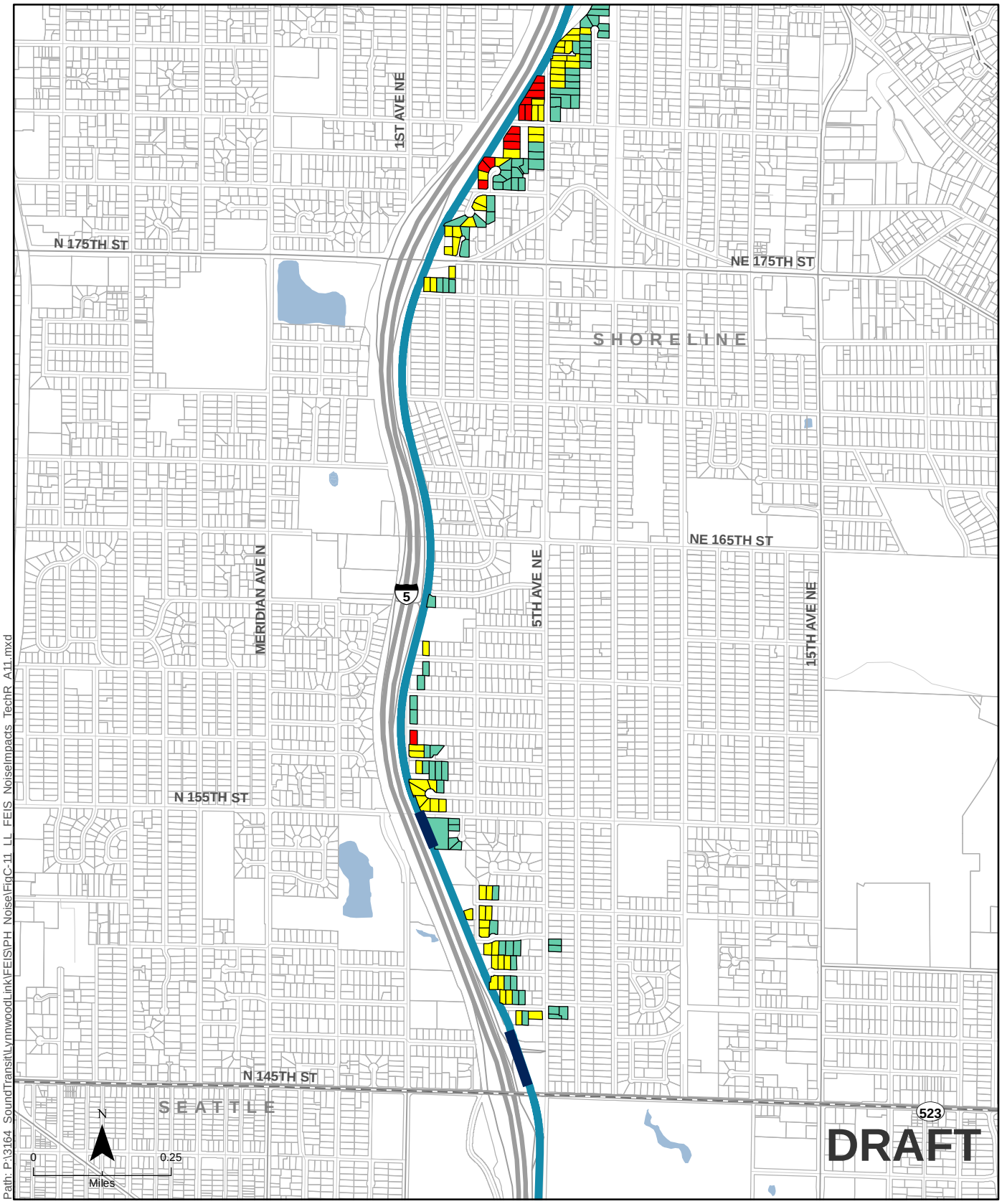
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A11
- Station Location
- Parcel Boundary

Figure C-11a
Potential Noise Impacts
Alternative A11

Lynnwood Link Extension



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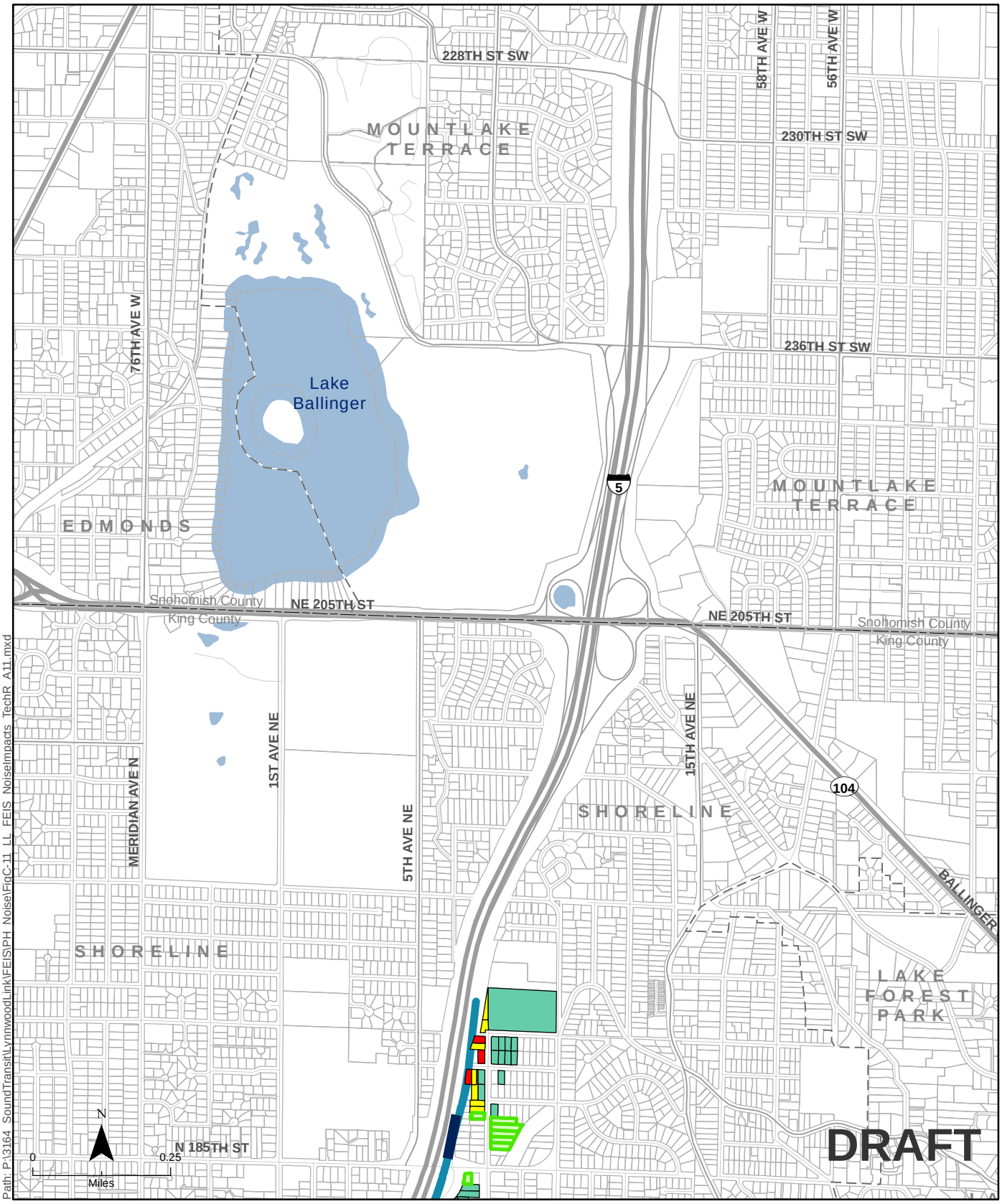
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A11
- Station Location
- Parcel Boundary

Figure C-11b
Potential Noise Impacts
Alternative A11

Lynnwood Link Extension



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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative A11
- Station Location
- Parcel Boundary

Figure C-11c
Potential Noise Impacts
Alternative A11

Lynnwood Link Extension

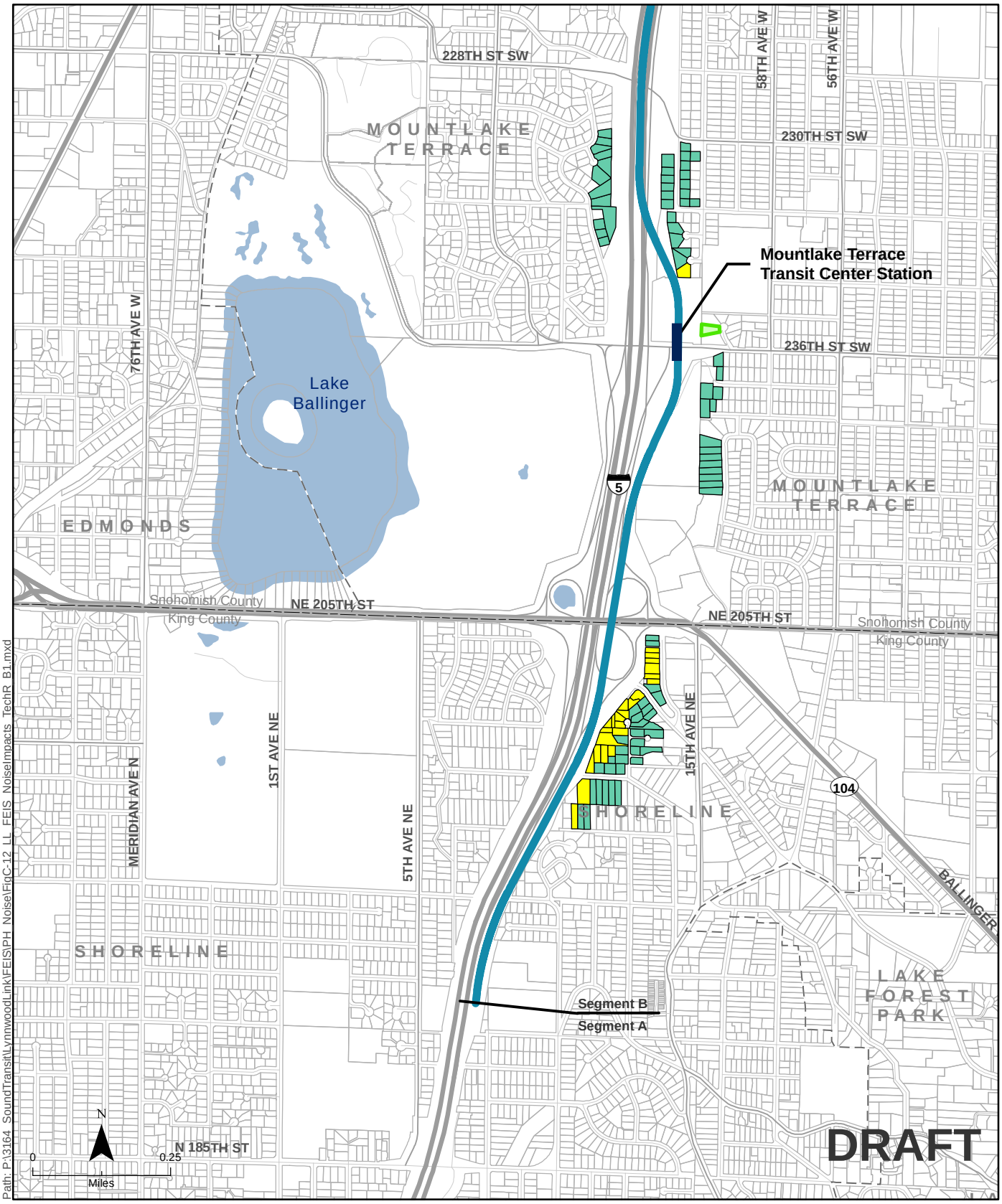
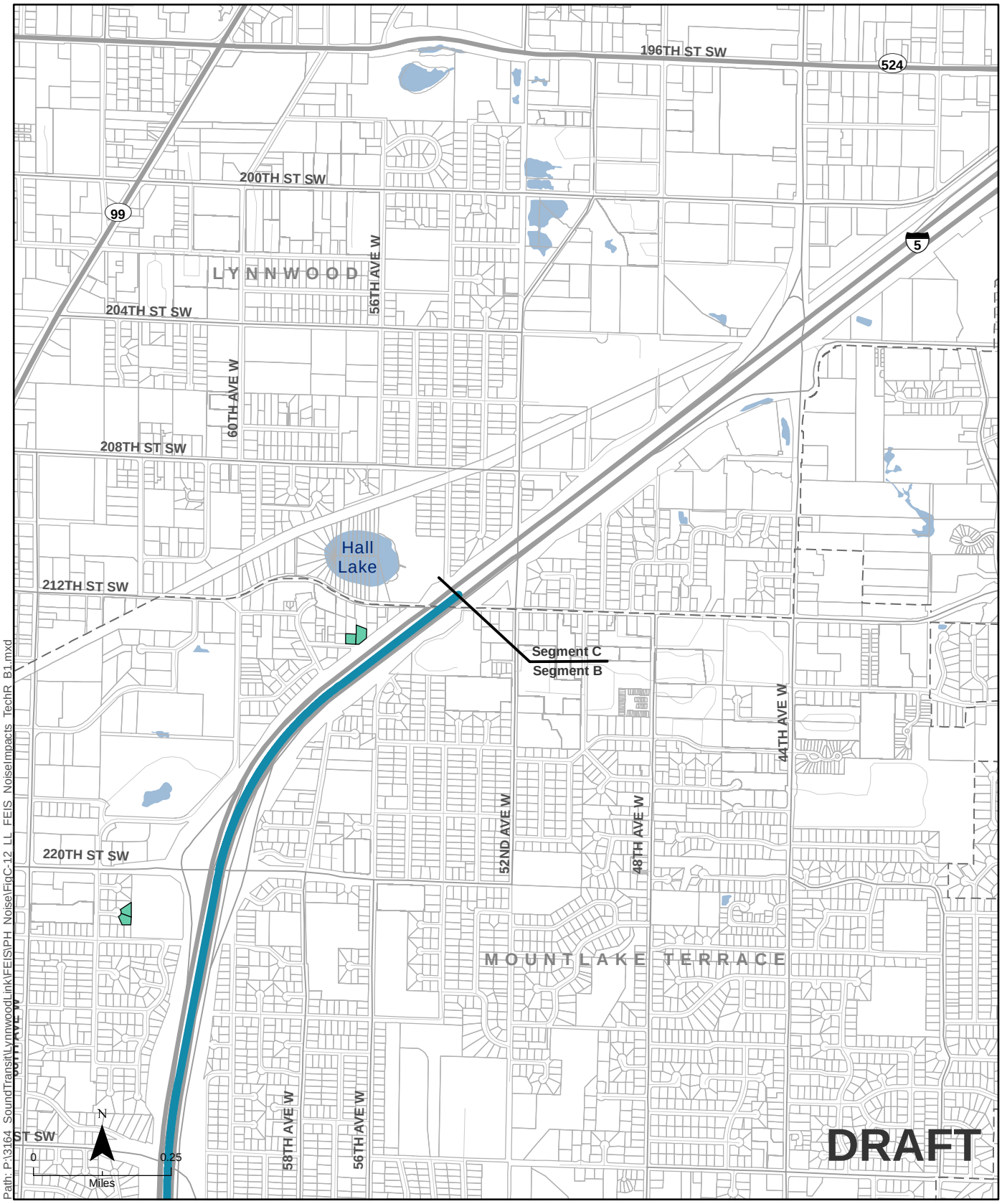


Figure C-12a
Potential Noise Impacts
Alternative B1

Lynnwood Link Extension

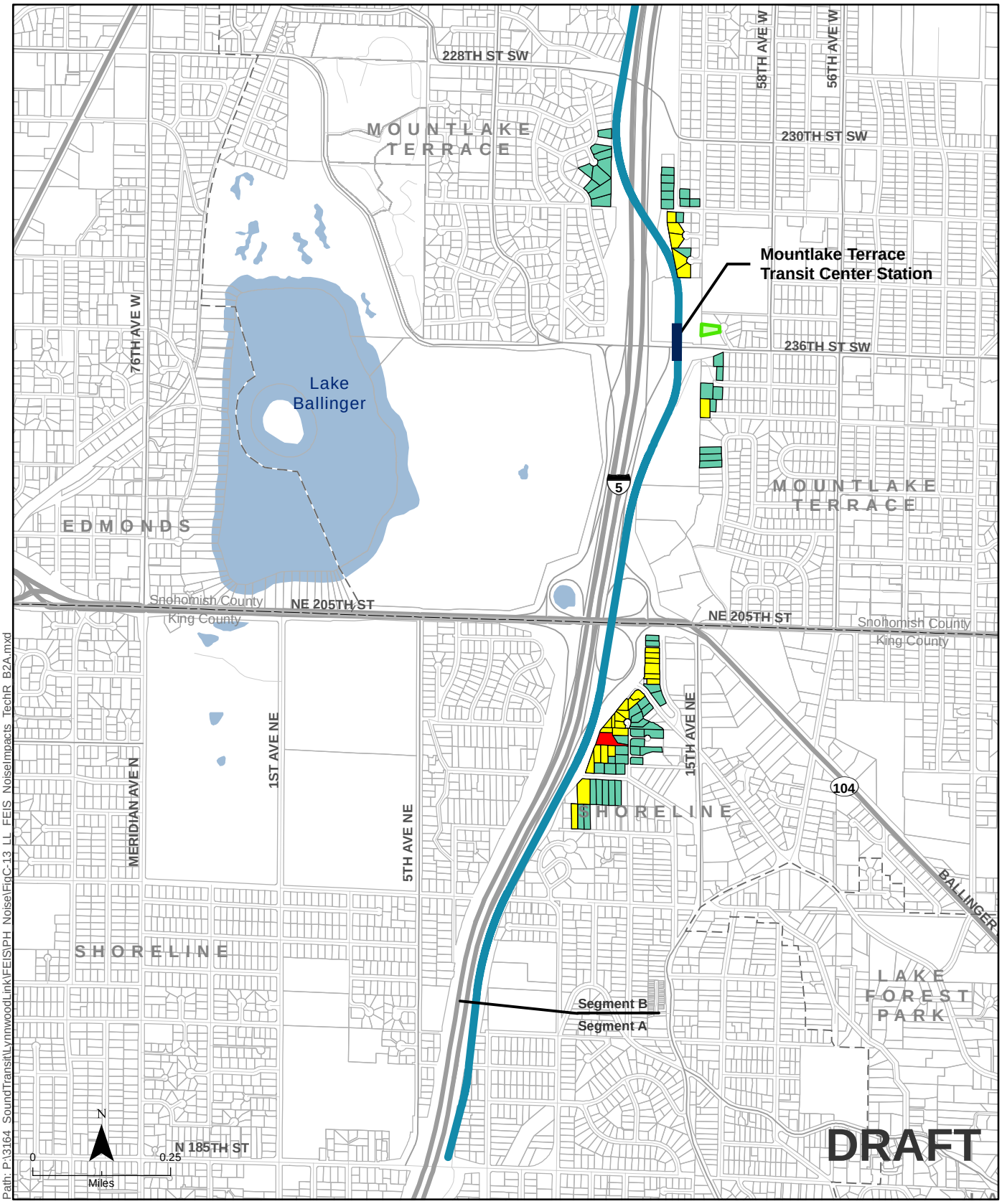


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative B1
- Station Location
- Parcel Boundary

Figure C-12b
Potential Noise Impacts
Alternative B1

Lynnwood Link Extension



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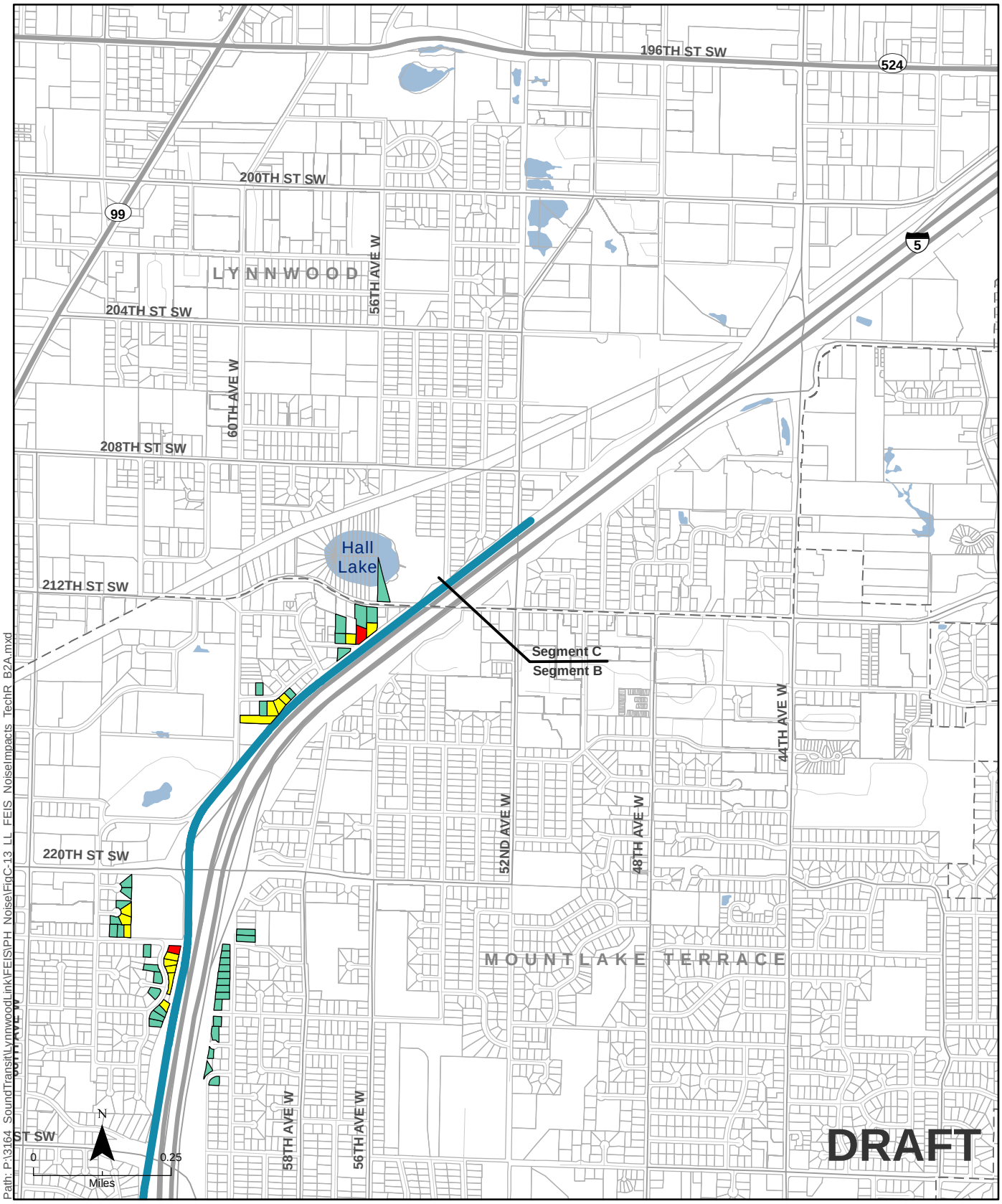
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative B2A
- Station Location
- Parcel Boundary

Figure C-13a
Potential Noise Impacts
Alternative B2A

Lynnwood Link Extension

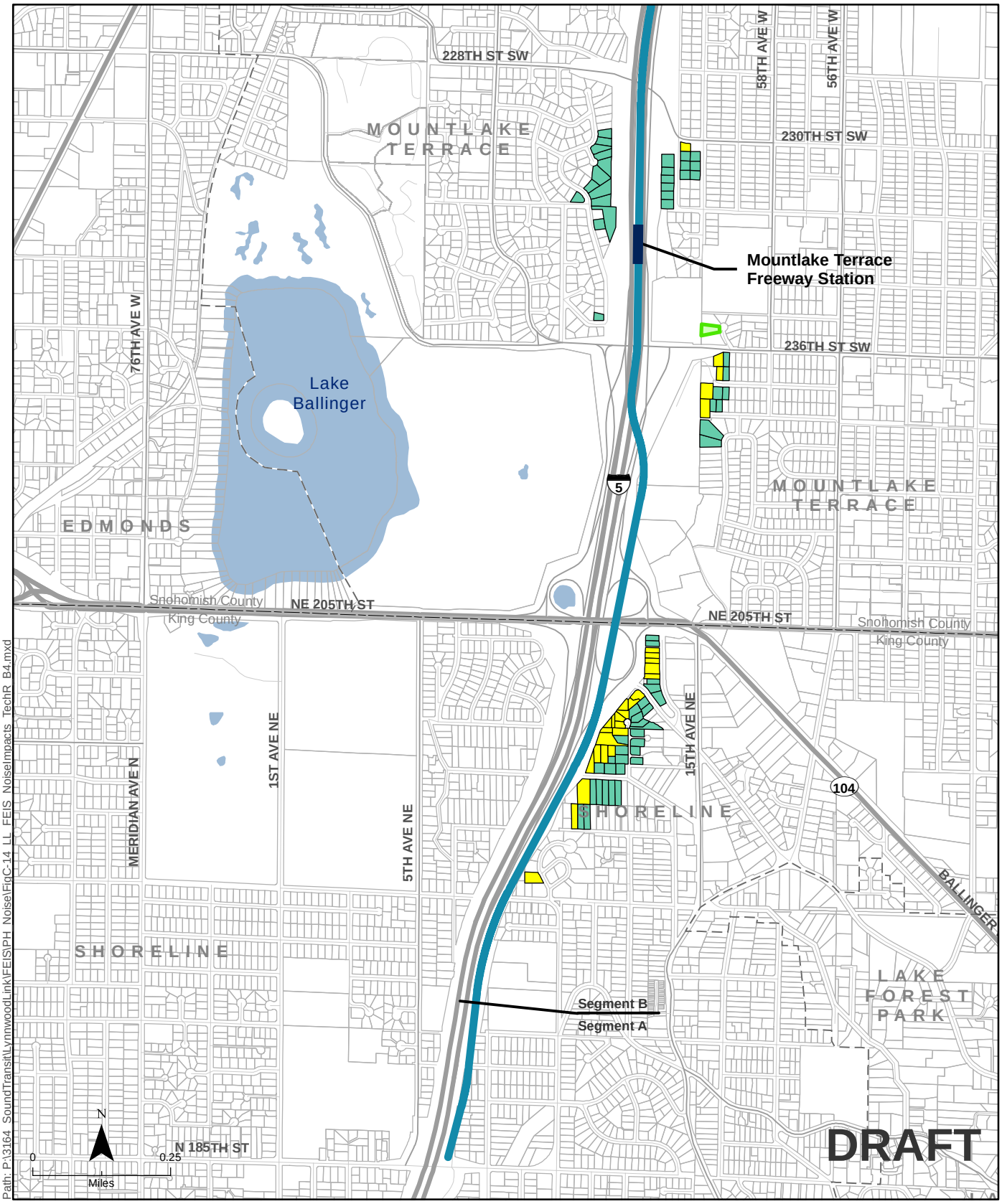


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative B2A
- Station Location
- Parcel Boundary

Figure C-13b
Potential Noise Impacts
Alternative B2A

Lynnwood Link Extension



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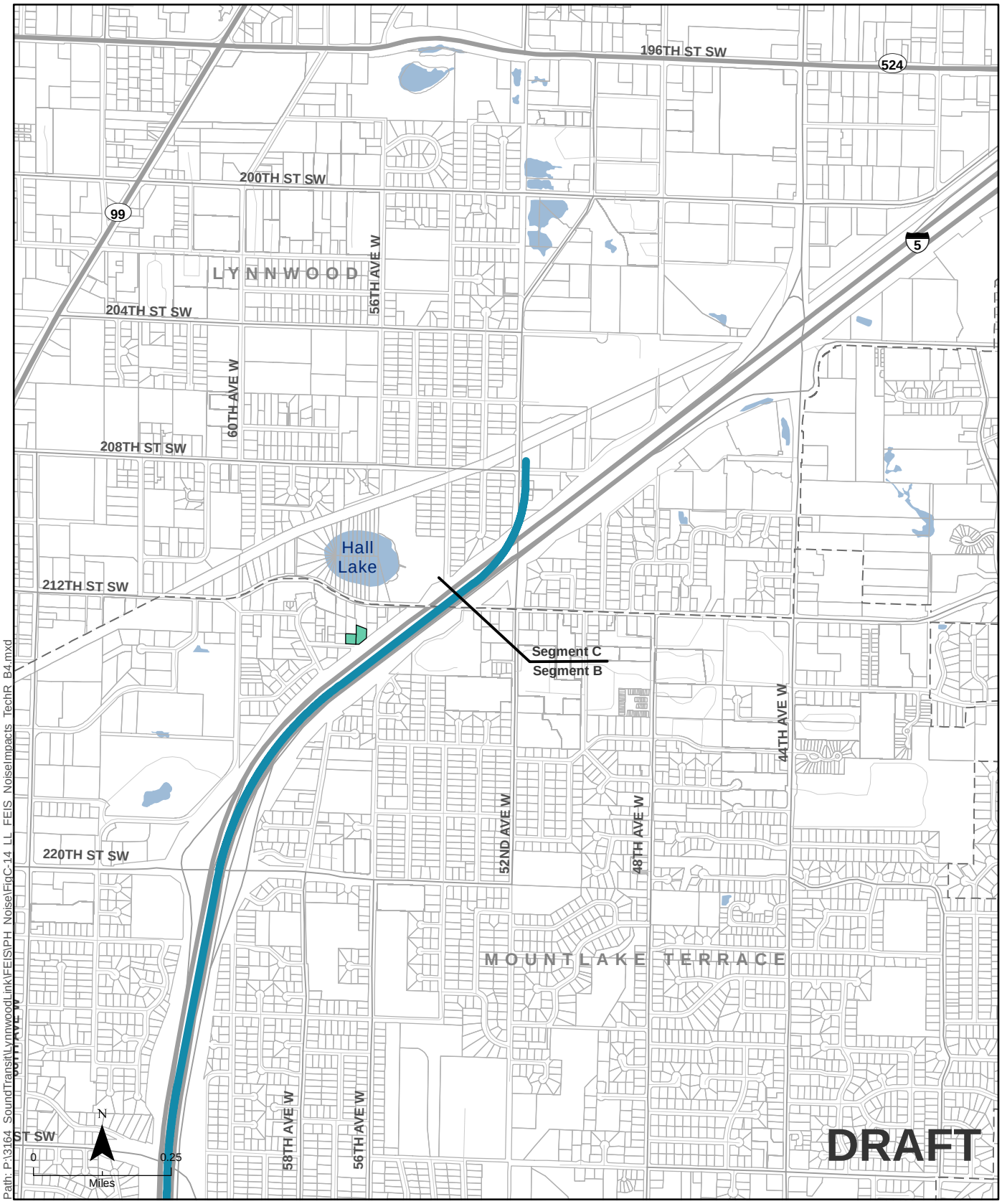
Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative B4
- Station Location
- Parcel Boundary

Figure C-14a
Potential Noise Impacts
Alternative B4

Lynnwood Link Extension

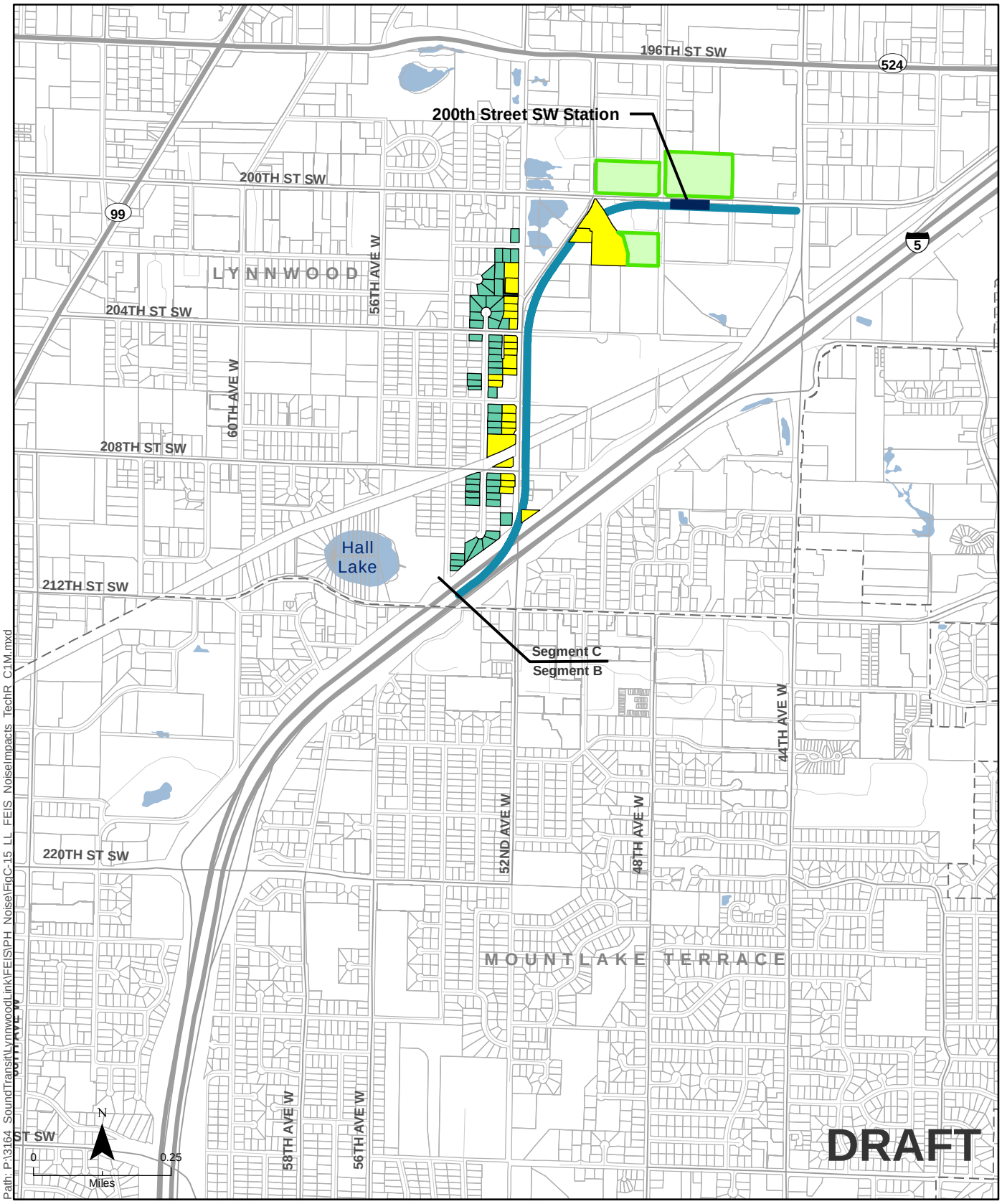


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative B4
- Station Location
- Parcel Boundary

Figure C-14b
Potential Noise Impacts
Alternative B4

Lynnwood Link Extension

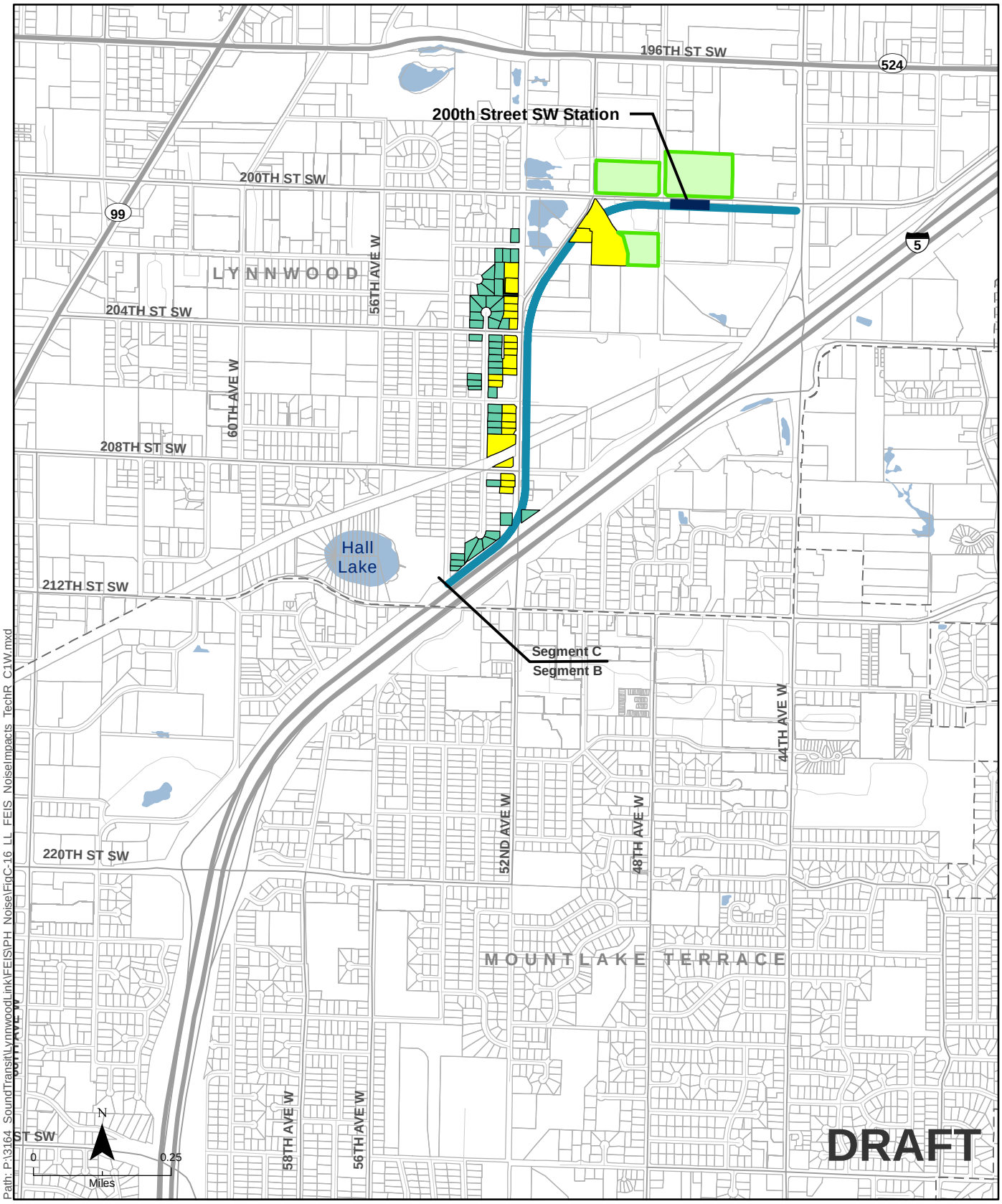


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative C1M
- Station Location
- Parcel Boundary

Figure C-15
Potential Noise Impacts
Alternative C1M

Lynnwood Link Extension

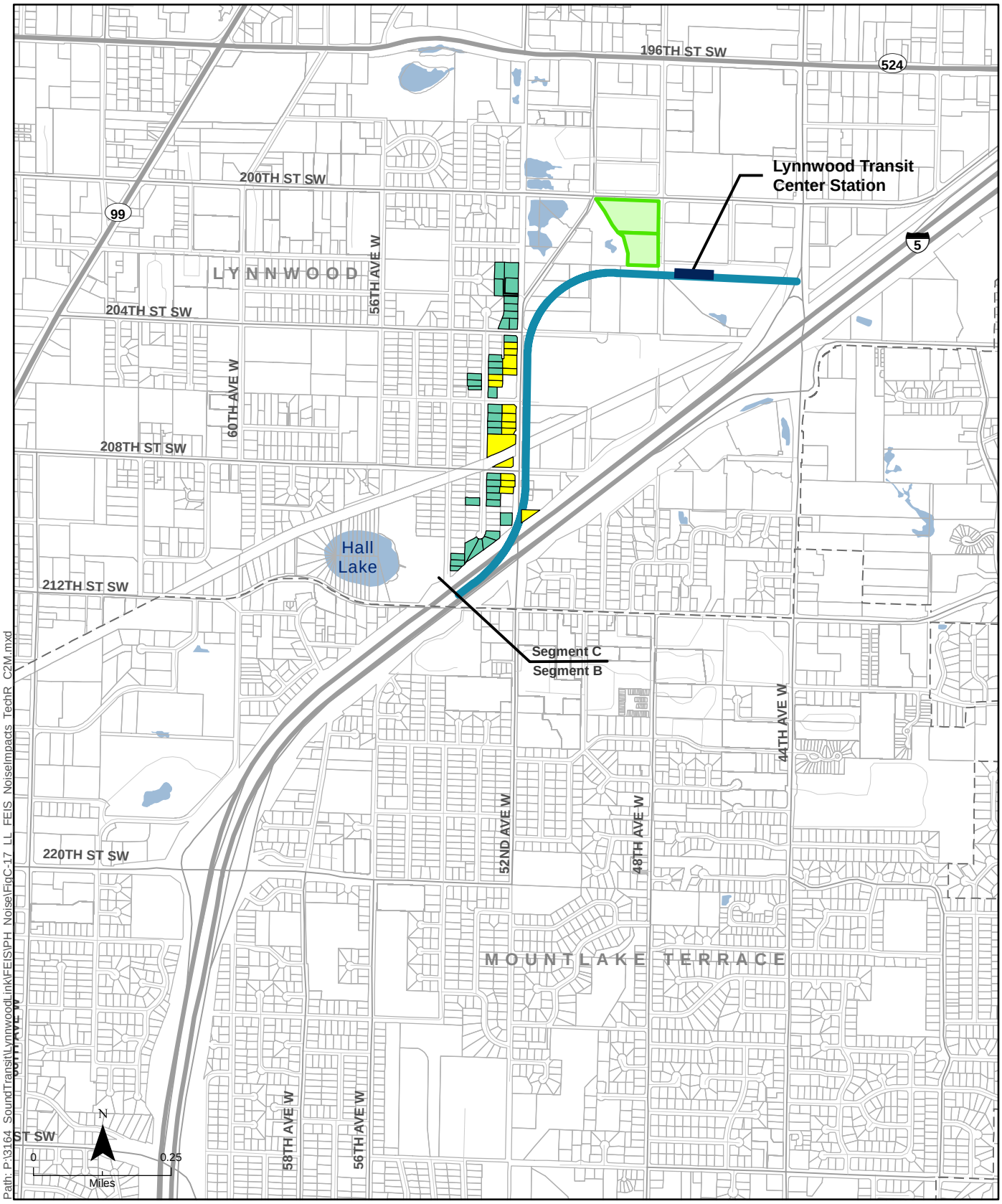


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative C1W
- Station Location
- Parcel Boundary

Figure C-16
Potential Noise Impacts
Alternative C1W

Lynnwood Link Extension



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative C2M
- Station Location
- Parcel Boundary

Figure C-17
Potential Noise Impacts
Alternative C2M

Lynnwood Link Extension

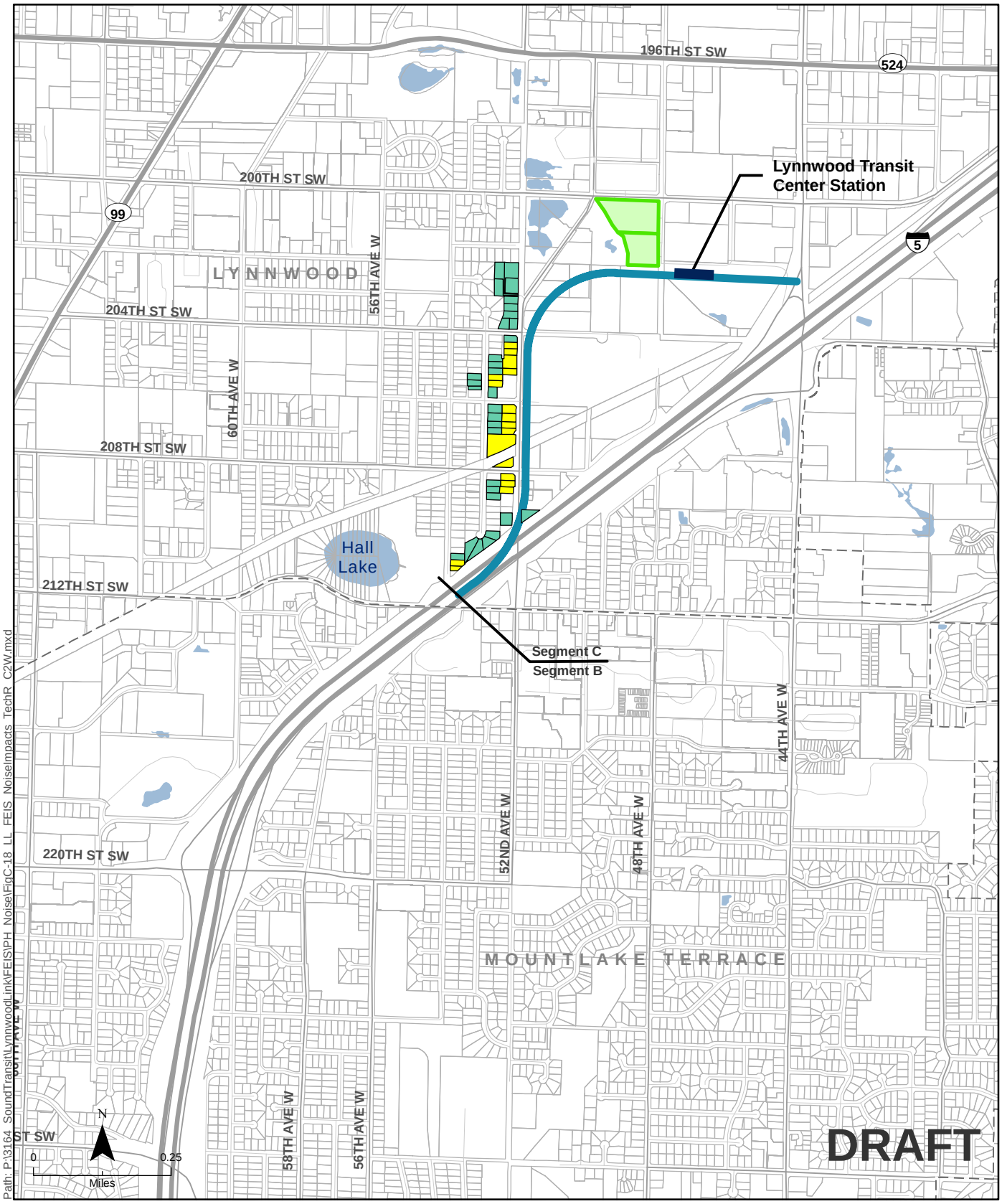
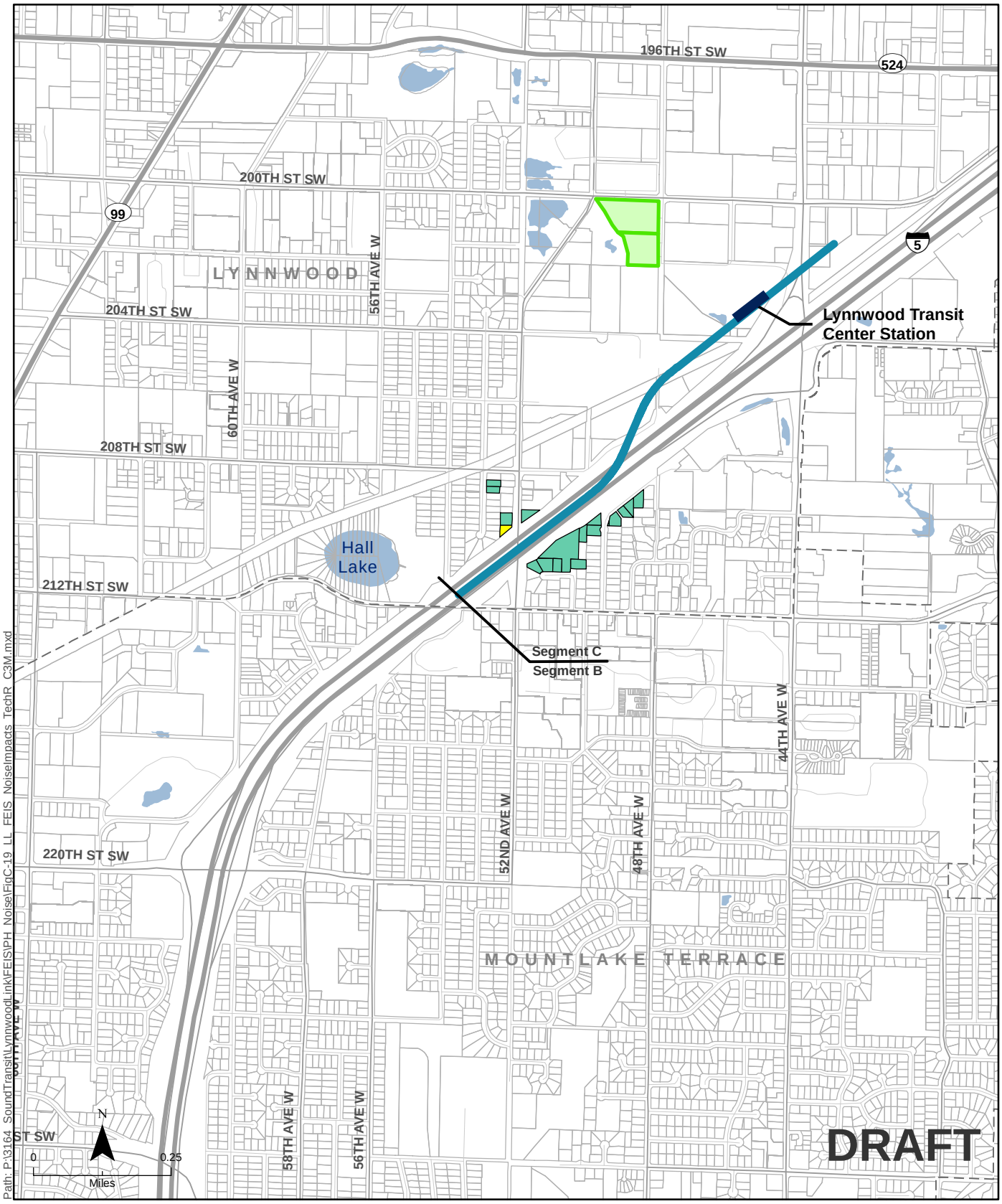


Figure C-18
Potential Noise Impacts
Alternative C2W

Lynnwood Link Extension

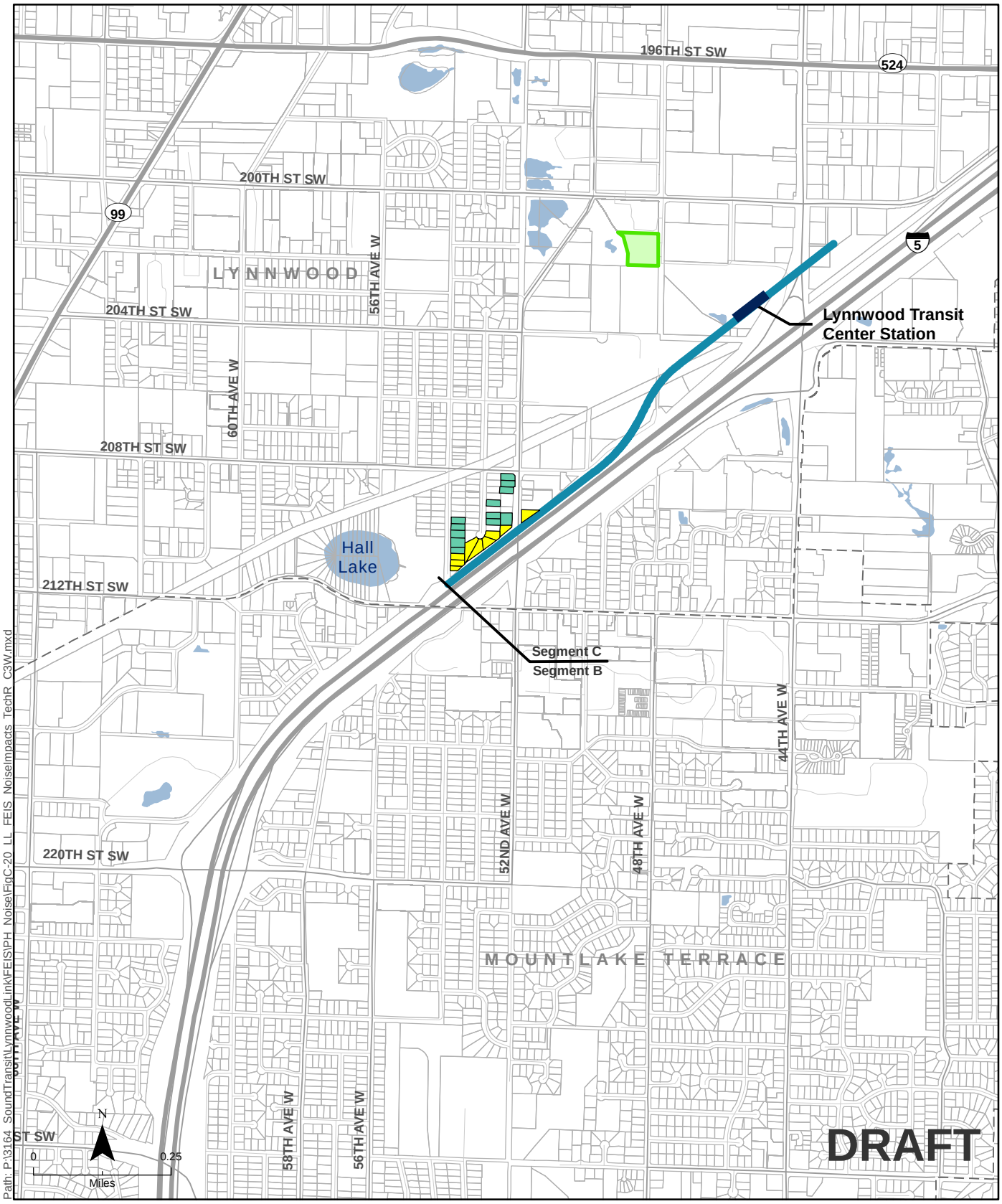


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative C2M
- Station Location
- Parcel Boundary

Figure C-19
Potential Noise Impacts
Alternative C3M

Lynnwood Link Extension



Path: P:\3164 SoundTransit\LynnwoodLink\FEIS\PH Noise\FigC-20 LL FEIS NoiseImpacts TechR C3W.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Moderate Noise Impact Requiring Mitigation
- Park and Ride Moderate Noise Impact Requiring Mitigation
- Severe Noise Impact Requiring Mitigation
- Moderate Residual Noise Impact Requiring Additional Mitigation (Sound Insulation)
- Alternative C2M
- Station Location
- Parcel Boundary

Figure C-20
Potential Noise Impacts
Alternative C3W

Lynnwood Link Extension

ATTACHMENT D

Vibration Impacts by Build Alternative

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
27+00	104 NE NORTHGATE WAY, Seattle	MF	72	81	103	70	70	70	70	70	54	53	55	55	55	55	55
33+00	11355 3RD AVE NE, Seattle	MF	72	97	156	97	97	97	97	97	53	52	51	53	51	53	51
33+90	11300 1ST AVE NE, Seattle	MF	72	46	76	36	36	36	36	36	60	51	58	58	58	58	58
34+10	133 NE 115TH ST, Seattle	SF	72	58	123	58	58	58	58	58	66	59	62	66	62	66	62
34+40	139 NE 115TH ST, Seattle	SF	72	89	155	89	112	89	112	89	60	58	57	59	57	59	57
34+60	145 NE 115TH ST, Seattle	SF	72	142	209	142	142	142	142	142	58	57	55	58	55	58	55
36+20	136 NE 115TH ST, Seattle	SF	72	30	103	30	30	30	30	30	**76**	63	68	**76**	68	**76**	68
36+20	142 NE 115TH ST, Seattle	SF	72	67	139	67	67	67	67	67	63	62	59	63	59	63	59
36+40	147 NE 116TH ST, Seattle	MF	72	24	103	24	24	24	24	24	**79**	63	71	**79**	71	**79**	71
36+50	148 NE 115TH ST, Seattle	SF	72	84	159	84	129	84	129	84	63	62	58	62	58	62	58
36+70	304 3RD AVE NE, Seattle	SF	72	297	372	297	297	297	297	297	59	57	57	59	57	59	57
37+10	11519 3RD AVE NE, Seattle	SF	72	113	143	113	113	113	113	113	63	62	58	63	58	63	58
37+20	11508 3RD AVE NE, Seattle	SF	72	265	340	265	265	265	265	265	60	58	57	60	57	60	57
37+70	11514 3RD AVE NE, Seattle	SF	72	235	309	235	235	235	235	235	61	59	58	61	58	61	58
37+90	11523 3RD AVE NE, Seattle	SF	72	96	169	96	96	96	96	96	63	62	58	63	58	63	58
38+20	11522 3RD AVE NE, Seattle	SF	72	209	280	209	209	209	209	209	61	59	58	61	58	61	58
38+70	11526 3RD AVE NE, Seattle	SF	72	187	253	187	187	187	187	187	62	60	58	62	58	62	58
39+20	11600 3RD AVE NE, Seattle	SF	72	164	223	164	164	164	164	164	62	61	58	62	58	62	58
39+80	156 NE 116TH ST, Seattle	SF	72	46	111	46	46	46	46	46	69	63	64	69	64	69	64
39+80	11606 3RD AVE NE, Seattle	SF	72	141	194	141	141	141	141	141	62	61	58	62	58	62	58
40+30	11610 3RD AVE NE, Seattle	SF	72	120	165	120	120	120	120	120	62	62	58	62	58	62	58
41+40	11622 3RD AVE NE, Seattle	SF	72	100	134	100	100	100	100	100	63	62	58	63	58	63	58
42+50	308 NE 117TH ST, Seattle	SF	72	DISP	65	43	43	43	43	43	---	63	65	71	65	71	65
43+10	11708 3RD AVE NE, Seattle	SF	72	DISP	50	37	37	37	37	37	---	68	66	**73**	66	**73**	66
43+30	11710 3RD AVE NE, Seattle	SF	72	20	DISP	21	DISP	21	DISP	21	**81**	---	**73**	---	**73**	---	**73**

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
43+30	11710 3RD AVE NE, Seattle	CH	75	50	DISP	52	DISP	52	DISP	52	64	---	59	---	59	---	59
43+60	316 NE 117TH ST, Seattle	SF	72	115	123	116	116	116	116	116	56	56	55	56	55	56	55
43+80	322 NE 117TH ST, Seattle	SF	72	171	176	172	172	172	172	172	56	55	54	56	54	56	54
44+10	326 NE 117TH ST, Seattle	SF	72	225	230	227	226	227	226	227	55	55	54	55	54	55	54
45+00	11721 5TH AVE NE, Seattle	SF	72	251	253	253	253	253	253	253	55	55	53	55	53	55	53
45+80	323 NE 120TH ST, Seattle	SF	72	DISP	DISP	25	DISP	25	DISP	25	---	---	69	---	69	---	69
46+10	11723 5TH AVE NE, Seattle	SF	72	193	194	194	194	194	194	194	55	55	54	55	54	55	54
46+60	11725 5TH AVE NE, Seattle	SF	72	163	165	165	165	165	165	165	56	56	54	56	54	56	54
47+10	325 NE 120TH ST, Seattle	SF	72	DISP	DISP	81	DISP	81	DISP	81	---	---	57	---	57	---	57
47+60	11737 C 5TH AVE NE, Seattle	SF	72	105	143	106	142	106	142	106	58	56	55	56	55	56	55
47+90	11737 B 5TH AVE NE, Seattle	SF	72	158	160	160	160	160	160	160	56	56	54	56	54	56	54
48+50	327 NE 120TH ST, Seattle	SF	72	DISP	34	34	34	34	34	34	---	**74**	68	**74**	68	**74**	68
48+60	331 NE 120TH ST, Seattle	SF	72	53	57	57	57	57	57	57	68	67	63	67	63	67	63
48+90	337 NE 120TH ST, Seattle	SF	72	89	112	95	111	95	111	95	60	56	55	57	55	57	55
50+20	332 NE 120TH ST, Seattle	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
50+50	12029 5TH AVE NE, Seattle	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
50+60	338 NE 120TH ST, Seattle	SF	72	37	48	48	48	48	48	48	**73**	70	65	70	65	70	65
51+10	344 NE 120TH ST, Seattle	SF	72	98	104	104	104	104	104	104	59	58	55	58	55	58	55
51+40	12015 5TH AVE NE, Seattle	SF	72	109	124	124	124	124	124	124	57	56	55	56	55	56	55
51+90	12021 5TH AVE NE, Seattle	SF	72	165	165	165	165	165	165	165	56	56	54	56	54	56	54
52+40	12027 5TH AVE NE, Seattle	SF	72	32	47	47	47	47	47	47	**74**	70	65	70	65	70	65
52+40	12025 5TH AVE NE, Seattle	SF	72	109	109	109	109	109	109	109	57	57	55	57	55	57	55
52+40	12035 5TH AVE NE, Seattle	SF	72	43	63	63	63	63	63	63	71	66	62	66	62	66	62
53+50	12030 5TH AVE NE, Seattle	SF	72	220	239	239	239	239	239	239	55	55	54	55	54	55	54
53+50	12045 5TH AVE NE, Seattle	SF	72	24	45	45	45	45	45	45	**77**	70	66	70	66	70	66

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
54+20	12036 5TH AVE NE, Seattle	SF	72	196	217	217	217	217	217	217	55	55	54	55	54	55	54
54+30	12049 5TH AVE NE, Seattle	SF	72	32	55	55	55	55	55	55	74	68	63	68	63	68	63
54+70	12042 5TH AVE NE, Seattle	SF	72	180	201	201	201	201	201	201	55	55	54	55	54	55	54
55+00	12055 5TH AVE NE, Seattle	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
55+20	12048 5TH AVE NE, Seattle	SF	72	164	187	187	187	187	187	187	58	58	54	58	54	58	54
55+80	12054 5TH AVE NE, Seattle	SF	72	150	173	173	173	173	173	173	58	58	54	58	54	58	54
56+10	12301 5TH AVE NE, Seattle	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
56+80	12311 5TH AVE NE, Seattle	MF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
56+90	12302 5TH AVE NE, Seattle	SF	72	126	150	150	150	150	150	150	59	58	55	58	55	58	55
57+50	12308 5TH AVE NE, Seattle	SF	72	115	140	140	140	140	140	140	59	58	55	58	55	58	55
57+50	12321 5TH AVE NE, Seattle	MF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
58+30	12316 5TH AVE NE, Seattle	SF	72	103	128	128	128	128	128	128	59	59	55	59	55	59	55
58+40	12327 5TH AVE NE, Seattle	MF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
58+60	12320 5TH AVE NE, Seattle	SF	72	99	123	123	123	123	123	123	59	59	56	59	56	59	56
59+50	503 NE 124TH ST, Seattle	SF	72	89	113	113	113	113	113	113	60	59	56	59	56	59	56
60+00	12401 5TH AVE NE, Seattle	MF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
60+60	12417 5TH AVE NE, Seattle	MF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
60+90	500 NE 124TH ST, Seattle	SF	72	85	110	110	110	110	110	110	60	59	56	59	56	59	56
62+10	505 NE 125TH ST, Seattle	SF	72	99	125	125	125	125	125	125	59	59	56	59	56	59	56
63+90	502 NE 125TH ST, Seattle	SF	72	81	108	108	108	108	108	108	61	59	56	59	56	59	56
64+00	514 NE 125TH ST, Seattle	SF	72	195	223	223	223	223	223	223	58	57	53	57	53	57	53
64+00	510 NE 125TH ST, Seattle	SF	72	135	163	163	163	163	163	163	59	58	54	58	54	58	54
64+30	12512 5TH AVE NE, Seattle	SF	72	195	223	223	223	223	223	223	58	57	53	57	53	57	53
64+40	12518 5TH AVE NE, Seattle	SF	72	83	111	111	111	111	111	111	60	59	56	59	56	59	56
64+50	12520 5TH AVE NE, Seattle	SF	72	90	118	118	118	118	118	118	60	59	56	59	56	59	56
65+10	12526 5TH AVE NE, Seattle	SF	72	161	187	187	187	187	187	187	58	58	54	58	54	58	54

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
65+10	12528 5TH AVE NE, Seattle	SF	72	89	115	115	115	115	115	115	60	59	56	59	56	59	56
65+90	12532 5TH AVE NE, Seattle	SF	72	267	294	294	294	294	294	294	57	57	53	57	53	57	53
66+10	12534 5TH AVE NE, Seattle	SF	72	107	129	129	129	129	129	129	59	59	55	59	55	59	55
66+40	12546 B 5TH AVE NE, Seattle	SF	72	206	226	226	226	226	226	226	57	57	53	57	53	57	53
67+00	12542 5TH AVE NE, Seattle	SF	72	121	140	140	140	140	140	140	59	58	55	58	55	58	55
67+50	503 NE 127TH ST, Seattle	SF	72	87	100	100	100	100	100	100	60	59	56	59	56	59	56
67+50	509 NE 127TH ST, Seattle	SF	72	140	155	155	155	155	155	155	58	58	54	58	54	58	54
67+50	515 NE 127TH ST, Seattle	SF	72	200	215	215	215	215	215	215	58	57	53	57	53	57	53
69+20	522 NE 127TH ST, Seattle	SF	72	274	280	280	280	280	280	280	57	57	53	57	53	57	53
69+30	502 NE 127TH ST, Seattle	SF	72	113	120	120	120	120	120	120	59	59	56	59	56	59	56
69+30	514 NE 127TH ST, Seattle	SF	72	214	220	220	220	220	220	220	57	57	53	57	53	57	53
69+90	12708 5TH AVE NE, Seattle	SF	72	127	128	128	128	128	128	128	59	59	55	59	55	59	55
70+50	12718 5TH AVE NE, Seattle	SF	72	132	132	132	132	132	132	132	59	59	55	59	55	59	55
71+70	12745 ROOSEVELT WAY NE, Seattle	SF	72	247	244	244	237	235	237	235	57	57	53	57	53	57	53
71+80	12726 5TH AVE NE, Seattle	SF	72	134	130	130	128	124	128	124	59	59	55	59	56	59	56
73+00	12732 5TH AVE NE, Seattle	SF	72	135	130	130	118	118	118	118	59	59	55	54	52	54	52
73+00	12759 ROOSEVELT WAY NE, Seattle	SF	72	132	128	128	116	116	116	116	59	59	55	54	52	54	52
73+00	12749 ROOSEVELT WAY NE, Seattle	SF	72	248	243	243	232	231	232	231	57	57	53	51	50	51	50
74+20	12740 5TH AVE NE, Seattle	SF	72	128	124	124	106	106	106	106	59	59	56	54	54	54	54
77+20	502 NE 130TH ST, Seattle	SF	72	118	117	117	91	91	91	91	59	59	56	56	56	56	56
77+20	510 NE 130TH ST, Seattle	SF	72	161	157	157	133	133	133	133	58	58	54	53	51	53	51
77+20	516 NE 130TH ST, Seattle	SF	72	221	217	217	193	193	193	193	57	57	53	51	51	51	51
78+40	511 NE 131ST PL, Seattle	SF	72	170	165	165	142	142	142	142	58	58	54	52	51	52	51
78+40	519 NE 131ST PL, Seattle	SF	72	245	240	240	217	217	217	217	57	57	53	51	50	51	50

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
78+40	505 NE 131ST PL, Seattle	SF	72	105	100	100	77	77	77	77	59	59	56	59	59	59	59
79+40	520 NE 131ST PL, Seattle	SF	72	244	240	240	216	216	216	216	57	57	53	51	50	51	50
79+40	510 NE 131ST PL, Seattle	SF	72	169	165	165	141	141	141	141	58	58	54	52	51	52	51
82+30	13130 5TH AVE NE, Seattle	SF	72	231	226	226	204	204	204	204	54	54	50	48	47	48	47
115+10	522 NE 145TH ST, Shoreline	SF	72	310	314	336	346	346	314	336	53	50	50	53	53	50	50
115+20	516 NE 145TH ST, Shoreline	SF	72	250	254	276	287	286	254	276	53	50	50	53	53	50	50
116+10	14515 6TH AVE NE, Shoreline	SF	72	278	281	307	314	313	281	307	53	50	50	53	53	50	50
116+40	14512 5TH AVE NE, Shoreline	SF	72	162	164	191	196	196	164	191	54	51	51	54	54	51	51
116+50	14521 6TH AVE NE, Shoreline	SF	72	297	299	326	331	331	299	326	53	50	50	53	53	50	50
116+90	14518 5TH AVE NE, Shoreline	SF	72	183	183	210	215	214	183	210	54	51	50	53	53	51	50
117+00	14525 6TH AVE NE, Shoreline	SF	72	319	319	345	350	350	319	345	53	50	50	53	53	50	50
117+40	14526 5TH AVE NE, Shoreline	SF	72	205	205	228	234	234	205	228	53	50	50	53	53	50	50
117+80	14535 6TH AVE NE, Shoreline	SF	72	353	352	373	381	380	352	373	53	50	50	52	52	50	50
118+00	14532 5TH AVE NE, Shoreline	SF	72	228	227	247	255	255	227	247	50	50	50	53	53	50	50
118+60	14541 6TH AVE NE, Shoreline	SF	72	386	385	401	413	413	385	401	49	49	49	52	52	49	49
118+60	14540 5TH AVE NE, Shoreline	SF	72	250	249	266	277	277	249	266	50	50	50	53	53	50	50
119+10	14544 5TH AVE NE, Shoreline	SF	72	273	272	285	300	300	272	285	50	50	50	53	53	50	50
119+20	14549 6TH AVE NE, Shoreline	SF	72	408	408	420	435	435	408	420	49	49	49	52	52	49	49
119+70	14552 5TH AVE NE, Shoreline	SF	72	295	294	304	322	322	294	304	50	50	50	53	53	50	50
119+70	14555 6TH AVE NE, Shoreline	SF	72	431	430	439	458	458	430	439	49	49	49	52	52	49	49

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
120+20	14556 5TH AVE NE, Shoreline	SF	72	317	317	322	344	344	317	322	50	50	50	53	53	50	50
120+30	14565 6TH AVE NE, Shoreline	SF	72	453	453	458	480	480	453	458	49	49	49	52	52	49	49
120+80	14567 6TH AVE NE, Shoreline	SF	72	476	475	477	503	503	475	477	49	49	49	52	52	49	49
120+80	14560 5TH AVE NE, Shoreline	SF	72	340	339	341	367	367	339	341	50	50	50	53	53	50	50
121+10	14579 6TH AVE NE, Shoreline	SF	72	555	554	553	582	582	554	553	49	49	49	52	52	49	49
121+30	14570 5TH AVE NE, Shoreline	SF	72	362	362	360	389	389	362	360	50	50	50	52	52	50	50
121+80	515 NE 148TH ST, Shoreline	SF	72	488	488	483	515	515	488	483	49	49	49	52	52	49	49
121+90	14574 5TH AVE NE, Shoreline	SF	72	385	384	379	412	412	384	379	49	49	49	52	52	49	49
122+30	345 NE 148TH ST, Shoreline	SF	72	125	DISP	118	152	152	DISP	118	63	---	59	61	61	---	59
122+30	14578 5TH AVE NE, Shoreline	SF	72	402	401	395	429	429	401	395	50	47	48	50	50	47	48
122+50	339 NE 148TH ST, Shoreline	SF	72	113	DISP	104	140	140	DISP	104	64	---	60	62	62	---	60
122+60	14727 5TH AVE NE, Shoreline	SF	72	202	DISP	195	229	229	DISP	195	57	---	54	56	56	---	54
122+80	333 NE 148TH ST, Shoreline	SF	72	DISP	DISP	DISP	77	78	DISP	DISP	---	---	---	67	67	---	---
122+80	327 NE 148TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
123+50	14802 5TH AVE NE, Shoreline	SF	72	452	452	446	479	479	452	446	50	47	47	50	50	47	47
123+70	358 NE 148TH ST, Shoreline	SF	72	286	286	280	312	312	286	280	54	51	51	53	53	51	51
123+90	14808 5TH AVE NE, Shoreline	SF	72	473	473	467	498	498	473	467	50	47	47	50	50	47	47
123+90	348 NE 148TH ST, Shoreline	SF	72	228	228	223	254	254	228	223	56	53	53	55	55	53	53
124+20	14807 5TH AVE NE, Shoreline	SF	72	312	313	309	337	337	313	309	53	50	50	57	57	50	50

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
124+20	342 NE 148TH ST, Shoreline	SF	72	171	171	167	197	197	171	167	59	55	56	62	62	55	56
124+30	14812 5TH AVE NE, Shoreline	SF	72	493	493	490	517	517	493	490	50	47	47	54	54	47	47
124+40	336 NE 148TH ST, Shoreline	SF	72	114	115	112	139	139	115	112	64	60	60	65	65	60	60
124+70	357 NE 149TH ST, Shoreline	SF	72	370	371	369	393	393	371	369	51	48	52	55	55	48	52
124+70	330 NE 148TH ST, Shoreline	SF	72	74	75	73	96	96	75	73	67	63	64	67	67	63	64
124+80	14818 5TH AVE NE, Shoreline	SF	72	518	519	517	540	540	519	517	50	47	51	54	54	47	51
124+90	351 NE 149TH ST, Shoreline	SF	72	317	318	316	338	338	318	316	53	50	53	57	57	50	53
125+00	324 NE 148TH ST, Shoreline	SF	72	DISP	25	24	44	44	25	24	---	71	**72**	**72**	**72**	71	**72**
125+10	316 NE 148TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
125+20	345 NE 149TH ST, Shoreline	SF	72	263	265	264	284	284	265	264	55	52	55	59	59	52	55
125+40	339 NE 149TH ST, Shoreline	SF	72	209	212	211	229	229	212	211	57	53	56	61	61	53	56
125+40	14902 5TH AVE NE, Shoreline	SF	72	543	545	544	562	562	545	544	50	47	51	54	54	47	51
125+70	333 NE 149TH ST, Shoreline	SF	72	156	159	159	174	174	159	159	60	56	58	63	63	56	58
125+90	14910 5TH AVE NE, Shoreline	SF	72	568	571	571	585	585	571	571	50	47	51	54	54	47	51
126+00	327 NE 149TH ST, Shoreline	SF	72	102	106	106	119	119	106	106	65	61	61	66	66	61	61
126+30	321 NE 149TH ST, Shoreline	SF	72	81	87	87	94	94	87	87	67	62	62	67	67	62	62
126+50	309 NE 149TH ST, Shoreline	SF	72	DISP	27	27	32	32	27	27	---	71	71	**75**	**75**	71	71
126+50	14916 5TH AVE NE, Shoreline	SF	72	593	598	599	607	607	598	599	50	51	51	54	54	51	51
127+00	14922 5TH AVE NE, Shoreline	SF	72	619	624	625	629	629	624	625	50	50	51	54	54	50	51

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
127+10	305 NE 149TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
127+60	14928 5TH AVE NE, Shoreline	SF	72	644	648	649	652	652	648	649	50	50	50	54	54	50	50
128+00	320 NE 149TH ST, Shoreline	SF	72	130	134	134	137	137	134	134	62	62	62	65	65	62	62
128+20	14934 5TH AVE NE, Shoreline	SF	72	669	672	672	674	674	672	672	50	50	50	54	54	50	50
128+40	314 NE 149TH ST, Shoreline	SF	72	81	83	83	101	104	83	83	67	66	66	67	67	66	66
128+90	15100 5TH AVE NE, Shoreline	SF	72	693	694	694	697	697	694	694	50	50	50	54	54	50	50
129+60	313 NE 151ST ST, Shoreline	SF	72	130	131	131	133	133	131	131	62	62	62	65	65	62	62
129+90	307 NE 151ST ST, Shoreline	SF	72	98	104	103	105	106	104	103	65	64	65	66	66	64	65
130+00	308 NE 149TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
130+20	301 NE 151ST ST, Shoreline	SF	72	29	DISP	DISP	DISP	DISP	DISP	DISP	**79**	---	---	---	---	---	---
130+40	15101 3RD AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
131+80	306 NE 151ST ST, Shoreline	SF	72	110	112	112	114	114	112	112	66	64	64	66	66	64	64
132+20	15109 3RD AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
132+50	15112 3RD AVE NE, Shoreline	SF	72	116	118	118	120	120	118	118	66	66	63	66	66	66	63
132+90	311 NE 152ND ST, Shoreline	SF	72	197	199	199	200	200	199	199	62	62	57	62	62	62	57
133+10	15117 3RD AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
133+20	305 NE 152ND ST, Shoreline	SF	72	145	148	148	149	149	148	148	65	64	61	64	64	64	61
133+70	15121 3RD AVE NE, Shoreline	SF	72	47	50	50	51	51	50	50	71	71	70	70	70	71	70
134+70	310 NE 152ND ST, Shoreline	SF	72	277	280	280	281	281	280	280	59	59	54	54	59	59	54

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
135+00	225 NE 152ND ST, Shoreline	CH	75	100	107	100	104	109	107	100	20	20	33	20	20	20	33
135+00	304 NE 152ND ST, Shoreline	SF	72	219	221	221	222	222	221	221	61	61	61	56	61	61	61
135+90	411 NE 153RD ST, Shoreline	SF	72	347	350	350	349	349	350	350	56	56	56	52	52	56	56
137+00	405 NE 153RD ST, Shoreline	SF	72	264	267	267	259	259	267	267	60	59	59	55	55	59	59
137+00	407 NE 153RD ST, Shoreline	SF	72	264	267	267	259	259	267	267	60	59	59	55	55	59	59
138+00	403 NE 153RD ST, Shoreline	SF	72	304	308	308	292	292	308	308	56	56	56	50	50	56	56
138+40	15240 3RD AVE NE, Shoreline	SF	72	210	214	214	195	195	214	214	57	57	57	51	51	57	57
139+00	401 NE 153RD ST, Shoreline	SF	72	345	349	349	326	326	349	349	56	56	56	50	50	56	56
139+40	15451 4TH AVE NE, Shoreline	SF	72	363	367	367	343	343	367	367	56	56	56	50	50	56	56
140+00	15404 2ND AVE NE, Shoreline	SF	72	237	241	241	217	217	241	241	57	57	57	50	50	57	57
140+50	15401 2ND AVE NE, Shoreline	SF	72	133	138	138	113	113	138	138	59	59	59	53	53	59	59
140+50	15407 2ND AVE NE, Shoreline	SF	72	121	126	126	101	101	126	126	59	59	59	55	55	59	59
140+70	15408 2ND AVE NE, Shoreline	SF	72	298	302	302	278	278	302	302	57	56	56	50	50	56	56
141+00	145 NE 155TH ST, Shoreline	MF	72	73	78	78	53	53	78	78	58	58	58	60	60	58	58
141+60	15419 2ND AVE NE, Shoreline	SF	72	164	169	169	144	144	169	169	58	58	58	51	51	58	58
142+20	15425 2ND AVE NE, Shoreline	SF	72	190	195	195	170	170	195	195	58	54	54	51	51	54	54
142+80	165 NE 155TH ST, Shoreline	SF	72	214	219	219	193	193	219	219	57	53	53	51	51	53	53
143+20	157 NE 156TH ST, Shoreline	SF	72	408	413	413	388	388	413	413	56	52	52	49	49	52	52
143+50	151 NE 156TH ST, Shoreline	SF	72	351	357	357	331	331	357	357	56	53	53	50	50	53	53

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
143+70	143 NE 156TH ST, Shoreline	SF	72	295	300	300	275	275	300	300	57	53	53	50	50	53	53
144+00	137 NE 156TH ST, Shoreline	SF	72	238	244	244	DISP	DISP	244	244	57	53	53	---	---	53	53
144+30	132 NE 155TH ST, Shoreline	SF	72	172	178	178	DISP	DISP	178	178	54	51	51	---	---	51	51
144+60	125 NE 156TH ST, Shoreline	SF	72	99	105	105	DISP	DISP	105	105	52	52	52	---	---	52	52
144+90	156 NE 156TH ST, Shoreline	SF	72	476	482	482	456	456	482	482	52	50	50	47	47	50	50
144+90	110 NE 155TH ST, Shoreline	SF	72	62	69	69	DISP	DISP	69	69	61	54	54	---	---	54	54
145+20	148 NE 156TH ST, Shoreline	SF	72	412	418	418	392	392	418	418	52	50	50	47	47	50	50
145+50	142 NE 156TH ST, Shoreline	SF	72	348	354	354	328	328	354	354	52	50	50	47	47	50	50
145+80	136 NE 156TH ST, Shoreline	SF	72	283	290	290	DISP	DISP	290	290	52	50	50	---	---	50	50
146+10	130 NE 156TH ST, Shoreline	SF	72	219	226	226	DISP	DISP	226	226	53	51	51	---	---	51	51
146+40	15615 3RD AVE NE, Shoreline	SF	72	474	480	480	455	455	480	480	52	50	50	47	47	50	50
146+50	106 NE 155TH ST, Shoreline	SF	72	23	32	32	DISP	DISP	32	32	**72**	61	61	---	---	61	61
146+60	104 NE 156TH ST, Shoreline	SF	72	66	72	72	DISP	DISP	72	72	60	54	54	---	---	54	54
147+10	229 NE 157TH ST, Shoreline	SF	72	305	312	312	289	289	312	312	52	50	50	47	47	50	50
147+10	15621 3RD AVE NE, Shoreline	SF	72	493	500	500	476	476	500	500	52	50	50	47	47	50	50
147+40	223 NE 157TH ST, Shoreline	SF	72	248	255	255	233	233	255	255	53	50	50	48	48	50	50
147+50	241 NE 157TH ST, Shoreline	SF	72	436	443	443	420	420	443	443	52	50	50	47	47	50	50
147+60	125 NE 157TH ST, Shoreline	SF	72	194	201	201	179	179	201	201	53	51	51	48	48	51	51
147+60	235 NE 157TH ST, Shoreline	SF	72	379	386	386	364	364	386	386	52	50	50	47	47	50	50

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
147+70	122 NE 156TH ST, Shoreline	SF	72	177	184	184	DISP	DISP	184	184	54	51	51	---	---	51	51
147+80	15625 3RD AVE NE, Shoreline	SF	72	510	517	517	495	495	517	517	52	50	50	47	47	50	50
148+00	108 NE 156TH ST, Shoreline	SF	72	115	122	122	DISP	DISP	122	122	54	52	52	---	---	52	52
148+20	15618 1ST AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
148+40	117 NE 157TH ST, Shoreline	SF	72	143	150	150	130	130	150	150	54	51	51	49	49	51	51
148+60	111 NE 157TH ST, Shoreline	SF	72	DISP	109	109	90	90	109	109	---	52	52	51	51	52	52
148+80	101 NE 157TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
149+90	126 NE 157TH ST, Shoreline	SF	72	249	256	256	239	239	256	256	53	50	50	51	51	50	50
150+00	116 NE 157TH ST, Shoreline	SF	72	192	199	199	183	183	199	199	53	51	51	51	51	51	51
150+60	108 NE 157TH ST, Shoreline	SF	72	114	124	124	107	107	124	124	59	56	56	59	59	56	56
151+00	15710 1ST AVE NE, Shoreline	SF	72	145	163	163	140	140	163	163	58	54	54	58	58	54	54
151+40	117 NE 158TH ST, Shoreline	SF	72	211	218	218	205	205	218	218	57	57	57	57	57	57	57
151+50	111 NE 158TH ST, Shoreline	SF	72	143	150	150	137	137	150	150	58	58	58	59	59	58	58
151+60	105 NE 158TH ST, Shoreline	SF	72	94	102	102	92	92	102	102	60	59	59	60	60	59	59
155+00	104 NE 158TH ST, Shoreline	SF	72	94	102	102	94	94	102	102	60	59	59	60	60	59	59
155+10	116 NE 158TH ST, Shoreline	SF	72	214	221	221	221	221	221	221	57	57	57	57	57	57	57
155+10	110 NE 158TH ST, Shoreline	SF	72	145	152	152	152	152	152	152	58	58	58	58	58	58	58
156+40	105 NE 159TH ST, Shoreline	SF	72	68	76	76	76	76	76	76	63	62	62	62	62	62	62
156+50	113 NE 159TH ST, Shoreline	SF	72	129	135	135	135	135	135	135	59	59	59	59	59	59	59

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
156+70	117 NE 159TH ST, Shoreline	SF	72	197	204	204	204	204	204	204	58	57	57	57	57	57	57
158+40	104 NE 159TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
158+60	114 NE 159TH ST, Shoreline	SF	72	128	135	135	135	135	135	135	59	59	59	59	59	59	59
158+70	118 NE 159TH ST, Shoreline	SF	72	159	166	166	166	166	166	166	58	58	58	58	58	58	58
159+10	15918 1ST AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
159+80	15924 1ST AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
160+00	115 NE 161ST ST, Shoreline	SF	72	109	114	114	114	114	114	114	59	59	59	59	59	59	59
160+10	123 NE 161ST ST, Shoreline	SF	72	167	173	173	173	173	173	173	58	58	58	58	58	58	58
161+90	114 NE 161ST ST, Shoreline	SF	72	90	97	97	97	97	97	97	60	59	59	59	59	59	59
162+00	122 NE 161ST ST, Shoreline	SF	72	120	125	125	125	125	125	125	59	59	59	59	59	59	59
162+10	128 NE 161ST ST, Shoreline	SF	72	179	184	184	184	184	184	184	58	58	58	58	58	58	58
165+20	121 NE 163RD ST, Shoreline	SF	72	DISP	27	27	27	27	27	27	---	**79**	**79**	**79**	**79**	**79**	**79**
166+30	129 NE 163RD ST, Shoreline	SF	72	93	98	98	98	98	98	98	64	64	64	64	64	64	64
166+40	303 NE 163RD ST, Shoreline	SF	72	143	147	147	147	147	147	147	63	63	63	63	63	63	63
167+50	128 NE 163RD ST, Shoreline	SF	72	71	76	76	76	76	76	76	67	66	66	66	66	66	66
167+70	124 NE 163RD ST, Shoreline	SF	72	62	66	66	66	66	66	66	69	68	68	68	68	68	68
167+90	304 NE 163RD ST, Shoreline	SF	72	120	124	124	124	124	124	124	63	63	63	63	63	63	63
168+00	310 NE 163RD ST, Shoreline	SF	72	179	184	184	184	184	184	184	63	63	63	63	63	63	63
168+10	127 NE 164TH ST, Shoreline	SF	72	58	63	63	63	63	63	63	70	69	69	69	69	69	69

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
169+00	139 NE 164TH ST, Shoreline	SF	72	170	174	174	174	174	174	174	63	63	63	63	63	63	63
169+00	135 NE 164TH ST, Shoreline	SF	72	110	114	114	114	114	114	114	64	64	64	64	64	64	64
170+50	134 NE 164TH ST, Shoreline	SF	72	103	117	117	117	117	117	117	67	65	65	65	65	65	65
170+50	140 NE 164TH ST, Shoreline	SF	72	163	167	167	167	167	167	167	63	63	63	63	63	63	63
170+60	127 NE 165TH ST, Shoreline	SF	72	50	54	54	54	54	54	54	71	71	71	71	71	71	71
170+60	132 NE 164TH ST, Shoreline	SF	72	50	54	54	54	54	54	54	71	71	71	71	71	71	71
170+70	141 NE 165TH ST, Shoreline	SF	72	162	166	166	166	166	166	166	63	63	63	63	63	63	63
170+70	135 NE 165TH ST, Shoreline	SF	72	102	117	117	117	117	117	117	67	65	65	65	65	65	65
172+10	140 NE 165TH ST, Shoreline	SF	72	179	182	182	182	182	182	182	63	63	63	63	63	63	63
172+10	132 NE 165TH ST, Shoreline	SF	72	118	123	123	123	123	123	123	65	65	65	65	65	65	65
172+30	126 NE 165TH ST, Shoreline	SF	72	43	48	48	48	48	48	48	**72**	71	71	71	71	71	71
173+20	140 NE 165TH PL, Shoreline	SF	72	204	208	208	208	208	208	208	62	62	62	62	62	62	62
173+20	124 NE 165TH PL, Shoreline	SF	72	41	47	47	47	47	47	47	**72**	71	71	71	71	71	71
173+60	134 NE 165TH PL, Shoreline	SF	72	136	140	140	140	140	140	140	64	64	64	64	64	64	64
174+30	131 NE 166TH ST, Shoreline	SF	72	150	153	153	153	153	153	153	64	64	64	64	64	64	64
174+40	123 NE 166TH ST, Shoreline	SF	72	98	102	102	102	102	102	102	67	67	67	67	67	67	67
174+60	119 NE 166TH ST, Shoreline	SF	72	41	47	47	47	47	47	47	**72**	71	71	71	71	71	71
175+80	130 NE 166TH ST, Shoreline	SF	72	180	183	183	183	183	183	183	63	63	63	63	63	63	63
176+00	124 NE 166TH ST, Shoreline	SF	72	107	129	129	129	129	129	129	66	64	64	64	64	64	64

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
176+30	120 NE 166TH ST, Shoreline	SF	72	53	57	57	57	57	57	57	71	71	71	71	71	71	71
176+90	123 NE 167TH ST, Shoreline	SF	72	150	153	153	153	153	153	153	64	64	64	64	64	64	64
177+10	117 NE 167TH ST, Shoreline	SF	72	112	117	117	117	117	117	117	66	65	65	65	65	65	65
178+30	111 NE 167TH ST, Shoreline	SF	72	60	64	64	64	64	64	64	70	70	70	70	70	70	70
179+30	132 NE 167TH ST, Shoreline	SF	72	236	240	240	240	240	240	240	62	61	61	61	61	61	61
179+30	136 NE 167TH ST, Shoreline	SF	72	296	299	299	299	299	299	299	60	60	60	60	60	60	60
179+80	114 NE 167TH ST, Shoreline	SF	72	DISP	26	26	26	26	26	26	---	**74**	**74**	**74**	**74**	**74**	**74**
179+90	118 NE 167TH ST, Shoreline	SF	72	84	88	88	88	88	88	88	68	68	68	68	68	68	68
179+90	126 NE 167TH ST, Shoreline	SF	72	170	173	173	173	173	173	173	63	63	63	63	63	63	63
179+90	16719 3RD AVE NE, Shoreline	SF	72	232	236	236	236	236	236	236	62	62	62	62	62	62	62
180+50	16719 2ND AVE NE, Shoreline	SF	72	57	61	61	61	61	61	61	71	70	70	70	70	70	70
180+50	16716 2ND AVE NE, Shoreline	SF	72	149	153	153	153	153	153	153	64	64	64	64	64	64	64
180+90	16725 3RD AVE NE, Shoreline	SF	72	263	267	267	267	267	267	267	61	61	61	61	61	61	61
181+10	16723 2ND AVE NE, Shoreline	SF	72	55	59	59	59	59	59	59	71	70	70	70	70	70	70
181+20	16722 2ND AVE NE, Shoreline	SF	72	146	150	150	150	150	150	150	64	64	64	64	64	64	64
181+80	16729 2ND AVE NE, Shoreline	SF	72	50	54	54	54	54	54	54	71	71	71	71	71	71	71
181+80	16728 2ND AVE NE, Shoreline	SF	72	142	146	146	146	146	146	146	64	64	64	64	64	64	64
181+90	16735 3RD AVE NE, Shoreline	SF	72	258	261	261	261	261	261	261	61	61	61	61	61	61	61
182+40	16731 2ND AVE NE, Shoreline	SF	72	50	54	54	54	54	54	54	71	71	71	71	71	71	71

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
182+50	16738 2ND AVE NE, Shoreline	SF	72	138	141	141	141	141	141	141	64	64	64	64	64	64	64
182+60	16741 3RD AVE NE, Shoreline	SF	72	248	252	252	252	252	252	252	61	61	61	61	61	61	61
182+90	16735 2ND AVE NE, Shoreline	SF	72	45	49	49	49	49	49	49	**72**	71	71	71	71	71	71
183+00	16741 2ND AVE NE, Shoreline	SF	72	43	48	48	48	48	48	48	**72**	71	71	71	71	71	71
183+30	16747 3RD AVE NE, Shoreline	SF	72	211	215	215	215	215	215	215	62	62	62	62	62	62	62
183+80	16742 2ND AVE NE, Shoreline	SF	72	123	127	127	127	127	127	127	65	64	64	64	64	64	64
184+00	16753 3RD AVE NE, Shoreline	SF	72	203	206	206	206	206	206	206	62	62	62	62	62	62	62
185+00	109 NE 170TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
185+00	16761 3RD AVE NE, Shoreline	SF	72	185	189	189	189	189	189	189	63	63	63	63	63	63	63
185+20	121 NE 170TH ST, Shoreline	SF	72	101	133	133	133	133	133	133	67	64	64	64	64	64	64
185+30	204 NE 170TH ST, Shoreline	SF	72	399	403	403	403	403	403	403	58	58	58	58	58	58	58
185+30	119 NE 170TH ST, Shoreline	SF	72	45	50	50	50	50	50	50	**72**	71	71	71	71	71	71
185+70	110 NE 170TH ST, Shoreline	SF	72	205	209	209	209	209	209	209	62	62	62	62	62	62	62
185+80	104 NE 170TH ST, Shoreline	SF	72	97	101	101	101	101	101	101	67	67	67	67	67	67	67
186+10	17010 2ND AVE NE, Shoreline	SF	72	405	409	409	409	409	409	409	56	56	56	56	56	56	56
186+40	17011 2ND AVE NE, Shoreline	SF	72	210	214	214	214	214	214	214	57	57	57	57	57	57	57
186+50	17010 1ST AVE NE, Shoreline	SF	72	99	104	104	104	104	104	104	59	59	59	59	59	59	59
186+80	17016 2ND AVE NE, Shoreline	SF	72	409	412	412	412	412	412	412	56	56	56	56	56	56	56
187+10	17017 2ND AVE NE, Shoreline	SF	72	214	217	217	217	217	217	217	57	57	57	57	57	57	57

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
187+20	17016 1ST AVE NE, Shoreline	SF	72	96	101	101	101	101	101	101	60	59	59	59	59	59	59
188+40	17022 2ND AVE NE, Shoreline	SF	72	410	413	413	413	413	413	413	56	56	56	56	56	56	56
188+40	17022 1ST AVE NE, Shoreline	SF	72	96	99	99	99	99	99	99	60	59	59	59	59	59	59
188+40	17023 2ND AVE NE, Shoreline	SF	72	214	218	218	218	218	218	218	57	57	57	57	57	57	57
189+10	17028 1ST AVE NE, Shoreline	SF	72	99	103	103	103	103	103	103	59	59	59	59	59	59	59
189+10	17029 2ND AVE NE, Shoreline	SF	72	212	215	215	215	215	215	215	57	57	57	57	57	57	57
189+10	17028 2ND AVE NE, Shoreline	SF	72	408	411	411	411	411	411	411	56	56	56	56	56	56	56
189+70	17034 1ST AVE NE, Shoreline	SF	72	93	97	97	97	97	97	97	60	59	59	59	59	59	59
189+80	17035 2ND AVE NE, Shoreline	SF	72	208	211	211	211	211	211	211	57	57	57	57	57	57	57
189+90	17034 2ND AVE NE, Shoreline	SF	72	404	407	407	407	407	407	407	56	56	56	56	56	56	56
190+40	17040 1ST AVE NE, Shoreline	SF	72	90	95	95	95	95	95	95	60	60	60	60	60	60	60
190+50	17041 2ND AVE NE, Shoreline	SF	72	202	205	205	205	205	205	205	57	57	57	57	57	57	57
190+60	17040 2ND AVE NE, Shoreline	SF	72	397	401	401	401	401	401	401	56	56	56	56	56	56	56
191+00	17046 1ST AVE NE, Shoreline	SF	72	80	85	85	85	85	85	85	61	60	60	60	60	60	60
191+20	17047 2ND AVE NE, Shoreline	SF	72	194	198	198	198	198	198	198	58	58	58	58	58	58	58
191+40	17046 2ND AVE NE, Shoreline	SF	72	389	393	393	393	393	393	393	56	56	56	56	56	56	56
191+60	17052 1ST AVE NE, Shoreline	SF	72	DISP	72	72	72	72	72	72	---	63	63	63	63	63	63
191+80	17053 2ND AVE NE, Shoreline	SF	72	185	189	189	189	189	189	189	58	58	58	58	58	58	58
192+10	17052 2ND AVE NE, Shoreline	SF	72	379	383	383	383	383	383	383	56	56	56	56	56	56	56

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
192+30	17058 1ST AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
192+50	17059 2ND AVE NE, Shoreline	SF	72	174	178	178	178	178	178	178	58	58	58	58	58	58	58
192+80	17058 2ND AVE NE, Shoreline	SF	72	368	371	371	371	371	371	371	56	56	56	56	56	56	56
192+90	17204 1ST AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
193+20	17205 2ND AVE NE, Shoreline	SF	72	162	165	165	165	165	165	165	58	58	58	58	58	58	58
193+50	17210 1ST AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
193+50	17204 2ND AVE NE, Shoreline	SF	72	354	357	357	357	357	357	357	56	56	56	56	56	56	56
193+80	17211 2ND AVE NE, Shoreline	SF	72	148	151	151	151	151	151	151	58	58	58	58	58	58	58
194+10	17216 1ST AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
194+10	17222 1ST AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
194+30	17210 2ND AVE NE, Shoreline	SF	72	339	342	342	342	342	342	342	56	56	56	56	56	56	56
194+40	17217 2ND AVE NE, Shoreline	SF	72	132	135	135	135	135	135	135	59	59	59	59	59	59	59
194+80	105 NE 174TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
195+00	17216 2ND AVE NE, Shoreline	SF	72	322	325	325	325	325	325	325	56	53	53	53	53	53	53
195+10	17223 2ND AVE NE, Shoreline	SF	72	114	117	117	117	117	117	117	59	56	56	56	56	56	56
195+70	17222 2ND AVE NE, Shoreline	SF	72	303	306	306	306	306	306	306	56	53	53	53	53	53	53
195+70	111 NE 174TH ST, Shoreline	SF	72	148	151	151	151	151	151	151	58	55	55	55	55	55	55
196+10	110 NE 174TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
196+30	205 NE 174TH ST, Shoreline	SF	72	283	286	286	286	286	286	286	53	53	53	53	53	53	53

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
197+50	116 NE 174TH ST, Shoreline	SF	72	57	60	60	60	60	60	60	62	61	61	61	61	61	61
197+70	122 NE 174TH ST, Shoreline	SF	72	106	109	109	109	109	109	109	56	56	56	56	56	56	56
197+90	128 NE 174TH ST, Shoreline	SF	72	127	130	130	130	130	130	130	55	55	55	55	55	55	55
198+10	204 NE 174TH ST, Shoreline	SF	72	184	187	187	187	187	187	187	54	54	54	54	54	54	54
198+20	210 NE 174TH ST, Shoreline	SF	72	244	247	247	247	247	247	247	53	53	53	53	53	53	53
199+40	211 NE 175TH ST, Shoreline	SF	72	200	203	203	203	203	203	203	53	53	53	53	53	53	53
199+90	217 NE 175TH ST, Shoreline	SF	72	252	255	255	255	255	255	255	53	53	53	53	53	53	53
200+10	223 NE 175TH ST, Shoreline	SF	72	305	308	308	308	308	308	308	53	53	53	53	53	53	53
201+00	208 NE 175TH ST, Shoreline	SF	72	86	90	90	90	90	90	90	57	57	57	57	57	57	57
202+20	222 NE 175TH ST, Shoreline	SF	72	219	222	222	222	222	222	222	53	53	53	53	53	53	53
202+30	216 NE 175TH ST, Shoreline	SF	72	115	119	119	119	119	119	119	56	56	56	56	56	56	56
202+60	230 NE SERPENTINE PL, Shoreline	SF	72	276	280	280	280	280	280	280	53	53	53	53	53	53	53
202+80	206 NE 175TH ST, Shoreline	SF	72	DISP	29	29	29	29	29	29	---	69	69	69	69	69	69
202+80	17733 2ND PL NE, Shoreline	SF	72	76	81	81	81	81	81	81	58	57	57	57	57	57	57
203+20	218 NE 175TH ST, Shoreline	SF	72	120	125	125	125	125	125	125	56	56	56	56	56	56	56
203+20	17737 2ND PL NE, Shoreline	SF	72	22	DISP	DISP	DISP	DISP	DISP	DISP	72	---	---	---	---	---	---
203+50	220 NE 175TH ST, Shoreline	SF	72	133	137	137	137	137	137	137	55	55	55	55	55	55	55
203+50	17734 2ND PL NE, Shoreline	SF	72	134	138	138	138	138	138	138	55	55	55	55	55	55	55
203+90	234 NE SERPENTINE PL, Shoreline	SF	72	212	217	217	217	217	217	217	53	53	53	53	53	53	53

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
205+00	17741 2ND PL NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
205+40	17738 2ND PL NE, Shoreline	SF	72	187	191	191	191	191	191	191	58	54	54	54	54	54	54
205+40	17747 2ND PL NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
206+00	17753 2ND PL NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
206+10	308 NE SERPENTINE PL, Shoreline	SF	72	274	279	279	279	279	279	279	57	53	53	53	53	53	53
206+30	17748 2ND PL NE, Shoreline	SF	72	124	128	128	128	128	128	128	59	55	55	55	55	55	55
206+40	239 NE 178TH ST, Shoreline	SF	72	122	126	126	126	126	126	126	59	55	55	55	55	55	55
207+00	224 NE 178TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
207+40	311 NE 178TH ST, Shoreline	SF	72	193	198	198	198	198	198	198	58	53	53	53	53	53	53
207+50	230 NE 178TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
208+20	17803 3RD AVE NE, Shoreline	SF	72	71	76	76	76	76	76	76	66	61	61	61	61	61	61
208+80	17804 3RD AVE NE, Shoreline	SF	72	177	182	182	182	182	182	182	58	56	56	56	56	56	56
209+00	17809 3RD AVE NE, Shoreline	SF	72	34	40	40	40	40	40	40	**75**	67	67	67	67	67	67
209+30	17810 3RD AVE NE, Shoreline	SF	72	155	160	160	160	160	160	160	59	56	56	56	56	56	56
209+30	312 NE 178TH ST, Shoreline	SF	72	262	267	267	267	267	267	267	57	54	54	54	54	54	54
210+00	17815 3RD AVE NE, Shoreline	SF	72	DISP	22	22	22	22	22	22	---	**79**	**72**	**79**	**72**	**79**	**72**
210+00	17821 3RD AVE NE, Shoreline	SF	72	23	28	28	28	28	28	28	**79**	**77**	**75**	**77**	**75**	**77**	**75**
210+10	330 NE 178TH ST, Shoreline	SF	72	305	311	311	311	311	311	311	57	57	54	57	54	57	54
210+20	17816 3RD AVE NE, Shoreline	SF	72	178	184	184	184	184	184	184	58	58	56	58	56	58	56

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
210+30	17822 3RD AVE NE, Shoreline	SF	72	145	151	151	151	151	151	151	59	59	56	59	56	59	56
210+50	336 NE 178TH ST, Shoreline	SF	72	362	368	368	368	368	368	368	56	56	53	56	53	56	53
210+90	17825 3RD AVE NE, Shoreline	SF	72	96	101	101	101	101	101	101	61	61	59	61	59	61	59
211+00	340 NE 178TH ST, Shoreline	SF	72	253	259	259	259	259	259	259	57	57	55	57	55	57	55
211+70	344 NE 178TH ST, Shoreline	SF	72	207	213	213	213	213	213	213	58	58	55	58	55	58	55
212+00	337 NE 180TH ST, Shoreline	SF	72	154	161	161	161	161	161	161	59	59	56	59	56	59	56
212+30	348 NE 178TH ST, Shoreline	SF	72	305	311	311	311	311	311	311	57	57	54	57	54	57	54
212+60	335 NE 180TH ST, Shoreline	SF	72	103	109	109	109	109	109	109	61	60	58	60	58	60	58
212+90	333 NE 180TH ST, Shoreline	SF	72	58	65	65	65	65	65	65	68	67	63	67	63	67	63
213+10	17833 5TH AVE NE, Shoreline	SF	72	309	315	315	315	315	315	315	57	57	54	57	54	57	54
213+40	331 NE 180TH ST, Shoreline	SF	72	28	34	34	34	34	34	34	**77**	**80**	**73**	**80**	**73**	**80**	**73**
213+90	17845 5TH AVE NE, Shoreline	SF	72	259	265	265	265	265	265	265	57	57	54	57	54	57	54
214+50	17857 5TH AVE NE, Shoreline	SF	72	222	229	229	229	229	229	229	58	58	55	58	55	58	55
215+00	332 NE 180TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
215+10	17861 5TH AVE NE, Shoreline	SF	72	184	190	190	190	190	190	190	58	58	55	58	55	58	55
216+30	338 NE 180TH ST, Shoreline	SF	72	40	48	48	48	48	48	48	**73**	71	68	71	68	71	68
216+70	344 NE 180TH ST, Shoreline	SF	72	90	98	98	98	98	98	98	62	61	59	61	59	61	59
217+00	350 NE 180TH ST, Shoreline	SF	72	154	162	162	162	162	162	162	59	59	56	59	56	59	56
217+30	18019 5TH AVE NE, Shoreline	SF	72	25	32	32	32	32	32	32	**78**	**75**	**75**	**75**	**75**	**75**	**75**

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
217+30	356 NE 180TH ST, Shoreline	SF	72	151	158	158	158	158	158	158	59	59	56	59	56	59	56
217+50	18017 5TH AVE NE, Shoreline	SF	72	98	105	105	105	105	105	105	61	61	58	61	58	61	58
218+10	18023 5TH AVE NE, Shoreline	SF	72	63	71	71	71	71	71	71	67	66	62	66	62	66	62
218+40	18027 5TH AVE NE, Shoreline	SF	72	45	52	52	52	52	52	52	**72**	70	64	70	64	70	64
218+60	18016 5TH AVE NE, Shoreline	SF	72	211	219	219	219	219	219	219	58	58	55	58	55	58	55
218+90	18031 5TH AVE NE, Shoreline	SF	72	20	28	28	28	28	28	28	**80**	**77**	70	**77**	70	**77**	70
219+90	18034 5TH AVE NE, Shoreline	SF	72	129	137	137	137	137	137	137	60	59	56	59	56	59	56
220+00	18041 5TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
220+50	18036 5TH AVE NE, Shoreline	SF	72	142	152	152	152	152	152	152	58	58	55	58	55	58	55
221+00	504 NE 182ND CT, Shoreline	SF	72	101	113	113	109	113	109	113	59	59	56	59	56	59	56
221+60	18210 5TH AVE NE, Shoreline	SF	72	83	100	100	91	100	91	100	60	59	56	60	56	60	56
221+70	505 NE 183RD CT, Shoreline	SF	72	DISP	DISP	76	DISP	76	DISP	81	---	---	58	---	58	---	57
222+20	514 NE 182ND CT, Shoreline	SF	72	146	166	166	155	166	155	166	58	58	54	58	54	58	54
222+60	18310 5TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
222+70	515 NE 183RD CT, Shoreline	SF	72	133	157	157	141	157	141	157	59	58	54	57	54	57	54
222+90	18320 5TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
223+60	18326 5TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
223+80	514 NE 183RD CT, Shoreline	SF	72	83	115	115	91	115	91	115	59	59	56	58	56	58	56
224+10	520 NE 183RD CT, Shoreline	SF	72	110	146	146	118	146	118	146	57	58	55	57	55	57	55

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
224+40	18330 5TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
224+50	18069 7TH AVE NE, Shoreline	SF	72	173	211	211	181	211	181	211	56	57	53	56	53	56	53
225+00	18301 7TH AVE NE, Shoreline	SF	72	146	186	186	153	186	153	186	57	58	54	57	54	57	54
225+50	18307 7TH AVE NE, Shoreline	SF	72	123	165	165	131	165	131	165	57	58	54	57	54	57	54
226+00	18313 7TH AVE NE, Shoreline	SF	72	101	144	144	109	144	109	144	59	58	55	57	55	57	55
226+10	18308 7TH AVE NE, Shoreline	SF	72	272	315	315	279	315	279	315	57	56	53	55	53	55	53
226+70	18323 8TH AVE NE, Shoreline	SF	72	140	181	181	147	181	147	181	58	58	54	52	54	52	54
226+70	18316 7TH AVE NE, Shoreline	SF	72	145	187	187	152	187	152	187	58	58	54	52	54	52	54
226+90	18317 8TH AVE NE, Shoreline	SF	72	258	299	299	265	299	265	299	57	51	50	51	50	51	50
227+30	18329 8TH AVE NE, Shoreline	SF	72	161	200	200	167	200	167	200	58	51	50	52	50	52	50
228+80	721 NE 185TH ST, Shoreline	SF	72	170	199	199	176	199	176	199	58	51	50	52	50	52	50
229+00	731 NE 185TH ST, Shoreline	SF	72	233	260	260	240	260	240	260	57	51	50	51	50	51	50
229+20	18342 8TH AVE NE, Shoreline	SF	72	410	434	434	417	434	417	434	56	50	49	50	49	50	49
230+10	814 NE 185TH ST, Shoreline	SF	72	449	464	464	455	464	455	464	42	42	41	42	41	42	41
230+80	18510 7TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
230+90	18504 8TH AVE NE, Shoreline	SF	72	382	391	391	388	391	388	391	42	42	41	42	41	42	41
231+00	18511 8TH AVE NE, Shoreline	SF	72	DISP	187	DISP	DISP	DISP	DISP	DISP	---	45	---	---	---	---	---
231+10	18509 8TH AVE NE, Shoreline	SF	72	DISP	248	DISP	DISP	DISP	DISP	DISP	---	44	---	---	---	---	---
231+40	18516 7TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
231+60	18517 8TH AVE NE, Shoreline	SF	72	DISP	171	DISP	DISP	DISP	DISP	DISP	---	46	---	---	---	---	---
231+60	18510 8TH AVE NE, Shoreline	SF	72	372	375	375	378	375	378	375	43	43	42	42	42	42	42
232+00	18520 7TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
232+20	18523 8TH AVE NE, Shoreline	SF	72	DISP	155	DISP	DISP	DISP	DISP	DISP	---	47	---	---	---	---	---
232+20	18516 8TH AVE NE, Shoreline	SF	72	363	360	360	368	360	368	360	43	43	42	43	42	43	42
232+50	18528 7TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
232+70	18534 7TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
232+70	18522 8TH AVE NE, Shoreline	SF	72	353	345	345	359	345	359	345	43	43	42	43	42	43	42
232+90	18529 8TH AVE NE, Shoreline	SF	72	DISP	148	DISP	DISP	DISP	DISP	DISP	---	48	---	---	---	---	---
233+30	18528 8TH AVE NE, Shoreline	SF	72	343	330	330	349	330	349	330	43	43	42	43	42	43	42
233+30	18540 7TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
233+40	18533 8TH AVE NE, Shoreline	SF	72	DISP	134	DISP	DISP	DISP	DISP	DISP	---	49	---	---	---	---	---
233+90	18546 7TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
233+90	18534 8TH AVE NE, Shoreline	SF	72	334	315	315	339	315	339	315	43	43	42	43	42	43	42
234+00	18539 8TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
234+40	18547 8TH AVE NE, Shoreline	SF	72	130	107	107	135	107	135	107	50	53	49	49	49	49	49
234+50	18540 8TH AVE NE, Shoreline	SF	72	324	299	299	329	299	329	299	43	44	43	43	43	43	43
235+00	18552 7TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
235+10	18558 7TH AVE NE, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
235+30	18553 8TH AVE NE, Shoreline	SF	72	183	155	155	186	155	186	155	51	47	45	45	45	45	45
235+70	18554 8TH AVE NE, Shoreline	SF	72	305	270	270	309	270	309	270	49	44	43	43	43	43	43
235+80	18559 8TH AVE NE, Shoreline	SF	72	166	130	130	172	130	172	130	52	50	47	46	47	46	47
235+90	811 NE 188TH ST, Shoreline	SF	72	370	334	334	375	334	375	334	48	43	42	43	42	43	42
236+00	817 NE 188TH ST, Shoreline	SF	72	429	392	392	433	392	433	392	47	42	41	42	41	42	41
236+00	823 NE 188TH ST, Shoreline	SF	72	488	451	451	493	451	493	451	47	42	41	42	41	42	41
236+10	829 NE 188TH ST, Shoreline	SF	72	547	509	509	551	509	551	509	47	42	41	42	41	42	41
236+20	835 NE 188TH ST, Shoreline	SF	72	607	569	569	611	569	611	569	47	42	41	42	41	42	41
236+30	841 NE 188TH ST, Shoreline	SF	72	667	628	628	672	628	672	628	47	42	41	42	41	42	41
237+20	703 NE 189TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
237+20	707 NE 189TH ST, Shoreline	SF	72	DISP	DISP	DISP	DISP	DISP	DISP	DISP	---	---	---	---	---	---	---
237+30	721 NE 189TH ST, Shoreline	SF	72	105	65	65	112	65	112	65	56	60	54	55	54	55	54
237+40	18807 8TH AVE NE, Shoreline	SF	72	161	121	121	152	121	152	121	52	51	48	52	48	52	48
237+70	18810 8TH AVE NE, Shoreline	SF	72	273	232	232	277	232	277	232	49	45	44	49	44	49	44
237+80	810 NE 188TH ST, Shoreline	SF	72	341	301	301	345	301	345	301	48	44	43	48	43	48	43
238+70	715 NE 189TH ST, Shoreline	SF	72	30	DISP	DISP	DISP	DISP	DISP	DISP	73	---	---	---	---	---	---
238+70	719 NE 189TH ST, Shoreline	SF	72	75	38	38	85	38	85	38	61	70	62	59	62	59	62
238+80	727 NE 189TH ST, Shoreline	SF	72	132	96	96	128	96	128	96	52	57	50	53	50	53	50
238+90	18820 8TH AVE NE, Shoreline	SF	72	175	238	238	257	238	257	238	51	50	46	50	46	50	46

Table D-1. Projected Vibration for Segment A Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
239+10	811 NE 189TH ST, Shoreline	SF	72	320	286	286	324	286	324	286	49	49	46	48	46	48	46
239+20	718 NE 189TH ST, Shoreline	SF	72	17	DISP	DISP	20	DISP	20	DISP	**78**	---	---	**77**	---	**77**	---
240+60	18915 8TH AVE NE, Shoreline	SF	72	24	DISP	DISP	23	DISP	23	DISP	**75**	---	---	**75**	---	**75**	---
240+70	728 NE 189TH ST, Shoreline	SF	72	100	80	80	105	80	105	80	56	60	52	56	52	56	52
240+80	18910 8TH AVE NE, Shoreline	SF	72	221	197	197	224	197	224	197	50	51	47	50	47	50	47
240+90	810 NE 189TH ST, Shoreline	SF	72	290	266	266	293	266	293	266	49	50	46	49	46	49	46
241+20	18921 8TH AVE NE, Shoreline	SF	72	47	27	27	50	27	50	27	67	**74**	66	66	66	66	66
242+00	18920 8TH AVE NE, Shoreline	SF	72	202	185	185	204	185	204	185	51	51	47	51	47	51	47
242+20	811 NE 190TH ST, Shoreline	SF	72	270	254	254	273	254	273	254	49	50	46	49	46	49	46
243+60	19011 8TH AVE NE, Shoreline	SF	72	91	84	84	94	84	94	84	58	59	51	57	51	57	51
246+60	19031 8TH AVE NE, Shoreline	SF	72	92	90	90	94	90	94	90	58	58	51	57	51	57	51
246+60	816 NE 190TH ST, Shoreline	SC	75	210	210	210	210	210	210	210	48	48	44	48	44	48	44

Bold	Bold red numbers in cells indicate potential vibration impact (See main text for summary of number of potential impacts for each segment alternative)
SF	Single-Family Residence
MF	Multifamily Residence
HT	Hotel
CH	Church
SC	School
DISP	Indicates properties that would be displaced by the project

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
251+50	817 NE 194TH ST, Shoreline	SF	72	100	129	129	129	59	59	59	59
252+60	805 NE 194TH ST, Shoreline	SF	72	53	61	61	61	67	65	65	65
252+80	823 NE 194TH ST, Shoreline	SF	72	174	183	183	183	58	58	58	58
253+00	831 NE 194TH ST, Shoreline	SF	72	238	246	246	246	57	57	57	57
253+40	814 NE 194TH ST, Shoreline	SF	72	46	53	53	53	69	67	67	67
254+20	812 NE 194TH ST, Shoreline	SF	72	80	88	88	88	61	60	60	60
254+50	818 NE 194TH ST, Shoreline	SF	72	117	125	125	125	59	59	59	59
254+70	824 NE 194TH ST, Shoreline	SF	72	178	186	186	186	58	58	58	58
255+40	815 NE 195TH ST, Shoreline	SF	72	79	87	87	87	61	60	60	60
255+60	821 NE 195TH ST, Shoreline	SF	72	119	126	126	126	59	59	59	59
255+90	827 NE 195TH ST, Shoreline	SF	72	178	186	186	186	58	58	58	58
257+60	822 NE 195TH ST, Shoreline	SF	72	50	58	58	58	68	66	66	66
257+70	834 NE 195TH ST, Shoreline	SF	72	122	131	131	131	59	59	59	59
258+00	840 NE 195TH ST, Shoreline	SF	72	156	164	164	164	58	58	58	58
259+30	19705 10TH AVE NE, Shoreline	SF	72	40	50	50	50	**76**	68	68	68
259+40	19604 10TH AVE NE, Shoreline	SF	72	228	239	239	239	57	57	57	57
259+80	19715 10TH AVE NE, Shoreline	SF	72	45	52	52	52	**72**	67	67	67
261+00	1010 NE 197TH ST, Shoreline	SF	72	136	148	148	148	59	58	58	58
261+10	19723 10TH AVE NE, Shoreline	SF	72	63	79	79	79	65	61	61	61
261+70	19728 10TH AVE NE, Shoreline	SF	72	150	164	164	164	58	58	58	58
262+70	19731 10TH AVE NE, Shoreline	SF	72	99	115	115	115	59	59	59	59
263+80	19741 10TH AVE NE, Shoreline	SF	72	185	202	202	202	58	58	58	58
264+90	1002 NE 198TH ST, Shoreline	SF	72	114	133	133	133	59	59	59	59
266+10	1006 NE 198TH ST, Shoreline	SF	72	112	133	133	133	56	59	59	59
266+10	1000 NE 198TH ST, Shoreline	SF	72	66	85	85	85	60	60	60	60
268+40	1103 NE 200TH ST, Shoreline	SF	72	130	154	154	154	66	65	65	65

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
269+40	1107 NE 200TH ST, Shoreline	SF	72	162	187	187	187	65	64	64	64
269+60	1109 NE 200TH ST, Shoreline	SF	72	216	241	241	241	63	62	62	62
270+90	1104 NE 200TH ST, Shoreline	SF	72	128	152	152	150	66	65	65	65
271+20	1114 NE 200TH ST, Shoreline	SF	72	219	242	242	240	63	62	62	62
272+00	1112 NE 200TH ST, Shoreline	SF	72	227	249	249	246	62	61	61	62
272+10	1102 NE 200TH ST, Shoreline	SF	72	93	117	117	117	68	67	67	67
272+50	1108 NE 200TH ST, Shoreline	SF	72	110	133	133	129	67	66	66	66
272+60	1110 NE 200TH ST, Shoreline	SF	72	119	141	141	137	67	66	66	66
272+70	20035 12TH AVE NE, Shoreline	SF	72	152	171	171	167	65	65	65	65
272+80	20017 12TH AVE NE, Shoreline	SF	72	188	209	209	204	64	63	63	63
273+00	20019 12TH AVE NE, Shoreline	SF	72	257	278	278	273	61	60	60	61
273+70	20043 12TH AVE NE, Shoreline	SF	72	107	127	119	119	67	66	67	67
273+80	20039 12TH AVE NE, Shoreline	SF	72	198	219	219	212	63	63	63	63
274+50	20041 12TH AVE NE, Shoreline	SF	72	177	196	196	189	64	64	64	64
275+10	20101 12TH AVE NE, Shoreline	SF	72	180	199	199	191	64	63	63	64
275+80	20105 12TH AVE NE, Shoreline	SF	72	161	179	179	169	65	64	64	65
276+00	20109 12TH AVE NE, Shoreline	SF	72	170	188	188	178	65	64	64	64
276+10	20149 FOREST PARK DR NE, Shoreline	SF	72	178	196	196	185	64	64	64	64
277+20	20145 FOREST PARK DR NE, Shoreline	SF	72	261	278	278	265	61	60	60	61
277+40	20141 FOREST PARK DR NE, Shoreline	SF	72	274	291	291	278	61	60	60	60
279+50	20307 14TH AVE NE, Shoreline	SF	72	374	389	389	369	53	52	52	53
280+80	20313 14TH AVE NE, Shoreline	SF	72	365	378	378	354	53	52	52	53
281+30	20317 14TH AVE NE, Shoreline	MF	72	359	372	372	346	53	53	53	53
281+80	20327 14TH AVE NE, Shoreline	MF	72	353	366	366	337	53	53	53	53
282+30	20329 14TH AVE NE, Shoreline	MF	72	347	359	359	329	53	53	53	53

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
283+00	20333 14TH AVE NE, Shoreline	MF	75	339	351	351	318	53	53	53	53
283+50	20343 14TH AVE NE, Shoreline	MF	72	332	344	344	309	53	53	53	53
293+60	6015 244TH ST SW, MOUNTLAKE TERRACE	HT	72	566	569	569	498	47	47	47	47
299+70	23908 60TH AVE W, MOUNTLAKE TERRACE	SF	72	568	568	568	541	52	52	52	49
301+10	23904 60TH AVE W, MOUNTLAKE TERRACE	SF	72	517	519	519	535	52	52	52	49
301+70	23902 60TH AVE W, MOUNTLAKE TERRACE	SF	72	491	493	493	534	52	52	52	49
302+30	23900 60TH AVE W, MOUNTLAKE TERRACE	SF	72	464	467	467	535	52	52	52	49
302+90	23810 60TH AVE W, MOUNTLAKE TERRACE	SF	72	437	440	440	539	52	52	52	49
303+50	23808 60TH AVE W, MOUNTLAKE TERRACE	SF	72	410	414	414	545	52	52	52	49
304+60	23806 60TH AVE W, MOUNTLAKE TERRACE	SF	72	360	364	364	553	53	53	53	49
305+80	23804 60TH AVE W, MOUNTLAKE TERRACE	SF	72	302	307	307	576	53	48	48	49
306+00	23802 60TH AVE W, MOUNTLAKE TERRACE	SF	72	379	384	384	691	46	46	46	47
307+20	5909 238TH ST SW, MOUNTLAKE TERRACE	SF	72	244	246	246	619	49	49	49	47
307+30	6001 238TH ST SW, MOUNTLAKE TERRACE	SF	72	334	336	336	723	47	47	47	47
307+40	5907 238TH ST SW, MOUNTLAKE TERRACE	SF	72	393	395	395	780	46	46	46	47
308+20	5908 237TH ST SW, MOUNTLAKE TERRACE	SF	72	343	344	344	765	53	47	47	47
308+30	5904 237TH ST SW, MOUNTLAKE TERRACE	SF	72	436	437	437	859	52	45	45	47
308+30	6002 237TH ST SW, MOUNTLAKE TERRACE	SF	72	223	224	224	645	53	50	50	47
309+20	5909 237TH ST SW, MOUNTLAKE TERRACE	SF	72	372	372	372	776	53	50	46	45

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
309+20	5907 237TH ST SW, MOUNTLAKE TERRACE	SF	72	432	432	432	836	52	49	45	45
309+80	5906 236TH ST SW, MOUNTLAKE TERRACE	SF	72	342	342	342	739	53	50	47	45
309+80	5904 236TH ST SW, MOUNTLAKE TERRACE	SF	72	432	432	432	827	52	49	45	45
312+30	23509 59TH PL W, MOUNTLAKE TERRACE	SF	72	489	489	489	881	49	49	49	45
312+60	6300 234TH ST SW, MOUNTLAKE TERRACE	SF	72	674	674	674	296	49	49	49	57
312+70	23506 59TH PL W, MOUNTLAKE TERRACE	SF	72	221	221	221	613	50	50	50	55
312+90	23507 59TH PL W, MOUNTLAKE TERRACE	SF	72	456	456	456	847	49	49	49	54
313+10	23505 59TH PL W, MOUNTLAKE TERRACE	SF	72	448	448	448	840	49	49	49	54
313+80	23504 59TH PL W, MOUNTLAKE TERRACE	SF	72	221	221	221	613	50	50	50	55
313+90	23503 59TH PL W, MOUNTLAKE TERRACE	SF	72	449	449	449	840	52	49	49	54
314+10	6301 234TH ST SW, MOUNTLAKE TERRACE	SF	72	675	675	675	303	52	49	49	56
400+30	23310 63RD AVE W, MOUNTLAKE TERRACE	SF	72	676	676	676	304	52	47	49	56
400+40	23501 59TH PL W, MOUNTLAKE TERRACE	SF	72	334	334	334	726	53	50	50	55
400+50	23502 59TH PL W, MOUNTLAKE TERRACE	SF	72	221	221	221	613	53	50	50	55
403+50	23308 63RD AVE W, MOUNTLAKE TERRACE	SF	72	677	663	677	309	50	47	47	56
403+60	6002 233RD PL SW, MOUNTLAKE TERRACE	SF	72	144	164	135	502	52	52	52	50
403+90	6004 233RD PL SW, MOUNTLAKE TERRACE	SF	72	101	132	88	364	55	53	55	51
404+60	6005 233RD PL SW, MOUNTLAKE TERRACE	SF	72	97	130	83	320	55	53	56	51
405+20	6001 233RD PL SW, MOUNTLAKE TERRACE	SF	72	208	242	194	501	51	49	51	50

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
405+80	23306 63RD AVE W, MOUNTLAKE TERRACE	SF	72	662	630	665	311	50	47	47	51
405+90	6002 232ND PL SW, MOUNTLAKE TERRACE	SF	72	242	277	225	501	51	53	50	50
406+30	6004 232ND PL SW, MOUNTLAKE TERRACE	SF	72	131	164	113	376	59	54	53	50
406+60	6006 232ND PL SW, MOUNTLAKE TERRACE	SF	72	155	184	138	291	54	54	52	51
406+60	6003 233RD PL SW, MOUNTLAKE TERRACE	SF	72	161	195	145	320	54	54	52	51
406+90	6001 232ND PL SW, MOUNTLAKE TERRACE	SF	72	312	339	293	501	53	53	53	50
407+10	23304 63RD AVE W, MOUNTLAKE TERRACE	SF	72	629	600	643	313	52	52	52	51
407+90	6005 232ND PL SW, MOUNTLAKE TERRACE	SF	72	130	148	114	271	55	55	56	51
407+90	23302 63RD AVE W, MOUNTLAKE TERRACE	SF	72	609	588	625	314	52	52	52	51
408+10	6004 232ND ST SW, MOUNTLAKE TERRACE	SF	72	298	313	282	427	53	53	53	50
408+30	6003 232ND PL SW, MOUNTLAKE TERRACE	SF	72	254	266	239	376	53	53	53	50
408+50	6006 232ND ST SW, MOUNTLAKE TERRACE	SF	72	236	247	222	355	53	53	53	51
408+70	23300 63RD AVE W, MOUNTLAKE TERRACE	SF	72	590	576	602	338	52	52	52	51
408+90	6102 232ND ST SW, MOUNTLAKE TERRACE	SF	72	164	170	151	271	54	54	55	51
409+10	6003 232ND ST SW, MOUNTLAKE TERRACE	SF	72	429	427	418	485	52	52	52	50
409+50	23212 63RD AVE W, MOUNTLAKE TERRACE	SF	72	570	566	580	361	52	52	52	51
409+60	6007 232ND ST SW, MOUNTLAKE TERRACE	SF	72	349	337	340	390	53	53	53	50
409+80	23108 60TH AVE W, MOUNTLAKE TERRACE	SF	72	468	449	459	485	52	52	52	50
409+90	23207 63RD AVE W, MOUNTLAKE TERRACE	SF	72	404	407	412	266	52	52	52	51

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
410+30	23109 61ST AVE W, MOUNTLAKE TERRACE	SF	72	388	358	381	390	52	53	52	50
410+30	23112 61ST AVE W, MOUNTLAKE TERRACE	SF	72	182	158	175	210	54	54	54	51
410+60	23106 60TH AVE W, MOUNTLAKE TERRACE	SF	72	516	470	510	485	52	52	52	55
410+70	23207 63RD AVE W, MOUNTLAKE TERRACE	SF	72	375	392	380	261	52	53	53	51
411+20	23105 61ST AVE W, MOUNTLAKE TERRACE	SF	72	435	377	432	390	52	53	52	56
411+20	23110 61ST AVE W, MOUNTLAKE TERRACE	SF	72	227	180	224	210	53	54	53	51
411+30	23205 63RD AVE W, MOUNTLAKE TERRACE	SF	72	358	390	359	281	53	53	53	51
411+80	23100 60TH AVE W, MOUNTLAKE TERRACE	SF	72	561	482	559	485	52	52	52	52
412+00	23203 63RD AVE W, MOUNTLAKE TERRACE	SF	72	328	379	324	302	53	53	53	51
412+00	23106 61ST AVE W, MOUNTLAKE TERRACE	SF	72	265	195	268	210	53	54	53	57
412+40	23101 61ST AVE W, MOUNTLAKE TERRACE	SF	72	476	388	480	390	52	53	52	53
412+40	23117 63RD AVE, EDMONDS	SF	72	174	239	167	202	54	53	54	51
413+00	23102 61ST AVE W, MOUNTLAKE TERRACE	SF	72	296	205	306	210	50	54	53	57
413+40	23008 60TH AVE W, MOUNTLAKE TERRACE	SF	72	596	487	606	487	49	52	52	52
413+60	23115 63RD AVE W, MOUNTLAKE TERRACE	SF	72	180	270	160	255	51	53	54	51
413+70	23112 63RD AVE W, MOUNTLAKE TERRACE	SF	72	440	530	417	508	49	52	52	50
414+00	23010 61ST AVE W, MOUNTLAKE TERRACE	SF	72	319	211	339	211	50	53	53	53
414+00	23009 61ST AVE W, MOUNTLAKE TERRACE	SF	72	506	392	523	392	49	52	52	52
414+40	23111 63RD AVE W, MOUNTLAKE TERRACE	SF	72	261	368	230	362	50	53	53	51

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
414+80	23113 63RD AVE W, MOUNTLAKE TERRACE	SF	72	141	256	105	256	51	53	55	53
414+80	23014 63RD PL W, MOUNTLAKE TERRACE	SF	72	141	256	105	256	51	53	55	53
415+00	23109 63RD AVE W, MOUNTLAKE TERRACE	SF	72	325	442	285	442	50	52	55	52
415+00	23008 61ST AVE W, MOUNTLAKE TERRACE	SF	72	336	211	369	211	50	53	53	53
415+50	23107 63RD AVE W, MOUNTLAKE TERRACE	SF	72	383	506	335	506	49	52	55	52
415+60	23007 61ST AVE W, MOUNTLAKE TERRACE	SF	72	524	391	561	391	49	52	52	52
415+80	23105 63RD AVE W, MOUNTLAKE TERRACE	SF	72	442	571	387	571	49	52	55	52
415+80	23103 63RD AVE W, MOUNTLAKE TERRACE	SF	72	442	571	387	571	49	52	55	52
415+80	23101 63RD AVE W, MOUNTLAKE TERRACE	SF	72	442	571	386	571	49	52	55	52
415+90	23012 63RD PL W, MOUNTLAKE TERRACE	SF	72	297	427	242	427	50	52	55	52
416+40	23010 63RD AVE W, MOUNTLAKE TERRACE	SF	72	324	459	262	459	56	52	55	52
416+70	23015 63RD PL W, MOUNTLAKE TERRACE	SF	72	118	253	104	253	59	53	58	53
416+70	23008 63RD AVE W, MOUNTLAKE TERRACE	SF	72	338	474	271	474	56	52	55	52
417+00	23013 63RD PL W, MOUNTLAKE TERRACE	SF	72	117	254	104	254	59	53	58	53
417+30	23011 63RD PL W, MOUNTLAKE TERRACE	SF	72	117	255	149	255	59	53	57	53
417+50	23009 63RD AVE W, MOUNTLAKE TERRACE	SF	72	187	255	99	255	58	53	58	53
417+70	23004 63RD AVE W, MOUNTLAKE TERRACE	SF	72	373	510	288	510	56	52	55	52
418+30	6008 230TH ST SW, MOUNTLAKE TERRACE	SF	72	525	390	590	390	55	52	54	52
418+30	23007 63RD AVE W, MOUNTLAKE TERRACE	SF	72	185	256	99	256	58	53	58	53

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
418+60	23002 63RD AVE W, MOUNTLAKE TERRACE	SF	72	311	445	218	445	56	52	56	52
418+70	6304 230TH ST SW, MOUNTLAKE TERRACE	SF	72	380	514	285	514	56	55	55	55
419+10	6302 230TH ST SW, MOUNTLAKE TERRACE	SF	72	322	454	225	454	56	56	56	56
419+20	23005 63RD AVE W, MOUNTLAKE TERRACE	SF	72	189	257	99	257	58	57	58	57
419+60	6007 230TH ST SW, MOUNTLAKE TERRACE	SF	72	519	389	616	389	55	56	54	56
419+90	23003 63RD AVE W, MOUNTLAKE TERRACE	SF	72	128	257	92	257	59	57	58	57
420+30	6303 230TH ST SW, MOUNTLAKE TERRACE	SF	72	423	551	324	551	56	55	55	55
420+50	22909 61ST AVE W, MOUNTLAKE TERRACE	SF	72	516	388	613	388	55	56	54	56
420+70	23001 63RD AVE W, MOUNTLAKE TERRACE	SF	72	131	258	113	258	59	57	57	57
420+90	6301 230TH ST SW, MOUNTLAKE TERRACE	SF	72	364	490	268	490	56	55	55	55
421+20	22807 64TH PL W, MOUNTLAKE TERRACE	SF	72	518	643	423	643	55	55	54	55
421+30	22905 61ST AVE W, MOUNTLAKE TERRACE	SF	72	512	387	601	387	55	56	55	56
421+40	22909 63RD AVE W, MOUNTLAKE TERRACE	SF	72	134	259	101	259	59	57	58	57
421+40	22906 63RD AVE W, MOUNTLAKE TERRACE	SF	72	376	500	283	500	56	55	55	55
421+90	22805 64TH PL W, MOUNTLAKE TERRACE	SF	72	523	646	435	646	55	55	56	55
422+10	22904 63RD AVE W, MOUNTLAKE TERRACE	SF	72	392	515	307	515	56	55	56	55
422+20	22901 61ST AVE W, MOUNTLAKE TERRACE	SF	72	508	386	587	386	55	56	55	56
422+70	22905 63RD AVE W, MOUNTLAKE TERRACE	SF	72	140	261	152	261	58	57	58	57
423+00	22902 63RD AVE W, MOUNTLAKE TERRACE	SF	72	385	505	309	505	56	55	56	55

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
423+00	22803 64TH PL W, MOUNTLAKE TERRACE	SF	72	530	650	453	650	55	55	56	55
423+10	22809 61ST AVE W, MOUNTLAKE TERRACE	SF	72	504	384	574	384	55	56	55	56
423+40	22903 63RD AVE W, MOUNTLAKE TERRACE	SF	72	203	323	132	323	57	56	59	56
423+70	22901 63RD AVE W, MOUNTLAKE TERRACE	SF	72	288	408	220	408	57	56	57	56
423+80	22801 64TH PL W, MOUNTLAKE TERRACE	SF	72	534	655	466	655	55	55	55	55
424+00	22807 61ST AVE W, MOUNTLAKE TERRACE	SF	72	500	380	560	380	52	54	52	54
424+80	22803 61ST AVE W, MOUNTLAKE TERRACE	SF	72	497	375	547	375	52	54	52	54
425+60	6101 227TH ST SW, MOUNTLAKE TERRACE	SF	72	36	175	DISP	175	71	58	---	58
425+80	UNKNOWN	SF	72	370	494	326	494	54	52	55	52
426+20	22707 61ST AVE W, MOUNTLAKE TERRACE	SF	72	491	365	526	365	52	54	52	54
426+30	6304 227TH ST SW, MOUNTLAKE TERRACE	SF	72	498	623	458	623	52	52	52	52
427+00	22705 61ST AVE W, MOUNTLAKE TERRACE	SF	72	487	358	514	358	52	54	52	54
427+80	22703 61ST AVE W, MOUNTLAKE TERRACE	SF	72	483	349	502	349	52	54	52	54
428+10	6303 227TH ST SW, MOUNTLAKE TERRACE	SF	72	500	634	480	634	52	52	52	52
428+10	6103 227TH ST SW, MOUNTLAKE TERRACE	SF	72	98	169	55	169	62	59	67	59
428+10	6301 227TH ST SW, MOUNTLAKE TERRACE	SF	72	401	536	382	536	53	52	54	52
428+20	22605 63RD PL W, MOUNTLAKE TERRACE	SF	72	321	455	302	455	55	52	56	52
428+30	6201 227TH ST SW, LYNNWOOD	SF	72	152	197	119	197	59	58	61	58
428+30	22611 62ND AVE W, MOUNTLAKE TERRACE	SF	72	127	197	119	197	61	58	61	58

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
428+60	22701 61ST AVE W, MOUNTLAKE TERRACE	SF	72	477	340	491	340	52	55	52	55
429+40	22605 62ND AVE W, MOUNTLAKE TERRACE	SF	72	120	261	116	261	59	57	59	57
429+40	22609 61ST AVE W, MOUNTLAKE TERRACE	SF	72	471	330	479	330	55	56	55	56
429+50	22610 62ND AVE W, MOUNTLAKE TERRACE	SF	72	205	346	197	346	57	56	58	56
430+20	22608 62ND AVE W, MOUNTLAKE TERRACE	SF	72	229	374	225	374	57	56	57	56
430+20	22607 61ST AVE W, MOUNTLAKE TERRACE	SF	72	464	318	467	318	55	56	55	56
430+30	22603 63RD PL W, MOUNTLAKE TERRACE	SF	72	338	483	334	483	56	55	56	55
430+40	22606 62ND AVE W, MOUNTLAKE TERRACE	SF	72	230	376	227	376	57	56	57	56
430+90	22601 63RD PL W, MOUNTLAKE TERRACE	SF	72	345	494	344	494	56	55	56	55
431+00	22604 62ND AVE W, MOUNTLAKE TERRACE	SF	72	237	387	237	387	57	56	57	56
431+00	22605 61ST AVE W, MOUNTLAKE TERRACE	SF	72	456	306	456	306	56	56	56	56
431+20	22603 62ND AVE W, MOUNTLAKE TERRACE	SF	72	124	275	125	275	59	57	59	57
431+60	6204 226TH ST SW, MOUNTLAKE TERRACE	SF	72	352	505	355	505	56	55	56	55
431+70	6202 226TH ST SW, MOUNTLAKE TERRACE	SF	72	244	398	247	398	57	56	57	56
431+80	22603 61ST AVE W, MOUNTLAKE TERRACE	SF	72	448	292	444	292	56	57	56	57
432+10	6004 226TH ST SW, MOUNTLAKE TERRACE	SF	72	448	291	443	291	56	57	56	57
432+30	22601 62ND AVE W, MOUNTLAKE TERRACE	SF	72	128	285	133	285	59	57	59	57
432+60	6005 226TH ST SW, MOUNTLAKE TERRACE	SF	72	393	233	387	233	56	57	56	57
432+90	6201 226TH ST SW, MOUNTLAKE TERRACE	SF	72	345	505	351	505	56	55	56	55

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
433+20	22504 62ND AVE W, MOUNTLAKE TERRACE	SF	72	273	434	280	434	57	56	57	56
433+90	22505 62ND AVE W, MOUNTLAKE TERRACE	SF	72	128	289	135	289	59	57	59	57
433+90	6202 225TH PL SW, MOUNTLAKE TERRACE	SF	72	360	524	368	524	56	55	56	55
434+40	22503 62ND AVE W, MOUNTLAKE TERRACE	SF	72	122	287	130	287	59	57	59	57
434+80	22502 62ND AVE W, MOUNTLAKE TERRACE	SF	72	268	433	275	433	57	56	57	56
435+10	22501 62ND AVE W, MOUNTLAKE TERRACE	SF	72	109	275	116	275	59	57	59	57
435+40	6201 225TH PL SW, MOUNTLAKE TERRACE	SF	72	314	479	320	479	56	55	56	55
435+70	22406 62ND AVE W, MOUNTLAKE TERRACE	SF	72	239	405	245	405	57	56	57	56
435+70	6006 225TH ST SW, MOUNTLAKE TERRACE	SF	72	395	229	389	229	56	57	56	57
435+80	22407 62ND AVE W,	SF	72	121	262	129	262	59	57	59	57
436+40	6204 224TH ST SW, MOUNTLAKE TERRACE	SF	72	332	497	335	497	56	55	56	55
436+50	6202 224TH ST SW, MOUNTLAKE TERRACE	SF	72	255	421	259	421	57	56	57	56
436+70	22405 62ND AVE W,	SF	72	122	247	127	247	59	57	59	57
437+20	22403 62ND AVE W, MOUNTLAKE TERRACE	SF	72	113	237	115	237	59	57	59	57
437+70	22309 62ND AVE W, MOUNTLAKE TERRACE	SF	72	148	229	146	229	58	57	57	57
437+80	6003 225TH ST SW, MOUNTLAKE TERRACE	SF	72	380	217	382	217	56	57	55	57
438+20	22307 62ND AVE W, MOUNTLAKE TERRACE	SF	72	109	220	104	220	59	57	58	57
438+20	6201 224TH ST SW, MOUNTLAKE TERRACE	SF	72	259	422	256	422	57	56	55	56
438+80	6004 224TH ST SW, MOUNTLAKE TERRACE	SF	72	375	214	382	214	56	57	55	57

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
439+00	22305 62ND AVE W, MOUNTLAKE TERRACE	SF	72	63	205	63	205	65	57	64	57
439+10	22302 62ND AVE W, MOUNTLAKE TERRACE	SF	72	189	349	179	349	58	56	56	56
440+00	6202 223RD PL SW, MOUNTLAKE TERRACE	SF	72	154	308	191	308	58	56	56	56
440+20	6204 223RD PL SW, MOUNTLAKE TERRACE	SF	72	259	413	375	413	57	56	55	56
440+40	6003 224TH ST SW, MOUNTLAKE TERRACE	SF	72	353	196	325	196	56	58	55	58
440+70	6201 223RD PL SW, MOUNTLAKE TERRACE	SF	72	241	393	193	393	57	56	58	56
441+00	22306 60TH AVE W, MOUNTLAKE TERRACE	SF	72	347	191	325	191	56	58	55	58
441+00	22206 62ND AVE W,	SF	72	156	309	115	309	58	56	57	56
441+60	22304 60TH AVE W, MOUNTLAKE TERRACE	SF	72	343	187	325	187	56	58	55	58
441+90	22204 62ND AVE W, MOUNTLAKE TERRACE	SF	72	193	347	134	347	58	56	59	56
442+10	22209 62ND AVE W, MOUNTLAKE TERRACE	SF	72	114	210	DISP	210	56	57	---	57
442+20	22302 60TH AVE W, MOUNTLAKE TERRACE	SF	72	340	182	325	182	53	58	55	58
442+50	6208 222ND LN SW, MOUNTLAKE TERRACE	SF	72	360	515	445	515	53	55	50	55
442+70	22202 62ND AVE W, MOUNTLAKE TERRACE	SF	72	228	385	156	385	53	56	52	56
442+70	22210 60TH AVE W, MOUNTLAKE TERRACE	SF	72	338	177	325	177	53	58	56	58
442+70	22208 60TH AVE W, MOUNTLAKE TERRACE	SF	72	338	175	325	175	53	58	56	58
442+90	22207 62ND AVE W, MOUNTLAKE TERRACE	SF	72	72	207	DISP	207	59	57	---	57
443+20	22205 62ND AVE W, MOUNTLAKE TERRACE	SF	72	104	206	DISP	206	55	57	---	57
443+30	6207 222ND LN SW, MOUNTLAKE TERRACE	SF	72	356	516	439	516	53	55	50	55

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
443+30	6204 222ND ST SW, MOUNTLAKE TERRACE	SF	72	305	466	221	466	53	55	51	55
443+40	22206 60TH AVE W, MOUNTLAKE TERRACE	SF	72	340	173	325	173	53	58	51	58
443+90	22203 62ND AVE W,	SF	72	116	204	DISP	204	54	57	---	57
443+90	22204 60TH AVE W, MOUNTLAKE TERRACE	SF	72	345	171	325	171	53	58	51	58
444+50	6202 222ND ST SW, MOUNTLAKE TERRACE	SF	72	210	380	119	380	53	56	54	56
444+50	22202 60TH AVE W, MOUNTLAKE TERRACE	SF	72	350	169	325	169	53	58	51	58
444+80	22201 62ND AVE W, MOUNTLAKE TERRACE	SF	72	103	202	DISP	202	55	58	---	58
445+30	6303 222ND ST SW, MOUNTLAKE TERRACE	SF	72	512	690	417	690	52	55	49	55
445+60	6205 222ND ST SW, MOUNTLAKE TERRACE	SC	75	158	199	52	199	51	55	61	55
446+10	22111 60TH AVE W, MOUNTLAKE TERRACE	SF	72	484	282	375	282	52	57	50	57
446+50	6302 221ST PL SW, MOUNTLAKE TERRACE	SF	72	517	710	417	710	52	55	49	55
446+70	22109 60TH AVE W, MOUNTLAKE TERRACE	SF	72	481	272	375	272	52	57	50	57
447+20	6303 221ST PL SW, MOUNTLAKE TERRACE	SF	72	520	723	417	723	52	55	49	55
447+30	22107 60TH AVE W, MOUNTLAKE TERRACE	SF	72	478	261	375	261	52	57	50	57
447+90	22105 60TH AVE W, MOUNTLAKE TERRACE	SF	72	475	250	375	250	52	57	50	57
448+30	22103 60TH AVE W, MOUNTLAKE TERRACE	SF	72	473	244	375	244	52	57	50	57
448+50	5904 221ST ST SW, MOUNTLAKE TERRACE	SF	72	539	306	375	306	52	56	50	56
448+60	6305 221ST PL SW, MOUNTLAKE TERRACE	SF	72	526	747	417	747	52	55	49	55
448+80	6304 220TH PL SW, MOUNTLAKE TERRACE	SF	72	527	750	417	750	52	55	49	55

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
448+90	6302 220TH PL SW, MOUNTLAKE TERRACE	SF	72	527	751	417	751	52	55	49	55
449+90	5905 221ST ST SW, MOUNTLAKE TERRACE	SF	72	644	393	375	393	52	56	50	56
450+00	6303 220TH PL SW, MOUNTLAKE TERRACE	SF	72	532	771	417	771	52	55	49	55
451+10	5903 221ST ST SW, MOUNTLAKE TERRACE	SF	72	682	415	375	415	52	56	50	56
451+30	6305 220TH PL SW, MOUNTLAKE TERRACE	SF	72	537	793	417	793	52	55	49	55
453+50	5902 219TH ST SW, MOUNTLAKE TERRACE	SF	72	649	340	375	340	52	56	53	56
457+50	5905 219TH ST SW, MOUNTLAKE TERRACE	SF	72	573	256	375	256	47	57	52	57
459+40	5810 218TH PL SW, MOUNTLAKE TERRACE	SF	72	536	236	375	236	52	57	52	57
460+90	5811 218TH PL SW, MOUNTLAKE TERRACE	SF	72	484	215	375	215	52	57	52	57
461+80	5809 218TH PL SW, MOUNTLAKE TERRACE	SF	72	466	222	375	222	52	57	52	57
462+00	6102 ST ALBION WAY, MOUNTLAKE TERRACE	MF	72	114	244	96	244	53	54	54	54
463+20	21726 58TH AVE W, MOUNTLAKE TERRACE	SF	72	487	268	487	268	52	57	52	57
464+40	21712 58TH AVE W, MOUNTLAKE TERRACE	SF	72	468	276	470	276	52	57	52	57
467+80	5912 214TH ST SW, MOUNTLAKE TERRACE	SF	72	215	369	215	369	57	56	57	56
467+90	21620 58TH AVE W, MOUNTLAKE TERRACE	SF	72	417	258	417	258	56	57	56	57
468+40	5910 214TH ST SW, MOUNTLAKE TERRACE	SF	72	146	300	146	300	58	56	57	56
468+70	21503 60TH AVE W, MOUNTLAKE TERRACE	SF	72	146	167	136	167	58	58	57	58
468+80	5908 214TH ST SW, MOUNTLAKE TERRACE	SF	72	138	242	133	242	59	57	57	57
469+00	21530 58TH AVE W, MOUNTLAKE TERRACE	SF	72	357	199	355	199	56	58	55	58

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
469+00	21616 58TH AVE W, MOUNTLAKE TERRACE	SF	72	357	199	356	199	56	58	55	58
469+10	5909 214TH ST SW, MOUNTLAKE TERRACE	SF	72	355	508	356	508	56	55	55	55
469+50	5907 214TH ST SW, MOUNTLAKE TERRACE	SF	72	303	455	305	455	56	56	55	56
469+50	5906 214TH ST SW, MOUNTLAKE TERRACE	SF	72	85	167	90	167	60	58	58	58
469+70	5904 214TH ST SW, MOUNTLAKE TERRACE	SF	72	60	167	65	167	65	58	63	58
469+90	5905 214TH ST SW, MOUNTLAKE TERRACE	SF	72	251	404	254	404	57	56	55	56
470+70	5903 214TH ST SW, MOUNTLAKE TERRACE	SF	72	183	335	188	335	58	56	56	56
470+70	21331 60TH AVE W, MOUNTLAKE TERRACE	SF	72	333	485	337	485	56	55	55	55
471+50	5902 214TH ST SW, MOUNTLAKE TERRACE	SF	72	54	179	59	179	67	58	64	58
471+60	5901 214TH ST SW, MOUNTLAKE TERRACE	SF	72	181	332	186	332	58	56	56	56
471+60	5810 214TH ST SW, MOUNTLAKE TERRACE	SF	72	48	179	53	179	69	58	66	58
471+70	21304 59TH PL W, MOUNTLAKE TERRACE	SF	72	261	411	266	411	57	56	55	56
472+20	21305 59TH PL W, MOUNTLAKE TERRACE	SF	72	256	406	262	406	57	56	55	56
472+30	21528 58TH AVE W, MOUNTLAKE TERRACE	SF	72	347	193	340	193	56	58	55	58
472+50	21307 59TH PL W, MOUNTLAKE TERRACE	SF	72	181	331	188	331	58	56	56	56
472+80	5806 214TH ST SW, MOUNTLAKE TERRACE	SF	72	40	181	47	181	71	58	68	58
473+10	5709 215TH PL SW, MOUNTLAKE TERRACE	SF	72	383	230	375	230	56	57	55	57
473+30	5803 214TH ST SW, MOUNTLAKE TERRACE	SF	72	183	332	191	332	58	56	56	56
473+60	5804 214TH ST SW, MOUNTLAKE TERRACE	SF	72	58	185	68	185	66	58	62	58

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
474+20	5802 214TH ST SW, MOUNTLAKE TERRACE	SF	72	54	191	63	191	67	58	65	58
474+60	21501 58TH AVE W, MOUNTLAKE TERRACE	SF	72	363	212	353	212	56	57	56	57
475+00	5801 214TH ST SW, MOUNTLAKE TERRACE	SF	72	169	315	180	315	58	56	58	56
475+30	21318 58TH AVE W, MOUNTLAKE TERRACE	SF	72	190	336	200	336	58	56	58	56
475+30	21316 58TH AVE W, MOUNTLAKE TERRACE	SF	72	225	371	235	371	57	56	57	56
475+50	21312 58TH AVE W, MOUNTLAKE TERRACE	SF	72	306	452	316	452	56	56	56	56
476+60	5720 213TH ST SW, MOUNTLAKE TERRACE	SF	72	120	270	130	270	59	57	59	57
476+70	21227 58TH AVE W UNIT 1 THRU 5, MOUNTLAKE TERRACE	MF	72	309	459	319	459	56	56	56	56
477+20	21317 58TH AVE W, MOUNTLAKE TERRACE	SF	72	47	186	56	186	69	58	66	58
477+20	5723 213TH ST SW, MOUNTLAKE TERRACE	SF	72	268	418	277	418	57	56	57	56
477+40	5710 213TH ST SW, MOUNTLAKE TERRACE	SF	72	98	206	108	206	59	57	59	57
477+60	5721 213TH ST SW, MOUNTLAKE TERRACE	SF	72	328	478	338	478	56	55	56	55
478+10	5711 213TH ST SW, MOUNTLAKE TERRACE	SF	72	189	339	198	339	58	56	58	56
478+60	5709 213TH ST SW, MOUNTLAKE TERRACE	SF	72	244	394	254	394	57	56	57	56
478+80	5632 213TH ST SW, MOUNTLAKE TERRACE	SF	72	48	185	58	185	**72**	58	66	58
478+80	5627 213TH ST SW, MOUNTLAKE TERRACE	MF	72	118	268	127	268	59	57	59	57
478+80	21404 56TH AVE W, MOUNTLAKE TERRACE	SF	72	353	204	344	204	56	57	56	57
479+40	5623 213TH ST SW, MOUNTLAKE TERRACE	SF	72	195	345	204	345	58	56	57	56
479+60	5625 213TH ST SW, MOUNTLAKE TERRACE	SF	72	88	204	97	204	60	57	59	57

Table D-2. Projected Vibration for Segment B Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
479+80	5506 214TH PL SW, MOUNTLAKE TERRACE	SF	72	414	265	406	265	56	57	56	57
479+80	5615 213TH ST SW, MOUNTLAKE TERRACE	SF	72	50	185	59	185	68	58	65	58
480+20	5619 213TH ST SW, MOUNTLAKE TERRACE	SF	72	131	281	140	281	59	57	58	57
480+50	5503 214TH PL SW, MOUNTLAKE TERRACE	SF	72	443	293	434	293	56	57	56	57
480+80	5604 212TH ST SW, MOUNTLAKE TERRACE	SF	72	67	189	75	189	64	58	62	58
481+00	5616 212TH ST SW, MOUNTLAKE TERRACE	SF	72	257	407	265	407	57	56	57	56
481+10	5505 214TH ST SW, MOUNTLAKE TERRACE	SF	72	404	254	395	254	56	57	56	57
481+30	5610 212TH ST SW, MOUNTLAKE TERRACE	SF	72	109	258	117	258	59	57	59	57
482+00	5518 212TH ST SW, UNKNOWN	SF	72	56	189	DISP	189	62	58	---	58
482+40	5602 212TH ST SW, MOUNTLAKE TERRACE	SF	72	138	241	145	241	55	57	58	57
483+30	5522 212TH ST SW, MOUNTLAKE TERRACE	SF	72	46	189	DISP	189	65	58	---	58
483+40	5518 212TH ST SW, UNKNOWN	SF	72	108	239	DISP	239	52	52	---	52
483+40	5509 214TH PL SW, MOUNTLAKE TERRACE	MF	72	316	167	309	167	45	50	48	50
483+70	5605 212TH ST SW, LYNNWOOD	SF	72	255	405	263	405	49	49	51	49
484+70	5525 212TH ST SW, LYNNWOOD	SF	72	180	329	187	329	51	50	52	50
486+90	54TH AVE W, LYNNWOOD	PK	75	121	157	127	157	50	51	50	51
489+60	5402 212TH ST SW, MOUNTLAKE TERRACE	MF	72	287	137	280	137	46	49	46	49

Bold Bold numbers in cells indicate potential vibration impact (See main text for summary of number of potential impacts for each segment alternative)
SF Single-Family Residence
MF Multifamily Residence
HT Hotel
CH Church
SC School
DISP Indicates properties that would be displaced by the project

Table D-3. Projected Vibration for Segment C Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	C1M	C2M	C3M	C1W	C2W	C3W	PA	C1M	C2M	C3M	C1W	C2W	C3W
492+30	21031 54TH AVE W, LYNNWOOD	SF	72	47	179	179	179	52	52	52	58	51	51	53	57	57	57
492+60	20928 53RD AVE W, LYNNWOOD	SF	72	114	182	182	182	119	119	119	52	51	51	53	52	52	52
492+80	21019 54TH AVE W, LYNNWOOD	SF	72	99	213	213	214	104	104	104	52	50	50	52	52	52	52
493+20	21011 54TH AVE W, LYNNWOOD	SF	72	174	258	258	261	180	180	180	51	49	49	51	51	51	51
493+50	21007 54TH AVE W, LYNNWOOD	SF	72	158	301	301	308	163	163	163	51	48	48	51	51	51	51
494+10	20927 54TH AVE W, LYNNWOOD	SF	72	229	362	362	379	234	234	234	50	47	47	49	50	50	50
494+80	20932 53RD AVE W, LYNNWOOD	SF	72	73	154	154	182	77	77	77	54	52	52	53	53	53	53
495+10	20926 53RD AVE W, LYNNWOOD	SF	72	172	283	283	322	177	177	177	51	49	49	50	47	47	51
495+60	20922 53RD AVE W, LYNNWOOD	SF	72	203	295	295	353	207	207	208	51	49	49	50	46	46	50
496+00	20914 53RD AVE W, LYNNWOOD	SF	72	251	324	324	400	252	252	255	53	53	53	56	49	49	53
496+40	20929 53RD AVE W, LYNNWOOD	SF	72	50	105	105	178	53	53	53	64	55	55	58	62	62	63
496+40	20908 53RD AVE W, LYNNWOOD	SF	72	298	350	350	447	295	295	302	53	53	53	56	48	48	53
496+70	20925 53RD AVE W, LYNNWOOD	SF	72	90	160	160	237	87	87	94	57	54	54	57	55	55	57
496+70	20902 53RD AVE W, LYNNWOOD	SF	72	345	373	373	494	333	333	349	53	53	53	55	47	47	53
496+80	20924 52ND AVE W, LYNNWOOD	SF	72	59	DISP	DISP	209	DISP	DISP	62	61	---	---	57	---	---	61
497+10	20830 53RD AVE W, LYNNWOOD	SF	72	392	391	391	541	366	366	396	52	53	53	52	46	46	52
497+20	20923 53RD AVE W, LYNNWOOD	SF	72	132	190	190	279	125	125	134	55	54	54	53	53	53	55
497+50	20915 53RD AVE W, LYNNWOOD	SF	72	124	141	141	274	99	99	128	56	54	54	53	54	54	55
497+60	20828 53RD AVE W, LYNNWOOD	SF	72	450	409	409	599	398	398	454	52	52	52	52	46	46	52

Table D-3. Projected Vibration for Segment C Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	C1M	C2M	C3M	C1W	C2W	C3W	PA	C1M	C2M	C3M	C1W	C2W	C3W
497+90	20911 53RD AVE W, LYNNWOOD	SF	72	171	163	163	321	131	131	175	54	54	54	53	53	53	54
498+00	20826 53RD AVE W, LYNNWOOD	SF	72	499	418	418	649	415	415	503	52	52	52	52	45	45	52
498+30	20901 53RD AVE W, LYNNWOOD	SF	72	218	182	182	368	159	159	222	53	54	54	53	52	52	53
498+30	20804 53RD AVE W, LYNNWOOD	SF	72	549	423	423	699	423	423	553	52	52	52	52	52	52	52
498+40	20918 52ND AVE W, LYNNWOOD	MF	72	116	84	84	266	56	56	102	53	53	53	50	57	57	53
498+70	20829 53RD AVE W, LYNNWOOD	SF	72	265	197	197	415	183	183	269	53	54	54	52	51	51	53
499+00	20825 53RD AVE W, LYNNWOOD	SF	72	314	209	209	464	202	202	318	53	53	53	52	50	50	53
499+40	20819 53RD AVE W, LYNNWOOD	SF	72	370	227	227	520	225	225	373	53	53	53	52	50	50	53
499+60	20830 52ND AVE W, LYNNWOOD	CH	75	191	100	100	340	93	93	194	51	52	52	50	51	51	51
499+80	20813 53RD AVE W, LYNNWOOD	SF	72	413	222	222	563	222	222	416	52	53	53	52	53	53	52
499+80	20726 53RD AVE W, LYNNWOOD	SF	72	734	423	423	883	423	423	737	52	52	52	51	52	52	52
500+20	20801 53RD AVE W, LYNNWOOD	SF	72	463	223	223	612	223	223	466	41	50	50	38	50	50	41
500+20	20718 53RD AVE W, LYNNWOOD	SF	72	786	423	423	936	423	423	789	34	43	43	35	43	43	34
500+40	20818 52ND AVE W, LYNNWOOD	SF	72	287	113	113	436	113	113	290	48	54	54	42	53	53	48
500+50	20909 52ND AVE W, LYNNWOOD	SF	72	53	25	25	218	35	35	56	60	**75**	**75**	51	67	67	59
500+60	20712 53RD AVE W, LYNNWOOD	SF	72	836	422	422	985	422	422	839	33	43	43	36	43	43	33
500+90	20812 52ND AVE W, LYNNWOOD	SF	72	332	117	117	481	117	117	334	46	54	54	41	54	54	46
501+00	20706 53RD AVE W, LYNNWOOD	SF	72	885	422	422	1035	422	422	888	34	43	43	36	43	43	34
501+30	20806 52ND AVE W, LYNNWOOD	SF	72	377	110	110	527	110	110	380	45	56	56	39	56	56	45

Table D-3. Projected Vibration for Segment C Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	C1M	C2M	C3M	C1W	C2W	C3W	PA	C1M	C2M	C3M	C1W	C2W	C3W
501+40	20628 53RD AVE W, LYNNWOOD	SF	72	935	422	422	1085	422	422	938	35	43	43	36	43	43	35
501+70	5211 208TH ST SW, LYNNWOOD	SF	72	500	107	107	649	107	107	503	40	56	56	37	56	56	40
501+80	20618 53RD AVE W, LYNNWOOD	SF	72	982	422	422	1132	422	422	985	36	43	43	36	43	43	36
501+90	20815 52ND AVE W, LYNNWOOD	CM	72	181	17	17	345	17	17	197	50	**82**	**82**	44	**82**	**82**	49
502+10	20612 53RD AVE W, LYNNWOOD	SF	72	1029	421	421	1179	421	421	1032	51	52	52	51	52	52	51
502+50	5306 206TH ST SW, LYNNWOOD	SF	72	1077	421	421	1226	421	421	1079	51	52	52	51	52	52	51
503+00	20629 53RD AVE W, LYNNWOOD	SF	72	808	221	221	958	221	221	811	51	53	53	51	53	53	51
503+30	20623 53RD AVE W, LYNNWOOD	SF	72	856	221	221	1005	221	221	858	51	53	53	51	53	53	51
503+50	20706 52ND AVE W, LYNNWOOD	SF	72	651	180	180	801	180	180	653	52	54	54	51	54	54	52
503+50	5303 206TH ST SW, LYNNWOOD	SF	72	1207	421	421	1356	421	421	1209	51	52	52	51	52	52	51
503+70	20609 53RD AVE W, LYNNWOOD	SF	72	903	221	221	1052	221	221	905	51	53	53	51	53	53	51
503+80	20628 52ND AVE W, LYNNWOOD	SF	72	737	124	124	887	124	124	739	52	56	56	51	56	56	52
504+20	20601 53RD AVE W, LYNNWOOD	SF	72	966	221	221	1115	221	221	968	51	53	53	51	53	53	51
504+20	20510 53RD AVE W, LYNNWOOD	SF	72	1290	421	421	1440	421	421	1292	51	52	52	51	52	52	51
504+40	20624 52ND AVE W, LYNNWOOD	SF	72	770	110	110	920	110	110	772	52	56	56	51	56	56	52
504+60	20506 53RD AVE W, LYNNWOOD	SF	72	1338	421	421	1487	421	421	1340	51	52	52	51	52	52	51
504+70	20523 53RD AVE W, LYNNWOOD	SF	72	1112	270	270	1261	270	270	1114	51	53	53	51	53	53	51
504+80	20618 52ND AVE W, LYNNWOOD	SF	72	817	137	137	967	137	137	819	51	55	55	51	55	55	51
505+00	20502 53RD AVE W, LYNNWOOD	SF	72	1385	420	420	1530	420	420	1387	51	52	52	51	52	52	51

Table D-3. Projected Vibration for Segment C Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	C1M	C2M	C3M	C1W	C2W	C3W	PA	C1M	C2M	C3M	C1W	C2W	C3W
505+30	5210 206TH ST SW, LYNNWOOD	SF	72	881	107	107	1030	107	107	883	51	56	56	51	56	56	51
505+30	20428 53RD AVE W, LYNNWOOD	SF	72	1432	420	420	1553	420	420	1434	51	52	52	51	52	52	51
505+70	20424 53RD AVE W UNIT Q, LYNNWOOD	SF	72	1482	420	420	1577	420	420	1483	51	52	52	51	52	52	51
505+80	20517 53RD AVE W, LYNNWOOD	SF	72	1164	220	220	1297	220	220	1165	51	53	53	51	53	53	51
506+30	20511 53RD AVE W, LYNNWOOD	SF	72	1211	220	220	1320	220	220	1212	51	53	53	51	53	53	51
506+30	20416 53RD AVE W, LYNNWOOD	SF	72	1531	420	421	1601	420	421	1533	51	52	52	51	52	52	51
506+90	20505 53RD AVE W, LYNNWOOD	SF	72	1257	220	220	1343	220	220	1259	51	53	53	51	53	53	51
507+60	20412 53RD AVE W, LYNNWOOD	MF	72	1579	420	422	1625	420	422	1582	54	52	52	51	52	52	51
508+30	20429 53RD AVE W, LYNNWOOD	SF	72	1302	220	220	1366	220	220	1307	54	53	53	51	53	53	51
509+70	20504 52ND AVE W, LYNNWOOD	SF	72	1160	112	112	1217	112	112	1173	51	56	56	51	56	56	51
509+80	20425 53RD AVE W,	SF	72	1345	219	219	1390	219	219	1356	51	53	53	51	53	53	51
511+10	20430 52ND AVE W, LYNNWOOD	SF	72	1198	122	122	1239	122	122	1220	51	56	56	51	56	56	50
511+80	20419 53RD AVE W, LYNNWOOD	SF	72	1391	229	230	1423	229	230	1412	51	53	53	51	53	53	51
511+80	20406 53RD AVE W, LYNNWOOD	SF	72	1622	420	423	1649	420	423	1632	51	52	45	48	52	45	51
514+50	20411 53RD AVE W, LYNNWOOD	SF	72	1423	229	232	1448	229	232	1461	51	53	53	48	53	53	50
514+60	20416 52ND AVE W, LYNNWOOD	SF	72	1263	108	108	1288	108	108	1305	51	56	56	48	56	56	51
516+30	20410 52ND AVE W, LYNNWOOD	SF	72	1287	114	114	1313	114	114	1333	51	54	56	48	54	56	51
516+50	20403 53RD AVE W, LYNNWOOD	SF	72	1447	229	233	1474	229	233	1493	51	53	49	48	53	49	51
517+10	20406 52ND AVE W, LYNNWOOD	SF	72	1309	106	113	1340	106	113	1360	51	55	53	48	55	53	51
517+20	5309 204TH ST SW, LYNNWOOD	SF	72	1663	418	434	1694	418	434	1713	51	52	45	48	52	45	51

Table D-3. Projected Vibration for Segment C Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	C1M	C2M	C3M	C1W	C2W	C3W	PA	C1M	C2M	C3M	C1W	C2W	C3W
517+90	20318 53RD AVE W, LYNNWOOD	SF	72	1688	425	451	1726	425	451	1741	51	52	45	48	52	45	48
518+00	5215 204TH ST SW, LYNNWOOD	SF	72	1427	169	190	1464	169	190	1483	51	54	51	48	54	51	48
518+30	5207 204TH ST SW, LYNNWOOD	SF	72	1351	113	140	1393	113	140	1411	51	54	52	48	54	52	48
518+40	5225 204TH ST SW, LYNNWOOD	SF	72	1526	256	281	1563	256	281	1578	51	53	48	48	53	48	48
518+90	20310 53RD AVE W, LYNNWOOD	SF	72	1736	452	488	1780	452	488	1799	51	52	47	48	52	47	48
519+10	20317 53RD AVE W, LYNNWOOD	SF	72	1526	241	278	1568	241	278	1587	51	53	48	48	53	48	48
519+20	20304 53RD AVE W, LYNNWOOD	SF	72	1708	421	461	1760	421	461	1777	51	52	47	48	52	47	48
519+30	20316 52ND AVE W, LYNNWOOD	SF	72	1387	103	139	1444	103	139	1460	51	55	52	48	55	52	48
519+50	20309 53RD AVE W, LYNNWOOD	SF	72	1538	248	291	1597	248	291	1613	51	53	48	48	53	48	48
519+90	20306 52ND AVE W, LYNNWOOD	SF	72	1411	116	167	1481	116	167	1490	51	54	51	48	54	51	48
520+40	20302 52ND AVE W, LYNNWOOD	SF	72	1435	133	193	1519	133	193	1526	51	54	51	48	54	51	48
520+50	20303 53RD AVE W, LYNNWOOD	SF	72	1585	282	345	1670	282	345	1678	51	53	47	48	53	47	48
520+70	20218 52ND AVE W, LYNNWOOD	SF	72	1459	154	228	1553	154	228	1564	51	54	50	48	54	50	48
520+80	20210 52ND AVE W, LYNNWOOD	SF	72	1466	160	239	1564	160	239	1575	51	54	49	48	54	49	48
520+80	20212 52ND AVE W, LYNNWOOD	SF	72	1463	157	234	1559	157	234	1570	51	54	49	48	54	49	48
520+90	20220 52ND AVE W, LYNNWOOD	SF	72	1470	163	245	1570	163	245	1581	51	54	49	48	54	49	48
522+10	5214 201ST PL SW, LYNNWOOD	SF	72	1662	358	484	1808	358	484	1813	51	53	47	48	53	47	48
522+10	5208 201ST PL SW, LYNNWOOD	SF	72	1590	288	425	1746	288	425	1750	51	53	45	48	53	45	48
522+70	5217 201ST PL SW, LYNNWOOD	SF	72	1751	459	620	1933	459	620	1935	51	52	47	48	52	47	48

Table D-3. Projected Vibration for Segment C Without Mitigation

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Distance							Projected Maximum 1/3 OB Level (VdB)						
				PA	C1M	C2M	C3M	C1W	C2W	C3W	PA	C1M	C2M	C3M	C1W	C2W	C3W
522+80	5201 201ST PL SW, LYNNWOOD	SF	72	1681	392	562	1874	392	562	1874	51	52	47	48	52	47	48
526+70	20104 48th AVE W, LYNNWOOD	MF	72	486	218	61	837	218	61	829	49	47	57	45	47	57	45
528+40	4920 200TH ST SW UNIT A101, LYNNWOOD	MF	72	715	DISP	352	1078	DISP	352	1071	49	---	50	45	---	50	45
530+60	4807 200TH ST SW, LYNNWOOD	MF	72	1010	114	723	1379	114	723	1372	45	49	49	45	49	49	45
536+00	4727 200TH ST SW, LYNNWOOD	MF	72	535	93	726	917	93	726	912	49	52	46	45	52	46	45
541+80	4220 200TH ST SW, LYNNWOOD	HT	72	251	472	450	98	472	450	98	46	49	49	55	49	49	55

Bold Bold numbers in cells indicate potential vibration impact (See main text for summary of number of potential impacts for each segment alternative)
SF Single-Family Residence
MF Multifamily Residence
HT Hotel
CH Church
SC School
CM Commercial Property
DISP Indicates properties that would be displaced by the project

Table D-4. Projected Vibration for Segment A With Mitigation (Impacted Receivers Only)

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Mitigation Measure							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
36+20	136 NE 115TH ST, Seattle	SF	72	TDA	-	-	TDA	-	TDA	-	63	-	-	63	-	63	-
36+40	147 NE 116TH ST, Seattle	MF	72	TDA	-	-	TDA	-	TDA	-	65	-	-	65	-	65	-
43+10	11708 3RD AVE NE, Seattle	SF	72	DISP	-	-	TDA	-	TDA	-	-	-	-	63	-	63	-
43+30	11710 3RD AVE NE, Seattle	SF	72	TDA	DISP	HCF	DISP	HCF	DISP	HCF	67	-	67	-	67	-	67
48+50	327 NE 120TH ST, Seattle	SF	72	DISP	TDA	-	TDA	-	TDA	-	-	60	-	60	-	60	-
50+60	338 NE 120TH ST, Seattle	SF	72	TDA	-	-	-	-	-	-	59	-	-	-	-	-	-
52+40	12027 5TH AVE NE, Seattle	SF	72	TDA	-	-	-	-	-	-	60	-	-	-	-	-	-
53+50	12045 5TH AVE NE, Seattle	SF	72	TDA	-	-	-	-	-	-	63	-	-	-	-	-	-
54+30	12049 5TH AVE NE, Seattle	SF	72	TDA	-	-	-	-	-	-	60	-	-	-	-	-	-
125+00	324 NE 148TH ST, Shoreline	SF	72	DISP	-	None[a]	TDA	TDA	-	None[a]	-	-	72	70	70	-	72
126+50	309 NE 149TH ST, Shoreline	SF	72	DISP	-	-	FST	FST	-	-	-	-	-	69	69	-	-
130+20	301 NE 151ST ST, Shoreline	SF	72	TDA + SFC	DISP	DISP	DISP	DISP	DISP	DISP	72[b]	-	-	-	-	-	-
146+50	106 NE 155TH ST, Shoreline	SF	72	TDA	-	-	DISP	DISP	-	-	58	-	-	-	-	-	-
165+20	121 NE 163RD ST, Shoreline	SF	72	DISP	TDA	TDA	TDA	TDA	TDA	TDA	-	66	66	66	66	66	66
172+30	126 NE 165TH ST, Shoreline	SF	72	TDA	-	-	-	-	-	-	67	-	-	-	-	-	-
173+20	124 NE 165TH PL, Shoreline	SF	72	TDA	-	-	-	-	-	-	67	-	-	-	-	-	-
174+60	119 NE 166TH ST, Shoreline	SF	72	TDA	-	-	-	-	-	-	67	-	-	-	-	-	-
179+80	114 NE 167TH ST, Shoreline	SF	72	DISP	TDA	TDA	TDA	TDA	TDA	TDA	-	68	68	68	68	68	68
182+90	16735 2ND AVE NE, Shoreline	SF	72	TDA	-	-	-	-	-	-	67	-	-	-	-	-	-
183+00	16741 2ND AVE NE, Shoreline	SF	72	TDA	-	-	-	-	-	-	67	-	-	-	-	-	-
185+30	119 NE 170TH ST, Shoreline	SF	72	TDA	-	-	-	-	-	-	67	-	-	-	-	-	-
203+20	17737 2ND PL NE, Shoreline	SF	72	HCF	DISP	DISP	DISP	DISP	DISP	DISP	67	-	-	-	-	-	-
209+00	17809 3RD AVE NE, Shoreline	SF	72	TDA	-	-	-	-	-	-	61	-	-	-	-	-	-
210+00	17815 3RD AVE NE, Shoreline	SF	72	DISP	TDA	HCF	TDA	HCF	TDA	HCF	-	65	67	65	67	65	67
210+00	17821 3RD AVE NE, Shoreline	SF	72	TDA	TDA	SFC	TDA	SFC	TDA	SFC	65	63	70	63	70	63	70
213+40	331 NE 180TH ST, Shoreline	SF	72	TDA	TDA	SFC	TDA	SFC	TDA	SFC	63	66	68	66	68	66	68
216+30	338 NE 180TH ST, Shoreline	SF	72	TDA	-	-	-	-	-	-	60	-	-	-	-	-	-

Table D-4. Projected Vibration for Segment A With Mitigation (Impacted Receivers Only)

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Mitigation Measure							Projected Maximum 1/3 OB Level (VdB)						
				PA	A1	A3	A5	A7	A10	A11	PA	A1	A3	A5	A7	A10	A11
217+30	18019 5TH AVE NE, Shoreline	SF	72	TDA	TDA	SFC	TDA	SFC	TDA	SFC	64	61	69	61	69	61	69
218+40	18027 5TH AVE NE, Shoreline	SF	72	TDA	-	-	-	-	-	-	60	-	-	-	-	-	-
218+90	18031 5TH AVE NE, Shoreline	SF	72	TDA	TDA	-	TDA	-	TDA	-	66	63	-	63	-	63	-
238+70	715 NE 189TH ST, Shoreline	SF	72	TDA	DISP	DISP	DISP	DISP	DISP	DISP	59	-	-	-	-	-	-
239+20	718 NE 189TH ST, Shoreline	SF	72	TDA	DISP	DISP	TDA	DISP	TDA	DISP	64	-	-	63	-	63	-
240+60	18915 8TH AVE NE, Shoreline	SF	72	TDA	DISP	DISP	TDA	DISP	TDA	DISP	61	-	-	61	-	61	-
241+20	18921 8TH AVE NE, Shoreline	SF	72	-	TDA	-	-	-	-	-	-	60	-	-	-	-	-

Bold Bold red numbers in cells indicate potential vibration impact after mitigation
SF Single-Family Residence
MF Multifamily Residence
TDA Tire-Derived Aggregate Track Underlayment
SFC Spring Frog Crossover
FST Floating Slab Track
HCF High Compliance Fasteners (on Elevated Structure)
[a]Standard vibration mitigation not effective at this receiver (see text for explanation)
[b]FST combined with a Spring Frog Crossover would mitigate impact at this receiver (see text for explanation)

Table D-5. Projected Vibration for Segment B With Mitigation (Impacted Receivers Only)

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Mitigation Measure				Projected Maximum 1/3 OB Level (VdB)			
				PA	B1	B2A	B4	PA	B1	B2A	B4
259+30	19705 10TH AVE NE, Shoreline	SF	72	SFC	-	-	-	71	-	-	-
259+80	19715 10TH AVE NE, Shoreline	SF	72	SFC	-	-	-	69	-	-	-
478+80	5632 213TH ST SW, MOUNTLAKE TERRACE	SF	72	SFC	-	-	-	69	-	-	-

SF Single-Family Residence
SFC Spring Frog Crossover

Table D-6. Projected Vibration for Segment C With Mitigation (Impacted Receivers Only)

Civil Station (PA)	Address	Rec. Type	FTA Crit. (VdB)	Mitigation Measure							Projected Maximum 1/3 OB Level (VdB)						
				PA	C1M	C2M	C3M	C1W	C2W	C3W	PA	C1M	C2M	C3M	C1W	C2W	C3W
500+50	20909 52ND AVE W, LYNNWOOD	SF	72	-	HCF	HCF	-	-	-	-	-	70	70	-	-	-	-
501+90	20815 52ND AVE W, LYNNWOOD	CM	72	-	HCF	HCF	-	HCF	HCF	-	-	**79**	**79**	-	**79**	**79**	-

Bold Bold red numbers in cells indicate potential vibration impact after mitigation
SF Single-Family Residence
CM Commercial Property
HCF High Compliance Fasteners (on Elevated Structure)

ATTACHMENT E

Vibration Propagation Data

ATTACHMENT E

Vibration Propagation Data

The pages within this Attachment contain tables of the regression coefficients for each 1/3-octave band as calculated from the transfer mobility data measured at each vibration propagation test site. Plots of the Line Source Responses calculated at multiple distances for a two-car Sound Transit train (380 feet long) are also included.

Table E-1. SVT-01 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	-23.4	8.5	75.2	109.9	74.8	198.1	160.5	175.4	234.2	98.1	114.6	82.4	-31.2	-43.8	27.2	118.9	61.5	-100.5
A_1	13.3	-24.1	-118.2	-186.6	-117.6	-313.5	-256.1	-283.3	-379.6	-152.3	-166.0	-72.8	127.1	178.8	46.8	-110.8	-30.6	249.3
A_2	-3.9	9.0	52.7	95.5	55.7	159.2	134.0	152.8	207.0	90.0	95.3	31.3	-76.7	-118.9	-46.8	34.5	-3.8	-155.4
A_3	0.2	-1.3	-7.8	-16.3	-9.1	-26.5	-23.3	-27.4	-37.8	-18.9	-19.8	-7.0	11.4	20.4	7.8	-5.6	0.7	27.0

PSR = $A_0 + A_1 \cdot \log_{10}(D) + A_2 \cdot \log_{10}^2(D) + A_3 \cdot \log_{10}^3(D)$

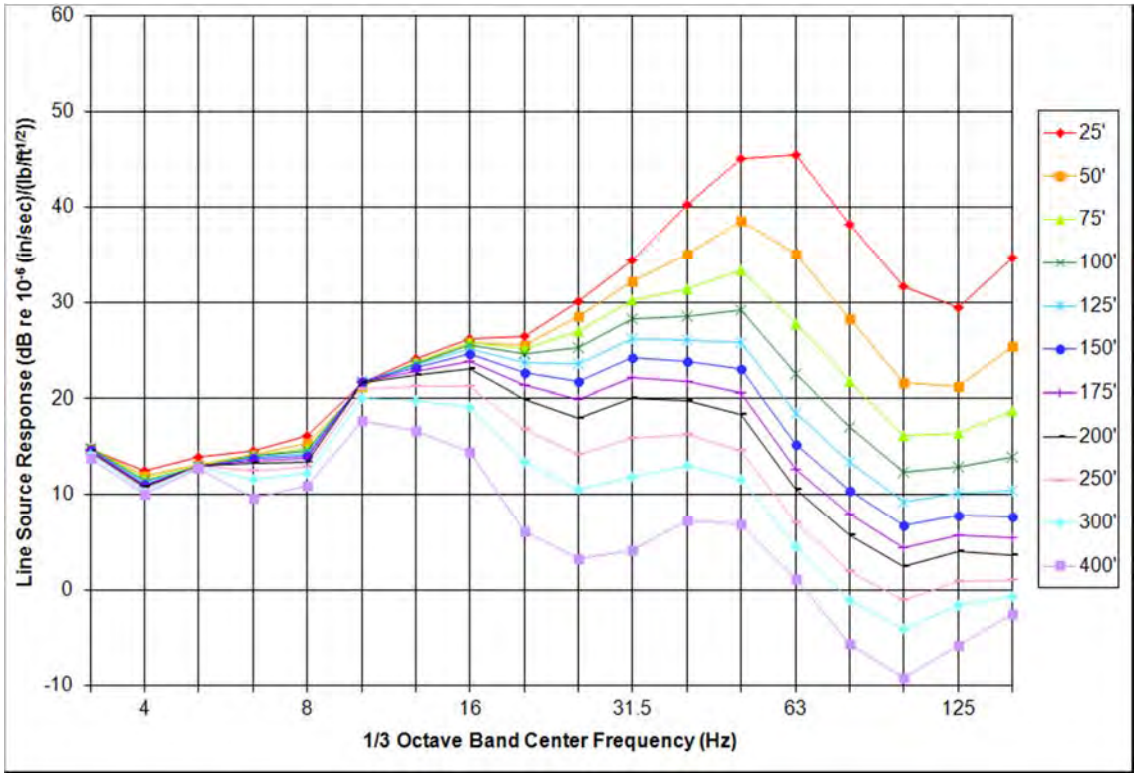


Exhibit E-1. Line Source Responses for Site SVT-01

Table E-2. SVT-02 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	38.4	28.2	44.6	24.8	20.3	13.4	10.3	-2.1	-5.4	-10.6	-5.8	-82.4	-126.2	-134.2	-80.9	-90.9	-186.5	-215.8
A_1	-55.4	-36.0	-74.2	-36.7	-24.6	-13.6	-11.9	12.5	15.7	24.5	4.1	159.9	257.3	276.1	163.2	183.1	389.4	451.8
A_2	11.8	-0.7	25.7	6.3	-1.6	-4.9	-1.3	-13.6	-11.3	-11.9	13.8	-76.1	-139.8	-153.2	-83.9	-99.1	-231.8	-270.6
A_3	0.0	2.4	-3.1	0.0	1.6	1.9	0.5	2.4	1.3	0.9	-6.5	9.1	21.4	24.0	10.6	13.8	39.9	47.4

PSR = $A_0 + A_1 \bullet \log_{10}(D) + A_2 \bullet \log_{10}^2(D) + A_3 \bullet \log_{10}^3(D)$

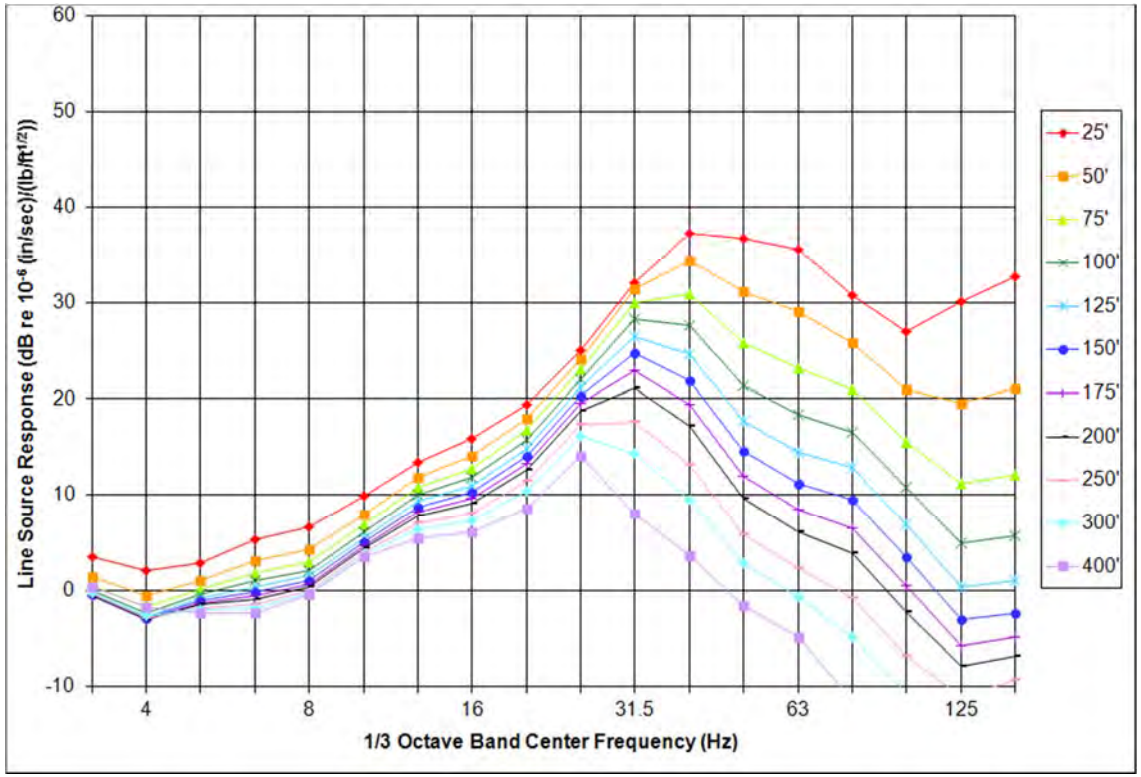


Exhibit E-2. Line Source Responses for Site SVT-02

Table E-3. SVT-03 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	-30.3	10.4	-5.2	-25.4	-22.7	-54.9	-17.2	21.2	47.5	6.3	-74.0	-235.8	-176.8	-78.0	-6.0	24.8	-17.6	22.3
A_1	36.6	-16.4	22.3	32.7	32.1	88.2	26.4	-34.1	-77.1	-8.8	123.9	411.8	328.6	193.9	105.8	61.6	116.2	77.8
A_2	-20.6	1.0	-24.3	-18.2	-20.4	-49.2	-16.7	14.5	40.1	9.6	-52.7	-210.8	-170.4	-111.5	-82.8	-66.4	-90.9	-85.1
A_3	3.4	0.5	5.5	2.7	3.4	8.3	2.8	-2.8	-8.0	-4.1	4.6	32.1	25.5	16.9	14.4	13.0	16.6	18.1

$PSR = A_0 + A_1 \cdot \log_{10}(D) + A_2 \cdot \log_{10}^2(D) + A_3 \cdot \log_{10}^3(D)$

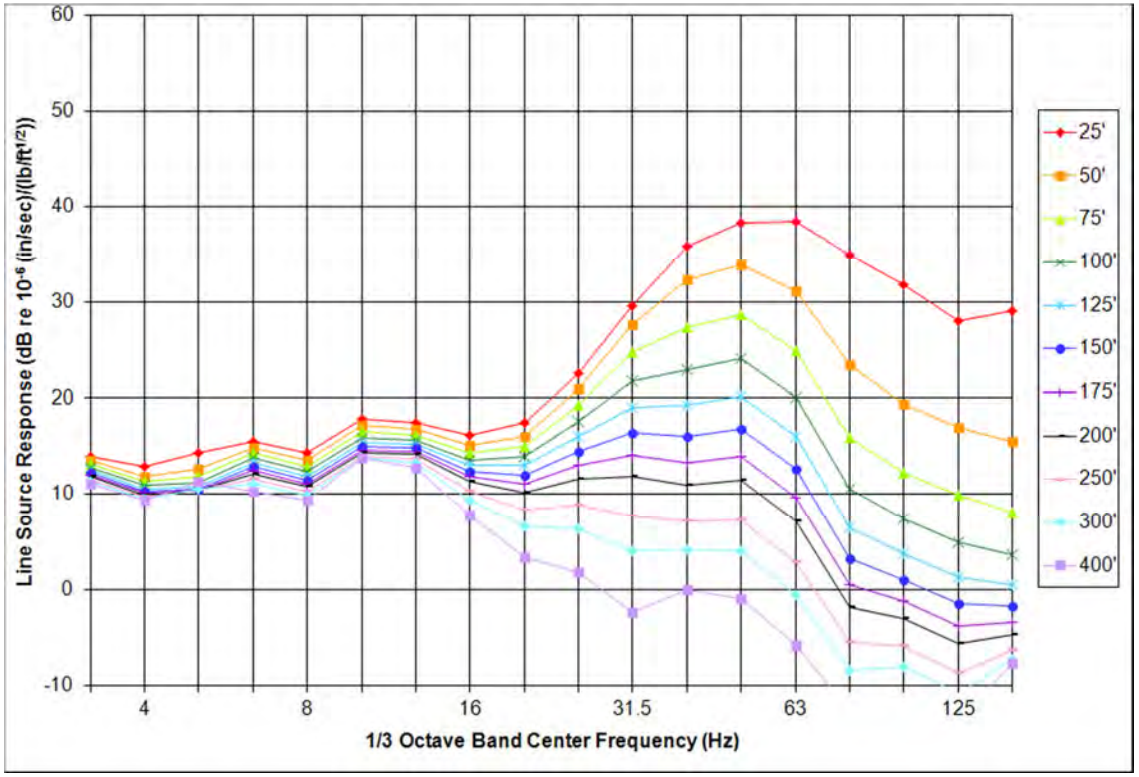


Exhibit E-3. Line Source Responses for Site SVT-03

Table E-4. SVT-04 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	105.5	-30.9	86.6	1.6	-37.3	42.1	76.7	39.9	125.7	146.0	193.9	213.3	124.4	31.2	-69.3	-141.7	-231.7	-175.7
A_1	-184.0	49.5	-130.9	10.6	66.0	-61.3	-115.8	-54.0	-188.3	-216.9	-295.0	-309.3	-156.4	33.2	202.5	296.9	441.4	378.7
A_2	92.1	-35.8	54.8	-22.5	-44.3	25.3	54.4	21.6	91.4	107.8	154.0	158.7	80.0	-33.6	-125.1	-166.5	-241.2	-222.2
A_3	-15.1	7.2	-7.9	5.8	8.2	-4.1	-9.1	-3.6	-15.6	-18.8	-27.9	-28.7	-16.2	4.8	20.5	26.3	38.6	37.9

$PSR = A_0 + A_1 \cdot \log_{10}(D) + A_2 \cdot \log_{10}^2(D) + A_3 \cdot \log_{10}^3(D)$

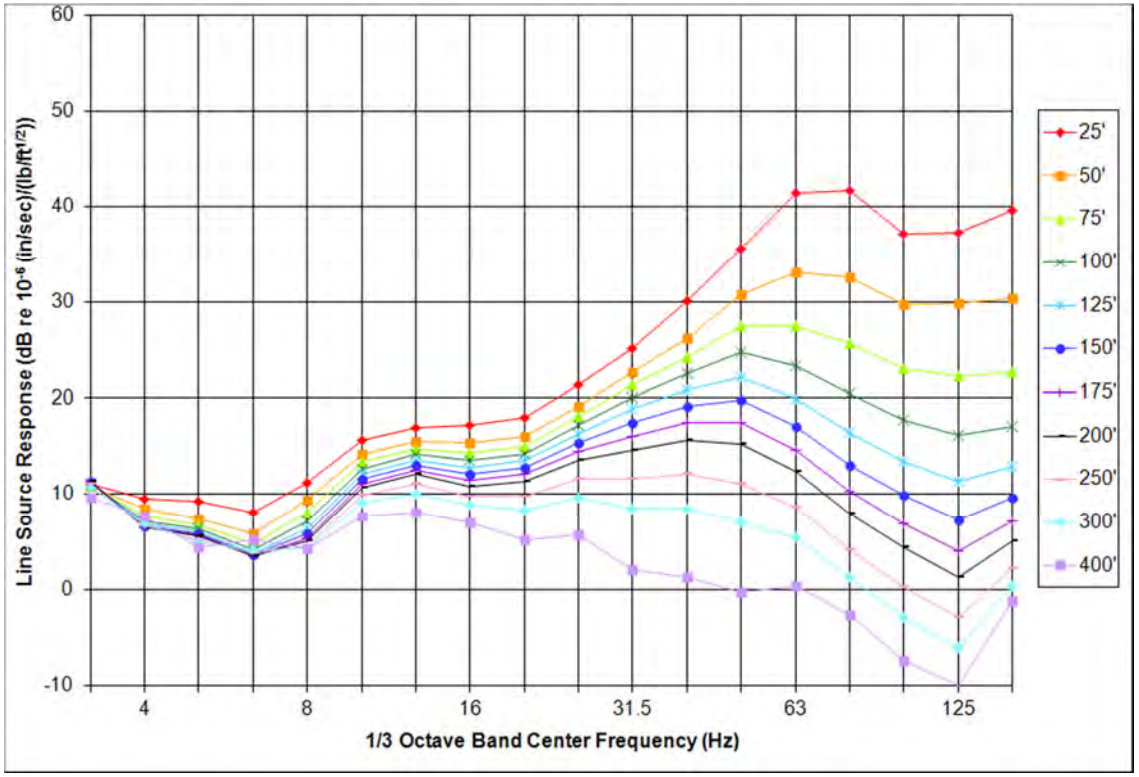


Exhibit E-4. Line Source Responses for Site SVT-04

Table E-5. SVT-05 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	-124.1	69.3	-36.6	6.0	16.8	82.5	77.0	124.8	58.7	-125.0	-283.4	-263.2	-191.1	-95.7	111.0	94.7	75.3	116.0
A_1	188.9	-109.2	92.3	-5.6	-11.0	-112.1	-76.0	-152.8	-52.2	251.0	534.0	519.5	414.0	232.4	-118.2	-91.5	-90.9	-170.0
A_2	-99.1	47.7	-67.6	-2.8	-2.7	51.1	25.5	74.2	35.8	-117.4	-279.4	-287.8	-248.1	-144.0	41.3	20.9	29.2	76.8
A_3	16.3	-7.0	13.8	0.8	0.9	-8.3	-3.2	-13.2	-9.8	14.0	43.3	47.5	43.6	24.8	-6.8	-2.0	-4.2	-13.0

$PSR = A_0 + A_1 \cdot \log_{10}(D) + A_2 \cdot \log_{10}^2(D) + A_3 \cdot \log_{10}^3(D)$

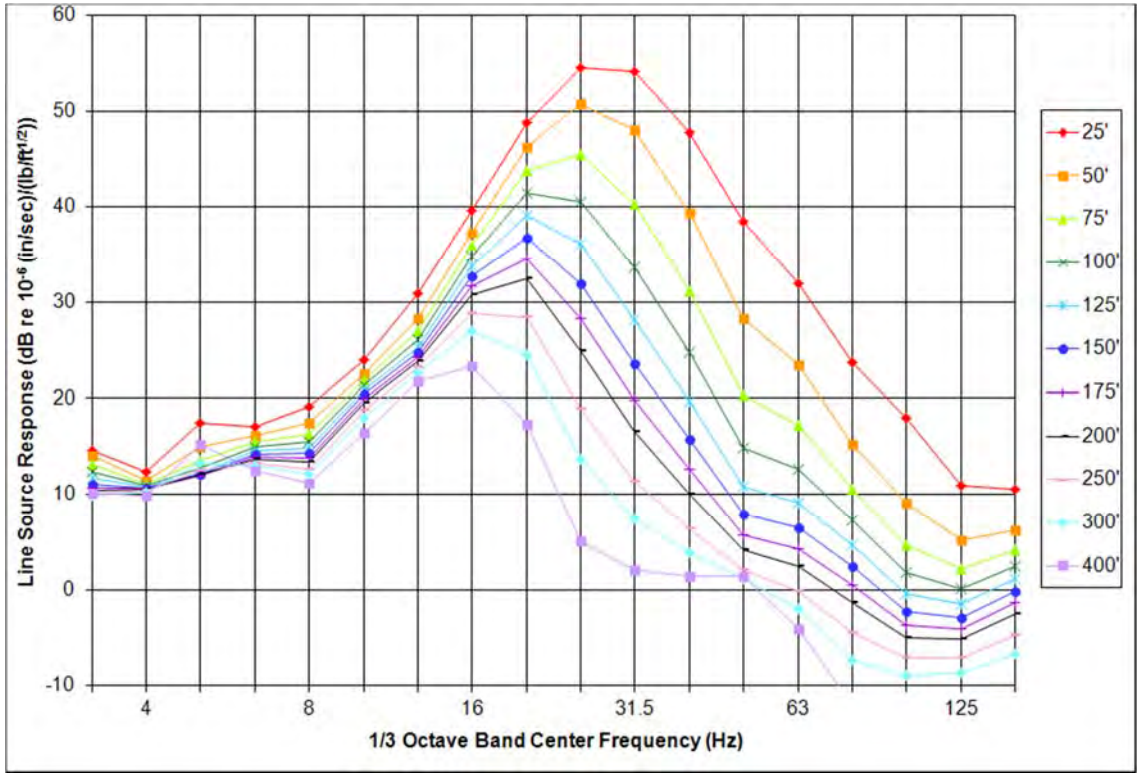


Exhibit E-5. Line Source Responses for Site SVT-05

Table E-6. SVT-06 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	39.5	3.6	74.4	44.8	81.0	102.7	132.9	157.9	136.3	59.4	147.4	129.5	88.3	85.5	120.6	199.2	221.7	89.6
A_1	-69.6	-5.3	-114.2	-57.2	-109.0	-145.7	-192.8	-234.9	-201.8	-63.0	-207.9	-164.5	-82.6	-72.1	-122.2	-272.4	-323.4	-104.1
A_2	28.9	-6.1	50.8	16.8	42.6	64.8	93.4	122.6	112.2	36.4	117.4	90.3	40.5	30.6	49.6	136.3	170.7	54.8
A_3	-4.1	2.0	-8.0	-1.7	-5.7	-9.9	-15.6	-21.9	-21.6	-8.5	-23.5	-18.6	-9.4	-7.2	-9.2	-25.2	-32.5	-12.9

$PSR = A_0 + A_1 \cdot \log_{10}(D) + A_2 \cdot \log_{10}^2(D) + A_3 \cdot \log_{10}^3(D)$

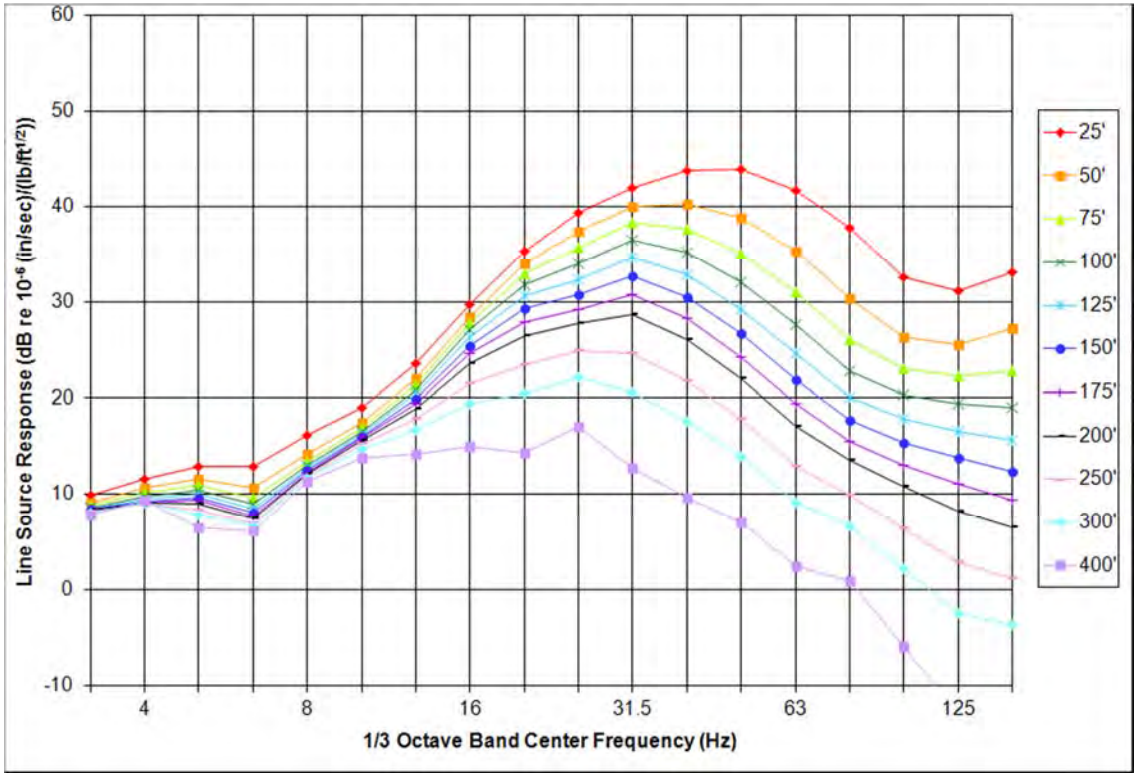


Exhibit E-6. Line Source Responses for Site SVT-06

Table E-7. SVT-07 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	122.8	145.5	136.3	102.9	117.1	198.0	222.1	226.2	191.0	114.0	57.2	-72.6	25.7	62.1	145.5	127.3	137.9	165.1
A_1	-194.9	-237.0	-218.1	-151.2	-170.5	-301.5	-310.2	-248.3	-179.3	-94.9	-29.1	179.7	4.4	-44.8	-153.4	-120.9	-138.4	-168.1
A_2	87.4	115.6	104.4	65.2	76.9	147.6	140.2	86.8	51.0	30.8	12.4	-98.5	-7.0	7.2	45.2	23.2	28.9	37.0
A_3	-13.1	-18.9	-17.0	-9.9	-12.1	-24.4	-21.6	-10.1	-4.6	-5.4	-5.3	13.8	-1.1	-1.5	-4.8	0.0	0.0	0.0

PSR = $A_0 + A_1 \cdot \log_{10}(D) + A_2 \cdot \log_{10}^2(D) + A_3 \cdot \log_{10}^3(D)$

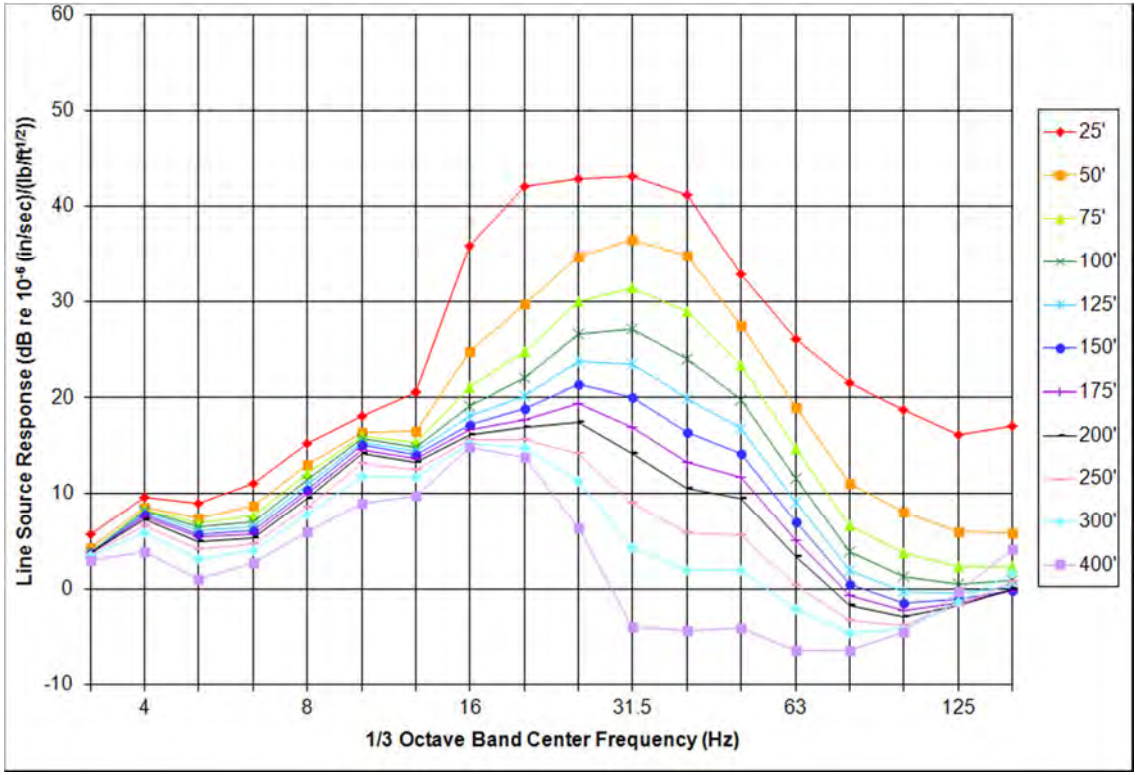


Exhibit E-7. Line Source Responses for Site SVT-07

Table E-8. SVT-08 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	12.0	-31.3	-15.0	-50.4	-39.5	-24.3	-41.0	131.8	282.3	285.7	229.8	176.8	230.0	77.0	-33.6	9.2	51.7	43.6
A_1	-40.9	39.7	30.3	95.4	88.9	71.2	95.8	-197.6	-448.0	-448.7	-341.5	-237.5	-309.4	-43.3	159.4	104.3	33.0	39.6
A_2	14.8	-31.3	-33.0	-68.6	-68.8	-58.5	-65.2	97.7	235.0	238.5	183.3	127.0	159.5	10.5	-111.0	-94.6	-60.2	-65.7
A_3	-1.9	6.2	7.3	13.4	14.1	12.0	12.1	-16.9	-41.3	-42.8	-34.5	-25.3	-30.4	-4.1	18.7	18.1	13.1	15.0

PSR = $A_0 + A_1 \cdot \log_{10}(D) + A_2 \cdot \log_{10}^2(D) + A_3 \cdot \log_{10}^3(D)$

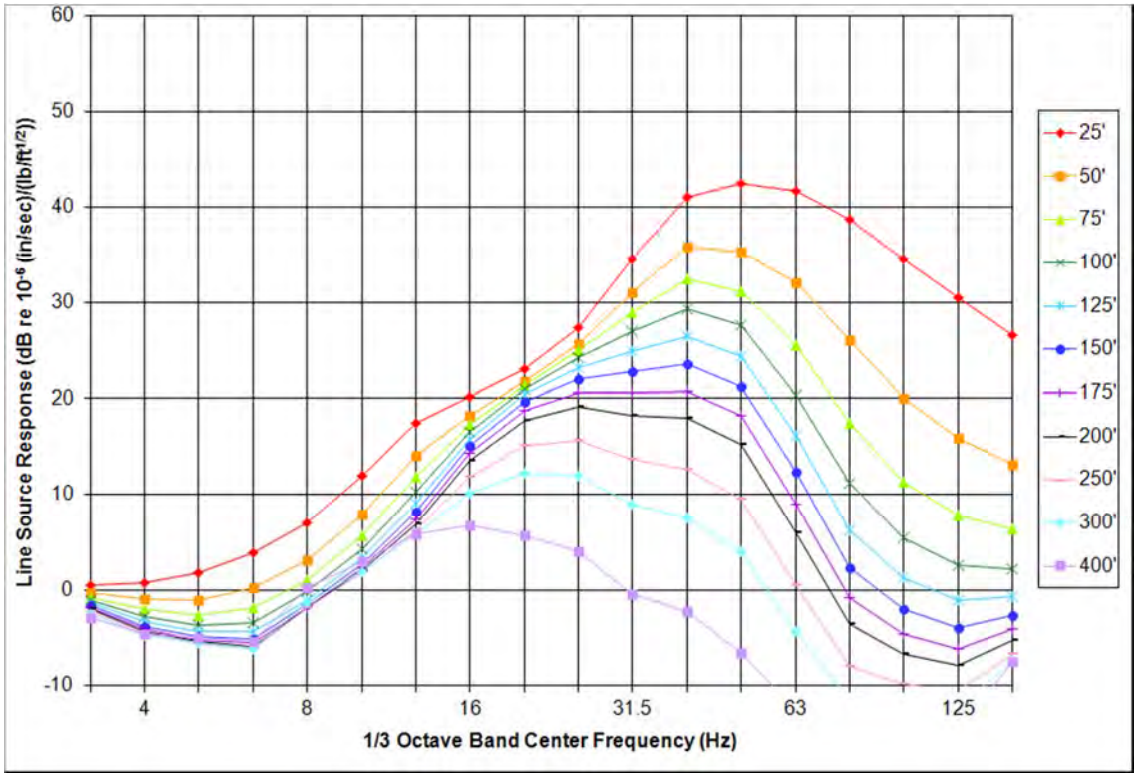


Exhibit E-8. Line Source Responses for Site SVT-08

Table E-9. SVT-09 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	332.7	174.9	106.1	93.2	-28.8	19.8	-69.5	-7.2	-15.8	35.3	93.7	41.6	31.7	-26.5	-121.4	-176.2	0.7	86.9
A_1	-521.3	-274.2	-160.0	-161.7	39.1	-34.4	117.7	12.4	30.3	-49.8	-140.6	-40.8	-27.2	79.2	250.1	326.9	73.0	-50.3
A_2	257.9	131.0	68.8	82.6	-26.6	9.4	-71.8	-12.3	-19.4	22.0	69.6	11.3	12.9	-41.2	-131.9	-161.5	-46.4	6.5
A_3	-42.6	-21.0	-9.7	-14.2	5.1	-0.5	13.2	2.3	3.4	-3.9	-12.2	-1.6	-4.1	4.6	19.5	22.0	5.4	-1.5

PSR = $A_0 + A_1 \cdot \log_{10}(D) + A_2 \cdot \log_{10}^2(D) + A_3 \cdot \log_{10}^3(D)$

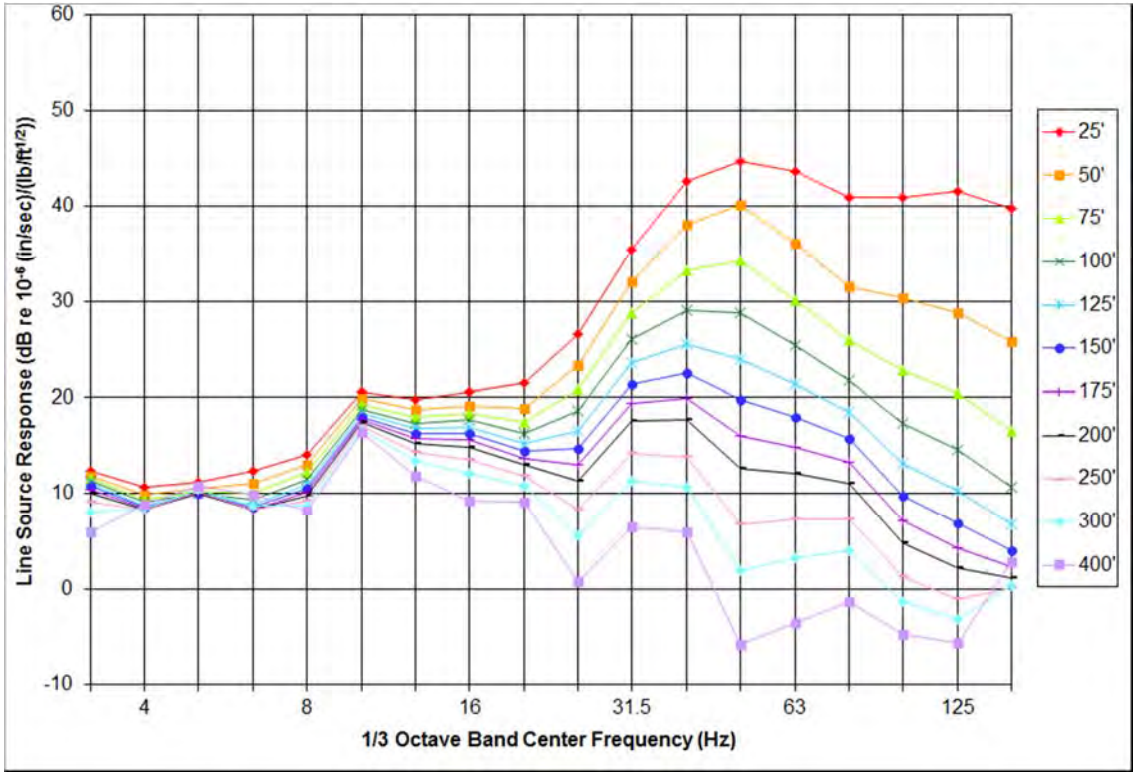


Exhibit E-9. Line Source Responses for Site SVT-09

Table E-10. SVT-10 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	374.5	204.4	2.6	-6.8	-22.8	-119.0	-32.4	89.7	149.2	113.9	102.9	-61.5	-151.7	-204.5	-366.2	-477.6	-385.6	-217.0
A_1	-557.1	-314.9	19.1	5.3	21.4	177.9	47.7	-140.2	-227.2	-140.8	-103.2	169.9	314.6	414.8	691.0	875.8	754.5	467.6
A_2	262.4	151.0	-19.4	-1.2	-7.4	-87.0	-22.3	69.9	115.6	66.6	46.6	-94.9	-167.3	-227.1	-381.0	-488.7	-442.7	-291.5
A_3	-41.1	-24.3	3.8	-0.4	0.4	13.2	2.6	-12.0	-20.0	-11.8	-9.1	14.0	25.2	36.2	63.7	84.2	79.2	53.4

$PSR = A_0 + A_1 \cdot \log_{10}(D) + A_2 \cdot \log_{10}^2(D) + A_3 \cdot \log_{10}^3(D)$

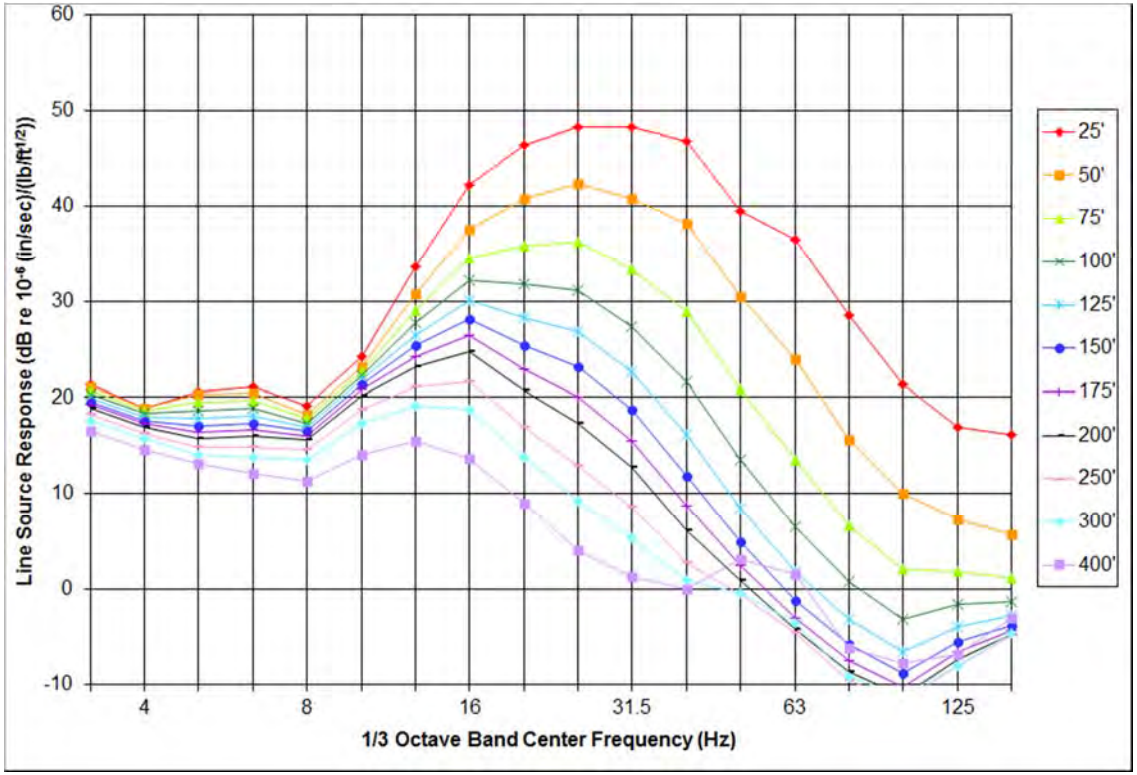


Exhibit E-10. Line Source Responses for Site SVT-10

Table E-11. SVT-11 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	289.2	276.8	203.8	141.2	40.5	34.5	71.8	62.2	92.5	76.8	96.5	121.5	272.6	149.3	75.8	55.0	-48.3	30.6
A_1	-442.4	-432.8	-326.5	-238.0	-66.0	-50.3	-100.2	-71.5	-124.5	-90.6	-115.7	-161.7	-404.0	-187.7	-40.5	-13.3	167.3	25.0
A_2	207.0	208.5	159.4	120.6	27.1	18.1	40.3	21.8	54.5	36.6	49.1	81.6	211.2	97.0	10.7	2.4	-101.9	-25.9
A_3	-31.9	-33.0	-25.5	-20.2	-3.9	-2.4	-5.6	-2.1	-8.2	-5.3	-7.5	-14.7	-37.3	-18.6	-3.1	-3.2	16.1	3.1

PSR = $A_0 + A_1 \cdot \log_{10}(D) + A_2 \cdot \log_{10}^2(D) + A_3 \cdot \log_{10}^3(D)$

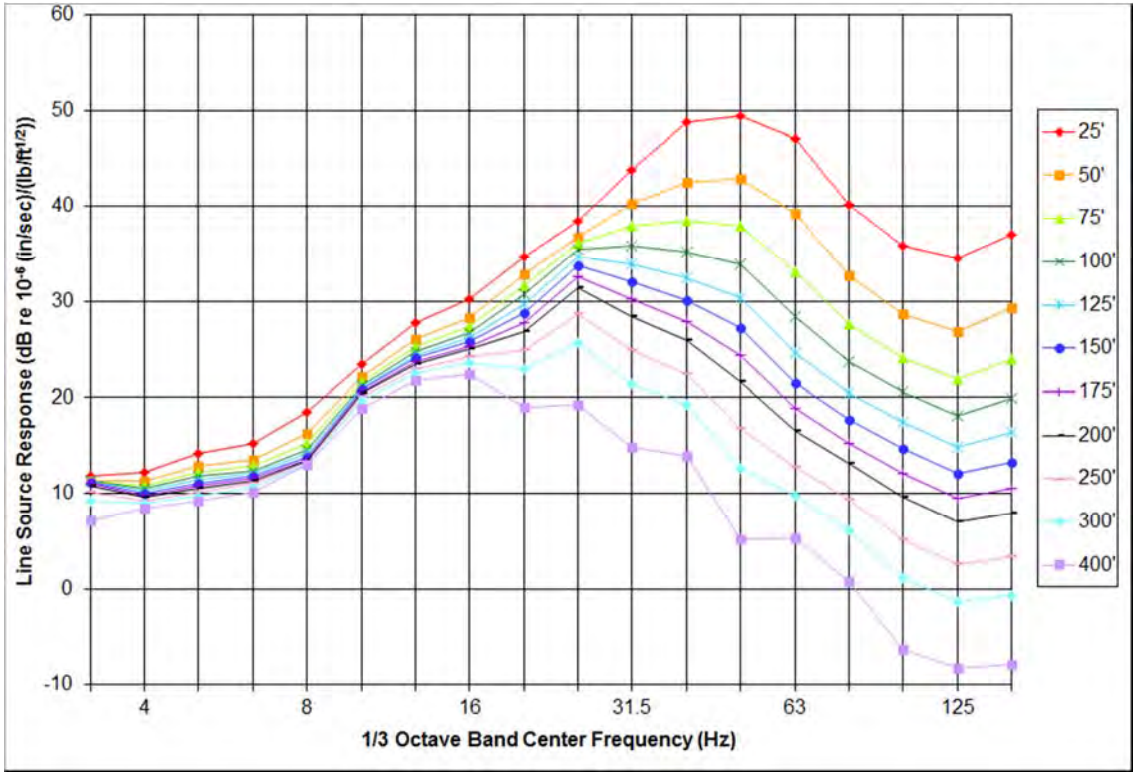


Exhibit E-11. Line Source Responses for Site SVT-11

Table E-12. SVT-12 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	210.1	173.3	54.4	132.9	22.3	27.5	78.4	172.7	116.0	72.2	131.0	14.0	75.0	178.2	135.1	23.4	46.4	113.1
A_1	-301.8	-258.5	-99.6	-236.0	-52.0	-34.5	-128.8	-281.3	-184.8	-93.0	-189.5	17.4	-85.3	-239.0	-169.2	23.2	-8.5	-128.6
A_2	132.9	113.5	49.5	125.4	26.4	7.9	64.0	146.3	97.3	44.4	102.9	-7.7	53.5	129.3	95.3	-10.5	-4.1	60.8
A_3	-19.4	-16.4	-8.1	-21.6	-4.4	-0.1	-10.7	-25.3	-17.2	-7.8	-19.6	-1.0	-12.8	-25.1	-20.2	-2.0	-1.3	-12.7

PSR = $A_0 + A_1 \cdot \log_{10}(D) + A_2 \cdot \log_{10}^2(D) + A_3 \cdot \log_{10}^3(D)$

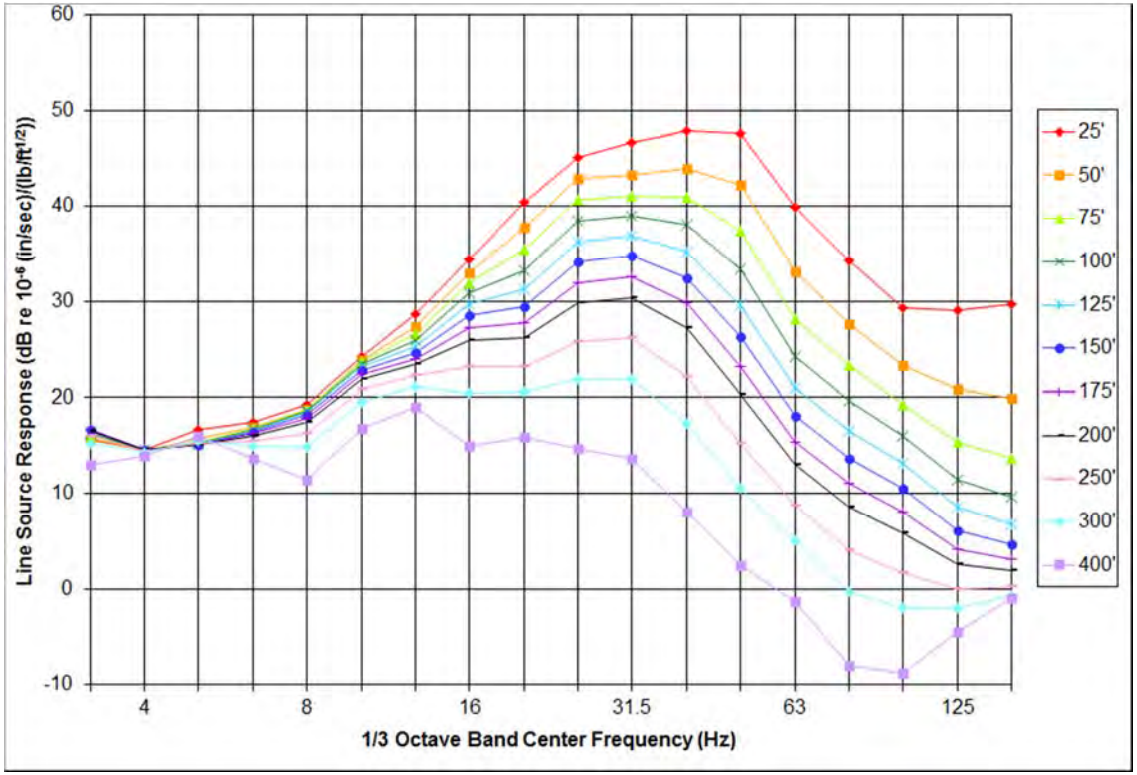


Exhibit E-12. Line Source Responses for Site SVT-12

Table E-13. SVT-13 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	260.3	290.9	310.2	276.3	140.1	34.8	-1.7	43.0	72.4	119.8	255.1	340.3	507.2	477.4	249.2	187.6	76.7	-48.2
A_1	-339.0	-400.2	-458.2	-427.6	-211.8	-39.1	7.6	-61.8	-115.5	-180.3	-406.7	-552.0	-823.8	-738.5	-347.2	-237.1	-52.5	161.7
A_2	141.3	174.2	213.9	208.7	93.5	3.7	-14.2	23.9	58.1	87.6	212.4	299.0	448.4	393.6	183.3	122.4	22.1	-101.8
A_3	-20.3	-25.3	-33.0	-33.6	-13.4	1.5	3.5	-3.4	-9.9	-14.4	-36.8	-53.9	-80.7	-70.3	-34.2	-24.0	-6.8	16.3

PSR = $A_0 + A_1 \cdot \log_{10}(D) + A_2 \cdot \log_{10}^2(D) + A_3 \cdot \log_{10}^3(D)$

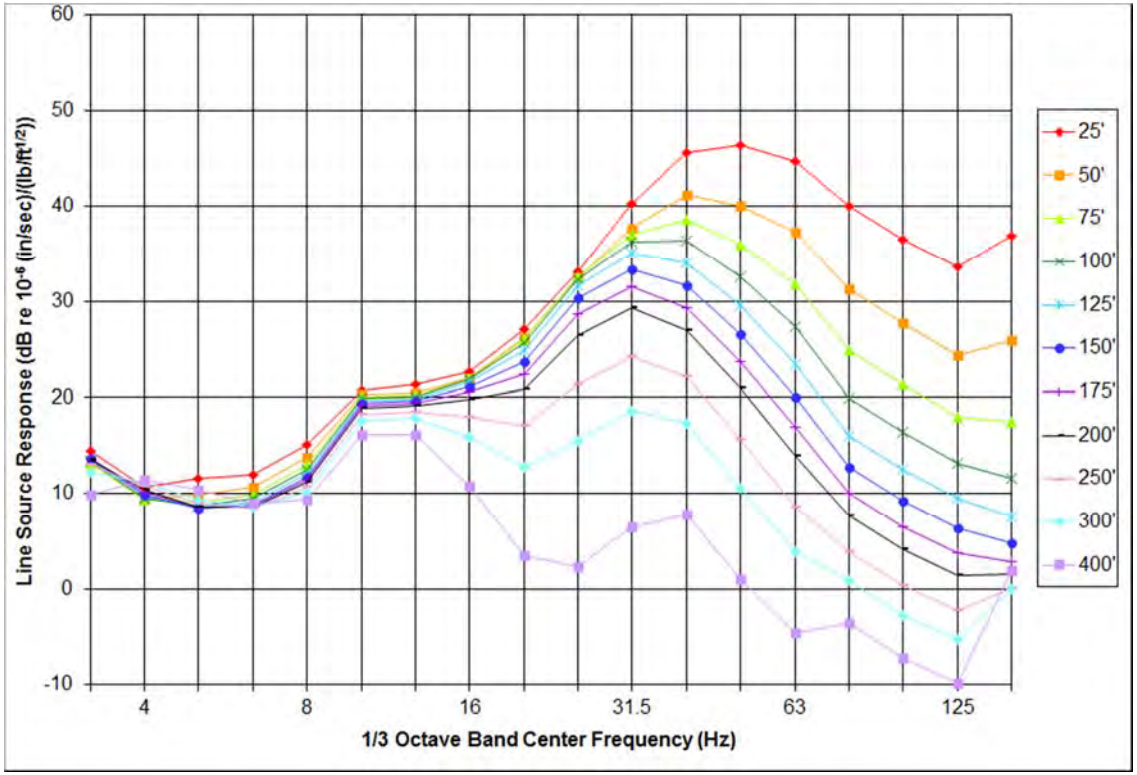


Exhibit E-13. Line Source Responses for Site SVT-13

Table E-14. SVT-14 Regression Coefficients from Measured Transfer Mobilities

	1/3 Octave Band Center Frequency (Hz)																	
Coeff.	**3.15**	**4**	**5**	**6.3**	**8**	**10**	**12.5**	**16**	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
A_0	264.3	360.7	365.7	388.7	366.6	452.3	399.3	225.9	180.3	151.5	168.8	77.4	47.5	58.9	83.3	79.8	25.4	53.7
A_1	-291.3	-478.2	-514.5	-583.9	-562.6	-711.7	-621.0	-328.6	-271.7	-235.6	-281.7	-106.3	8.8	48.9	13.1	5.4	90.2	19.8
A_2	81.9	193.0	225.8	277.4	271.6	355.7	306.3	151.2	135.1	124.5	159.9	60.7	-26.0	-69.7	-47.1	-36.7	-85.3	-40.2
A_3	-4.0	-24.6	-32.1	-43.1	-42.9	-58.6	-50.0	-23.2	-23.0	-22.7	-30.7	-13.3	5.1	15.6	10.4	7.2	16.5	7.4

PSR = $A_0 + A_1 \cdot \log_{10}(D) + A_2 \cdot \log_{10}^2(D) + A_3 \cdot \log_{10}^3(D)$

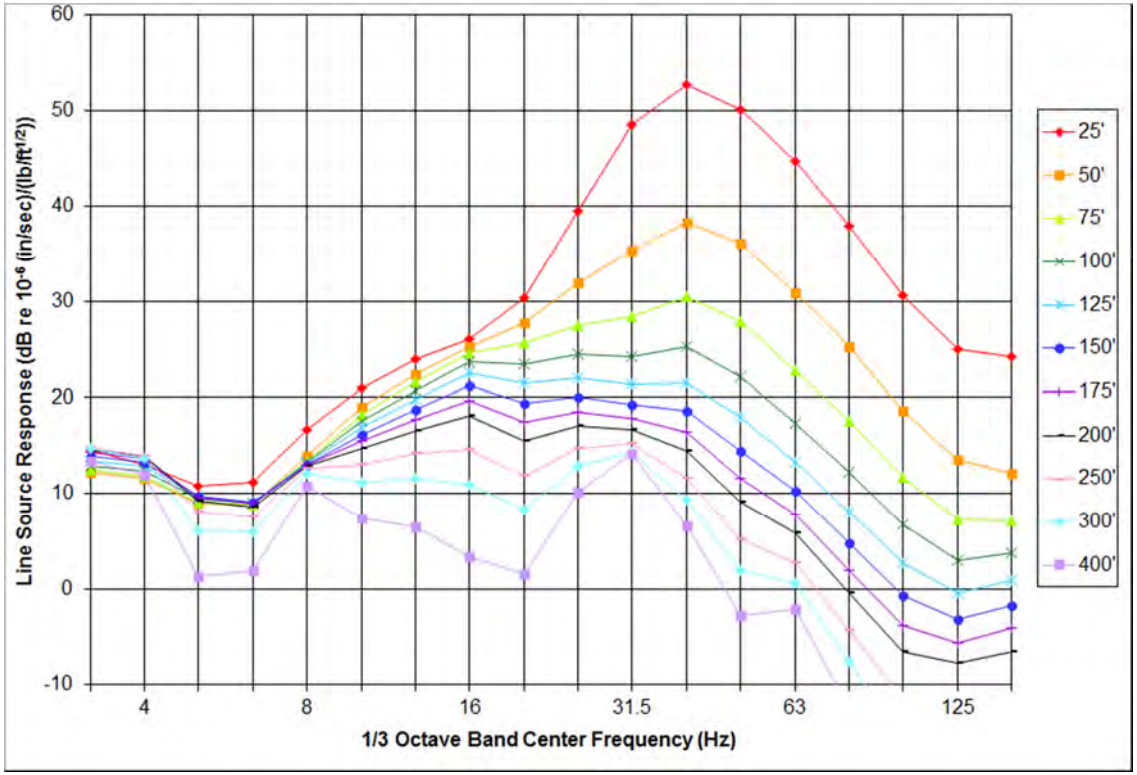
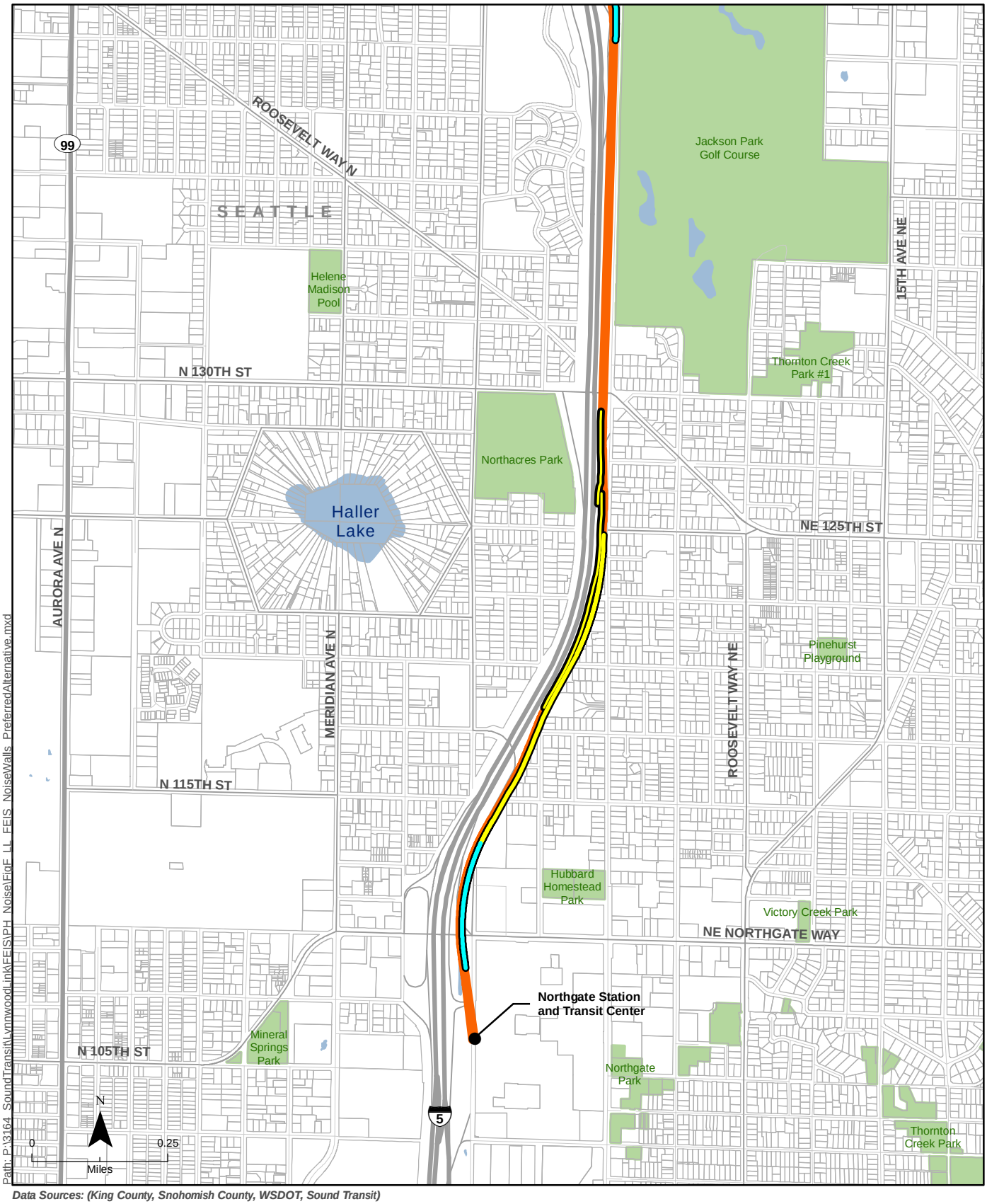


Exhibit E-14. Line Source Responses for Site SVT-14

ATTACHMENT F

Maps of Noise Wall Mitigation Locations



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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Preferred Alternative Noise Walls

- At Grade Noise Wall
- Aerial Noise Wall
- Preferred Alternative (PA)
- Preferred Alternative Station Location

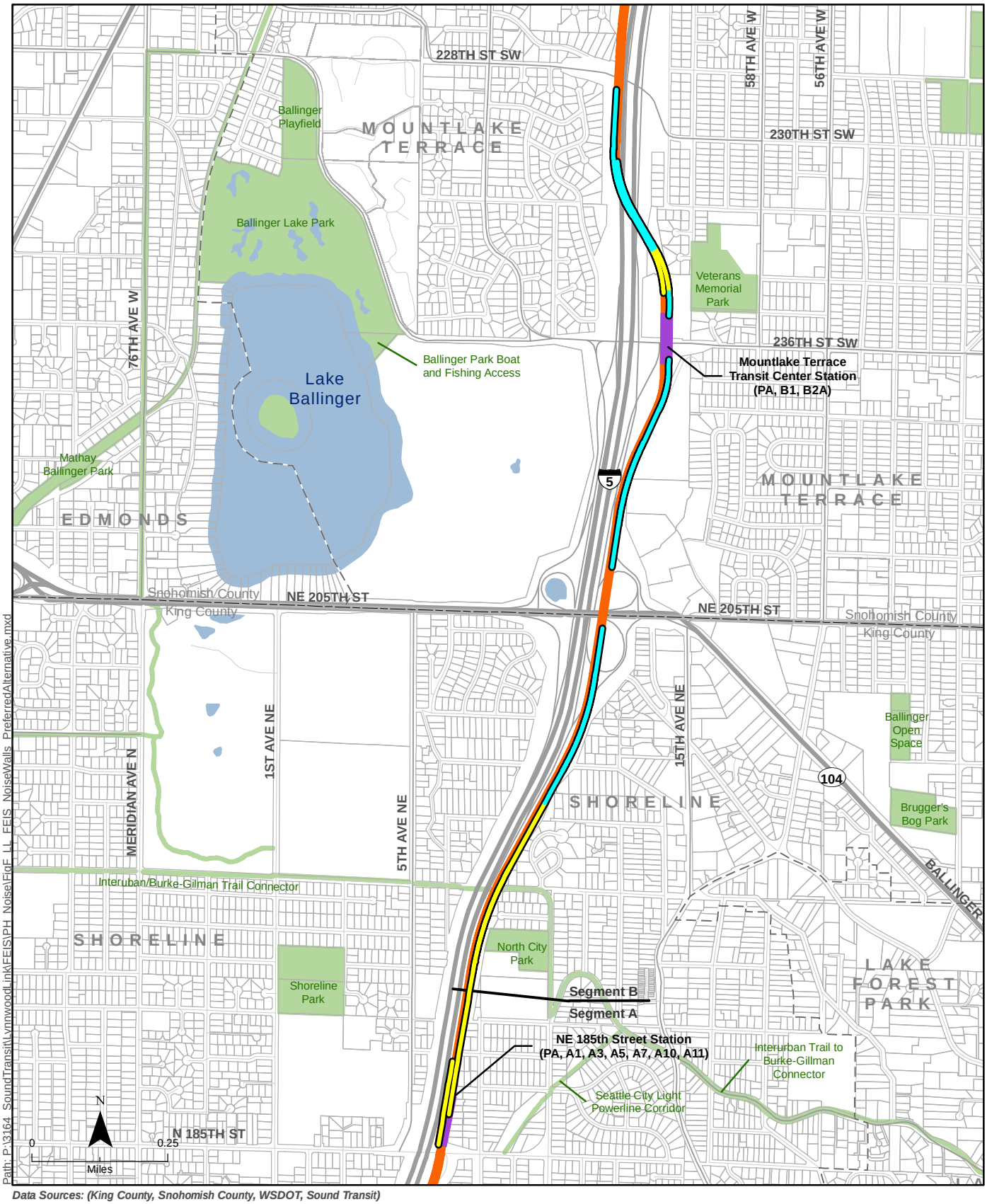
Lynnwood Link Extension

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Preferred Alternative
Noise Walls

At Grade Noise Wall
Aerial Noise Wall
Preferred Alternative (PA)
Preferred Alternative Station Location

Lynnwood Link Extension

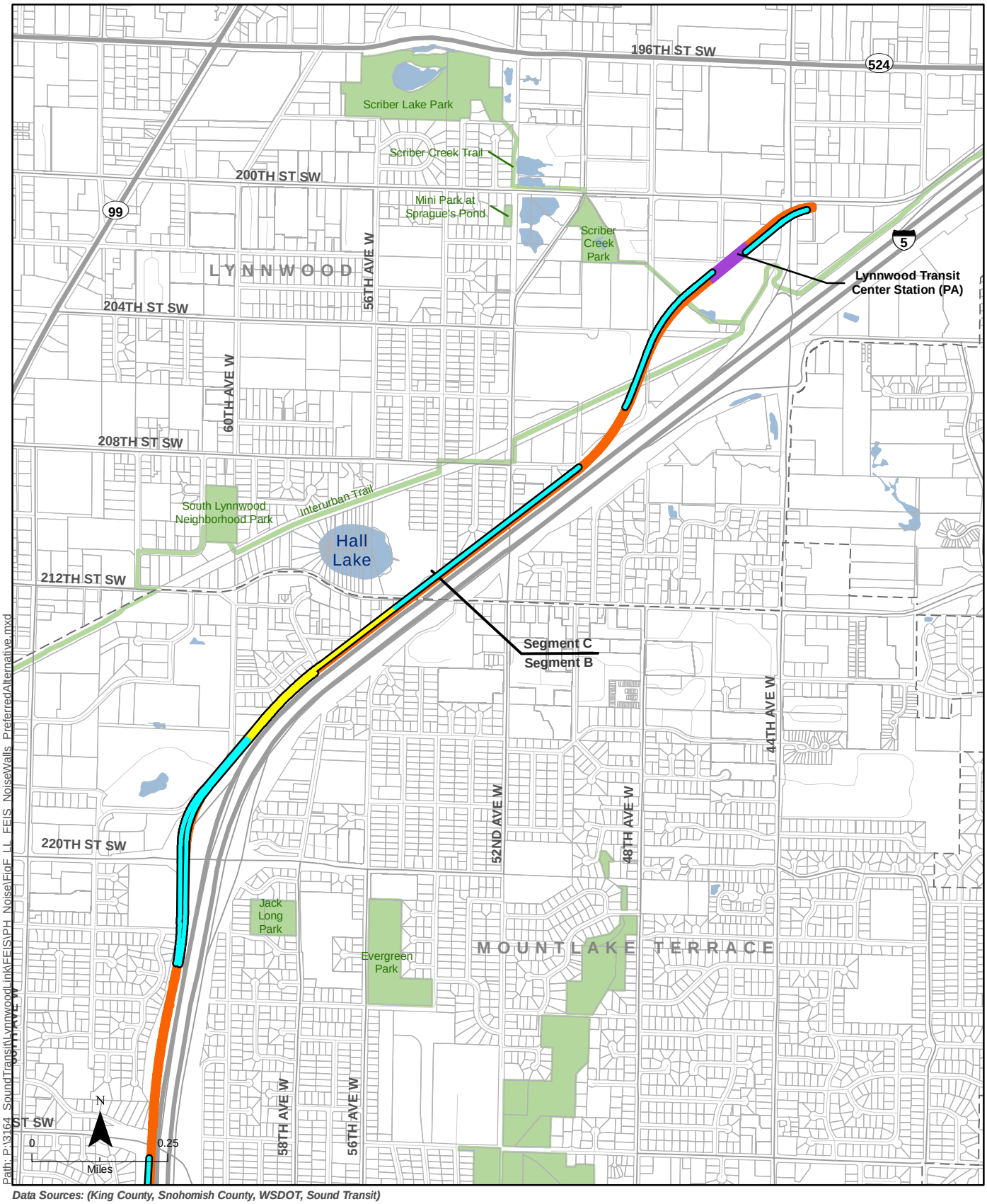


Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Preferred Alternative
Noise Walls

At Grade Noise Wall
Aerial Noise Wall
Preferred Alternative (PA)
Preferred Alternative Station Location

Lynnwood Link Extension



Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Preferred Alternative
Noise Walls

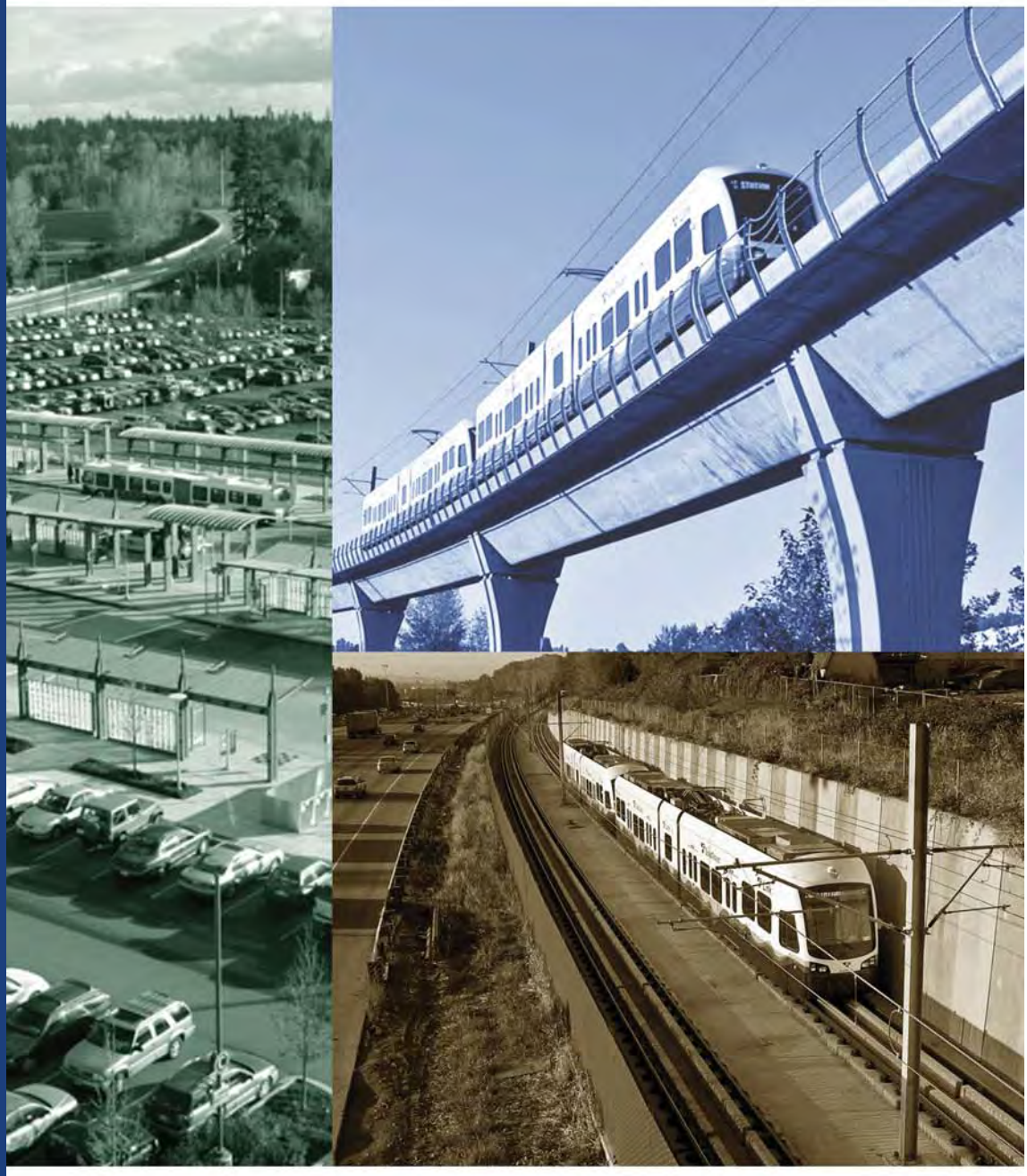
At Grade Noise Wall
Aerial Noise Wall
Preferred Alternative (PA)
Preferred Alternative Station Location

Lynnwood Link Extension

LYNNWOOD LINK EXTENSION

FINAL ENVIRONMENTAL IMPACT STATEMENT

Transportation Technical Report



APRIL 2015

SOUNDTRANSIT

U.S. Department of Transportation
Federal Transit Administration

SOUNDTRANSIT
RIDE THE WAVE

Lynnwood Link Extension

Technical Report

Transportation

401 South Jackson Street
Seattle, WA98104-2826

April 2015

North Corridor Transit Partners

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Appendix A: Transportation Technical Analysis Methodology

Appendix B: Future Transportation Improvement Assumptions for the No Build Alternative

Appendix C: Detailed LOS Analysis Reports

Appendix D: I-5 Collision Data

Acronyms and Abbreviations

acc/MEV	accidents per million entering vehicles
ADA	Americans with Disabilities Act
BNSF	Burlington Northern Santa Fe
CCTV	closed-circuit television
CFR	Code of Federal Regulations
EIS	Environmental Impact Statement
FGTS	Washington State Freight and Goods Transportation System
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
CAL	collision analysis location
HOV	high-occupancy vehicle
HSS	Highways of Statewide Significance
I-405	Interstate 405
I-5	Interstate 5
LOS	level of service
mph	miles per hour
NEPA	National Environmental Policy Act
PSRC	Puget Sound Regional Council
PUD	Public Utility District
RCW	Revised Code of Washington
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
Sea-Tac Airport	Seattle-Tacoma International Airport
SEPA	State Environmental Policy Act
Sound Transit	Central Puget Sound Regional Transit Authority
SR	State Route
ST2	Sound Transit 2
TCQSM	Transit Capacity and Quality of Service Manual
TCRP	Transit Cooperative Research Program
USC	United States Code
v/c ratio	volume-to-capacity ratio
VHT	vehicle hours of travel
VMT	vehicle miles of travel
WSDOT	Washington State Department of Transportation

1 INTRODUCTION

1.1 Project Background

The Central Puget Sound Regional Transit Authority (Sound Transit) intends to extend the Link light rail system from the planned station at the Northgate Transit Center in Seattle to the Lynnwood Transit Center in Lynnwood in southern Snohomish County, as shown in Figure 1-1. This project is currently known as the Lynnwood Link Extension. As part of the federal regulations and guidelines leading to the application for New Starts grant funds, Sound Transit conducted an Alternatives Analysis (Sound Transit 2011a) to support the evaluation of several options for addressing mobility needs in the project corridor. Sound Transit is conducting analysis and preparing a National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) Final Environmental Impact Statement (EIS) for the project.

The project corridor generally follows Interstate 5 (I-5) between Northgate and Lynnwood. While it is the major north-south route through the state of Washington, I-5 also serves a large commuter market between Snohomish and King counties and the city of Seattle. The corridor falls within an urban area that is constrained by Puget Sound to the west and Lake Washington to the east. There is a large north-to-south commuter market in this area that travels between the communities in Snohomish and King counties, toward Seattle or north to Everett, where many of the region's jobs are located.

The Lynnwood Link Extension is an element of Sound Transit's adopted Long-Range Plan and is part of the Sound Transit 2 (ST2) Plan for regional transit investments approved by voters in 2008. The project is also in the region's Metropolitan Transportation Plan (Puget Sound Regional Council's *Transportation 2040*). All of these plans anticipate the eventual extension of mass transit service north to Everett, and connecting to a regional system of rail and bus service serving other markets to the south, such as the University of Washington, Capitol Hill, downtown Seattle, downtown Bellevue, Redmond, SeaTac, and Federal Way.

The Final EIS phase for the Lynnwood Link Extension is building on the results of the Alternatives Analysis that Sound Transit performed in 2010 and 2011, and the findings from the Draft EIS in 2012 and 2013. The Alternatives Analysis developed and evaluated a range of alternatives to improve transit in the corridor, and resulted in an *Alternatives Analysis Report and SEPA Addendum* that identified the most promising alternatives for more detailed study and analysis (Sound Transit 2011a). From September 30, 2011, to October 31, 2011, Sound Transit and the Federal Transit Administration (FTA) conducted public scoping for the EIS. Based on the results of the scoping process, in December 2011 the Sound Transit Board of Directors determined that the alternatives to be further developed and studied in the

EIS would be limited to light rail, and the general alignment would be along I-5 (Sound Transit 2011b). For the I-5 corridor alternative concepts, the Draft EIS evaluated a range of potential alternatives in three segments from Northgate to Lynnwood. Sound Transit and FTA published a Draft EIS for the project on July 26, 2013, with a 60-day comment period that ended on September 23, 2013. After the end of the comment period, which included four open house events with public hearings, Sound Transit reviewed the public comments. The Sound Transit Board then reviewed the alternatives, the Draft EIS and the public comments before approving Motion M2013-96, identifying a Preferred Alternative for the Final EIS. Motion M2013-96 also directed Sound Transit to further evaluate potential modifications and options for the Preferred Alternative and other alternatives.

Figure 1-1. Lynnwood Link Extension Vicinity Map

1.2 Purpose of Technical Report

This technical report presents detailed findings from the technical analysis of potential transportation impacts of the Lynnwood Link Extension. A summary of the information in this report is provided in Chapter 3, Transportation Impacts and Mitigation, of the Lynnwood Link Extension Final EIS.

1.3 Organization of Technical Report

In addition to this Chapter 1, Introduction, the report comprises the following chapters:

- Chapter 2, Methodology and Assumptions, summarizes the analysis methods used to assess the alternatives in this report.
- Chapter 3, Relevant Plans, Policies, and Coordination, provides information regarding guiding regulations, plans, and policies and agency participation in the planning and analysis process.
- Chapter 4, Affected Environment, discusses current transportation conditions.
- Chapter 5, Long-Term Impacts, describes anticipated impacts in terms of the following:
  - Regional Context and Travel Patterns
  - Transit
  - Freeway Operations
  - Arterials and Local Streets
  - Nonmotorized Facilities
  - Freight Mobility and Access
  - Parking
  - Safety
- Chapter 6, Construction Impacts, discusses expected impacts due to project construction activities.
- Chapter 7, Indirect and Secondary Impacts, describes the project effects that may occur later in time or some distance from the project.
- Chapter 8, Cumulative Impacts, describes the potential additional cumulative transportation effects of other projects that were not included in the traffic and ridership modeling.
- Chapter 9, Potential Mitigation Measures, describes the potential measures that could be implemented to mitigate effects of the project.

2 METHODOLOGY AND ASSUMPTIONS

The methodology and assumptions used to analyze the transportation impacts of the Lynnwood Link Extension are presented in detail in the *Transportation Technical Analysis Methodology Memorandum* (Sound Transit 2012), and subsequently refined in the *Transportation Technical Analysis Methodology Addendum* for the Final EIS (Sound Transit 2014) to reflect comments made on the Draft EIS analysis. Both of these documents are provided in Appendix A of this technical report. These documents provide the following information.

- Guiding regulations, plans, and/or policies that guide the transportation analysis
- A list of lead and cooperating agencies
- Data needs and sources, such as traffic volumes, parking supply and utilization, pedestrian and bicycle facilities, accident data, and transit service characteristics
- Study area and area of effect, including intersections and roadway segments studied
- Analysis tools used for travel demand forecasting and traffic operations analysis
- Assessment methods and analysis thresholds used for analysis of regional transit, regional traffic, corridor traffic, local and sub-regional bus service, intersection operations, freeway and ramp operations, property access and local circulation, parking, nonmotorized facilities and modes, freight, construction, and safety
- Methodology for development of detailed traffic volumes
- Assessment methods for indirect and cumulative effects
- Transportation data developed for use by other disciplines
- Development of mitigation measures

3 RELEVANT PLANS, POLICIES, AND COORDINATION

3.1 Guiding Regulations, Plans, and/or Policies

The transportation analysis is guided by the following laws and regulations:

- NEPA
- SEPA
- Moving Ahead for Progress in the 21st Century Act (MAP-21), Public Law 112-141
- Code of Federal Regulations (CFR) 23 Part 450 (implementing United States Code [USC] 23 Section 111, which requires the U.S. Secretary of Transportation to approve access revisions to the Interstate System)
- CFR 23 Part 625 (Design Standards for Highways)
- CFR 23 Part 710 (Right-Of-Way and Real Estate)
- CFR 23 Part 771 (Environmental Impact and Related Procedures)
- CFR 23 Part 810 (Mass Transit and Special Use Highway Projects)
- Washington State Growth Management Act (Revised Code of Washington [RCW] 36,70A.070)
- In addition to the laws and regulations identified above, the analysis of local transportation impacts is guided by the policy direction established in the numerous plans or policy documents adopted within the project corridor. These include, but are not limited to:
- ST2 Plan, approved November 4, 2008
- Transit-Oriented Development (TOD) Program Strategic Plan Update (Sound Transit, April 24, 2014)
- Strategic Plan for Public Transportation 2011–2021 (King County Department of Transportation Metro Transit Division, July 11, 2011)
- 2014–2019 Transit Development Plan (Community Transit, May 1, 2014 Final)
- Community Transit Long-Range Transit Plan (Community Transit, February 4, 2011)
- Washington Transportation Plan 2007–2026 (Washington State Department of Transportation [WSDOT], November 14, 2006)
- WSDOT Design Manual (M.3082.02) (January, 2014)
- WSDOT Development Service Manual (M.3007.00) (September, 2005)

- Puget Sound Regional Council (PSRC) Transportation 2040-Update Report: Toward a Sustainable Transportation System (Spring 2014)
- PSRC Transit Supportive Toolkit (December 2013)
- Comprehensive and/or Transportation Plans for the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood, as well as King County and Snohomish County
- 6-Year Capital Improvement Program for the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood, as well as King County and Snohomish County

3.2 Agency Coordination

The transportation planning and analysis process has involved local jurisdictions, state agencies, federal agencies, transit agencies, PSRC, and other interested parties.

3.2.1 NEPA Lead Agency

The FTA is the lead agency for development of the Final EIS in accordance with NEPA regulations.

3.2.2 Cooperating and Participating Agencies

For the development of the Final EIS and this Transportation Technical Report, Sound Transit staff and consultants met with and/or coordinated with staff planners and engineers from the following cooperating and participating agencies:

- WSDOT
- Federal Highway Administration (FHWA)
- PSRC
- Community Transit
- King County Metro
- City of Lynnwood
- City of Mountlake Terrace
- City of Shoreline
- City of Seattle
- Snohomish County
- King County

4 AFFECTED ENVIRONMENT

4.1 Regional Context and Travel Patterns

This section discusses the primary roadways in the project area and their current use. Key observations and findings include the following:

- Peak direction traffic volumes across north-south screenlines in the corridor currently approach overall capacity.
- Approximately 115,000 persons travel through the corridor by transit and automobiles at Northgate during the 3-hour PM peak period[1], including travel on I-5 and adjacent arterials.
- Traffic congestion on I-5 currently adds 44 minutes of travel time to the general purpose lanes and 38 minutes to the high-occupancy vehicle (HOV) lanes for a trip from Everett to Seattle during the AM peak period. During the PM peak period, traffic congestion adds 23 minutes for the general purpose lanes and 21 minutes for the HOV lanes.
- The general purpose lanes on I-5 operate at over capacity during multiple hours of the day. The HOV lane is also congested, although not to the level of the general purpose lanes.
- The HOV lanes on I-5 are currently not meeting WSDOT's adopted performance standard (maintaining an average speed of 45 miles per hour [mph] or more at least 90 percent of the time during the peak hour[2] in both the morning and afternoon).[3]
- The majority of riders using the Lynnwood Link Extension to travel between downtown Seattle and the University District would begin their trips in north Seattle, North Creek, Shoreline, Edmonds, and Lynnwood.

In summary, the I-5 corridor, which is the predominant travel corridor connecting urban centers, including Lynnwood, Northgate, and downtown Seattle, has limited person throughput and reliability for automobile and transit users due to traffic congestion in both the general purpose and HOV lanes.

4.1.1 Transportation Facilities

The project area is served by a network of roadways consisting of a major interstate route (I-5), state highways (SR 99, SR 523, SR 522, and SR 104), and other local arterials and roads as shown in Figure 4-1.

[1] PM peak period is defined as the three consecutive hours with the highest traffic or transit volumes during afternoon/evening. For the purpose of the Sound Transit Ridership and Highway Models, this is approximately 3-6pm.
[2] Peak hour is defined as the single hour with the highest traffic or transit volumes during the PM peak period.
[3] http://wsdot.wa.gov/publications/fulltext/graynotebook/CR12.pdf

Major Limited-Access Highways

The primary north-south highway through the project area is I-5, a limited access freeway, facilitating regional and interstate movement, regional express bus service, and access to jurisdictions within the corridor. It is an essential roadway for the movement of people and goods in the Puget Sound region and is at or near capacity during many hours of the day. A number of traffic management features are incorporated in this highway facility, including HOV lanes, ramp meters, queue bypass lanes, and variable message signs to provide information to drivers. WSDOT operates a roadway conditions service Web site for I-5 and other facilities in Puget Sound that links to mobile devices and provide roadway congestion information.

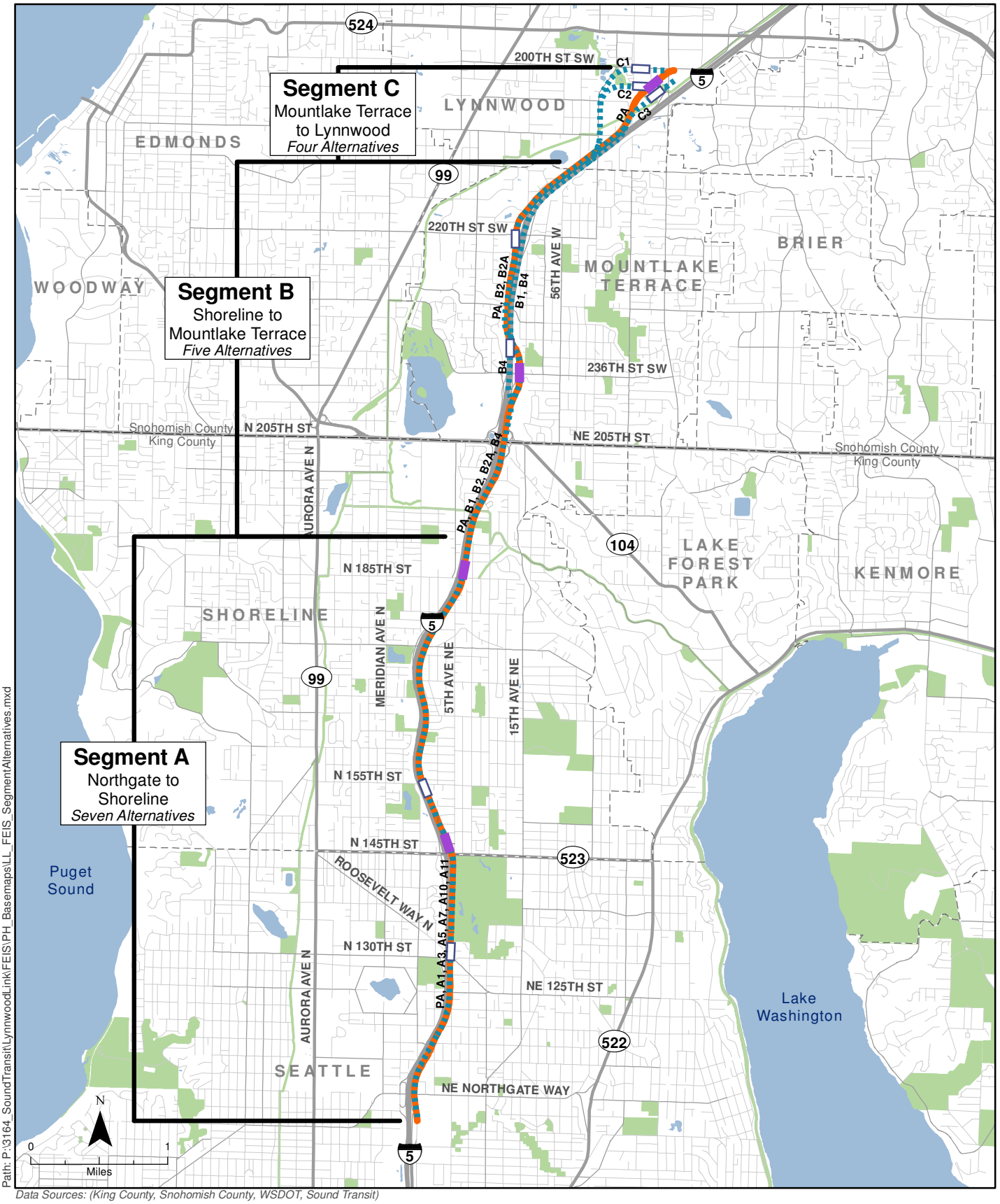
State Highways and Local Arterials

Several of the north-south arterials offering connections among neighborhoods, commercial districts, major access points to I-5, and major destinations include Aurora Avenue North (SR 99), Meridian Avenue North, 5th Avenue NE, 15th Avenue NE, 52nd Avenue West, and segments of Roosevelt Way North.

Four state highways located within the project area provide access to bus transit, passenger rail, and the movement of freight through the area.

SR 99 (Aurora Avenue North) is a primary north-south roadway that is parallel to I-5 through the project area. It is an important arterial with high traffic volumes, five to seven travel lanes, a high degree of access control, and traffic signal coordination that facilitates north-south travel flows. Portions of this roadway have managed access, which improves the roadway capacity by limiting left-turn movements at midblock locations into businesses and local streets. SR 99 also serves as a major facility for transit with business access and transit lanes (lanes that are restricted to buses and vehicles accessing businesses) accommodating bus rapid transit services through much of the project area as well as other express and local bus services. Arterial improvements are under construction in Shoreline to implement additional business access and transit lanes plus managed access.

SR 523, also known as North/NE 145th Street, is a four-lane arterial that provides access to I-5 as well as Lake City Way to the east and SR 99 to the west. North/NE 145th Street is an arterial that connects communities, forms the city boundary between Seattle and Shoreline, and passes through residential development.



Path: P:\3164_SoundTransit\LynnwoodLink\FEIS\PH_Basemaps\LL_FEIS_SegmentAlternatives.mxd

Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

- Preferred Alternative (PA)
- Preferred Alternative Station Location
- Other Light Rail Alternatives
- Other Alternative Station Location
- Preferred Alternative and Other Alternatives
- Roadway
- Local Street
- City Boundary
- County Boundary
- Park
- Waterbody

Note:
Each segment alternative can be matched to any adjacent segment alternative.

Figure 4-1
Alternatives by Segment

Lynnwood Link Extension

SR 104 extends from SR 522 to the Edmonds Ferry Terminal where SR 104 crosses Puget Sound via the Washington State Ferries. In the project area, SR 104 is named differently depending on the jurisdiction in which it is located. From east to west, it is known as Ballinger Way, 244th Street SW, NE 205th Street (the King-Snohomish county line), and Edmonds Way as it approaches the Edmonds Ferry Terminal. SR 104 is a two-to-four-lane arterial that runs northwest-southeast and provides access to I-5. Peak-period congestion along SR 104 is recurring within the SR 104/I-5 interchange area, extending east along Ballinger Way and west along the SR 99/Aurora Village commercial district.

SR 524, also known as 196th Street, is a major east-west arterial through Lynnwood. In the west, it connects to SR 99 and Edmonds. To the east, SR 524 continues under Interstate 405 (I-405) with no access to the interstate and ends at SR 522.

East-west arterial travel within the project area is tied to connections with I-5, to Aurora Avenue North/SR 99, and to Lake City Way/SR 522. A limited number of north-south arterials provide connectivity among neighborhoods, commercial districts, and communities, both east and west of I-5.

NE 130th Street, NE 145th Street, and NE 175th Street are four-lane arterials that access I-5 with interchanges, where congestion occurs regularly. North 117th Street, NE 155th Street, and NE 185th Street cross I-5 and connect business districts on each side of I-5. Peak-period travel conditions on east-west routes are a function of arterial spacing, access to I-5, and proximity to commercial districts. East-west traffic flows generally at arterial speeds between 30 and 35 mph.

Other major north-south roadways in the project area include Meridian Avenue North/76th Avenue West, 15th Avenue NE, 5th Avenue NE, Greenwood Avenue North, Westminster Way North, and SR 522. These arterials provide additional capacity for commuters during peak travel periods as well as access to residential neighborhoods.

Meridian Avenue North is a two-lane minor arterial (30 mph) that provides both property access and neighborhood connections among the single-family residential neighborhoods north of North 130th Street. This roadway extends across the county boundary, continuing as 76th Avenue West in Snohomish County and connecting to SR 99/Pacific Highway. Meridian Avenue North carries between 6,100 and 12,000 vehicles per day within Shoreline[4]. Meridian Avenue North/76th Avenue West has limited intersection control, with signals at major east-west arterials; otherwise, it serves as a direct north-south route between I-5 and SR 99.

[4] City of Shoreline Traffic Flow Map, December 2009

15th Avenue NE is a two- to five-lane arterial that extends north from Northgate Way to SR 104/Ballinger Way east of I-5. It carries between 9,100 and 16,600 vehicles per day[5] and the speed limit is 25 to 35 mph. This major arterial passes through the Northgate commercial district as well as a historical Shoreline business district. This route provides neighborhood and community connections, a commuter bypass to I-5, and links to residential areas.

5th Avenue NE, which is a remnant collector arterial from the I-5 construction, lies immediately adjacent to I-5 between NE 130th Street and NE 185th Street. It is a two-lane street that provides access to single-family residential neighborhoods and neighborhood commercial districts in Shoreline. The speed limit is 30 mph, and traffic volumes are modest within Shoreline at 3,300 to 6,900 vehicles per day[6]. 5th Avenue NE is likely used as a bypass to I-5 during peak-period congestion.

Roosevelt Way North/NE is another remnant of I-5 construction with a segment west of I-5 that connects North 130th Street to Aurora Avenue North and North 145th Street, running northwest to southeast. It is a two-lane, tree-lined street with an open ditch that serves adjacent single-family residential neighborhoods as a low-speed and low-volume collector street. Roosevelt Way extends to the east of I-5 from the North 130th Street interchange and connects to SR 522/Lake City Way via NE 125th Street.

Within Lynnwood, 200th Street SW provides a three-lane minor arterial connection between SR 99 and the Lynnwood Transit Center. With a posted speed limit at 30 mph, traffic along 200th Street SW flows smoothly through multifamily residential neighborhoods.

4.1.2 Travel Demand and Patterns

Miles Driven and Hours Spent in Travel

Table 4-1 shows the vehicle miles of travel (VMT) and vehicle hours of travel (VHT) for the Puget Sound region as modeled with the PSRC Regional Model: WSDOT Project Version for 2011, which is used as the base year. Detailed information about that model is provided in the *Transit Ridership Forecasting Technical Report* (Sound Transit 2012). These systemwide measures are useful primarily for comparison purposes. They will be used to compare to future conditions with and without the Lynnwood Link Extension to indicate travel growth in the region and the effect of the project on that growth.

[5] Ibid.
[6] Ibid.

Table 4-1. Daily VMT and VHT in the Puget Sound Region for Base Year 2011

	VMT	VHT
Base Year (2011)	79,440,000	2,210,000

Vehicles Traveling through the Corridor

Figure 4-2 presents the four screenlines that were used for analyzing corridor traffic conditions along with current AM peak hour, PM peak hour, and daily traffic volumes across those screenlines by direction, including directional volume-to-capacity (v/c) ratios for the peak hours.

A "screenline" is an imaginary line across a section of freeway and/or arterials. Screenlines are often used in traffic analyses to determine how much volume is entering or exiting a particular area based on how much traffic crosses the screenline. A v/c ratio above 0.90 (or 90 percent of capacity) typically represents congested conditions. A v/c ratio of 1.0 indicates that a corridor is operating at capacity and represents highly congested conditions.

The four screenlines used in this analysis were selected by Sound Transit in consultation with local agencies to represent locations within the corridor where major movements might be affected by the project. The v/c ratios are an indicator of a given facility to accommodate the demand wanting to use it, and as such, provide a general assessment of congestion levels. The traffic volumes and v/c ratios shown were also derived from the PSRC Regional Model: WSDOT Project Version for the base year (2011) scenario.

During the AM peak hour, in the southbound peak direction of traffic flow, traffic volumes approach the overall capacity at screenlines 1, 2, and 3, indicating that AM peak hour travel in the peak direction through the corridor is currently congested. However, these three screenlines are well below capacity in the reverse direction, with a v/c ratio of around 0.40. Screenline 4, on NE 145th Street just east of I-5, has a v/c ratio of 0.71 in the westbound direction (the peak flow of travel) indicating relatively high volumes, but within the capacity of the facility. At a v/c ratio of 0.25 in the eastbound direction, traffic flows are well within the capacity of the roadway.

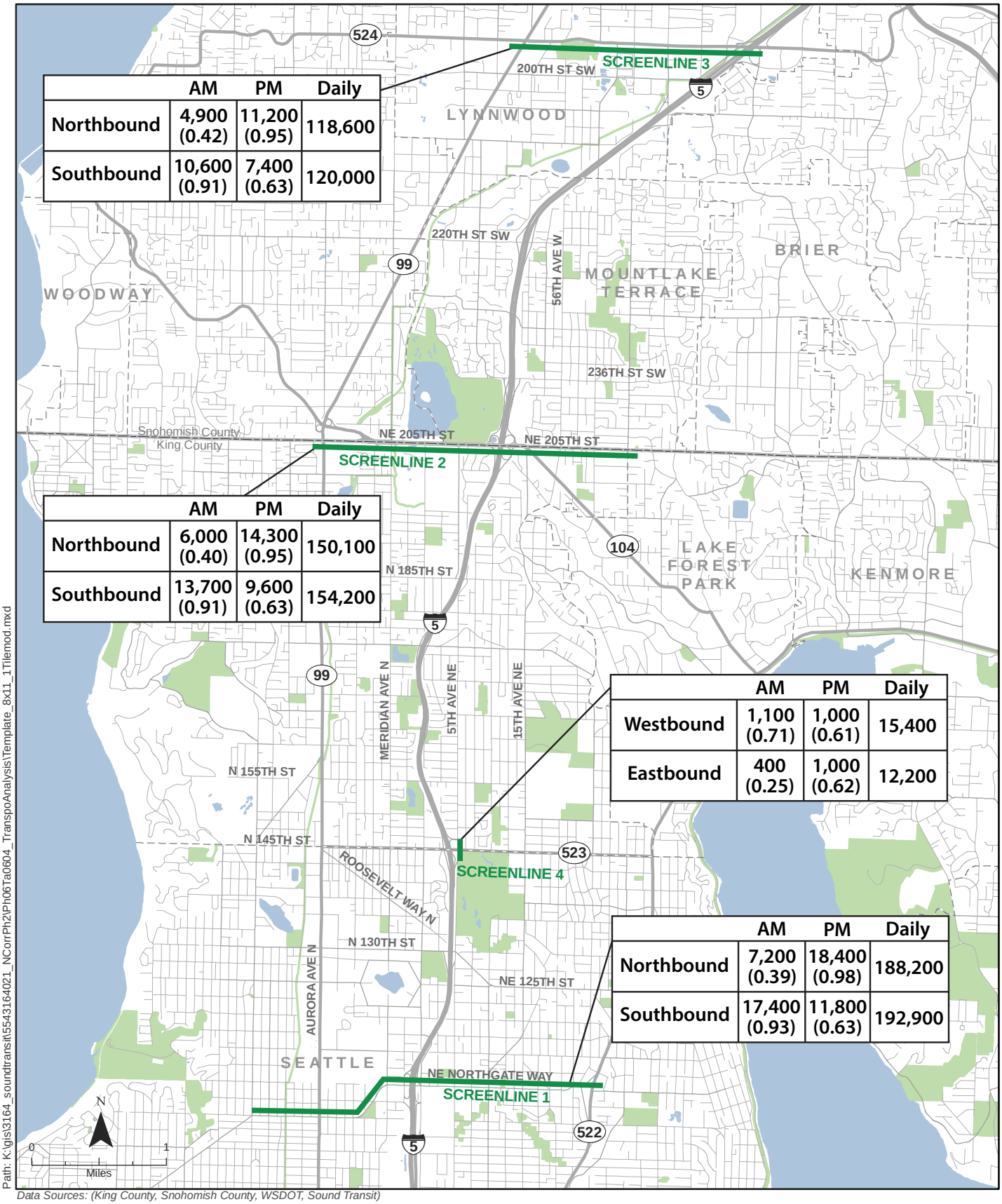
Similar to the AM peak hour, during the PM peak hour, the screenlines show traffic volumes approaching or at the overall capacity of screenlines in the northbound direction, which is the peak direction of traffic flow. Southbound traffic volumes during the PM peak hour also reflect congested conditions.

These screenlines are below capacity in the reverse direction, at a v/c ratio of 0.63; however, southbound travel is still typically difficult in the PM peak hour due to a combination of bottleneck locations, particularly in the Northgate area near the terminus of the reversible I-5 express lanes, and congestions emanating from multiple points as far south as downtown Seattle. In the Northgate area, in the PM peak hour

(when the express lanes are northbound) the southbound HOV lane traffic is forced to merge into the southbound general purpose lanes at this location. Additionally, immediately south of this point, traffic from the Northgate interchange merges into the mainline, and then a southbound lane drops to NE 80th/85th Streets, resulting in only a three-lane southbound mainline. This constraint builds upon the southbound congestion that emanates from farther south and causes southbound congestion that backs up to north of Northgate on a regular basis in the PM peak period. Additionally, because the southbound HOV lane terminates at this point, current southbound express bus service cannot bypass the freeway congestion, resulting in very unreliable southbound transit travel times, as well as significant delay for buses returning to terminals or bases at the end of service or to start a route.

Screenline 4 has a v/c ratio of about 0.60 in both directions during the PM peak hour, generally indicating acceptable levels of service.

On a daily basis, screenline traffic volumes are fairly well balanced, with slightly higher traffic volumes in the southbound direction on screenlines 1 through 3 and higher volumes in the westbound direction on screenline 4.



	AM	PM	Daily
Northbound	4,900 (0.42)	11,200 (0.95)	118,600
Southbound	10,600 (0.91)	7,400 (0.63)	120,000

	AM	PM	Daily
Northbound	6,000 (0.40)	14,300 (0.95)	150,100
Southbound	13,700 (0.91)	9,600 (0.63)	154,200

	AM	PM	Daily
Westbound	1,100 (0.71)	1,000 (0.61)	15,400
Eastbound	400 (0.25)	1,000 (0.62)	12,200

	AM	PM	Daily
Northbound	7,200 (0.39)	18,400 (0.98)	188,200
Southbound	17,400 (0.93)	11,800 (0.63)	192,900

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Data Sources: (King County, Snohomish County, WSDOT, Sound Transit)

Legend

Screenlines

X,XXX = Volume

(0.XX) = Volume-to-Capacity (V/C) Ratio

Figure 4-2
Analysis Screenlines

Lynnwood Link Extension

People Traveling through the Corridor

Table 4-2 shows existing person throughput during the PM peak period in the corridor at two screenline locations. The person throughput includes trips on I-5, SR 99, and other north-south arterials via both automobile and transit. Approximately 115,000 persons travel through the corridor at Northgate during the 3-hour PM peak period. Similar to the VMT and VHT measures, this measure is most useful for comparison purposes. It is used to compare to future conditions with and without the Lynnwood Link Extension to indicate the expected trip growth within the corridor, and the effect of the project on that growth.

Table 4-2. Person Throughput—PM Peak Period

Screenline	Screenline Location	Northbound	Southbound	Total
1	North of Northgate Way NE			
	Transit	11,000	2,000	13,000
	Automobile	62,000	40,000	102,000
	Total	73,000	42,000	115,000
2	South of North 205th Street			
	Transit	7,000	1,000	8,000
	Automobile	49,000	32,000	81,000
	Total	56,000	33,000	89,000

Sources: Sound Transit Ridership Model and PSRC Regional Model: WSDOT Project Version (2012)

I-5 Congestion

WSDOT reports and records traffic conditions for major roadway facilities on a daily basis. The segment of I-5 between Everett (at the SR 526 interchange) and downtown Seattle carries some of the highest vehicle volumes in the region. Figure 4-3, the WSDOT traffic conditions map, characterizes traffic conditions from "stop and go" to "wide open" conditions. A typical November weekday is shown in this figure; however, a wide variation of peak period congestion is experienced throughout the corridor. A recent study of I-5 operations by WSDOT[7] found that, although the recent recession has caused a decrease in traffic volumes, traffic congestion continues to be an issue in the corridor. Figure 4-4 summarizes data collected in 2011, indicating that areas of extreme congestion continue to occur in the corridor throughout much of the AM and PM peak periods.

[7] WSDOT, Puget Sound Express Toll Lanes Concept Study, July 2014

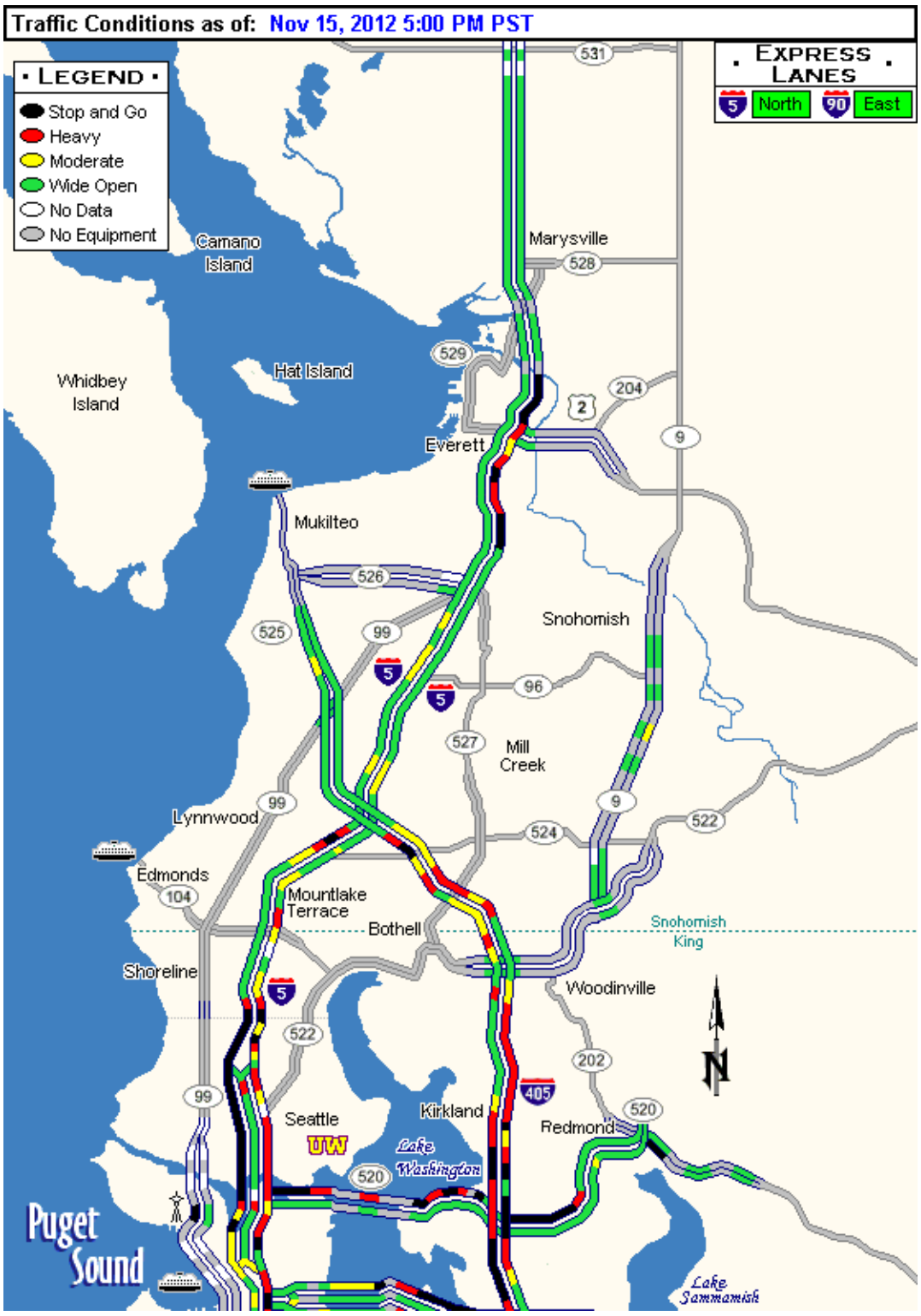


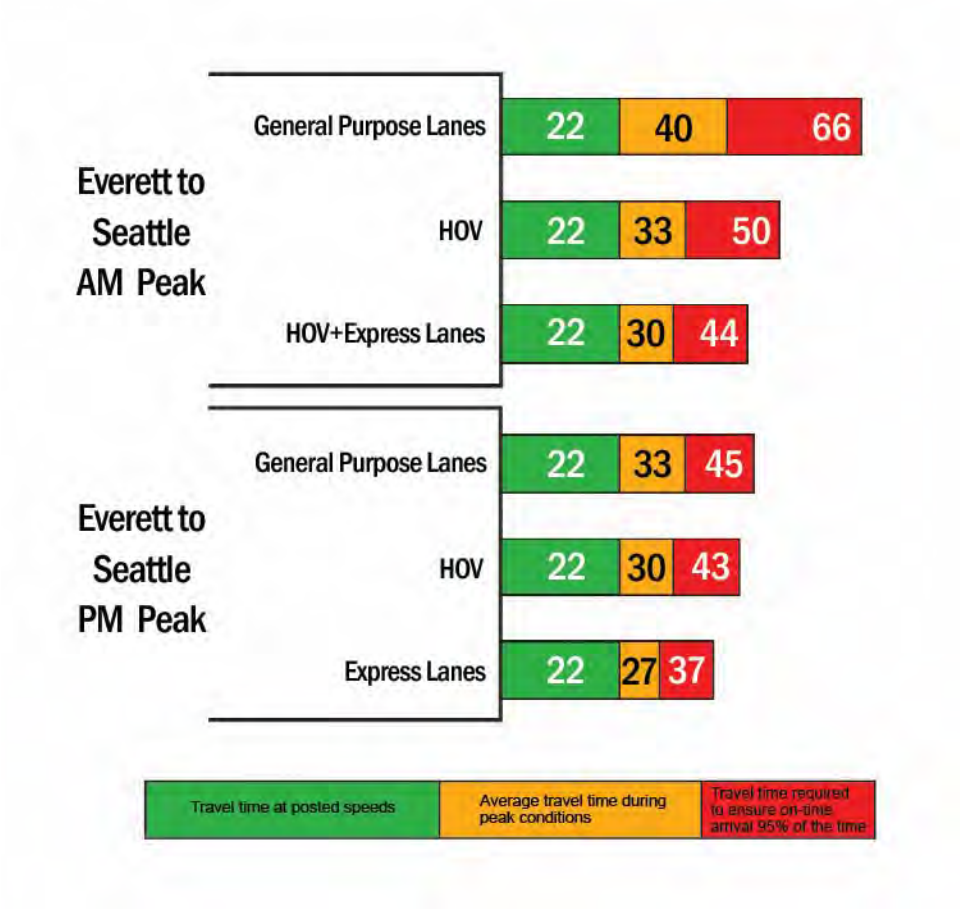
Figure 4-3. Example of WSDOT Traffic Conditions Map

Source: WSDOT Congestion Data, 2011

Figure 4-4. Extreme Congestion Conditions, Northgate to Lynnwood

Roadway congestion is often reported in terms of travel-time reliability. Typically, a travel time in the 95th percentile is used to describe the reliability of a trip or the variance in the time it can take between destinations. Drivers may use this travel-time value to estimate when they need to leave to reach a destination on time. The 95 percent reliable travel times along I-5 are much longer during peak periods compared to travel times during uncongested periods when traffic is at free-flow speeds. Figure 4-5 compares travel times on I-5 from Everett to Seattle for the general purpose, HOV, and Express Lanes. Travel times are provided for travel at posted speeds, average travel time during peak conditions, and travel time required to ensure on-time arrival 95 percent of the time. As shown in Figure 4-5, vehicles traveling from Everett to Seattle during the AM peak period and using the general purpose lanes would arrive on time 95 percent of the time if they allowed 66 minutes to complete the trip. A vehicle trip in the HOV lane would take 50 minutes, a

savings of 16 minutes. The travel time from Everett to Seattle at the posted speed limit (i.e., no congestion) is 22 minutes, meaning that the AM peak period congestion causes a traveler to allot 44 additional minutes of time for the trip if using the general purpose lanes, and 38 additional minutes if using the HOV lanes.



Source: The 2012 Congestion Report, WSDOT

Figure 4-5. Travel-Time Reliability for the Everett-to-Seattle Commute

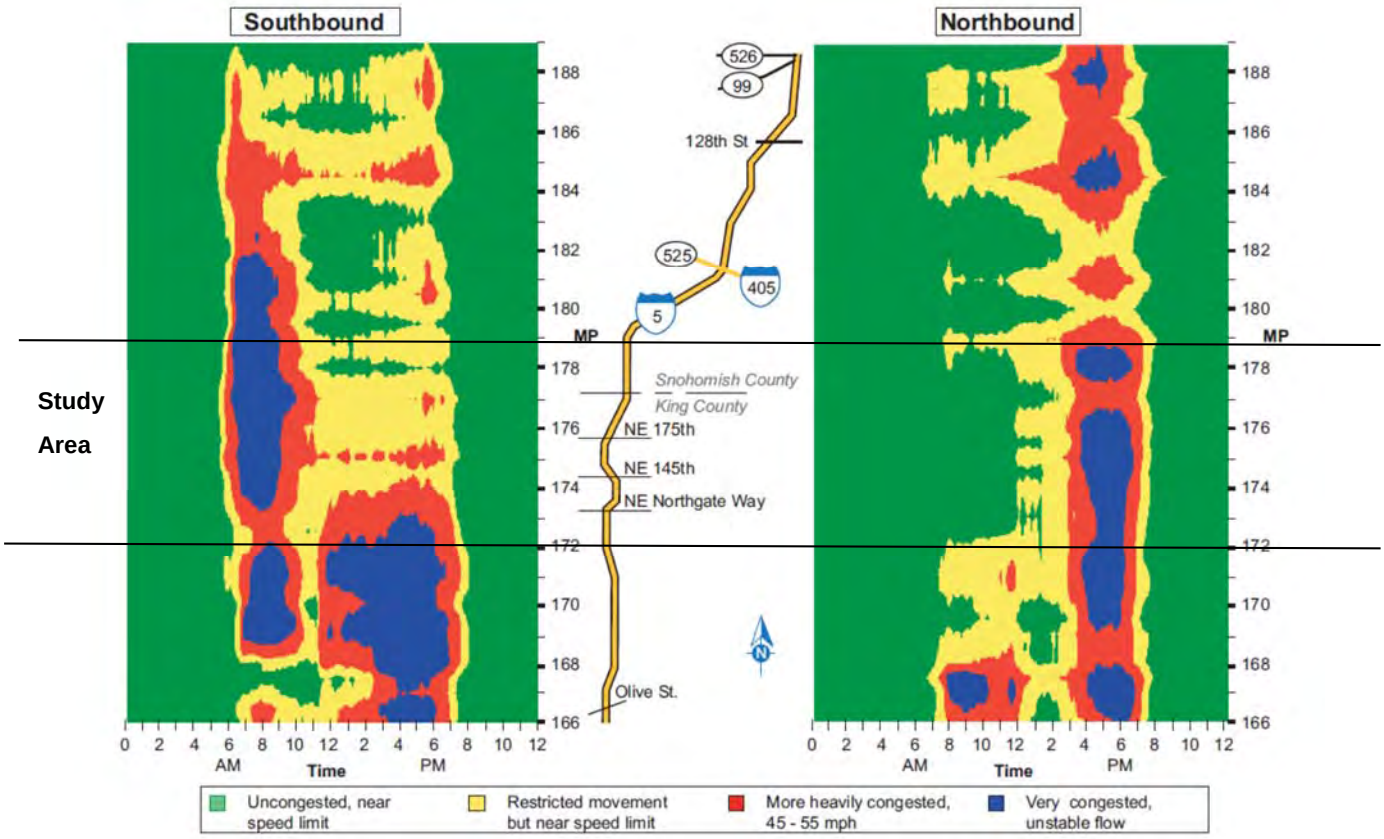
General Purpose Lane Performance

Data provided by WSDOT show recurring congestion based on I-5 travel speeds for the AM and PM peak periods. Figure 4-6 illustrates the average congestion levels along I-5 between downtown Seattle and Everett over a 24-hour period. I-5 operates at over capacity during many hours of the day.[8] Afternoon southbound traffic on I-5 regularly backs up into Shoreline for a variety of reasons: (1) congestion is emanating from as far south as downtown Seattle, and (2) the express lanes are serving northbound traffic, hence providing proportionately less capacity southbound south of Northgate. If the express lanes were to serve southbound traffic during the PM peak period, congestion would still be likely to occur, although it would not be as severe. To better understand congestion levels along I-5, it is helpful to look at not only average traffic congestion but also the frequency of congestion. Congestion frequency measures the times and locations that heavy congestion is likely to occur and, therefore, can be an indicator of the "reliability" of good travel performance in an area. Figure 4-7 shows the frequency of significant congestion in terms of the number of weekdays per week that congestion occurs. As shown in Figure 4-7, not only does this stretch of I-5 operate at over capacity many hours of the day (as shown in Figure 4-6), but it also operates at over capacity for many days each week.[9]

Additional WSDOT measures of congestion are provided in Figures 4-8 and 4-9. These figures illustrate three measures of travel time for general purpose vehicles over a 24-hour period on I-5 between downtown Seattle and the SR 526 interchange: (1) average travel time; (2) 95th percentile travel time; and (3) the likelihood of a "slow" trip, defined as an average overall trip speed on the freeway of less than approximately 35 mph for 2007 traffic conditions.

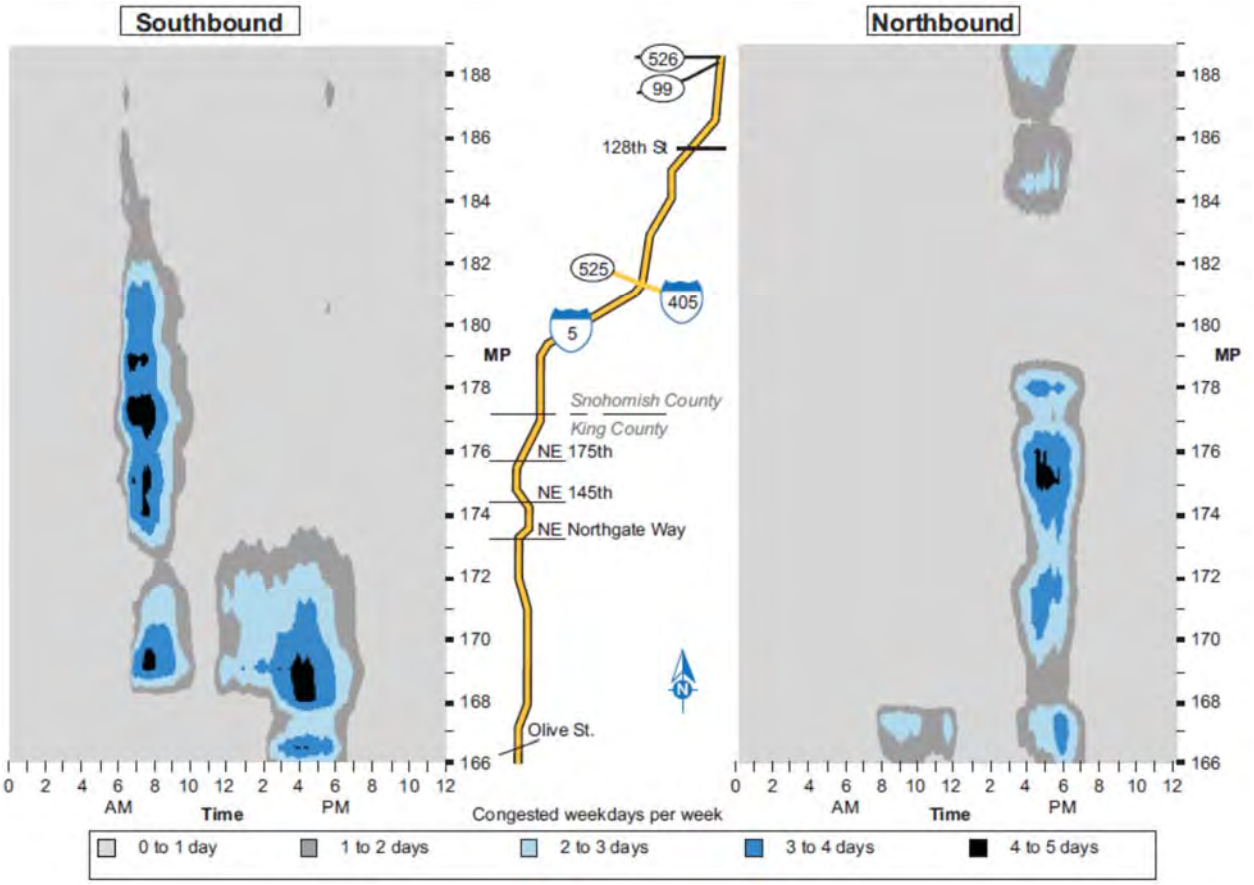
Northbound trips from downtown Seattle to south Everett experience only minor slowing throughout the day until about 2:00 pm, when trip times begin to steadily increase, peaking between 4:00 pm and 5:00 pm, and a steady decline to uncongested conditions at around 7:30 pm. Average trip times during the PM peak period are approximately 80 percent longer than those during the off-peak period, with 95th percentile travel times being more than 100 percent higher than those during the off-peak period. There is a moderate (50 percent) likelihood of a slow trip during the PM peak period.

[8] WSDOT & Washington State Transportation Center (TRAC), Central Puget Sound Freeway Network Usage and Performance Report, 2003 Update, 2005: http://depts.washington.edu/trac/bulkdisk/pdf/623.1.pdf
[9] Ibid



Note: "MP" = milepost

Figure 4-6. I-5 North—General Purpose Traffic Congestion (2006)



Note: "MP" = milepost

Figure 4-7. Frequency of Significant Congestion on I-5 North—General Purpose Lanes, 2006 Weekday Average

In the southbound direction, travel times increase during both the morning and afternoon commutes. Average trip times during the AM peak period are twice as long as those during the off-peak period. Trip times decrease during the midmorning hours but increase again in the early afternoon, gradually peaking around 4:00 pm, which is about 70 percent higher than trip times during off-peak uncongested periods. The likelihood of a southbound trip with an average speed of less than 35 mph is up to almost 70 percent during the middle of the AM peak period and around 45 percent during the PM peak period.

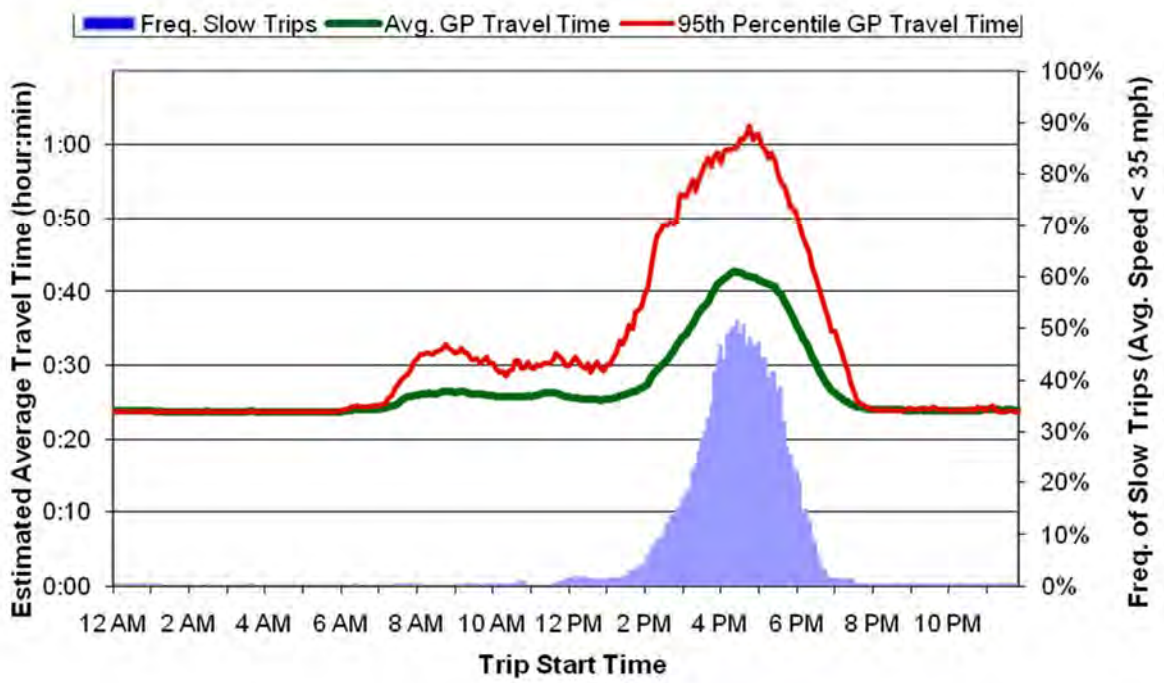


Figure 4-8. Estimated Average Weekday Travel Times (2006)—Seattle Central Business District to SR 526 Interchange: Northbound General Purpose Lanes (23.7 Miles)

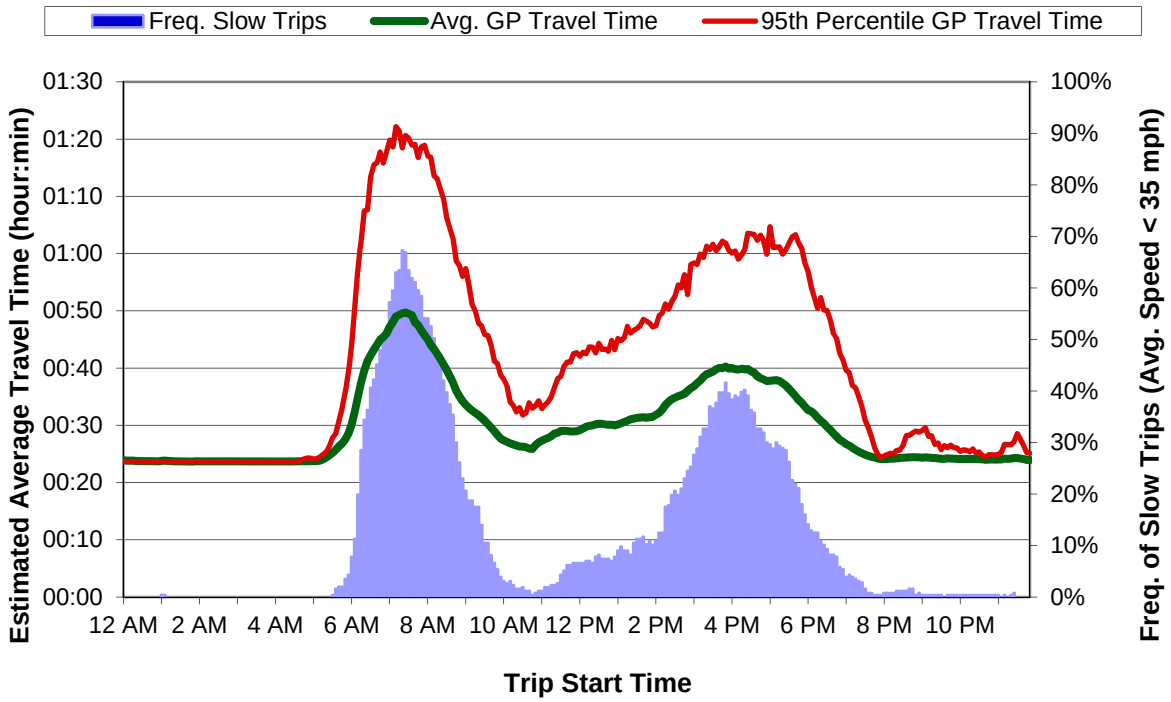


Figure 4-9. Estimated Average Weekday Travel Times (2006)—SR 526 Interchange to Seattle Central Business District: Southbound General Purpose Lanes (23.7 Miles)

HOV Lane Performance

The HOV lanes along I-5 are for vehicles with two or more passengers. According to a 2002 study by the Washington State Transportation Center,[10] the northbound HOV lane near Northgate can exceed 1,500 vehicles per hour during the afternoon commute, which is comparable to the adjacent general purpose lanes. Hence, the HOV lanes tend to be congested in the peak directions during the peak periods, although not to the level of the general purpose lanes because the magnitude of volumes in the general purpose lanes is causing congestion and slower travel speeds in the HOV lanes. With no physical separation between the HOV and general purpose lanes, as well as non-standard lane widths and limited shoulder width to the left of the HOV lane, congestion in the general purpose lanes also affects the operation of the HOV lanes. Also, the high number of buses using the HOV lane can contribute to congestion in the HOV lane.

In addition, in some locations buses using I-5 must weave across the general purpose lanes when entering or exiting the freeway, except at the Lynnwood Transit Center and Mountlake Terrace Freeway Station, where buses use the direct-access ramps to access the HOV lane. While this movement does not have a significant impact on traffic in the general purpose lanes, it does cause additional delay to buses making this movement.

WSDOT's adopted public policy regarding HOV lane performance is that a driver in an HOV lane should be able to maintain an average speed of 45 mph or more at least 90 percent of the time during the peak hour for both the morning and afternoon. As shown in Figures 4-10 through 4-12, the HOV lanes on I-5 are currently not meeting this performance standard.[11, 12] This low level of performance in the HOV lanes affects the ability of bus transit service to maintain schedules and provide fast, reliable service. In addition, buses traveling in the non-peak direction (e.g., southbound during the PM peak period) must travel in general purpose lanes from Northgate to downtown Seattle because the reversible express lanes operate in the peak direction only. Thus, these bus trips are subject to general purpose traffic congestion for that portion of the trip.

[10] TRAC, HOV Lane Performance Monitoring 2002 Report – Volume 2, 2004: http://depts.washington.edu/trac/bulkdisk/pdf/584.1.pdf
[11] WSDOT, HOV Policy, 2010: http://www.wsdot.wa.gov/HOV/Policy.htm
[12] TRAC, Executive Summary for HOV Action Plan Phase 1, WSDOT project T4118-24, April 2008

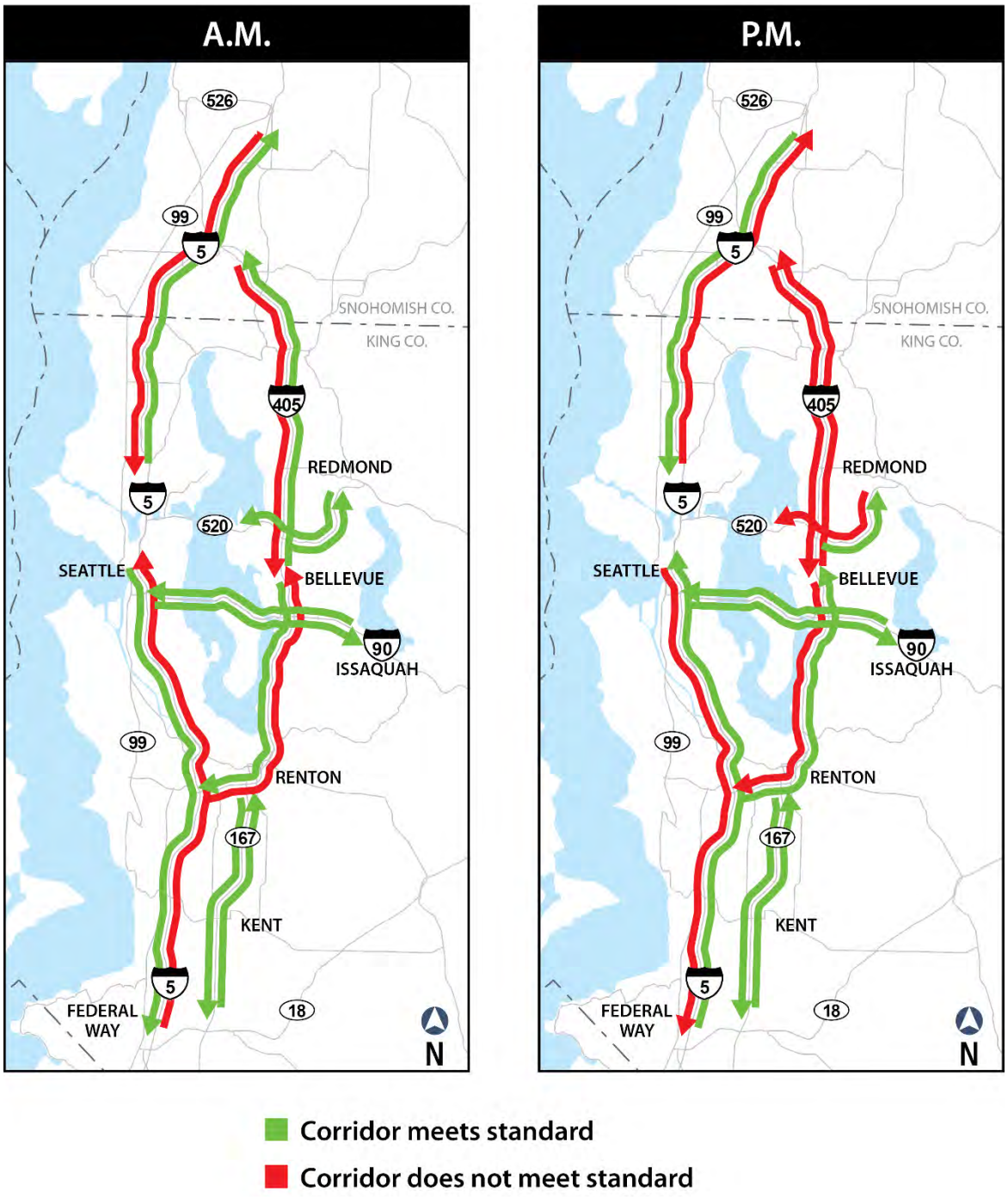


Figure 4-10. HOV Lane Performance Standard

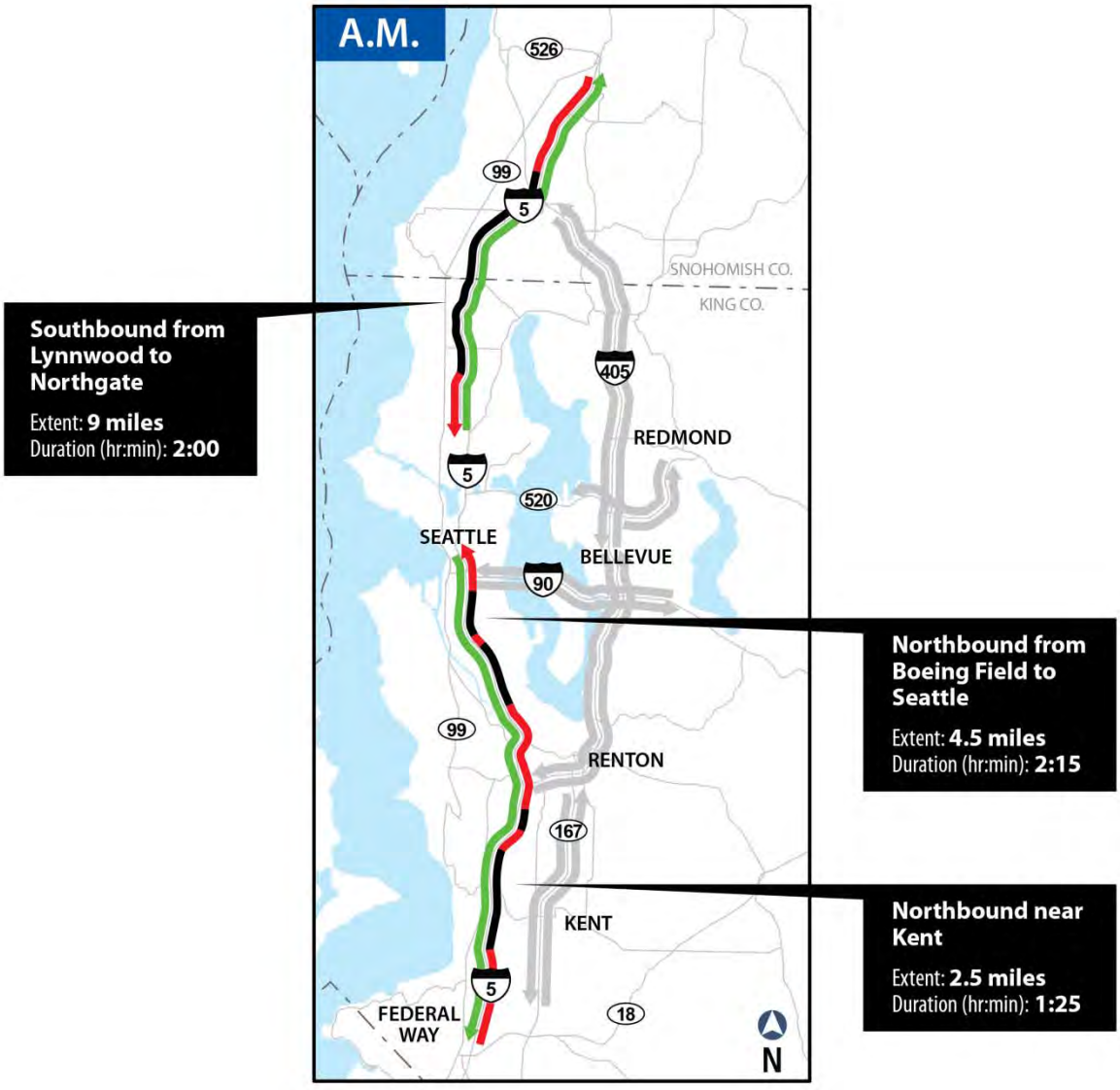


Figure 4-11. Heavily Congested Segments (AM)

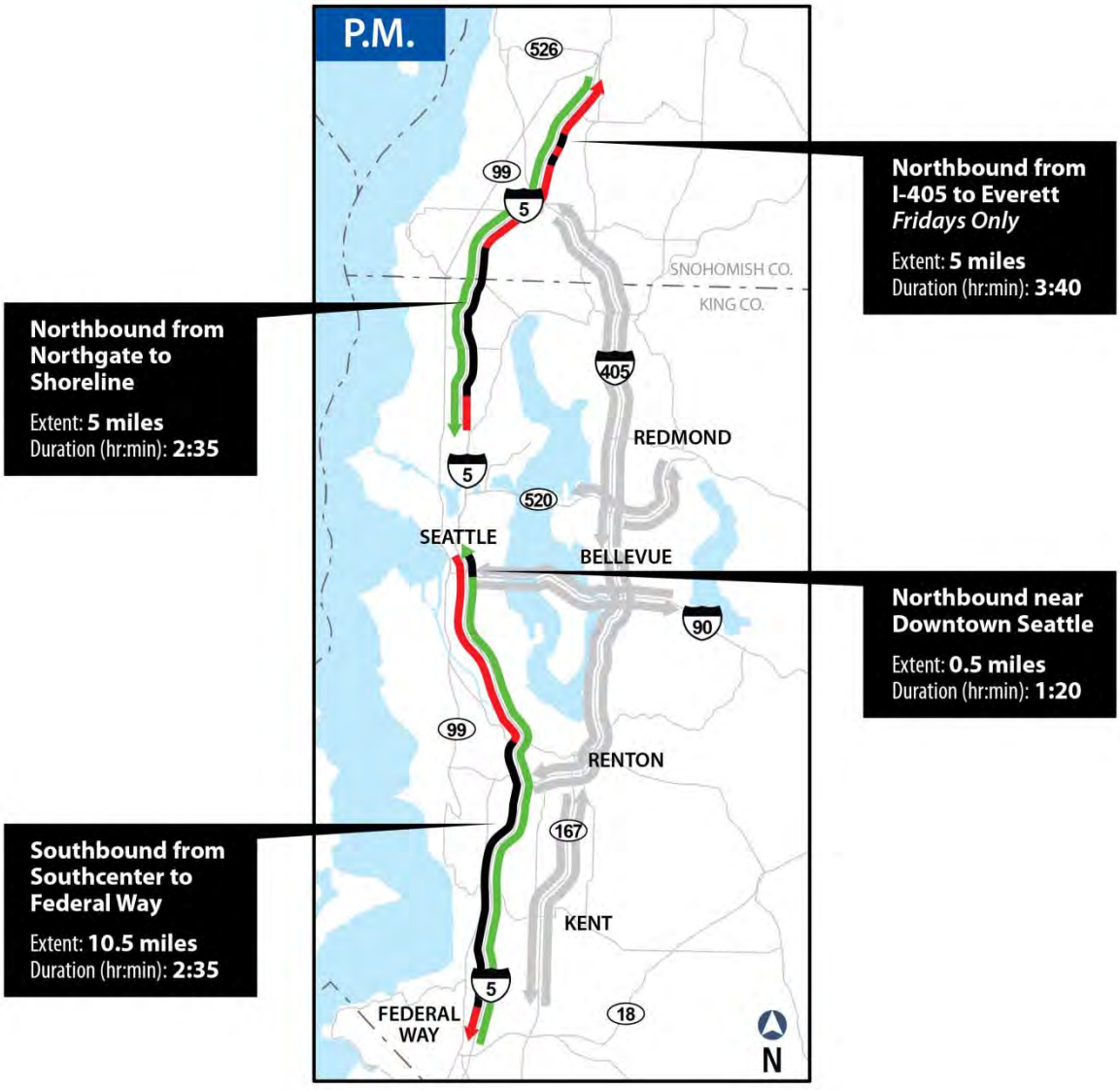


Figure 4-12. Heavily Congested Segments (PM)

The portion of the I-5 HOV system from downtown Seattle to Lynnwood suffers from significant geometric limitations that, when combined with high vehicle volumes, cause congestion. The most significant bottlenecks are at the entrances and exits to the reversible express lanes where there is considerable lane changing when many vehicles enter and leave the HOV lanes to and from the general purpose lanes.[13]

In addition to high volumes and changes in geometry, congestion in the HOV lanes can also be caused by the interaction between HOV lane traffic and nearby slow traffic in the general purpose lane (i.e., "lane friction") because drivers in the HOV lane are reluctant to travel at speeds that are significantly greater than the speed of vehicles in the adjacent lane. Also, when drivers in the HOV lane need to leave the HOV lane and enter the congested general purpose lane, congestion can result as the driver slows down to wait for a gap in the adjacent lane. As HOV traffic merges from on-ramps (either via general purpose lanes or from HOV direct-access ramps), congestion can also occur in the HOV lane. Finally, traffic incidents are a frequent cause of congestion for both general purpose and HOV lanes. These can take the form of incidents in the HOV lane that block traffic directly, incidents in the general purpose lanes that contribute to lane friction, or disabled vehicles in the shoulder, again causing lane friction.

According to the Washington State Transportation Center, the HOV lanes become congested precisely when most transit service is using them. In the morning, southbound I-5 north of Northgate is "one of the most routinely congested freeway segments in the metropolitan area, and the HOV lanes are severely affected by this congestion."[14] As indicated previously, WSDOT adopted policy regarding HOV lane performance is that HOV lanes are considered reliable if speeds are below 45 mph less than 10 percent of the time. This reliability threshold is illustrated in Figure 4-13, which also shows the change in HOV lane speed and reliability between 2006 and 2007. For the I-5 southbound lanes, there is little change during the AM peak period. The southbound HOV lane operates between 25 and 35 mph over the entire AM peak period, well below the 45-mph speed threshold. Figure 4-14 shows that while speeds for the northbound HOV lane remained relatively similar over the PM peak period (30 to 40 mph) for 2006 and 2007, the probability of having a slow trip increased from 30 percent in 2006 to almost 50 percent in 2007.

[13] TRAC, HOV Lane Performance Monitoring 2002 Report – Volume 2, 2004: http://depts.washington.edu/trac/bulkdisk/pdf/584.1.pdf
[14] TRAC, HOV Lane Performance Monitoring 2002 Report – Volume 1, 2004: http://depts.washington.edu/trac/bulkdisk/pdf/584.2.pdf

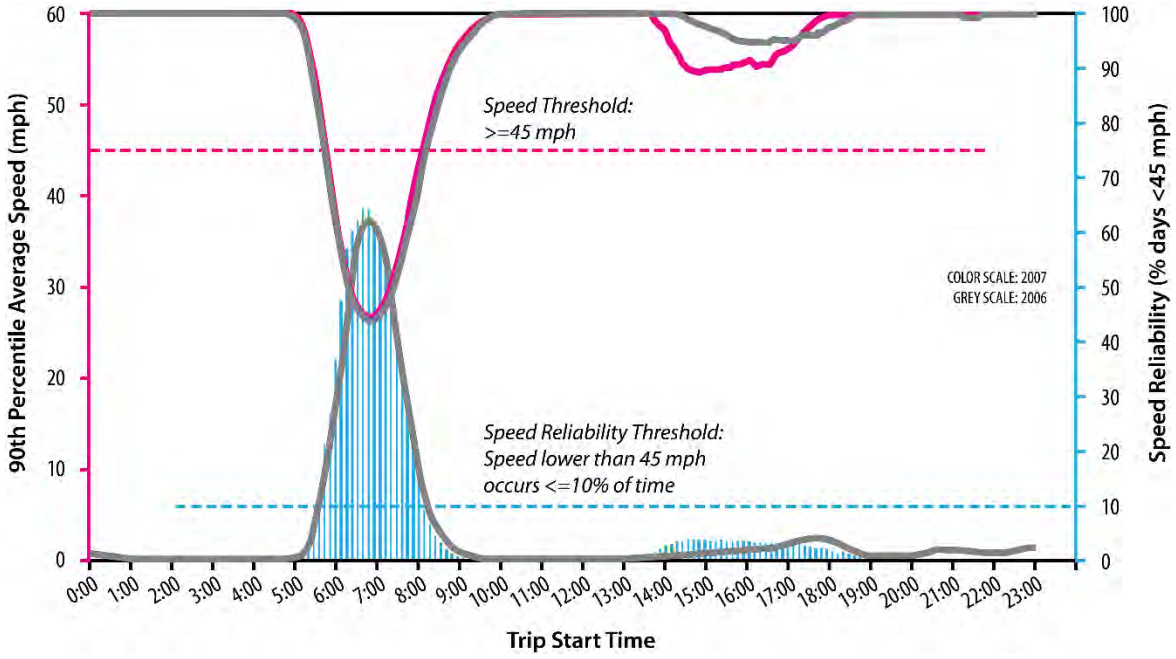


Figure 4-13. Change in HOV Lane Speed and Reliability—I-5 Southbound, SR 526 to Northgate (16.6 Miles)

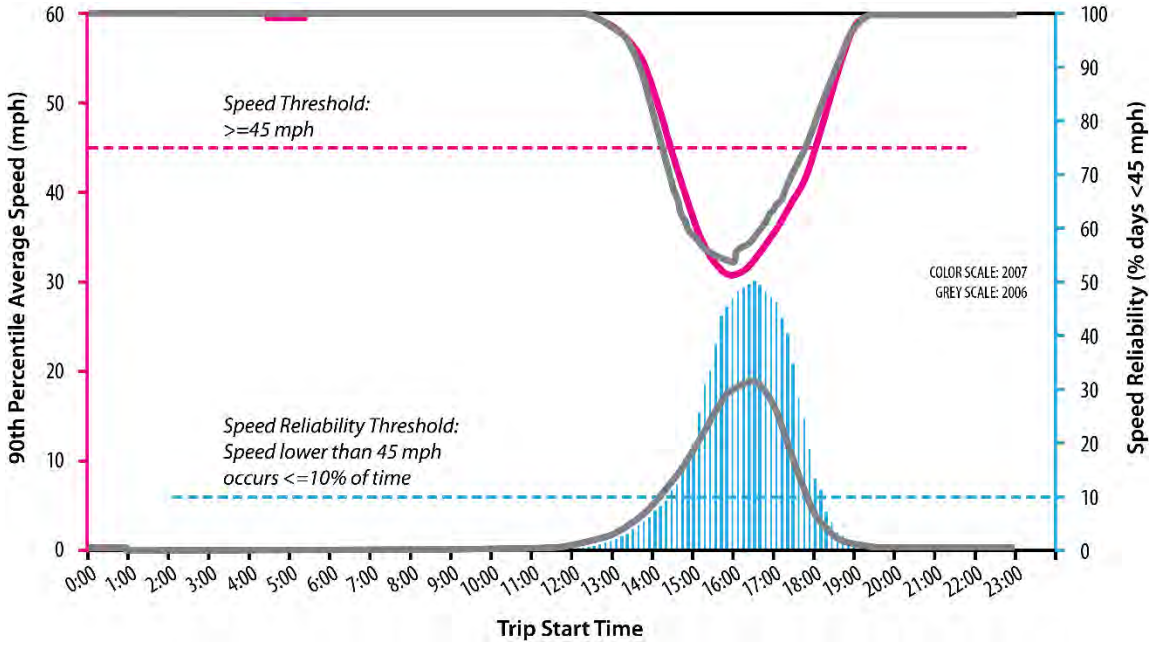


Figure 4-14. Change in HOV Lane Speed and Reliability—I-5 Northbound, Northgate to SR 526 (16.6 Miles)

4.2 Transit

This section describes existing conditions for regional and local transit facilities, operations, and services within the project area and the Lynnwood Link Extension's impacts on those transit facilities and services.

- Daily bus ridership in the Lynnwood Link Extension corridor is approximately 19,400 riders on I-5 bus routes north of Northgate, which reflects the highest transit ridership of any corridor in the region.
- Southbound transit trips from Shoreline during the AM peak period are 16 minutes to Northgate and 66 minutes to Seattle-Tacoma International Airport (Sea-Tac Airport), while trips from Lynnwood are 36 minutes to downtown Seattle and 79 minutes to the airport.
- Transit passenger level of service (LOS) for service frequency for trips between the corridor and regional destinations currently ranges generally between LOS A and LOS D. Some regional locations are not served with direct (i.e., one-seat, no transfer) bus service from within the corridor.
- Transit passenger level of service for hours of service currently ranges between LOS A and LOS B for trips between the corridor and most regional destinations. However, there are a few destinations for which trips from the corridor are experiencing LOS E or worse conditions.
- Transit passenger level of service for passenger load for trips between the corridor and regional destinations currently ranges between LOS A and LOS B.
- Transit passenger level of service for reliability and on-time performance for trips between the corridor and regional destinations currently ranges between LOS B and LOS C.

4.2.1 Transit Operations and Level of Service

Selected major urban center destinations, transit centers, and transit hubs at potential light rail station areas were used to measure transit (bus and light rail) LOS for the project area. Existing and future regional transit services were evaluated based on the following categories:

- Service characteristics
- Ridership
- Transit travel times
- Transfers

The quality of transit service was evaluated based on the following transit LOS measures:

- Service frequency LOS
- Hours of service LOS
- Passenger load LOS (passenger crowding)
- Reliability of service LOS (on-time performance and headway adherence)

The destinations and transit activity centers used to evaluate transit LOS include major regional urban centers, existing transit centers in the project area, and the areas of potential light rail stations for the alternatives. These include the following:

- Downtown Bellevue
- Sea-Tac Airport
- Downtown Seattle
- Capitol Hill
- University District
- Northgate
- North Seattle (NE 130th Street/NE 145th Street)
- Shoreline (NE 155th Street/NE 185th Street)
- Mountlake Terrace Transit Center
- 220th Street SW
- Lynnwood Transit Center

The transit LOS performance levels were analyzed using the methodology defined by the *Transit Capacity and Quality of Service Manual* (TCQSM), 2nd Edition, Part 3, Transit Research Board, 2003, and Transit Cooperative Research Program (TCRP) Report 100, Transit Research Board, 2003[15]. These are nationally recognized resources for the measurement of transit capacity and quality of service. The Transportation Methods and Assumptions Report in Appendix A of this report provides a detailed discussion of the transit LOS methodology.

Similar to how LOS is typically measured for highway or arterial performance in the United States, transit LOS is measured using the letter grades A through F, with LOS A denoting the best performance and LOS F generally considered failing performance. Transit LOS was analyzed for the PM peak hour (5:00 pm to 6:00 pm) to describe

[15] A third edition of this reference document was issued in 2013. However, to maintain consistency with the Draft EIS, the methodology defined in the second edition was used for this report.

transit performance during the period when traffic congestion and transit ridership are typically high. LOS A indicates more frequent service, more hours served during the day, high reliability, and minimal passenger crowding in a transit vehicle. Circulation is defined as the route(s) on which transit operates. Appendix B of this report provides the TCQSM descriptions of each of the transit LOS levels, their ranges, and their grade descriptions. The individual components of transit LOS are defined below.

Service Frequency LOS is the number of times within the PM peak hour that a bus or light rail train stops at a specific location. Generally, the shorter the headway between buses for a transit route, the less time a rider has to wait between bus arrivals; hence, the better the service frequency LOS. Bus routes that have headways of less than 10 minutes are considered LOS A, whereas headways higher than 60 minutes reflect LOS F. Table 4-3 shows thresholds for each LOS level.

Table 4-3. Service Frequency LOS Thresholds

LOS	Average Headway (minutes)	Vehicles per Hour	Comments
A	<10	>6	Passengers do not need schedules
B	10–14	5–6	Frequent service, passengers consult schedules
C	15–20	3–4	Maximum desirable time to wait if bus/train missed
D	21–30	2	Service unattractive to choice riders
E	31–60	1	Service available during the hour
F	>60	<1	Service unattractive to all riders

Source: Transit Capacity and Quality of Service Manual

Hours of Service LOS is the total transit operating hours provided within a 24-hour (daily) period. Hours of service LOS is intended to measure the availability of transit service to riders and potential users. The longer that transit service is provided throughout the day, the better the LOS. Table 4-4 shows thresholds for each LOS level.

Table 4-4. Hours of Service LOS Thresholds

LOS	Hours of Service	Comments
A	19–24	Night or “owl” service provided
B	17–18	Late evening service provided
C	14–16	Early evening service provided
D	12–13	Daytime service provided
E	4–11	Peak hour service only or limited midday service
F	0–3	Very limited or no service

Source: Transit Capacity and Quality of Service Manual

Passenger Load LOS is intended to measure passenger comfort and the ability of a rider to find a seat on the bus or train during the PM peak hour. Passenger load LOS also measures crowding in the transit vehicle. On buses, passenger load LOS is defined by the number of passengers per seat. For light rail, passenger load LOS is a measure of square footage available for standing per standing passenger. Passenger load LOS A indicates that riders are able to spread out on the vehicle along with the potential to use empty seats for storing parcels and/or bags instead of carrying them on their laps. A passenger load LOS at or worse than LOS D may reflect overcrowding, and the transit service provider may need to increase service frequency to improve LOS. In addition, a large number of passengers can cause the bus to dwell longer at stops resulting from crowded passenger boarding and alighting. The longer dwell time can negatively affect travel time and service reliability. Table 4-5 shows thresholds for each LOS level.

Table 4-5. Passenger Load LOS Thresholds

LOS	Load Factor (passenger per seat)	Comments
A	0.00–0.50	No passenger need sit next to another
B	0.51–0.75	Passengers can choose where to sit
C	0.76–1.00	All passengers can sit
D	1.01–1.25	Comfortable standee load for design
E	1.26–1.50	Maximum schedule load
F	>1.50	Crush load

Source: Transit Capacity and Quality of Service Manual

Reliability of Service LOS was analyzed at major transit hubs within the project corridor. The reliability LOS measures the degree to which a transit vehicle meets or misses the scheduled headway at its arrival station. This includes both a transit vehicle arriving late and also a transit vehicle leaving early from a stop. A bus leaving early would mean that some transit riders would miss their bus. Two methods were used to determine transit reliability. For transit routes with scheduled headways greater than 10 minutes, on-time reliability was evaluated in terms of on-time performance, defined as being 0 to 5 minutes late. For transit routes operating at scheduled headways of 10 minutes or less, headway adherence (calculated as the coefficient of variation) was used to determine reliability. Reliability was calculated using the TCQSM methodology, which compares the standard deviation of actual headways to scheduled headways of transit routes at major transit centers and park-and-ride lots within the project area. On-time performance for June 2012 was provided by Sound Transit staff for Sound Transit Express routes operating in the corridor. Table 4-6 shows the thresholds for each LOS level.

Table 4-6. Reliability of Service LOS Thresholds

LOS	On-Time Percentage	Comments[a]
A	95.0–100.0%	1 late transit vehicle every 2 weeks (no transfer)
B	90.0–94.9%	1 late transit vehicle every week (no transfer)
C	85.0–89.9%	3 late transit vehicles every 2 weeks (no transfer)
D	80.0–84.9%	2 late transit vehicles every week (no transfer)
E	75.0–79.9%	1 late transit vehicle every day (with a transfer)
F	<75.0%	1 late transit vehicle at least daily (with a transfer)

[a] Individual's perspective based on five round trips per week.

Source: Transit Capacity and Quality of Service Manual

4.2.2 Regional Transit

Service Characteristics

Transit services within the project area are provided by Community Transit, King County Metro, and Sound Transit. Bus routes along I-5 are operated by Sound Transit, Community Transit, and King County Metro, and they provide long-distance service between major transit centers in the project area and major urban centers in the region. Sound Transit's ST Express regional bus service provides two-direction, all-day service between major regional destinations. Community Transit and King County Metro services along I-5 in the project area are primarily peak-direction, peak-period service, which is oriented to commuters.

Swift, Community Transit's bus rapid transit service, operates along the Snohomish County portion of the SR 99 corridor to the west of the study area. King County Metro's RapidRide E Line began service on Aurora Avenue North in February 2014. Local buses provide service to several transit centers, park-and-ride facilities, neighborhoods, and activity centers. The frequency and number of bus routes in service increase during the peak periods, primarily in the peak direction of travel. These routes connect park-and-rides and transit centers in Snohomish and North King counties with major employment centers in Seattle. Table 4-7 lists the existing bus routes serving the project area. Two routes were eliminated in September 2014. They remain in Table 4-7 to disclose that they were included in the transit model.

Table 4-7. Existing Bus Routes Evaluated in the Project Area

Route	Stop Locations in Project Area	Service Area	Schedule (with headways)
CT 110	Mountlake Terrace Transit Center, 220th Street SW	Mountlake Terrace, Edmonds (eliminated September, 2014)	Weekdays (6:00 am to 8:30 am, 3:45 pm to 6:15 pm) every 30 minutes
CT 111	Mountlake Terrace Transit Center	Mountlake Terrace, Brier	Weekdays (5:15 am to 7:30 am, 4:30 pm to 7:00 pm) every 30 minutes in peak direction
CT 112	Mountlake Terrace Transit Center	Mountlake Terrace, Brier, Lynnwood, Swamp Creek, Ash Way	Weekdays (6:00 am to 10:00 pm) every 30 minutes Saturdays (6:15 am to 9:15 pm) every 60 minutes
CT 115	Lynnwood Transit Center	Aurora Village, Edmonds, Lynnwood, Alderwood, Swamp Creek, Ash Way, Mill Creek, Mariner	Weekdays (5:15 am to 10:00 pm) every 30 minutes Saturdays (5:45 am to 10:30 pm) every 60 minutes
CT 116	Lynnwood Transit Center	Edmonds, Lynnwood, Alderwood, Swamp Creek, Ash Way, Mill Creek, Silver Firs	Weekdays (5:30 am to 10:30 pm) every 30 minutes Saturdays (6:00 am to 10:00 pm) every 60 minutes
CT 119	Mountlake Terrace Transit Center	Mountlake Terrace, Brier, Lynnwood, Ash Way	Weekdays (6:15 am to 10:15 pm) every 30 minutes Saturdays (6:15 am to 10:00 pm) every 60 minutes
CT 120	Lynnwood Transit Center	Lynnwood, Canyon Park	Weekdays (5:30 am to 9:45 pm) every 30 minutes Saturdays (6:15 am to 10:00 pm) every 60 minutes
CT 130	Mountlake Terrace Transit Center, Lynnwood Transit Center	Lynnwood, Mountlake Terrace, Aurora Village, Edmonds	Weekdays (5:30 am to 10:00 pm) every 30 minutes Saturdays (6:30 am to 10:00 pm) every 60 minutes
CT 201	Lynnwood Transit Center	Lynnwood, Alderwood, Swamp Creek, Ash Way, Mill Creek, Mariner, Everett, Marysville, Smokey Point	Weekdays (4:45 am to 11:00 pm) every 40 minutes Saturdays (6:15 am to 10:00 pm) every 60 minutes
CT 202	Lynnwood Transit Center	Lynnwood, Alderwood, Swamp Creek, Ash Way, Mill Creek, Mariner, Everett, Marysville, Smokey Point	Weekdays (5:00 am to 10:30 pm) every 40 minutes Saturdays (5:45 am to 9:30 pm) every 60 minutes
CT 402	Lynnwood Transit Center	Downtown Seattle, Lynnwood	Weekdays (5:15 am to 9:00 am, 2:30 pm to 7:15 pm) every 15 minutes in peak direction
CT 405	220th Street SW	Downtown Seattle, Mountlake Terrace, Edmonds	Weekdays (6:00 am to 8:30 am, 3:15 pm to 6:45 pm) every 30 minutes in peak direction
CT 413	Mountlake Terrace Transit Center	Downtown Seattle, Mountlake Terrace, Lynnwood	Weekdays (5:00 am to 9:00 am, 3:00 pm to 7:00 pm) every 15 minutes in peak direction
CT 415	Mountlake Terrace Transit Center	Downtown Seattle, Mountlake Terrace, Lynnwood	Weekdays (5:45 am to 9:00 am, 3:30 pm to 6:30 pm) every 15 minutes in peak direction
CT 417	Lynnwood Transit Center	Downtown Seattle, Lynnwood, Mukilteo	Weekdays (6:30 am to 9:15 am, 3:15 pm to 6:15 pm) every 30 minutes in peak direction

Table 4-7. Existing Bus Routes Evaluated in the Project Area

Route	Stop Locations in Project Area	Service Area	Schedule (with headways)
CT 421	Lynnwood Transit Center	Downtown Seattle, Lynnwood, Marysville	Weekdays (4:45 am to 8:15 am, 2:30 pm to 7:00 pm) every 30 minutes in peak direction
CT 422	Lynnwood Transit Center	Downtown Seattle, Lynnwood, Marysville, Stanwood	Weekdays (5:15 am to 8:00 am, 4:15 pm to 7:15 pm) every 60 minutes in peak direction
CT 425	Lynnwood Transit Center	Downtown Seattle, Lynnwood, Lake Stevens	Weekdays (5:30 am to 8:00 am, 3:30 pm to 6:30 pm) every 30 minutes in peak direction
CT 810	Mountlake Terrace Transit Center, Lynnwood Transit Center	University District, Mountlake Terrace, Lynnwood, Mill Creek, Everett	Weekdays (9:15 am to 11:15 am, 6:00 pm to 7:30 pm) every 30 minutes in peak direction
CT 821	Lynnwood Transit Center	University District, Lynnwood, Marysville	Weekdays (5:30 am to 8:15 am, 3:30 pm to 6:15 pm) every 30 minutes in peak direction
CT 855	Lynnwood Transit Center	University District, Mountlake Terrace, Lynnwood	Weekdays (6:15 am to 9:15 am, 12:30 pm to 6:00 pm) every 15 minutes in peak direction
CT 871	Mountlake Terrace Transit Center, 220th Street SW	University District, Mountlake Terrace, Edmonds	Weekdays (6:00 am to 10:15 am, 12:30 pm to 6:30 pm) every 15 minutes in peak direction
CT 885	Lynnwood Transit Center	University District, Mountlake Terrace, Lynnwood	Weekdays (5:45 am to 6:15 am, 3:00 pm to 5:30 pm) every 60 to 90 minutes in peak direction
KCM 41	NE 130th Street	Downtown Seattle, University District, Northgate, Lake City	Weekdays (4:45 am to 1:45 am) every 5 to 15 minutes Saturdays (5:45 am to 1:45 am) every 15 minutes Sundays (6:15 am to 1:45 am) every 30 minutes
KCM 242	NE 130th Street, NE 145th Street	Jackson Park, Northgate, Ravenna, Montlake, Bellevue, Overlake	Weekdays (5:45 am to 10:00 am, 3:30 pm to 7:15 pm) every 30 minutes in peak direction
KCM 243	NE 130th Street, NE 145th Street	Jackson Park, Lake City, Ravenna, Montlake, Bellevue (eliminated September, 2014)	Weekdays (6:30 am to 8:30 am, 4:15 pm to 6:15 pm) every 30 to 60 minutes in peak direction
KCM 301	NE 145th Street	Downtown Seattle, University District, Jackson Park, Shoreline, Richmond Beach	Weekdays (4:30 am to 9:00 am, 3:00 pm to 6:30 pm) every 15 minutes
KCM 303	NE 145th Street	Downtown Seattle/First Hill, Northgate, Jackson Park Shoreline	Weekdays (5:30 am to 9:00 am, 3:30 pm to 8:00 pm) every 15 minutes in peak direction
KCM 304	NE 145th Street	Downtown Seattle, Jackson Park, Shoreline, Richmond Beach	Weekdays (6:15 am to 8:30 am, 3:30 pm to 6:30 pm) every 30 minutes in peak direction
KCM 308	NE 145th Street	Downtown Seattle, Jackson Park, Lake City, Lake Forest Park, Horizon View	Weekdays (5:45 am to 8:30 am, 4:00 pm to 6:45 pm) every 30 to 60 minutes in peak direction
KCM 316	None	Downtown Seattle, Northgate, Haller Lake, Meridian Park	Weekdays (6:00 am to 8:45 am, 4:00 pm to 7:00 pm) every 20 minutes in peak direction

Table 4-7. Existing Bus Routes Evaluated in the Project Area

Route	Stop Locations in Project Area	Service Area	Schedule (with headways)
KCM 330	NE 145th Street, NE 155th Street	Shoreline, Fircrest, Lake City	Weekdays (6:30 am to 9:15 am, 12:30 pm to 6:15 pm) every 30 to 60 minutes
KCM 345	None	Northgate, Greenwood, Shoreline	Weekdays (6:15 am to 11:15 am) every 30 minutes Saturdays (7:15 am to 10:45 pm) every 30 minutes Sundays (7:15 am to 10:45 pm) every 60 minutes
KCM 346	None	Northgate, Haller Lake, Meridian Park, Shoreline	Weekdays (5:15 am to 11:30 am) every 30 minutes Saturdays (6:00 am to 12:00 pm) every 30 minutes Sundays (6:30 am to 12:00) every 60 minutes
KCM 347	NE 145th Street, Mountlake Terrace Transit Center	Northgate, Jackson Park, North City, Ballinger Terrace, Mountlake Terrace	Weekdays (5:15 am to 12:15 am) every 30 minutes Saturdays (7:00 am to 11:00 pm) every 30 minutes Sundays (6:30 am to 10:30 pm) every 30 minutes
KCM 348	NE 185th Street	Northgate, Shoreline, Richmond Beach	Weekdays (5:30 am to 11:30 pm) every 30 minutes Saturdays (6:00 am to 12:15 am) every 30 minutes Sundays (6:00 am to 12:15 am) every 30 minutes
KCM 373	NE 145th Street	University District, Ravenna, Jackson Park, Shoreline, Aurora Village	Weekdays (6:15 am to 10:15 am, 1:30 pm to 7:30 pm) every 15 to 30 minutes in peak direction
ST 510	(None) The 512 becomes the 510 for the peak period, peak direction.	Downtown Seattle to Everett	Weekdays (4:20 am to 9:00 am, 3;00 pm to 7:00 pm every 10 minutes in peak direction;
ST 512	NE 145th Street, Mountlake Terrace Transit Center, Lynnwood Transit Center	Downtown Seattle, University District, Jackson Park, Mountlake Terrace, Lynnwood, Ash Way, Everett	Weekdays off peak direction and off peak (5:30 am to 1:00 am) every 15 minutes Weekends (5:30 am to 1:00 am) every 30 minutes
ST 511	Mountlake Terrace Transit Center, Lynnwood Transit Center	Downtown Seattle, Mountlake Terrace, Lynnwood, Ash Way	Weekdays peak period, peak direction (4:20 am to 9:00 am, 2:30 pm to 7:00 pm) every 20 minutes
ST 513	Mountlake Terrace Transit Center	Downtown Seattle, Mountlake Terrace, Everett	Weekdays (5:30 am to 9:00 am, 3:45 pm to 7:00 pm) every 15 to 30 minutes
ST 535	Lynnwood Transit Center	Lynnwood, Alderwood, Canyon Park, UW Bothell, Totem Lake, Downtown Bellevue	Weekdays (4:45 am to 11:00 pm) every 30 minutes Saturdays (7:15 am to 11:00 pm) every 60 minutes

Note: Transit routes are from spring 2012 schedules obtained from King County Metro and Sound Transit Web sites: http://www.kingcounty.gov and http://www.soundtransit.org.
Source: Community Transit (2012); King County Metro (2012); Sound Transit (2014). Routes eliminated in September, 2014 that were included in the transit model remain in the table.
CT = Community Transit
KCM = King County Metro
ST = Sound Transit

The major transfer points within the project area are transit centers and park-and-ride facilities. Community Transit, King County Metro, and Sound Transit provide service to these facilities. There are three transit centers within the I-5 corridor at Northgate, Mountlake Terrace, and in downtown Lynnwood. The Northgate Transit Center is accessed by general purpose ramps to and from the I-5 mainline and express lanes (to and from the south only). There are freeway flyer stops at NE 145th Street (northbound and southbound) that are accessed from the outside general purpose lanes. Regional transit serving these flyer stops is limited because transit must leave the inside HOV lane and weave through congested general purpose lanes to exit to the flyer stops and then weave again to re-enter the inside HOV lanes. Regional transit accesses the Mountlake Terrace Transit Center using the in-line freeway station. Regional transit serves the Lynnwood Transit Center from the HOV lanes to direct access ramps that lead to 46th Avenue West.

Within Segment A there are two small park-and-ride lots. These facilities connect adjacent neighborhoods with King County Metro buses running along I-5 and regional arterials. These King County Metro routes provide service to a variety of destinations, including downtown Seattle, the University District, Northgate Transit Center, Aurora Village, and Mountlake Terrace Transit Center. Snohomish County has 40 park-and-ride lots, ranging in size from 10 spaces to almost 1,400 spaces, which provide connections to regional transit centers and employment areas, such as downtown Seattle, the University District, and Northgate Transit Center. Table 4-8 lists the existing transit facilities in the project area.

Table 4-8. Existing Transit Facilities in the Project Area

Transit Facility	Type of Facility	Rider Amenities	Served by Routes	Park-and-Ride Stalls
Northgate Transit Center (includes adjacent facilities at Northgate Mall and Thornton Place)	Transit Center, Park-and-Ride	Bicycle Lockers	ST 555, 556 KCM 16, 40, 41, 66, 67, 68, 75, 242, 303, 345, 346, 347, 348, 995	1,523
NE 133rd/5th Avenue NE Park-and-Ride (I-5 at NE 130th Street)	Park-and-Ride		KCM 242, 243	46
North Jackson Park Park-and-Ride (I-5 at NE 145th Street)	Park-and-Ride		ST 510, 511, 512 KCM 242, 243, 301, 303, 304, 308, 347, 373	68
Mountlake Terrace Transit Center (I-5 at 236th Street SW)	Transit Center, Park-and-Ride	Bicycle Lockers	ST 511, 512, 513 CT 110, 111, 112, 119, 130, 413, 415, 810, 871	880
Lynnwood Transit Center	Transit Center, Park-and-Ride	Bicycle Lockers	ST 511, 512, 535 CT 115, 116, 120, 130, 201, 202, 402, 417, 421, 422, 425, 810, 821, 855, 885	1,370

Note: Transit routes and park-and-ride stalls listed as of summer 2012.
Sources: http://www.communitytransit.org/parking/, http://metro.kingcounty.gov/tops/parknride/pr-north-seattle.html
CT = Community Transit
ST = Sound Transit
KCM = King County Metro

Community Transit commuter express routes serve regional trips between Snohomish County and urban centers in King County, including downtown Seattle, the University District, and the Eastside. Service is oriented to commuter travel, with higher frequencies provided during the peak period in the peak direction. In addition, Community Transit and Everett Transit provide local service between park-and-ride lots and transit centers throughout Snohomish County. King County Metro provides regional and local service between north Seattle and the county's urban centers. Sound Transit provides regional express bus service in the corridor between major urban centers and transit centers. Table 4-8 lists regional and local bus routes serving the project area.

In general, during the peak periods, the frequency of buses in the peak direction is greater than the frequency of buses running in the opposite "reverse-peak" direction. Midday, off-peak, and weekend transit service is less frequent than during the peak periods. On weekdays, Sound Transit Route 511 operates every 15 minutes in both directions between downtown Seattle and Ash Way Park-and-Ride in Lynnwood.

Ridership

Table 4-9 shows the daily bus ridership for regional bus routes on I-5 north of Northgate, in comparison with various locations on other key transit corridors in the region. Ridership on I-5 at the Ship Canal Bridge includes riders from north of Northgate, in addition to those boarding farther south between Northgate and the Ship Canal. This information shows that the project corridor currently carries the highest bus ridership volumes in the region, and provides a point of comparison with future year (2035) alternatives.

Table 4-9. Daily Bus Ridership on Selected Regional Corridors —Base Year (2011)

Route	Bus Ridership
I-5, North of Northgate Way	19,400
I-5, Ship Canal	33,400
I-5, South of West Seattle Bridge	16,400
I-5, South of I-405	9,200
SR 520, Midspan	16,000
I-90, between Seattle and Mercer Island	11,600
I-90, East of 148th/150th Avenue SE Interchange	4,000
I-405, North of SR 520	4,400
I-405, South of SR 520	4,000

Source: Sound Transit Ridership Forecasting Model

Transit Travel Times

Table 4-10 shows scheduled peak-period transit travel times between Shoreline (I-5 at NE 145th Street) and Lynnwood (Lynnwood Transit Center) and other regional destinations. As shown in Table 4-10, the southbound transit trips from Shoreline during the AM peak period are 16 minutes to Northgate and 66 minutes to Sea-Tac Airport. Transit trips from Lynnwood are 36 minutes to downtown Seattle and 79 minutes to Sea-Tac Airport. The transit travel times from Lynnwood to Northgate exceed the travel time from Lynnwood to the University District (a longer distance) due to the lack of direct service between Lynnwood and Northgate; therefore, passengers must make inefficient transfers.

Table 4-10. Transit Travel Times—AM Peak Period Southbound (minutes)

Destination	From Shoreline	From Lynnwood
Northgate	16	52
University of Washington	25	37
Capitol Hill	30	48
Downtown Seattle	18	36
Sea-Tac Airport	66	79
Downtown Bellevue	49	46
Overlake	65	71

Source: Scheduled transit travel times from King County Metro Trip Planner, http://metro.kingcounty.gov/

Table 4-11 shows the transit trip travel times during the PM peak period from regional destinations to Shoreline (NE 145th Street Station) and Lynnwood (Lynnwood Transit Center Station). Longer transit travel times generally occur during the PM peak period in the peak commute direction (northbound) than during the AM peak commute peak direction (southbound) for most origins and destinations. These travel times for both peak periods reflect the congestion in the I-5 general purpose and HOV lanes causing inconsistency in travel times.

Table 4-11. Transit Travel Times—PM Peak Period Northbound (minutes)

Origin	To Shoreline	To Lynnwood
Northgate	7	70
University of Washington	30	32
Capitol Hill	62	60
Downtown Seattle	22	41
Sea-Tac Airport	75	93
Downtown Bellevue	51	58
Overlake	63	78

Source: Scheduled transit travel times from King County Metro Trip Planner, http://metro.kingcounty.gov/

Table 4-12 shows the southbound transit travel times during the PM peak period to regional destinations from Shoreline and Lynnwood. The travel times are only slightly faster and reflect higher variability than those described previously, which reflects the heavy traffic volumes in the I-5 corridor during the PM peak period. Southbound congestion is exacerbated when the I-5 express lanes are operating in the northbound direction.

Table 4-12. Transit Travel Times—PM Peak Period Southbound (minutes)

Destination	From Shoreline	From Lynnwood
Northgate	17	55
University of Washington	47	39
Capitol Hill	40	66
Downtown Seattle	23	35
Sea-Tac Airport	66	79
Downtown Bellevue	60	46
Overlake	58	61

Source: Scheduled transit travel times from King County Metro Trip Planner, http://metro.kingcounty.gov/

These transit travel times reflect the current conditions on existing bus routes (and light rail service to Sea-Tac Airport) and include wait times associated with transfers when the trip requires more than one route. All trips to and from Sea-Tac Airport are assumed to include travel by bus to downtown Seattle and a transfer to Link light rail to the airport. In addition to these travel times, the total transit trip travel time would include the time to access the bus as a pedestrian, bicyclist, passenger, or driver, as well as the wait time for the initial bus boarding. The wait time for a bus would be dependent on the service reliability (adherence to schedule). If a bus arrival is unreliable, then the riders must arrive prior to the scheduled time and wait until the bus arrives on time or late. The bus reliability is an LOS factor discussed in Section 4.2.1 above. The analysis of transfers is presented below.

Transfers

The number of transfers being made from bus-to-bus or bus-to-rail can be measured by a systemwide transfer rate, which is the average number of transit boardings per transit trip. As shown in Table 4-13, the systemwide transfer rate for the base year (2011) is 1.39. As with other systemwide measures, this transfer rate will be useful as a comparison both for future transfer rates and how transfer rates would change with the project.

Table 4-13. Transit Transfer Rate

Measure	Base Year (2011)
Transfer Rate	1.39
Total Daily (24 hours) Transit Trips	384, 200
Total Daily Transit Boardings	533,200

Source: Sound Transit Ridership Forecasting Model

Level of Service for Transit Service Frequency

Figure 4-15 presents the existing PM peak hour LOS for service frequency between selected key locations. Many pairs of destinations to and from station areas in the corridor currently operate at LOS C or better. Destination pairs with bus service frequency at LOS D or worse with travel to or from the project corridor are:

- Downtown Bellevue to north Seattle and Lynnwood Transit Center
- Downtown Seattle to 220th Street SW
- Northgate to Shoreline
- Shoreline to Northgate
- 220th Street SW to Mountlake Terrace Transit Center
- Lynnwood Transit Center to downtown Bellevue

There are also potential station areas that do not have direct bus service to or from the other potential station areas or urban centers. The trip pairs without direct bus service are:

- Downtown Bellevue to Shoreline, Mountlake Terrace Transit Center, and 220th Street SW
- Sea-Tac Airport to all station areas in the project area
- Downtown Seattle to Shoreline
- Capitol Hill to all station areas in the project area
- University District to Shoreline
- Northgate to 220th Street SW
- North Seattle to downtown Bellevue, Sea-Tac Airport, Capitol Hill, Shoreline, and 220th Street SW
- Shoreline to all station areas and urban centers, except Northgate
- Mountlake Terrace Transit Center to downtown Bellevue, Sea-Tac Airport, Capitol Hill, and Shoreline
- 220th Street SW to all station areas in the project area, except downtown Seattle and Mountlake Terrace Transit Center
- Lynnwood Transit Center to Sea-Tac Airport, Capitol Hill, Shoreline, and 220th Street SW

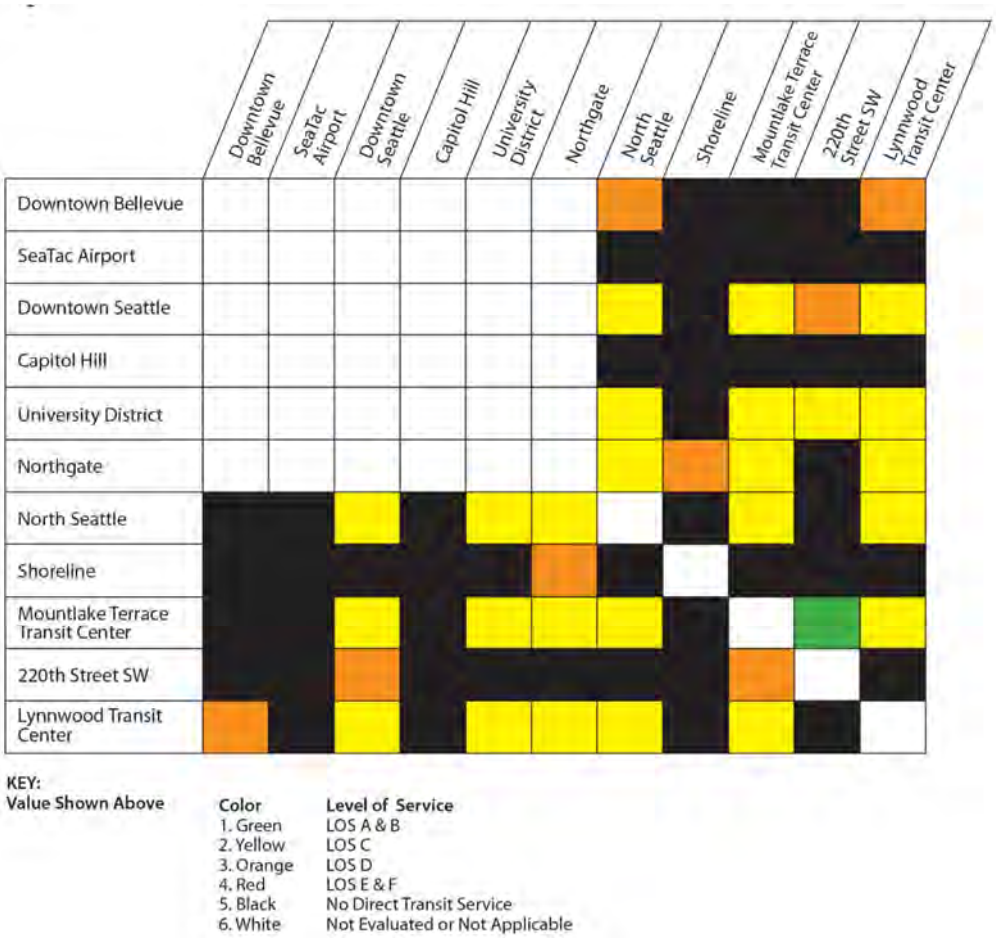


Figure 4-15. Existing PM Peak Hour Service Frequency Level of Service

Level of Service for Hours of Service

Figure 4-16 presents the LOS for hours of service for existing conditions. Hours of service LOS were evaluated between potential station areas and key regional locations. Many pairs of destinations are at LOS A or B, but none are at LOS C or D. The following are at LOS E or worse:

- Downtown Bellevue to North Seattle
- Downtown Seattle to 220th Street SW
- University District to 220th Street SW
- North Seattle to downtown Bellevue
- Shoreline to downtown Bellevue
- Mountlake Terrace Transit Center to 220th Street SW
- 220th Street SW to Mountlake Terrace Transit Center

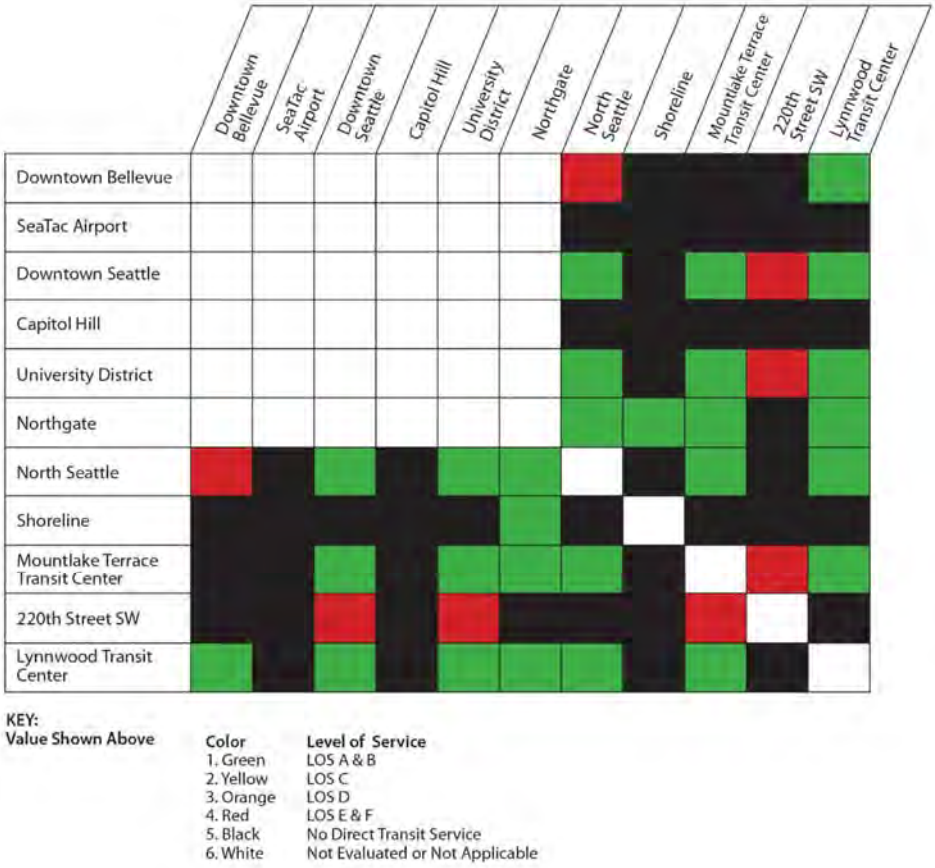


Figure 4-16. Existing Hours of Service Level of Service

Level of Service for Passenger Load

Passenger load data were available for Sound Transit Express and King County Metro transit routes. While reliable data for Community Transit routes were not readily available, the data shown for other operators are indicative of operating conditions in the corridor. Load factors were evaluated at three screenlines. The screenlines are used in the analysis to capture all north-south trips across an imaginary east-west line. The load factor represents the number of riders relative to the total number of seats available. The load factor will vary depending on the quantity of service provided. When buses are overloaded, the transit agency may re-structure routes or add service to reduce overcrowding. For example, as ridership increased following the opening of the Mountlake Terrace Freeway Station in 2011, service on two Sound Transit Express routes was increased in February 2012 to relieve overcrowding.

Table 4-14 shows PM peak period passenger load factors and the corresponding LOS on bus routes traveling on I-5, SR 99, and other north-south facilities shown on the three screenlines. The load factor is at LOS A or LOS B at each screenline.

Table 4-14. PM Peak Period Load Factors

Location and Direction	Average Passengers per Seat[a]	LOS
Screenline 1: North of NE Northgate Way		
Northbound	0.54	B
Southbound	0.28	A
Screenline 2: South of 205th Street		
Northbound	0.59	B
Southbound	0.21	A
Screenline 3: North of 212th Street SW		
Northbound	0.58	B
Southbound	0.23	A

[a] Based on 58 seats per bus.

Source: Sound Transit Ridership Model, 2011

Table 4-15 shows passenger load factors and the corresponding LOS for the AM and PM peak periods on King County Metro bus routes on I-5 at NE Northgate Way. The load factor LOS is A or B, meaning that all passengers have a seat on the bus. Note that the passenger data collection methods do not necessarily capture the number of passengers on a given bus at every location, at every time of day, or the peak load along a given route.

Table 4-15. AM and PM Peak Period Load Factors—King County Metro Routes, I-5 at NE Northgate Way

Direction	Average Passengers per Seat[a]	LOS
AM Peak Period		
Northbound	0.11	A
Southbound	0.62	B
PM Peak Period		
Northbound	0.45	A
Southbound	0.17	A

[a] Based on 58 seats per bus.

Source: King County Metro, Fall 2011

Level of Service for Reliability and On-time Performance

Table 4-16 shows on-time performance and the corresponding LOS for all-day service provided by Sound Transit Regional Express routes serving the Lynnwood Link Extension corridor. On-time is defined as 0 to 5 minutes late from the scheduled time. These Sound Transit Regional Express routes operate at LOS B and

LOS C averaged across the entire day. With an on-time percentage of 90 percent, this means that 10 percent of the trips on that route are at least 5 minutes late.

Table 4-16. On-Time Performance—Sound Transit Regional Express Routes

Route	On-Time Percentage	LOS
510	87.4%	C
511	90.0%	B
512	92.7%	B
513	85.3%	C

Source: Sound Transit, June 2012 Monthly Report

4.2.3 Local and Sub-Regional Transit

The affected environment for local transit is presented by the proposed station area. A few routes that travel within the corridor segment, but do not travel in the vicinity of a station area, are presented under the segment summary.

Segment A: Seattle to Shoreline

Two local King County Metro bus routes operate within Segment A but not in the vicinity of a station area. Route 41 operates between downtown Seattle and Lake City. This route uses I-5 between downtown Seattle and the Northgate Transit Center, travels on 5th Avenue NE to NE 125th Street, and then to Lake City. Route 301 operates between downtown Seattle and Firdale Avenue/North 195th Street in Shoreline. Route 301 operates on I-5 with a stop at the NE 145th Street flyer stop and then uses the NE 175th Street interchange to and from Firdale Avenue/North 195th Street.

There are two small park-and-ride lots in Segment A, in addition to the park-and-ride stalls at the Northgate Transit Center. The NE 133rd/5th Avenue NE Park-and-Ride lot at 5th Avenue NE and NE 133rd Street is approximately 1,000 feet north of NE 130th Street and has 46 parking stalls. The North Jackson Park Park-and-Ride lot is approximately 500 feet north of NE 145th Street with 68 parking stalls.

NE 130th Street/I-5 Area

Two local King County Metro bus routes operate within the NE 130th Street/I-5 area and link the Eastside to north Seattle. Route 242 operates between the Overlake Park-and-Ride in Redmond to NE 165th Street in Seattle's Ridgecrest neighborhood. Route 242 travels on 5th Avenue NE between the Northgate Transit Center and NE 165th Street, with stops at NE 130th Street and NE 145th Street.

There are three King County Metro 900 series, Dial-a-Ride routes that operate between the Lakeside School and the South Kirkland Park-and-Ride, Seward Park neighborhood, and Laurelhurst neighborhood. Routes 986 and 987 operate on

Roosevelt Way and NE 130th Street, crossing over I-5. Route 995 operates on 5th Avenue NE, NE 130th Street, and NE 145th Street.

NE 145th Street/I-5 Area

King County Metro Route 242 described above include stops in the NE 145th Street area.

In addition to other King County Metro routes, Routes 301 and 303 travel between downtown Seattle/First Hill and north Seattle neighborhoods using the NE 145th Street freeway flyer stop and exiting I-5 at the 175th Street interchange. Route 304 operates between downtown Seattle using I-5 and the NE 145th Street interchange to travel west and serve the Shoreline and Richmond Beach areas. Route 308 uses I-5 between downtown Seattle and the NE 145th Street interchange to travel east towards Lake City and the Horizon View neighborhoods.

King County Metro Route 347 travels on 15th Avenue NE, NE 145th Street, 5th Avenue NE, and NE 175th Street to North City, Ballinger Terrace, and the Mountlake Terrace Transit Center. Route 373 is a local route operating between the University of Washington and Aurora Village along 15th Avenue NE, with a stop at NE 145th Street.

NE 155th Street/I-5 Area

King County Metro Route 330 operates between Lake City and Shoreline Community College traveling on NE 155th Street.

NE 185th Street/I-5 Area

King County Metro Route 348 operates between Northgate and the Richmond Beach neighborhood, traveling on 15th Avenue NE, NE 175th Street, 5th Avenue NE, and then west on NE 185th Street over I-5.

Segment B: Shoreline to Mountlake Terrace

The local bus routes within Segment B access the Mountlake Terrace Transit Center, or are in the vicinity of the 220th Street SW area. These local bus routes are described by station area below. The Mountlake Terrace Transit Center has 880 park-and-ride stalls, bicycle lockers, two bus bays for local routes, and two bus stops on 236th Street SW.

Mountlake Terrace Transit Center Area

Five Community Transit routes (111, 112, 119, 810, and 871) use Bus Bays 1 and 2 within the transit center. Two Community Transit routes operate between the Mountlake Terrace Transit Center and the Edmonds multimodal station. Route 130 uses bus stops on 236th Street SW, operating between the Lynnwood Transit Center

and the Edmonds multimodal station. Route 130 travels on Lakeview Drive toward Edmonds.

Two Community Transit routes connect the Mountlake Terrace and Ash Way Park-and-Ride lots. Route 112 operates between the Mountlake Terrace Transit Center, the Lynnwood Transit Center, and Ash Way Park-and-Ride traveling on 236th Street SW to the east. Route 119 operates between the Mountlake Terrace Transit Center and the Ash Way Park-and-Ride traveling on 236th Street SW, 56th Avenue West, over I-5 on 228th Street SW, then on 66th Avenue West and 220th Street SW.

Community Transit Routes 810 and 871 provide service to the University of Washington. These routes access I-5 from the 236th Street SW interchange.

Community Transit Route 111 operates between the Mountlake Terrace Transit Center and Brier east of I-5. King County Metro Route 347 from Northgate also enters the transit center to access the bus bays. From 15th Avenue NE, Route 347 travels on NE 205th Street, 48th Avenue West, and 236th Street SW to the transit center.

220th Street SW/I-5 Area

Community Transit Route 119 described above operates along 220th Street SW.

Segment C: Mountlake Terrace to Lynnwood

The local bus routes within Segment C use the Lynnwood Transit Center, which is described below. The Lynnwood Transit Center has 1,370 park-and-ride stalls, bicycle lockers, and 20 bus bays.

Lynnwood Transit Center Area

The local Community Transit routes provide connections between Community Transit park-and-rides throughout Snohomish County. The local routes access the Lynnwood Transit Center on 200th Street SW and then circulate on 48th Avenue West and 46th Avenue West to enter and exit the transit center. Route 112 travels on 44th Avenue West with bus stops on this street.

Route 115 connects the Aurora Village Transit Center, Edmonds Park-and-Ride, Edmonds Community College Transit Center, Lynnwood Transit Center, Swamp Creek Park-and-Ride, Ash Way Park-and-Ride, McCollum Park Park-and-Ride, and the Mariner Park-and-Ride. Route 116 connects the Edmonds multimodal station to Mill Creek, traveling through the Lynnwood, Swamp Creek, and Ash Way Park-and-Rides. Route 120 connects the Lynnwood Transit Center to the Canyon Park Park-and-Ride in Bothell. Route 130 connects the Edmonds multimodal station, Aurora Village Transit Center, Mountlake Terrace Transit Center, and the Lynnwood Transit Center. Route 130 travels on 52nd Avenue West to 200th Street SW and into the Lynnwood Transit Center. Routes 201 and 202 connect the Lynnwood Transit

Center to park-and-rides to the north and then the Everett multimodal station and Smokey Point in Arlington. Route 196 travels between the Edmonds multimodal station to Alderwood Mall Parkway/184th Street SW, along 196th Street SW north of the Lynnwood Transit Center.

4.3 Freeway Operations

This section discusses current I-5 freeway traffic operations from the NE 130th Street interchange to the City of Lynnwood interchange areas. Key observations and findings after analysis of the existing freeway operations include the following:

- During the AM peak hour, average speeds on southbound I-5 (the peak direction of travel) range from 24 mph to 58 mph, with noticeable congestion (defined as LOS E or F) from SR 104 to the NE 130th Street interchange area. In the northbound direction, speeds are estimated at approximately 55 mph with operations at LOS B or C.
- During the PM peak hour, average speeds on northbound I-5 from NE 130th Street to the City of Lynnwood interchange areas range from 18 mph to 51 mph, with noticeable congestion (LOS E or F) throughout the study area. In the southbound direction, modeled speeds range from 45 mph to 58 mph with operating conditions generally at LOS C or D; however, congestion is typically encountered from the Northgate area southbound through downtown Seattle based on known conditions and field observations. This southbound congestion is known to frequently extend north of the Northgate area into Shoreline. However, due to the limits of the study area, such spillback effects, vehicle queuing from a congestion point that extends beyond the next interchange or intersection, are not explicitly reflected in the model used for this analysis.

4.3.1 Evaluation Methodology

Existing freeway conditions were evaluated using VISSIM analysis software—a widely accepted traffic micro-simulation tool. VISSIM assesses the roadway network stochastically (i.e. estimating flow conditions based on probability and randomness) in which the movement of individual vehicles within a traffic stream are represented as they respond to the influences and operating behaviors of other vehicles. Performance measures reported from the VISSIM simulation analysis include travel times, mainline speeds, vehicle throughput, and LOS. An I-5 VISSIM model was developed to analyze the study corridor from the NE 130th Street/I-5 interchange to the City of Lynnwood interchanges with I-5.

To establish a baseline foundation for comparing future no build and build scenarios, an existing conditions model was developed for the AM and PM peak hours, 7 to 8 AM and 5 to 6 PM, respectively. In addition to modeling the freeway ramps at the study area interchanges, 27 arterial intersections were represented in the model to capture interactions between freeway and arterial traffic operations. These

interactions included queuing activity and spill-back effects within the NE 130th Street and NE 145th Street interchange areas and the Lynnwood Transit Center Station area.

A supporting Synchro analysis model was used for analyzing and reporting traffic conditions for peripheral intersections (outside of the interchange areas) not covered in the VISSIM analysis. Refer to Section 4.4.1 for the results of the intersection analysis. The intersections incorporated in the VISSIM model are listed below.

Study Intersections

NE 130th Street Interchange Area

- 5th Avenue NE at NE 127th Street (PM peak hour only)
- 5th Avenue NE at the I-5 northbound off-ramp south of NE 130th Street (AM and PM peak hours)
- 5th Avenue NE at NE 130th Street/Roosevelt Way NE (AM and PM peak hours)
- I-5 southbound on-ramp at NE 130th Street (AM and PM peak hours)
- 3rd Avenue NE at NE 130th Street (PM peak hour only)
- 1st Avenue NE at NE 130th Street (AM and PM peak hours)

NE 145th Street Interchange Area

- 5th Avenue NE at the I-5 northbound off-ramp south of NE 145th Street (AM and PM peak hours)
- 5th Avenue NE at the I-5 northbound on-ramp (AM and PM peak hours)
- 5th Avenue NE at North Jackson Park-and-Ride access drive (AM and PM peak hours)
- I-5 southbound on-ramp and off-ramp at NE 145th Street (AM and PM peak hours)
- 4th Avenue NE at NE 145th Street (PM peak hour only)
- 3rd Avenue NE at NE 145th Street (PM peak hour only)
- 1st Avenue NE at NE 145th Street (PM peak hour only)

City of Lynnwood Transit Center Station Area

- 196th Street SW at 50th Avenue West (AM and PM peak hours)
- 196th Street SW at 48th Avenue West (PM peak hour only)
- 196th Street SW at 44th Avenue West (AM and PM peak hours)
- 196th Street SW at 40th Avenue West (PM peak hour only)
- 196th Street SW at 36th Avenue West/I-5 Southbound Ramps (AM and PM peak hours)
- 196th Street SW at Poplar Way (AM and PM peak hours)
- Alderwood Mall Parkway/I-5 Northbound Ramps and Poplar Way (AM and PM peak hours)
- 198th Street SW at 44th Avenue West (PM peak hour only)
- 198th Street SW at 40th Avenue West (PM peak hour only)
- 200th Street SW at 50th Avenue West (AM and PM peak hours)
- 200th Street SW at 48th Avenue West (AM and PM peak hours)
- 200th Street SW at 46th Avenue West (AM and PM peak hours)
- 200th Street SW at 44th Avenue West (AM and PM peak hours)
- Alderwood Mall Boulevard and 40th Avenue West (PM peak hour only)

To capture potential operational impacts of the project to the freeway system, the VISSIM model framework was developed to include the interchanges beyond the corridor limits on each side of the project. As such, it extends from the interchange at NE Northgate Way on the south end of the corridor, to south of the I-405/I-5 interchange in Lynnwood on the north end.

I-5 north of NE Northgate Way generally consists of four general purpose lanes and an inside HOV lane in each direction. The HOV lane extends throughout the entire length of I-5 in the study area. The freeway interchanges analyzed are described from south to north below.

The NE 130th Street interchange includes I-5 ramps to and from the south only. The northbound exit ramp lane to NE 130th Street is a drop lane and intersects 5th Avenue NE south of NE 130th Street. The ramp intersection with 5th Avenue NE is controlled by a stop sign for the off-ramp only. The neighboring interchange to the north is NE 145th Street/SR 523.

The NE 145th Street interchange is a full movement facility with I-5 on-ramp and off-ramp access provided in both the northbound and southbound directions. Both sets of ramps include special purpose lanes for buses to access freeway flyer stop facilities. 5th Avenue NE crosses the northbound off-ramp south of NE 145th Street

with both directions of 5th Avenue NE controlled by stop signs. The northbound bus off-ramp intersects 5th Avenue NE north of NE 145th Street. The northbound on-ramp begins at this same intersection location. Northbound vehicles on NE 145th Street travel northbound on 5th Avenue NE to access the northbound ramp.

North of NE 155th Street, northbound and southbound on-ramps and off-ramps provide access for only bus maintenance vehicles.

A full diamond interchange exists at NE 175th Street with a drop-lane and an add lane for the northbound off-ramps and on-ramps, respectively. The southbound ramps reflect merge and diverge conditions.

The SR 104/I-5 interchange is full access along with collector/distributor lanes in both directions. This interchange is closely spaced with the 236th Street SW interchange, which has access to and from the south only, and a freeway median flyer bus stop that is accessed from the center HOV lanes at the Mountlake Terrace Transit Center. The SR 104 ramps to and from the north access I-5 north of 236th Street SW.

The 220th Street SW interchange is a full movement diamond interchange with an add lane for the northbound on-ramp to I-5.

The City of Lynnwood lies at the north end of the study corridor. There are several ramps connecting I-5 to Lynnwood in both the northbound and southbound directions. From 44th Street SW, I-5 ramps are provided to and from the south. Along with surface street access to the Lynnwood station, an HOV/transit direct access ramp is also provided connecting to and from the I-5 northbound and southbound HOV lanes. In addition, there are ramps to and from 196th Street SW and Poplar Way that are just south of the I-405/I-5 interchange.

4.3.2 Freeway Volumes

Existing traffic volumes on I-5 ramps were compiled from the WSDOT 2010 Ramp and Roadway count database and balanced along the I-5 study corridor. The existing conditions VISSIM model was calibrated to replicate observed traffic counts (peak period mainline volumes) generally within a 5 percent (+/-) deviation range. Figures 4-17 to 4-19 show the I-5 traffic volumes for the AM and PM peak hours.

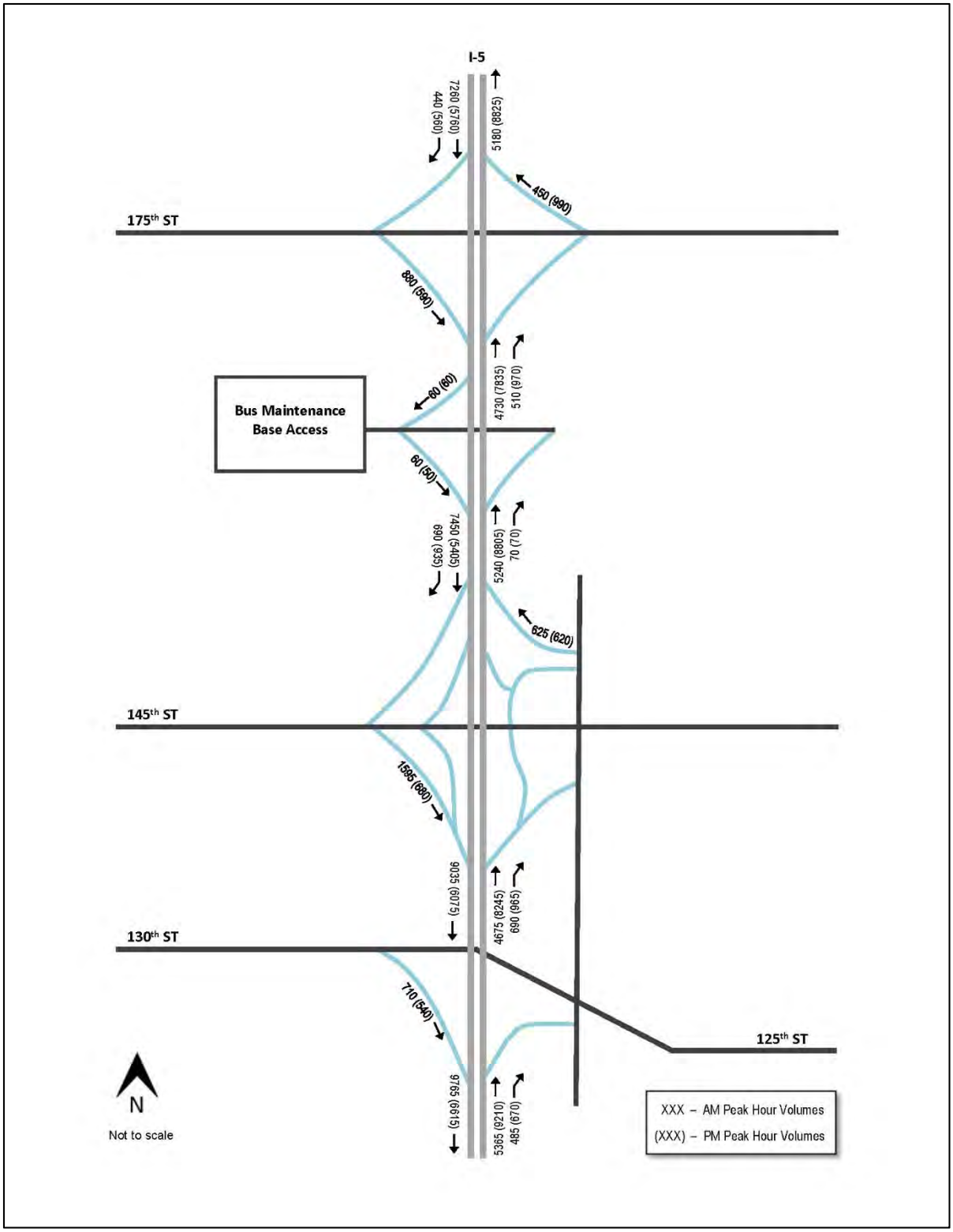


Figure 4-17. Freeway Mainline and Ramp Volumes (Segment A)—Existing Conditions AM and PM Peak Hour

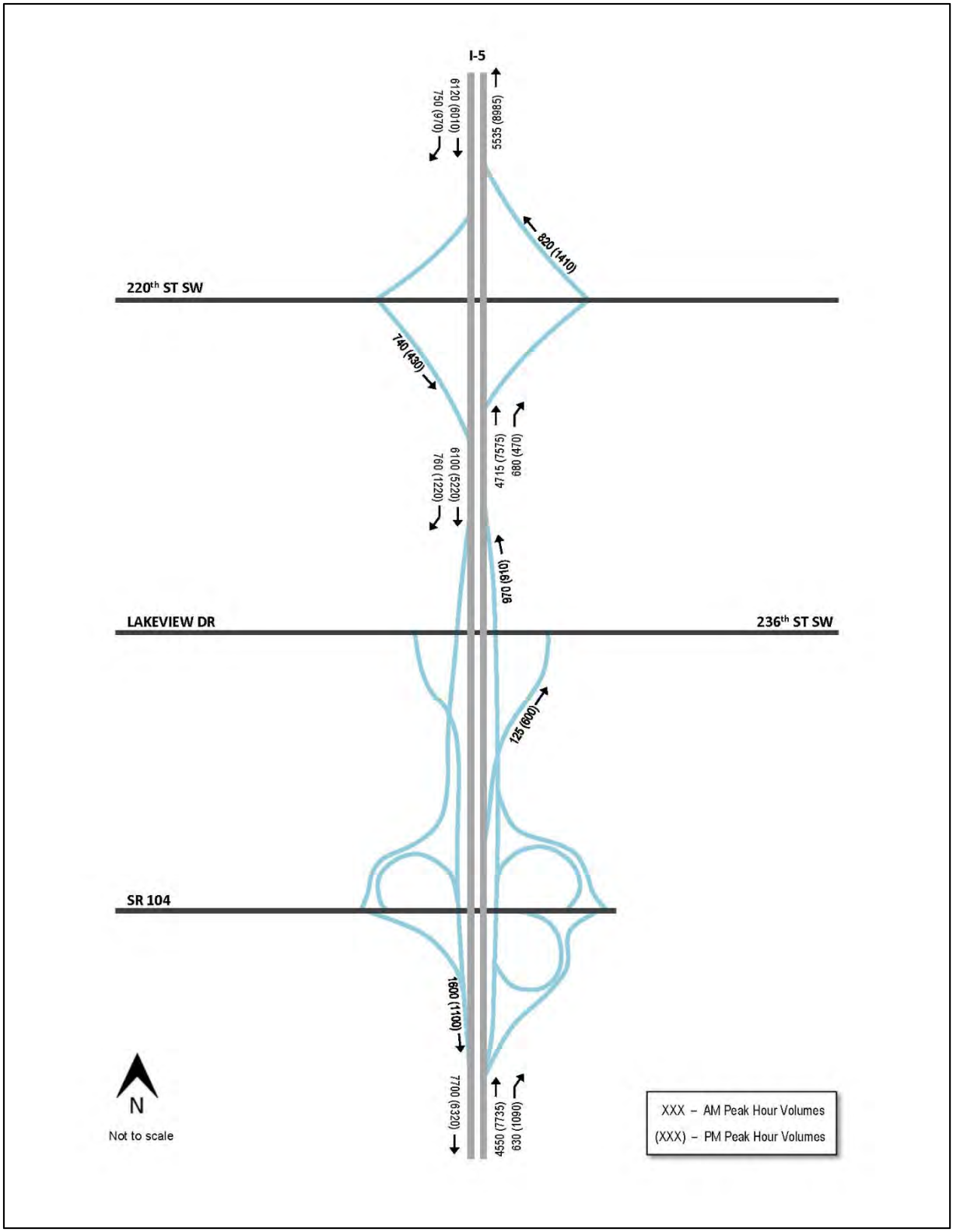


Figure 4-18. Freeway Mainline and Ramp Volumes (Segment B)—Existing Conditions AM and PM Peak Hour

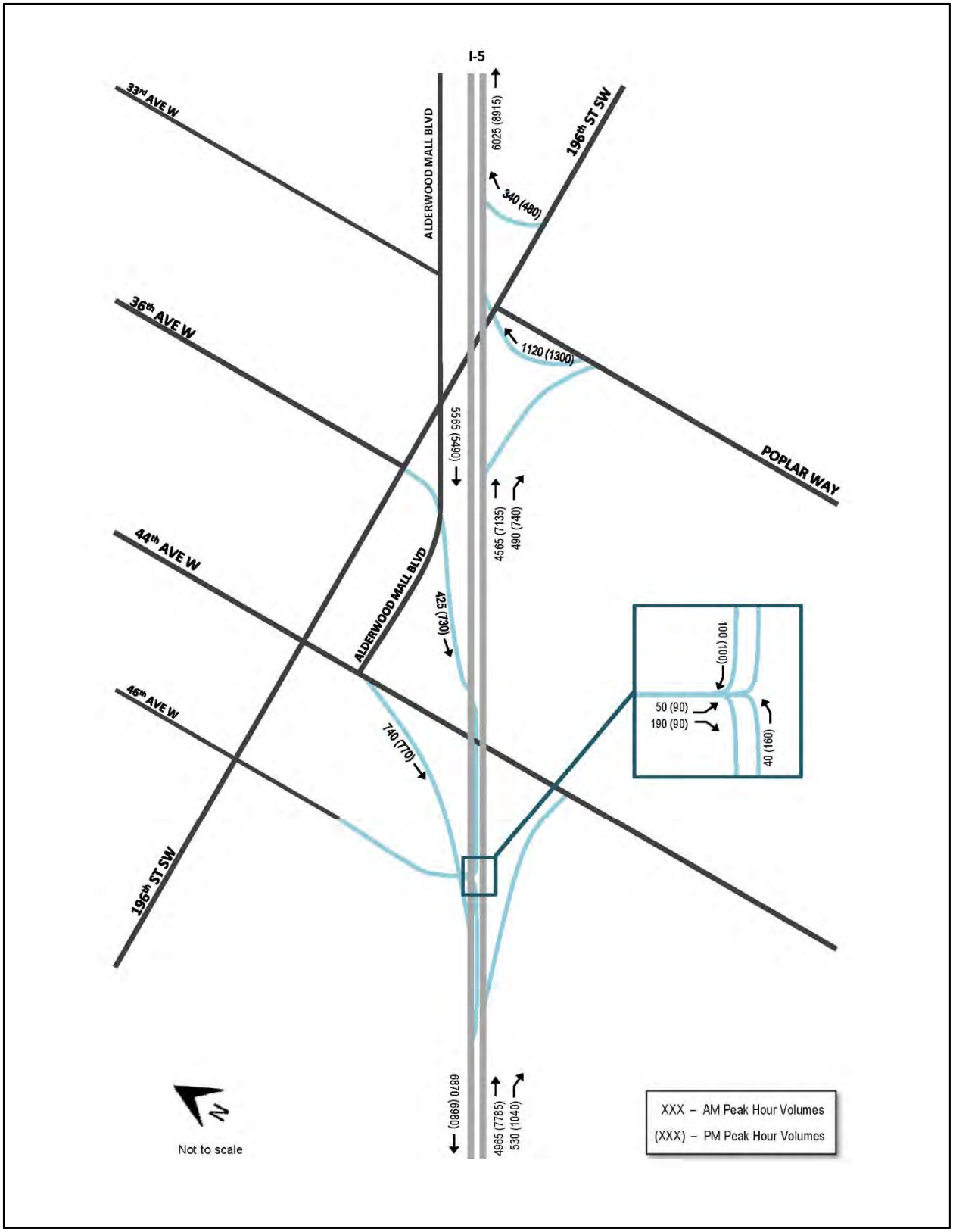


Figure 4-19. Freeway Mainline and Ramp Volumes (Segment C)—Existing Conditions AM and PM Peak Hour

4.3.3 Freeway Speeds and Level of Service

Current freeway mainline speeds were obtained from existing WSDOT traffic flow monitoring data and were used to calibrate the simulation model in order to accurately represent operating conditions on I-5 near the NE 130th Street and NE 145th Street interchanges (where ramp modifications are proposed with the light rail alternatives). Figures 4-20 to 4-22 show the modeled freeway speeds and LOS for existing conditions in the AM and PM peak hours along the study area. North of NE 145th Street, the model was calibrated at a more cursory level based on aggregate volume throughput.

In the AM peak hour, average speeds currently along southbound I-5, the peak direction of travel, are estimated to range from 24 mph to 58 mph. For northbound I-5, the off-peak direction speeds are approximately 55 mph. The LOS results from the model simulation and analysis indicate that southbound I-5 is operating under very congested conditions in the AM peak hour (LOS E or F) within this freeway segment. This congestion is largely due to high volumes of merging traffic at NE 130th Street, NE 145th Street, NE 175th Street, and SR 104, as well as merging and weaving activity farther south. Operating conditions for the northbound direction are in the LOS B to C range, indicating that speeds and flow characteristics are generally acceptable.

In the PM peak hour, average speeds along northbound I-5 (peak direction) range from 18 mph to 51 mph. Southbound I-5 average speeds range from 45 mph to 58 mph through the NE 130th Street interchange. The LOS results indicate that northbound I-5 is operating under highly congested conditions at LOS E or F within this study area. This congestion is mainly due to high volumes of merging and weaving traffic at each of the study interchanges along the broader I-5 study corridor. One example of heavy merging and weaving ramp activity is the NE 130th Street interchange area where the northbound stop-controlled off-ramp and upstream weave section causes backups on the northbound I-5 mainline.

Southbound I-5 traffic flow conditions range from LOS C to E within this study segment, indicating that operations are generally acceptable but with some sections of slow-moving traffic. Southbound traffic conditions near the NE 145th Street interchange are one such example of heavy congestion. Backups in this area are caused by heavy volumes exiting at NE 145th Street, causing delays and some spill-back onto the freeway. Also, while not explicitly analyzed, south of the NE 130th Street and Northgate interchanges, traffic flow on I-5 is typically constrained in the PM peak hour due to congestion caused by a variety of factors including merging and weaving activity, lane configuration, and capacity constraints, etc. This segment of I-5 can often be congested into downtown Seattle and extending into areas farther south.

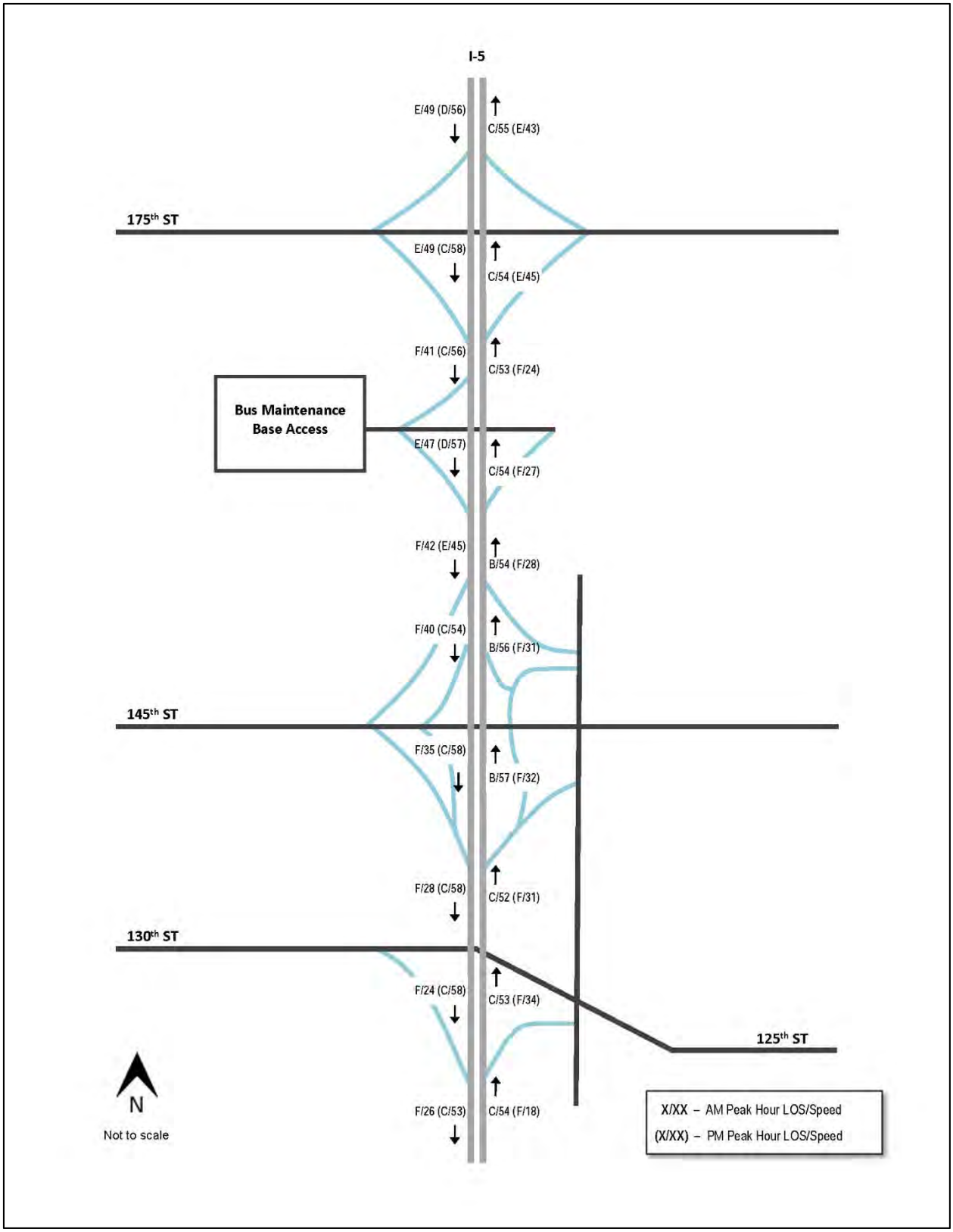


Figure 4-20. Freeway LOS and Speeds (Segment A)—Existing Conditions AM and PM Peak Hour

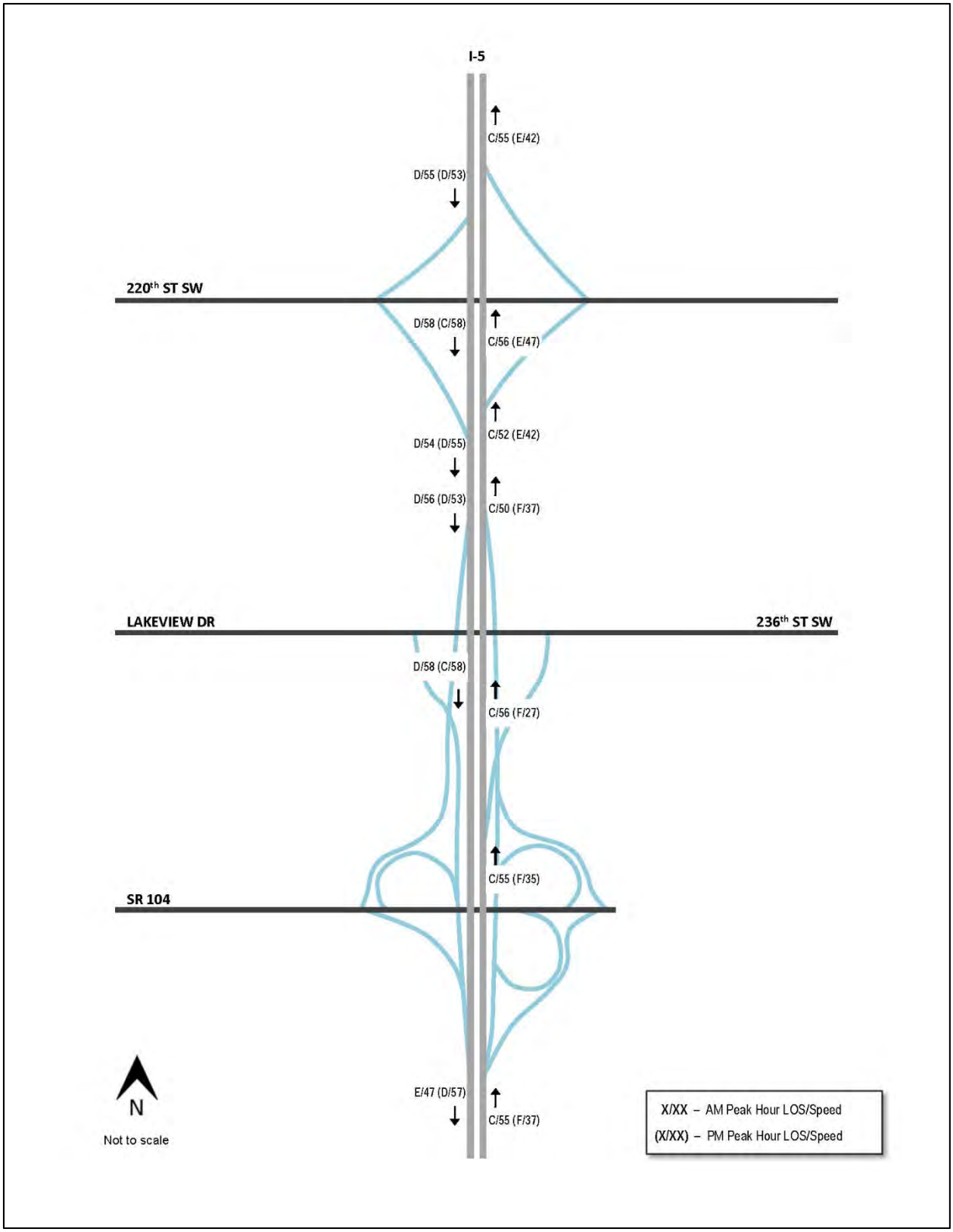


Figure 4-21. Freeway LOS and Speeds (Segment B)—Existing Conditions AM and PM Peak Hour

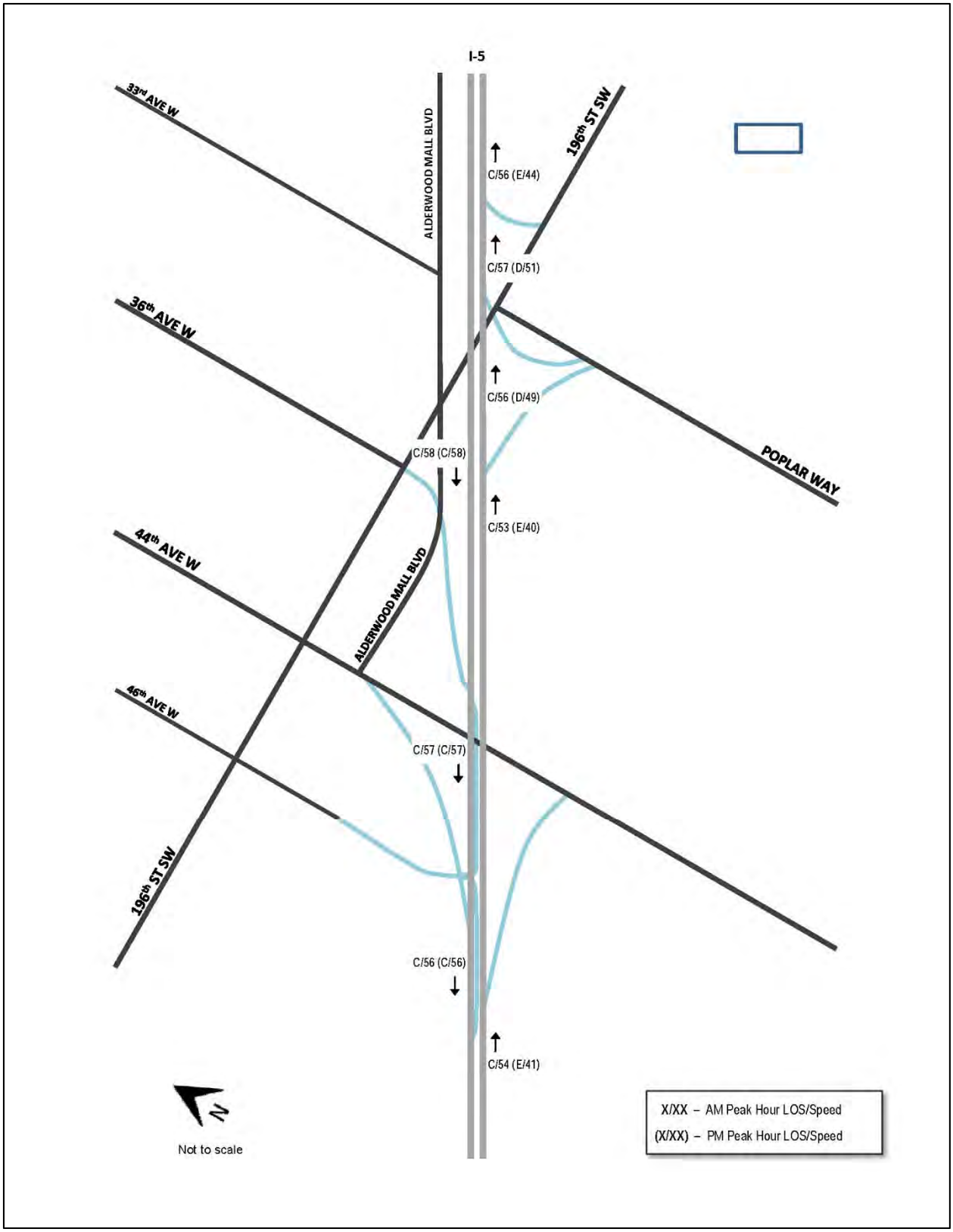


Figure 4-22. Freeway LOS and Speeds (Segment C)—Existing Conditions AM and PM Peak Hour

4.4 Arterials and Local Streets

This section describes current operational conditions for the arterial and local street network within the project area. Key observations and findings include the following:

- Intersections near each proposed light rail station were analyzed to determine whether they are currently operating at acceptable levels or failing according to the governing jurisdiction's intersection LOS standard. In Segment A, the City of Shoreline arterial segments were also evaluated to ensure consistency with the City's concurrency standards.
- In Segment A, 7 out of the 69 intersections evaluated in Seattle and Shoreline for intersection LOS currently do not meet agency standards for acceptable operations during the AM and/or PM peak hour. These intersections are located along 1st Avenue near Northgate, I-5/NE 130th Street and I-5/NE 145th Street interchanges, along NE 145th Street, and on Aurora Avenue North. In addition, one northbound arterial segment currently does not meet the City of Shoreline's concurrency standard during the PM peak hour.
- In Segment B, 1 intersection out of the 19 intersections analyzed within the City of Mountlake Terrace, located near the existing Mountlake Terrace Transit Center, currently operates below standards during the AM peak hour.
- In Segment C, all 20 of the intersections evaluated for intersection LOS currently meet the City of Lynnwood LOS standards.

4.4.1 Traffic Operations

The arterial and local street analysis involved locations most likely to be affected by the project alternatives. The evaluation also included a description of the physical characteristics of the major road facilities in each segment. These characteristics include functional classification, number of lanes, speed limits, and daily traffic volumes. The focus of the arterial and local street analysis, however, was on intersection operations in areas most directly affected, such as by a change in channelization or signal control, as well as those indirectly affected by changes in volume due to trips accessing the light rail system. The latter included intersections surrounding transit stations with proposed increases in park-and-ride capacity and passenger pick-up and drop-off activity.

Existing peak-hour turning movement counts for 2010 through 2012 were collected from WSDOT and the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood for all intersections where data were readily available. Where recent turning movement counts were not available, new counts were taken in May and June 2012. Additional information used in the operational analysis includes the roadway's functional use, lane geometry, traffic signal timing and phasing patterns, on-street parking, proximity to bus stops, and speed limits.

The quality of traffic operations is described in terms of LOS. Traffic operations were analyzed using the Transportation Research Board's *Highway Capacity Manual* methodology to calculate peak hour LOS at signalized and unsignalized intersections. Intersection results at signalized intersections are provided for the average delays of all vehicles as they approach the intersection. However, at selected intersections key movements that are operating significantly different from the overall intersection LOS are also called out. Synchro (version 7.0) software was used to analyze most of the signalized and unsignalized intersections, with the exception of intersections at the NE 130th Street and NE 145th Street interchanges between 1st Avenue NE and 5th Avenue NE, and intersections in the Lynnwood City Center. VISSIM version 5.40 software was used to analyze these intersections in order to more effectively represent queue interactions between intersections. Figure 4-21 shows the locations of all the evaluated intersections.

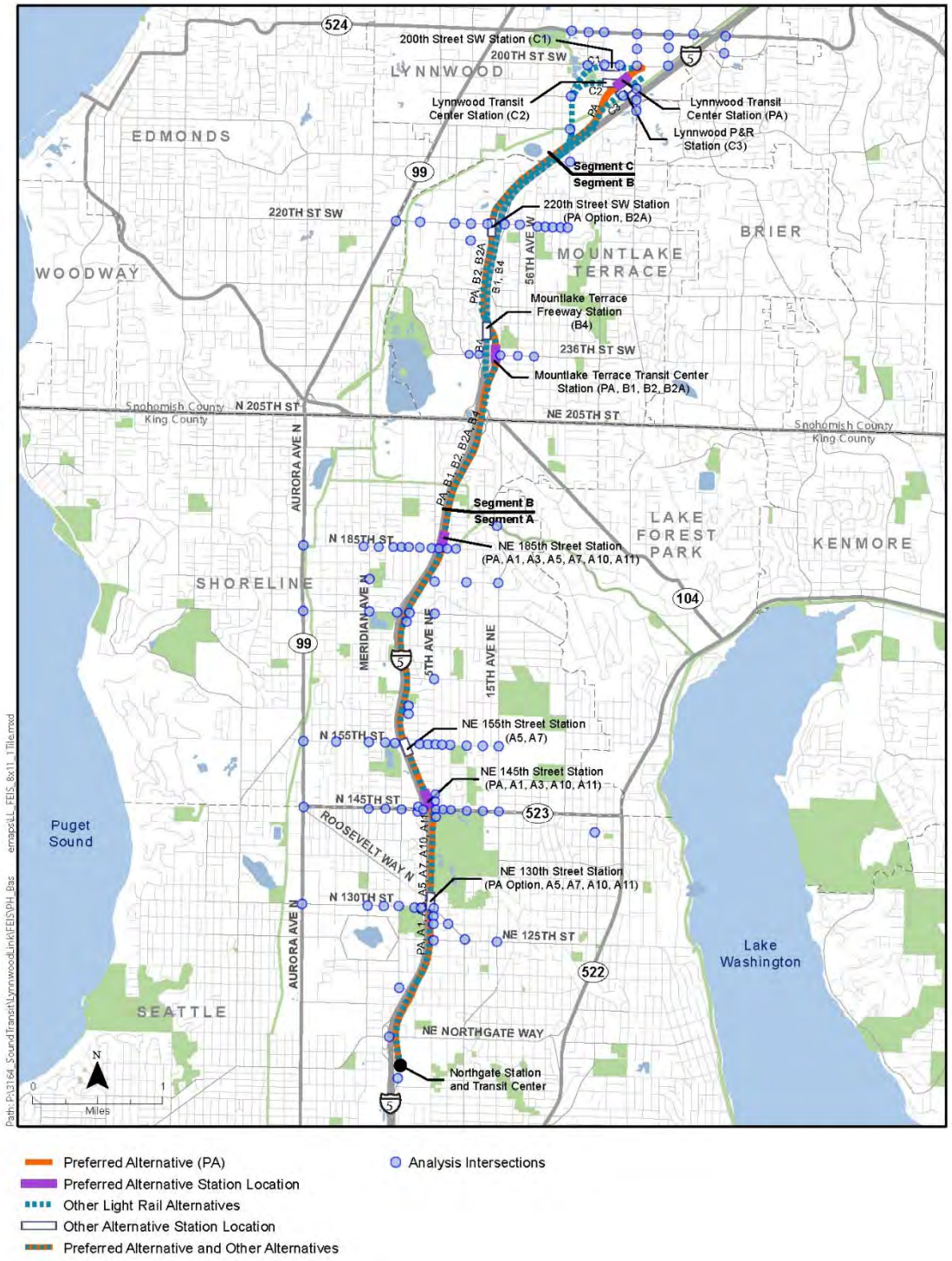


Figure 4-23. Analysis Intersections

Intersection results at unsignalized intersections are provided for the average delays for all vehicles at all-way stop-controlled intersections, and the leg that would experience the greatest delay, or worst LOS, for two-way stop-controlled intersections. LOS ratings, shown in Table 4-17, range from LOS A to LOS F; LOS A represents the best operation and LOS F the poorest operation. LOS was calculated for all study area intersections. Detailed LOS analysis reports for each intersection are provided in Appendix C.

Table 4-17. Level of Service Definitions for Signalized and Unsignalized Intersections

LOS	Average Control Delay (seconds per vehicle)		Traffic Flow Characteristics
	Signalized Intersection	Unsignalized Intersection	
A	≤ 10	≤ 10	Virtually free flow; completely unimpeded.
B	> 10 and ≤ 20	> 10 and ≤ 15	Stable flow with slight delays; less freedom to maneuver.
C	> 20 and ≤ 35	> 15 and ≤ 25	Stable flow with delays; less freedom to maneuver.
D	> 35 and ≤ 55	> 25 and ≤ 35	High density but stable flow.
E	> 55 and ≤ 80	> 35 and ≤ 50	Operating conditions at or near capacity; unstable flow.
F	> 80	> 50	Forced flow; breakdown conditions.

Source: *2010 Highway Capacity Manual,* Transportation Research Board.

Intersections were analyzed to determine whether they are currently operating at acceptable levels or failing. Arterials within the Shoreline city limits were also analyzed to determine whether they meet City of Shoreline concurrency standards, which are intended to ensure that adequate transportation facilities will be in place as new developments occur. Intersections and arterials are considered failing when they do not operate at or better than the governing jurisdiction's performance standard. Table 4-18 summarizes the performance standards for the relevant jurisdiction.

Table 4-18. Arterials and Local Street Performance Standards in the Project Corridor

Agency	Minimum Performance Standard
WSDOT	LOS D for highways of statewide significance (HSS) LOS E/mitigated for regionally significant state highways (non-HSS)
City of Lynnwood	LOS E for city center arterials LOS D for non-city center arterials
City of Mountlake Terrace	LOS D for signalized intersections with the following exceptions (LOS E): • 212th Street SW • 244th Street SW • 220th Street SW between SR 99 and I-5 LOS E for unsignalized intersections

Table 4-18. Arterials and Local Street Performance Standards in the Project Corridor

Agency	Minimum Performance Standard
City of Shoreline	LOS D for signalized intersections LOS D for unsignalized intersecting arterials Volume-to-capacity ratio of 0.90 or lower for principal and minor arterials with the following exceptions: • 5th Avenue NE from NE 145th Street to the I-5 on-ramps; exempt from City concurrency standard • 15th Avenue NE from NE 150th Street to NE 175th Street; volume-to-capacity ratio of 1.10 or lower
City of Seattle	LOS D (goal)

Segment A: Seattle to Shoreline

Link light rail within Segment A is projected to run along the east side of I-5 from the Northgate Station (currently under construction) to a proposed station at NE 185th Street. The six alternatives considered in this segment are either at-grade with elevated sections or mostly elevated, and have intermediate stations at NE 130th Street, NE 145th Street, and NE 185th Street, or NE 130th Street and NE 155th Street. Table 4-19 lists the arterials or roadways potentially affected by the project, including classification, number of lanes, speed limit, and daily traffic volumes.

Table 4-19. Segment A Existing Roadway Facilities

Roadway	Arterial Classification	Number of Lanes	Speed Limit (mph)	Daily Traffic Volume[a] (vehicles)
I-5	Interstate	6–8	60	171,000–211,000
SR 99	Principal Arterial	4–7	30–50	28,000–34,000
SR 522/Lake City Way NE	Principal Arterial	2–5	30–35	32,000–46,000
SR 523/North 145th Street	Principal Arterial	4	35	21,000–28,000
NE Northgate Way	Principal Arterial	4	30	17,500–31,700
NE 115th Street	Collector Arterial	2	20	1,200
NE 125th Street	Principal Arterial	2–3	30	18,000
North/NE 130th Street	Principal Arterial	4	30	19,900
North/NE 155th Street	Minor Arterial	2	35	7,200–11,800
North/NE 165th Street	Local Primary Street or Collector Arterial	2	25	600–1,900
North/NE 175th Street	Principal Arterial	4	35	18,000–30,800
North/NE 185th Street	Minor Arterial	2–4	35	7,200–17,300
Ashworth Avenue North	Local Primary Street or Collector Arterial	2	25	400–1,800
Meridian Avenue North	Collector Arterial	2	35	3,900–12,100

Table 4-19. Segment A Existing Roadway Facilities

Roadway	Arterial Classification	Number of Lanes	Speed Limit (mph)	Daily Traffic Volume[a] (vehicles)
1st Avenue NE	Principal/Collector Arterial	2–5	25–30	3,000–5,300
5th Avenue NE	Minor Arterial	2–4	30	3,400–19,300
Roosevelt Way North/NE	Principal/Collector Arterial	4	30	18,400
10th Avenue NE	Collector Arterial or Local Primary Street	2	30	1,300–5,000
15th Avenue NE	Principal/Minor Arterial	4	35	14,100–15,700

[a] Year 2011 to 2012 daily traffic volumes are based on the latest available daily traffic count information available, including average annual daily traffic (AADT) volumes from the WSDOT Annual Traffic Report (2011), average annual weekday traffic (AAWT) volumes from 2010 Seattle Traffic Flow Map (2011), average daily traffic (ADT) counts from the Seattle Department of Transportation traffic count database (2011-2012), and average weekday daily traffic (AWDT) volumes from the Shoreline Master Plan (2011).

For Segment A, PM peak hour analysis was conducted for 31 intersections within Seattle boundaries and 38 intersections within Shoreline city limits. AM peak hour analysis was also conducted at 15 of the intersections in Seattle and 11 of the intersections in Shoreline. Existing intersection analysis results, shown in Figures 4-22 and 4-23, were compared with the relevant jurisdiction's adopted LOS standard (shown in Table 4-18) to determine whether the intersection operates at an acceptable LOS. Figures 4-22 and 4-23 are color coded to indicate where LOS standards are met or are not met. Green and yellow indicate the LOS standards are met; red indicates operations fall below LOS standards.

As shown in Figures 4-22 and 4-23, seven intersections in Segment A currently do not meet LOS standards during the PM peak hour, and two intersections do not meet LOS standards in the AM peak hour:

- 1st Avenue NE and I-5 ramps/Northgate Mall Driveway (PM peak hour)
- 1st Avenue NE and NE Northgate Way (PM peak hour)
- 5th Avenue NE and I-5 northbound off-ramp south of NE 130th Street—eastbound approach (AM and PM peak hours)
- North 130th Street and Aurora Avenue North (PM peak hour)
- NE 145th Street and Bothell Way NE/Lake City Way NE (PM peak hour)
- NE 145th Street and 12th Avenue NE—northbound approach (PM peak hour)
- 5th Avenue NE and I-5 northbound off-ramp south of NE 145th Street—northbound approach (PM peak hour)

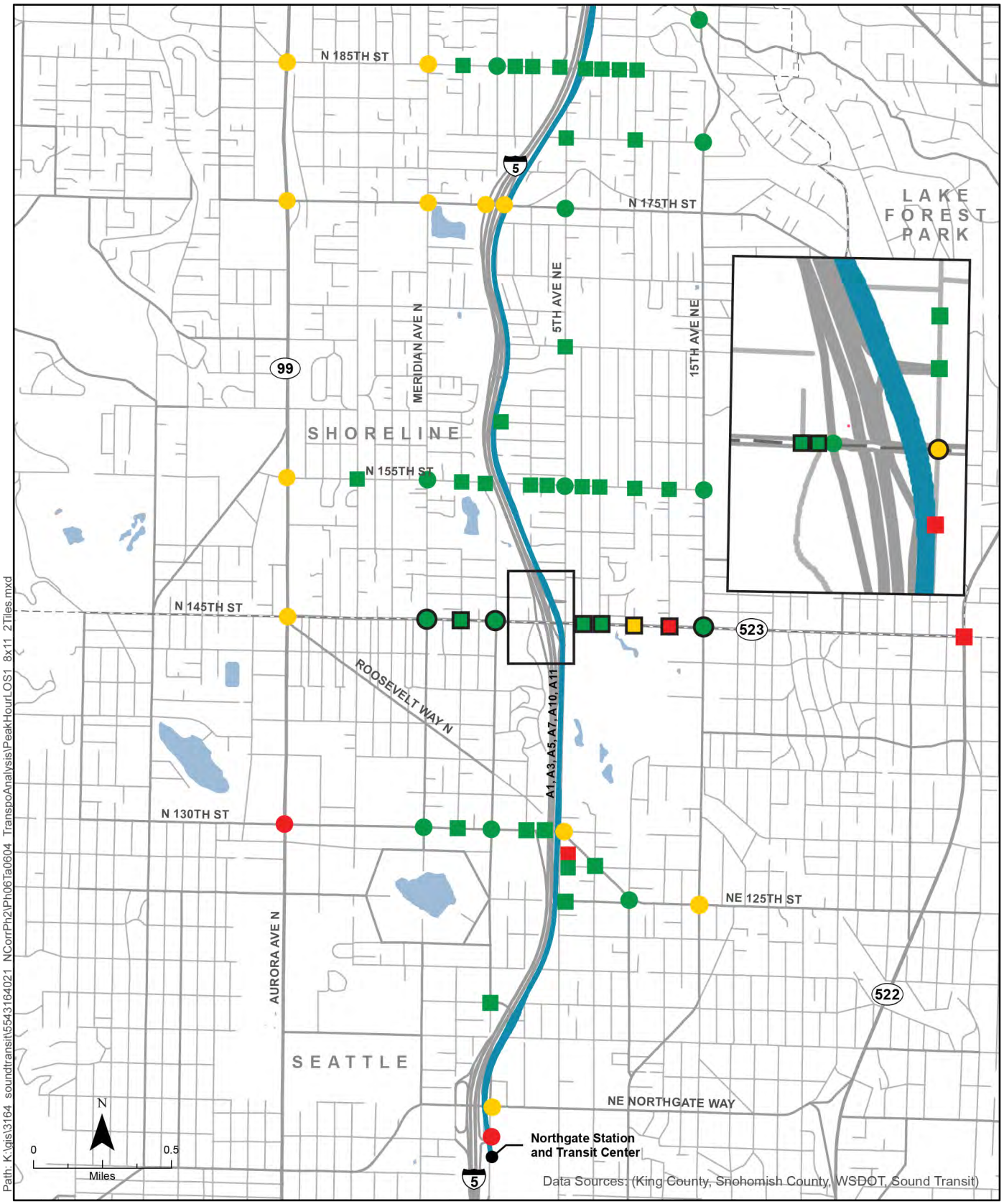
For Shoreline, the following arterials were also evaluated for PM peak hour v/c ratios to determine whether they meet the City of Shoreline concurrency standards:

- NE 155th Street—Westminster Way North to 15th Avenue NE
- NE 185th Street—Aurora Avenue North to 10th Avenue NE
- 5th Avenue NE/7th Avenue NE—NE 145th Street to NE 185th Street
- Meridian Avenue North—North 145th Street to North 205th Street
- 15th Avenue NE—NE 145th Street to NE 205th Street
- NE 175th Street—Aurora Avenue North to 15th Avenue NE

The v/c ratio ranges for these arterials are shown in Figure 4-24. The majority of these arterials were compared with the City's v/c standard of 0.90 or lower for principal and minor arterials. Exceptions to the 0.90 standard include 5th Avenue NE from NE 145th Street to the I-5 on-ramps, which is exempt from the City concurrency standards, and 15th Avenue NE between NE 150th Street and NE 175th Street, which has a v/c standard of 1.10. In Figure 4-24, green and yellow indicate that the v/c ratio is within the City of Shoreline's v/c standard of 0.90; red indicates that the arterial v/c ratio falls below 0.90.

As shown in Figure 4-24, the following arterial segments currently have v/c ratios that are higher than 0.90 during the PM peak hour:

- Meridian Avenue North from North 175th Street to North 185th Street—northbound (does not meet concurrency standard)
- 5th Avenue NE north of North 145th Street—northbound (exempt from concurrency)
- 15th Avenue NE south of NE 155th Street—northbound (v/c is below 1.10, does not exceed concurrency standard)



Legend

Light Rail Alternatives

Intersection Level of Service

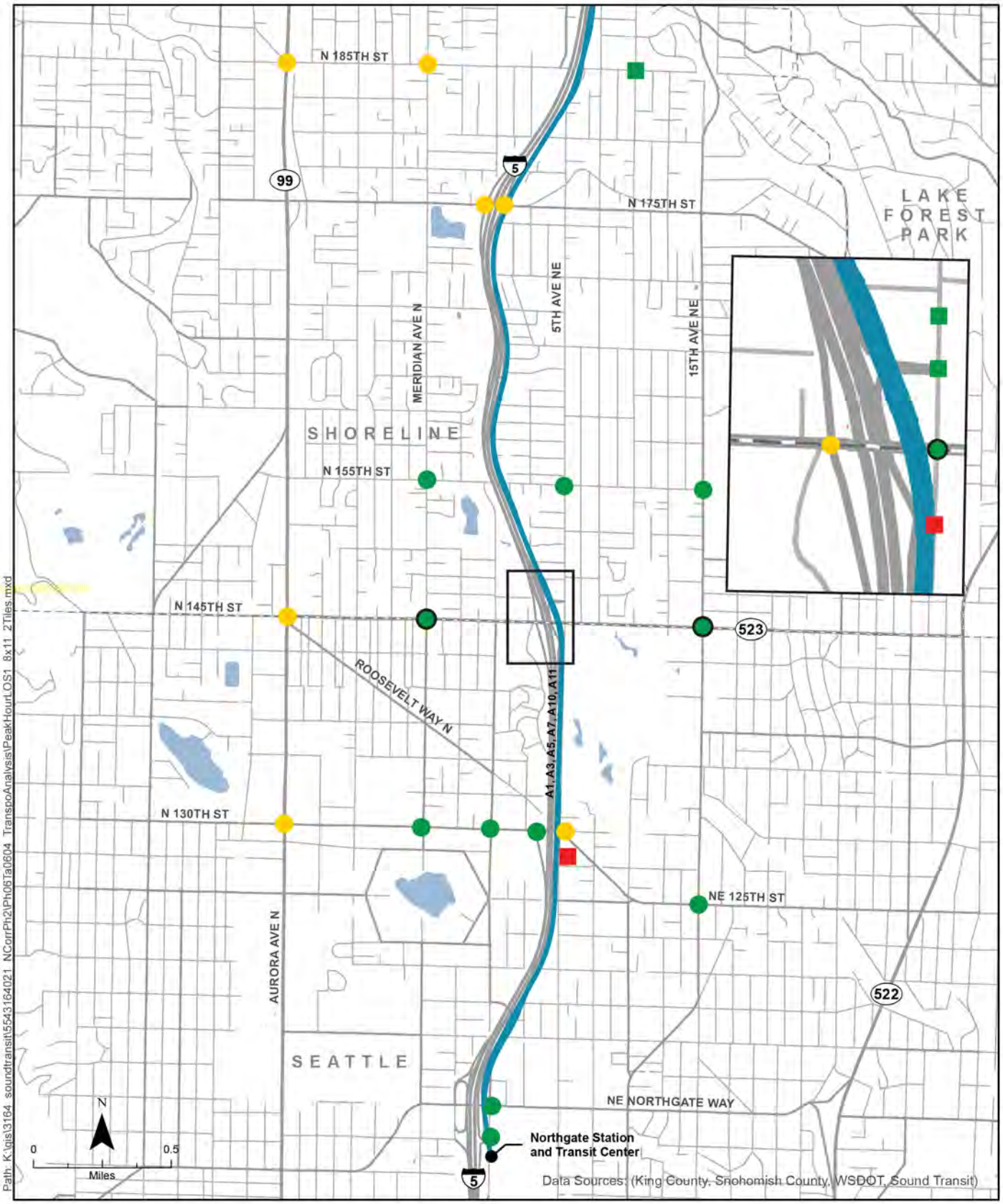
Seattle, Shoreline & WSDOT HSS[1]	WSDOT non-HSS[1]
A-C	A-D
D	E
E-F	F

[1]HSS = Highways of statewide significance

Intersection Type

- Signalized
- Two-Way Stop Controlled
- [A] All-Way Stop Controlled

Figure 4-24
Existing PM Peak Hour Intersection LOS - Segment A



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Light Rail Alternatives

Intersection Level of Service

Seattle, Shoreline & WSDOT HSS[1]	WSDOT non-HSS[1]
A-C	A-D
D	E
E-F	F

[1]HSS = Highways of statewide significance

Intersection Type

- Signalized
- Two-Way Stop Controlled
- [A] All-Way Stop Controlled

Figure 4-25
Existing AM Peak Hour Intersection LOS - Segment A

Figure 4-26. Existing PM Peak Hour Arterial LOS—City of Shoreline Arterials

Segment B: Shoreline to Mountlake Terrace

Segment B extends north of NE 185th Street to 212th Street SW. The proposed light rail alternatives closely follow I-5, all beginning at the east side of the interstate, connecting to the Mountlake Terrace Transit Center or the Mountlake Terrace Freeway Station, then either crossing the interstate to a west side station, or continuing down the center of I-5 to a median station. One alternative includes an additional station at 220th Street SW. Table 4-20 lists the arterials or roadways potentially affected by the project.

Table 4-20. Segment B Existing Roadway Facilities

Roadway	Arterial Classification	Number of Lanes	Speed Limit (mph)	Daily Traffic Volume[a] (vehicles)
I-5	Interstate	6–8	60	163,000–190,000
SR 99	Principal Arterial	4–7	30–50	28,000–31,000
Ashworth Avenue North	Collector Arterial or Local Primary Street	2	25	1,700–1,800
Meridian Avenue North	Minor Arterial	2	35	9,000–10,800
1st Avenue NE	Collector Arterial	2	25	4,200
5th Avenue NE	Collector Arterial	2	30	2,100
10th Avenue NE	Collector Arterial	2	30	4,300
15th Avenue NE	Principal Arterial	4	35	13,500
SR 104/North 205th Street	Primary Arterial	5	40	52,300
244th Street SW	Primary Arterial/Minor Arterial	2	30	10,200–20,700
236th Street SW	Minor Arterial	2–3	30	10,400*
220th Street SW	Principal Arterial/Minor Arterial	2–5	35	31,700*
212th Street SW	Minor Arterial	2	35	11,100*
66th Avenue West	Minor Arterial/Collector Arterial	2–4	30	11,100*
58th Avenue West	Collector Arterial	2	25	2,100*
56th Avenue West	Minor Arterial	2	25	8,000*
52nd Avenue West	Minor Arterial/Collector Arterial	2	25	6,500*

[a] Except where noted with an asterisk (*), year 2011 to 2012 daily traffic volumes are based on the latest available daily traffic count information available, including average annual daily traffic (AADT) volumes from the WSDOT Annual Traffic Report (2011) and average weekday daily traffic (AWDT) volumes from the Shoreline Master Plan (2011). Daily traffic volumes for locations noted with an asterisk were estimated by multiplying existing 2012 PM peak hour volumes by a factor of 10.

The PM peak-hour intersection analysis for Segment B was conducted for 19 intersections in the City of Mountlake Terrace. The AM peak-hour intersection analysis was also conducted at six of the intersections. Existing intersection analysis results, shown in Figures 4-25 and 4-26, were compared with the relevant jurisdiction's adopted LOS standard (shown in Table 4-18) to determine whether the intersection operates at an acceptable LOS. As shown in Figures 4-25 and 4-26, the 236th Street SW and 56th Avenue West intersection currently does not meet LOS standards during the AM peak hour: All Segment B intersections meet LOS standards during the PM peak hour.

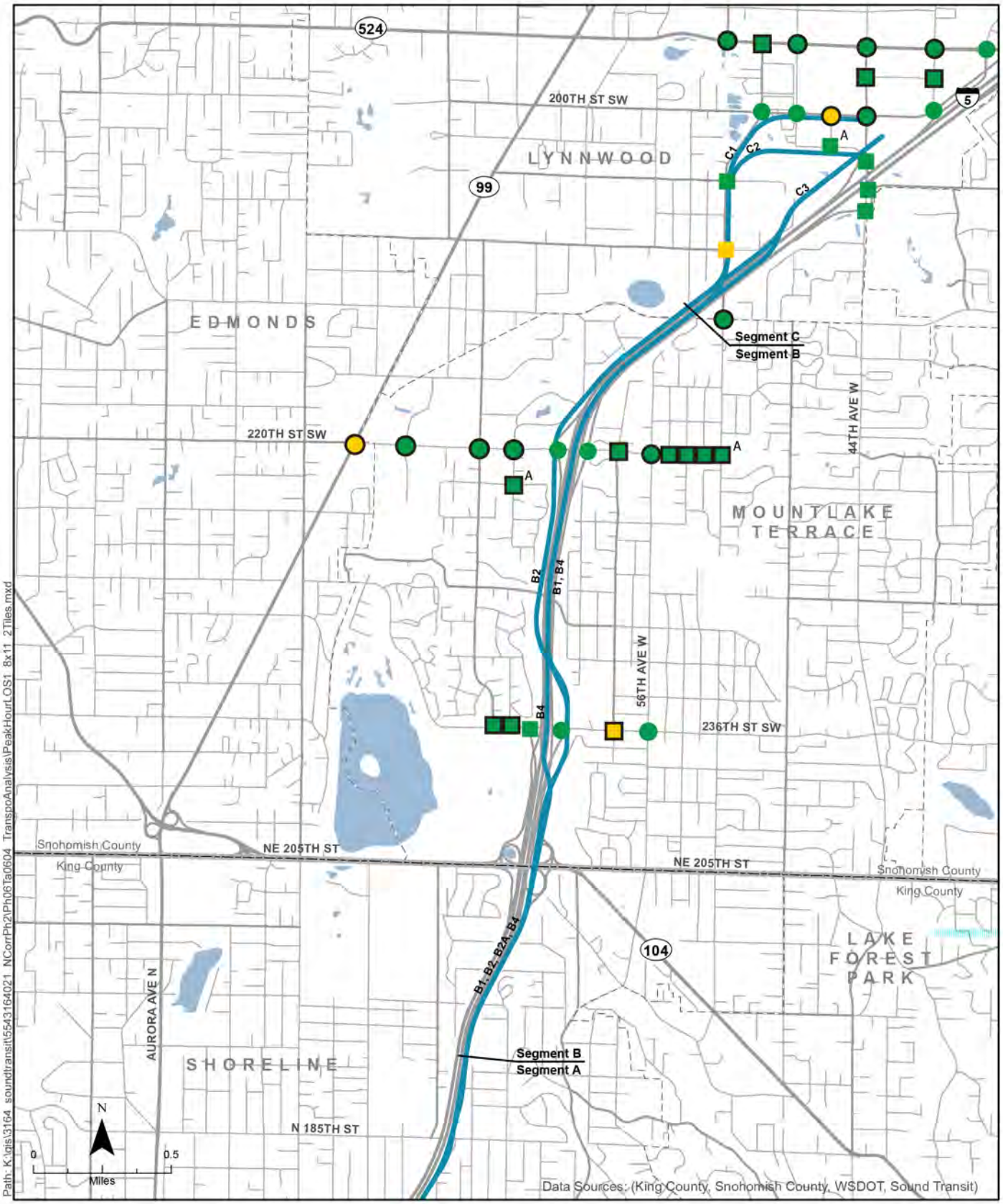
Segment C: Mountlake Terrace to Lynnwood

Segment C extends along an elevated track north of 212 Street SW to a terminus near the existing Lynnwood Transit Center. Each alternative is initially aligned with I-5, then diverges to the west, either along 52nd Avenue West to 200th Street SW, west of the transit center, or close to I-5 south of the transit center. Table 4-21 lists the arterials or roadways potentially affected by the project.

Table 4-21. Segment C Existing Roadway Facilities

Roadway	Arterial Classification	Number of Lanes	Speed Limit (mph)	Daily Traffic Volume[a] (vehicles)
I-5	Interstate	6–8	60	190,000
52nd Avenue West	Minor Arterial	2–3	30	6,500*
48th Avenue West	Collector Arterial	2	25	6,500*
40th Avenue West	Collector Arterial	2	25	5,800*
36th Avenue West	Minor Arterial	2–5	35	12,700*
208th Street SW	Collector Arterial	2	30	5,100*
204th Street SW	Collector Arterial	2	15	1,900*
200th Street SW	Minor Arterial	2–4	30	16,100*
198th Street SW	Collector Arterial	2	25	700*
SR 524/196th Street SW	Principal Arterial	4–5	35	24,000–40,000

[a] Except where noted with an asterisk (*), year 2011 to 2012 daily traffic volumes are based on the latest available daily traffic count information available, including average annual daily traffic (AADT) volumes from the WSDOT Annual Traffic Report (2011). Daily traffic volumes for locations noted with an asterisk were estimated by multiplying existing 2012 PM peak hour volumes by a factor of 10.



Legend

Light Rail Alternatives

Intersection Level of Service

Lynnwood non City Center arterials, WSDOT HSS[1] & Mountlake Terrace signalized intersections (see exceptions* below)

- A-C
- D
- E-F

Lynnwood City Center arterials, WSDOT non-HSS[1] & Mountlake Terrace unsignalized & signalized intersections (see exceptions* below)

- A-D
- E
- F

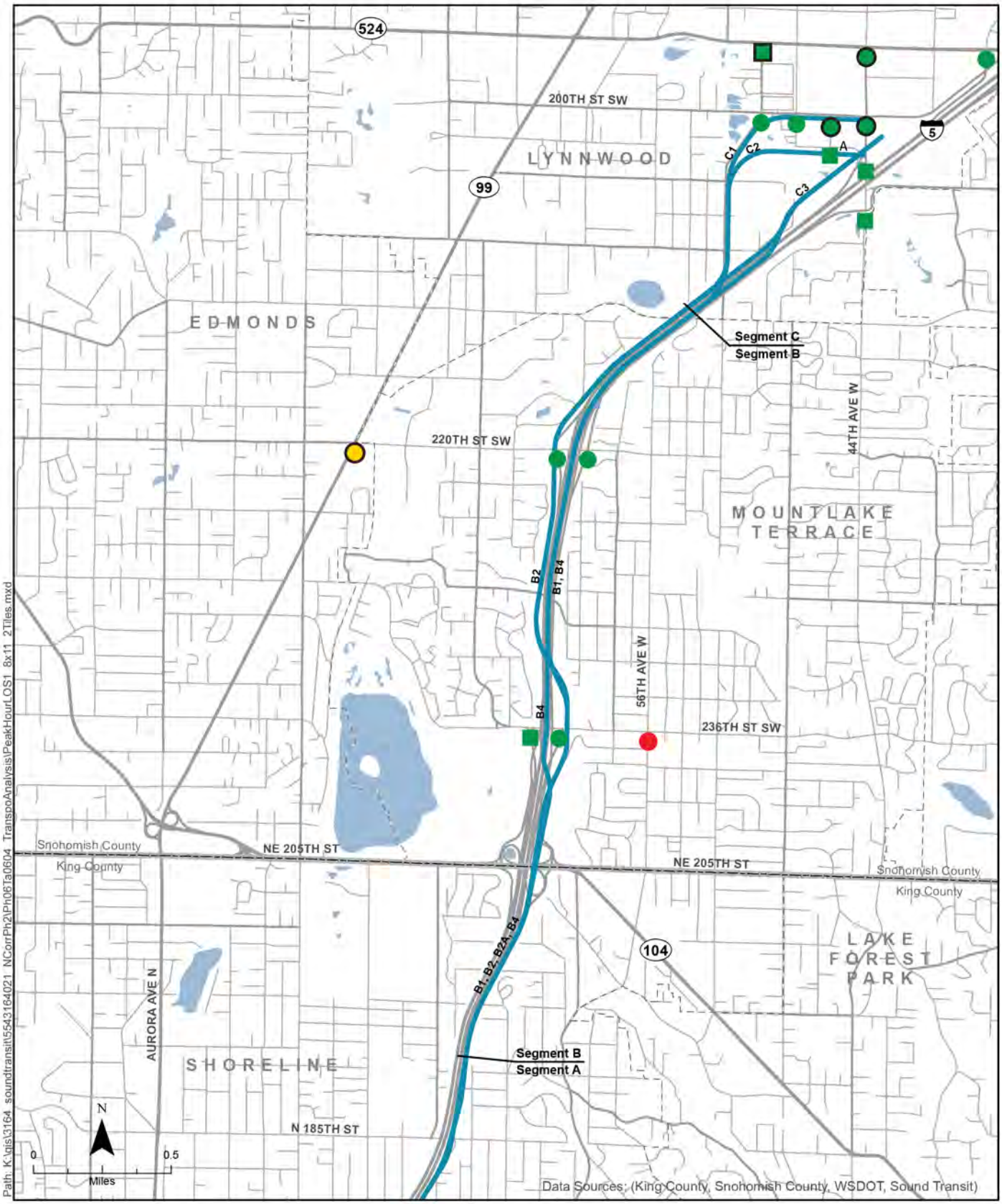
Intersection Control

- Signalized
- Two-Way Stop Controlled
- A All-Way Stop Controlled

Figure 4-27
Existing PM Peak Hour Intersection LOS - Segments B and C

*Exceptions include intersections on 244th Street SW, 220th Street SW and 212th Street SW corridors

[1] HSS = Highways of statewide significance



Legend

Light Rail Alternatives

Intersection Level of Service

Lynnwood non City Center arterials, WSDOT HSS[1] & Mountlake Terrace signalized intersections (see exceptions* below)

- A-C
- D
- E-F

Lynnwood City Center arterials, WSDOT non-HSS[1] & Mountlake Terrace unsignalized & signalized intersections (see exceptions* below)

- A-D
- E
- F

Intersection Control

- Signalized
- Two-Way Stop Controlled
- All-Way Stop Controlled

Figure 4-28
Existing AM Peak Hour
Intersection LOS - Segments B and C

*Exceptions include intersections on 244th Street SW, 220th Street SW and 212th Street SW corridors

[1]HSS = Highways of statewide significance

The PM peak-hour traffic operations analysis for Segment C was conducted for 20 intersections in Lynnwood. The AM peak-hour intersection analysis was also conducted at 10 of the intersections. Existing intersection analysis results, shown in Figures 4-25 and 4-26, were compared with the relevant jurisdiction's adopted LOS standard (shown in Table 4-18) to determine whether the intersection operates at an acceptable LOS. As shown in Figures 4-25 and 4-26, all intersections in Segment C currently meet LOS standards during the PM and AM peak hours.

4.4.2 Property Access and Local Circulation

The property access and local circulation analysis focuses on streets, driveways, and connections most likely to be affected by the project alternatives. The evaluation of existing conditions includes a description of the physical characteristics of local street facilities near the proposed stations and along the guideway in each segment. These characteristics include the number of lanes, sidewalks, driveways, and cul-de-sacs where property access may be constrained or changed with the light rail project. The focus of the property access and local circulation analysis is on areas that would be most directly affected by the project, such as by a change in driveway operation (right turns only), street modifications, and connections.

Segment A: Seattle to Shoreline

The following is a description of the roadways most likely to be affected by the Segment A light rail alignments and stations.

1st Avenue NE, Northgate Way NE to NE 117th Street

1st Avenue NE, north of Northgate Way NE, runs along the east side of I-5 with a transition to NE 117th Street, which crosses I-5. The posted speed limit on this roadway is 30 mph. The west side of 1st Avenue NE has no development, but north of Northgate Way NE, 1st Avenue NE provides exclusive access to a set of apartment buildings (Northgate Apartments). To the east of 1st Avenue NE, NE 112th Street connects to 2nd Avenue NE and thus to Northgate Way.

North of NE 112th Street, there is one driveway with access to 1st Avenue NE. No other property access is available to 1st Avenue NE or to North 117th Street up to and across I-5 until the all-way stop-controlled intersection at 1st Avenue NE/NE 117th Street. A multi-use trail intersects 1st Avenue NE at the NE 116th Street alignment with connection to 3rd Avenue NE. Apartments east of 1st Avenue NE and north of NE 112th Street are accessed from the north via NE 115th Street.

NE 117th Street at 3rd Avenue NE

NE 117th Street is a local street connecting 3rd Avenue NE to 5th Avenue NE with residential properties and access driveway serving the Seattle Latvian Evangelical Lutheran Church.

5th Avenue NE, NE 117th Street to NE 125th Street

5th Avenue NE is a two-lane arterial roadway with on-street parking and residential development on both sides, connecting Northgate Way north to the NE 130th Street interchange area and beyond. The arterial speed limit is 30 mph on 5th Avenue NE. Single-family driveways provide access directly to and from 5th Avenue NE, with multi-family driveways on the west side of 5th Avenue NE north of NE 123rd Street extending to NE 125th Street. NE 124th Street is a local dead end street extending east from 5th Avenue NE that serves 10 homes.

NE 130th Street/I-5 Area

5th Avenue NE is on the east side of I-5 within the limited access boundaries at the NE 130th Street interchange between NE 127th Street and a church driveway, north of NE 131st Place. There is no development on the west side of 5th Avenue NE north of NE 125th Street because of its proximity to I-5. Northbound and southbound traffic on 5th Avenue NE is separated by a raised median or curb, in the limited access area, thereby limiting property access to right turns only into and out of properties between NE 127th Street and NE 131st Place along 5th Avenue NE. Four properties have limited driveway access to 5th Avenue NE between NE 127th Street and NE 130th Street. There are two little-used driveways on 5th Avenue NE between NE 130th Street and NE 131st Place.

5th Avenue NE is the connecting street for NE 131st Place access to the arterial network. Properties along 5th Avenue NE within the limited access boundaries are constrained to right turns into and out of the driveways.

NE 125th Street and NE 127th Street connect 5th Avenue NE with 8th Avenue NE and Roosevelt Way NE.

5th Avenue NE, NE 130th Street to NE 145th Street

5th Avenue NE is an arterial serving a limited number of properties and travels between NE 130th Street and NE 145th Street. Two residences have driveways to 5th Avenue NE north of NE 130th Street—both driveways appear to be little used. One side street, NE 131st Place, is a cul-de-sac serving 10 homes that intersect 5th Avenue NE, between NE 130th Street and NE 145th Street. The North Seattle Church of the Nazarene has driveways to 5th Avenue NE, serving the approximately 80-space parking lot. The NE 133rd/5th Avenue NE Park-and-Ride lot is located on the west side of 5th Avenue NE, with two driveways and a southbound bus stop. The Jackson

Park Golf Course lies on the east side of 5th Avenue NE, and there is one gated driveway for maintenance access to the park and golf course from the west.

NE 145th Street/I-5 Area

The northbound freeway off-ramp from I-5 in the NE 145th Street interchange area flows into 5th Avenue NE just south of NE 145th Street. Northbound and southbound traffic on 5th Avenue NE stops at the ramp intersection. Northbound and southbound traffic are separated on 5th Avenue NE with a raised median and curb within the limited access area of the interchange, extending just south of the northbound off-ramp to just north of the northbound on-ramp from 5th Avenue NE (approximately NE 146th Street). The North Jackson Park Park-and-Ride lot is located on the west side of 5th Avenue NE north of the northbound on-ramp to I-5. There are side-by-side left-turn pockets on 5th Avenue NE to accommodate left-turn storage for southbound left-turning traffic to NE 145th Street, and for northbound left-turning traffic to the northbound on-ramp to I-5.

5th Avenue NE is within the limited access area of the interchange, extending from approximately NE 138th Street to NE 146th Street. South of NE 145th Street, there are no driveways or access points within the limited access area. North of NE 145th Street, a few residences have driveway access within the limited access area, but with right-turn access only. NE 148th Street provides an east-west local street connection between 5th Avenue NE and 8th Avenue NE. 5th Avenue NE has bus service with a northbound bus stop just north of NE 145th Street and a southbound bus stop adjacent to the North Jackson Park Park-and-Ride lot.

3rd Avenue NE at NE 151st Street

3rd Avenue NE is a local street cul-de-sac that connects to NE 151st Street to serve the adjacent residential properties. North of NE 151st Street, 3rd Avenue NE serves five homes.

NE 155th Street/I-5 Area

NE 155th Street is a three-lane arterial with marked bicycle lanes and sidewalks on both sides in the vicinity of the NE 155th Street Station. This east-west street passes under I-5, with 1st Avenue NE located just west of I-5. On the south side of NE 155th Street, from 1st Avenue NE to 2nd Avenue NE, two driveways provide property access to the Shoreline Fire Department Station 65 and associated parking, and to one house west of 2nd Avenue NE. Between 2nd Avenue NE and 4th Avenue NE, two driveways serve residences on the south side of NE 155th Street. 2nd Avenue NE is a cul-de-sac to NE 155th Street and serves as access for 10 homes. 4th Avenue NE is a cul-de-sac to NE 155th Street and serves as access for nine homes. From 4th Avenue NE to 5th Avenue NE, there are two residential

driveways and one driveway to a church (Shoreline Full Gospel Fellowship) on the south side of NE 155th Street. The church has alternative access to 5th Avenue NE.

On the north side of NE 155th Street, from 1st Avenue NE and 3rd Avenue NE, there is one residential driveway. From 3rd Avenue NE to 5th Avenue NE, there are seven residential driveways along the north side of NE 155th Street.

Access to the Twin Ponds playground and parking lot is from 1st Avenue NE just south of NE 155th Street. A driveway on the north side of NE 155th Street serves St. Barnabas Church, just west of 1st Avenue NE.

1st Avenue NE, NE 157th Street to NE 161st Street

1st Avenue NE is a two-lane local street just east of the I-5 right-of-way that parallels 3rd Avenue NE with local street connections along NE 157th Street, NE 158th Street, NE 159th Street, and NE 161st Street. 1st Avenue NE provides driveway access to adjacent residential properties.

1st Avenue NE, NE 170th Street to NE 174th Street

1st Avenue NE is a two-lane local street just east of the I-5 right-of-way that parallels 2nd Avenue NE with local street connections on NE 170th Street and NE 174th Street, providing driveway access for the adjacent residential properties.

NE 178th Street at 2nd Place NE and 3rd Avenue NE Cul-de-Sacs

NE 178th Street is a two-lane local street that provides driveway access to the adjacent residential properties, with connection to the 2nd Place NE cul-de-sac serving 10 homes and connection to the 3rd Avenue NE cul-de-sac serving nine homes.

NE 185th Street/I-5 Area

NE 185th Street is a two-lane street with sidewalks on both sides. NE 185th Street crosses over I-5. East of I-5, there is one driveway access from NE 185th Street on the south side between 7th Avenue NE and 8th Avenue NE. 7th Avenue NE is a cul-de-sac north of NE 185th Street that serves nine homes. NE 189th Street is a local street extending west from 8th Avenue NE to serve five homes, located just east of the I-5 right-of-way.

South of NE 185th Street, 5th Avenue NE extends to connect to NE 180th Street, with two cul-de-sacs to the east (NE 182nd Court with seven homes and NE 183rd Court with five homes) and 12 homes with driveways to 5th Avenue NE.

West of I-5 along NE 185th Street, 5th Avenue NE connects to the north, serving the Shoreline School District properties. On the north side of NE 185th Street, from 3rd Avenue NE to 5th Avenue NE, there are six residential driveways and one

driveway to the parking lot adjacent to the school sports field. On the south side of NE 185th Street from 3rd Avenue NE to the bridge over I-5, there are eight residential driveways.

NE 195th Street at I-5 Pedestrian Bridge

NE 195th Street is a two-lane local street serving adjacent residential properties. The pedestrian bridge over I-5 connects to street ends on both sides.

Segment B: Shoreline to Mountlake Terrace

The following is a description of the roadways most likely to be affected by the Segment B light rail alignments and stations.

Mountlake Terrace Transit Center Area

236th Street SW is the arterial adjacent to the Mountlake Terrace Transit Center, with a sidewalk on the north side of the street through the study area (west of I-5 extending east of 58th Avenue West). A south sidewalk extends east from the I-5 northbound off-ramp to beyond 58th Avenue West. The transit center and park-and-ride lot access to 236th Street SW is at the signalized intersection with the I-5 northbound off-ramp. This is the sole vehicle access to the transit center and park-and-ride facility. Eight homes have driveway access to the south side of 236th Street SW, between the Mountlake Terrace Transit Center and 58th Avenue West. On the north side of 236th Street SW, between the Mountlake Terrace Transit Center and 58th Avenue West, there is a cul-de-sac (59th Place West serving nine homes) and three residential driveways.

West of I-5 along 236th Street SW, there is no driveway access until the intersection at 68th Avenue West.

Access to I-5 at 236th Street SW is provided via a half-diamond interchange with a northbound off-ramp and southbound on-ramp.

220th Street SW/I-5 Area

220th Street SW is a major east-west arterial with an interchange connection to I-5, sidewalks along both sides, but no driveway access on the south side between the I-5 interchange and 64th Avenue West. A channelized access driveway to the north provides right-in and right-out access for businesses on the north side of 220th Street SW. Residential development on the south side of 220th Street SW has property access via 220th Place SW and 64th Avenue West. The intersection of 220th Street SW at 64th Avenue West is signalized with full access to all quadrants.

222nd Street SW is a local street that serves residential and school properties. This street connects to the arterial network at 64th Avenue West where the intersection has all-way stop control.

Ten homes access 222nd Street SW directly with driveways between 62nd Avenue West and 64th Avenue West. A secondary local street access to the arterial network is south via 62nd Avenue West and west along 224th Street SW to 64th Avenue SW.

North of the 220th Street SW interchange area, 64th Avenue West is a two-lane roadway collector that becomes 219th Street SW with commercial property access on both sides. 219th Street SW becomes 60th Avenue West that serves commercial properties on the west side. 60th Avenue West is the arterial west of I-5. North of St. Albion Way, 60th Avenue West serves residential land uses at 214th Street SW and beyond. 214th Street SW at 58th Avenue W is a local street intersection serving residential properties with a street end abutting the I-5 right-of-way.

Segment C: Mountlake Terrace to Lynnwood

The following is a description of the roadways most likely to be affected by the Segment C light rail alignments and stations.

52nd Avenue West/Cedar Valley Road

52nd Avenue West is a three- to five-lane arterial with sidewalks on both sides from its route under I-5 (four lanes) to 208th Street SW (five lanes) and continuing as Cedar Valley Road (three-lane roadway) to 200th Street SW. Property access along 52nd Avenue West, from I-5 to 208th Street SW, includes five residential driveways and two driveways at a church on the west side and one residential driveway plus two commercial/industrial driveways on the east side. From 208th Street SW to the Interurban Trail crossing, there is only one driveway on the east side of the street. From the Interurban Trail to 206th Street SW, there are six residential driveways on the west side and one commercial/industrial driveway on the east side. This property only has access to 52nd Avenue West.

Between 206th Street SW and 204th Street SW, driveways on 52nd Avenue West serve the Grange Hall and two residences on the west side of the street; no access points are provided along the east side. From 204th Street SW to where 52nd Avenue West transitions to Cedar Valley Road, there are three residential driveways and one cul-de-sac with five homes on the west side of the street. One driveway on the east side of 52nd Avenue West serves WorkSource Lynnwood with an auxiliary access to 204th Street SW.

Cedar Valley Road south of 200th Street SW has four driveways serving professional office buildings on the west side. On the east side, there are two driveways serving business park developments as well as a driveway and parking lot at Scriber Creek

Park (with trail). These driveways are not interconnected; each driveway on the east side is a sole access point for the property.

East of 52nd Avenue West, 208th Street SW is a two-lane roadway serving industrial and commercial properties. 208th Street SW intersects with 50th Avenue West, a local street cul-de-sac, crosses the Interurban Trail, and ends just north of the trail crossing. Multiple commercial driveways connect to 208th Street SW. 208th Street SW is the sole access to 52nd Avenue West and the street network for these properties.

Lynnwood Transit Center Area

200th Street SW is a three-lane street west of 46th Avenue West with sidewalks on both sides of the street. Driveways provide access to apartment complex developments on the north side of the street (two driveways between 46th Avenue West and 48th Avenue West, three driveways between 48th Avenue West and 50th Avenue West). On the south side of 200th Street SW, two driveways serve apartments between 50th Avenue West and 48th Avenue West, and one driveway serves a business park between 48th Avenue West and 46th Avenue West. Commercial properties have access to 200th Street SW between 46th Avenue West and 44th Avenue West via four commercial driveways on the north side and two commercial driveways on the south side. Additional property access to these commercial properties is provided via 48th Avenue West, 46th Avenue West, and 44th Avenue West. Additional property access to the apartment complexes is provided via 50th Avenue West and 48th Avenue West.

Alderwood Mall Boulevard is a five-lane arterial extending east of 200th Street SW from the 44th Avenue West intersection. There are commercial property driveways on the north and south sides of the roadway.

48th Avenue West serves multifamily residential developments north and south of 200th Street SW. This roadway also provides access on the east side to commercial buildings, the Lynnwood Park-and-Ride, and the Lynnwood Transit Center.

South of 200th Street SW, 46th Avenue West provides access to business and commercial properties with driveways on the west and east sides of the street. It also provides access to the Lynnwood Park-and-Ride and Lynnwood Transit Center.

The Lynnwood direct access interchange with I-5 provides access to and from the HOV lanes in both directions along I-5, with a connection into the Lynnwood Park-and-Ride.

4.5 Nonmotorized Facilities

This section describes the existing and no build conditions for pedestrian and bicycle travel facilities within the study area. Key observations and findings related to existing nonmotorized travel in the project area include the following:

- Streets in Seattle surrounding proposed station areas are generally old and lacking ADA-accessible walkways at intersections. Sidewalks are typically 5 feet wide.
- Streets in Shoreline are generally without sidewalks.
- Pedestrian volumes are low throughout the corridor except in Lynnwood, where there are a moderate number of pedestrians.
- Bicycle lanes are sporadic and bicycles generally share a lane with traffic.
- The multi-use Interurban Trail is approximately 1 mile west of the NE 145th Street, NE 155th Street, NE 185th Street, and Mountlake Terrace Station areas. It then reaches within 0.50 mile of the 220th Street SW Station area and is between the existing Lynnwood Transit Center/Park-and-Ride and I-5.

4.5.1 Pedestrian Facilities

Existing pedestrian facilities were inventoried on all arterials within 0.50 mile of each station for all light rail alternatives. Arterials were identified based on each jurisdiction's transportation plans. The inventory includes streets classified as arterials, collector arterials, and collectors, so that all streets connecting the station to activity centers are those included in the existing conditions inventory. Typical pedestrian facilities are sidewalks, pedestrian walkways and paths, and multi-use trails.

A pedestrian LOS was evaluated for intersections within 300 feet of proposed stations where intersection data were collected for the traffic analysis. Existing pedestrian volumes were gathered from PM peak hour intersection data, collected primarily in May 2012. The LOS analysis was based on a pedestrian flow rate in pedestrians per minute and the sidewalk width. The resulting LOS is based on the *Highway Capacity Manual* methodology. Pedestrian LOS for sidewalks was analyzed using the methodology from the *Highway Capacity Manual* (Transportation Research Board 2000) and the TCQSM. Pedestrian LOS is a measure of walking conditions on a sidewalk.

Segment A: Seattle to Shoreline

Streets that would be affected by one or more project alternatives along Segment A include 1st Avenue NE, NE 117th Street, and 5th Avenue NE. There are sidewalks on the east side of 1st Avenue NE and the north side of NE 117th Street. There are sidewalks on the east side of 5th Avenue NE south of NE 130th Street, but no sidewalks between NE 130th Street and NE 145th Street.

The pedestrian facilities within 0.50 mile of NE 130th Street, NE 145th Street, NE 155th Street, and NE 185th Street Station areas are presented in Figures 4-27, 4-28, 4-29, and 4-30, respectively. The pedestrian environment at each station is described below for each station area.

NE 130th Street/I-5 Area

The NE 130th Street Station would be located in the northeast quadrant of the I-5 interchange in Seattle. The streets in this area of Seattle are generally old and lacking ADA-accessible walkways at intersections. Sidewalks are typically 5 feet wide without planting strips. There are pedestrian paths adjacent to arterials that consist of an at-grade asphalt path separated from the edge of the street by a gravel and grass strip.

Figure 4-27 shows these types of paths along NE 130th Street, the west side of 1st Avenue NE, and the collector arterials around Haller Lake. The bus stop at Meridian Avenue North, south of NE 130th Street, has no sidewalk or curb.

Pedestrian activity is generated at the bus stops located on each leg of the NE 130th Street/5th Avenue NE intersection. Pedestrian volumes were one to two pedestrians per hour at the intersection of NE 130th Street and 5th Avenue NW, resulting in an LOS A rating for the existing sidewalks.

NE 145th Street/I-5 Area

The NE 145th Street Station would be located in the northeast quadrant of the I-5 interchange. The city of Seattle is south of NE 145th Street, and the city of Shoreline is north of NE 145th Street. The streets in the vicinity are generally old and lacking ADA-accessible sidewalks at intersections. Some intersection locations have been upgraded to current ADA standards, but most have not yet been upgraded. Sidewalks are typically 5 feet wide without planting strips. This condition occurs all along NE 145th Street.

There are pedestrian paths adjacent to arterials that consist of an at-grade asphalt path separated from the edge of the street by a gravel and grass strip. These are located along the west side of Meridian Avenue North, south of NE 145th Street, on the east side of 1st Avenue NE. There are asphalt pedestrian paths at the interchange to provide pedestrian access to the existing bus-transit freeway flyer stops. These are shown on Figure 4-28.

Pedestrian activity is generated at the bus stops located on each leg of the NE 145th Street/5th Avenue NE intersection, the freeway flyer stops, and other periodic pedestrian movements. Pedestrian volumes were six to eight pedestrians per hour in the east-west direction at NE 145th Street and 5th Avenue NW, resulting in LOS A conditions on existing sidewalks.

NE 155th Street/I-5 Area

The NE 155th Street Station would be located in the northeast quadrant of NE 155th Street and I-5. As shown on Figure 4-29, there are sidewalks on all of the arterials within 0.50 mile of the station. The sidewalks are in variable conditions.

Pedestrian activity is generated at the bus stops located on NE 155th Street near 5th Avenue NE and 6th Avenue NE, as well as other periodic pedestrian movements. Pedestrian volumes were two to eight pedestrians per hour along NE 155th Street from 1st Avenue NE to 3rd Avenue NE, resulting in an LOS A rating for the existing sidewalks.

NE 185th Street/I-5 Area

The NE 185th Street Station would be located in the northeast quadrant of I-5 and NE 185th Street in Shoreline. The sidewalks are in variable conditions. Some intersection locations have been upgraded to current ADA standards.

The sidewalks on 9th Avenue, a local street, were included in the inventory because it is one of the few local streets with sidewalks. In addition, 9th Avenue may provide a pedestrian route from the potential light rail station to the North City commercial and multifamily housing area at 15th Avenue NE and NE 180th Street.

10th Avenue NE, north of NE 185th Street, is an arterial street with no sidewalks. Sidewalks are on the parallel street of 8th Avenue NE and along NE 180th Street, and therefore these streets were included in the inventory. NE Perkins Way has a striped paved shoulder/walkway on the north side. The roadway is steep and winding with concrete barriers along curves to protect pedestrians.

A paved multi-use trail exists along NE 195th Street between 1st Avenue NE and Meridian Avenue North. There is no vehicle access along this segment of street right-of-way. Figure 4-30 provides the inventory of the NE 185th Street Station area pedestrian facilities.

Pedestrian activity is generated at the bus stops located on each leg of NE 185th Street between the bridge and 7th Avenue NE, as well as other neighborhood pedestrian activity. Pedestrian volumes were one to six pedestrians per hour along NE 185th Street from 5th Avenue NE to 8th Avenue NE, resulting in an LOS A rating for the existing sidewalks.

Segment B: Shoreline to Mountlake Terrace

There is a pedestrian and bicycle overcrossing of I-5 at NE 195th Street, located north of the proposed NE 185th Street Station and south of the Mountlake Terrace Transit Center. The pedestrian facilities within 0.50 mile of the proposed Mountlake Terrace Transit Center Station and 220th Street SW Station are presented in Figures 4-31 and 4-32. The pedestrian environment at these station areas is described below.

Mountlake Terrace Transit Center Area

The Mountlake Terrace Transit Center Station would be located at the existing Mountlake Terrace Park-and-Ride, while the Mountlake Terrace Freeway Station is located in the I-5 median adjacent to the park-and-ride. A pedestrian trail through Veteran's Memorial Park connects the existing Mountlake Terrace Park-and-Ride to the Mountlake Terrace Town Center. This trail is a soft-surface wooded trail.

Pedestrian activity is generated at the bus stops located on each leg of 236th Street SW between the I-5 bridge and the transit center entrance, including other periodic pedestrian movements. Pedestrian volume counts indicated about six pedestrians per hour in the east and west directions on 236th Street SW at the transit center entrance, resulting in an LOS A rating for the existing sidewalks.

220th Street SW/I-5 Area

The 220th Street SW Station would be located in the southwest quadrant of the I-5 interchange. Local streets within 0.5 mile of this proposed station generally have sidewalks on only one side. The Interurban Trail is within 1 mile of the station site to the west and northwest.

Pedestrian volume counts show one to three pedestrians per hour at 220th Street SW and the I-5 off-ramps. Pedestrian volumes were counted at one to six pedestrians per hour in the vicinity of 220th Street SW and 64th Avenue West. The pedestrian LOS rating is A for the existing sidewalks at these locations.

Segment C: Mountlake Terrace to Lynnwood

No pedestrian facilities would be affected by the light rail alignment along Segment C. The pedestrian facilities within 0.50 mile of the Lynnwood Transit Center and future station areas are presented in Figure 4-33. The pedestrian environment is described below.

There are sidewalks on all of the streets in downtown Lynnwood and in the vicinity of the station alternatives. The Interurban Trail extends through the station areas. This trail is an on-street facility adjacent to 52nd Avenue West between 208th Street SW and the power line segments. To the north, the trail follows the Snohomish County Public Utility District (PUD) power line right-of-way, crosses over 44th Avenue West on a pedestrian/bicycle bridge, and then continues adjacent to the west side of I-5.

Pedestrian volumes are generated by the downtown activity, transit center, and park-and-ride lots. Pedestrian volumes at 200th Street SW and 46th Avenue West ranged from 32 to 48 pedestrians per hour, resulting in an LOS A rating for pedestrians. At 46th Avenue West and 48th Avenue West/Interurban Trail, there were 154 pedestrians per hour crossing the north leg of this intersection. During the PM peak

hour, pedestrians are leaving the transit center via a plaza and entering the park-and-ride lot to the southeast. Pedestrians either traverse directly into the park-and-ride lot or use 48th Avenue West/Interurban Trail, which has 10-foot-wide sidewalks on the south side at this location. A 10-foot-wide sidewalk with 154 pedestrians per hour results in an LOS B rating.

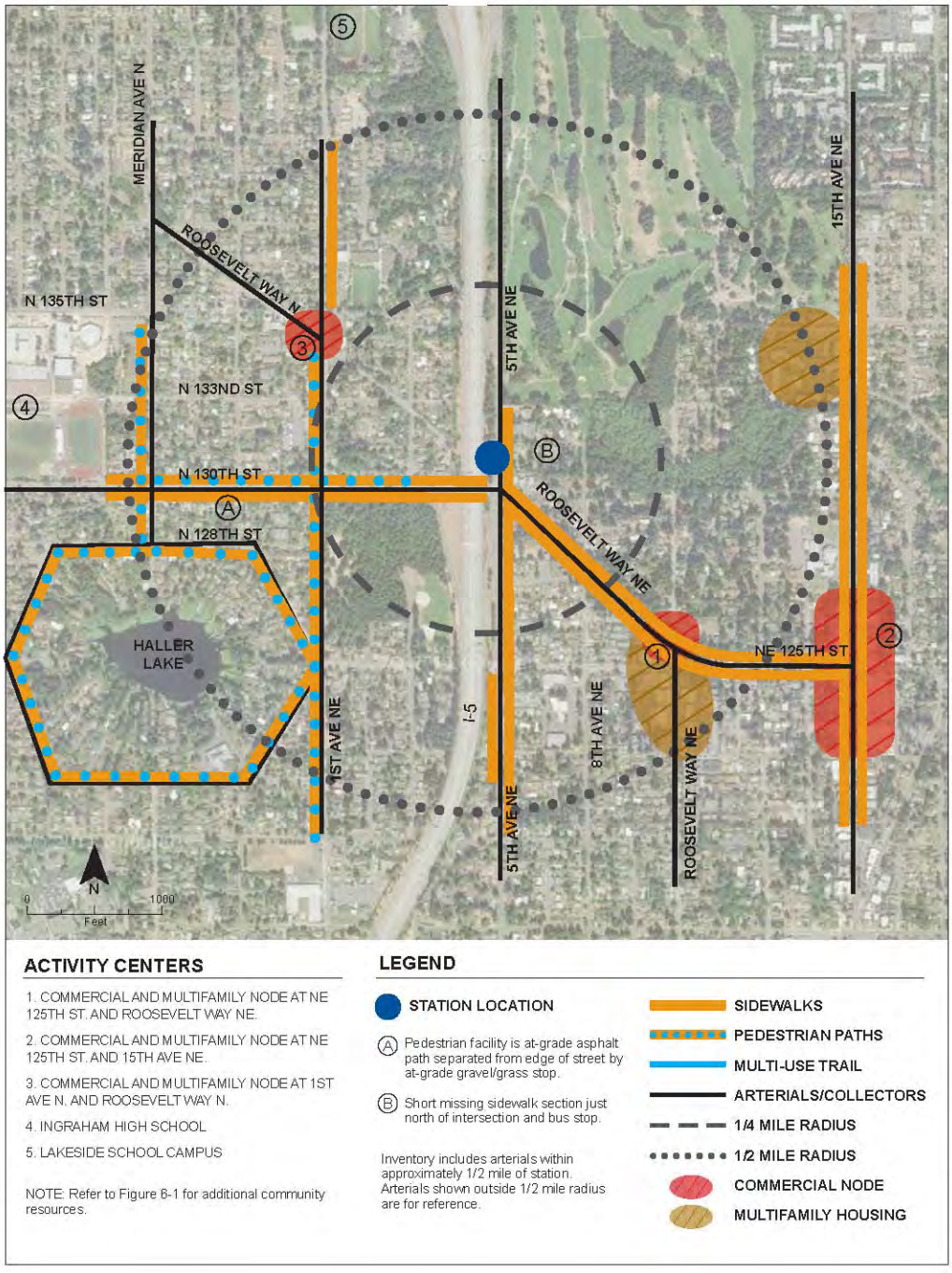


Figure 4-29. NE 130th Street Station Pedestrian Facility Inventory

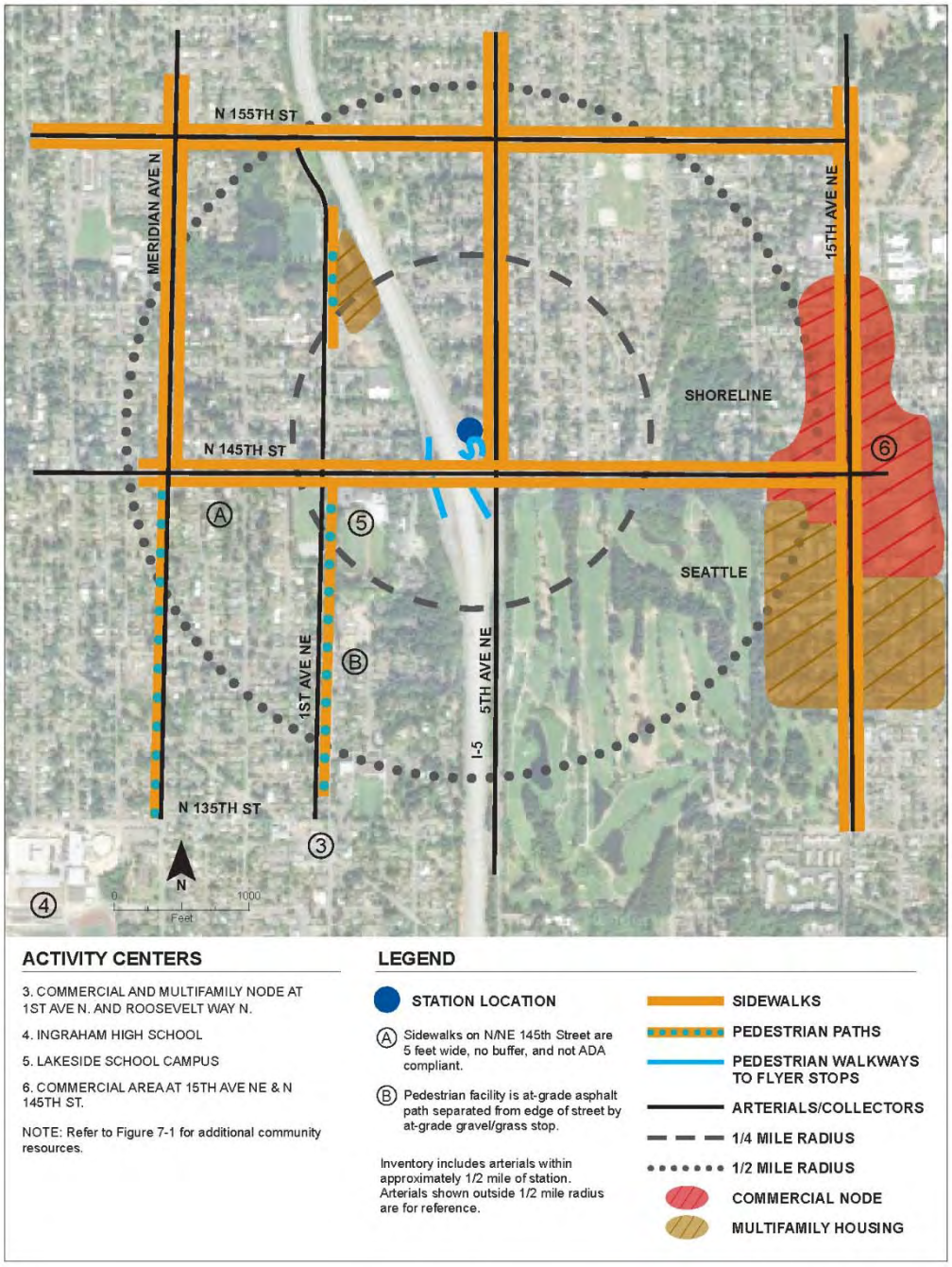


Figure 4-30. NE 145th Street Station Pedestrian Facility Inventory

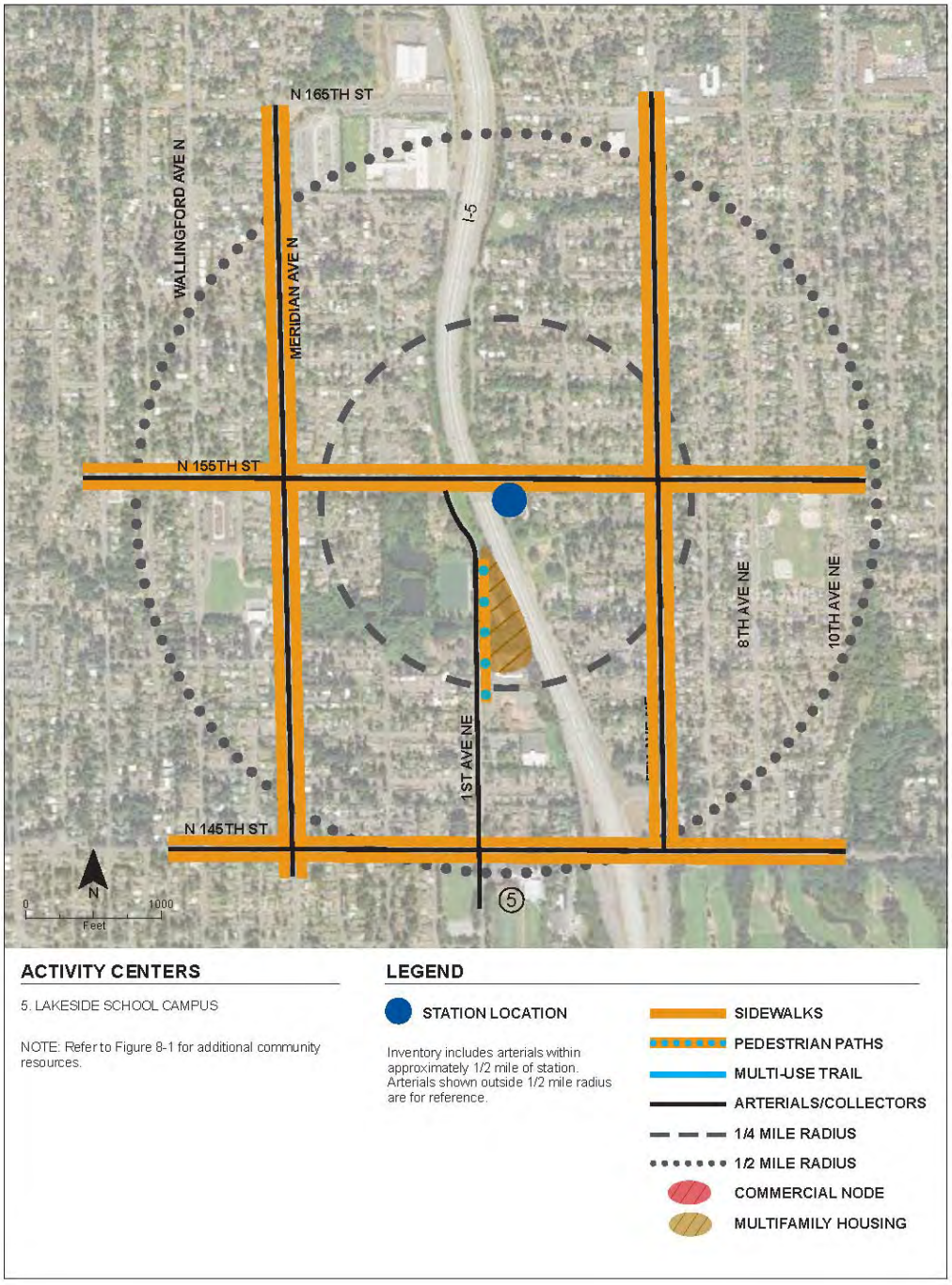


Figure 4-31. NE 155th Street Station Pedestrian Facility Inventory

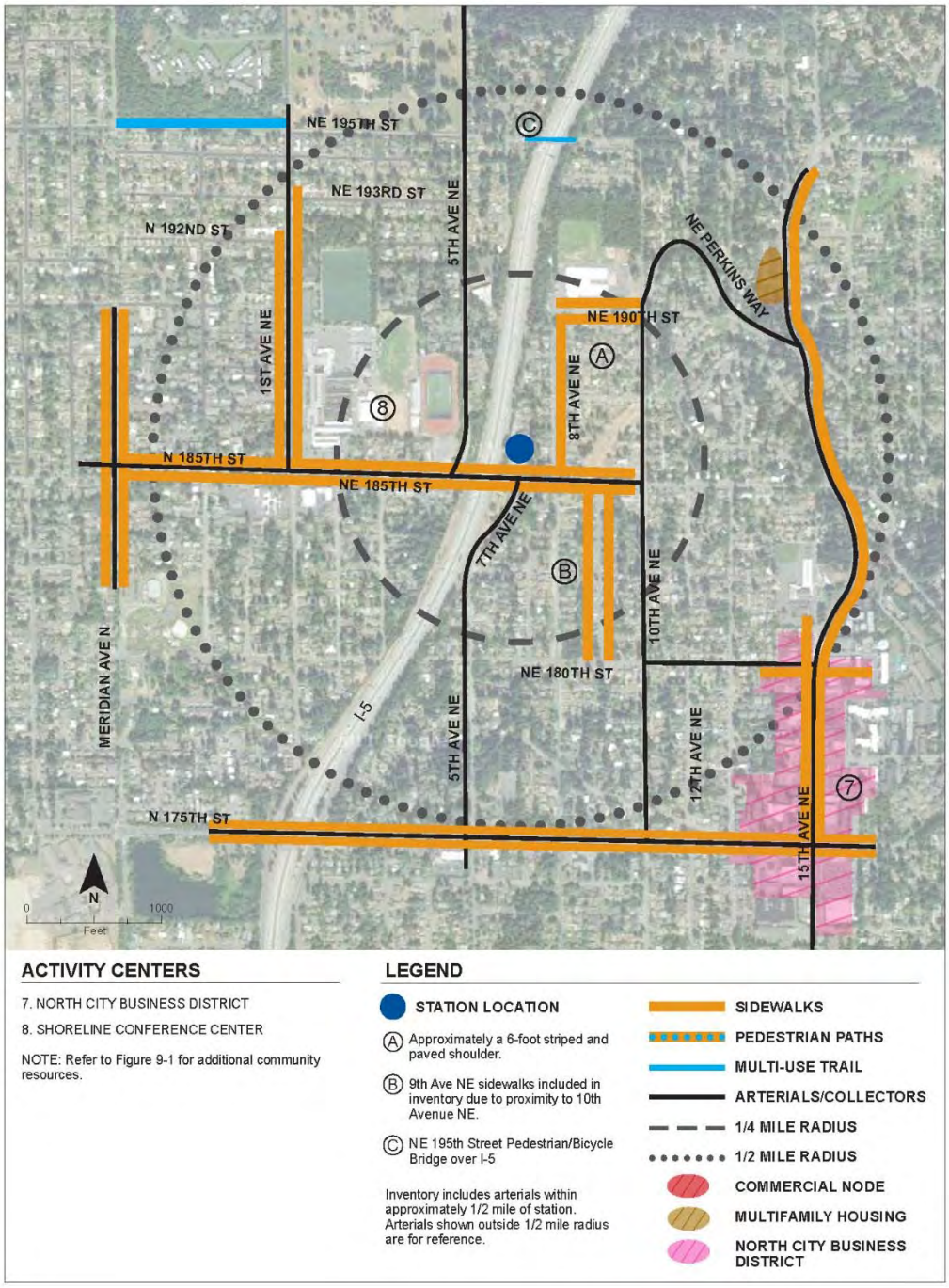


Figure 4-32. NE 185th Street Station Pedestrian Facility Inventory

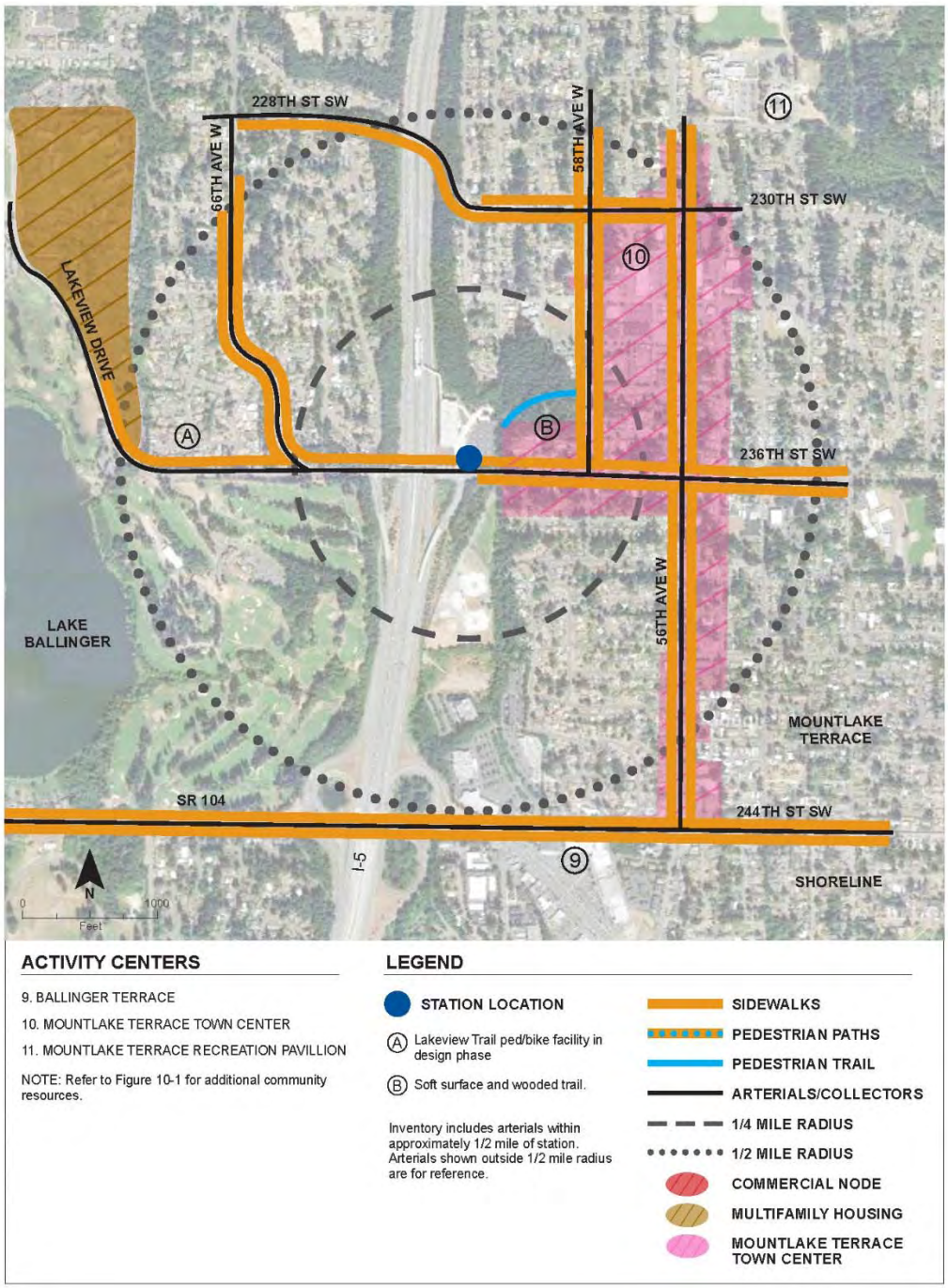


Figure 4-33. Mountlake Terrace Transit Center Station Pedestrian Facility Inventory

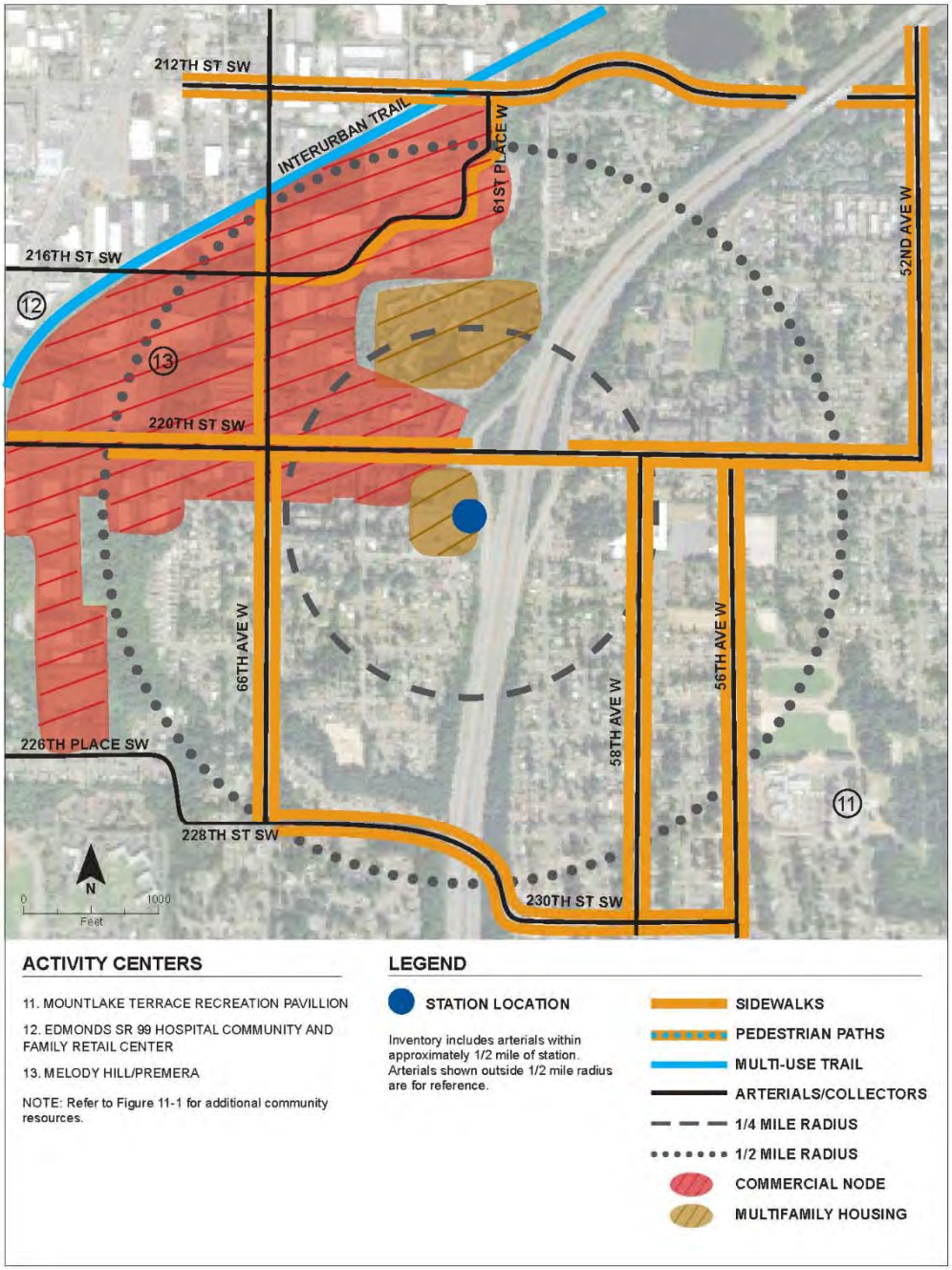


Figure 4-34. 220th Street SW Station Pedestrian Facility Inventory

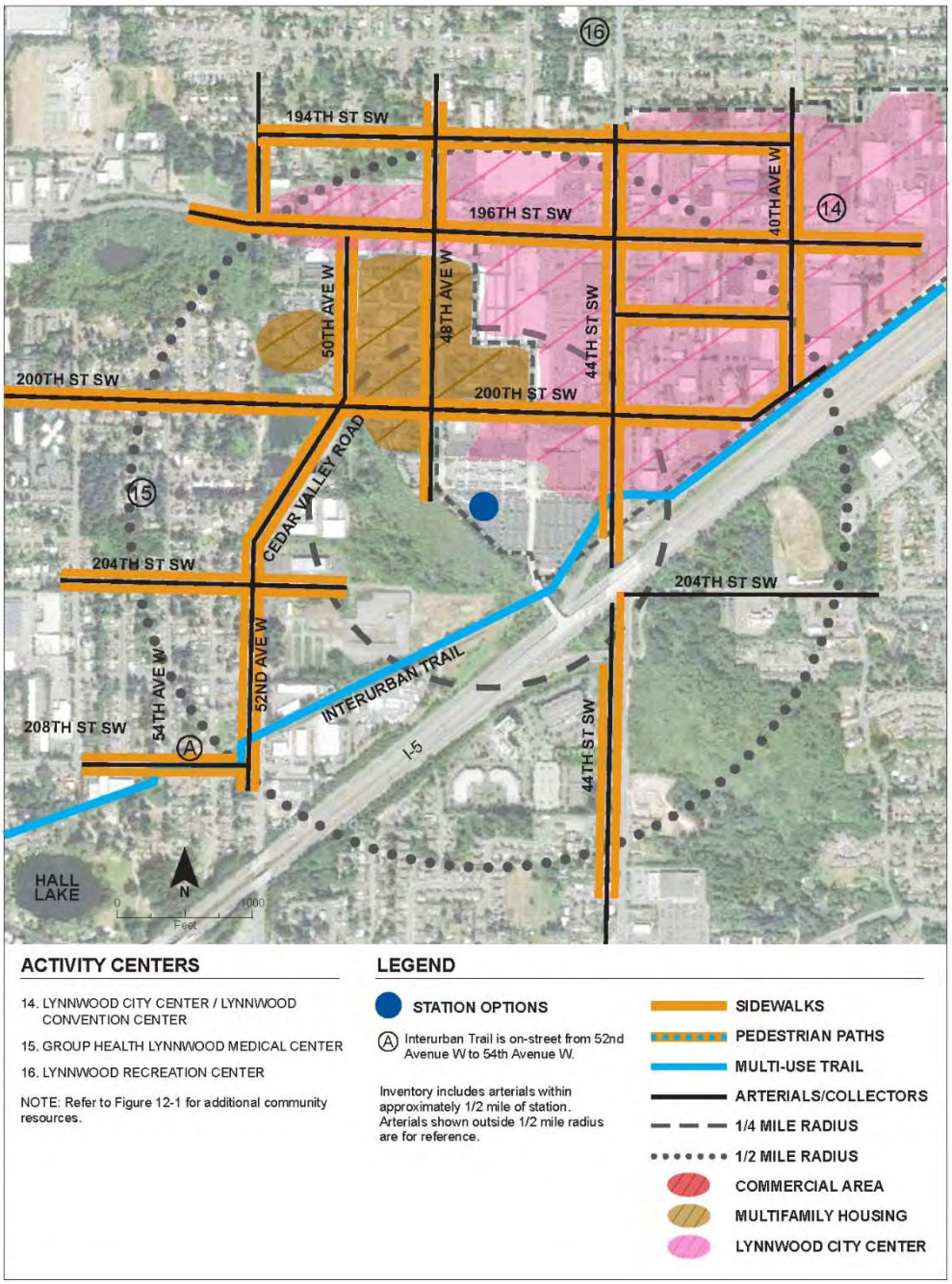


Figure 4-35. Lynnwood Transit Center Station Pedestrian Facility Inventory

4.5.2 Bicycle Facilities

Existing bicycle facilities were inventoried on all arterials within 1 mile of each proposed station for all light rail alternatives. Arterials were identified based on each jurisdiction's transportation plans. Arterials include streets classified as arterials, collector arterials, and collectors. Typical bicycle facilities are bicycle lanes, multi-use trails, and streets with wide lanes or wide paved shoulders that are identified as shared-use facilities.

Segment A: Seattle to Shoreline

Streets that would be affected by one or more project alternatives along Segment A include 1st Avenue NE, NE 117th Street, and 5th Avenue NE. There are wide curb lanes adjacent to sidewalks or paved shoulders on these streets.

The bicycle facilities within 1 mile of the NE 130th Street, NE 145th Street, NE 155th Street, and NE 185th Street Stations are presented in Figures 4-34, 4-35, 4-36, and 4-37, respectively.

The bicycle environment at each station is described below.

NE 130th Street/I-5 Area

The NE 130th Street Station would be located in the northeast quadrant of the I-5 interchange in Seattle. The streets in this area of Seattle are generally old and lacking in constructed bicycle facilities. The City of Seattle uses a pavement marking called a sharrow to define streets that should be shared by vehicles and bicycles. The existing bicycle facility inventory is shown in Figure 4-34. There are sharrows along 1st Avenue NE from 0.50 mile south of NE 130th Street, north to Roosevelt Way NE, and for a short segment on Roosevelt Way NE through a small commercial area. Sharrows also occur on the collector streets that surround Haller Lake and to the west on NE 125th Street. East of I-5 there is a bicycle lane on NE 125th Street, from Roosevelt Way NE going east beyond the 1-mile radius from the station location.

NE 145th Street/I-5 Area

The NE 145th Street Station would be located in the northeast quadrant of the I-5 interchange. The city limits of Seattle and Shoreline are along the center line of NE 145th Street. The existing bicycle facility inventory is shown in Figure 4-35.

Bicycle lanes are provided on NE 155th Street from 5th Avenue NE going west beyond the 1-mile radius from the station location. There is also a segment of bicycle lane on 15th Avenue NE from approximately NE 150th Street going north beyond the 1-mile radius.

NE 155th Street/I-5 Area

The NE 155th Street Station would be located over NE 155th Street along the east side of I-5. The existing bicycle facility inventory is shown in Figure 4-36. There are bicycle lanes on NE 155th Street from 5th Avenue NE to the west beyond the 1-mile radius from the station. There are also bicycle lanes on 15th Avenue NE, which is a north-south arterial approximately 1 mile from the station. These bicycle lanes begin at approximately NE 150th Street and extend northward.

NE 185th Street/I-5 Area

The NE 185th Street Station would be located in the northeast quadrant of the I-5 interchange in Shoreline. The existing bicycle facility inventory is shown in Figure 4-37. Bicycle lanes are provided on NE 185th Street from 1st Avenue NE to the west. There are sharrows on 10th Avenue NE from NE 175th Street to NE 190th Street. North of NE 190th Street, 10th Avenue NE becomes NE Perkins Way, which has a striped paved shoulder/walkway on the north side. The roadway is steep and winding, with concrete barriers along the curves to protect pedestrians.

At NE 195th Street, there is a bridge over I-5 for pedestrians and bicycles. Farther to the west, a paved multi-use trail exists along NE 195th Street between 1st Avenue NE and Meridian Avenue North. No vehicle access is available along this segment of street right-of-way.

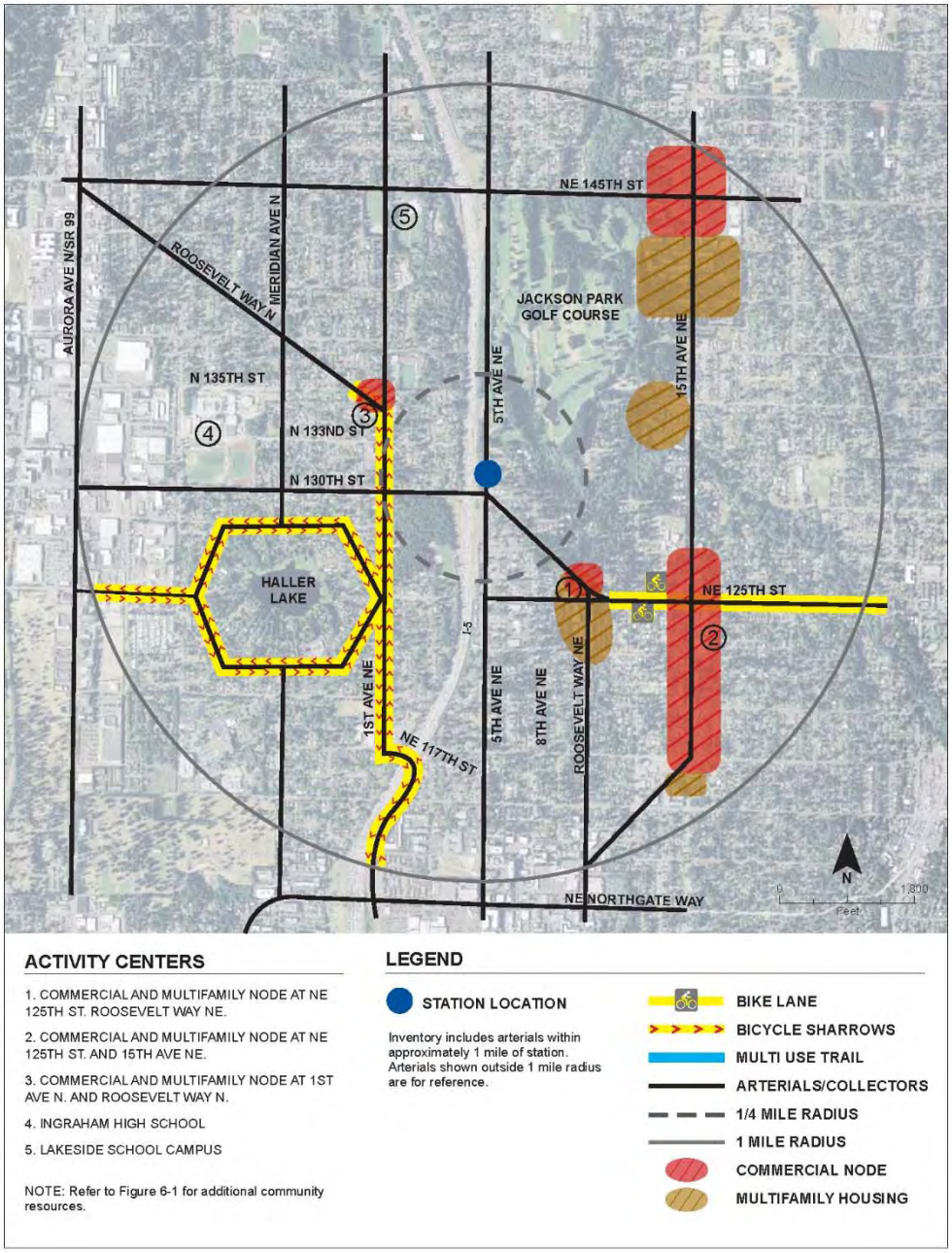


Figure 4-36. NE 130th Street Station Bicycle Facility Inventory

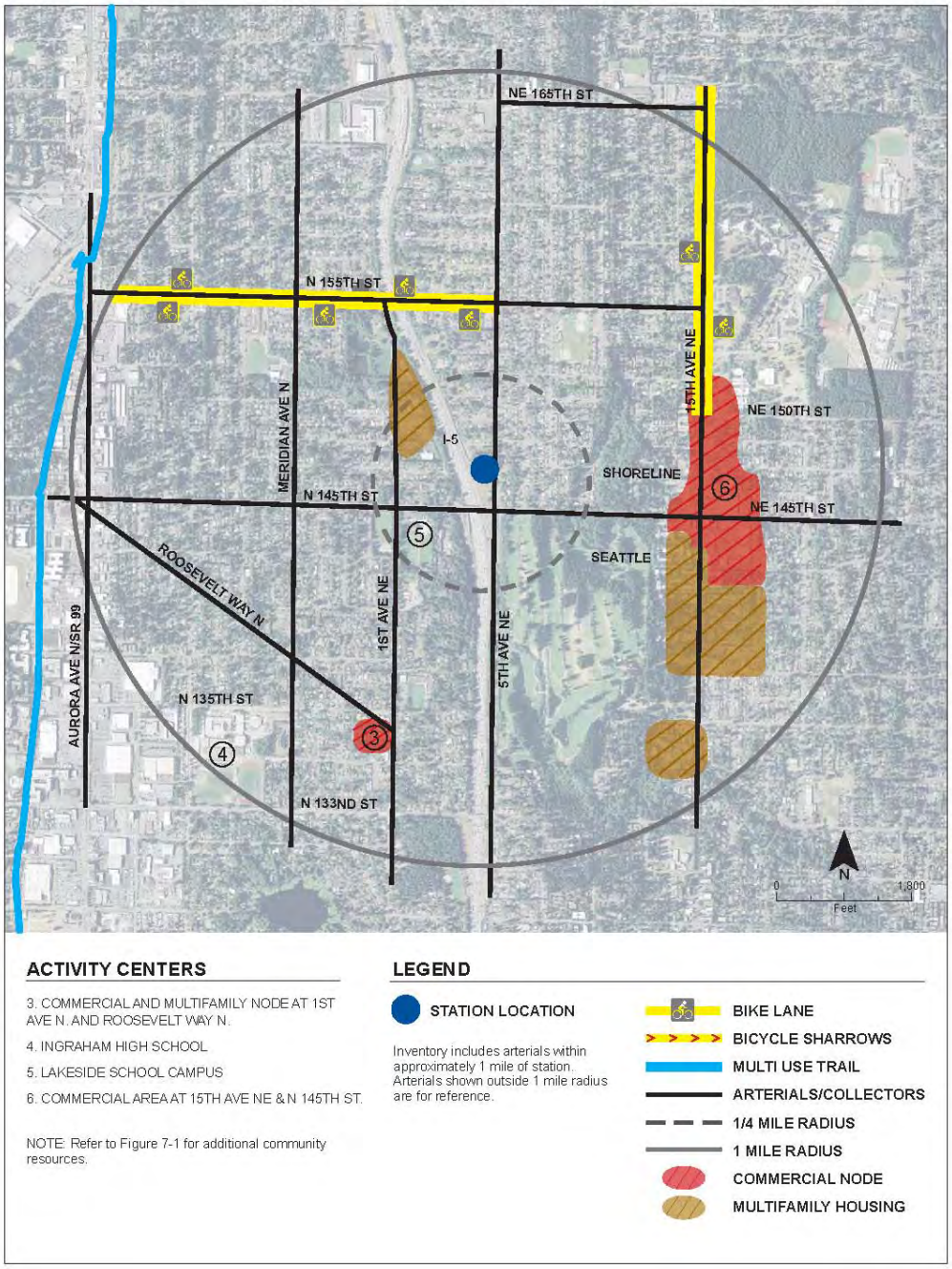


Figure 4-37. NE 145th Street Station Bicycle Facility Inventory

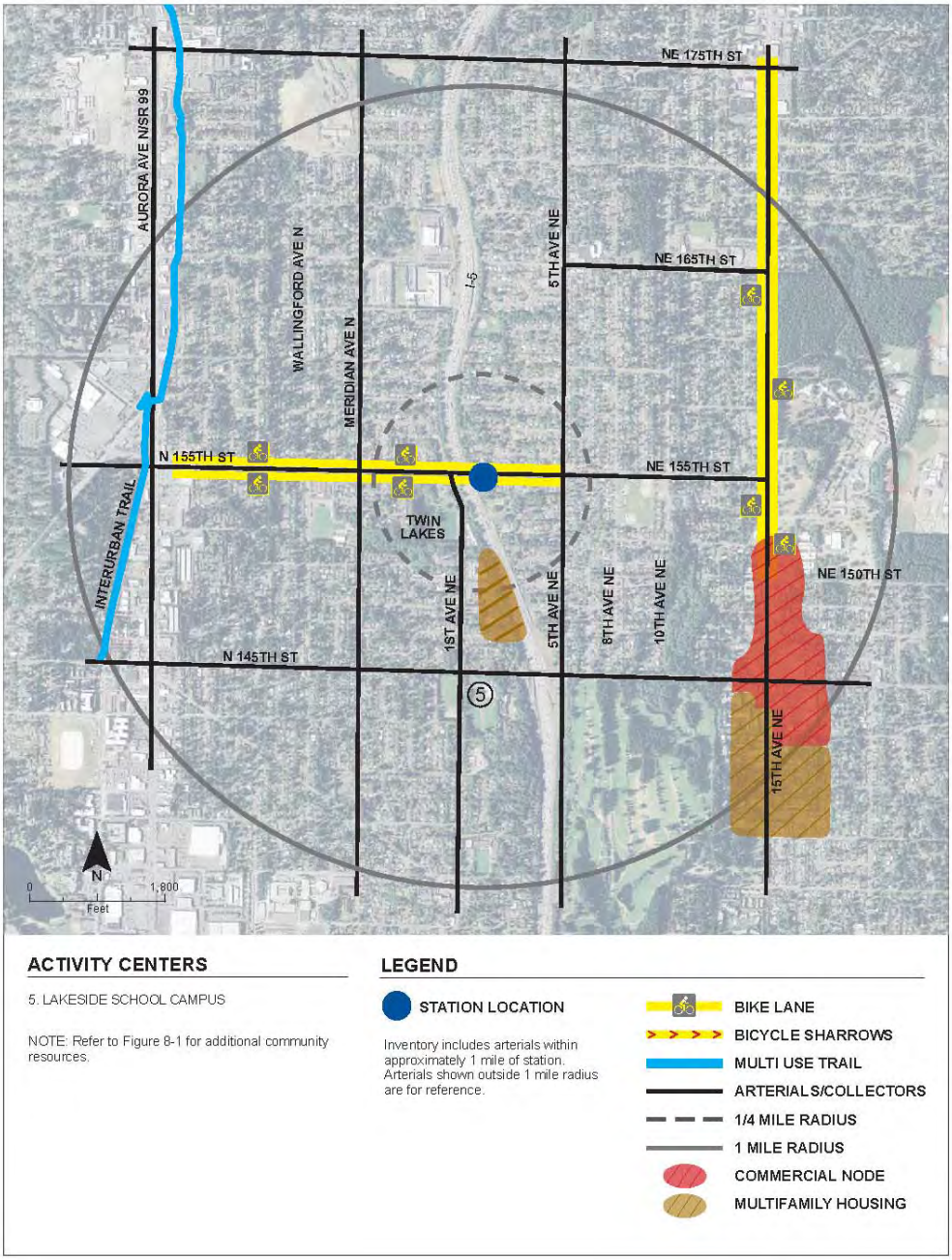


Figure 4-38. NE 155th Street Station Bicycle Facility Inventory

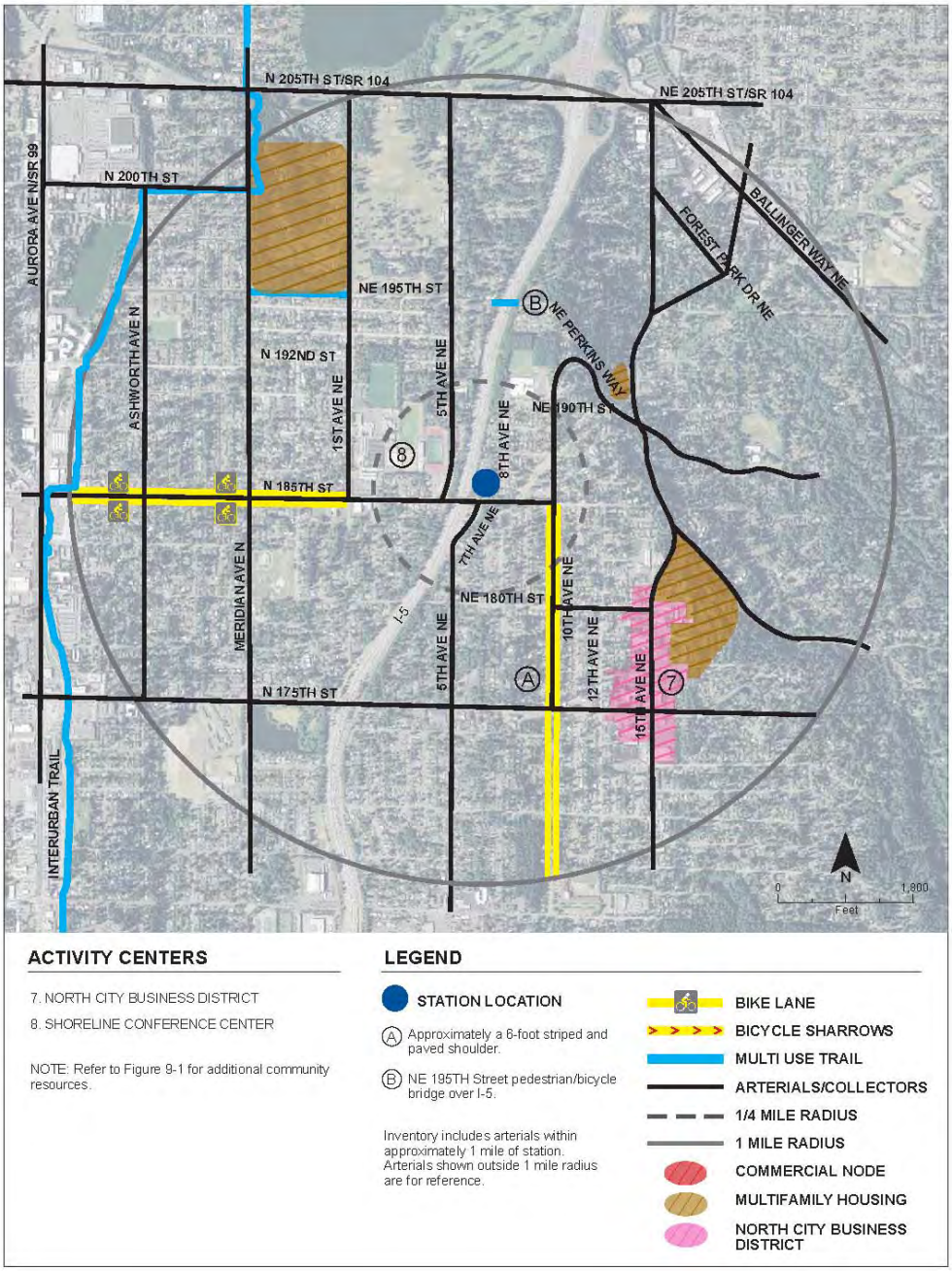


Figure 4-39. NE 185th Street Station Bicycle Facility Inventory

Segment B: Shoreline to Mountlake Terrace

A pedestrian and bicycle overcrossing of I-5 is located at NE 195th Street, north of the NE 185th Street Station and south of the Mountlake Terrace Transit Center.

The Interurban Trail is approximately 1 mile west of the Mountlake Terrace Transit Center. The Interurban Trail is a regional facility and connects Lynnwood with Mountlake Terrace within the proposed light rail corridor.

The bicycle facilities within 1 mile of the Mountlake Terrace Transit Center Station are presented in Figure 4-38. The bicycle environment at this station is summarized below.

Mountlake Terrace Transit Center Area

A bicycle lane is available on both sides of 230th Street SW north of the Mountlake Terrace Transit Center. The lane extends from 56th Avenue West to I-5. The arterial extends across I-5 but without the bicycle lanes. On the south side, the eastbound bicycle lane begins immediately after the arterial overcrossing and provides space for bicycles to climb the eastbound uphill grade.

The Interurban Trail crosses 228th Street SW, at a little more than 1 mile from the Mountlake Terrace Transit Center. Bicycle volumes on the trail at this location during one PM peak hour were approximately nine northbound and four southbound cyclists. During the AM peak hour there were four northbound and two southbound cyclists (PSRC 2010).

A multi-use pedestrian/bicycle facility is under design for the north side of 236th Street and Lakeview Drive, from the west side of the freeway interchange to the Interurban Trail.

220th Street SW/I-5 Area

Bicycle facilities are not available on arterials in the 220th Street SW area (Figure 4-39). The Interurban Trail is near the 220th Street SW Station (0.50 mile) and connects to the Lynnwood Transit Center to the north.

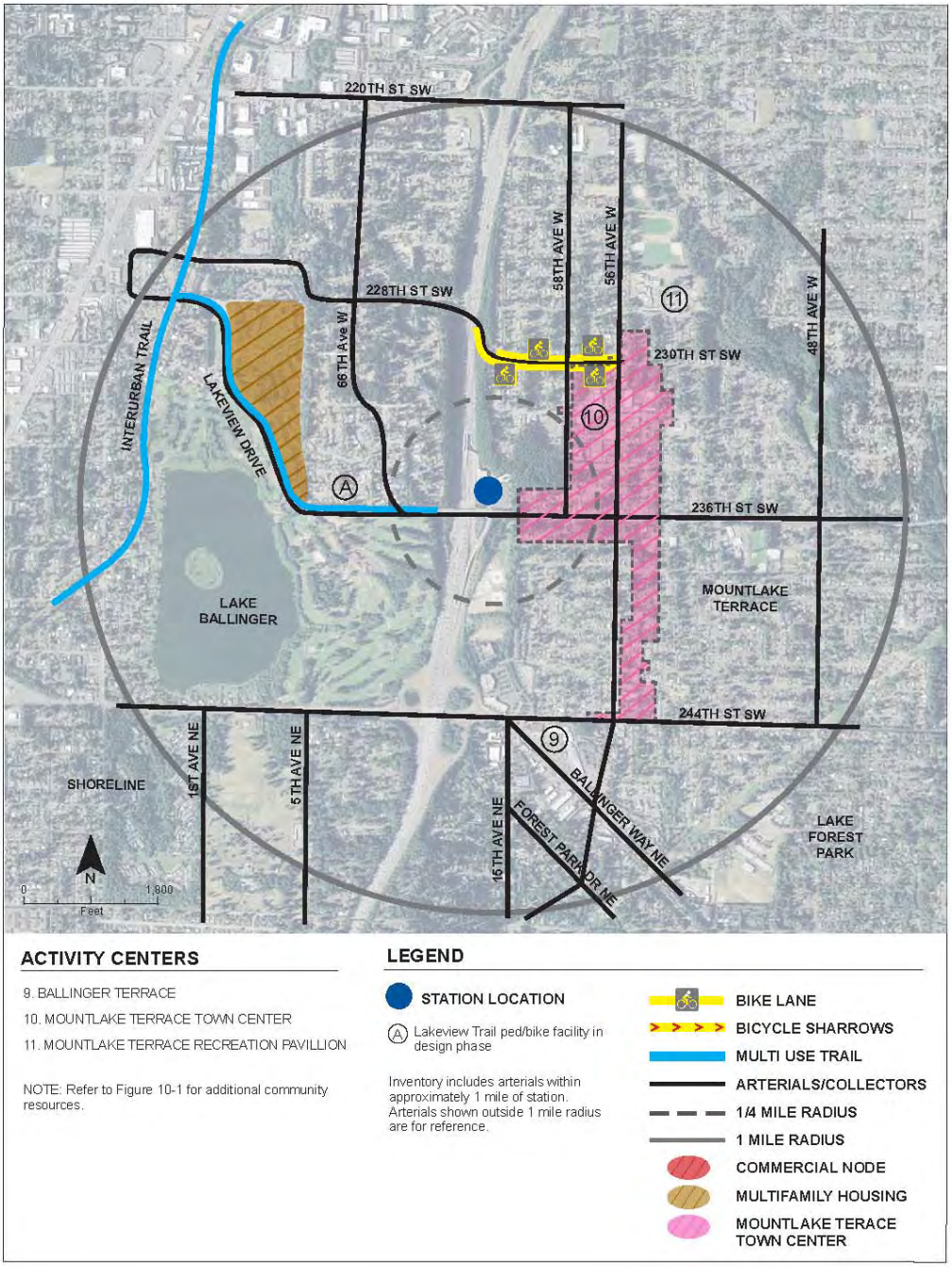


Figure 4-40. Mountlake Terrace Transit Center Station Bicycle Facility Inventory

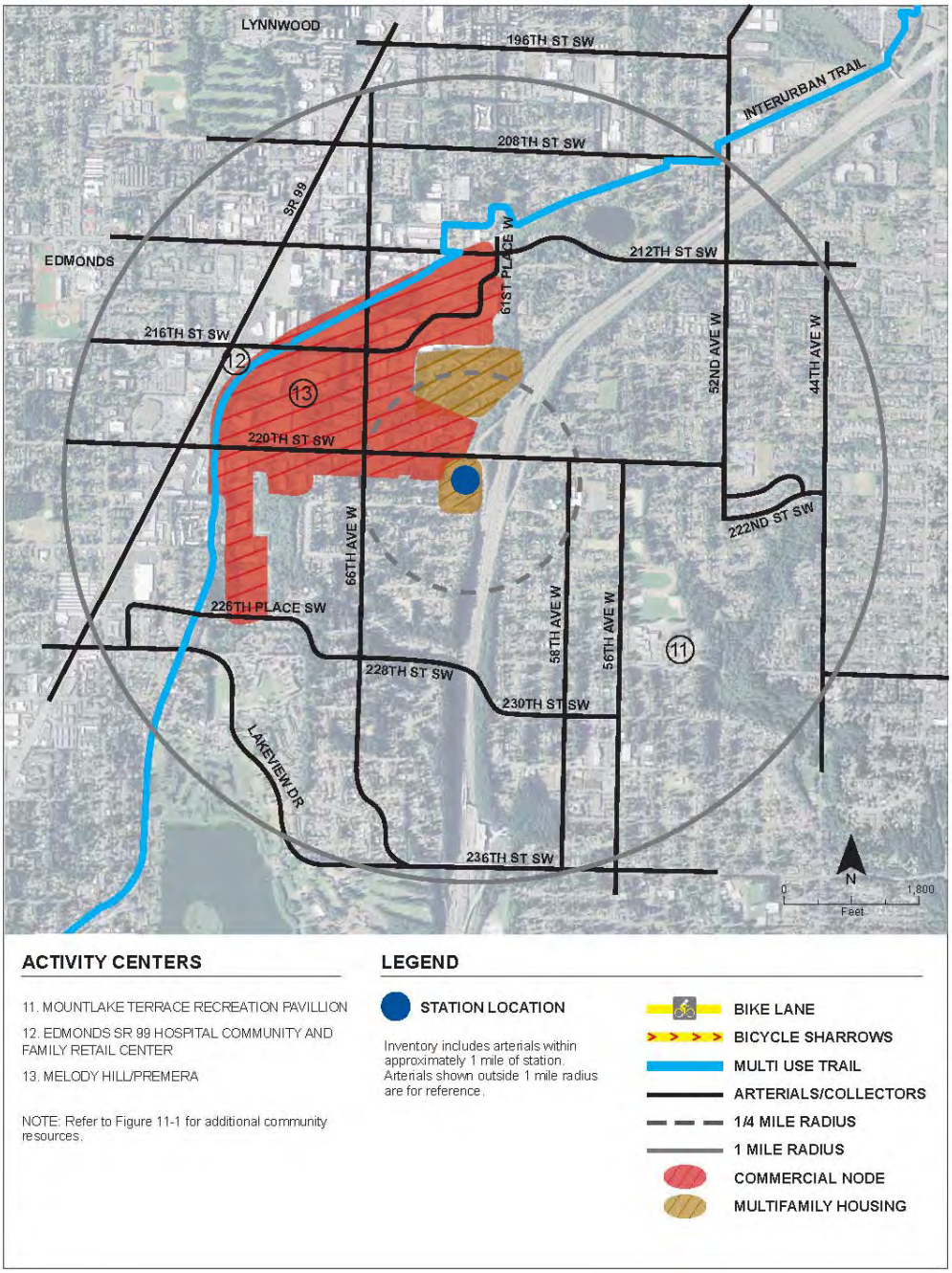


Figure 4-41. 220th Street SW Station Bicycle Facility Inventory

Segment C: Mountlake Terrace to Lynnwood

Bicycle lanes are on 52nd Avenue West and Cedar Valley Road from 208th Street SW, in the vicinity of the Interurban Trail, north to 200th Street SW (Figure 4-40). A shared lane for bicycles also is available on 200th Street SW from 50th Avenue West through the 1-mile inventory area.

The Interurban Trail passes through the station areas. It is an on-street facility adjacent to 52nd Avenue West between 208th Street SW and the power line segments. To the north, the trail follows the Snohomish County PUD power line right-of-way, then crosses over 44th Avenue West on a pedestrian/bicycle bridge, and continues on the west side of I-5.

Bicycle volumes on the Interurban Trail were available north and south of the Lynnwood Transit Center. During one hour of the PM peak period, there were 18 bicycles on the trail at 37th Avenue West and Alderwood Mall Boulevard. On 208th Street SW, east of 52nd Avenue West where the Interurban Trail is on-street for a short segment, there were five bicycles on the trail during one PM peak hour (PSRC 2010).

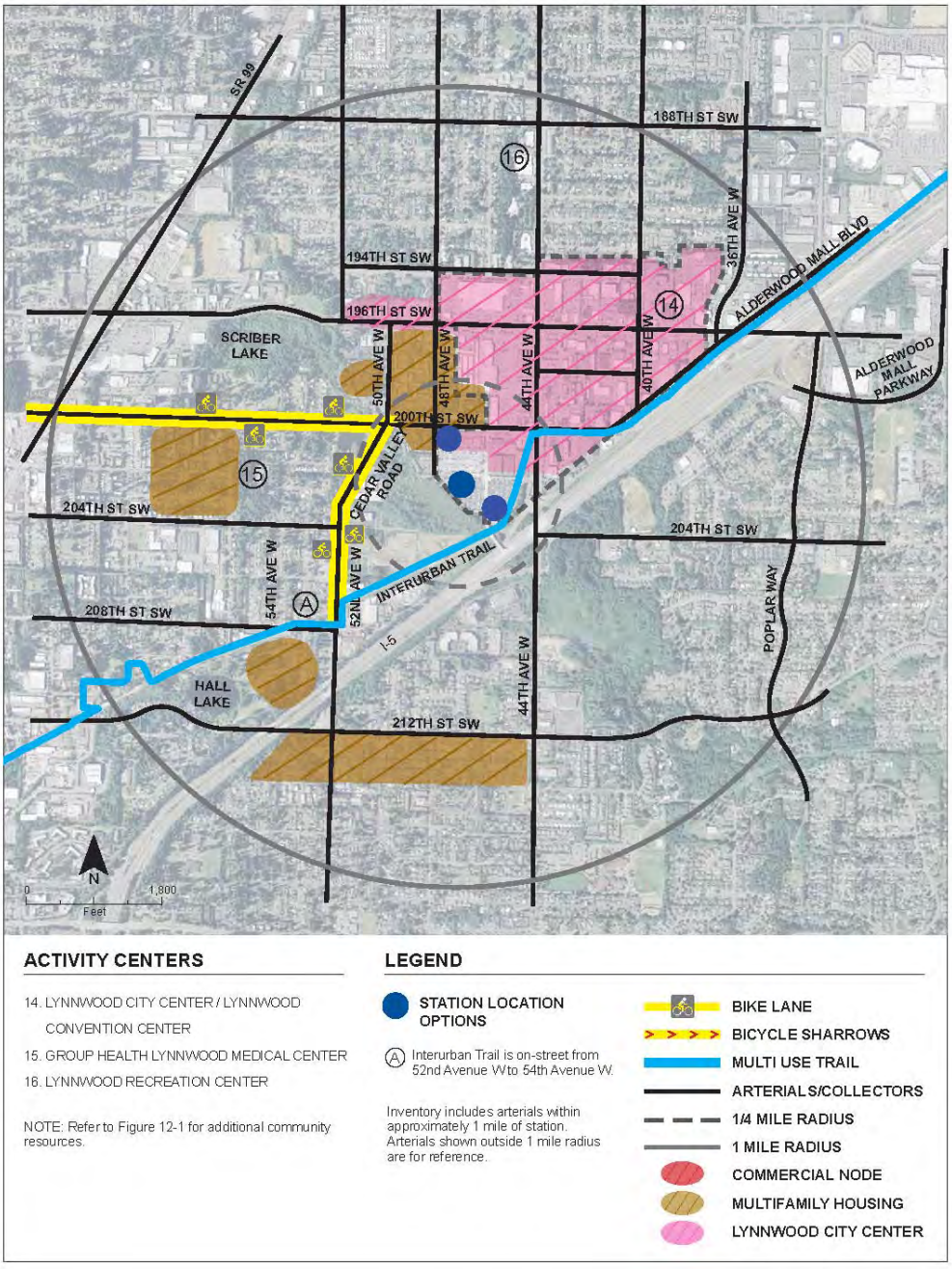


Figure 4-42. Lynnwood Transit Center Station Bicycle Facility Inventory

4.6 Freight Mobility and Access

Freeways, arterials, and local roadways throughout the project vicinity are vital to the movement of freight and goods between major transportation hubs, such as the Port of Seattle and Sea-Tac Airport, including other business and customer destinations. Within the Lynnwood Link Extension study area, only roadways are used for freight transportation. West of the study area, the Burlington Northern Santa Fe (BNSF) Railway owns and operates a dual-track mainline, which connects Portland, Oregon, to Everett, Washington, and carries more than 5 million tons of goods per year. Also located west of the Lynnwood Link Extension study area, Puget Sound is classified as a freight waterway, carrying more than 25 million tons of goods a year.

I-5 is the principal freight route through the Puget Sound region and is located within the Lynnwood Link Extension study area. In addition, many arterial streets throughout the corridor are also identified as truck routes.

4.6.1 Key Freight Roadways

The Washington State Freight and Goods Transportation System (FGTS) is used to classify highways, county roads, and city streets according to the average annual gross truck tonnage they carry. Truck tonnage values are derived from actual or estimated truck traffic count data that are converted into average weights by truck type. Classifications range from T-1, which includes roadways that carry over 10 million tons per year, to T-5, which includes roadways that carry over 20,000 tons in 60 days. Table 4-22 summarizes the classifications and the corresponding tonnage.

Table 4-22. Freight and Goods Transportation System Classifications

FGTS Classification	Annual Gross Tonnage
T-1	More than 10 million tons
T-2	4 to 10 million tons
T-3	300,000 to 4 million tons
T-4	100,000 to 300,000 tons
T-5	At least 20,000 tons in 60 days and less than 100,000 tons per year

Source: Washington State Freight and Goods Transportation System 2011 Update, March 2012.

The principal freight route (classified as T-1) through the Puget Sound region is I-5, which is located within the study area. About 186,000 vehicles travel on the I-5 mainline every day. Of this number, about 11,000 are trucks, or 6 percent of the total vehicles.

The following sections describe the specific freight roadways and corresponding classifications for each segment of the project corridor.

Segment A: Seattle to Shoreline

In addition to routes identified by WSDOT as part of the FGTS, truck routes in Segment A include arterial streets identified as major truck streets within Seattle and truck routes in Shoreline.

Figure 4-41 shows the location of existing FGTS-classified freight routes in Segment A, in addition to truck routes identified by the Cities of Seattle and Shoreline.

Key roadways classified as T-1 in Segment A are:

- I-5
- NE Northgate Way from I-5 to Lake City Way NE (SR 522)

Key roadways classified as T-2 are:

- North Northgate Way west of I-5
- NE 175th Street
- NE 185th Street
- Greenwood Avenue North
- Lake City Way NE (SR 522)

Key roadways classified as T-3 are:

- NE 125th Street
- North 130th Street
- North 145th Street
- North 155th Street
- NE 175th Street/5th Avenue NE
- Lake City Way NE/SR 522
- Aurora Avenue North (SR 99)
- Meridian Avenue North
- 15th Avenue NE
- 25th Avenue NE

Key study area roadways classified as T-4 are:

- 5th Avenue North
- NE 175th Street
- Roosevelt Way NE

No other roadways in Segment A are designated as freight or truck routes by the City of Seattle or the City of Shoreline in addition to the routes identified by the FGTS.

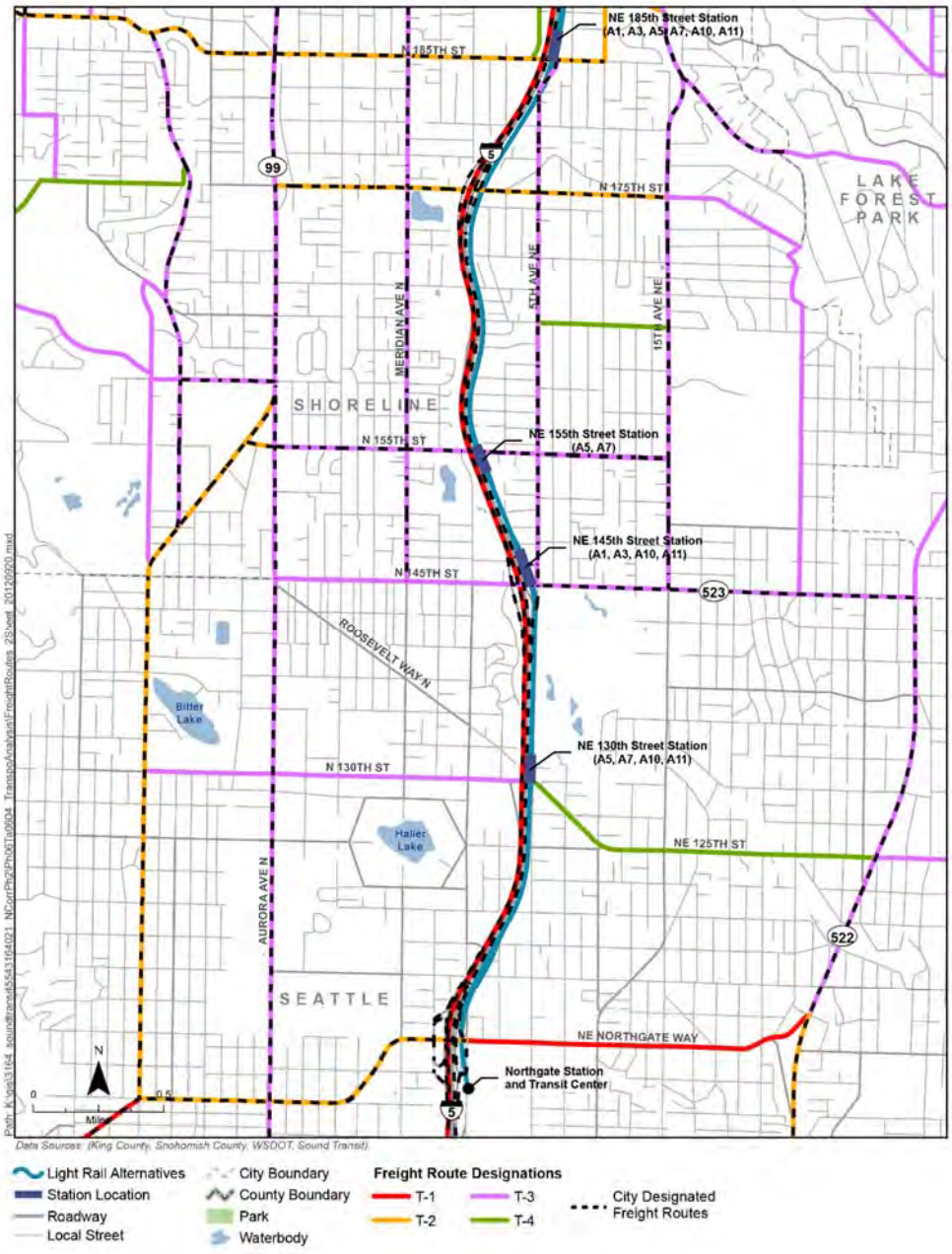


Figure 4-43. FGTS and City Freight Route Classifications in Segment A

Segment B: Shoreline to Mountlake Terrace

In addition to routes identified by the FGTS, truck routes in Segment B include arterial streets identified as truck routes in Shoreline and truck routes in Mountlake Terrace. Existing freight routes in Segment B, identified by the FGTS and the Cities of Shoreline and Mountlake Terrace, are shown in Figure 4-42.

As shown in Figure 4-42, I-5 is the only roadway classified as T-1 in Segment B.

Key roadways classified as T-2 are:

- 220th Street SW
- 66th Avenue West

Key roadways classified as T-3 are:

- Ballinger Way NE (SR 104)
- NE 205th Street
- 244th Street SW
- 236th Street SW
- 212th Street SW
- Aurora Avenue North/Pacific Highway (SR 99)
- Meridian Avenue North
- 15th Avenue NE
- 19th Avenue North/56th Avenue West
- 52nd Avenue West

No additional roadways are designated as freight or truck routes by the City of Shoreline or the City of Mountlake Terrace in addition to those identified by the FGTS.

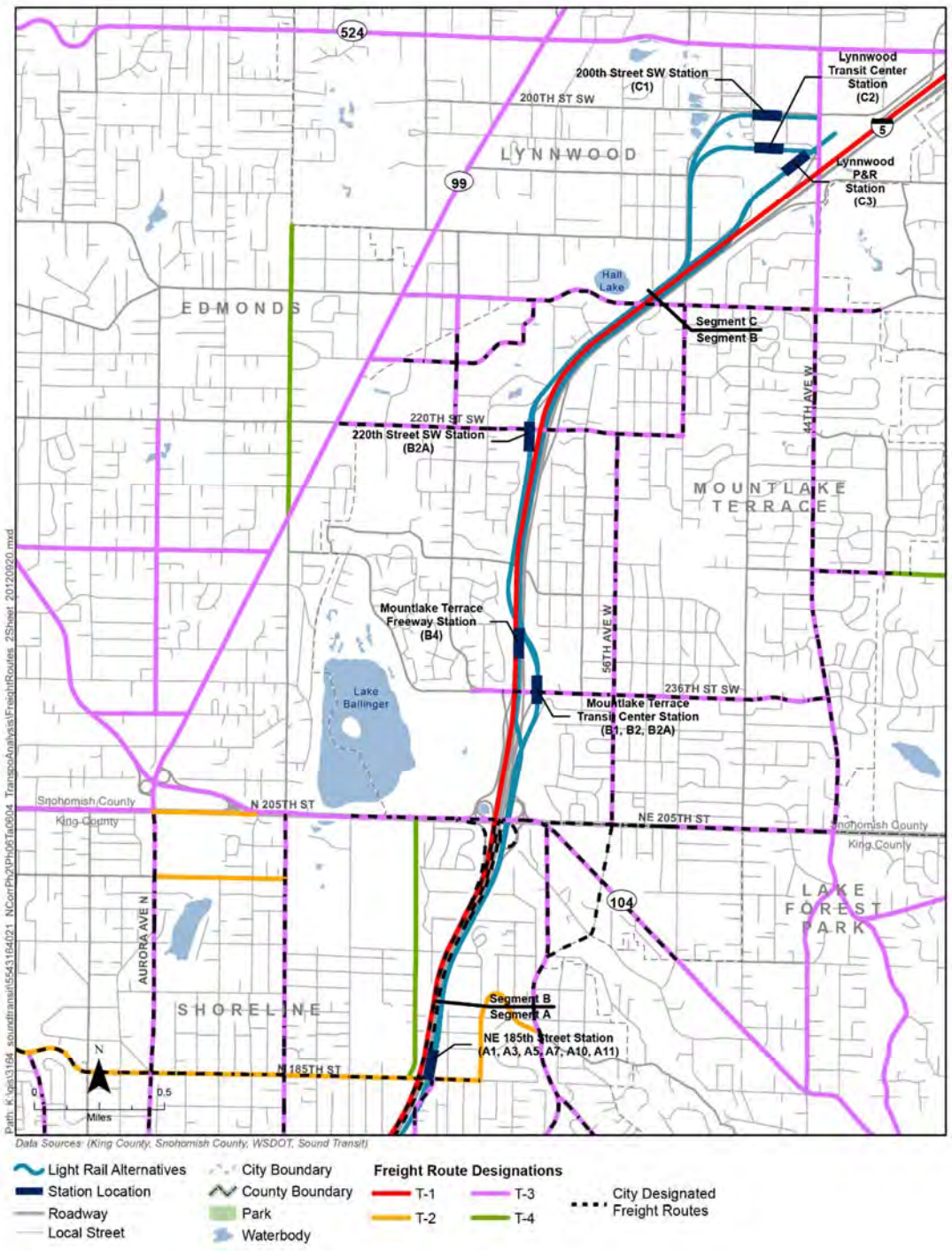


Figure 4-44. FGTS Classifications in Segments B and C

Segment C: Mountlake Terrace to Lynnwood

Freight routes in Segment C are identified by the FGTS. FGTS-classified freight routes within Lynnwood are shown in Figure 4-42. I-5 is the only roadway in Segment C designated as a T-1 route. Key roadways designated as T-3 routes are:

- 212th Street SW
- 196th Street SW (SR 524)
- 44th Avenue West

No additional roadways are designated as freight or truck routes by the City of Lynnwood.

4.7 Parking

Parking surveys were conducted to inventory the supply, parking restrictions, and midday use of on-street and off-street parking, including both private parking lots and park-and-ride lots. The survey was conducted within 0.25 mile of the proposed station locations, shown in Figure 4-43. Between stations, the parking survey was conducted within the footprint of the light rail alignments. Overall key observations and findings include the following:

- Existing parking utilization in the NE 130th Street/I-5 area is approximately 14 percent for both on-street and off-street parking, including the NE 133rd/5th Avenue NE Park-and-Ride lot, which is 24 percent utilized.
- Existing parking utilization in the NE 145th Street/I-5 area is approximately 27 percent for on-street and 71 percent for off-street parking, including the North Jackson Park Park-and-Ride lot, which is 94 percent utilized.
- Existing parking utilization in the NE 155th Street/I-5 area is approximately 17 percent for on-street and 25 percent for off-street parking.
- Existing parking utilization in the NE 185th Street/I-5 area is approximately 11 percent for on-street and 43 percent for off-street parking.
- Existing parking utilization in the Mountlake Terrace Transit Center and freeway station area is approximately 8 to 16 percent for on-street and 88 percent for off-street parking, including the Mountlake Terrace Park-and-Ride garage and surface lot, which is 93 percent utilized.
- Existing parking utilization in the 220th Street SW/I-5 area is approximately 11 percent for on-street and 52 percent for off-street parking.
- Existing parking utilization in the Lynnwood Transit Center area is approximately 44 to 100 percent for on-street and 57 to 68 percent for off-street parking, including the Lynnwood Park-and-Ride lot, which is 100 percent utilized.

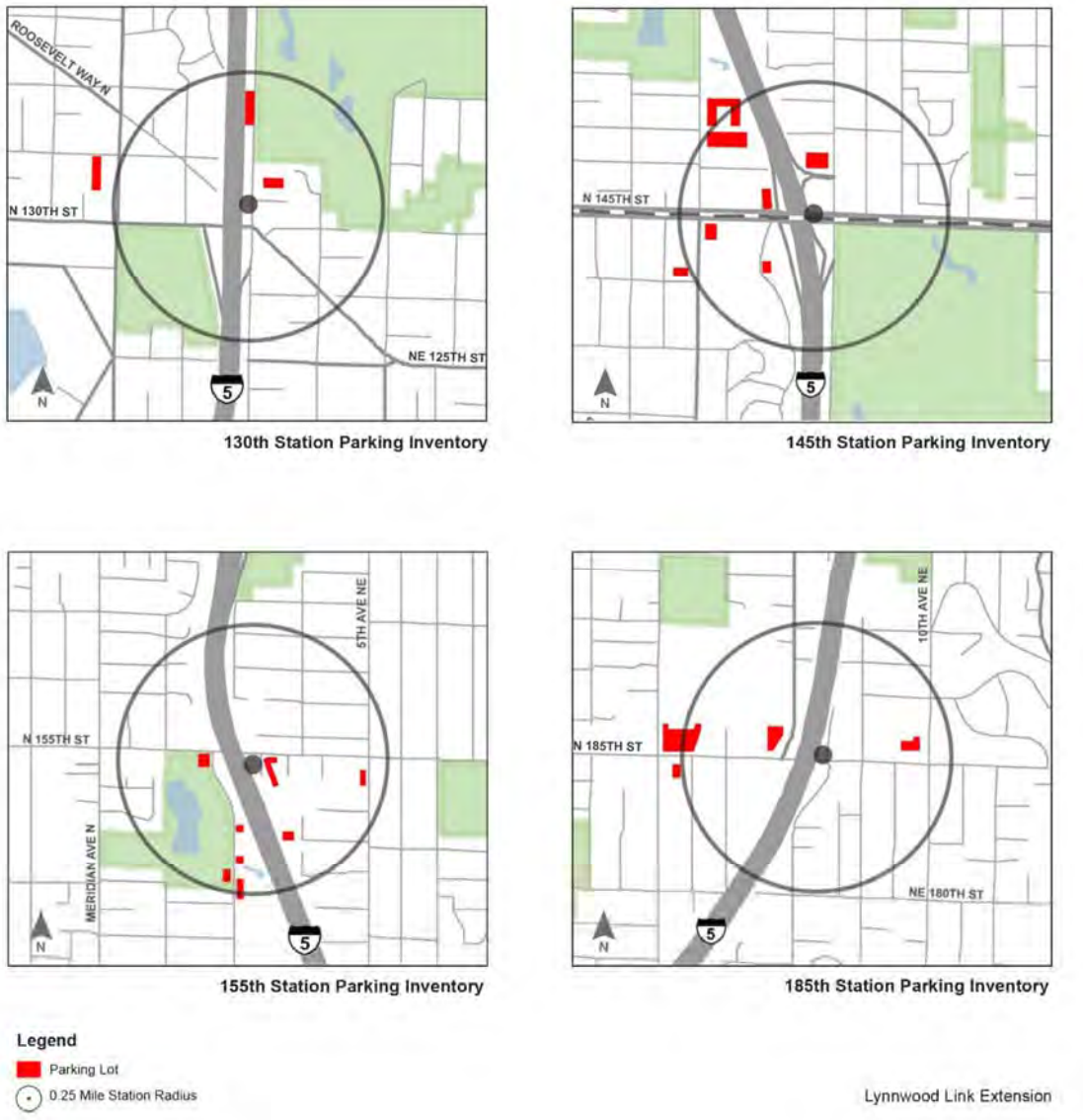


Figure 4-45. Areas Inventoried for Parking in Segment A

4.7.1 Segment A: Seattle to Shoreline

Table 4-23 summarizes the results of the parking survey within Segment A along the light rail alignment, which consists of NE 113th Street to NE 185th Street along the east side of I-5.

Table 4-23. Parking Supply and Utilization for Segment A

Parking Type	Parking Supply			Midday Utilization	
	No Restrictions	Time-Restricted	Total	Parked Cars	Percent Utilization
On-Street[a]	130	0	130	12	9%
Off-Street[a]	19	0	19	12	63%

[a] Data were collected mid-week in May 2012. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.

Within the survey area, on-street parking is available on a few streets that are within the proposed light rail alignment for a total of 130 spaces. The majority of the on-street parking spaces along the alignment are on 1st Avenue NE between NE 157th Street and 161st Street, and between NE 170th Street and NE 174th Street. As shown above in Table 4-22, the on-street parking utilization is 9 percent in this area based on field observations.

One off-street parking lot is available within the rail alignment and is located just north of NE 117th Street and east of I-5. This parking lot was 63 percent utilized.

NE 130th Street/I-5 Area

Table 4-24 summarizes the results of the parking survey within 0.25 mile of the proposed NE 130th Street Station. The parking survey area extends from approximately NE 125th Street to NE 135th Street and from 1st Avenue NE to 10th Avenue NE.

Table 4-24. Parking Supply and Utilization for NE 130th Street/I-5 Area

	Parking Supply			Midday Utilization	
Parking Type	No Restrictions	Time-Restricted	Total	Parked Cars	Percent Utilization
On-Street[a]	400	30	430	60	14%
Off-Street[a*]	290[b]	0	290	40[c]	14%

[a] Data were collected mid-week in May 2012. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.
[b] Includes existing park-and-ride lot with 46 spaces.
[c] Park-and-ride utilization source: King County Metro Transit Park and Ride Utilization Report, Second Quarter 2012.

The study area is mostly residential with single-family homes. A large park, North Acres Park, is located to the southwest and Jackson Park Golf Course is located to the northeast.

The majority of the residential streets in this area has on-street parking, with a total of 400 unrestricted parking spaces. No parking is allowed on NE 130th Street, Roosevelt Way North, and portions of 5th Avenue NE. In addition, 5th Avenue NE and 127th Avenue NE have time-restricted parking. On 5th Avenue NE, approximately 5 spaces are allocated for buses only from 5 am to 9 am, and an additional 18 spaces are provided for 4-hour parking from 7 am to 6 pm. There are nine spaces on the north side of 127th Avenue NE with 4-hour parking from 7 am

to 6 pm. As shown above in Table 4-23, the on-street parking utilization is 14 percent in this area based on field observations.

One off-street parking lot is within the study area. The NE 133rd/5th Avenue NE Park-and-Ride, located along 5th Avenue NE approximately 0.25 mile north of NE 130th Street, was 24 percent utilized.

NE 145th Street/I-5 Area

Table 4-25 summarizes the results of the parking survey within 0.25 mile of the NE 145th Street Station area. The parking survey area for the proposed NE 145th Street Station location extends from approximately NE 140th Street to NE 150th Street and from 1st Avenue NE to 10th Avenue NE.

Table 4-25. Parking Supply and Utilization for NE 145th Street/I-5 Area

	Parking Supply			Midday Utilization	
Parking Type	No Restrictions	Time-Restricted	Total	Parked Cars	Percent Utilization
On-Street[a]	450	0	450	120	27%
Off-Street[a]	350	0	350	250	71%

[a] Data were collected mid-week in May 2012. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.

The study area to the north of NE 145th Street is mostly residential with single-family homes. The Lakeside School is located to the southwest and the Jackson Park Golf Course to the southeast.

The majority of the residential streets in this area has on-street parking, with a total of 450 unrestricted parking spaces. No parking is allowed on NE 145th Street, 1st Avenue NE, and portions of 5th Avenue NE. As shown in Table 4-24, the on-street parking utilization was 27 percent in this inventory area.

A few off-street parking lots are available, including lots for Lakeside School, which were 100 percent utilized. The North Jackson Park-and-Ride lot, located along 5th Avenue NE just north of NE 145th Street, was 94 percent utilized.

NE 155th Street/I-5 Area

Table 4-26 summarizes the results of the parking surveys within 0.25 mile of the proposed NE 155th Street Station. The survey area extends from NE 150th Street to NE 159th Street and from Meridian Avenue North to 5th Avenue NE.

Table 4-26. Parking Supply and Utilization for NE 155th Street/I-5 Area

	Parking Supply			Midday Utilization	
Parking Type	No Restrictions	Time-Restricted	Total	Parked Cars	Percent Utilization
On-Street[a]	580	0	580	100	17%
Off-Street[a]	200	0	200	50	25%

[a] Data were collected mid-week in May 2012. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.

The study area is mostly residential with single-family homes, including a large park in the southwest and a couple of businesses.

The majority of the residential streets in this area has on-street parking, with a total of 580 unrestricted parking spaces. No parking is allowed on NE 155th Street, 1st Avenue NE, and portions of 5th Avenue NE. As shown in Table 4-25, the on-street parking utilization was 17 percent.

A few off-street parking lots are available with approximately 200 spaces. The off-street parking lots were 25 percent utilized. There are no existing park-and-ride lots in this area.

NE 185th Street/I-5 Area

Table 4-27 summarizes the results of the parking surveys within 0.25 mile of the proposed NE 185th Street Station. The survey area for the NE 185th Street Station extends from North 180th Street to North 190th Street and from 2nd Avenue NE to 10th Avenue NE.

Table 4-27. Parking Supply and Utilization for NE 185th Street/I-5 Area

	Parking Supply			Midday Utilization	
Parking Type	No Restrictions	Time-Restricted	Total	Parked Cars	Percent Utilization
On-Street[a]	700	0	700	80	11%
Off-Street[a]	300	0	300	130	43%

[a] Data were collected mid-week in May 2012. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.

The study area is mostly residential with single-family homes. The Shoreline Center is located in the northwest quadrant of the study area. The majority of the residential streets in this area has on-street parking, with a total of 700 unrestricted parking spaces. No parking is allowed on portions of NE 185th Street and portions of 5th Avenue NE. As shown in Table 4-26, the on-street parking utilization was 11 percent.

Off-street parking lots at the Shoreline Center were 58 percent utilized. Utilization of all off-street parking lots was 43 percent. There are no existing park-and-ride lots in this area.

4.7.2 Segment B: Shoreline to Mountlake Terrace

On-street or off-street parking is not available along the proposed light rail alignment between NE 185th Street and Mountlake Terrace beyond the station areas.

Mountlake Terrace Transit Center Area

Figure 4-44 shows the areas within 0.25 mile of each proposed station location for which the parking surveys for the proposed Mountlake Terrace Transit Center Station and the Mountlake Terrace Freeway Station, respectively, were conducted. The survey area for the Mountlake Terrace stations was from approximately 228th Street SW to 239th Street SW and from 66th Avenue West and 58th Avenue West. The survey area includes various uses: residential development, a golf course, the Mountlake Terrace Public Library, and the existing Mountlake Terrace Park-and-Ride. Tables 4-28 and 4-29 summarize the parking inventory results for these areas.

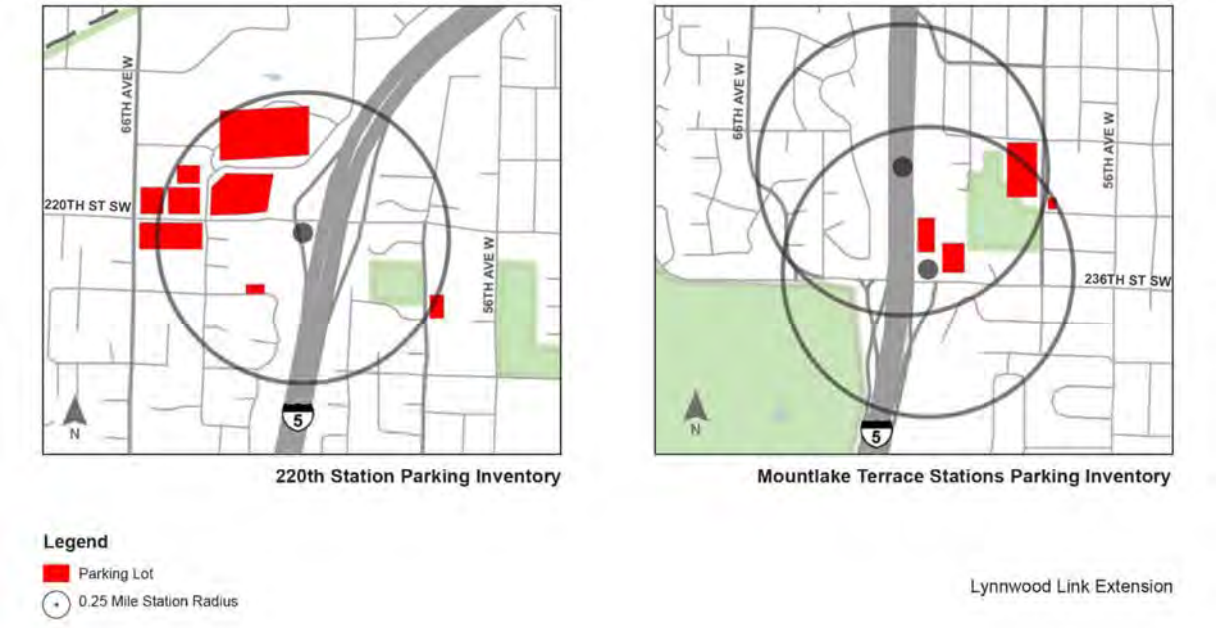


Figure 4-46. Area Inventoried for Segment B

Table 4-28. Parking Supply and Utilization for the Mountlake Terrace Transit Center Area

	Parking Supply			Midday Utilization	
Parking Type	No Restrictions	Time-Restricted	Total	Parked Cars	Percent Utilization
On-Street[a]	440	0	440	70	16%
Off-Street[a]	990[b]	0	990	870[c]	88%

[a] Data were collected mid-week in May 2012. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.
[b] Includes existing park-and-ride with 878 spaces.
[c] Park-and-ride utilization source: Community Transit 2012 System Performance Report.

Table 4-29. Parking Supply and Utilization for the Mountlake Terrace Freeway Station Area

	Parking Supply			Midday Utilization	
	No Restrictions	Time-Restricted	Total	Parked Cars	Percent Utilization
On-Street[a]	640	0	640	50	8%
Off-Street[a]	990[b]	0	990	870[c]	88%

[a] Data were collected mid-week in May 2012. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.
[b] Includes existing park-and-ride with 878 spaces.
[c] Park-and-ride utilization source: Community Transit 2012 System Performance Report.

On-street parking is available on the majority of the residential streets. No parking is allowed on 236th Street SW, and portions of 60th Avenue West and 64th Avenue West. As shown in Table 4-27, there were fewer on-street parking spaces within 0.25 mile of the Mountlake Terrace Transit Center and the utilization was higher at 16 percent. As shown in Table 4-28, the utilization of on-street parking within 0.25 mile of the Mountlake Terrace Freeway Station was 8 percent.

Off-street parking for the Mountlake Terrace Public Library was 49 percent utilized. The Mountlake Terrace Transit Center park-and-ride facility, which consists of 880 spaces in a garage and surface lot, was 93 percent utilized. The combined 990 parking spaces in the area were 88 percent utilized.

220th Street SW/I-5 Area

Table 4-30 summarizes the results of the parking survey within 0.25 mile of the proposed 220th Street SW Station area. The survey area for the 220th Street SW Station is approximately from 216th Street SW to 225th Place SW and from 66th Avenue West to 58th Avenue West.

Table 4-30. Parking Supply and Utilization for 220th Street SW/I-5 Area

Parking Type	Parking Supply			Midday Utilization	
	No Restrictions	Time-Restricted	Total	Parked Cars	Percent Utilization
On-Street[a]	610	0	610	70	11%
Off-Street[a]	1300	0	1300	680	52%

[a] Data were collected mid-week in May 2012. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.

The survey area south of 220th Street SW is mostly single-family homes with a school to the west of I-5 and a shopping center to the east of 66th Avenue West. The area north of 200th Street SW is a mix of commercial and multifamily homes, including two large apartment complexes.

On-street parking is available on the majority of the residential streets. No parking is allowed on 220th Street SW. As shown in Table 4-29, the on-street parking utilization was 11 percent. The off-street parking lots were 52 percent utilized. There are no existing park-and-ride lots in this station area.

4.7.3 Segment C: Mountlake Terrace to Lynnwood

Table 4-31 summarizes the results of the parking survey within the Segment C light rail alignment, not including the station areas. The parking survey area for the light rail alignment in Segment C is from 236th Street SW to 196th Street SW, along the west side of I-5 until 52nd Avenue West, and then along the east side of 52nd Avenue West.

Table 4-31. Parking Supply and Utilization for Segment C

Parking Type	Parking Supply			Midday Utilization	
	No Restrictions	Time-Restricted	Total	Parked Cars	Percent Utilization
On-Street[a]	30	0	30	7	23%
Off-Street[a]	305	0	300	235	77%

[a] Data were collected mid-week in May 2012. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.

On-street parking is available on 227th Street SW just west of I-5 and 204th Street SW east of Cedar Valley Road. The on-street parking utilization was 23 percent.

Two off-street parking lots are within the light rail alignment. One is north of 204th Street SW and east of 52nd Avenue West, and the other is north of 208th Street SW and east of 52nd Avenue West. These off-street parking lots were 77 percent utilized.

Lynnwood Transit Center Area

Figure 4-45 shows the station areas inventoried for Segment C. Table 4-32 summarizes the results of the parking survey within 0.25 mile of the proposed Lynnwood Park-and-Ride Station.

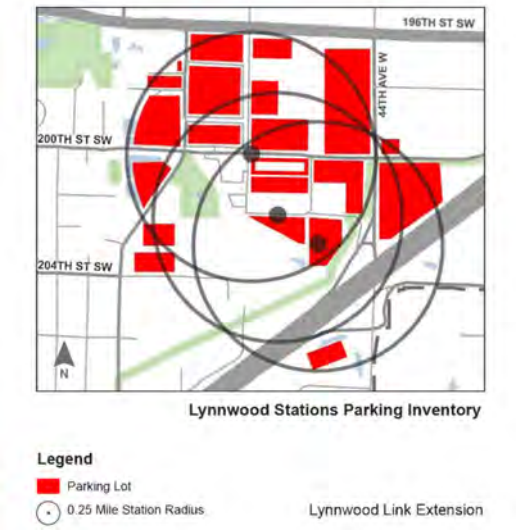


Figure 4-47. Areas Inventoried for Segment C

Table 4-32. Parking Supply and Utilization for Lynnwood Park-and-Ride Station

Parking Type	Parking Supply			Midday Utilization	
	No Restrictions	Time-Restricted	Total	Parked Cars	Percent Utilization
On-Street[a]	0	0	0	0	Not applicable
Off-Street[a]	3,020[b]	0	3,020	2,050[c]	68%

[a] Data were collected mid-week in May 2012. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.
[b] Includes existing park-and-ride with 1,370 spaces.
[c] Park-and-ride utilization source: Community Transit 2011 Annual Park and Ride License Plate Survey Strategic Planning report.

The survey area for the Lynnwood Park-and-Ride Station extends from approximately the south side of I-5 to 200th Street SW and from 48th Avenue West to 44th Avenue West. The study area is a mix of uses—commercial, retail, multifamily residences, and the existing Lynnwood Park-and-Ride. There is no on-street parking in this area.

The Lynnwood Transit Center park-and-ride lot was 100 percent utilized. All of the off-street parking was 68 percent utilized.

Table 4-33 summarizes the results of the parking survey within 0.25 mile of the proposed Lynnwood Transit Center Station.

Table 4-33. Parking Supply and Utilization for Lynnwood Transit Center Station

Parking Type	Parking Supply			Midday Utilization	
	No Restrictions	Time-Restricted	Total	Parked Cars	Percent Utilization
On-Street[a]	10	0	0	10	100%
Off-Street[a]	3,720[b]	0	3,720	2,410[c]	65%

[a] Data were collected in mid-week in May 2012. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.
[b] Includes existing park-and-ride with 1,370 spaces.
[c] Park-and-ride utilization source: Community Transit 2011 Annual Park and Ride License Plate Survey Strategic Planning report.

The survey area for the proposed Lynnwood Transit Center Station extends from I-5 to 198th Street SW and from 50th Avenue West to 44th Avenue West. The study area is a mix of uses—commercial, retail, multifamily residences, and the existing Lynnwood Park-and-Ride lot.

On-street parking is only available on one block of 48th Avenue West, and all 10 parking spaces were utilized. The existing park-and-ride lot is 100 percent utilized. All of the off-street parking, including the park-and-ride, was 65 percent utilized during the survey.

Table 4-34 summarizes the results of the parking survey within 0.25 mile of the proposed 200th Street SW Station.

Table 4-34. Parking Supply and Utilization for 200th Street SW Station

Parking Type	Parking Supply			Midday Utilization	
	No Restrictions	Time-Restricted	Total	Parked Cars	Percent Utilization
On-Street[a]	90	0	90	40	44%
Off-Street[a]	4,420[b]	0	4,420	2,510[c]	57%

[a] Data were collected mid-week in May 2012. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.
[b] Includes existing park-and-ride with 1,370 spaces.
[c] Park-and-ride utilization source: Community Transit 2011 Annual Park and Ride License Plate Survey Strategic Planning report.

The survey area for the 200th Street SW Station is approximately from 204th Street SW to 196th Street SW and from 50th Avenue West to 44th Avenue West. The study area is a mix of uses—commercial, retail, multifamily residences, and the existing Lynnwood Park-and-Ride lot.

On-street parking is only available on one block of 48th Avenue West and one block on 50th Avenue West. The utilization was 44 percent.

The existing park-and-ride was 100 percent utilized. All of the off-street parking spaces were 57 percent utilized during the survey.

4.8 Safety

This section discusses current safety-related issues in the project corridor. Accident data for a 4-year period (2010 to 2013) for the study intersections were collected from WSDOT for both highway facilities and city streets. Accident data were reviewed for each study intersection to tally accidents by severity (fatality, injury or property damage only) for the analysis period and to develop an accident rate for the location. The accident rate (in accidents/year, along with traffic volumes) gives an indication of high accident occurrence. The City of Seattle identifies collision analysis locations (CALs) for future safety improvements at signalized intersections experiencing more than 10 collisions per year, and at unsignalized intersections with 5 collisions per year. For other jurisdictions, locations where the accident rate is at or exceeds 1.0 accident per million entering vehicles were identified as CALs.

Key observations and findings include the following:

- In Segment A, 11 CALs were identified near the I-5/NE 130th Street and I-5/NE 145th Street interchanges, at intersections along NE 145th Street, and at locations on Aurora Avenue North.
- In Segment B, two intersections located near the 220th Street SW Station vicinity currently meet CAL criteria.
- In Segment C, eight intersections near the Lynnwood Transit Center currently meet CAL criteria.

The dominant accident type for each CAL is noted in the safety review that follows for the local intersections.

4.8.1 I-5 Ramps and Ramp Terminals

Accident data were provided by WSDOT for I-5 ramps within the corridor study area.

Table 4-35 summarizes the accident data collected for the I-5 ramps extending from the Northgate interchange to the SR 524 interchange at 196th Street SW in Lynnwood (MP 170 to 182). Table 4-35 identifies each study area segment and station areas. Ramp accident data were combined with city street and state route accident data, which are summarized in Section 4.8.2 for local intersections.

Along I-5, between 80 and 85 percent of the accidents were congestion-related, involving rear-end collisions from slowing or stopped traffic, or sideswipe collisions from merge or weave movements, and these occurred most often during peak periods. Other collisions, involving vehicles leaving the roadway, and fixed object collisions, made up the remaining accidents, and tended to occur during nighttime hours.

Table 4-35. I-5 Ramp Accident Data

Interchange Areas and Ramps	ADT	2010-2013 Accident Data			Yearly Accident Average
		PDO	INJ	FAT	
Segment A					
Northgate - NB off ramp to 1st at NE 107th	14,910	4.75	2.50	0.00	7.25
Northgate - ramp at Rev Express Lanes at NE 103rd	4,240	4.00	2.50	0.00	6.50
Northgate - NB on ramp (from 107th and north of NG Way)	13,290	4.00	0.75	0.00	4.75
Northgate - NB on ramp (from Northgate Way)	3,960	1.50	0.75	0.00	2.25
Northgate - SB CD off ramp	14,530	2.75	1.50	0.00	4.25
Northgate - SB off ramp to Northgate Way (westbound)	7,870	3.75	1.00	0.00	4.75
Northgate - SB on ramp (from Northgate Way)	5,480	2.00	1.50	0.00	3.50
Northgate - SB off ramp to Northgate Way (eastbound)	6,140	3.50	1.75	0.00	5.25
Northgate Way between ramps	30,600	10.25	6.25	0.00	16.50
Northgate - Reversible Lanes	35,660	67.25	39.50	0.00	106.75
Northgate - SB on ramp (from Northgate Way to I-5)	6,420	2.50	0.75	0.00	3.25
NE 130th - NB off ramp to 5th	8,100	2.75	1.75	0.00	4.50
NE 130th - SB on ramp at 130th	7,630	1.25	0.50	0.00	1.75
NE 130th Street between ramps	-	2.75	1.75	0.00	4.50
NE 145th - NB off ramp to 5th	11,940	3.75	1.75	0.00	5.50
NE 145th - NB transit slip ramp (between off and on ramp)	20	0.00	0.00	0.00	0.00
NE 145th - NB transit slip ramp to 5th Ave NE	20	0.00	0.00	0.00	0.00
NE 145th - NB on ramp from 5th, n/o 145th	10,680	3.00	2.75	0.00	5.75
NE 145th - SB off ramp to 145th	12,190	3.50	1.75	0.00	5.25
NE 145th - SB transit slip ramp		0.00	0.00	0.00	0.00
NE 145th - SB on ramp from 145th	10,940	1.00	0.25	0.00	1.25

Table 4-35. I-5 Ramp Accident Data

Interchange Areas and Ramps	ADT	2010-2013 Accident Data			Yearly Accident Average
		PDO	INJ	FAT	
KC Metro Base - NB off ramp	400	0.00	0.00	0.00	0.00
KC Metro Base - NB roadway (between Base and 175th)	610	0.00	0.00	0.00	0.00
KC Metro Base - between ramps		0.25	0.00	0.00	0.25
KC Metro Base - SB off ramp	510	0.00	0.00	0.00	0.00
KC Metro Base - SB on ramp	500	0.00	0.00	0.00	0.00
NE 175th - NB off ramp	14,490	1.75	1.75	0.00	3.50
NE 175th - NB on ramp	8,640	0.50	0.75	0.00	1.25
NE 175th Street between ramps		7.00	3.50	0.00	10.50
NE 175th - SB off ramp	6,670	1.50	0.50	0.00	2.00
NE 175th - SB on ramp	9,250	0.75	0.00	0.00	0.75
Segment B					
SR 104/NE 205th St NB off ramp (eastbound)	4,080	1.25	0.25	0.00	1.50
SR 104/NE 205th St NB off ramp (westbound)	7,550	0.75	0.00	0.00	0.75
SR 104/NE 205th St NB on ramp (eastbound)	8,070	0.50	1.00	0.00	1.50
SR 104/NE 205th St NB on ramp (westbound)	5,500	1.25	0.25	0.00	1.50
NB CD SR 104/NE 205th to 236th Street SW	13,950	8.00	3.75	0.00	11.75
236th St SW - NB off ramp	4,650	1.25	0.00	0.00	1.25
MLT Freeway Station - NB off ramp		0.00	0.00	0.00	0.00
MLT Freeway Station - NB on ramp		0.00	0.00	0.00	0.00
MLT Freeway Station - SB off ramp		0.00	0.25	0.00	0.25
MLT Freeway Station - SB on ramp		0.00	0.00	0.00	0.00
236th St SW between ramps		0.50	0.50	0.00	1.00
236th St SW - SB on ramp	4,190	1.50	1.00	0.00	2.50
SR 104 - SB CD 236th St SW to SR 104/NE 205th St	13,860	2.00	0.25	0.00	2.25
236th SB Slip ramp to SR 104/NE 205th St	2,750	0.00	0.00	0.00	0.00
SR 104/NE 205th St SB off ramp (westbound right)	16,610	0.25	0.00	0.00	0.25
SR 104/NE 205th St SB on ramp (westbound GP traffic)	3,450	2.25	0.50	0.00	2.75
SR 104/NE 205th St SB on ramp (HOV traffic - both directions)	1,160	0.00	0.00	0.00	0.00
SR 104/NE 205th St SB on ramp (eastbound GP traffic)	7,370	2.25	1.50	0.00	3.75
220th St SW - NB off ramp	8,550	0.25	0.25	0.00	0.50
220th St SW - NB on ramp	15,110	2.25	0.75	0.00	3.00
220th St SW between ramps	-	8.00	1.50	0.00	9.50
220th St SW - SB off ramp	12,610	4.50	1.25	0.00	5.75
220th St SW - SB on ramp	8,550	1.75	0.50	0.00	2.25
Segment C					
Lynnwood TC Direct Access - Ramp	4,140	1.50	0.50	0.00	2.00
Lynnwood TC Direct Access - NB off ramp	1,450	0.25	0.25	0.00	0.50
Lynnwood TC Direct Access - NB on ramp	950	0.00	0.00	0.00	0.00
Lynnwood TC Direct Access - SB off ramp	1,330	0.00	0.00	0.00	0.00
Lynnwood TC Direct Access - SB on ramp	1,360	0.00	0.00	0.00	0.00
44th Ave W - NB off ramp	12,540	4.00	0.50	0.00	4.50
44th Ave W - SB on ramp	11,700	1.75	1.00	0.00	2.75
44th Ave W between ramps		7.00	3.00	0.00	10.00

Table 4-35. I-5 Ramp Accident Data

Interchange Areas and Ramps	ADT	2010-2013 Accident Data			Yearly Accident Average
		PDO	INJ	FAT	
Poplar Way - NB off ramp	7,680	1.00	0.75	0.00	1.75
Poplar Way - NB on ramp	17,280	3.75	0.25	0.00	4.00
196th St SW - NB on ramp	5,810	1.50	0.25	0.00	1.75
196th St SW - SB off ramp (eastbound)	7,070	2.50	0.75	0.00	3.25
196th St SW - SB off ramp (westbound)	15,730	5.00	0.75	0.00	5.75
196th St SW - SB on ramp	8,870	2.50	0.50	0.00	3.00

4.8.2 Local Intersections

Accident rates were calculated for the study intersections as the number of accidents per million entering vehicles (acc/MEV). Tables 4-35 through 4-38 list the intersection locations for each station area under consideration, indicating intersection traffic volumes, accident averages, and accident rates for the intersections. These are also shown on the map in Figure 4-46. Accident data for local intersections were compiled for city streets, state routes (SR 99, SR 522, SR 523, SR 524), and I-5 ramps.

The City of Seattle uses a system in which a CAL is identified for future safety improvements. In evaluating the accident rates, a signalized intersection in Seattle is considered a CAL with more than 10 collisions per year, on average, and an unsignalized intersection is considered a CAL with 5 collisions per year, on average.

For other jurisdictions, an intersection is considered a CAL where the accident rate is at or exceeds 1.0 acc/MEV.

Accident types observed are noted for each CAL listed among the study intersections.

Segment A: Seattle to Shoreline

Accident data and rates for Seattle and Shoreline intersections are presented in Tables 4-36 and 4-37, respectively. Any intersections that are identified as CAL, either along the guideway or near the proposed light rail stations, are discussed below.

Table 4-36. Segment A, City of Seattle Intersection Accident Data

Intersection	PM Peak Hour Entering Volume	ADT	2010-2013, 4 Year Average			Yearly Accident Average	Accident Rate (acc/MEV)
			PDO	INJ	FAT		
N Northgate Way at 1st Avenue NE*	4375	43,750	2.50	1.25	0	3.75	0.23
Northgate Way between ramps	3060	30,600	10.25	6.25	0	16.50	1.48
NE 103rd Street at 1st Avenue NE at I-5 Express Lanes On- Off-Ramps*	2085	20,850	5.00	2.75	0	7.75	1.02
N 117th Street at 1st Avenue NE	653	6,530	0.25	0.50	0	0.75	0.31
NE 125th Street at 15th Avenue NE	3114	31,140	8.25	4.25	0	12.50	1.10
NE 127th Street at 8th Ave NE/Roosevelt Way NE	1565	15,650	1.75	1.00	0	2.75	0.48
Roosevelt Way NE at 10th Avenue NE	1664	16,640	0.00	0.00	0	0.00	0.00
NE 125th Street at 5th Avenue NE	894	8,940	0.75	1.25	0	2.00	0.61
NE 127th Street at 5th Avenue NE	736	7,360	0.25	0.00	0	0.25	0.09
I-5 Northbound Off-Ramp at 5th Avenue NE *	1271	12,710	2.75	1.75	0	4.50	0.97
NE 130th Street at 5th Ave NE/Roosevelt Wy NE	2611	26,110	0.25	3.50	0	8.25	0.87
NE 130th Street at I-5 Southbound On-Ramp *	2061	20,610	1.25	0.50	0	1.75	0.23
NE 130th Street at 3rd Avenue NE	2061	20,610	0.50	0.00	0	1.00	0.13
NE 130th Street at 1st Avenue NE	2418	24,180	1.50	2.25	0	3.75	0.42
N 130th Street at Corliss Avenue N	1591	15,910	0.00	0.00	0	0.00	0.00
N 130th Street at Meridian Avenue N	1887	18,870	0.75	2.50	0	3.25	0.47
N 130th Street at Aurora Avenue N*	4198	41,980	8.00	7.00	0	15.00	0.98
N 145th Street at Aurora Avenue N*	4245	42,450	9.00	5.50	0.25	14.75	0.95
N 145th Street at Meridian Avenue N*	2358	23,580	5.75	6.00	0	11.75	1.37
N 145th Street at Corliss Avenue N*	1915	19,150	0.00	0.25	0	0.25	0.04
NE 145th Street at 1st Avenue NE*	2519	25,190	3.00	2.75	0	5.75	0.63
NE 145th Street at 3rd Avenue NE*	2243	22,430	1.00	0.00	0	1.00	0.12
NE 145th Street at 4th Avenue NE*	2252	22,520	0.25	0.50	0	0.75	0.09
NE 145th Street at I-5 Southbound Ramps*	2911	29,110	8.25	5.50	0	13.75	1.29
NE 145th Street at 5th Avenue NE*	3700	37,000	9.00	5.25	0	14.25	1.06
5th Avenue NE at I-5 Northbound Off-Ramp *	1374	13,740	3.75	1.75	0	5.50	1.10
5th Avenue NE at I-5 Northbound Transit-Only Off-Ramp/Northbound On-Ramp*	1331	13,310	3.00	2.75	0	5.75	1.18
5th Avenue NE at North Jackson Park-and-Ride	716	7,160	0.00	0.00	0	0.00	0.00
NE 145th Street at 6th Avenue NE*	2408	24,080	1.25	0.25	0	1.50	0.17
NE 145th Street at 8th Avenue NE*	2457	24,570	1.25	0.75	0	2.00	0.22
NE 145th Street at 10th Avenue NE*	2405	24,050	0.00	0.00	0	0.00	0.00
NE 145th Street at 12th Avenue NE*	2388	23,880	1.00	0.50	0	1.50	0.17
NE 145th Street at 15th Avenue NE*	3645	36,450	10.75	4.25	0	15.00	1.13

* I-5 ramp and SR facility accident data included in intersection accident summary

Table 4-37. Segment A, City of Shoreline Intersection Accident Data

Intersection	PM Peak Hour Entering Volume	ADT	2010-2013, 4 Year Average			Yearly Accident Average	Accident Rate (acc/MEV)
			PDO	INJ	FAT		
N 155th Street at Aurora Avenue N*	3631	36,310	7.50	4.50	0	12.00	0.91
N 155th Street at Ashworth Avenue N	1221	12,210	0.00	0.25	0	0.25	0.06
N 155th Street at Meridian Avenue N	1804	18,040	2.75	1.25	0	4.00	0.61
N 155th Street at Corliss Avenue N	1074	10,740	0.00	0.00	0	0.00	0.00
NE 155th Street at 1st Avenue NE	1194	11,940	1.00	0.50	0	1.50	0.34
NE 155th Street at 3rd Avenue NE	1037	10,370	0.25	0.50	0	0.75	0.20
NE 155th Street at 4th Avenue NE	997	9,970	0.00	0.00	0	0.00	0.00
NE 155th Street at 5th Avenue NE	1493	14,930	2.25	1.00	0	3.25	0.60
NE 155th Street at 6th Avenue NE	849	8,490	0.00	0.00	0	0.00	0.00
NE 155th Street at 8th Avenue NE	946	9,460	0.50	0.00	0	0.50	0.14
NE 155th Street at 10th Avenue NE	864	8,640	0.25	0.50	0	0.75	0.24
NE 155th Street at 12th Avenue NE	800	8,000	0.50	0.75	0	1.25	0.43
NE 155th Street at 15th Avenue NE	1974	19,740	1.50	2.00	0	3.50	0.49
NE 161st Street at 1st Avenue NE	-	-	0.00	0.00	0	0.00	N/A
NE 165th Street at 5th Avenue NE	764	7,640	0.50	0.25	0	0.75	0.27
NE 159th Street at 1st Avenue NE	-	-	0.00	0.00	0	0.00	N/A
NE 174th Street at 1st Avenue NE	-	-	0.00	0.00	0	0.00	N/A
NE 175th Street at 5th Avenue NE	1797	17,970	3.25	1.50	0	4.75	0.72
NE 175th Street at I-5 Northbound Ramps *	2560	25,600	2.25	2.50	0	4.75	0.51
NE 175th Street at I-5 Southbound Ramps *	2634	26,340	2.25	0.50	0	2.75	0.29
N 175th Street at Meridian Avenue N	2960	29,600	7.00	2.75	0	9.75	0.90
N 175th Street at Aurora Avenue N*	3172	31,720	7.00	3.00	0	10.00	0.86
NE 180th Street at 15th Avenue NE	1737	17,370	2.00	0.75	0	2.75	0.43
NE 180th Street at 10th Avenue NE	596	5,960	1.00	0.00	0	1.00	0.46
NE 180th Street at 5th Avenue NE	409	4,090	0.75	0.00	0	0.75	0.50
N 180th Street at Meridian Avenue N	1082	10,820	0.75	0.50	0	1.25	0.32
NE Perkins Way at 15th Avenue NE	1399	13,990	2.25	0.50	0	2.75	0.54
N 185th Street at Aurora Avenue N*	3413	34,130	6.00	3.25	0	9.25	0.74
N 185th Street at Meridian Avenue N	2037	20,370	3.75	2.00	0	5.75	0.77
N 185th Street at Corliss Avenue N	1074	10,740	0.50	0.00	0	0.50	0.13
NE 185th Street at 1st Avenue NE	2231	22,310	1.00	0.25	0	1.25	0.15
NE 185th Street at 2nd Avenue NE	1032	10,320	0.00	0.00	0	0.00	0.00
NE 185th Street at 3rd Avenue NE	1020	10,200	0.00	0.00	0	0.00	0.00
NE 185th Street at 5th Avenue NE	1082	10,820	2.00	0.50	0	2.50	0.63
NE 185th street at 7th Avenue NE	1154	11,540	0.00	0.00	0	0.00	0.00
NE 185th Street at 8th Avenue NE	835	8,350	0.25	0.25	0	0.50	0.16
NE 185th Street at 9th Avenue NE	764	7,640	0.00	0.00	0	0.00	0.00

* I-5 ramp and SR facility accident data included in intersection accident summary

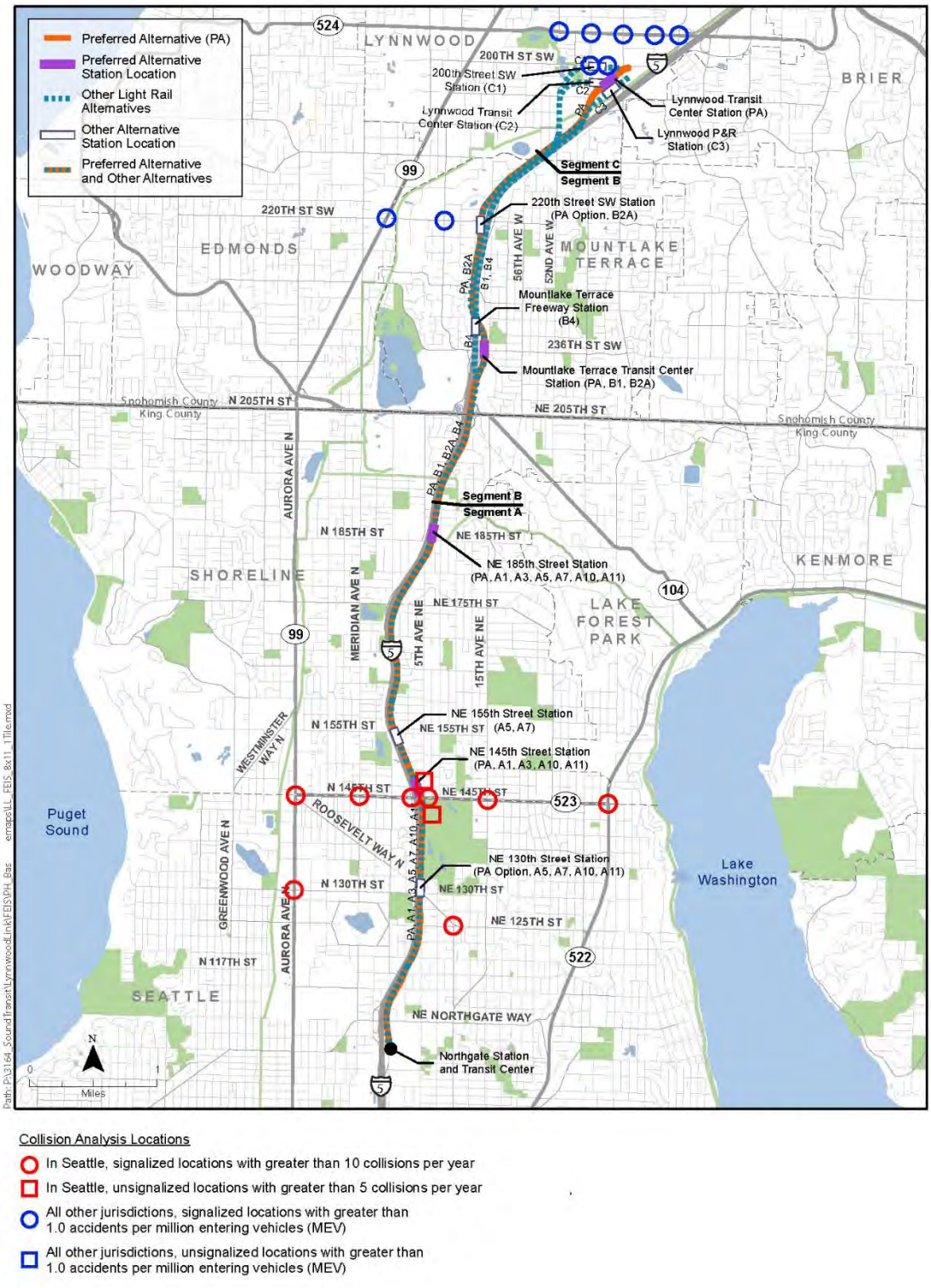


Figure 4-48. Existing Collision Analysis Locations in Study Area

Northgate Station Area

All light rail alternatives will connect to the Northgate Station and elevated guideway, and extend north by crossing Northgate Way and following 1st Avenue NE to North 117th Street and to 5th Avenue NE at NE 125th Street. Accident data for the Northgate study intersections are summarized in Table 4-35.

According to City of Seattle data, one location would be classified as CAL in the Northgate Station area:

- Northgate Way between ramps: 16.5 average accidents/year, 1.48 acc/MEV; the safety issue at this location appears to be congestion with predominantly rear-end type accidents.

Bicycle collisions were recorded on North Northgate Way between ramps (one collision) and on North 117th Street at 1st Avenue NE (one collision).

NE 130th Street/I-5 Area

According to City of Seattle data, one location would classify as CAL in the station study area:

- NE 130th Street at Aurora Avenue North: 15 average accidents/year, 0.98 acc/MEV; the safety issue at this location appears to be congestion with high rear-end, right-angle and left-turn accidents plus pedestrian and bicycle accidents.

The I-5 northbound off-ramp to NE 130th Street at 5th Avenue NE is a stop-controlled ramp where right-angle and rear-end collisions are prevalent. This location had previously been identified as a CAL, but currently is not one.

Pedestrian collisions were recorded at NE 125th Street and 15th Avenue NE (one collision) and at NE 130th Street and Aurora Avenue North (four collisions).

Bicycle collisions were recorded at NE 127th Street/8th Avenue NE/Roosevelt Way NE (one collision), NE 130th Street at 1st Avenue NE (one collision) and NE 130th Street and Aurora Avenue North (one collision).

NE 145th Street/I-5 Area

The NE 145th Street Station area lies just north of the Seattle-Shoreline boundary. Many of the study intersections lie along SR 523, also known as North/NE 145th Street. Accident data were collected from WSDOT for city intersections, I-5 ramps, and SR 523.

According to City of Seattle data, six signalized intersections would be classified as CALs for the NE 145th Street Station study area:

- North 145th Street at Aurora Avenue North: 14.75 average accidents/year, 0.95 acc/MEV; safety issue appears to be congestion with predominantly

rear-end, right-angle and left-turn type accidents plus pedestrian and bicycle accidents.

- North 145th Street at Meridian Avenue North: 11.75 average accidents/year, 1.37 acc/MEV; safety issue appears to be congestion with predominantly rear-end, left-turn and right-angle accidents with pedestrian accidents. The intersection has existing two-phase signal without left-turn pockets.
- NE 145th Street at I-5 Southbound ramps: 13.75 average accidents/year, 1.29 acc/MEV; safety issue appears to be congestion with predominantly rear-end accidents.
- NE 145th Street at 5th Avenue NE: 14.25 average accidents/year, 1.06 acc/MEV; safety issue appears to be congestion with predominantly left-turn, rear-end and right-angle accidents with pedestrian accidents.
- NE 145th Street at 15th Avenue NE: 15 average accidents/year, 1.13 acc/MEV; safety issue appears to be congestion with rear-end and right-angle accidents and pedestrian accidents.
- NE 145th Street at Bothell Way NE: 13 average accidents/year, 0.81 acc/MEV; safety issue appears to be congestion with rear-end, sideswipe, right-angle and pedestrian accidents.

Two stop-controlled ramp intersections could also be considered CALs near the NE 145th Street Station:

- I-5 northbound off-ramp to NE 145th Street at 5th Avenue NE: 5.5 average accidents/year, 1.10 acc/MEV; safety issue appears to be congestion with predominantly rear-end and right-angle accidents at the ramp terminus. Fifth Avenue NE traffic stops for the ramp traffic.
- I-5 northbound transit off-ramp and general purpose on-ramp at 5th Avenue NE: 5.75 average accidents/year, 1.18 acc/MEV; safety issue appears to be left-turn and rear-end accidents, with high turning traffic to on ramp that must yield to through traffic.

Factors explaining why these intersections exhibit a higher accident rate were not evaluated; accident experiences at each intersection are briefly summarized below. The North 145th Street/Aurora Avenue North intersection experiences a high number of rear-end and right-angle accidents. The North 145th Street at Meridian Avenue North intersection experiences a high number of rear-end, left-turn, and right-angle accidents. The NE 145th Street at I-5 southbound ramps intersection experiences a high number of left-turn and right-angle accidents. The NE 145th Street at 5th Avenue NE intersection experiences a high number of rear-end, left-turn, right-angle, and sideswipe accidents. The NE 145th Street at 15th Avenue NE intersection experiences a high number of rear-end and right-angle accidents. The NE 145th Street at Bothell Way intersection experiences a high number of rear-end and right-angle accidents.

Two pedestrian accidents and one fatal pedestrian accident occurred at North 145th Street and Aurora Avenue North. Pedestrian accidents were also recorded at NE 145th Street at 15th Avenue NE (two), and NE 145th Street at Bothell Way (three). Bicycle accidents occurred at North 145th Street and Aurora Avenue North (one), and NE 145th Street at 1st Avenue NE (one).

NE 155th Street/I-5 Area

Pedestrian accidents occurred at North 155th Street and Aurora Avenue North (one), North 155th Street and Meridian Avenue North (three), and NE 155th Street at 10th Avenue NE (one).

One bicycle accident occurred at North 155th Street and Aurora Avenue North.

NE 185th Street/I-5 Area

Bicycle accidents occurred at North 175th Street at Meridian Avenue North (one), NE 175th Street at I-5 northbound ramps (one), and North 185th Street at Meridian Avenue North (one).

Segment B: Shoreline to Mountlake Terrace

Accident data and rates for Mountlake Terrace intersections are presented in Table 4-38. Any intersections that are identified as CAL, either along the light rail guideway or near the proposed light rail stations, are discussed below.

Table 4-38. Segment B, City of Mountlake Terrace Intersection Accident Data

Intersection	PM Peak Hour Entering Volume	ADT	2010-2013, 4 Year Average			Yearly Accident Average	Accident Rate (acc/MEV)
			PDO	INJ	FAT		
222nd Street SW at 64th Avenue W	249	2,490	0.00	0.00	0	0.00	0.00
220th Street SW at SR 99*	4757	47,570	19.50	10.00	0	29.50	1.70
220th Street SW at 70th Avenue W	2177	21,770	3.25	2.25	0	5.50	0.69
220th Street SW at 66th Avenue W	3266	32,660	9.00	3.25	0	12.25	1.03
220th Street SW at 64th Avenue W	3265	32,650	3.75	3.50	0	7.25	0.61
220th Street SW at I-5 Southbound Ramps *	3238	32,380	6.25	2.00	0	8.25	0.70
220th Street SW at I-5 Northbound Ramps *	2662	26,620	2.50	1.00	0	3.50	0.36
220th Street SW at 58th Avenue W	1216	12,160	2.00	0.75	0	2.75	0.62
220th Street SW at 56th Avenue W	1312	13,120	2.50	1.00	0	3.50	0.73
220th Street SW at 55th Avenue W	887	8,870	0.00	0.00	0	0.00	0.00
220th Street SW at 54th Avenue W	896	8,960	0.25	0.50	0	0.75	0.23
220th Street SW at 53rd Avenue W	851	8,510	0.00	0.00	0	0.00	0.00
220th Street SW at 52nd Avenue W	860	8,600	0.75	0.50	0	1.25	0.40
236th Street SW (Lakeview Dr) at 64th Avenue W	736	7,360	0.50	0.25	0	0.75	0.28
236th Street SW (Lakeview Dr) at I-5 Southbound On-Ramp *	1056	10,560	1.50	1.00	0	2.50	0.65
236th Street SW at I-5 Northbound Off-Ramp and Mountlake Terrace Park-and-Ride *	1547	15,470	1.50	0.00	0	1.50	0.27
236th Street SW at 58th Avenue W	1180	11,800	2.75	0.50	0	3.25	0.75

* I-5 ramp and SR facility accident data included in intersection accident summary

Mountlake Terrace Transit Center Area

In Mountlake Terrace near the Mountlake Terrace Transit Center, there are no CALs at any of the study intersections.

No pedestrian or bicycle accidents occurred at study intersections.

220th Street SW/I-5 Area

Two study intersections meet CAL criteria near the proposed 220th Street SW Station location:

- 220th Street SW at SR 99: 29.5 average accidents/year, 1.7 acc/MEV; safety issue appears to be congestion with predominantly rear-end and right-angle accidents where 6 pedestrian and one bicycle accidents occurred.
- 220th Street SW at 66th Avenue West: 12.25 average accidents/year, 1.03 acc/MEV; safety issue appears to be congestion with predominantly left-turn, rear-end and right-angle accidents.

Factors explaining why these intersections exhibit a higher accident rate were not evaluated. 220th Street SW at SR 99 experienced a high number of rear-end, sideswipe, and right-angle accidents, and 220th Street SW at 66th Avenue West experienced a high number of rear-end and left-turn accidents.

Six pedestrian collisions and one bicycle collision were reported at 220th Street SW at SR 99. One pedestrian collision was reported at 220th Street SW at 52nd Avenue West.

Segment C: Mountlake Terrace to Lynnwood

Accident data and rates for Lynnwood intersections are presented in Table 4-39. Any intersections that are identified as CALs, either along the proposed light rail guideway or near the light rail stations, are discussed below.

Table 4-39. Segment C, City of Lynnwood Intersection Accident Data

Intersection	PM Peak Hour Entering Volume	ADT	2010-2013, 4 Year Average			Yearly Accident Average	Accident Rate (acc/MEV)
			PDO	INJ	FAT		
200th Street SW at 50th Avenue W	1783	17,830	4.75	1.25	0	6.00	0.92
200th Street SW at 48th Avenue W	1936	19,360	9.50	5.50	0	15.00	2.12
200th Street SW at 46th Avenue W	1879	18,790	8.75	2.50	0	11.25	1.64
200th Street SW at 44th Avenue W	4011	40,110	3.25	0.75	0	4.00	0.27
204th Street SW at 52nd Avenue W	808	8,080	0.00	0.00	0	0.00	0.00
208th Street SW at 52nd Avenue W	1050	10,500	1.00	0.25	0	1.25	0.33
212th Street SW at 52nd Avenue W	1970	19,700	2.75	1.00	0	3.50	0.49
I-5 Direct Access at 46th Avenue W *	779	7,790	1.50	0.50	0	2.00	0.70
I-5 Southbound On-Ramp at 44th Avenue W*	3066	30,660	1.75	1.00	0	2.75	0.25
204th Street SW at 44th Avenue W, 44th between ramps*	2546	25,460	7.00	3.00	0	10.00	1.08
I-5 Northbound Off-Ramp at 44th Avenue W *	2917	29,170	4.00	0.50	0	4.50	0.42
Alderwood Mall Blvd at 40th Avenue W	1630	16,300	4.00	0.50	0	4.50	0.76
196th Street SW at 52nd Avenue W	2655	26,550	6.50	3.50	0	10.00	1.03
196th Street SW at 50th Avenue W	2704	27,040	5.50	0.50	0	6.00	0.61
196th Street SW at 48th Avenue W	3081	30,810	9.25	5.75	0	15.00	1.33
196th Street SW at 44th Avenue W	4253	42,530	14.25	4.00	0	18.25	1.18
196th Street SW at 40th Avenue W	3308	33,080	14.00	5.00	0	19.00	1.57
196th Street SW at 36th Avenue W*	4120	41,200	27.00	8.50	0	35.50	2.36
196th Street SW at Poplar Way*	3390	33,900	5.25	2.00	0	7.25	0.59
198th Street SW at 44th Avenue W	2050	20,500	0.50	0.00	0	0.50	0.07

* I-5 ramp and SR facility accident data included in intersection accident summary

Lynnwood Transit Center Area

Eight study intersections meet CAL criteria near the Lynnwood Transit Center:

- 204th Street SW at 44th Avenue West (between ramps): 10 average accidents/year, 1.08 acc/MEV; safety issue appears to be congestion with predominantly rear-end accidents.
- 200th Street SW at 48th Avenue West: 15 average accidents/year, 2.12 acc/MEV; safety issue appears to be congestion with predominantly rear-end and right-angle accidents with pedestrian accidents.

- 200th Street SW at 46th Avenue West: 11.25 average accidents/year, 1.64 acc/MEV; safety issue appears to be congestion with predominantly rear-end, right-angle, sideswipe and left-turn accidents.
- 196th Street SW at 52nd Avenue West: 10 average accidents/year, 1.03 acc/MEV; safety issue appears to be congestion with predominantly rear-end, right-angle and left-turn accidents.
- 196th Street SW at 48th Avenue West: 15 average accidents/year, 1.33 acc/MEV; safety issue appears to be congestion with predominantly left-turn, rear-end and right-angle accidents plus pedestrian and bicycle accidents.
- 196th Street SW at 44th Avenue West: 18.25 average accidents/year, 1.18 acc/MEV; safety issue appears to be congestion with predominantly rear-end, right-angle, sideswipe and left-turn accidents plus pedestrian and bicycle accidents.
- 196th Street SW at 40th Avenue West: 19 average accidents/year, 1.57 acc/MEV; safety issue appears to be congestion with predominantly rear-end and left-turn accidents plus pedestrian and bicycle accidents.
- 196th Street SW at 36th Avenue West: 35.5 average accidents/year, 2.36 acc/MEV; safety issue appears to be congestion with predominantly rear-end, left-turn and sideswipe accidents plus pedestrian and bicycle accidents.

Factors explaining why these intersections exhibit a higher accident rate were not evaluated, but 200th Street SW at 48th Avenue West experienced a high number of rear-end accidents with a modest amount of traffic through the intersection. The intersection of 200th Street SW at 46th Avenue West experienced a high number of rear-end and right-angle accidents. 196th Street SW at 48th Avenue West experienced a high number of left-turn, rear-end, and right-angle accidents; 196th Street SW at 44th Avenue West experienced a high number of rear-end, right-angle, and sideswipe accidents; 196th Street SW at 40th Avenue West experienced a high number of rear-end and left-turn accidents; and 196th Street SW at 36th Avenue West experienced a high number of rear-end and sideswipe accidents.

Pedestrian accidents occurred at 200th Street SW at 48th Avenue West (three), 196th Street SW at 48th Avenue West (two), 196th Street SW at 44th Avenue West (two), 196th Street SW at 40th Avenue West (one), and 196th Street SW at 36th Avenue West (one).

Bicycle accidents occurred at 200th Street SW at 50th Avenue West (one), 196th Street SW at 48th Avenue West (one), 196th Street SW at 44th Avenue West (one), 196th Street SW at 40th Avenue West (one), and 196th Street SW at 36th Avenue West (one).

5 LONG-TERM IMPACTS

Long-term impacts for the future forecast year of 2035 are discussed in this chapter for the light rail alternatives (including the Preferred Alternative) in comparison with the No Build Alternative. Appendix B lists improvements to the transportation system assumed to be in place under the No Build Alternative.

5.1 Regional Context and Travel Patterns

This chapter also discusses travel in the region and project corridor for a future year (forecast year 2035) and how the project is expected to affect that travel. Key observations and findings related to these travel projections include the following:

- The light rail alternatives, including the Preferred Alternative, would reduce overall regional VMT by approximately 300,000 miles per day and approximately 25,000 daily hours of travel.
- Screenline traffic volumes and v/c ratios would generally be reduced with the light rail alternatives.
- PM peak period person trips through the corridor would increase from 134,000 to 138,000 with the light rail alternatives.

5.1.1 Travel Demand and Patterns

Miles Driven and Hours Spent in Travel

Table 5-1 shows the VMT and VHT for the Puget Sound region for the No Build Alternative, the Preferred Alternative and other light rail alternative scenarios for forecast year 2035. By 2035, ridership on the light rail alternatives, including the Preferred Alternative, is estimated to help reduce automobile travel in the region by approximately 300,000 miles per day compared to the No Build Alternative (a reduction of approximately 0.3 percent), and about 25,000 fewer hours per day would be spent traveling by automobile (a reduction of approximately 0.8 percent). A significant portion of this reduction (more than 65 percent) is expected to occur within the project corridor as new riders shift from automobile to transit. The change in automobile travel would be very similar among the light rail alternatives; therefore, the differences among the alternatives were too small to be accurately modeled. Differences in transit ridership between light rail alternatives are discussed in Section 5.2, Transit.

Table 5-1. Daily Vehicle Miles of Travel and Vehicle Hours of Travel for Forecast Year 2035

Alternative	VMT		VHT	
	4-County Region	Project Corridor	4-County Region	Project Corridor
No Build Alternative	100,600,000	20,320,000	3,140,000	688,000
Preferred Alternative and Other Light Rail Alternatives	100,310,000 to 100,330,000	20,120,000 to 20,140,000	3,115,000 to 3,117,000	671,000 to 672,500

Vehicles Traveling through the Corridor

Tables 5-2 through 5-6 show AM peak hour, PM peak hour, daily traffic volumes, and peak hour v/c ratios at four selected screenline locations, respectively. The improved transit service provided by the Preferred Alternative and other light rail alternatives would attract more trips to transit, and hence slightly reduce vehicle volumes and congestion in the corridor. Screenline volumes are projected to be reduced by up to 5,400 vehicles per day. The v/c ratios indicate that southbound travel in the AM peak hour and northbound travel in the PM peak hour would be at capacity or over capacity in the corridor if the Lynnwood Link Extension was built or not, although these ratios would be slightly reduced with the light rail alternatives. This reflects, in part, the additional HOV lane capacity made available for other vehicles with the removal of applicable bus routes that currently operate in the I-5 HOV lanes.

Table 5-2. AM Peak Hour Screenline Vehicle Volumes for Forecast Year 2035

	No Build Alternative		Preferred Alternative and Other Light Rail Alternatives	
Screenline Location	**Northbound**	**Southbound**	**Northbound**	**Southbound**
1: North of Northgate Way NE	8,600	19,300	8,400	18,800
2: South of North 205th Street	7,300	14,800	7,200	14,400
3: South of 196th Street SW	6,500	11,100	6,400	10,900
	Westbound	**Eastbound**	**Westbound**	**Eastbound**
4: NE 145th Street	1,200	500	1,200	400

Table 5-3. AM Peak Hour Screenline Volume-to-Capacity Ratios for Forecast Year 2035

	No Build Alternative		Preferred Alternative and Other Light Rail Alternatives	
Screenline Location	**Northbound**	**Southbound**	**Northbound**	**Southbound**
1: North of Northgate Way NE	0.47	1.03	0.45	1.00
2: South of North 205th Street	0.44	0.98	0.43	0.95
3: South of 196th Street SW	0.55	0.95	0.54	0.94
	Westbound	**Eastbound**	**Westbound**	**Eastbound**
4: NE 145th Street	0.74	0.29	0.76	0.28

Table 5-4. PM Peak Hour Screenline Vehicle Volumes for Forecast Year 2035

	No Build Alternative		Preferred Alternative and Other Light Rail Alternatives	
Screenline Location	**Northbound**	**Southbound**	**Northbound**	**Southbound**
1: North of Northgate Way NE	21,000	13,300	20,500	13,100
2: South of North 205th Street	16,400	11,200	15,900	11,000
3: South of 196th Street SW	12,200	8,500	11,900	8,500
	Westbound	**Eastbound**	**Westbound**	**Eastbound**
4: NE 145th Street	1,000	1,100	1,000	1,000

Table 5-5. PM Peak Hour Screenline Volume-to-Capacity Ratios for Forecast Year 2035

	No Build Alternative		Preferred Alternative and Other Light Rail Alternatives	
Screenline Location	**Northbound**	**Southbound**	**Northbound**	**Southbound**
1: North of Northgate Way NE	1.13	0.71	1.09	0.70
2: South of North 205th Street	0.98	0.74	0.94	0.72
3: South of 196th Street SW	1.04	0.73	1.03	0.73
	Westbound	**Eastbound**	**Westbound**	**Eastbound**
4: NE 145th Street	0.60	0.65	0.59	0.63

Table 5-6. Daily Screenline Vehicle Volumes for Forecast Year 2035

	No Build Alternative		Preferred Alternative and Other Light Rail Alternatives	
Screenline Location	**Northbound**	**Southbound**	**Northbound**	**Southbound**
1: North of Northgate Way NE	218,600	217,400	213,200	212,600
2: South of North 205th Street	175,400	174,300	171,400	170,500
3: South of 196th Street SW	135,500	133,000	133,800	131,500
	Westbound	**Eastbound**	**Westbound**	**Eastbound**
4: NE 145th Street	16,200	13,800	16,300	13,800

People Traveling through the Corridor

Table 5-7 shows person throughput in the corridor at two screenline locations during the PM peak period for the No Build Alternative, the Preferred Alternative and other light rail alternatives for forecast year 2035. The person throughput includes trips on I-5, SR 99, and other north-south arterials, as well as transit trips on those facilities. Compared with the No Build Alternative, the Preferred Alternative and other light rail alternatives would result in more people moving through the corridor (person throughput) during the peak periods, as measured by screenlines across the corridor. The evening peak (northbound) direction would have the largest increase in total trips by all modes. The total person throughput in both directions would increase by approximately 3 percent north of Northgate Way and by 4 percent south of North

205th Street. On I-5 only, up to a 10 percent increase in person throughput is expected with the light rail alternatives.

Table 5-7. Person Throughput—Forecast Year 2035 PM Peak Period

Screenline Location	Alternative	Northbound	Southbound	Total
North of Northgate Way NE	No Build	86,000	48,000	134,000
	Preferred Alternative and Other Light Rail Alternatives	89,000	49,000	138,000
South of North 205th Street	No Build	66,000	39,000	105,000
	Preferred Alternative and Other Light Rail Alternatives	69,000	40,000	109,000

Sources: Sound Transit Ridership Model and PSRC Regional Model: WSDOT Project Version (2012)

5.2 Transit

This section discusses future transit service, operations, and expected ridership in the project corridor, and the project's potential effects on these elements. Key observations and findings include the following:

- By 2035, between 63,000 and 74,000 daily riders would use the proposed light rail extension, and overall transit usage from Snohomish County to King County would increase by as much as 55 percent under the light rail alternatives. Up to 22,000 new daily transit trips would be made using the regional system (bus and rail) as a result of the project.
- Transit travel times to and from all regional destinations would be shorter with the light rail alternatives, with AM peak trips from Lynnwood to Northgate and downtown Seattle 10 to 16 minutes faster than with the No Build Alternative.
- Transit passenger LOS between the project area and other regional destinations, including service frequency, hours of service, passenger load, and reliability, would improve significantly with the light rail alternatives.
- I-5 bus routes would be restructured to remove duplication of service with light rail, and local transit service could be restructured to reduce duplication and to provide improved or new connections to light rail under the light rail alternatives.

5.2.1 Regional Transit

The ridership forecast shows that by 2035, under current assumptions, all Community Transit bus service to Seattle would be terminated and replaced with light rail; between 63,000 and 74,000 riders would use the Lynnwood Link Extension each day, and up to 22,000 new daily transit trips throughout the region would result

from the extension. Overall regional transit use (on both bus and rail) would increase by up to approximately 50 percent. There would be direct light rail service from Lynnwood to Northgate, the University District, Capitol Hill, downtown Seattle, south of downtown Seattle, the Rainier Valley, and Sea-Tac Airport. Light rail connections would be provided to Bellevue, Bel-Red, and Overlake. In addition, light rail in the I-5 corridor would substantially improve transit service reliability. The reliability in service would improve the rating to LOS A with light rail, compared to LOS C or worse with the No Build Alternative. The frequency of transit throughout the day would also improve because light rail would operate with midday headways of 5 to 10 minutes, compared to midday headways of 15 minutes on the most frequent bus routes. Light rail would also be available for more hours of the day and additional destinations, such as Shoreline and Mountlake Terrace Transit Center.

Transit Facility and Service Characteristics

With the Preferred Alternative and other light rail alternatives, a number of transit facility improvements would be implemented, including new light rail stations and new or expanded park-and-ride and bus layover facilities at some of the stations. Proposed park-and-ride facilities are discussed in Sections 5.4.1 (Traffic Volume Forecasts) and 5.7 (Parking). Other bus facility improvements are identified in the *Definition of Alternatives Technical Memorandum* (Sound Transit 2012).

Regional bus service could be restructured to reduce duplication with light rail and to provide improved or new connections to the Lynnwood Link Extension. King County Metro, Community Transit, and Sound Transit Express have identified potential conceptual plans for bus services to be integrated with the future Link light rail routes and stations. This information included scenarios for low and high service levels, covering a range of potential future revenue scenarios. Table 5-8 lists the assumed level of feeder bus service serving the proposed light rail stations in terms of estimated number of peak hour buses serving each station. The low revenue scenarios were assumed for the ridership forecasting effort, while the higher revenue scenarios were used to conservatively establish the size of the bus facilities at each station. However, actual changes to regional and local bus routes will require a public comment process and council or board approval to implement changes. This section describes some conceptual options for modifying regional bus operations. Additional information on the conceptual bus options is provided in the *Definition of Alternatives Technical Memorandum* (Sound Transit 2012) and the *Ridership Forecasting Technical Report* (Sound Transit 2012).

Table 5-8. Assumed Feeder Bus Service to Light Rail Stations

Station (Number of Feeder Routes)	Peak Bus Trips per Hour		Midday Bus Trips per Hour	
	Low Revenue Scenario	High Revenue Scenario	Low Revenue Scenario	High Revenue Scenario
NE 130th Street (3 routes)	18	18	12	12
NE 145th Street (4 routes)[a]	16	16	14	14
NE 155th Street (2 routes)	6	6	6	6
NE 185th Street (4 routes, including Community Transit *Swift*)	18	18	16	16
Mountlake Terrace (6 routes)	17	21	14	15
220th Street SW (2 routes)	2	8	1	5
Lynnwood Transit Center (16 routes)	49	62	23	28

[a] Some routes at this station would serve NE 130th Street instead if there were a station at NE 130th Street.

Ridership

Table 5-9 shows daily ridership on buses (for the 2011 base year and No Build Alternative for 2035) and on light rail (for five representative light rail scenarios in 2035) in the project corridor. The number of light rail project riders in any of the representative light rail scenarios would be more than double the bus riders in the No Build Alternative. Among the light rail scenarios, project riders would range from 63,000 to 74,000 daily riders. The total daily systemwide boardings for the No Build and light rail alternatives are also provided in Table 5-9. This number is calculated differently than the project rider, and includes all bus and rail transit boardings in the system.

Table 5-9. Daily Ridership for Forecast Year 2035

	Bus Riders		Light Rail Project Riders					
	Base Year (2011)	No Build Alternative	Light Rail Alternatives					
Number of Stations			4[a]	4	5	5	5	6
Station Locations			North 145th Street North 185th Street Mountlake Terrace Transit Center Lynnwood Transit Center	North 145th Street North 185th Street Mountlake Terrace Freeway Station Lynnwood Transit Center	North 130th Street North 145th Street North 185th Street Mountlake Terrace Transit Center Lynnwood Transit Center	North 130th Street North 155th Street North 185th Street Mountlake Terrace Transit Center Lynnwood Transit Center	North 145th Street North 185th Street Mountlake Terrace Transit Center 220th Street SW Lynnwood Transit Center	North 130th Street North 145th Street North 185th Street Mountlake Terrace Transit Center 220th Street SW Lynnwood Transit Center
Daily Project Corridor Light Rail Project Riders[b]	--	--	64,000-72,000	63,000-71,000	66,000-74,000	66,000-74,000	64,000 - 72,000	66,000-74,000
Daily Project Corridor I-5 Bus Riders	19,400	32,000-34,000	--	--	--	--	--	--
Total Systemwide Daily Transit Trips	384,000	601,000	623,000	622,000	622,000	622,000	623,000	622,000
Daily New Transit Riders	--	--	21,500	20,800	20,900	20,800	21,200	20,700
Daily Passenger Miles	3,171,000	5,607,000	5,966,000	5,955,000	5,951,000	5,950,000	5,957,000	5,942,000
Daily Systemwide Light Rail Boardings	25,400	249,000	283,000	283,000	283,000	283,000	283,000	283,000
Total Systemwide Daily Boardings	533,000	915,000	943,000	942,000	940,000	940,000	941,000	938,000

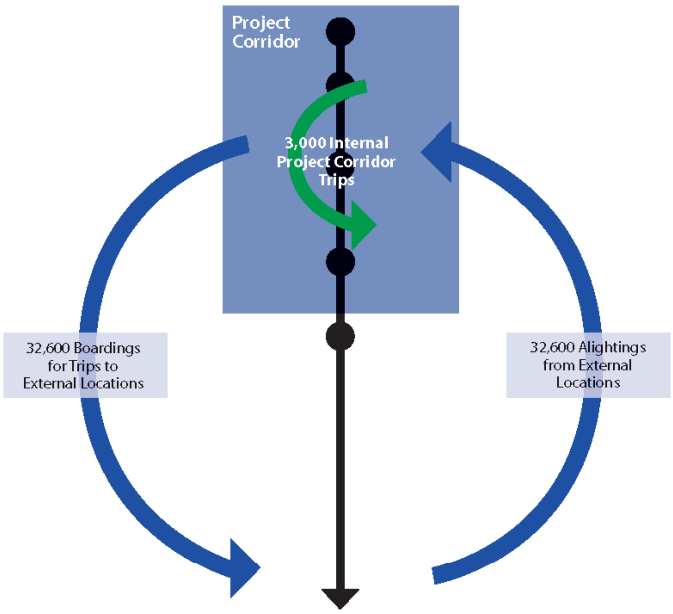
Source: Sound Transit Ridership Forecasting Model

a Preferred Alternative

b FTA defines project riders as the number of trips on any portion of the project within a given weekday; the range represents assumptions on future population and employment forecasts for station areas.

Average weekday boardings by station under different alternative station combinations were estimated for 2035. An example of how weekday boardings are calculated is shown in Figure 5-1. Figures 5-2a and 5-2b show station boardings for the Preferred Alternative and for other potential station combinations. The ridership for the Lynnwood Transit Center station would vary depending on the combination of stations to the south. For example, as shown in Figures 5-2a and 5-2b, with a station at the Mountlake Terrace Transit Center, and no station at 220th Street SW or NE 130th Street, there would be 17,900 daily boardings at the Lynnwood Transit Center Station. However, as also shown in Figures 5-2a and 5-2b, the addition of a station at NE 130th Street to this scenario would reduce ridership at the Lynnwood Transit Center Station to 17,600 boardings. The number of boardings shown in Figures 5-2a/5-2b through 5-5 is not directly comparable to the project riders shown in Table 5-9 because these numbers are calculated differently. The number of project riders is calculated as the number of inbound boardings and outbound alightings that occur within the project corridor (north of Northgate). For trips where a rider boards and alights within the project corridor, only one of these is counted in the project rider calculation. In contrast, the station boardings shown in Figures 5-2a/5-2b through 5-5 include only boardings. To generate a number that is roughly comparable to the project riders shown in Table 5-9, one would need to double the numbers shown in Figures 5-2a/5-2b through 5-5.

Example calculation of project riders for a four station alignment (145th Street, 185th Street, Mountlake Terrace Transit Center, Lynnwood Transit Center)



Total Daily Project Boardings = Boardings for Internal to External Trips (32,600) + Boardings for Internal to Internal Trips (3,000) = 35,600

Total Daily Project Corridor Riders = Boardings for Internal to External Trips (32,600) + Alightings for External to Internal Trips (32,600) + Boardings/Alightings for Internal to Internal Trips** (3,000) = 68,200

Total Daily Project Boardings and Alightings = Daily Project Boardings (35,600)* 2 = 71,200

or

Total Daily Project Boardings and Alightings = Daily Project Riders (68,200) + Daily Alightings for Internal to Internal Trips (3,000) = 71,200

** Each internal project corridor trip has one boarding and one alighting within the corridor.*

***There are 3,000 internal project corridor trips which produce 3,000 internal boardings and 3,000 internal alightings.*

Figure 5-1. Example Calculation of Project Riders

However, this would be slightly higher than the number of project riders, because it would reflect all boardings and alightings for those trips that occur at stations completely within the project corridor. Figures 5-3 through 5-5 show boardings for combinations of stations along the project corridor and indicate where boardings are gained and lost, depending on how ridership is attracted to a combination of stations. Some key trade-offs include the following:

- Adding the 220th Street SW and NE 130th Street Stations to the Preferred Alternative is projected to reduce daily boardings at the Lynnwood Transit Center Station by 700. Part of the reason for the net loss at the Lynnwood Transit Center, compared to a project without these two optional stations, is that adding the two optional stations would increase travel time for the light rail trip, which would be less attractive for riders traveling to and from Lynnwood. In addition, approximately 200 of the forecasted daily boardings would shift from the Lynnwood Transit Center to the new 220th Street SW Station.
- Moving the Mountlake Terrace Station from the transit center into the freeway median would reduce daily boardings by 800 at the station and for the corridor because it would add substantial walk time for riders using the Mountlake Terrace Station.
- Adding NE 130th Street as a third Segment A station would result in a net increase of 500 daily boardings because it would provide additional access to the transit network. Approximately 1,200 of the daily boardings at the NE 130th Street Station would shift from the Northgate Station.
- For the alternatives with three stations in Segment A, moving the station from NE 145th Street to NE 155th Street would reduce daily boardings by approximately 400 for the segment.

The difference in boardings among alternatives is influenced by a combination of factors, including the density of population and employment near stations, the amount of parking available at stations, connecting local bus service at stations, additional travel time caused by additional stations elsewhere in the corridor, and distance between stations. Figures 5-3 through 5-9 show the 15-minute walkshed for each of the potential station locations, while Table 5-10 shows the forecasted population and employment in 2035 that is contained within those walksheds.

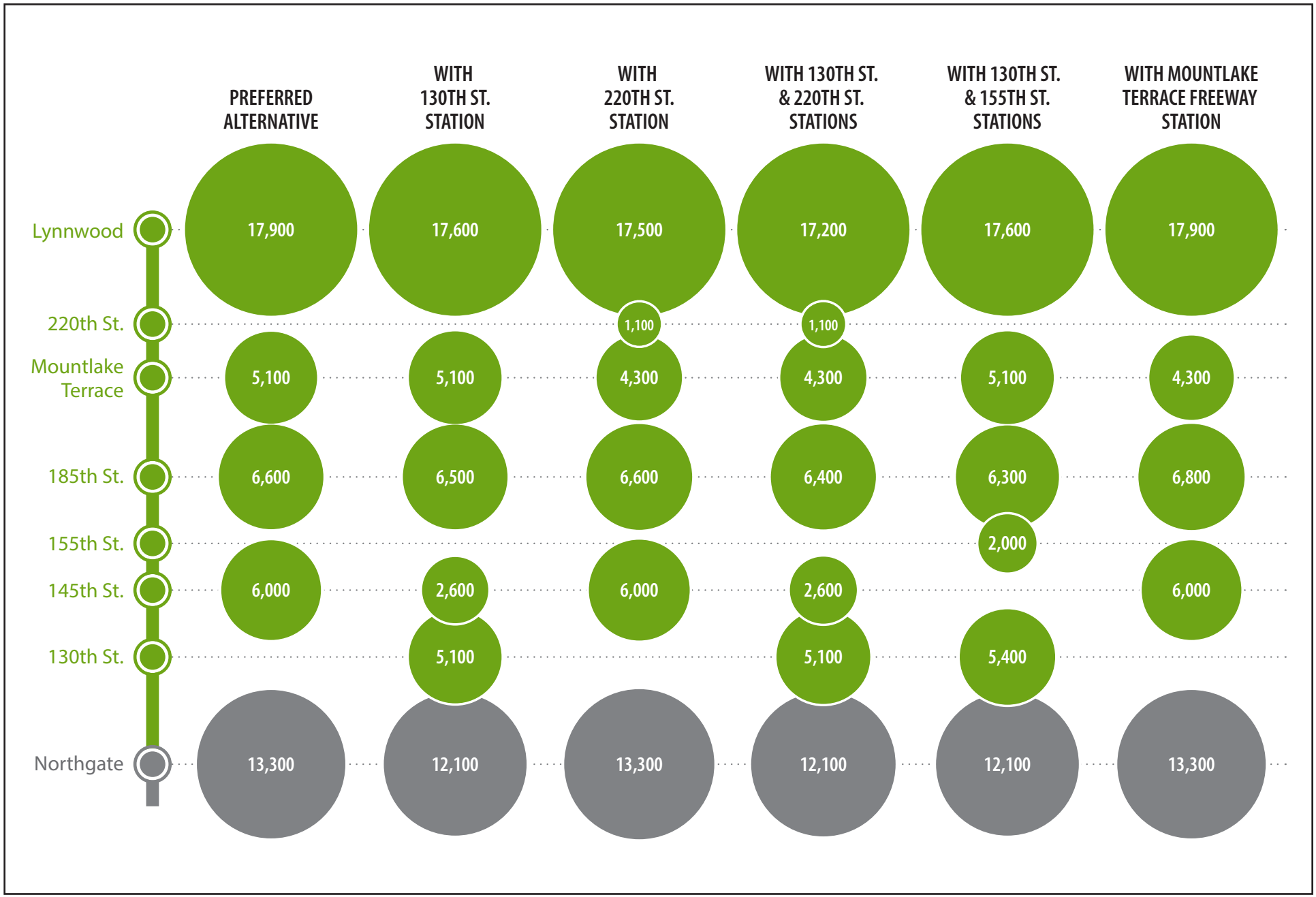


Figure 5-2
2035 Average Weekday Station Boardings for the Preferred Alternative and Options

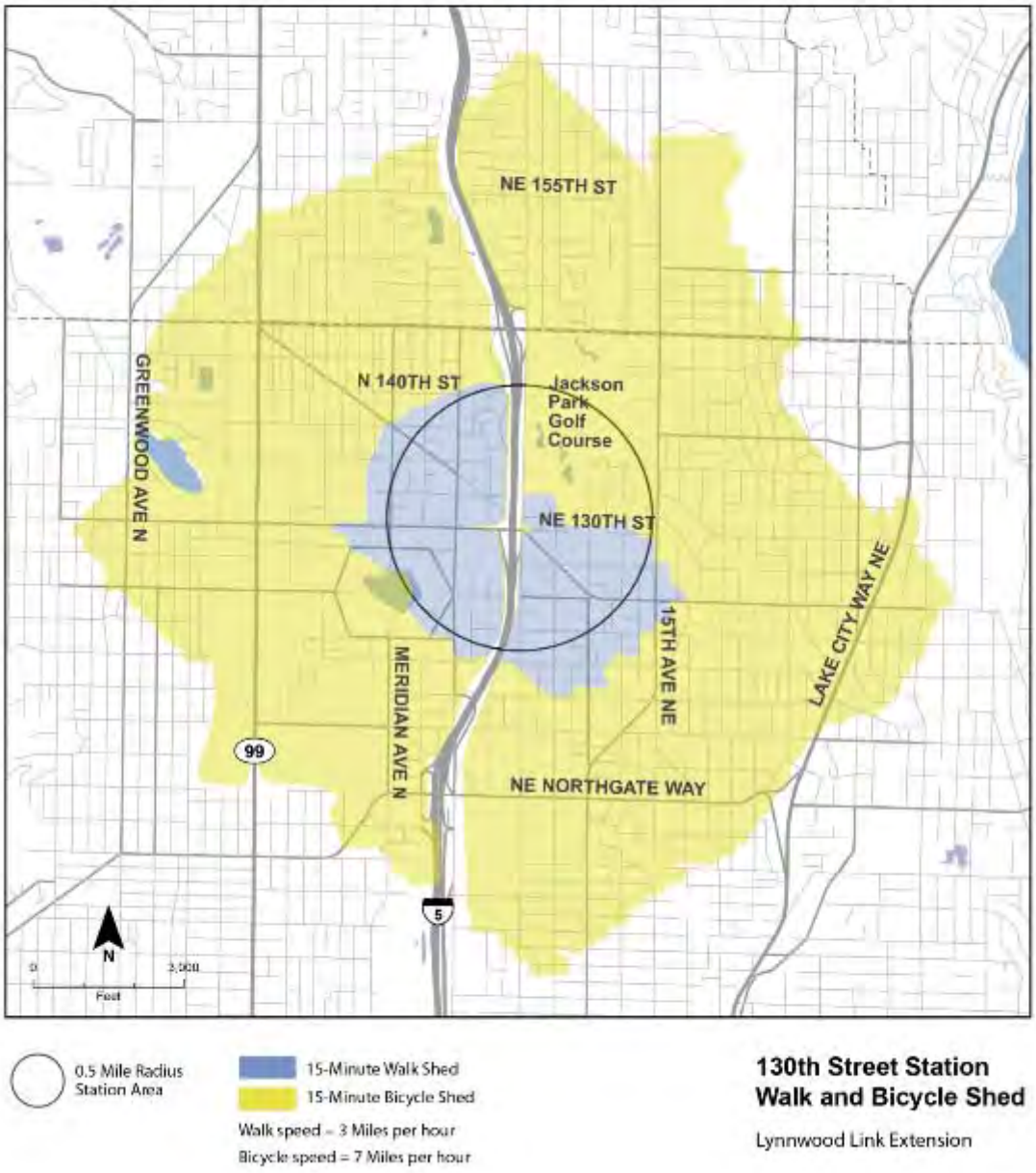


Figure 5-3. 15-minute Walkshed and Bicycleshed—NE 130th Street Station

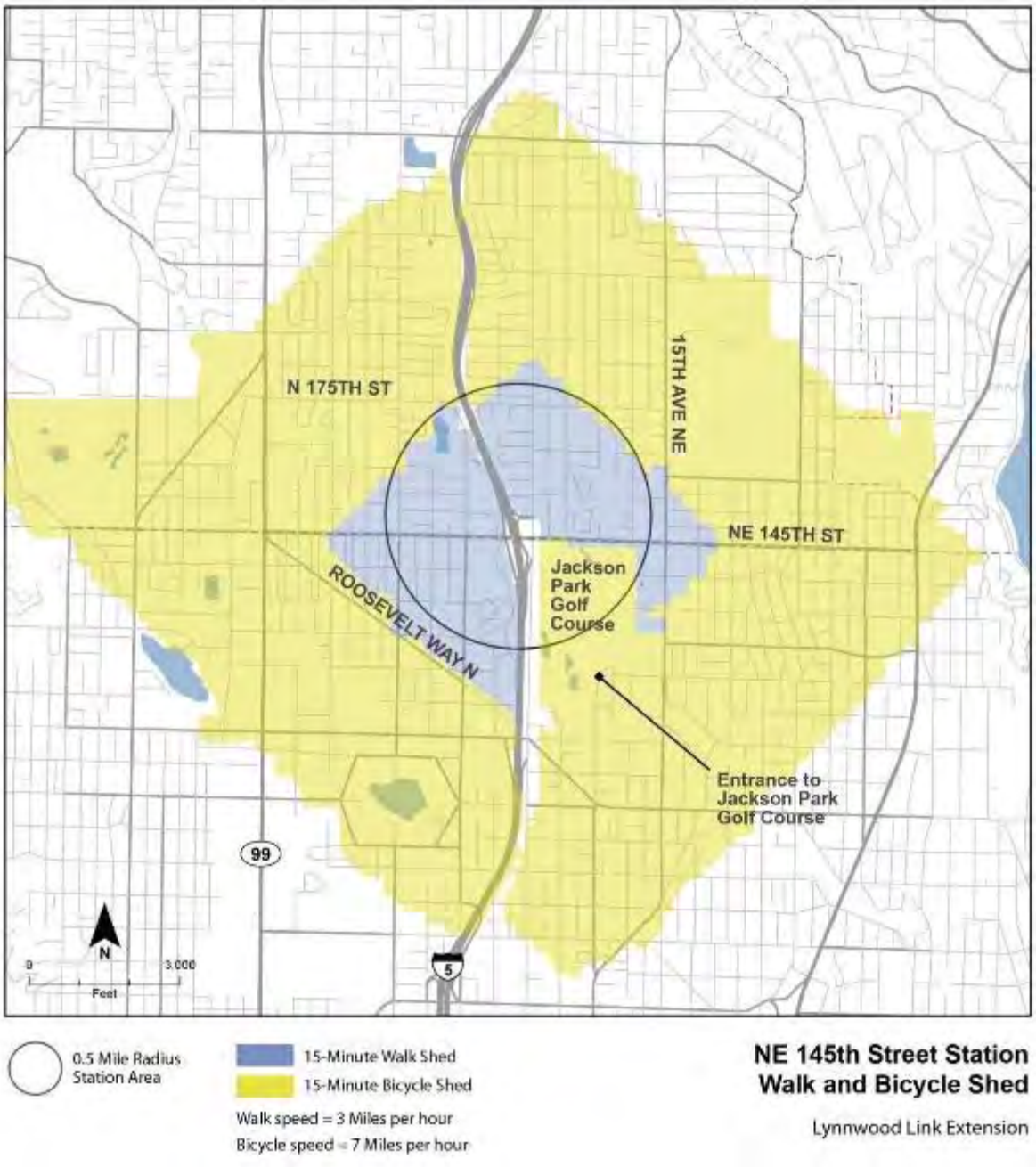


Figure 5-4. 15-minute Walkshed and Bicycleshed—NE 145th Street Station

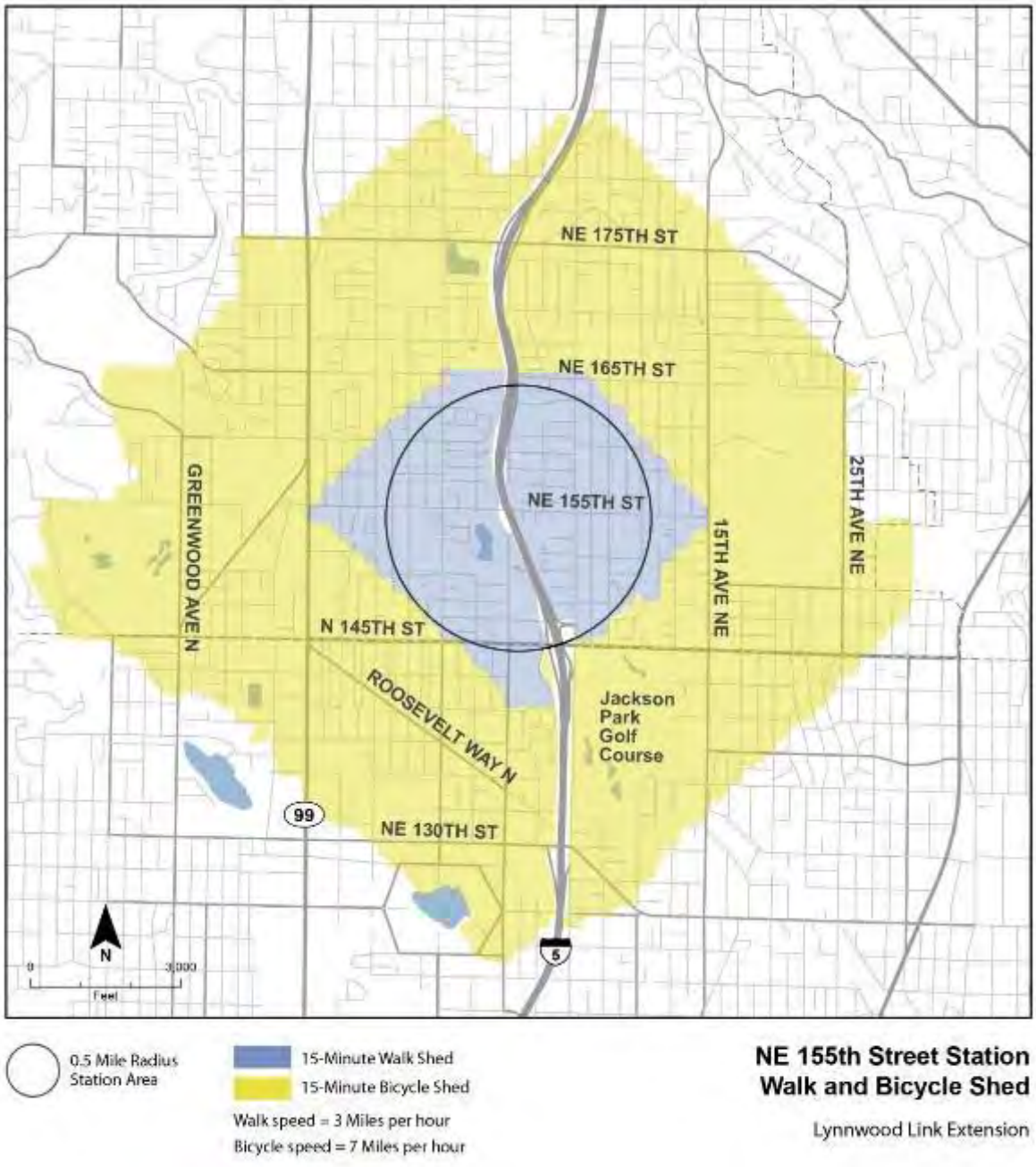


Figure 5-5. 15-minute Walkshed and Bicycleshed—NE 155th Street Station

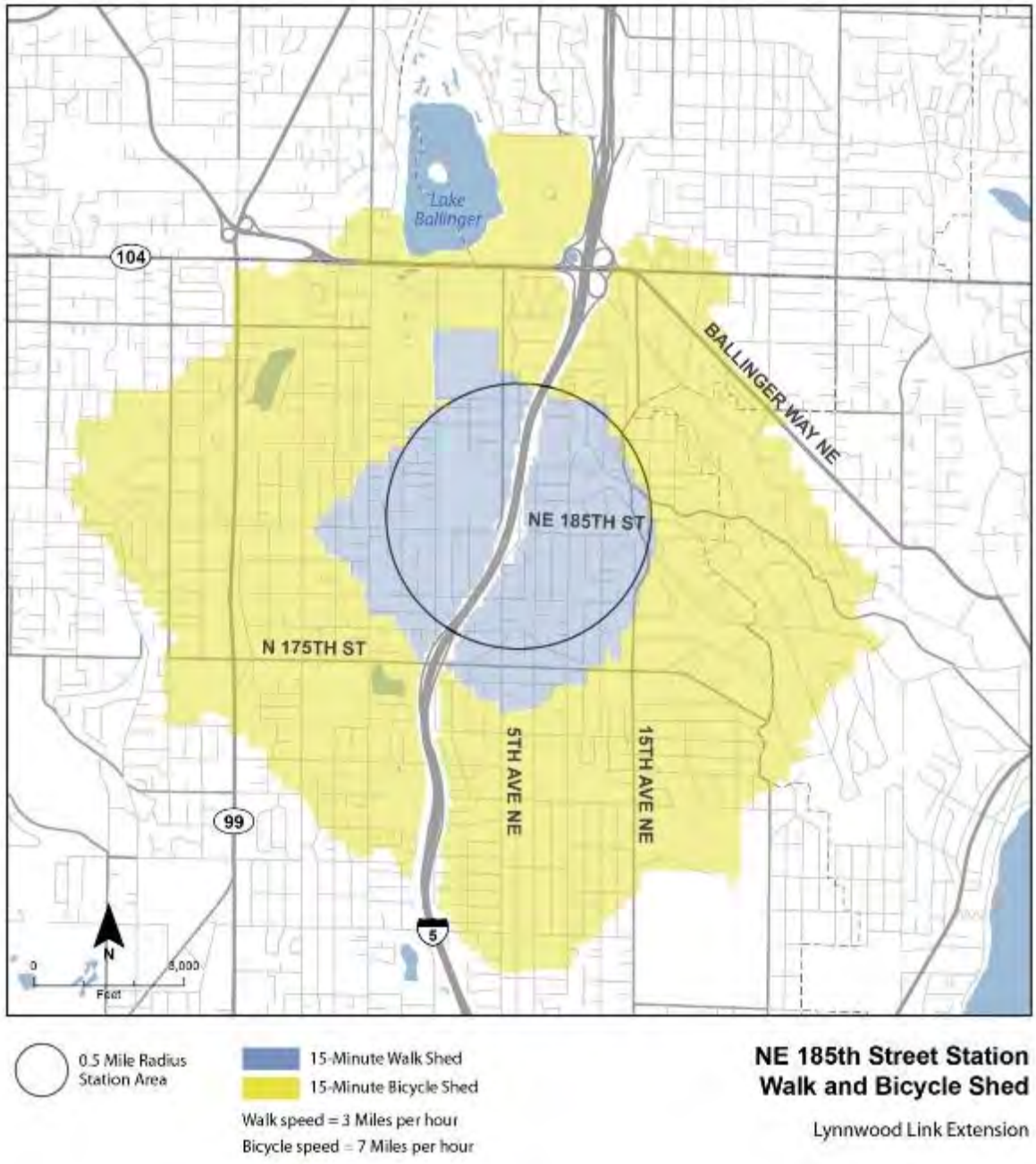


Figure 5-6. 15-minute Walkshed and Bicycleshed—NE 185th Street Station

Mountlake Terrace Transit Center Station

Mountlake Terrace Freeway Station

0.5 Mile Radius Station Area

15-Minute Walk Shed

15-Minute Bicycle Shed

Walk speed = 3 Miles per hour

Bicycle speed = 7 Miles per hour

Figure 5-7. 15-minute Walkshed and Bicycleshed—Mountlake Terrace Transit Center and Mountlake Terrace Freeway Station

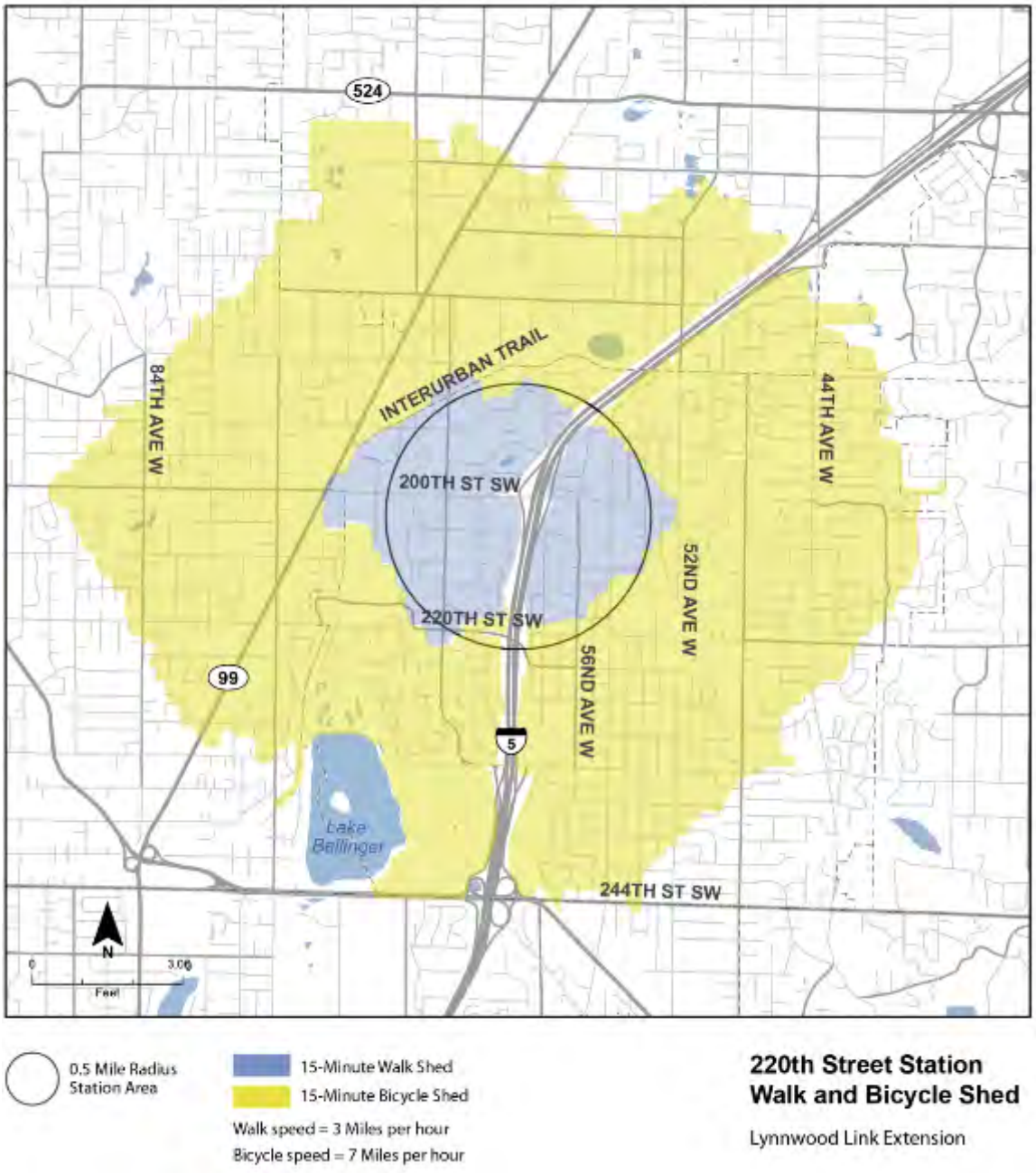


Figure 5-8. 15-minute Walkshed and Bicycleshed—220th Street SW Station

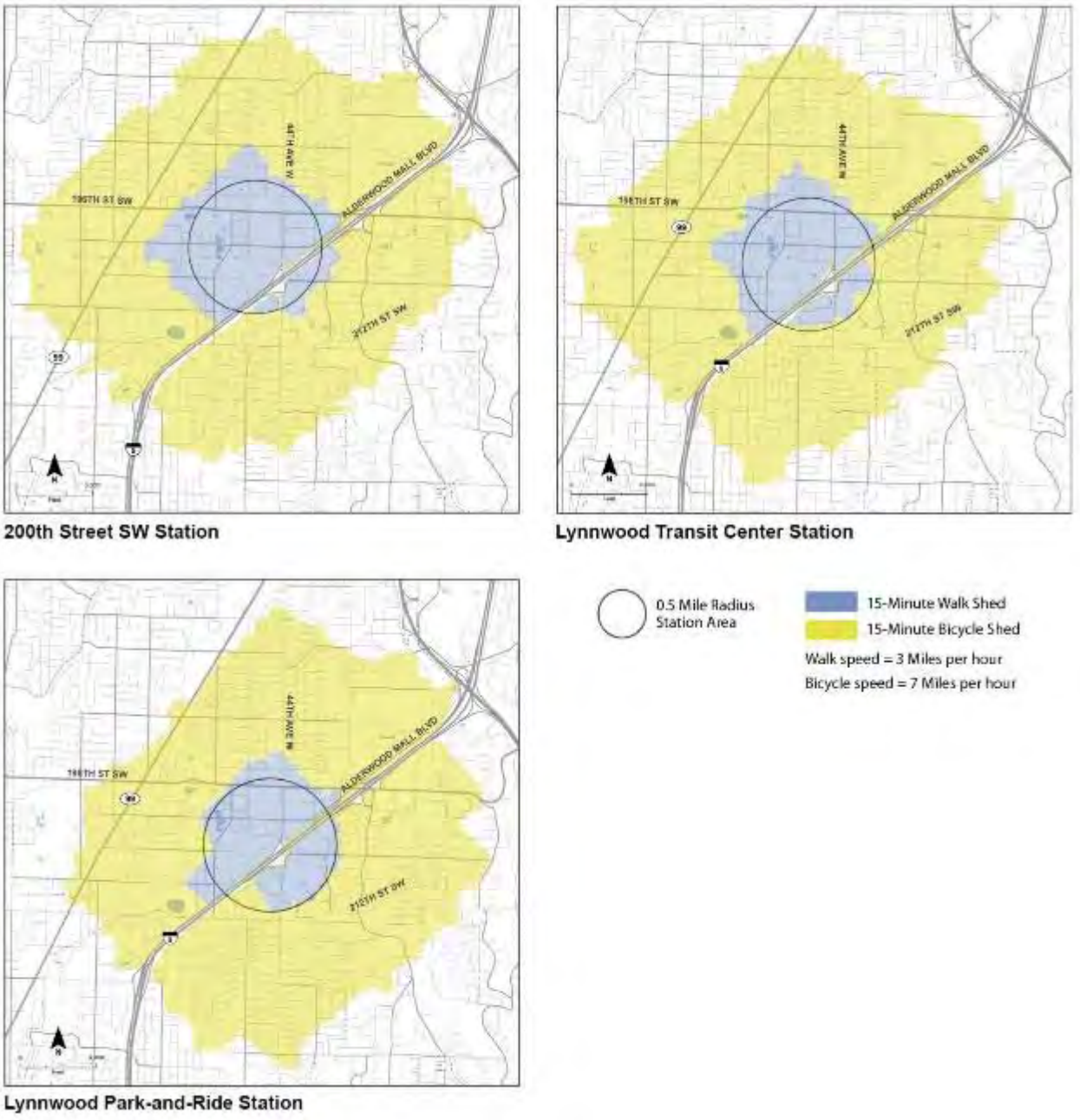


Figure 5-9. 15-minute Walkshed and Bicycleshed—Lynnwood Transit Center Station Alternatives

Table 5-10. Walkshed and Bicycleshed Population and Employment for Forecast Year 2035

	Walkshed		Bicycleshed	
Station	2035 Population	2035 Employment	2035 Population	2035 Employment
NE 130th Street Station	5,000	900	53,100	23,700
NE 145th Street Station	7,800	1,400	42,800	12,900
NE 155th Street Station	8,300	1,300	32,200	13,500
NE 185th Street Station	7,400	2,200	33,800	9,900
Mountlake Terrace Transit Center Station	4,700	1,100	24,700	10,000
Mountlake Terrace Freeway Station	4,100	,100	21,000	9,100
220th Street SW Station	3,200	2,300	32,800	16,600
Lynnwood Park-and-Ride Station	6,000	7,600	45,200	38,200
Lynnwood Transit Center Station	6,100	7,100	42,800	42,800
200th Street SW Station	7,800	8,500	49,700	47,400

Source: PSRC Land Use Forecast, 2013 Land Use Baseline, Maintenance Release 1 (MR1) Update

Transit Travel Times

Tables 5-11 and 5-12 show estimated AM peak-period transit travel times from Shoreline (I-5 and NE 145th Street) and Lynnwood (Lynnwood Transit Center), respectively, to regional destinations for the No Build Alternative, the Preferred Alternative and other light rail alternatives in forecast year 2035. Travel times are shown for light rail scenarios with four, five, and six stations, respectively. Bus travel times are based on existing scheduled travel times, adjusted to reflect estimated future roadway congestion, while light rail travel times are based on estimated future actual travel times. Travel times under the No Build Alternative are expected to increase compared with existing conditions because bus speeds in general purpose and HOV freeway lanes would degrade with increasing traffic congestion. Travel times to all regional destinations would be shorter with the Preferred Alternative and other light rail alternatives, with trips to Northgate from Lynnwood up to 12 minutes faster and trips to downtown Seattle from Lynnwood up to 16 minutes faster than the No Build Alternative, which relies on bus travel in congested mixed traffic for portions of its route.

Table 5-11. 2035 Transit Travel Times (minutes) from Shoreline for AM Peak Period Southbound

Destination	No Build Alternative	Preferred Alternative and Other Light Rail Alternatives	
		4 Stations	5/6 Stations
Northgate	10	3	4
University of Washington	22	11	12
Capitol Hill	26	14	15
Downtown Seattle	22	16	17
Sea-Tac Airport	63	51	52
Downtown Bellevue	53	41	42
Overlake	63	51	52

Sources: No Build Alternative: King County Metro Trip Planner, http://metro.kingcounty.gov/, representative trip selected and adjusted for future estimated roadway congestion. Light rail alternatives: Sound Transit light rail travel time estimates

Table 5-12. 2035 Transit Travel Times (minutes) from Lynnwood for AM Peak Period Southbound

Destination	No Build Alternative	Preferred Alternative and Other Light Rail Alternatives		
		4 Stations	5 Stations	6 Stations
Northgate	26	14	15	16
University of Washington	38	22	23	24
Capitol Hill	42	25	26	27
Downtown Seattle	43	27	28	29
Sea-Tac Airport	79	62	63	64
Downtown Bellevue	55	52	53	54
Overlake	79	62	63	64

Sources: No Build Alternative: King County Metro Trip Planner, http://metro.kingcounty.gov/, representative trip selected and adjusted for future estimated roadway congestion. Light rail alternatives: Sound Transit light rail travel time estimates

Transit travel times during the PM peak period from regional destinations to Shoreline and Lynnwood, respectively, are presented in Tables 5-13 and 5-14. Similar to AM peak southbound trips, travel times from all regional destinations would be shorter with the Preferred Alternative and other light rail alternatives, with trips from Northgate to Lynnwood up to 10 minutes faster and trips from downtown Seattle to Lynnwood up to 15 minutes faster than the No Build Alternative.

Table 5-13. 2035 Transit Travel Times (minutes) to Shoreline for PM Peak Period Northbound

Origin	No Build Alternative	Preferred Alternative and Other Light Rail Alternatives	
		4 Stations	5/6 Stations
Northgate	10	3	4
University of Washington	22	11	12
Capitol Hill	26	14	15
Downtown Seattle	26	16	17
Sea-Tac Airport	63	51	52
Downtown Bellevue	53	41	42
Overlake	63	51	52

Sources: No Build Alternative: King County Metro Trip Planner, http://metro.kingcounty.gov/, representative trip selected and adjusted for future estimated roadway congestion. Light rail alternatives: Sound Transit light rail travel time estimates

Table 5-14. 2035 Transit Travel Times (minutes) to Lynnwood for PM Peak Period Northbound

Origin	No Build Alternative	Preferred Alternative and Other Light Rail Alternatives		
		4 Stations	5 Stations	6 Stations
Northgate	24	14	15	16
University of Washington	36	22	23	24
Capitol Hill	40	25	26	27
Downtown Seattle	42	27	28	29
Sea-Tac Airport	77	62	63	64
Downtown Bellevue	64	52	53	54
Overlake	77	62	63	64

Sources: No Build Alternative: King County Metro Trip Planner, http://metro.kingcounty.gov/, representative trip selected and adjusted for future estimated roadway congestion. Light rail alternatives: Sound Transit light rail travel time estimates

The southbound bus travel times during the PM peak period to regional destinations from Shoreline and Lynnwood, respectively, are presented in Tables 5-15 and 5-16. Similar to AM peak southbound trips and PM peak northbound trips, travel times to all regional destinations would be shorter with the Preferred Alternative and other light rail alternatives, with trips to Northgate from Lynnwood up to 6 minutes faster and trips to downtown Seattle from Lynnwood up to 11 minutes faster than the No Build Alternative.

Table 5-15. 2035 Transit Travel Times (minutes) from Shoreline for PM Peak Period Southbound

Destination	No Build Alternative	Preferred Alternative and Other Light Rail Alternatives	
		4 Stations	5/6 Stations
Northgate	14	3	4
University of Washington	26	11	12
Capitol Hill	30	14	15
Downtown Seattle	28	16	17
Sea-Tac Airport	67	51	52
Downtown Bellevue	57	41	42
Overlake	67	51	52

Sources: No Build Alternative: King County Metro Trip Planner, http://metro.kingcounty.gov/, representative trip selected and adjusted for future estimated roadway congestion. Light rail alternatives: Sound Transit light rail travel time estimates

Table 5-16. 2035 Transit Travel Times (minutes) from Lynnwood for PM Peak Period Southbound

Destination	No Build Alternative	Preferred Alternative and Other Light Rail Alternatives		
		4 Stations	5 Stations	6 Stations
Northgate	20	14	15	16
University of Washington	32	22	23	24
Capitol Hill	36	25	26	27
Downtown Seattle	38	27	28	29
Sea-Tac Airport	73	62	63	64
Downtown Bellevue	55	52	53	54
Overlake	73	62	63	64

Sources: No Build Alternative: King County Metro Trip Planner, http://metro.kingcounty.gov/, representative trip selected and adjusted for future estimated roadway congestion. Light rail alternatives: Sound Transit light rail travel time estimates

The No Build Alternative transit travel times (forecast year 2035) shown above reflect the planned light rail network extending to Northgate to the north and Overlake to the east. For many of the trips depicted above, passengers would use bus service to travel between Lynnwood/Shoreline and Northgate, and light rail between Northgate and other regional destinations. These bus routes would travel in mixed traffic under varying degrees of congestion, hence adding delays to the trip. These times also incorporate transfer times between bus routes if more than one route is needed to complete the trip, as well as between bus and rail.

In addition to these travel times, as listed in Tables 5-11 through 5-16, the total transit travel time would also include the time to access the bus as a pedestrian, bicyclist, passenger, or driver. The wait time for a bus would be dependent on the service reliability (adherence to schedule). If the scheduled bus arrival time is unreliable, then the riders must arrive prior to the scheduled time and wait until the bus arrives either on time or late, adding to the total travel time. Bus reliability is an

LOS factor discussed in a subsequent section. An analysis of transfer requirements for transit users is discussed below.

Transfers

When transit riders need to transfer to complete a trip, they may see the transit system as being too complex and their travel times can feel longer or more unpredictable. As a result, some may choose not to use transit for the trip. However, the quality of transfers, whether between buses or between bus and rail, has a dramatic impact on the overall perception of transfers. Factors determining the quality of transfers include proximity of transfer location, wait time, waiting area conditions, service reliability, safety and security, and availability of real-time arrival information.

Wait time is a function of the service frequency on the route to which a transit user is transferring and/or the ability to provide reliable "timed transfer" connections. There is evidence that quality transfers are acceptable and can be only a minor impediment. For example, King County Metro, which historically has been one of the strongest advocates of the "one-seat ride," has been implementing a new "multi-centered" route structure focused on a series of transit "hubs" where convenient transfers can be made to multiple destinations. The key to the acceptance and success of these systems is safe, appealing, and protected transfer facilities together with more frequent service and/or timed transfers, thereby resulting in negligible impacts on ridership.

Transfers can be measured by a systemwide transfer rate, which is the average number of transit boardings per transit trip. Table 5-17 provides the system-wide transfer rate for the existing base year (2011) as well as the projected transfer rate for the forecast year (2035) under the No Build Alternative and for the light rail alternatives. Overall, the transfer rate is estimated to increase from the base year (1.39) to the No Build Alternative (1.52). This can be attributed to an increase in riders transferring from local bus service to the planned light rail extensions to Northgate and Overlake. Overall, future system-wide transfer rates with the Preferred Alternative and other light rail alternatives would be lower than the No Build Alternative. The slight reduction in transfer rate is predicted with the Preferred Alternative and other light rail alternatives because riders using the Lynnwood Link Extension would have a no-transfer, one-seat ride to regional destinations accessible via the light rail network. Transfers may be required to travel to destinations to the east, including downtown Bellevue and Overlake. Also, transfers in some parts of the regional system could increase as more riders use light rail for a part of their trip because it could reduce their overall travel times.

Table 5-17. Transit Transfer Rates for the Base Year (2011) and Forecast Year (2035)

	Base Year	No Build Alternative	Preferred Alternative and Other Light Rail Alternatives
Transfer Rate	1.39	1.52	1.51
Total Daily (24 hours) Transit Trips	384,000	601,000	622,000 to 623,000
Total Daily Transit Boardings	533,000	915,000	938,000 to 943,000

Source: Sound Transit Ridership Forecasting Model

Level of Service for Service Frequency

Figures 5-10 and 5-11 show the LOS for service frequency for the No Build Alternative and light rail alternatives (including the Preferred Alternative) in forecast year 2035, respectively. As shown in Figure 5-10, the light rail connections created by implementing the Northgate Link Extension and East Link projects for travel connecting downtown Seattle, Capitol Hill, the University District, Northgate, downtown Bellevue, and Sea-Tac Airport were not evaluated. For the majority of those origin-destination pairs with no-transfer, one seat service under the No Build Alternative, the LOS for service frequency is expected to be LOS C.

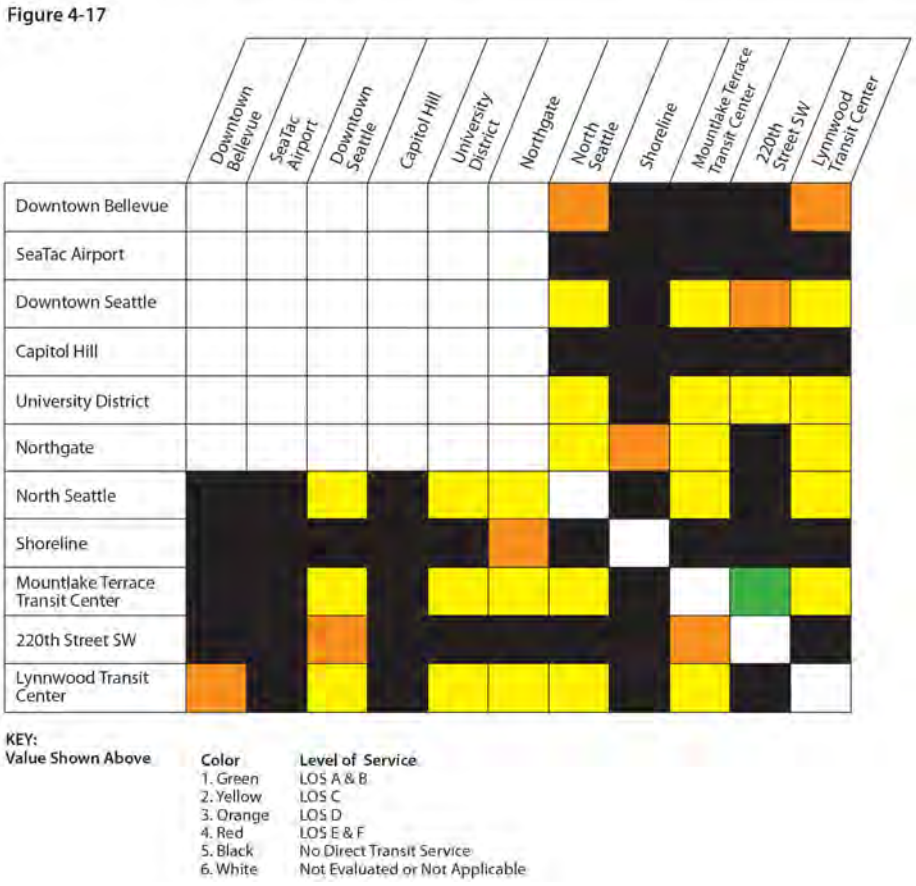


Figure 5-10. No Build Alternative LOS for Service Frequency in Forecast Year 2035

As shown in Figure 5-11, the implementation of the Lynnwood Link Extension (forecast year 2035) improves the quality of service to LOS A for connections between north Seattle, Shoreline, Mountlake Terrace Transit Center, 220th Avenue SW, Lynnwood Transit Center and the rest of the Link light rail system.

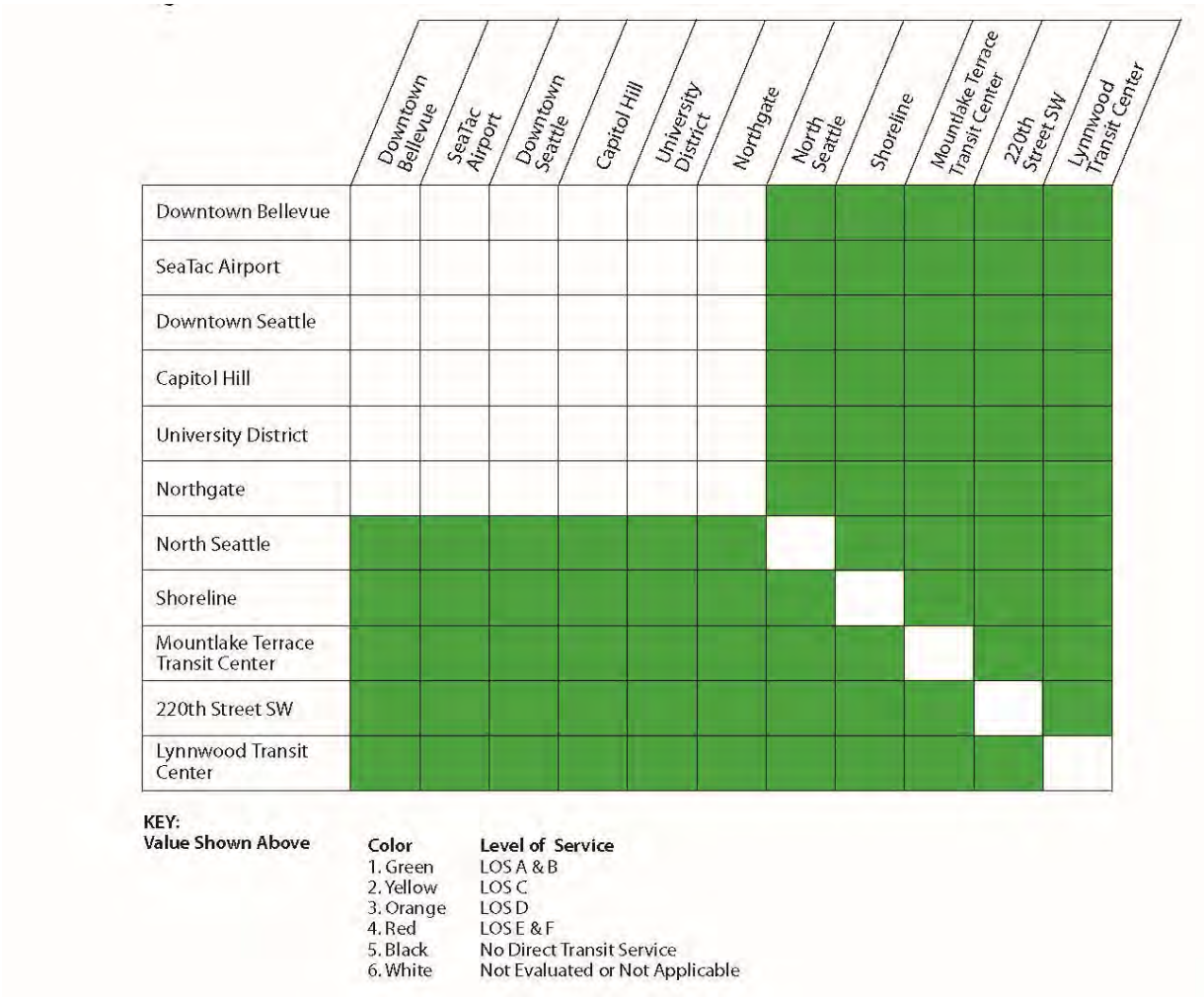


Figure 5-11. Preferred Alternative and Other Light Rail Alternatives LOS for Service Frequency in Forecast Year 2035

Level of Service for Hours of Service

Figures 5-12 and 5-13 show the LOS for hours of service for the No Build Alternative, the Preferred Alternative and other light rail alternatives in forecast year 2035, respectively. As shown in Figure 5-12, the light rail connections created by implementing the Northgate Link Extension and East Link projects for travel connecting downtown Seattle, Capitol Hill, the University District, Northgate, downtown Bellevue, and Sea-Tac Airport were not evaluated.

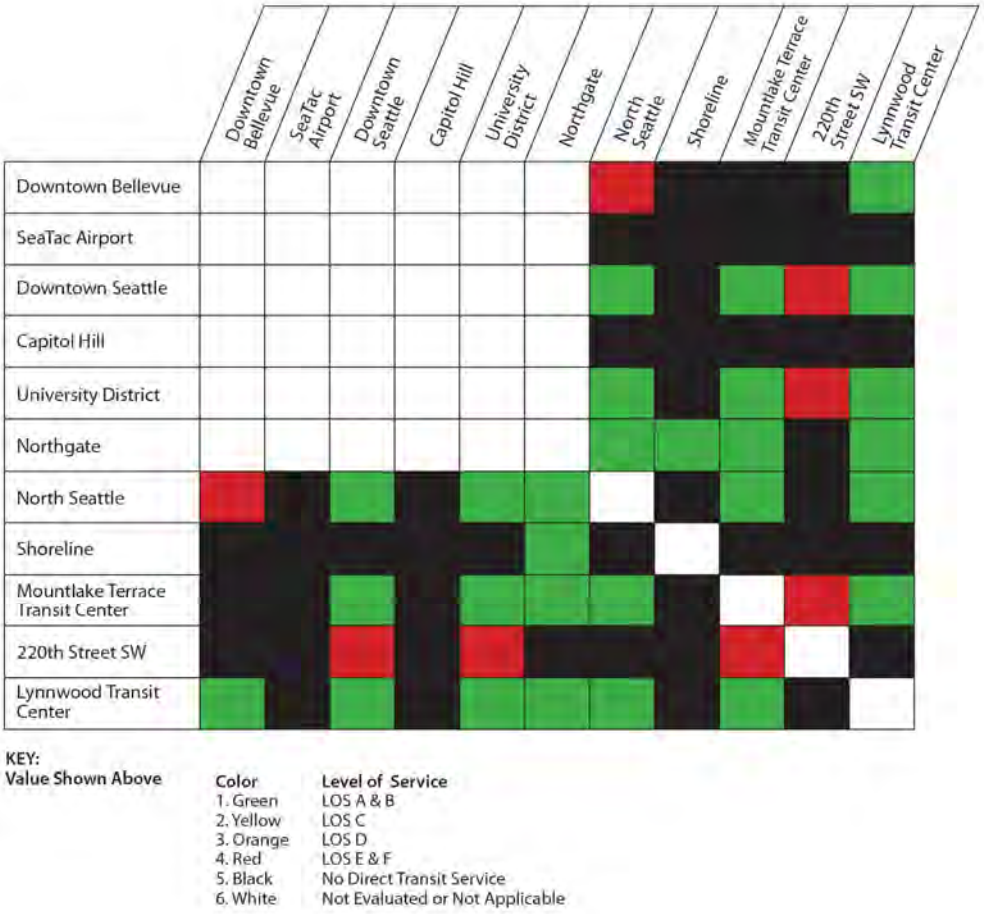


Figure 5-12. No Build Alternative LOS for Hours of Service in Forecast Year

As shown in Figure 5-13, implementing the Lynnwood Link Extension (all alternatives including the Preferred Alternative) improves the hours of service to LOS A for no-transfer, one-seat service between, in particular, Shoreline, 220th Street SW, and the rest of the Link light rail system.

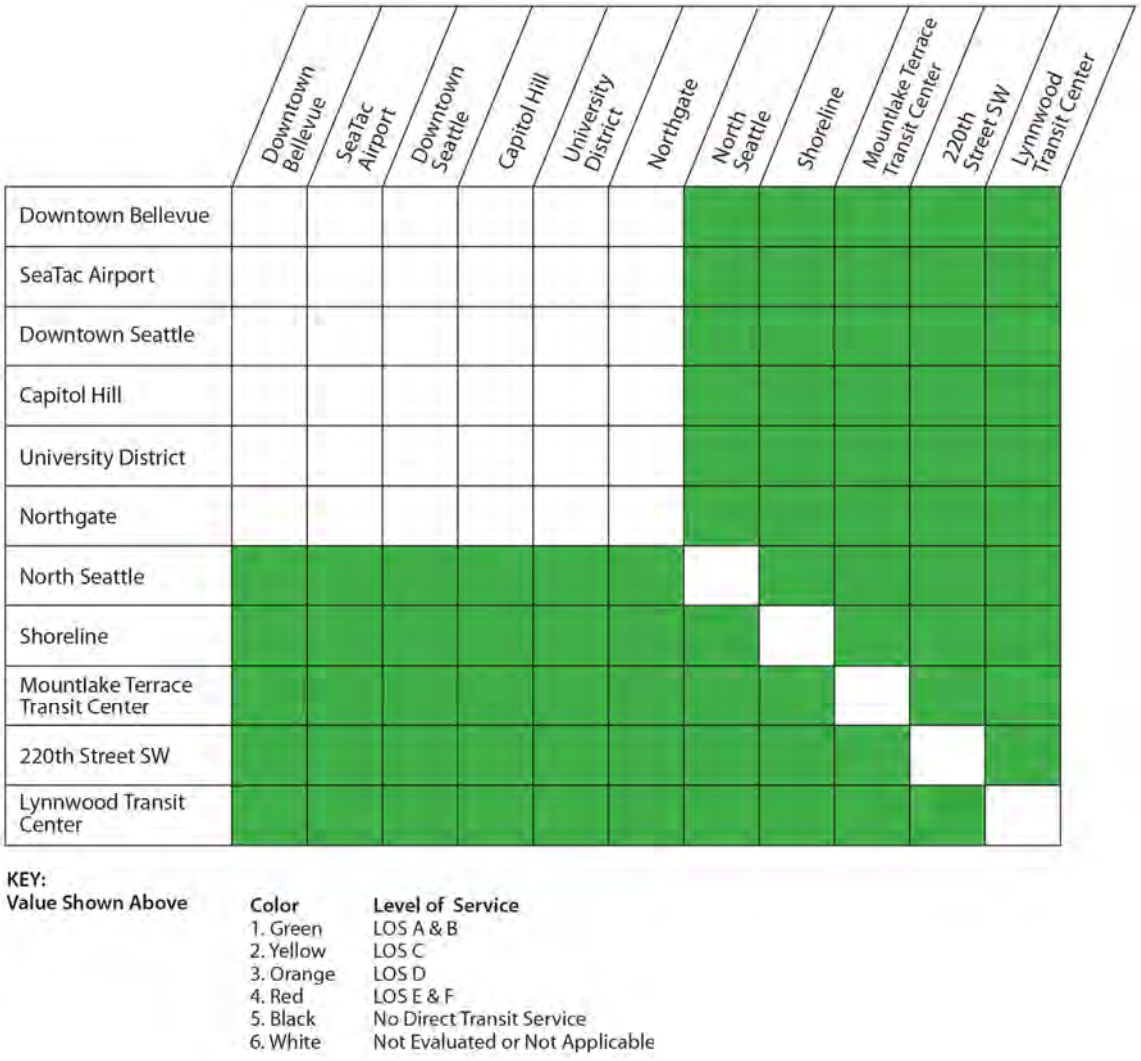


Figure 5-13. Preferred Alternative and Other Light Rail Alternatives LOS for Hours of Service in Forecast Year 2035

Level of Service for Passenger Load

Passenger load LOS for the No Build Alternative, the Preferred Alternative and other light rail alternatives (forecast year 2035) were estimated using passenger volume forecasts from the Sound Transit Ridership Model, and calculated in accordance with the TCQSM guidelines[16]. Table 5-18 shows the PM peak-hour passenger load LOS on bus routes and light rail in the corridor at three locations for the No Build Alternative and light rail alternatives (forecast year 2035). With the No Build Alternative, the passenger load LOS for bus service on I-5 is expected to be between LOS D and F. For the light rail alternatives, bus service on parallel north-

[16] Methodology defined in the second edition of the TCQSM (2003) was used for consistency with the DEIS.

south facilities would be LOS A, while light rail LOS would be LOS A for all locations and directions shown, except for the northbound direction north of Northgate, where passenger loads would reach LOS C.

Table 5-18. PM Peak Hour Passenger Load Factors in Forecast Year 2035

		No Build Alternative	Light Rail Alternatives	
Screenline Location	**Direction**	**Bus LOS**	**Bus LOS**	**Light Rail LOS**
Screenline 1: North of NE Northgate Way	Northbound	D	A	C
	Southbound	F	A	A
Screenline 2: South of 205th Street	Northbound	E	A	A
	Southbound	F	A	A
Screenline 3: North of 112th Street SW	Northbound	D	A	A
	Southbound	F	A	A

Source: Sound Transit Ridership Model, 2014

Level of Service for Reliability and On-time Performance

Reliability of bus service in forecast year 2035 for the No Build Alternative is expected to degrade in comparison with existing conditions as traffic congestion on freeways and arterials in the project corridor continues to worsen. Forecasts show future speeds will decrease along I-5 as congestion increases. Poor bus reliability could result in buses arriving close together (bunched) rather than at scheduled intervals, as well as buses being unable to meet scheduled arrival times. Light rail operating within the corridor would be more reliable because it would operate in an exclusive right-of-way for the entire length of the corridor. However, light rail reliability in the corridor could be subject to delays experienced elsewhere in the system where the light rail segment is operating at-grade.

5.2.2 Local and Sub-Regional Bus Transit

As discussed in Section 5.4.2, congested traffic operations that would occur with the No Build Alternative, or could occur with the light rail alternatives, may affect the reliability of local bus service near stations. Near the proposed Lynnwood Station area, congested traffic operations along 196th Street SW without the light rail project would similarly affect local bus service and the access provided to the station.

Bus routes on I-5 would be restructured to remove duplication of service with light rail. Local transit service could be restructured to reduce duplication and to provide improved or new connections to the Lynnwood Link Extension. Additional routes would achieve desirable goals for frequency and coverage by establishing local service to the light rail stations, but new routes would require additional resources. Local route changes will require a public comment process and council or board approval to implement the changes. The following sections describe assumed bus

operations at stations (based on input from local transit operators) and some conceptual options for modifying local bus operations. Additional information on the conceptual bus options is provided in Section 5.2.1. Section 5.5.1 discusses the pedestrian flow analysis associated with movement to and from bus stops to the light rail stations.

Segment A: Seattle to Shoreline

Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Street Stations

NE 145th Street Station

Local routes that serve the North Jackson Park Park-and-Ride lot would be combined with local service parallel to the light rail corridor to provide a more frequent service to the NE 145th Street Station. Local bus riders taking a short trip who are currently on routes parallel to the proposed light rail alignment could experience reduced frequency of service if new routes are not added. Riders who are on local bus routes and taking a longer trip could benefit by frequent service and a transfer to light rail. Routes selected for rerouting to the light rail stations could be those that currently carry more long-distance riders. King County Metro's conceptual service plan focuses east-west bus service on NE 155th Street to avoid the slow travel speeds on NE 145th Street. Buses that serve the NE 145th Street station would travel from NE 155th Street to the NE 145th Street station via 5th Avenue NE. At the NE 145th Street station buses would enter the station to drop off and pick up riders adjacent to the station plaza. Buses would then use the station transit facility to turn around and travel northbound along 5th Avenue NE back to NE 155th Street. Bus platforms and shelters are provided on 5th Avenue NE, one in each direction south of the intersection of 5th Avenue NE at the station egress/I-5 northbound ramps to provide for a potential local route that remains on 5th Avenue NE. Bus stops are provided on NE 145th Street, one in each direction west of NE 145th Street to provide for a potential future bus route on NE 145th Street. In addition to east-west bus service centered on NE 155th Street, King County Metro may also provide service to the station that travels along 5th Avenue NE between NE 145th Street and NE 155th Street. These routes could serve the station either by using the internal station bus bays or by stopping at the bus stops on 5th Avenue adjacent to the station.

Two paratransit stops are provided within the proposed station area along the internal roadway. The stops are adjacent to the proposed station plaza and near the proposed vertical circulation to the station platform. No layover is planned at the NE 145th Street Station; however, the active bus bays would adequately serve

expected 2035 bus service needs for passengers transferring between light rail and buses.

NE 185th Street Station

The restructured bus routes that could provide more frequent service to the NE 145th Street Station could also be rerouted to provide frequent service to the NE 185th Street Station. An existing route on NE 185th Street that currently terminates at the Aurora Village Transit Center could instead be terminated at the NE 185th Street Station. Local transit service on NE 175th Street could be shifted to NE 185th Street. Bus rerouting to NE 175th Street and 5th Avenue NE could require improvements to the tight-turning radius around the northeast corner. This turn is currently problematic for buses.

Community Transit's SR 99 *Swift* bus rapid transit service, which currently terminates at the Aurora Village Transit Center, could be extended to the south and east to terminate at the NE 185th Street Station, providing high-frequency connections to light rail. The plan for bus rapid transit on NE 185th Street includes potential inclusion of transit signal priority treatments. There would be a signal at the intersection of the station driveway at 7th Avenue NE/NE 185th Street to minimize delay to buses and improve safety and mobility for the mix of all modes accessing the station.

A circulating roadway internal to the station would provide access to bus layover spaces and active bus bays. Upon entering the station area there would be four active bus bays adjacent to the station plaza. Buses would circulate around the surface parking to five bus layover spaces. A paratransit stop would also be located adjacent to the station plaza. Two additional active bus bays would be located on NE 185th Street, which would be at the south end of the station plaza. Bus route restructuring to serve the NE 185th Street Station could result in layover activity by Community Transit and King County Metro. The layover space and active bus bays would adequately serve potential bus needs. The active bus bays would also satisfy expected 2035 bus service requirements for the light rail passengers transferring to buses.

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Street Stations

NE 145th Street Station

Local routes stopping at the North Jackson Park-and-Ride lot could be combined with local service parallel to the light rail corridor to provide a more frequent service to the NE 145th Street Station. Local bus riders taking a short trip who are currently on routes parallel to the proposed light rail alignment could experience reduced frequency of service if new routes are not added. Riders who are on local bus routes

and taking a longer trip could benefit by frequent service and a transfer to light rail. Routes selected for rerouting to the light rail stations could be those that currently carry more long-distance riders.

NE 185th Street Station

The combined bus routes developed to provide more frequent service to the NE 145th Street Station could be rerouted to provide frequent service to the NE 185th Street Station. An existing route on NE 185th Street that terminates at the Aurora Village Transit Center could be terminated at the NE 185th Street Station. Local transit service on NE 175th Street could be shifted to NE 185th Street. Bus rerouting to NE 175th Street and 5th Avenue NE could necessitate improvements to the tight-turning radius around the northeast corner. This turn is currently problematic for buses.

Community Transit's SR 99 *Swift* bus rapid transit service, which currently terminates at the Aurora Village Transit Center, could be extended to the south and east to terminate at the NE 185th Street Station, providing high-frequency connections to light rail. Potential transit priority treatments along NE 185th Street could be considered in the Final EIS.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Street Stations

NE 145th Street Station

Alternative A3 local transit impacts could be the same as with Alternative A1.

NE 185th Street Station

Alternative A3 local transit impacts could be the same as with Alternative A1.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations

NE 130th Street Station

Buses on 5th Avenue NE would be provided bus stops within the travel lane between NE 130th Street and the leased park-and-ride. Two new bus stops would be provided on NE 130th Street west of 5th Avenue NE.

NE 155th Street Station

The frequency of the existing route on NE 155th Street, from Lake City to Shoreline Community College, with Alternative A5 could be enhanced with an increase in service frequency.

NE 185th Street Station

Alternative A5 local transit impacts could be the same as with Alternative A1.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations

NE 130th Street Station

Alternative A7 local transit impacts could be the same as with Alternative A5.

NE 155th Street Station

Alternative A7 local transit impacts could be the same as with Alternative A5.

NE 185th Street Station

Alternative A7 local transit impacts could be the same as with Alternative A3.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations

NE 130th Street Station

Alternative A10 local transit impacts could be similar to Alternative A5, with local service connections to the light rail stations shared between the NE 130th Street Station and NE 145th Street Station.

NE 145th Street Station

Alternative A10 local transit impacts could be similar to Alternative A1, with local service connections to the light rail stations shared between the NE 130th Street Station and NE 145th Street Station.

NE 185th Street Station

Alternative A10 local transit impacts could be the same as Alternative A5.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations

NE 130th Street Station

Local transit impacts with Alternative A11 could be the same as with Alternative A7.

NE 145th Street Station

Local transit impacts with Alternative A11 could be the same as with the Preferred Alternative.

NE 185th Street Station

Local transit impacts with Alternative A11 could be the same as with Alternative A3.

Segment B: Shoreline to Mountlake Terrace

Preferred Alternative (B2 Modified): Along I-5 to Lynnwood Park-and-Ride

Mountlake Terrace Transit Center Station

The existing local service is focused on the Mountlake Terrace Transit Center due to its size and connections to existing regional transit service. Therefore, the frequency of local service could be increased as funding allows in order to feed the higher frequency and higher capacity of light rail service with the Preferred Alternative. Buses would enter the transit center at the existing entrance that would be on the west side of the light rail station. Upon entering, there would be two bus bays adjacent to the station platform for loading and unloading. There would also be two active bus bays on 236th Street SW immediately east of the station. The paratransit load/unload area would be located adjacent to the plaza near the north end of the station. The active bus bays would adequately serve expected 2035 bus requirements for passengers transferring from light rail to buses.

Buses that layover at the Mountlake Terrace Transit Center would leave the active bus bay, circulate around the planned surface parking lot, and layover along the exit-only roadway, which would be located approximately 300 feet east of the station entrance. There would be seven bus layover spaces provided to accommodate the conceptual service plans of Community Transit and the regional focus of the Mountlake Terrace Transit Center Station. The surface parking area would be modified to provide a second exit-only driveway for buses. There would be seven layover spaces for a mix of 40-foot buses and 60-foot articulated buses. Eastbound buses on 236th Street SW would not have access to the layover spaces. The expected layover needs range from four spaces for the low transit forecast to eight spaces for the high transit forecast. The length of the layover space in the preliminary design would provide for two layover spaces with independent pull-in/pull-out movement.

220th Street SW Station South Option

The frequency of local service could be increased as funding allows in order to feed the higher frequency and capacity of light rail service. There would be active bus bays located on 220th Street SW adjacent to the station.

Alternative B1: East Side to Mountlake Terrace Transit Center to Median

Mountlake Terrace Transit Center Station

The impacts to local transit with Alternative B1 would be similar to the Preferred Alternative.

Alternative B2A Modified: with 220th Street SW Station North Option (elevated)

220th Street SW Station North

The frequency of local service could be increased as funding allows in order to feed the higher frequency and capacity of light rail service. There would be active bus bays located on 220th Street SW adjacent to the station.

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median

Mountlake Terrace Freeway Station

The Mountlake Terrace Freeway flyer stop could be closed and bus routes currently serving the Mountlake Terrace Freeway Station would be eliminated to reduce duplication with light rail service. Local service would be reconfigured to serve the light rail station from arterials. The frequency of local service could be increased as funding allows in order to feed the higher frequency and capacity of light rail service.

Segment C: Mountlake Terrace to Lynnwood

Preferred Alternative (C3 Modified): Along I-5 to Lynnwood Park-and-Ride

Lynnwood Park-and-Ride Station

The frequency of local service could be increased as funding allows to feed the higher frequency and capacity of light rail service. The existing transit center, with 20 bus bays, serves a mix of active bus bays and layover spaces. An increase of nine layover bus bays would be provided with the Preferred Alternative. The additional bus bays would be provided on the north side of the existing bus transit center where there is an existing surface parking lot. Paratransit load and unload spaces would be provided adjacent to the station plaza along the northeast edge of the surface parking lot. The total number of bus bays with the Preferred Alternative would be adequate for future needs at the Lynnwood Park-and-Ride Station.

Alternative C1: 52nd Avenue West to 200th Street SW

200th Street SW Station

The existing local service is focused on the Lynnwood Transit Center due to its size and connections to existing regional transit service. Therefore, the frequency of local service could be increased as funding allows in order to feed the higher frequency and capacity of light rail service with Alternative C1.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center

Lynnwood Transit Center Station

The frequency of local service could be increased as funding allows in order to feed the higher frequency and capacity of light rail service with Alternative C2.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride

Lynnwood Park-and-Ride Station

The frequency of local service could be increased as funding allows to feed the higher frequency and capacity of light rail service. The existing transit center, with 20 bus bays, serves a mix of active bus bays and layover spaces. An increase of four to six bus bays is expected with the increase in bus arrivals and departures due to light rail transfers. The increased demand for bus bays is not currently included in the concept design. Paratransit load and unload spaces would be provided near the east end of the station and near the circulation route to the station.

5.3 Freeway Operations

This section discusses future projected freeway operations within the project corridor and the potential effects that the project would have on these operations. Key observations and findings include the following:

- Freeway operations were analyzed in detail for the segment of I-5 that extends from south of the NE 130th Street interchange to the city of Lynnwood.
- For the No Build Alternative (forecast year 2035), freeway mainline traffic during peak periods in the peak direction of travel is expected to operate under congested conditions, with AM southbound estimated speeds ranging from 17 mph to 58 mph depending on location within the corridor, and PM northbound estimated speeds ranging from 20 mph south of the NE 130th Street off-ramp to 50 mph north of the 196th Street SW on-ramp in Lynnwood. Although not explicitly evaluated, assuming no change in current HOV policy (e.g., occupancy eligibility), HOV lane speeds and

general performance are also expected to degrade, particularly in the peak direction, affecting reliability and travel times for carpools and buses.

- For the Preferred Alternative (forecast year 2035) during the AM peak hour, freeway speeds and operating conditions are not expected to be substantially affected by the additional traffic generated by the station park-and-ride facilities. Traffic generated by the park-and-rides is expected to be localized and not from longer travel distances along I-5; therefore, little to no additional traffic along I-5 is anticipated with the project. Added station-related traffic on local arterials is generally not expected to cause spillback to nearby intersections or affect I-5 ramp or mainline operations. Vehicle throughput along I-5 is shown to be similar for conditions without the light rail project and the Preferred Alternative.
- During the PM peak hour, the Preferred Alternative would result in some improvements in freeway operations for northbound I-5 due to the reconfiguration of the northbound NE 130th Street off-ramp and the proposed removal of the off-ramp stop control at the intersection with 5th Avenue NE. North of the NE 130th Street off-ramp, speeds along I-5 are projected to be slightly slower as a result of increased vehicle throughput along I-5 due to the improvement at NE 130th Street. In the southbound direction, speeds and vehicle throughput on I-5 would be similar without the light rail project and the Preferred Alternative. In addition, the project would likely reduce the number of buses in the I-5 HOV lanes, thereby providing additional HOV capacity and improving HOV operations and speeds compared to conditions without the project.

5.3.1 Freeway Volumes

For the No Build Alternative (forecast year 2035), freeway volumes were estimated using growth rates derived from the PSRC Travel Demand Model: WSDOT Project Version. Growth rates were applied directly to existing traffic volumes along with minor refinements and modeled in VISSIM traffic simulation software. The VISSIM model framework was prepared and calibrated for existing conditions from the NE 130th Street interchange to the city of Lynnwood, just south of the I-405/I-5 interchange. Estimated 2035 freeway mainline and ramp volumes are shown in Figures 5-14, 5-15, and 5-16 for both the AM and PM peak hours.

Year 2035 I-5 mainline volumes between the NE 130th Street interchange and the city of Lynnwood are expected to increase by approximately 3 to 8 percent from existing conditions with the exception of the northbound (off-peak) direction in the AM peak hour, which are projected to increase by approximately 10 to 15 percent from existing conditions. These volume forecasts reflect higher growth in travel demand. The highest demand is expected in the northbound direction during the AM peak hour because in this segment I-5 is currently not operating at capacity and therefore has greater potential for growth.

Traffic volumes with each light rail alternative are mainly generated by station area trip activity, which includes traffic to and from the park-and-ride facilities and passenger pick-ups and drop-offs. Users destined for this station area are assumed to arrive at the station primarily through local streets and arterials. Changes in freeway operations with the light rail alternatives could result from reconstruction and geometric changes at the interchanges and, in some cases, congestion on the local streets could affect I-5 off-ramps and subsequently the I-5 mainline. NE 130th Street, NE 145th Street, and 200th Street SW are the three interchanges with proposed modifications to the interchange and/or ramp terminal intersections.

Freeway Speeds and Level of Service

By 2035, freeway operating conditions near the NE 130th Street and NE 145th Street interchange areas would degrade from current conditions which, as previously described, are already congested. Freeway speeds and densities are an output of the VISSIM analysis and are a direct reflection of congestion. LOS is calculated from the density estimates based on the *Highway Capacity Manual* methodology. Tables 5-16 and 5-17 show the AM peak hour freeway speeds and LOS for the No Build Alternative and light rail alternatives for Segment A in forecast year 2035, respectively; Tables 5-21 and 5-22 show PM peak hour speeds and LOS; and Figures 5-20, 5-21, and 5-22 indicate the freeway segment locations. The results are discussed below.

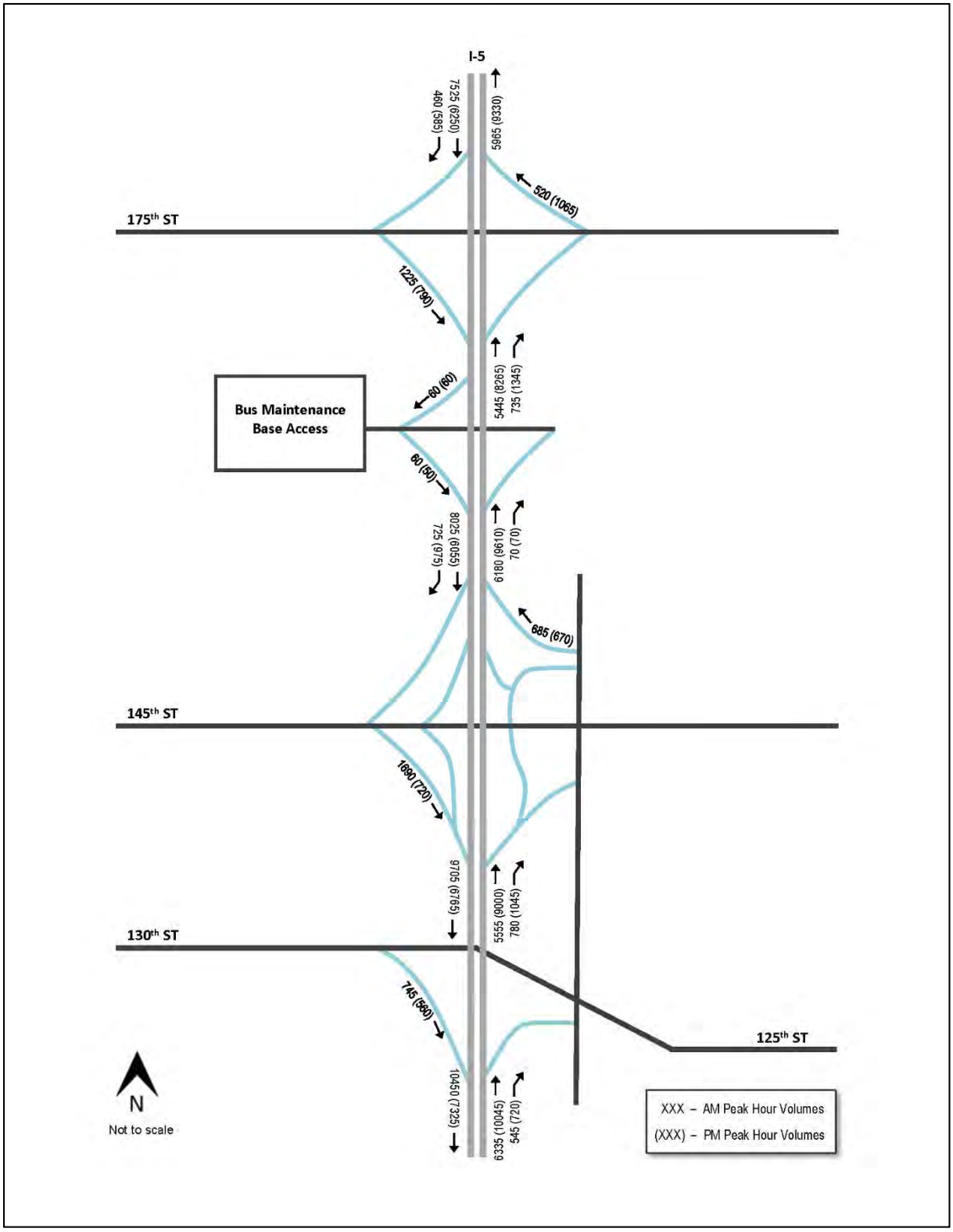


Figure 5-14. 2035 (Segment A) Peak Hour Freeway Volumes

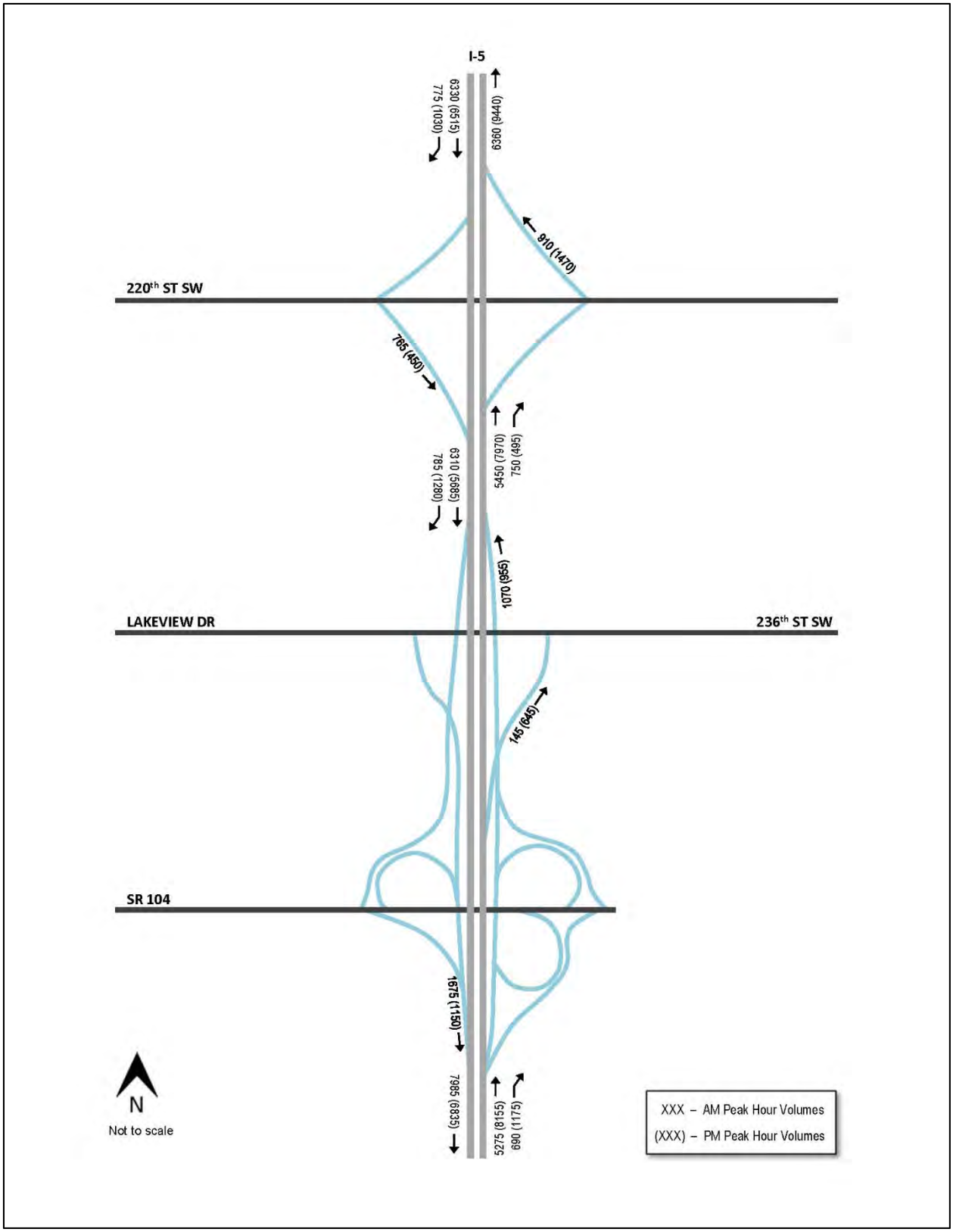


Figure 5-15. 2035 (Segment B) Peak Hour Freeway Volumes

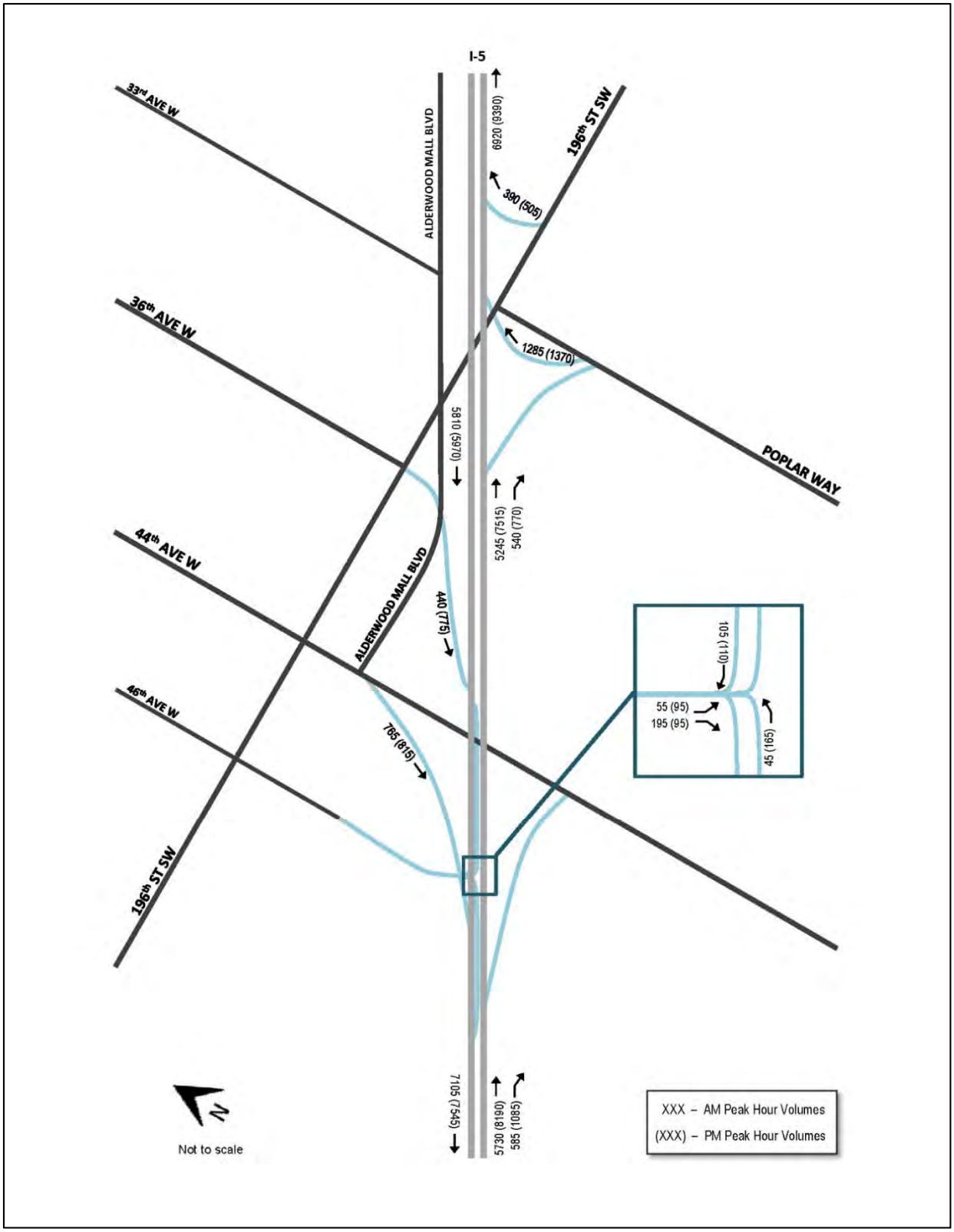


Figure 5-16. 2035 (Segment C) Peak Hour Freeway Volumes

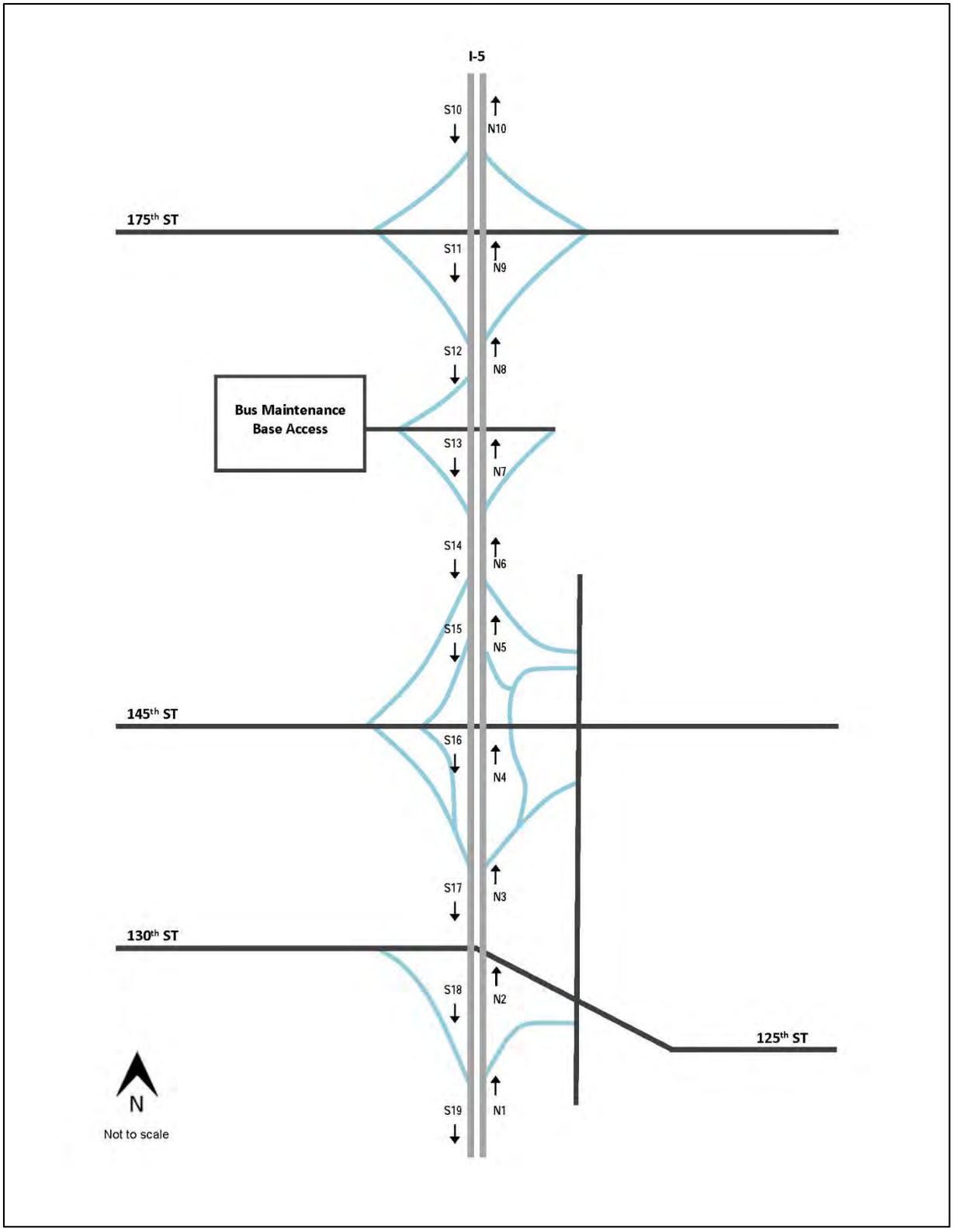


Figure 5-17. I-5 Freeway Segment IDs for Freeway Operations Analysis (Segment A)

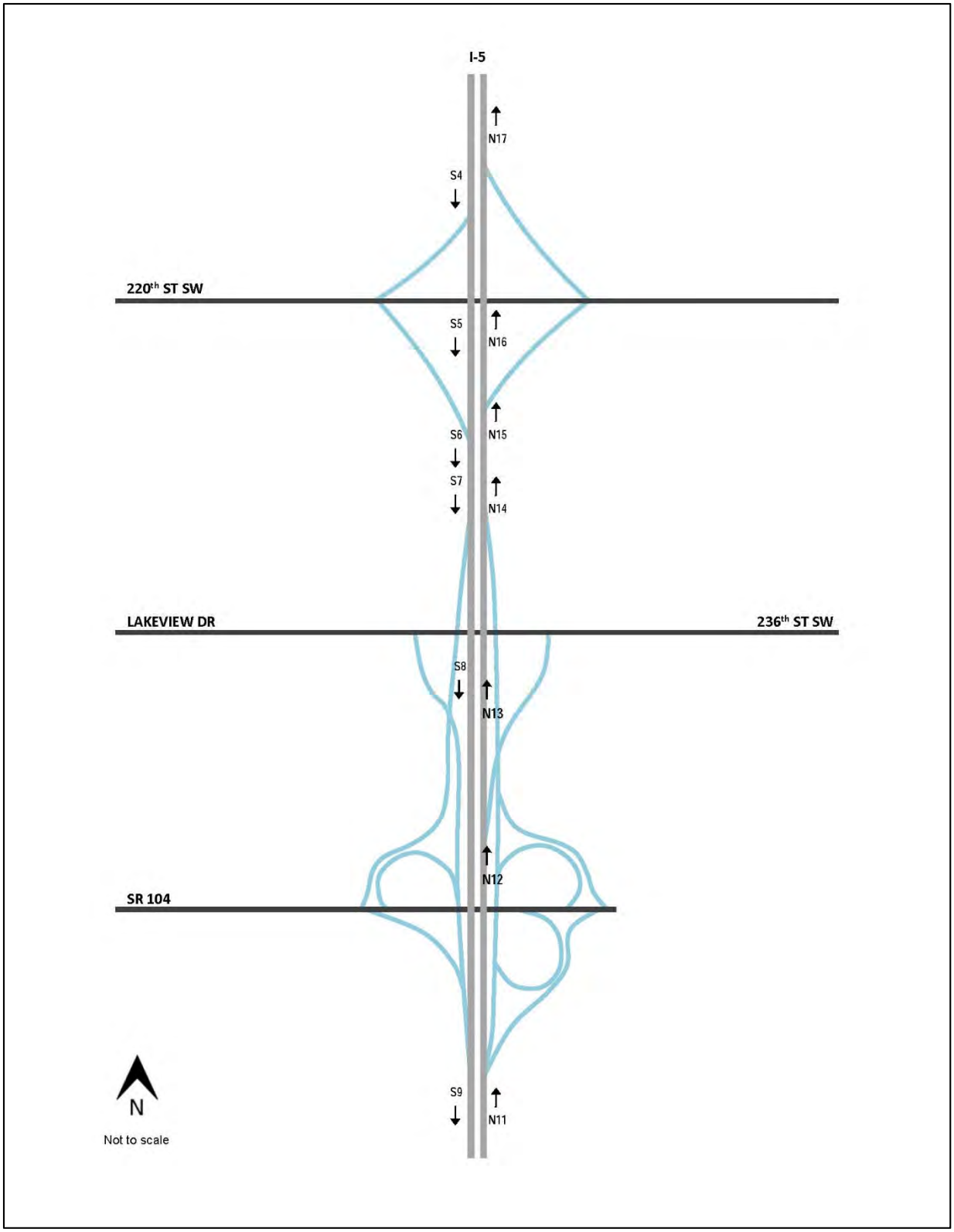


Figure 5-18. I-5 Freeway Segment IDs for Freeway Operations Analysis (Segment B)

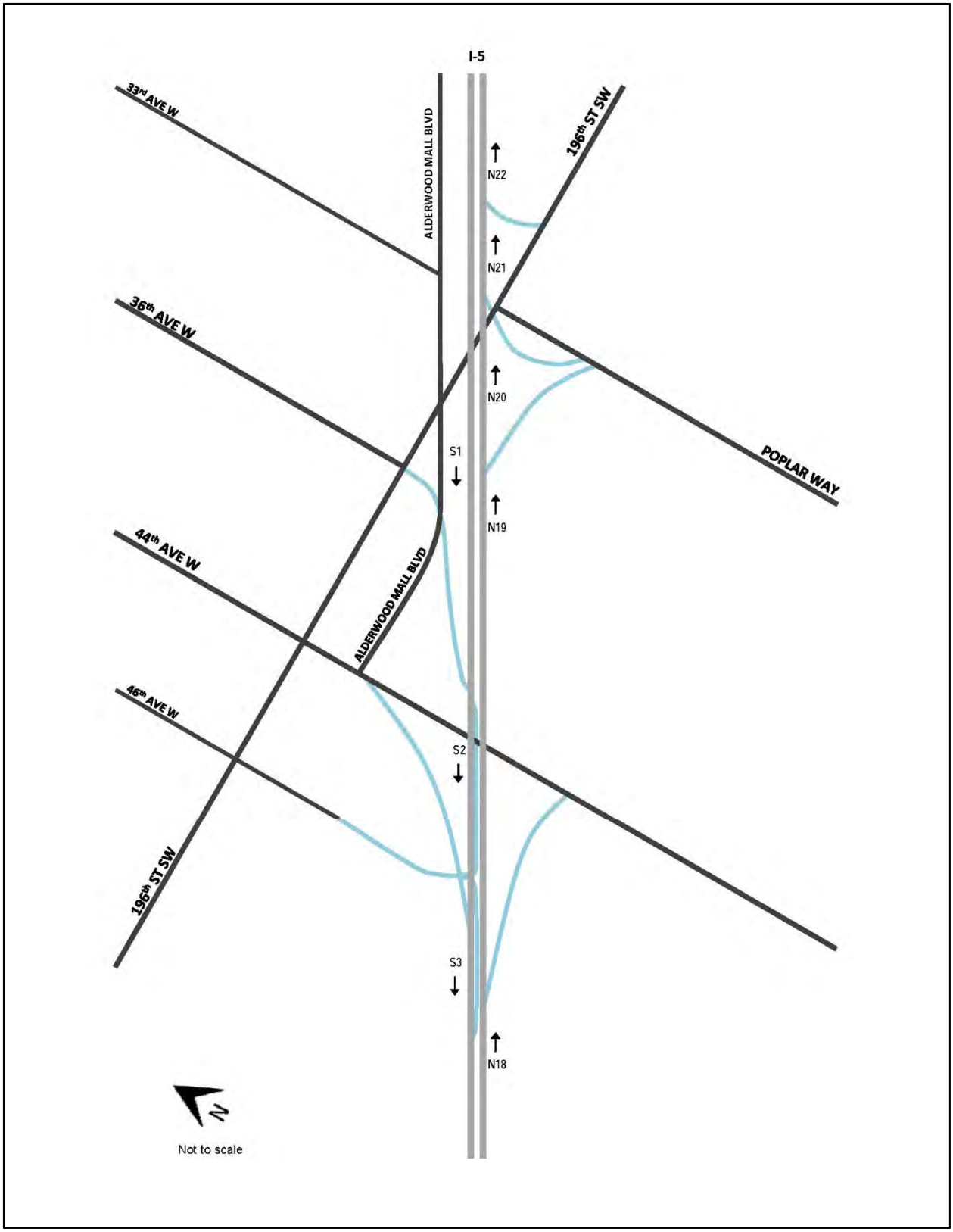


Figure 5-19. I-5 Freeway Segment IDs for Freeway Operations Analysis (Segment C)

Table 5-19. Forecast Year 2035 AM/PM Peak Hour Freeway Speeds (Segment A)

ID	I-5 Segment	Segment Type	No Build Alternative	Preferred Alternative	Preferred Alternative with Options[a]	Alternative A1	Alternative A3	Alternative A5	Alternative A7	Alternative A10	Alternative A11
N1	Northbound, Northgate on-ramp to NE 130th Street off-ramp	Weave	52 / 23	53 / 26	53 / 27	53 / 30	53 / 24	53 / 27	53 / 23	53 / 32	52/ 19
N2	Northbound, north of NE 130th Street off-ramp	Segment	52 / 29	52 / 27	52 / 27	52 / 30	52 / 32	52 / 28	52 / 29	52 / 32	52 / 31
N3	Northbound, NE 145th Street off-ramp	Diverge	51 / 26	51 / 25	51 / 25	51 / 27	51 / 30	51 / 26	51 / 26	51 / 28	51 / 28
N4	Northbound, NE 145th Street off-ramp to NE 145th Street on-ramp	Segment	56 / 22	56 / 23	56 / 22	56 / 25	56 / 29	56 / 22	56 / 23	56 / 25	56 / 26
N5	Northbound, north of NE 145th Street transit on-ramp	Merge	56 / 18	56 / 20	56 / 19	56 / 22	56 / 25	56 / 19	56 / 20	56 / 21	56 / 22
N6	Northbound, north of NE 145th Street on-ramp	Merge	54 / 17	54 / 19	54 / 17	54 / 20	54 / 22	54 / 17	54 / 18	54 / 19	54 / 20
N7	Northbound, north of NE 155th Street off-ramp	Segment	52 / 21	52 / 23	52 / 22	52 / 24	52 / 24	52 / 22	52 / 22	52 / 23	52 / 23
N8	Northbound, NE 175th off-ramp	Diverge	51 / 20	51 / 21	51 / 21	51 / 22	51 / 22	51 / 21	51 / 20	51 / 21	51 / 20
N9	Northbound, north of the Ne 175th off-ramp	Segment	53 / 26	52 / 29	53 / 37	53 / 36	53 / 30	53 / 33	53 / 37	53 / 32	53 / 28
N10	Northbound, north of the NE 175th on-ramp	Merge	53 / 22	53 / 26	53 / 32	53 / 32	53 / 27	53 / 29	53 / 32	53 / 28	53 / 25

Table 5-19. Forecast Year 2035 AM/PM Peak Hour Freeway Speeds (Segment A)

ID	I-5 Segment	Segment Type	No Build Alternative	Preferred Alternative	Preferred Alternative with Options[a]	Alternative A1	Alternative A3	Alternative A5	Alternative A7	Alternative A10	Alternative A11
S10	Southbound, north of NE 175th Street off-ramp	Diverge	32 / 55	30 / 56	30 / 56	30 / 56	32 / 56	27 / 56	30 / 56	29 / 55	32 / 55
S11	Southbound, south of NE 175th Street off-ramp	Segment	25 / 57	24 / 57	24 / 57	24 / 57	24 / 57	23 / 55	22 / 57	24 / 57	26 / 57
S12	Southbound, south of NE 175th Street on-ramp	Merge	28 / 53	29 / 54	27 / 52	27 / 53	27 / 54	25 / 50	28 / 53	26 / 53	27 / 53
S13	Southbound, south of NE 155th off-ramp	Segment	33 / 57	35 / 57	32 / 53	32 / 56	32 / 55	29 / 52	34 / 57	30 / 56	31 / 57
S14	Southbound, north of NE 145th Street off-ramp	Diverge	29 / 47	31 / 45	28 / 42	28 / 45	29 / 46	27 / 43	31 / 46	28 / 41	28 / 47
S15	Southbound, north of NE 145th Street transit off-ramp	Diverge	31 / 54	30 / 53	28 / 53	28 / 53	28 / 54	26 / 53	28 / 53	27 / 52	28 / 53
S16	Southbound, NE 145th Street off-ramp to NE 145th Street on-ramp	Segment	24 / 58	25 / 58	23 / 58	23 / 58	23 / 58	22 / 58	24 / 58	22 / 58	23 / 58
S17	Southbound, south of NE 145th Street on-ramp	Merge	19 / 58	20 / 58	18 / 58	18 / 58	19 / 58	18 / 58	19 / 58	18 / 58	18 / 58
S18	Southbound, north of NE 130th Street on-ramp	Segment	17 / 58	18 / 58	17 / 58	17 / 58	17 / 58	17 / 58	18 / 58	17 / 58	17 / 58
S19	Southbound, south of NE 130th Street on-ramp	Merge	23 / 52	24 / 52	22 / 52	22 / 52	23 / 53	23 / 52	23 / 52	22 / 52	22 / 53

[a] Preferred Alternative with options includes a NE 130th Street Station.

Table 5-20. Forecast Year 2035 AM/PM Peak Hour Freeway LOS (Segment A)

ID	I-5 Segment	Segment Type	No Build Alternative	Preferred Alternative	Preferred Alternative with Options*	Alternative A1	Alternative A3	Alternative A5	Alternative A7	Alternative A10	Alternative A11
N1	Northbound, Northgate on-ramp to NE 130th Street off-ramp	Weave	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F
N2	Northbound, north of NE 130th Street off-ramp	Segment	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / E
N3	Northbound, NE 145th Street off-ramp	Diverge	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F
N4	Northbound, NE 145th Street off-ramp to NE 145th Street on-ramp	Segment	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F
N5	Northbound, north of NE 145th Street transit on-ramp	Merge	B / F	B / F	B / F	B / F	B / F	B / F	B / F	B / F	B / F
N6	Northbound, north of NE 145th Street on-ramp	Merge	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F
N7	Northbound, north of NE 155th Street off-ramp	Segment	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F
N8	Northbound, NE 175th off-ramp	Diverge	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F
N9	Northbound, north of the Ne 175th off-ramp	Segment	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F
N10	Northbound, north of the NE 175th on-ramp	Merge	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F	C / F

Table 5-20. Forecast Year 2035 AM/PM Peak Hour Freeway LOS (Segment A)

ID	I-5 Segment	Segment Type	No Build Alternative	Preferred Alternative	Preferred Alternative with Options*	Alternative A1	Alternative A3	Alternative A5	Alternative A7	Alternative A10	Alternative A11
S10	Southbound, north of NE 175th Street off-ramp	Diverge	F / D	F / D	F / D	F / D	F / D	F / D	F / D	F / D	F / D
S11	Southbound, south of NE 175th Street off-ramp	Segment	F / D	F / D	F / D	F / D	F / D	F / D	F / D	F / D	F / D
S12	Southbound, south of NE 175th Street on-ramp	Merge	F / D	F / D	F / D	F / D	F / D	F / D	F / D	F / D	F / D
S13	Southbound, south of NE 155th off-ramp	Segment	F / D	F/ D	F/ D	F / D	F / D	F / D	F / D	F / D	F / D
S14	Southbound, north of NE 145th Street off-ramp	Diverge	F / E	F / E	F / E	F / E	F / E	F / E	F / E	F / E	F / E
S15	Southbound, north of NE 145th Street transit off-ramp	Diverge	F / D	F / D	F / D	F / D	F / D	F / D	F / D	F / D	F / D
S16	Southbound, NE 145th Street off-ramp to NE 145th Street on-ramp	Segment	F / C	F / C	F / C	F / C	F / C	F / C	F / C	F / C	F / C
S17	Southbound, south of NE 145th Street on-ramp	Merge	F / C	F / C	F / C	F / C	F / C	F / C	F / C	F / C	F / C
S18	Southbound, north of NE 130th Street on-ramp	Segment	F / C	F / C	F / C	F / C	F / C	F / C	F / C	F / C	F / C
S19	Southbound, south of NE 130th Street on-ramp	Merge	F / C	F / C	F / C	F / C	F / C	F / C	F / C	F / C	F / C

* Preferred Alternative with options includes a NE 130th Street Station

Table 5-21. Forecast Year 2035 AM/PM Peak Hour Freeway Speeds (Segment B)

ID	I-5 Segment	Segment Type	No Build Alternative	Preferred Alternative	Preferred Alternative w/ Options*
N11	Northbound, SR 104 off-ramp	Diverge	53 / 18	53 / 19	53 / 21
N12	Northbound, 236th Street SW off-ramp	Diverge	53 / 33	53 / 28	53 / 28
N13	Northbound, north of 236th Street SW off-ramp	Segment	53 / 26	54 / 24	55 / 23
N14	Northbound, SR 104 on-ramp	Merge	44 / 36	48 / 34	48 / 33
N15	Northbound, 220th Street SW off-ramp	Diverge	50 / 43	46 / 38	44 / 37
N16	Northbound, north of 220th Street SW off-ramp	Segment	54 / 47	54 / 44	54 / 43
N17	Northbound, 220th Street SW on-ramp	Merge	53 / 40	53 / 39	54 / 40
S4	Southbound, 220th Street SW off-ramp	Diverge	54 / 47	52 / 49	52 / 49
S5	Southbound, south of 220th Street SW off-ramp	Segment	57 / 57	57 / 57	57 / 57
S6	Southbound, 220th Street SW on-ramp	Merge	52 / 53	52 / 52	52 / 52
S7	Southbound, SR 104 off-ramp	Diverge	56 / 54	56 / 54	56 / 53
S8	Southbound, south of SR 104 off-ramp	Segment	57 / 58	58 / 58	54 / 58
S9	Southbound, SR 104 on-ramp	Merge	32 / 56	33 / 56	31 / 57

* Preferred Alternative with options includes a 220th Street Station with a 200 space park-and-ride lot

Table 5-22. Forecast Year 2035 AM/PM Peak Hour Freeway LOS (Segment B)

ID	I-5 Segment	Segment Type	No Build Alternative	Preferred Alternative	Preferred Alternative w/ Options*
N11	Northbound, SR 104 off-ramp	Diverge	C / F	C / F	C / F
N12	Northbound, 236th Street SW off-ramp	Diverge	C / F	C / F	C / F
N13	Northbound, north of 236th Street SW off-ramp	Segment	C / F	C / F	C / F
N14	Northbound, SR 104 on-ramp	Merge	D / F	D / F	D / F
N15	Northbound, 220th Street SW off-ramp	Diverge	D / E	D / F	D / F
N16	Northbound, north of 220th Street SW off-ramp	Segment	C / E	C / E	C / E
N17	Northbound, 220th Street SW on-ramp	Merge	C / E	C / F	C / F
S4	Southbound, 220th Street SW off-ramp	Diverge	D / E	D / E	D / E
S5	Southbound, south of 220th Street SW off-ramp	Segment	D / D	D / D	D / D
S6	Southbound, 220th Street SW on-ramp	Merge	D / D	D / D	D / D
S7	Southbound, SR 104 off-ramp	Diverge	D / D	D / D	D / D
S8	Southbound, south of SR 104 off-ramp	Segment	D / C	D / C	D / C
S9	Southbound, SR 104 on-ramp	Merge	F / D	F / D	F / D

* Preferred Alternative with options includes a 220th Street Station with a 200-space park-and-ride lot.

Table 5-23. Forecast Year 2035 AM/PM Peak Hour Freeway Speeds (Segment C)

ID	I-5 Segment	Segment Type	No Build Alternative	Preferred Alternative	Preferred Alternative with 400 additional parking spaces
N18	Northbound, 44th Avenue West off-ramp	Diverge	51 / 38	52 / 37	51 / 41
N19	Northbound, 196th Street SW off-ramp	Diverge	51 / 39	51 / 37	51 / 39
N20	Northbound, north of 196th Street SW off-ramp	Segment	54 / 48	55 / 48	55 / 48
N21	Northbound, 196th Street SW eastbound on-ramp	Merge	56 / 51	56 / 51	56 / 52
N22	Northbound, 196th Street SW westbound on-ramp	Merge	54 / 44	55 / 44	55 / 45
S1	Southbound, north of 196th Street SW on-ramp	Segment	58 / 58	58 / 58	58 / 58
S2	Southbound, 196th Street SW on-ramp	Merge	57 / 55	57 / 56	57 / 56
S3	Southbound, 44th Avenue W on-ramp	Merge	56 / 56	56 / 56	56 / 56

Table 5-24. Forecast Year 2035 AM/PM Peak Hour Freeway LOS (Segment C)

ID	I-5 Segment	Segment Type	No Build Alternative	Preferred Alternative	Preferred Alternative with 400 additional parking spaces
N18	Northbound, 44th Avenue West off-ramp	Diverge	C / F	C / F	C / E
N19	Northbound, 196th Street SW off-ramp	Diverge	D / F	D / F	D / F
N20	Northbound, north of 196th Street SW off-ramp	Segment	C / E	C / D	C / D
N21	Northbound, 196th Street SW eastbound on-ramp	Merge	C / D	C / D	C / D
N22	Northbound, 196th Street SW westbound on-ramp	Merge	C / E	C / E	C / E
S1	Southbound, north of 196th Street SW on-ramp	Segment	C / C	C / C	C / C
S2	Southbound, 196th Street SW on-ramp	Merge	C / D	C / D	C / D
S3	Southbound, 44th Avenue West on-ramp	Merge	C / C	C / C	C / C

Freeway Operations for the No Build Alternative

During the AM peak hour, average vehicle speeds on southbound I-5 would be approximately 35 mph or slower with the No Build Alternative (forecast year 2035) south of the SR 104 interchange. As with existing conditions, mainline congestion would be the result of high levels of entering and exiting traffic. The southbound on-ramps at NE 145th Street and SR 104 draw heavy demands that cause reduced speeds at critical merge areas. In the northbound (off-peak) direction, I-5 would operate with average speeds ranging from 44 mph to 56 mph. These congested conditions for the southbound direction are also reflected in the LOS ratings that are LOS D to F. The northbound direction would generally operate at LOS C, indicating free-flow conditions.

During the PM peak hour, average northbound travel speeds would range from approximately 17 mph south of the NE 130th Street off-ramp to approximately 51 mph in Lynnwood. I-5 would continue to operate under highly congested conditions (LOS E and F), with high volumes of merging and diverging traffic causing delay and spillback on the I-5 mainline. In particular, merging and diverging activity near the off-ramps to NE 130th Street, NE 175th Street, and SR 104 would cause noticeable mainline disruptions with average speeds reducing to 20 mph or less.

Southbound (off-peak) speeds on I-5 would range from approximately 45 mph to 55 mph within the area analyzed. On the freeway mainline segment approaching NE 145th Street, southbound off-ramp volumes would cause delays and queues that extend onto the freeway mainline. Similar to existing conditions, I-5 traffic south of the NE 130th Street and Northgate interchanges would slow noticeably in the PM peak hour caused by the HOV lane merging into the general purpose lanes (due to the express lanes operating northbound during this time period), traffic from the Northgate interchange merging in, a lane drop to NE 85th/80th Streets, and congestion-related backups from as far south as downtown Seattle and beyond. This level of congestion is expected to become worse in the future and would result in unstable and unreliable flow conditions, travel times, and speeds.

Freeway Operations for the Light Rail Alternatives

Segment A: Seattle to Shoreline

For the Preferred Alternative during the AM peak hour, freeway speeds and operations are not expected to be affected by the additional traffic generated by the park-and-ride lot at the NE 145th Street Station because few trips to and from the light rail station are expected to use I-5. Some additional congestion is anticipated along the local arterials but this is not expected to affect I-5 operations. For the other light rail alternatives for Segment A, the freeway operations are not anticipated

to be affected by the traffic generated from the light rail station. In addition to speeds and LOS, the vehicle throughput on I-5 is similar under the No Build Alternative and all the light rail alternatives.

Similar to the AM peak hour, the Preferred Alternative in the PM peak hour is not anticipated to increase congestion along I-5. However, operations along northbound I-5 at NE 130th Street off-ramp would improve due to the grade separation of the northbound NE 130th Street off-ramp with southbound 5th Avenue NE and the resulting removal of the off-ramp stop control at the intersection with 5th Avenue NE. Northbound travel speeds approaching NE 130th Street could improve by approximately 5 mph. Speeds north of this off-ramp could decrease as increased traffic throughput is facilitated due to the removal of the bottleneck at the off-ramp, but not due to increased congestion at the interchanges to the north. The travel times along I-5 from south of the NE 130th Street interchange to north of the NE 145th Street interchange are not anticipated to change as a result of the Preferred Alternative. The three at-grade alternatives (Alternatives A1, A5, and A10) would operate similar to the Preferred Alternative at the NE 130th Street off-ramp due to the ramp reconfiguration. Alternatives A7 and A11, with an elevated guideway and a station at NE 130th Street, do not include the NE 130th Street off-ramp reconstruction and would potentially result in degraded I-5 operations as the existing ramp terminus configuration could be affected by local street congestion.

During the PM peak hour in the southbound direction, speeds on I-5 for the Preferred Alternative are not anticipated to decrease. The local street congestion at the NE 145th Street Station is not anticipated to spill back onto I-5. With the exception of Alternative A10, the other alternatives are not anticipated to affect I-5 operations. Alternative A10 includes a different NE 145th Street Station configuration than the Preferred Alternative and an additional 150 parking stalls could cause a slight decrease in I-5 speeds approaching the southbound off-ramp. The increased local street traffic associated with the park-and-ride facility would cause increased intersection delay that could worsen the congestion on the southbound NE 145th Street off-ramp and on I-5 near the ramp diverge. The increase in travel times for southbound I-5 trips between NE 155th Street and NE 145th Street is estimated at less than a minute. This slight increase in delay would be eliminated with mitigation. Potential measures for mitigating these impacts focus on improving local street intersection operations, which are described in Section 9.3, Freeway, in Chapter 9, Potential Mitigation Measures.

In addition, the project would likely reduce the number of buses in the I-5 HOV lanes, which would create additional HOV capacity and improve HOV operations and speeds compared with the No Build Alternative. The benefits to the HOV lane would likely be similar for all light rail alternatives.

Segment B: Shoreline to Mountlake Terrace

The Preferred Alternative between Shoreline and Mountlake Terrace is not anticipated to generate additional trips along I-5. Trips generated by the NE 185th Street and Mountlake Terrace Stations are anticipated to use the local arterial system to access the stations. Therefore, I-5 volumes are expected to be similar to the No Build Alternative. At the 220th Street SW interchange, the Preferred Alternative moves the southbound ramp terminus intersection farther east. This change in configuration does not affect the merge-and-diverge areas with I-5 but reduces the distance between the northbound and southbound ramp intersections at 220th Street SW. Queuing and storage distance between the two intersections is expected to be sufficient and not cause any additional delay along 220th Street SW or to the I-5 ramps.

In addition, an analysis of the Preferred Alternative with an optional 220th Station was performed for I-5. This alternative has a station at 220th Street SW but does not move the southbound ramp terminus intersection. Similar to the Preferred Alternative, impacts on I-5 are not anticipated as a result of a station at 220th Street SW.

Segment C: Mountlake Terrace to Lynnwood

The four segment C alternatives, including the Preferred Alternative, for the Lynnwood Station are expected to have similar operations along I-5 because the trip generation and station access to the arterial system is the same across the alternatives. The majority of trips being generated by the additional park-and-ride capacity would use the local arterial system. However, some trips are anticipated to use I-5 via the 44th Avenue West ramps, the 196th Street SW ramps, or the HOV direct access ramps to access the station. These additional I-5 trips are projected to be very minor and have minimal effect on I-5 operations. The additional surface street traffic is not projected to cause spillback onto the ramps. The AM and PM peak hour speeds and vehicle throughput are similar for the No Build Alternative and light rail alternatives.

An analysis was performed along I-5 for the Preferred Alternative with an options scenario that includes an additional 400 park-and-ride spaces over the capacity the Preferred Alternative provides. The increase in traffic would cause some additional congestion along the arterial streets but this is not anticipated to affect I-5 operations.

The remaining alternatives are expected to have similar I-5 operations to the Preferred Alternative.

5.4 Arterials and Local Streets

This section describes the impacts of the No Build Alternative, the Preferred Alternative and other light rail alternatives on arterials and local streets. The evaluation included development of forecast year 2035 traffic volumes, LOS analysis,

and identification of changes to access and circulation that would result from the project alternatives. The focus of the analysis in this section is on areas around each proposed station and along the alternative routes. Key observations and findings related to this section include the following:

- Background traffic volumes through the project corridor are expected to increase by approximately 0.7 to 1.3 percent per year between 2012 and 2035, with the highest growth anticipated in Segment C.
- The amount of traffic generated by the project is projected to be the highest at stations providing the greatest number of new park-and-ride spaces. These include the NE 145th Street, NE 155th Street, NE 185th Street, and Lynnwood Transit Center Stations. Overall, trip generation is expected to be the highest at the Lynnwood Transit Center Station because this station would serve as the northern terminus of the Lynnwood Link Extension, provide the highest overall number of park-and-ride spaces, and is expected to generate the highest station ridership.
- In 2035, intersections near the proposed light rail stations are expected to operate at LOS conditions similar to the No Build Alternative. Exceptions exist primarily near the Segment A stations, with a few isolated locations in Segment C.

5.4.1 Traffic Volume Forecasts

No Build Alternative

Travel demand forecasts for 2035 were developed for the Lynnwood Link Extension based on PSRC's current population and land use forecasts. The methodology used in developing these forecasts is described in detail in the *Transit Ridership Forecasting Interim Technical Report* (Sound Transit 2012).

Existing turning-movement count information and annual compounded growth rates developed from the Lynnwood Link Extension travel demand model were used to develop 2035 AM and PM peak-hour turning movements for the study intersections.

Overall, by 2035, traffic volumes in Segment A for the No Build Alternative are predicted to increase by an average annual growth rate of approximately 0.8 percent in the AM and PM peak hours. Traffic volumes in Segment B are projected to increase by approximately 0.9 percent and 0.7 percent per year in the AM and PM peak hours, respectively. In Segment C, traffic volumes are expected to increase by approximately 1.3 percent and 1 percent in the AM and PM peak hours, respectively. Traffic volumes are summarized for the No Build and Build Alternatives in Appendix C.

Light Rail Alternatives

For the light rail alternatives (including the Preferred Alternative), trips generated by light rail station usage were calculated for each station and added to the No Build Alternative's estimated volumes for 2035. Trip generation for each station comprises automobile trips to and from park-and-ride lots, passenger drop-off/pick-up trips, and new bus trips.

For the light rail alternatives, additional traffic would be generated by new or modified park-and-ride facilities. Table 5-25 shows existing and proposed park-and-ride capacities associated with each station. As shown in Table 5-25, park-and-ride spaces would be provided at all stations, except at the NE 130th Street Station with Alternative A10. For stations with park-and-ride lots, the number of park-and-ride spaces provided is expected to increase over existing capacities at all stations except the Mountlake Terrace Station. This station would maintain the number of existing parking spaces except with Alternative B1 with option.

For all proposed park-and-ride stations, it was assumed that the number of new park-and-ride vehicle trips generated during a 3-hour peak period would be equal to the net increase in park-and-ride stalls provided at each station. If the park-and-ride facility is an existing lot, the total number of new park-and-ride trips is the difference between the total number of proposed stalls and the total number of existing stalls. This assumption was applied to all park-and-ride lots in the study area and provides a conservatively high assessment of traffic impacts near the stations because all available parking stalls are assumed to be fully utilized. For the traffic analysis, it was assumed that 0.50 trips per occupied space would be generated during the AM peak hour and 0.45 trips per occupied space would be generated during the PM peak hour. These rates are consistent with survey data from Sound Transit's commuter rail stations, Central Link light rail park-and-ride, and trip generation from light rail transit park-and-ride lots in other rail systems in the United States.

Vehicle trips generated by passenger drop-off/pick-up activity are not constrained by the number of parking spaces at the park-and-ride lots and instead are more directly related to station ridership and mode of access. The Sound Transit Ridership Model was used to assign ridership to various modes of travel based on data from the 2008 BART Station Profile Study and recent data collected from the Tukwila park-and-ride station. Using this method, 16 percent of the total PM peak period ridership at each proposed station was used to calculate the estimated passenger drop-off/pick-up volumes.

Bus route trips were estimated from King County Metro's and Community Transit's conceptual 2025 transit integration plans to support planning for the Lynnwood Link Extension.

In general, the highest trip-generating stations are those providing the highest number of new park-and-ride spaces. These include the NE 145th Street, NE 155th Street, NE 185th Street, and Lynnwood Transit Center Stations. Overall, trip generation is expected to be the highest at the Lynnwood Transit Center Station because this station would serve as the northern terminus of the Lynnwood Link Extension, provide the highest overall number of park-and-ride spaces, and is expected to generate the highest station ridership.

The peak-hour vehicle trips generated at each proposed station area were assigned to study area roadways and intersections based on existing travel patterns, station access, and bus route assumptions provided by King County and/or Community Transit for each station.

Table 5-25. Existing and Proposed Park-and-Ride Capacity

Segment/Station	Station Option	Alternative	Number of Park-and-Ride Spaces		
			Existing	Proposed	Net Change
Segment A					
NE 130th Street Station	Option 1—At-grade, with park-and-ride	Preferred Alternative with option, A5	46	100[a]	+54
	Option 1—At-grade, no park-and-ride	A10,	46	0	-46
	Option 2—Elevated	A7, A11	46	142	+96
NE 145th Street Station	Option 1—Elevated, 500 park-and-ride spaces	A1	68	500	+432
	Option 1—Elevated, 650 park-and-ride spaces	A10	68	650	+582
	Option 2—Elevated	Preferred Alternative, A3, A11	68	500	+432
NE 155th Street Station	Elevated	A5, A7	0	500	+500
NE 185th Street Station	Options 1 and 2	Preferred Alternative, A1, A3, A7, A11	0	500	+500
	Option 3	A5, A10	0	350	+350
Segment B					
Mountlake Terrace Station	Transit Center Station—Elevated	Preferred Alternative, B1, B2A	880	880	0
	Freeway Station—At-Grade	B4	880	880	0
Mountlake Terrace Station	Transit Center Station—Elevated	B1 with option	880	1,160	+280
220th Street Station—Optional	Elevated	Preferred Alternative with option, B2A	0	200	+200
Segment C					
Lynnwood Transit Center Station	200th Street SW—Elevated	C1	1,370	1,900	+530
	Transit Center—Elevated	C2	1,370	1,900	+530
	Park-and-Ride Option 1—Elevated	C3 (Option 1)	1,370	1,900	+530
	Park-and-Ride Option 2—Elevated	Preferred Alternative, C3 Modified	1,370	1,900	+530
	Park-and-Ride Option 2—Elevated	Preferred Alternative with option	1,370	2,400	+1,030

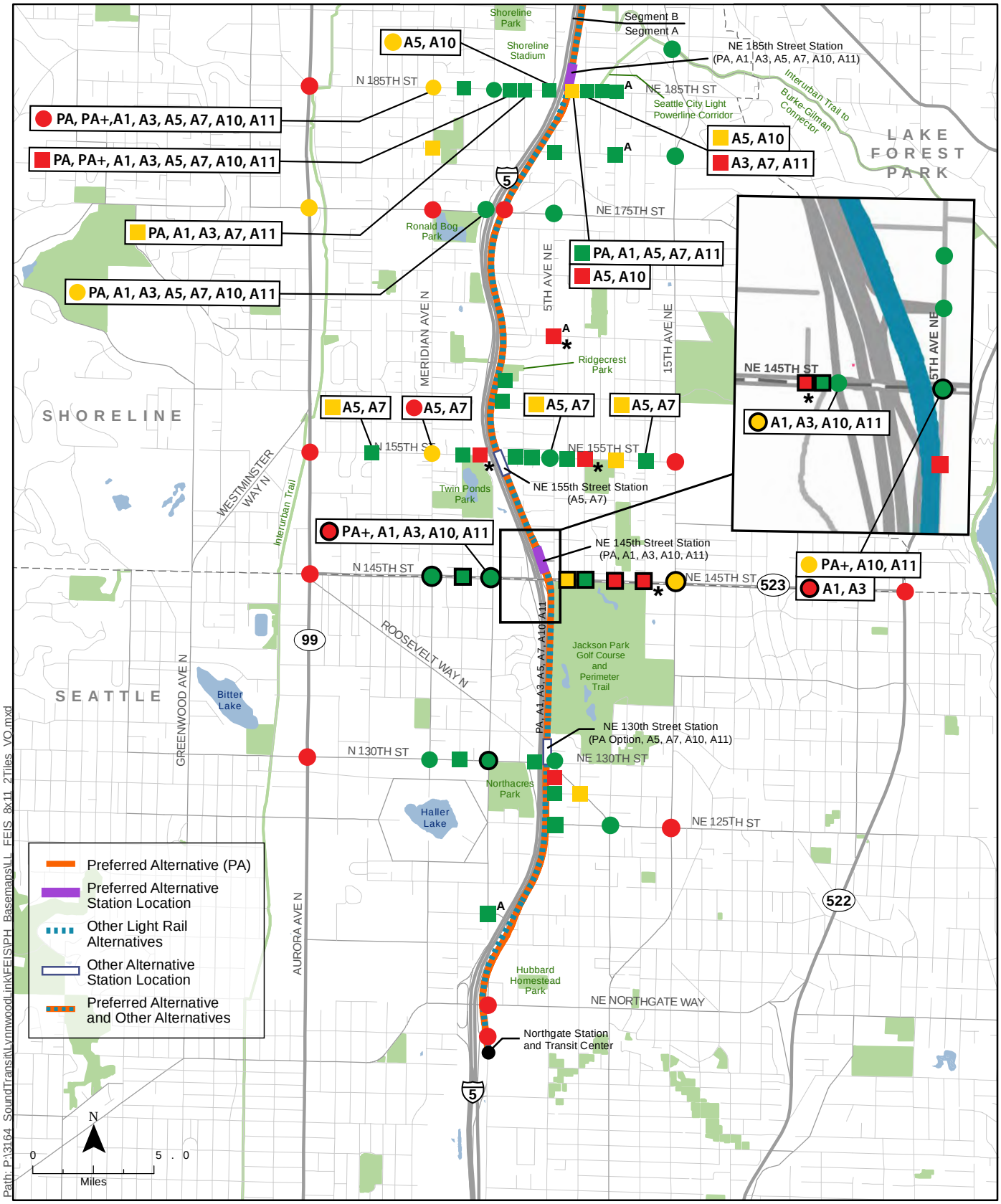
[a] Possible surface parking lot available for lease located adjacent to the station.

5.4.2 Traffic Operations

The traffic operations analysis compares the No Build Alternative and light rail alternatives in forecast year 2035 in the study area. Sound Transit selected the locations evaluated with input from the affected jurisdictions. These locations include intersections in areas that would be most directly affected—such as by a change in channelization or signal control—as well as those indirectly affected by a change in traffic volume caused by trips accessing the light rail system. The latter includes intersections surrounding transit stations with proposed increases in park-and-ride lot capacity and passenger pick-up/drop-off activity. In total, more than 108 intersections were analyzed for the three segments. A Synchro version 7.0 model was used to determine LOS at all of the signalized and unsignalized intersections, with the exception of intersections at the NE 130th Street and NE 145th Street interchanges between 1st Avenue NE and 5th Avenue NE, and intersections in the Lynnwood City Center. VISSIM version 5.40 was used to analyze these intersections because it better captures the queue interactions between intersections. The LOS at signalized intersections is defined in terms of average delay per vehicle, based on the definitions described in the 2000 *Highway Capacity Manual*. These definitions are shown in Table 4-17 in Section 4.4, Arterials and Local Streets, of Chapter 4, Affected Environment. Detailed LOS analysis reports for each intersection are provided in Appendix C.

In most cases, the signal timing plans provided by the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood were used to analyze the No Build Alternative and the light rail alternatives for forecast year 2035. Where appropriate, minor changes were made to the existing signal timing and phasing plans to model the future conditions. Figures 5-20 through 5-23 summarize the PM and AM peak hour intersection LOS analysis results for the No Build Alternative (in forecast year 2035), and indicate where the light rail alternatives would cause LOS to degrade below standards if not effectively mitigated. Several intersections analyzed within the Shoreline city limits are not subject to the City's LOS standard. In these cases, LOS D was still used as a threshold for identifying potential congestion issues.

In most locations, intersections near proposed stations are expected to operate at an LOS similar to the No Build Alternative. Exceptions are shown in Figures 5-20 through 5-23. For the NE 130th and NE 145th Street areas, Synchro analysis results were supplemented by results from the VISSIM model that was used to assess freeway and interchange area operations for these two locations. Impacts specific to each segment and alternative are described in the following subsections. Potential measures for mitigating these impacts are described in Section 9.4, Arterials and Local Streets, in Chapter 9, Potential Mitigation Measures.



Intersection Level of Service

Seattle, Shoreline & WSDOT HSS[1]	WSDOT non-HSS[1]
A-C	A-D
D	E
E-F	F

[1]HSS = Highways of Statewide Significance

Project LOS (If different from No Build) — No Build LOS

Alt(s)

PA Preferred Alternative
PA+ Preferred Alternative with Options

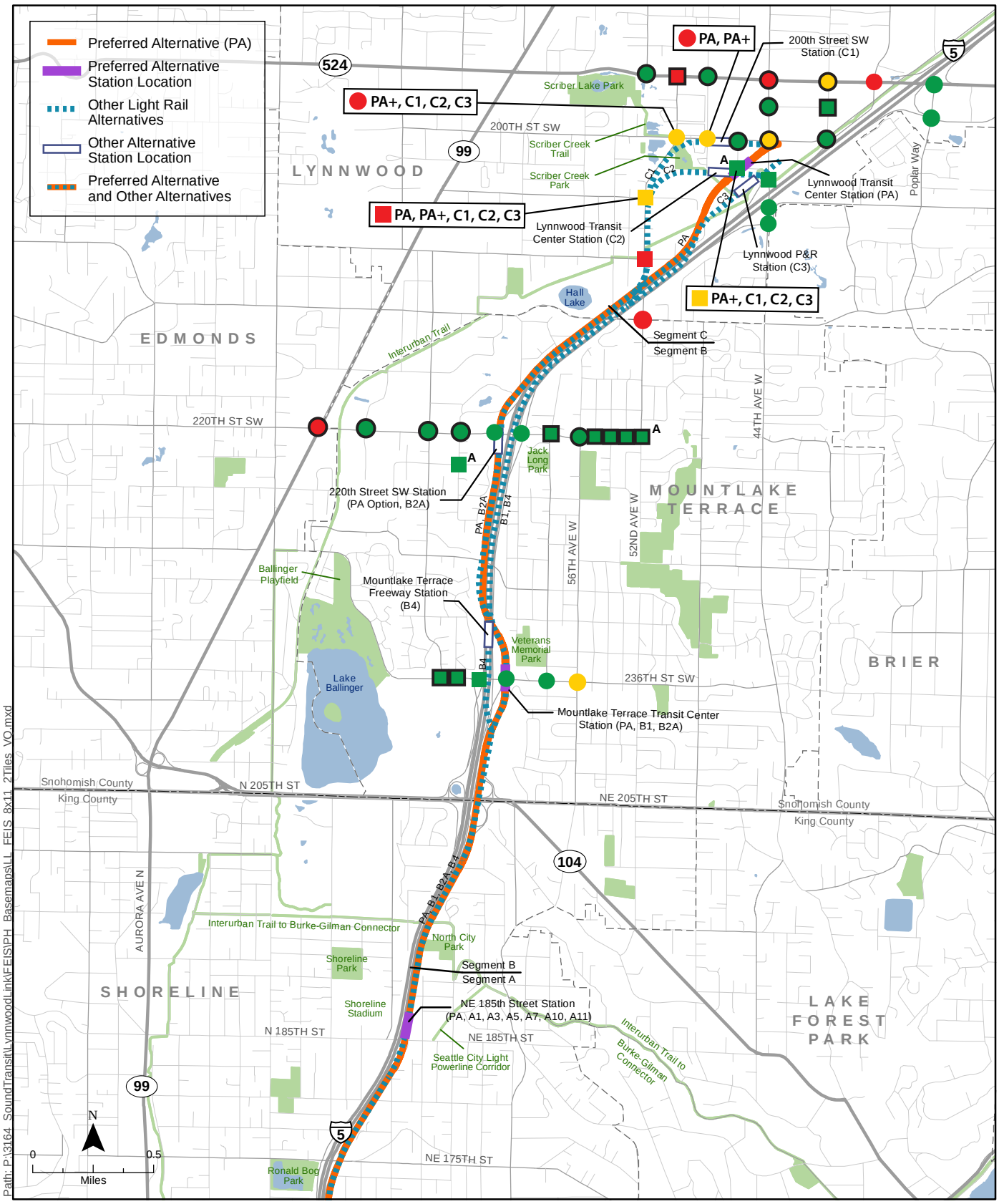
* Intersection exceeds agency LOS standard with No Build Alternative and Project Alternative(s) increase delay.

Intersection Type

- Signalized
- Two-Way Stop Controlled
- A All-Way Stop Controlled

Figure 5-20.
Segment A Seattle to Shoreline 2035 PM Peak Hour Intersection LOS

Lynnwood Link Extension



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Intersection Level of Service

Seattle, Shoreline & WSDOT HSS[1]	WSDOT non-HSS[1]
A-C	A-D
D	E
E-F	F

[1]HSS = Highways of Statewide Significance

Project LOS (If different from No Build)

No Build LOS

Alt(s)

PA Preferred Alternative

PA+ Preferred Alternative with Options

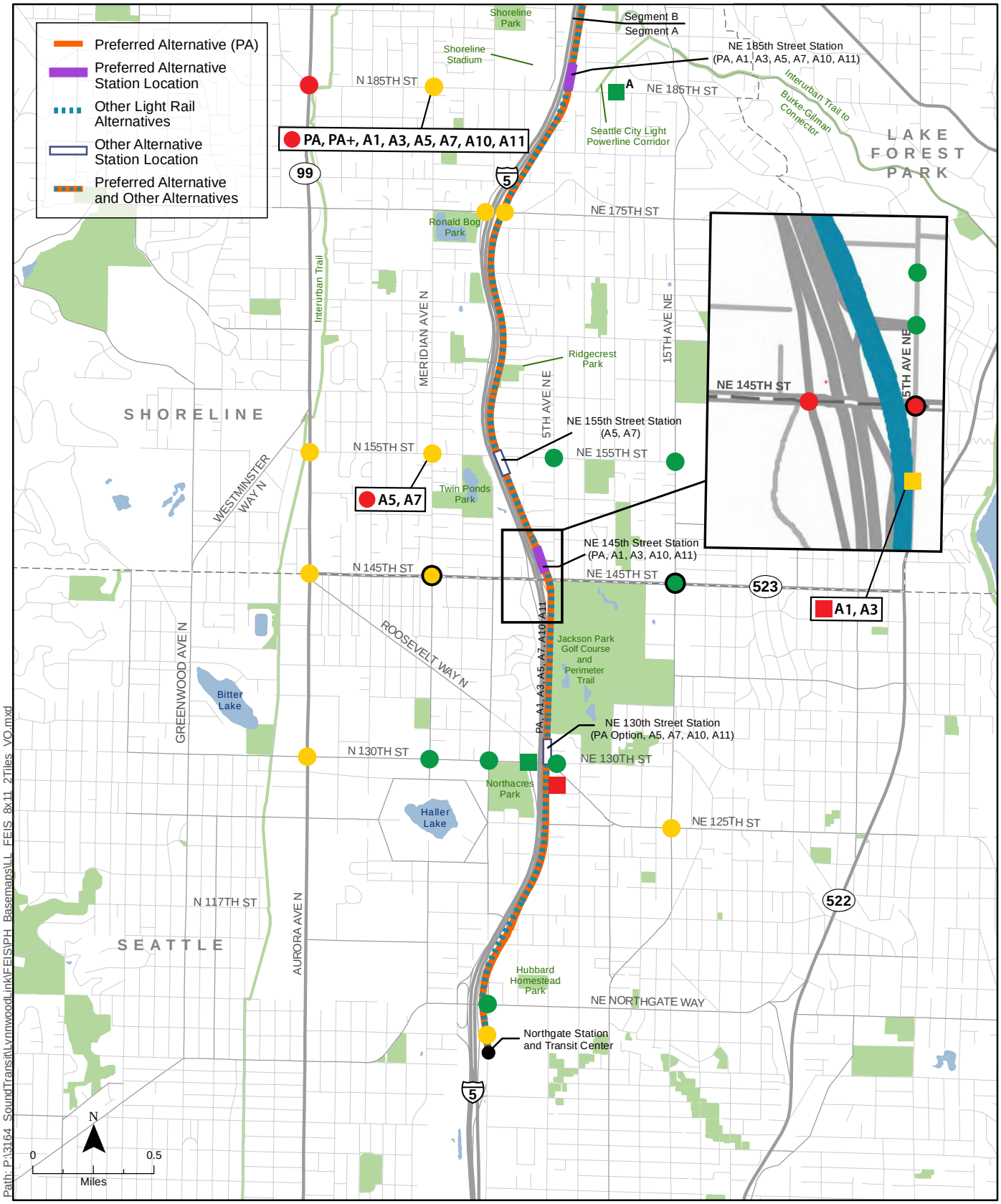
* Intersection exceeds agency LOS standard with No Build Alternative and Project Alternative(s) increase delay.

Intersection Type

- Signalized
- Two-Way Stop Controlled
- A All-Way Stop Controlled

Figure 5-21.
Segments B and C
Shoreline to Lynnwood
2035 PM Peak Hour
Intersection LOS

Lynnwood Link Extension



Intersection Level of Service

Seattle, Shoreline & WSDOT HSS[1]	WSDOT non-HSS[1]
A-C	A-D
D	E
E-F	F

[1]HSS = Highways of Statewide Significance

Project LOS (If different from No Build) — No Build LOS

Alt(s)

PA Preferred Alternative
PA+ Preferred Alternative with Options

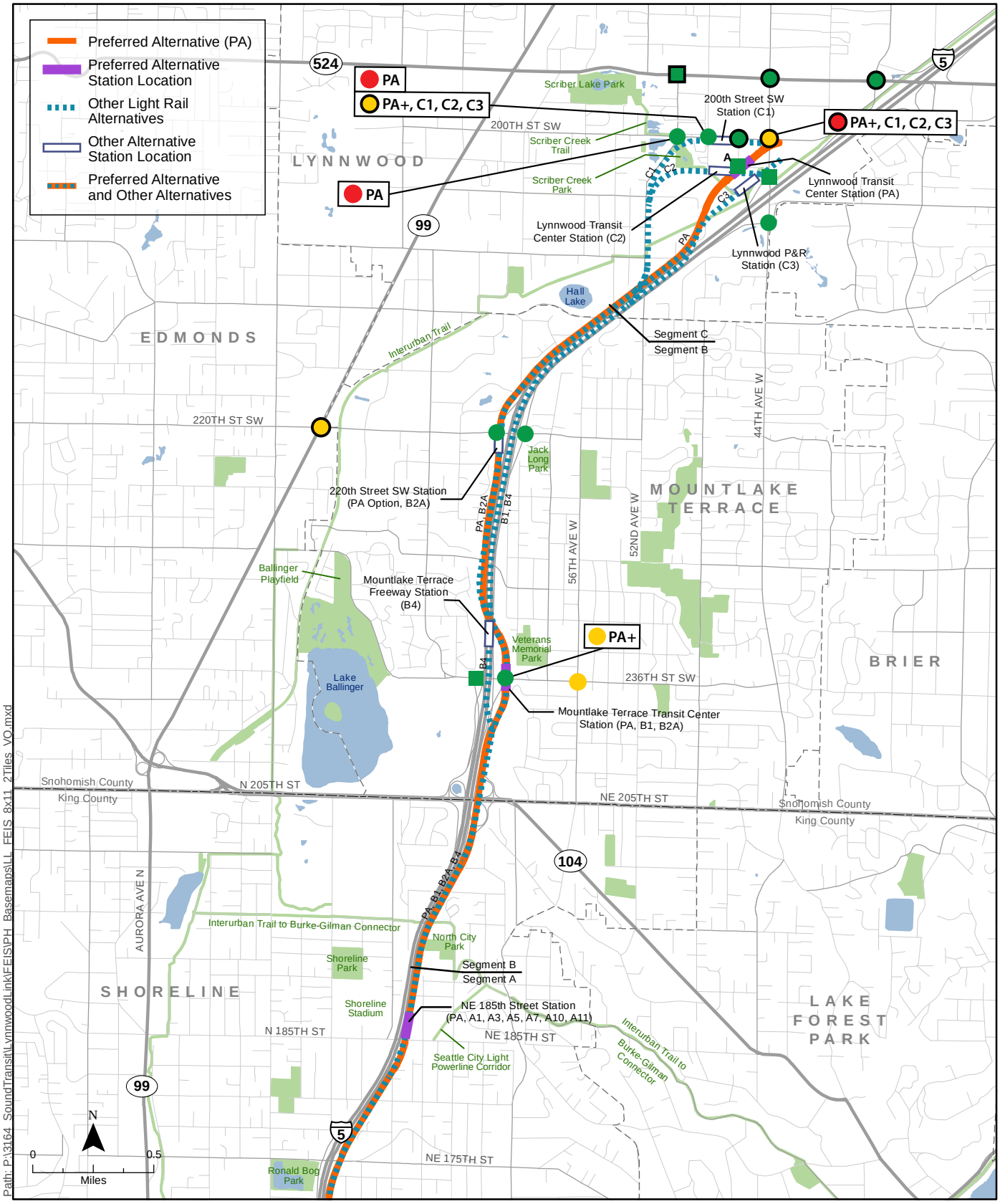
* Intersection exceeds agency LOS standard with No Build Alternative and Project Alternative(s) increase delay.

Intersection Type

- Signalized
- Two-Way Stop Controlled
- A All-Way Stop Controlled

Figure 5-22. Segment A Seattle to Shoreline 2035 AM Peak Hour Intersection LOS

Lynnwood Link Extension



Intersection Level of Service

Seattle, Shoreline & WSDOT HSS[1]	WSDOT non-HSS[1]
A-C	A-D
D	E
E-F	F

[1]HSS = Highways of Statewide Significance

Project LOS (If different from No Build) / No Build LOS

Alt(s)

PA Preferred Alternative
PA+ Preferred Alternative with Options

Intersection Type

- Signalized
- Two-Way Stop Controlled
- [A] All-Way Stop Controlled

* Intersection exceeds agency LOS standard with No Build Alternative and Project Alternative(s) increase delay.

Figure 5-23.
Segments B and C
Shoreline to Lynnwood
2035 AM Peak Hour
Intersection LOS

Lynnwood Link Extension

Segment A: Seattle to Shoreline

Tables 5-26 and 5-27 show the PM and AM peak hour LOS results for the Segment A No Build Alternative and the light rail alternatives in forecast year 2035. As shown in Table 5-26, 17 of the 67 intersections evaluated in Segment A would operate below LOS standards with the No Build Alternative during the PM peak hour. An additional two intersections would degrade below LOS standards during the PM peak hour with the Preferred Alternative, and between three and seven intersections would degrade with the other light rail alternatives. For the AM peak hour (Table 5-27), four intersections would operate below LOS standards with the No Build Alternative. One additional intersection would degrade below LOS standards during the AM peak hour with Alternatives A1 and A3 (5th Avenue NE and I-5 Northbound Off-ramp).

Table 5-26. Forecast Year 2035 PM Peak Hour Intersection LOS—Segment A

Nearest Station/ Intersection	LOS Std.	Alternative								
		No Build	Preferred Alternative	Preferred Alternative + Option	A1	A3	A5	A7	A10	A11
NE 130th Street Station										
North 130th Street and Aurora Avenue North	D	E	E	E	E	*	E	E	E	E
North 130th Street and Meridian Avenue North	D	B	B	B	B	*	B	B	B	B
North 130th Street and Corliss Avenue North	D	B	B	B	B	*	B	B	B	B
North 130th Street and 1st Avenue North	D	C	C	C	C	*	C	C	C	C
NE 130th Street and I-5 southbound on-ramp	D	A	A	A	A	*	A	A	A	A
5th Avenue NE and park-and-ride driveway (north)	D	*	*	*	*	*	*	A	*	A
5th Avenue NE and park-and-ride driveway (south)	D	*	*	*	*	*	*	A	*	A
5th Avenue NE and Park-and-Ride Driveway (church)	D	*	*	A	*	*	A	*	*	*
NE 130th Street and 5th Avenue NE	D	C	C	C	C	*	C	C	C	C
5th Avenue NE and I-5 northbound off-ramp	D	F	*	*	*	*	*	F	*	F
5th Avenue NE and NE 127th Street	D	C	B	B	B	*	B	B	B	B
5th Avenue NE and NE 125th Street	D	C	C	C	C	*	C	C	C	C
Roosevelt Way NE and 8th Avenue NE	D	D	D	D	D	*	D	D	D	D

Table 5-26. Forecast Year 2035 PM Peak Hour Intersection LOS—Segment A

Nearest Station/ Intersection	LOS Std.	Alternative								
		No Build	Preferred Alternative	Preferred Alternative + Option	A1	A3	A5	A7	A10	A11
8th Avenue NE and NE 127th Street	D	A	A	A	A	*	A	A	A	A
Roosevelt Way NE and 10th Avenue NE	D	B	B	B	B	*	B	B	B	B
NE 125th Street and 15th Avenue NE	D	E	E	E	E	*	E	E	E	E
NE 145th/NE 155th Street Station										
North 145th Street and Aurora Avenue North	D	E	E	E	E	E	*	*	E	E
North 145th Street and Meridian Avenue North	E	B	C	C	C	C	*	*	C	C
North 145th Street and Corliss Avenue North	E	D	D	D	D	D	*	*	D	D
North 145th Street and 1st Avenue NE	E	D	D	**F**	**F**	**F**	*	*	**F**	**F**
NE 145th Street and 3rd Avenue NE	E	F	F	F	F	F	*	*	F	F
NE 145th Street and I-5 southbound ramps	D	C	C	D	D	D	*	*	D	D
5th Avenue NE and park-and-ride driveway	D	A	A	A	B	B	*	*	C	B
5th Avenue NE and I-5 northbound on-ramp	D	B	B	A	A	A	*	*	A	A
NE 145th Street and 5th Avenue NE	E	D	D	E	**F**	**F**	*	*	E	E
5th Avenue NE and I-5 northbound off-ramp	D	F	F	F	F	F	*	*	F	F

Table 5-26. Forecast Year 2035 PM Peak Hour Intersection LOS—Segment A

Nearest Station/ Intersection	LOS Std.	Alternative								
		No Build	Preferred Alternative	Preferred Alternative + Option	A1	A3	A5	A7	A10	A11
NE 145th Street and 6th Avenue NE	E	E/F	E/F	E/F	E/F	E/F	*	*	E/F	E/F
NE 145th Street and 8th Avenue NE	E	D	D	D	D	D	*	*	D	D
NE 145th Street and 10th Avenue NE	E	F	F	F	F	F	*	*	F	F
NE 145th Street and 12th Avenue NE	E	F	F	F	F	F	*	*	F	F
NE 145th Street and 15th Avenue NE	E	E	E	E	E	E	*	*	E	E
NE 145th Street and Lake City Way NE	D	F	F	F	F	F	*	*	F	F
North 155th Street and Aurora Avenue North	D	E	*	*	*	*	E	E	*	*
North 155th Street and Ashworth Avenue North	D	C	*	*	*	*	D	D	*	*
North 155th Street and Meridian Avenue North	D	D	*	*	*	*	**E**	**E**	*	*
North 155th Street and Corliss Avenue North	D	C	*	*	*	*	C	C	*	*
North 155th Street and 1st Avenue NE	D	F	*	*	*	*	**F**	**F**	*	*
NE 155th Street and park-and-ride driveway	D	*	*	*	*	*	C	C	*	*
NE 155th Street and 3rd Avenue NE	D	B	*	*	*	*	C	C	*	*
NE 155th Street and 4th Avenue NE	D	B	*	*	*	*	C	C	*	*
NE 155th Street and 5th Avenue NE	D	B	*	*	*	*	B	B	*	*

Table 5-26. Forecast Year 2035 PM Peak Hour Intersection LOS—Segment A

Nearest Station/ Intersection	LOS Std.	Alternative								
		No Build	Preferred Alternative	Preferred Alternative + Option	A1	A3	A5	A7	A10	A11
NE 155th Street and 6th Avenue NE	D	C	*	*	*	*	D	D	*	*
NE 155th Street and 8th Avenue NE	D	E	*	*	*	*	**F**	**F**	*	*
NE 155th Street and 10th Avenue NE	D	D	*	*	*	*	D	D	*	*
NE 155th Street and 12th Avenue NE	D	C	*	*	*	*	D	D	*	*
NE 155th Street and 15th Avenue NE	D	E	*	*	*	*	F	F	*	*
NE 159th Street and 1st Avenue NE	D	A	*	*	*	*	A	A	*	*
NE 161st Street and 1st Avenue NE	D	A	*	*	*	*	A	A	*	*
NE 165th Street and 5th Avenue NE	D	F	*	*	*	*	F	F	*	*
NE 185th Street Station										
North 185th Street and SR 99	D	E	E	E	E	E	E	E	E	E
North 185th Street and Meridian Avenue North	D	D	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**
North 185th Street and Corliss Avenue North	D	B	B	B	B	B	B	B	B	B
North 185th Street and 1st Avenue NE	D	C	C	C	C	C	C	C	C	C
NE 185th Street and 2nd Avenue NE	D	C	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**
NE 185th Street and 3rd Avenue NE	D	C	D	D	D	D	C	D	C	D

Table 5-26. Forecast Year 2035 PM Peak Hour Intersection LOS—Segment A

Nearest Station/ Intersection	LOS Std.	Alternative								
		No Build	Preferred Alternative	Preferred Alternative + Option	A1	A3	A5	A7	A10	A11
5th Avenue NE and park-and-ride driveway	D	*	B	B	B	*	*	*	*	*
NE 185th Street and 5th Avenue NE	D	C	C	C	C	C	D	C	D	C
NE 185th Street and 7th Avenue NE	D	D	A	A	D	D	**F**	D	**F**	D
8th Avenue NE and transit center driveway (in)	D	*	A	A	A	A	A	A	A	A
8th Avenue NE and park-and-ride driveway (north)	D	*	*	*	*	A	A	A	A	A
8th Avenue NE and park-and-ride driveway (south) / transit center driveway (out)	D	*	*	*	*	A	B	A	B	A
NE 185th Street and 8th Avenue NE	D	C	C	C	C	**E**	D	**E**	D	**E**
NE 185th Street and east park-and-ride driveway (south)	D	*	*	*	*	*	B	*	B	*
NE 185th Street and 9th Avenue NE	D	B	B	B	B	B	B	B	B	B
10th Avenue NE and east park-and-ride driveway (north)	D	*	*	*	*	*	A	*	A	*
NE 185th Street and 10th Avenue NE	D	C	C	C	C	C	C	C	C	C
NE Perkins Way and 15th Avenue NE	D	C	C	C	C	C	C	C	C	C
North 180th Street and Meridian Avenue North	D	D	D	D	D	D	D	D	D	D

Table 5-26. Forecast Year 2035 PM Peak Hour Intersection LOS—Segment A

Nearest Station/ Intersection	LOS Std.	Alternative								
		No Build	Preferred Alternative	Preferred Alternative + Option	A1	A3	A5	A7	A10	A11
NE 180th Street and 5th Avenue NE	D	B	B	B	B	B	B	B	B	B
NE 180th Street and 10th Avenue NE	D	B	B	B	B	B	B	B	B	B
NE 180th Street and 15th Avenue NE	D	B	B	B	B	B	B	B	B	B
North175th Street and SR 99	D	D	D	D	D	D	D	D	D	D
North 175th Street and Meridian Avenue North	D	E	E	E	E	E	E	E	E	E
NE 175th Street and I-5 southbound ramps	D	C	C	C	C	C	C	C	C	C
NE 175th Street and I-5 northbound ramps	D	E	E	E	E	E	E	E	E	E
NE 175th Street and 5th Avenue NE	D	B	B	B	B	B	B	B	B	B

Notes:

LOS results highlighted in **BOLD** and grey shading indicate intersection locations where LOS with the light rail alternatives, because they worsen conditions compared to the No Build Alternative, would degrade to levels that do not meet the jurisdiction's LOS standard and may require mitigation.

* Location not analyzed for specified alternative. Intersection would be expected to operate similar to No Build Alternative.

Table 5-27. Forecast Year 2035 AM Peak Hour Intersection LOS—Segment A

Nearest Station/ Intersection	LOS Std.	Alternative								
		No Build	Preferred Alternative	Preferred with Option	A1	A3	A5	A7	A10	A11
NE 130th Street Station										
North 130th Street and Aurora Avenue North	D	D	D	D	D	*	D	D	D	D
North 130th Street and Meridian Avenue North	D	B	B	B	B	*	B	B	B	B
North 130th Street and 1st Avenue North	D	C	C	C	C	*	C	C	C	C
NE 130th Street and I-5 southbound on-ramp	D	A	A	A	A	*	A	A	A	A
5th Avenue NE and park-and-ride driveway (north)	D	*	*	*	*	*	*	A	*	A
5th Avenue NE and park-and-ride driveway (south)	D	*	*	*	*	*	*	A	*	A
5th Avenue NE and Park-and-Ride Driveway (church)	D	*	*	A	*	*	A	*	*	*
NE 130th Street and 5th Avenue NE	D	C	C	C	C	*	C	C	C	C
5th Avenue NE and I-5 northbound off-ramp	D	E	*	*	*	*	*	E	*	E
NE 125th Street and 15th Avenue NE	D	D	D	D	D	*	D	D	D	D
NE 145th/NE 155th Street Station										
North 145th Street and Aurora Avenue North	D	D	D	D	D	D	*	*	D	D
North 145th Street and Meridian Avenue North	E	E	E	E	E	E	*	*	E	E
NE 145th Street and I-5 southbound ramps	D	F	E	F	F	F	*	*	F	F
5th Avenue NE and park-and-ride driveway	D	A	B	B	B	B	*	*	B	B
5th Avenue NE and I-5 northbound on-ramp	D	B	C	A	C	A	*	*	C	A

Table 5-27. Forecast Year 2035 AM Peak Hour Intersection LOS—Segment A

Nearest Station/ Intersection	LOS Std.	Alternative								
		No Build	Preferred Alternative	Preferred with Option	A1	A3	A5	A7	A10	A11
NE 145th Street and 5th Avenue NE	E	F	F	F	F	F	*	*	F	F
5th Avenue NE and I-5 northbound off-ramp	D	D	D	D	**E**	**E**	*	*	D	D
NE 145th Street and 15th Avenue NE	E	D	D	D	D	D	*	*	D	D
North 155th Street and Aurora Avenue North	D	D	*	*	*	*	D	D	*	*
North 155th Street and Meridian Avenue North	D	D	*	*	*	*	**E**	**E**	*	*
NE 155th Street and 5th Avenue NE	D	B	*	*	*	*	B	B	*	*
NE 155th Street and 15th Avenue NE	D	B	*	*	*	*	C	C	*	*
NE 185th Street Station										
North 185th Street and SR 99	D	F	F	F	F	F	F	F	F	F
North 185th Street and Meridian Avenue North	D	D	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**
NE 185th Street and 10th Avenue NE	D	A	B	B	B	B	B	B	B	B
NE 175th Street and I-5 southbound ramps	D	D	D	D	D	D	D	D	D	D
NE 175th Street and I-5 northbound ramps	D	D	D	D	D	D	D	D	D	D

Notes:

LOS results highlighted in **BOLD** and grey shading indicate intersection locations where LOS with the light rail alternatives, because they worsen conditions compared to the No Build Alternative, would degrade to levels that do not meet the jurisdiction's LOS standard and may require mitigation.

* Location not analyzed for specified alternative. Intersection would be expected to operate similar to No Build Alternative.

City of Shoreline Arterial LOS

For Shoreline, the following arterials were also evaluated for v/c ratios to ensure consistency with City concurrency standards:

- NE 155th Street—Westminster Way North to 15th Avenue NE
- NE 185th Street—Aurora Avenue North to 10th Avenue NE
- 5th Avenue NE/7th Avenue NE—NE 145th Street to NE 185th Street
- Meridian Avenue North—North 145th Street to North 205th Street
- 15th Avenue NE—NE 145th Street to NE 205th Street
- NE 175th Street—Aurora Avenue North to 15th Avenue NE

The v/c ratios for these arterials, shown in Figure 5-24 for the No Build Alternative, were compared with the City's v/c standard of 0.90 or lower for most principal and minor arterials. Figure 5-25 shows additional locations where the light rail alternatives would cause v/c ratios to degrade below 0.90.

As shown in Figures 5-24 and 5-25, the following arterial segments would not meet the City of Shoreline's concurrency standards during the PM peak hour in 2035 with the No Build Alternative:

- Meridian Avenue North from North 155th Street to North 185th Street—northbound
- 5th Avenue NE from north of North 145th Street to NE 165th Street—northbound
- 15th Avenue NE south of and north of NE 155th Street—northbound (v/c ratio greater than 1.10, exceeds LOS standard)
- NE 175th Street west of 15th Avenue NE—westbound
- NE 185th Street west of 1st Avenue NE—eastbound
- NE 185th Street east of 1st Avenue NE—westbound

In addition, the following additional arterial segments would degrade to levels below the City of Shoreline's concurrency standards during the PM peak hour:

- NE 185th Street east of Meridian Avenue NE—westbound (all Segment A alternatives)
- NE 185th Street from 2nd Avenue NE to 5th Avenue NE—westbound (all Segment A alternatives)

Figure 5-24. Forecast Year 2035 PM Peak Arterial LOS for the No Build Alternative—City of Shoreline Arterials

Figure 5-25. City of Shoreline Arterials Worsened by the Light Rail Alternatives

Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Street Stations

With the Preferred Alternative, the following three intersections may require mitigation due to degraded operations below LOS standards compared to the No Build Alternative (intersections marked with an asterisk [*] are not subject to the City of Shoreline's LOS D standard):

- NE 145th Street and 6th Avenue NE
- North 185th Street and Meridian Avenue North
- NE 185th Street and 2nd Avenue NE*

In addition, the following intersection already exceeds the LOS standard in the No Build Alternative, and would experience increased delay with the Preferred Alternative:

- NE 145th Street and 12th Avenue NE

NE 145th Street Station

With the NE 145th Street Station for the Preferred Alternative, the I-5 northbound on-ramp would be moved to the north and signalized. Vehicles exiting the park-and-ride would exit at the relocated northbound on-ramp signalized intersection. Vehicles would enter the 500-space park-and-ride at a new unsignalized entrance along 5th Avenue NE midway between the northbound ramp intersection and the intersection with 145th Street NE.

During the PM peak hour new vehicle trips in the station vicinity would cause LOS at the intersection of NE 145th Street and 6th Avenue NE to degrade to LOS F.

In addition, PM peak-hour intersection delay would increase at the intersection of NE 145th Street and 12th Avenue NE. This location, however, would already operate at LOS F during the PM peak hour with the No Build Alternative.

NE 185th Street Station

With the NE 185th Street Station Option 1 for the Preferred Alternative, vehicles would access the 500-space park-and-ride via a new stop-controlled intersection on 5th Avenue NE north of NE 185th Street. It is assumed that most of the traffic accessing the park-and-ride would turn to or from NE 185th Street, and that left-turning vehicles would use the center two-way left-turn lane assumed to be included in the No Build Alternative.

A southbound right-turn pocket would be provided at the intersection of NE 185th Street and 5th Avenue NE. In addition, the two-way left-turn lane on NE 185th Street at 5th Avenue NE assumed in the No Build Alternative was also assumed to

extend east to the intersection of NE 185th Street and 7th Avenue NE and would facilitate traffic movements to/from the transit center driveway.

New vehicle trips in the station vicinity is expected to cause LOS at the intersections of North 185th Street and Meridian Avenue North, and North 185th Street and 2nd Avenue NE to degrade to LOS E during the PM peak hour. The North 185th Street and Meridian Avenue North intersection is also projected to degrade to LOS E during the AM peak hour.

Preferred Alternative with Options: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations

With the Preferred Alternative with options, the following four intersections may require mitigation due to degraded operations below LOS standards compared to the No Build Alternative (intersections marked with an asterisk [*] are not subject to the City of Shoreline's LOS D standard):

- North 145th Street and 1st Avenue NE
- NE 145th Street and 6th Avenue NE
- North 185th Street and Meridian Avenue North
- NE 185th Street and 2nd Avenue NE*

In addition, the following intersection already exceeds the LOS standard in the No Build Alternative, and would experience increased delay with the Preferred Alternative with options:

- NE 145th Street and 12th Avenue NE

NE 130th Street Station

With the NE 130th Street Station Option 1 for the Preferred Alternative with options, vehicles would access the 100-space park-and-ride via a new stop-controlled intersection on 5th Avenue NE north of NE 130th Street. The I-5 northbound off-ramp would be relocated to the south and southbound 5th Avenue NE would be moved below the off-ramp.

NE 145th Street Station

With the NE 145th Street Station Option 2 for the Preferred Alternative, the I-5 northbound on-ramp would be moved to the north and signalized. Vehicles would access the 500-space park-and-ride at a new stop-controlled intersection to 5th Avenue NE midway between the northbound ramp intersection and the intersection with 145th Street NE.

During the PM peak hour new vehicle trips in the station vicinity would cause LOS at the intersections of NE 145th Street and 1st Avenue NE, and NE 145th Street and 6th Avenue NE to degrade to LOS F.

In addition, PM peak-hour intersection delay would increase at the intersection of NE 145th Street and 12th Avenue NE. This location, however, would already operate at LOS F during the PM peak hour with the No Build Alternative.

NE 185th Street Station

The Preferred Alternative with options would result in the same LOS as the Preferred Alternative with the NE 185th Street Station.

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Street Stations

With Alternative A1, the impacts would be the same as with the Preferred Alternative for the NE 130th Street and NE 185th Street Stations.

NE 130th Street Station

Alternative A1 would result in the same LOS as the Preferred Alternative with the NE 130th Street Station.

NE 145th Street Station

With Alternative A1, the following four intersections at NE 145th Street Station may require mitigation due to degraded operations below LOS standards compared to the No Build Alternative:

- NE 145th Street and 1st Avenue NE
- NE 145th Street and 5th Avenue NE
- NE 145th Street and 6th Avenue NE
- 5th Avenue NE and I-5 Northbound Off-Ramp (south of NE 145th Street)

In addition, the following intersection already exceeds the LOS standard in the No Build Alternative, and would experience increased delay with the Alternative 1:

- NE 145th Street and 12th Avenue NE

With the NE 145th Street Station Option 2 for the Alternative A1, the I-5 northbound on-ramp would be moved to the north and signalized. Vehicles would access the 500-space park-and-ride at a new stop-controlled intersection to 5th Avenue NE midway between the northbound ramp intersection and the intersection with 145th Street NE.

During the PM peak hour new vehicle trips in the station vicinity would cause LOS at the intersections of NE 145th Street and 1st Avenue NE, NE 145th Street and 5th Avenue NE, and NE 145th Street and 6th Avenue NE to degrade1 to LOS F. During the AM peak hour the 5th Avenue NE and I-5 northbound off-ramp would degrade to LOS E.

In addition, PM peak-hour intersection delay would increase at the intersection of NE 145th Street and 12th Avenue NE. This location, however, would already operate at LOS F during the PM peak hour with the No Build Alternative.

NE 185th Street Station

Alternative A1 would result in the same LOS as the Preferred Alternative with the NE 185th Street Station.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Street Stations

With Alternative A3, the following six intersections may require mitigation due to degraded operations below LOS standards compared to the No Build Alternative (intersections marked with an asterisk [*] are not subject to the City of Shoreline's LOS D standard):

- NE 145th Street and 1st Avenue NE
- NE 145th Street and 5th Avenue NE
- 5th Avenue NE and I-5 northbound off-ramp (south of NE 145th Street)
- NE 145th Street and 6th Avenue NE
- North 185th Street and Meridian Avenue North
- NE 185th Street and 2nd Avenue NE*

In addition, the following intersection already exceeds the LOS standard in the No Build Alternative, and would experience increased delays with Alternative A3:

- NE 145th Street and 12th Avenue NE

NE 145th Street Station

Alternative A3 would result in the same LOS as Alternative A1with the NE 145th Street Station.

NE 185th Street Station

With the NE 185th Street Station Option 2 for Alternative A3, vehicles would access the 500-space park-and-ride via a new stop-controlled intersection on 8th Avenue NE north of NE 185th Street.

During the PM peak hour new vehicle trips in the station vicinity would cause LOS at the intersections of North 185th Street and Meridian Avenue North, and NE 185th Street and 2nd Avenue NE to degrade to LOS E. During the AM peak hour the North 185th Street and Meridian Avenue North intersection would also degrade to LOS E.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations

With Alternative A5, the following six intersections may require mitigation due to degraded operations below LOS standards and/or increased delays compared to the No Build Alternative (intersections marked with an asterisk [*] are not subject to the City of Shoreline's LOS D standard):

- North 155th Street and Meridian Avenue North
- NE 155th Street and 8th Avenue NE
- NE 155th Street and 15th Avenue NE
- North 185th Street and Meridian Avenue North
- NE 185th Street and 2nd Avenue NE*
- NE 185th Street and 7th Avenue NE*

In addition, the following two intersections already exceed LOS standards in the No Build Alternative, and would experience increased delays with Alternative A5:

- North 155th Street and 1st Avenue NE
- NE 165th Street and 5th Avenue NE

NE 130th Street Station

Alternative A5 would result in the same LOS as the Preferred Alternative with options with the NE 130th Street Station.

NE 155th Street Station

With the NE 155th Street Station for Alternative A5, vehicles would access the 500-space park-and-ride via a new south leg at the 155th Street NE and 3rd Avenue NE intersection.

During the PM peak hour, new vehicle trips in the station vicinity would cause LOS at the intersections of North 155th Street and Meridian Avenue North, NE 155th Street and 8th Avenue NE, and NE 155th Street and 15th Avenue NE to degrade to LOS E, F, and F, respectively.

During the AM peak hour, the 155th Street and Meridian Avenue North intersection would also degrade to LOS F.

In addition, PM peak hour intersection delays would increase at the NE 155th Street and 1st Avenue NE, and 165th Street and 5th Avenue NE intersections. These locations already operate at LOS F during the PM peak hour with the No Build Alternative.

NE 185th Street Station

With the NE 185th Street Station Option 3 for Alternative A5, vehicles would access a 150-space park-and-ride via a new stop-controlled intersection on 8th Avenue NE north of NE 185th Street, and a 200-space park-and-ride via new unsignalized intersections on 10th Avenue NE north of NE 185th Street and NE 155th Street west of 10th Avenue NE.

During the PM peak hour new vehicle trips in the station vicinity would cause LOS to degrade to LOS E at the intersection of North 185th Street and Meridian Avenue North, and NE 185th Street and 2nd Avenue NE, and to LOS F at the NE 185th Street and 7th Avenue NE intersection. The North 185th Street and Meridian Avenue North intersection would also degrade to LOS E during the AM peak hour.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations

With Alternative A7, the following six intersections may require mitigation due to degraded operations below LOS standards compared to the No Build Alternative (intersections marked with an asterisk [*] are not subject to the City of Shoreline's LOS D standard):

- North 155th Street and Meridian Avenue North
- NE 155th Street and 8th Avenue NE
- NE 155th Street and 15th Avenue NE
- North 185th Street and Meridian Avenue North
- NE 185th Street and 2nd Avenue NE*
- NE 185th Street and 8th Avenue NE*

In addition, the following two intersections already exceed LOS standards in the No Build Alternative, and experience increased delays with Alternative A7:

- North 155th Street and 1st Avenue NE
- NE 165th Street and 5th Avenue NE

NE 130th Street Station

With the NE 130th Street Station Option 2 for Alternative A7, vehicles would access the 100-space park-and-ride via two new stop-controlled intersections on 5th Avenue NE north of NE 130th Street.

NE 155th Street Station

Alternative A7 would result in the same LOS as Alternative A5 with the NE 155th Street Station.

NE 185th Street Station

Alternative A7 would result in the same LOS as Alternative A3 with NE 185th Street Station Option 2.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations

With Alternative A10, the following four intersections may require mitigation due to degraded operations below standards (LOS E to F) compared to the No Build Alternative (intersections marked with an asterisk [*] are not subject to the City of Shoreline's LOS D standard):

- North 145th Street and 1st Avenue NE
- North 185th Street and Meridian Avenue North
- NE 185th Street and 2nd Avenue NE*
- NE 185th Street and 7th Avenue NE

In addition, the following intersection already exceeds LOS standards in the No Build Alternative, and experience increased delays with Alternative A10:

- NE 145th Street and 12th Avenue NE

NE 130th Street Station

Alternative A10 would result in the same LOS as the Preferred Alternative with the NE 130th Street Station.

NE 145th Street Station

With the NE 145th Street Station Option 1 for Alternative A10, vehicles would access the 650-space park-and-ride at a new signalized intersection north of the I-5 northbound on-ramp.

New vehicle trips in the station vicinity would cause LOS at the intersections of North 145th Street and 1st Avenue NE to degrade to LOS F during the PM peak hour.

In addition, PM peak hour intersection delays would increase at the NE 145th Street and 12th Avenue NE intersection. This location already operate at LOS F during the PM peak hour with the No Build Alternative.

NE 185th Street Station

Alternative A10 would result in the same LOS as Alternative A5 with NE 185th Street Station Option 3.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations

With Alternative A11, the following five intersections may require mitigation due to degraded operations below LOS standards (LOS E to F) compared to the No Build Alternative (intersections marked with an asterisk [*] are not subject to the City of Shoreline's LOS D standard):

- North 145th Street and 1st Avenue NE
- NE 145th Street and 6th Avenue NE
- North 185th Street and Meridian Avenue North
- NE 185th Street and 2nd Avenue NE*
- NE 185th Street and 8th Avenue NE*

In addition, the following two intersections already exceed LOS standards in the No Build Alternative and experience increased delays with Alternative A11:

- NE 145th Street and 12th Avenue NE

NE 130th Street Station

Alternative A11 would result in the same LOS as Alternative A7 with NE 130th Street Station Option 2.

NE 145th Street Station

Alternative A11 would result in the same LOS as Alternative A1with NE 145th Street Station Option 2.

NE 185th Street Station

Alternative A11 would result in the same LOS as Alternative A3 with NE 185th Street Station Option 2.

Segment B: Shoreline to Mountlake Terrace

Tables 5-28 and 5-29 show the PM and AM peak hour LOS results for the No Build Alternative and light rail alternatives in Segment B for forecast year 2035. As shown in Table 5-28, the intersection of 220th Street SW and SR 99 would operate below LOS standards in the PM peak hour with both the No Build Alternative and light rail alternatives. All other intersections would operate within LOS standards during the PM and AM peak hours.

Table 5-28. Forecast Year 2035 PM Peak Hour Intersection LOS—Segment B

Nearest Station/ Intersection	LOS	Alternative					
		No Build	Preferred Alternative	Preferred Alternative with Option	B1	B2A	B4
Mountlake Terrace Station							
Lakeview Drive and 65th Place West	E	B	C	C	C	C	C
Lakeview Drive and 64th Avenue West	E	B	B	B	B	B	B
236th Street SW and I-5 southbound collector-distributor on-ramp	D	A	A	A	A	A	A
236th Street SW and I-5 northbound off-ramp	D	C	C	C	C	C	C
236th Street SW and transit center driveway (out)	E	*	D	D	D	D	*
236th Street SW and 58th Avenue West	E	A	B	B	B	B	B
236th Street SW and 56th Avenue West	D	D	D	D	D	D	D
220th Street SW Station							
220th Street SW and SR 99	E	F	F	F	F	F	*
220th Street SW and 70th Avenue West	E	C	*	C	*	*	*
220th Street and 66th Avenue West	E	D	*	D	*	*	*
220th Street and 64th Avenue West	E	C	*	C	*	*	*
64th Avenue West and 222nd Street SW	E	A	*	A	*	*	A
220th Street SW and park-and-ride driveway	E	*	*	A	*	*	A
220th Street SW and I-5 southbound ramps	D	B	*	B	*	*	B
220th Street SW and I-5 northbound ramps	D	C	*	C	*	*	C

Table 5-28. Forecast Year 2035 PM Peak Hour Intersection LOS—Segment B

		Alternative					
Nearest Station/ Intersection	**LOS**	**No Build**	**Preferred Alternative**	**Preferred Alternative with Option**	**B1**	**B2A**	**B4**
220th street SW and 58th Avenue West	E	A	*	A	*	*	A
220th Street SW and 56th Avenue West	E	C	*	C	*	*	C
220th Street SW and 55th Avenue West	E	B	*	B	*	*	B
220th Street SW and 54th Avenue West	E	B	*	B	*	*	B
220th Street SW and 53rd Avenue West	E	B	*	B	*	*	B
220th Street SW and 52nd Avenue West	E	C	*	C	*	*	C

Notes:
* Location not analyzed for specified alternative. Intersection would be expected to operate similar to No Build Alternative.

Table 5-29. Forecast Year 2035 AM Peak Hour Intersection LOS—Segment B

Nearest Station/ Intersection	LOS	No Build	Alternative				
			Preferred Alternative	Preferred Alternative with Option	B1	B2A	B4
Mountlake Terrace Station							
236th Street SW and I-5 southbound collector-distributor on-ramp	D	A	B	B	B	B	B
236th Street SW and I-5 northbound off-ramp	D	C	C	D	C	C	C
236th Street SW and transit center driveway (out)	E	*	D	D	D	D	*
236th Street SW and 56th Avenue West	D	D	D	D	D	D	D
220th Street SW Station							
220th Street SW and SR 99	E	E	*	E	*	E	*
220th Street SW and I-5 southbound ramps	D	B	*	C	*	C	*
220th Street SW and I-5 northbound ramps	D	C	*	C	*	C	*

Notes:
* Location not analyzed for specified alternative. Intersection would be expected to operate similar to No Build Alternative

Preferred Alternative: East Side to Mountlake Terrace Transit Center to West Side

With the Preferred Alternative, no intersections would require mitigation due to degraded operations below standards and/or increased delays compared with the No Build Alternative.

Mountlake Terrace Transit Center Station

With the Preferred Alternative, all intersections evaluated near the Mountlake Terrace Transit Center Station would operate at LOS standards similar to the No Build Alternative. The proposed park-and-ride driveway at 236th Street SW and 58th Avenue West would operate at LOS D during both the PM and AM peak hours with a two-way left-turn lane on 58th Avenue West.

Preferred Alternative with Options: East Side to Mountlake Terrace Transit Center to West Side

With the Preferred Alternative, no intersections would require mitigation due to degraded operations below standards and/or increased delays compared with the No Build Alternative.

Mountlake Terrace Transit Center Station

The Mountlake Terrace Transit Center Station would operate similar to the Preferred Alternative.

220th Street Station

With the Preferred Alternative with options, all intersections evaluated near the 220th Street Station would operate at LOS standards similar to the No Build Alternative.

Alternative B1: East Side to Mountlake Terrace Transit Center to Median

With Alternative B1, no intersections would require mitigation due to degraded operations below LOS standards and/or increased delays compared with the No Build Alternative.

Mountlake Terrace Transit Center Station

Alternative B1 would result in the same LOS as the Preferred Alternative.

Alternative B2A: Optional 220th Street SW Station (elevated)

Mountlake Terrace Transit Center Station

Alternative B2A would result in the same LOS as the Preferred Alternative.

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median

With Alternative B4, no intersections would require mitigation due to degraded operations below LOS standards and/or increased delays compared with the No Build Alternative.

Mountlake Terrace Freeway Station

With Alternative B4, vehicle trips and local access near the Mountlake Terrace Freeway Station are expected to be the same as with the Mountlake Terrace Transit Center (Alternatives B1 and B2A). Therefore, Alternative B4 would also result in the same intersection LOS as the Preferred Alternative.

Segment C: Mountlake Terrace to Lynnwood

Tables 5-30 and 5-31 show the PM and AM peak hour LOS results for the No Build Alternative and light rail alternatives (forecast year 2035) in Segment C. As shown in Table 5-30, five out of the 22 intersections evaluated in Segment C would operate below LOS standards with the No Build Alternative during the PM peak hour. With the Preferred Alternative and other light rail alternatives, most of these intersections would operate with delays similar to the No Build Alternative. The two exceptions are the intersections at 200th Street SW and 48th Avenue West, and 52nd Avenue West and 204th Street SW, which would have higher delays than the No Build Alternative with all of the alternatives. In the Final EIS, an option is being reviewed for the Preferred Alternative to have an additional 400 park-and-ride parking spaces at the station, which would cause an additional intersection, 200th Street SW and 50th Avenue West, to fall below operating standards in comparison to the No Build Alternative. This is due to the increased vehicle trips attached to the additional parking stalls. For the AM peak hour (Table 5-31), none of the intersections would operate below LOS standards with the No Build Alternative, but two intersections (200th Street SW/48th Avenue West and 200th Street SW/50th Avenue West) would degrade below LOS standards with the Preferred Alternative. For all other light rail alternatives, 200th Street SW and 44th Avenue West would degrade below LOS standards during the AM peak hour.

Table 5-30. Forecast Year 2035 PM Peak Hour Intersection LOS—Segment C

Nearest Station/ Intersection	LOS	No Build	Alternative				
			Preferred	Preferred with Option	C1	C2	C3
Lynnwood Station							
196th Street SW and 52nd Avenue West	E	C	C	C	C	C	C
196th Street SW and 50th Avenue West	E	F	F	F	F	F	F
196th Street SW and 48th Avenue West	E	E	E	E	E	E	E
196th Street SW and 44th Avenue West	E	F	F	F	F	F	F
196th Street SW and 40th Avenue West	E	E	E	E	E	E	E
196th Street SW and 36th Avenue West	D	F	E	E	E	E	E
196th Street SW and Poplar Way	E	D	C	D	D	D	D
Alderwood Mall Parkway/I-5 Northbound Ramps and Poplar Way	D	C	C	C	C	C	C
198th Street and 44th Avenue West	E	A	A	A	A	A	A
198th Street and 40th Avenue West	E	A	D	B	B	B	B
200th Street SW and 50th Avenue West	D	D	D	**E**	**E**	**E**	**E**
200th Street SW and 48th Avenue West	D	D	**E**	**E**	D	D	D
200th Street SW and 46th Avenue West	E	C	C	D	D	D	D
200th Street SW and 44th Avenue West	E	E	E	E	E	E	E
200th Street SW and 40th Avenue West	E	A	A	A	A	A	A
52nd Avenue West and 204th Street SW	E	E	**F**	**F**	**F**	**F**	**F**
52nd Avenue West and 208th Street SW	E	F	F	F	F	F	F
52nd Avenue West and 212th Street SW	E	F	F	F	F	F	F
46th Avenue West and garage driveway	E	C	C	E	E	E	E
44th Avenue West and I-5 southbound on-ramp	D	B	C	B	B	B	B
44th Avenue West and 204th Street SW	D	A	A	A	A	A	A
44th Avenue West and I-5 northbound off-ramp	D	C	C	C	C	C	C

Notes:

LOS results highlighted in **BOLD** and grey shading indicate intersection locations where LOS with the light rail alternatives, because they worsen conditions compared to the No Build Alternative, would degrade to levels that do not meet the jurisdiction's LOS standard and may require mitigation.

Table 5-31. Forecast Year 2035 AM Peak Hour Intersection LOS—Segment C

Nearest Station/ Intersection	LOS	Alternative					
		No Build	Preferred Alternative	Preferred Alternative with Option	C1	C2	C3
Lynnwood Station							
196th Street SW and 50th Avenue West	E	B	B	B	B	B	B
196th Street SW and 44th Avenue West	E	D	D	D	D	D	D
196th Street SW and 36th Avenue West	D	C	C	C	C	C	C
200th Street SW and 50th Avenue West	D	C	**F**	C	C	C	C
200th Street SW and 48th Avenue West	D	C	**E**	D	D	D	D
200th Street SW and 46th Avenue West	E	B	D	D	D	D	D
200th Street SW and 44th Avenue West	E	E	E	**F**	**F**	**F**	**F**
44th Avenue West and I-5 southbound on-ramp	D	B	A	A	A	A	A
44th Avenue West and I-5 northbound off-ramp	D	B	B	C	C	C	C

Notes:
LOS results highlighted in **BOLD** and grey shading indicate intersection locations where LOS with the light rail alternatives, because they worsen conditions compared to the No Build Alternative, would degrade to levels that do not meet the jurisdiction's LOS standard and may require mitigation.

Preferred Alternative: Along I-5 to Lynnwood Park-and-Ride Station

With the Preferred Alternative, the following three intersections may require mitigation due to degraded operations below LOS standards and/or increased delays compared with the No Build Alternative:

- 200th Street SW and 50th Avenue West
- 200th Street SW and 48th Avenue West
- 204th Street SW and 52nd Avenue West

Park-and-Ride Station

With the preferred alternative, the main access would be off of 48th Avenue West. The access to the transit center and park-and-ride off of 46th Avenue West would be restricted to HOV and transit vehicles.

The intersections of 200th Street SW and 48th Avenue West, and 204th Street SW and 52nd Avenue West would degrade to LOS E and F, respectively, during the PM peak hour with the Preferred Alternative. During the AM peak hour, the intersections of 200th Street SW and 48th Avenue West and 200th Street SW and 50th Avenue West would degrade to LOS E and F, respectively.

Preferred Alternative with Options: Along I-5 to Lynnwood Park-and-Ride Station (plus 400 parking spaces)

With the Preferred Alternative with options, the following four intersections may require mitigation due to degraded operations below LOS standards and/or increased delays compared with the No Build Alternative:

- 200th Street SW and 50th Avenue West
- 200th Street SW and 48th Avenue West
- 200th Street SW and 44th Avenue West
- 204th Street SW and 50th Avenue West

Park-and-Ride Station

The Preferred Alternative with options would operate similar to the Preferred Alternative, except the 200th Street SW and 48th Avenue West intersection would also degrade to LOS F during the PM peak hour.

Alternative C1: 52nd Avenue West to 200th Street SW

With Alternative C1, the following three intersections may require mitigation due to degraded operations below LOS standards and/or increased delays compared with the No Build Alternative:

- 200th Street SW and 50th Avenue West
- 200th Street SW and 44th Avenue West
- 204th Street SW and 50th Avenue West

200th Street SW Station

The intersections of 200th Street SW and 50th Avenue West, and 204th Street SW and 50th Avenue West would degrade to LOS E and F, respectively, during the PM peak hour with Alternative C1. During the AM peak hour, the 200th Street SW and 44th Avenue West intersection would degrade to LOS F.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center

With Alternative C2, the following three intersections may require mitigation due to degraded operations below LOS standards and/or increased delays compared with the No Build Alternative:

- 200th Street SW and 50th Avenue West
- 200th Street SW and 44th Avenue West
- 204th Street SW and 50th Avenue West

Lynnwood Transit Center Station

Alternative C2 would result in the same LOS as Alternative C1.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride

With Alternative C3, the following three intersections may require mitigation due to degraded operations below LOS standards and/or increased delays compared with the No Build Alternative:

- 200th Street SW and 50th Avenue West
- 200th Street SW and 44th Avenue West
- 204th Street SW and 50th Avenue West

Lynnwood Park-and-Ride Station

Alternative C3 would result in the same LOS as Alternative C1.

5.4.3 Property Access and Local Circulation

Implementation of light rail from Northgate to Lynnwood could affect property access and local circulation where roadway modifications are needed for guideway or station construction. The Preferred Alternative alignment includes some locations where changes would occur to property access and local circulation. The assessment of property access and local circulation with the light rail alternatives is based on review of the Preferred Alternative alignment and conceptual design of the light rail alignment and station alternatives.

Segment A: Seattle to Shoreline

Property access and local circulation would be affected in Segment A where alternatives would modify interchange ramp configurations, including modifications to NE 130th Street and NE 145th Street interchanges. An interchange justification report (IJR) is required for these modifications, with approval from WSDOT and FHWA. These potential impacts are discussed below by alternative.

Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Street Stations

No change in property access or local circulation would result with the Preferred Alternative from the Northgate Station along 1st avenue NE north of NE Northgate Way to North 117th Street. 1st Avenue NE would be reconstructed with the same access and connections as currently exist, including the trail connection to 3rd Avenue NE at NE 115th Street. The alternative would maintain and restore access to properties along the alignment that would remain, including construction of a new cul-de-sac access to the

Seattle Latvian Evangelical Lutheran Church from the intersection of 3rd Avenue NE at NE 117th Street.

The Preferred Alternative would include the reconstruction of the NE 130th Street interchange, which would result in changes to property access and local circulation on 5th Avenue NE. From NE 125th Street to NE 130th Street, properties along 5th Avenue NE will have right-turn access only to/from the driveways as well as at the NE 127th Street intersection. This would affect four properties on 5th Avenue NE north of NE 125th Street. The conceptual design for the interchange modifications would revise the intersection of 5th Avenue NE at NE 127th Street to right turns only. Access to and from NE 131st Place at 5th Avenue NE would be maintained, requiring a gap in the raised median. Access to and from the North Seattle Church of the Nazarene would be maintained, requiring a revised median for full access.

The reconstruction of the NE 130th Street overcrossing and interchange may require revisions at the intersection of NE 130th Street at Roosevelt Way NE located east of 5th Avenue NE, which could restrict turning movements from NE 130th Street to right turns only. NE 130th Street serves a residential neighborhood with 17 homes and provides additional access to 8th Avenue NE.

No changes in property access or local circulation are expected along 5th Avenue NE between NE 130th Street and NE 145th Street with the Preferred Alternative.

NE 145th Street Station

The Preferred Alternative would modify the location of the northbound on-ramp to I-5, which in turn would modify property access or local circulation for an estimated five parcels on the east side of 5th Avenue NE near the NE 145th Street Station. There is also some potential for cut-through traffic to access the station via local streets between 5th Avenue NE and 8th Avenue NE.

The Preferred Alternative would maintain access for properties on 3rd Avenue NE north of NE 151st Street.

North of NE 155th Street, the light rail guideway construction would include reconstruction of the local street—1st Avenue NE between NE 158th Street and NE 159th Street to maintain access and circulation. The Preferred Alternative would reconstruct 1st Avenue NE as a parking facility in conjunction with a water quality and infiltration facility between NE 159th Street and NE 161st Street, with connections to Ridgecrest Park. The Preferred Alternative would reconstruct 1st Avenue NE between NE 170th Street and NE 174th Street to maintain access and circulation.

The Preferred Alternative would maintain property access on 2nd Place NE and 3rd Avenue NE off of NE 178th Street.

NE 185th Street Station

The Preferred Alternative would reconstruct 5th Avenue NE north of NE 180th Street to maintain access to residences along the new roadway. 5th Avenue NE north of NE 185th Street would be rerouted to a new intersection, and property access would be maintained with the Preferred Alternative. The Preferred Alternative with the NE 185th Street Station would have access to NE 185th Street only for bus, paratransit, and passenger drop off/pick up activity. A park-and-ride garage would be constructed on the west side of I-5 from the station. There is some potential for cut-through traffic to access the station via local streets between 8th Avenue NE and 10th Avenue NE, north of NE 185th Street.

Preferred Alternative Options: NE 130th Street Station and Shoreline Stadium Park-and-Ride Garage

Similar to the Preferred Alternative, the NE 130th Street Station could restrict driveway access to right turns only on 5th Avenue NE opposite the station. Access to and from NE 131st Place at 5th Avenue NE would be maintained, requiring a gap in the raised median. Access to and from the North Seattle Church of the Nazarene would be maintained, requiring a revised median for full access.

Construction of a park-and-ride garage at the Shoreline Stadium site would replace the existing parking lot with a garage, maintain a driveway access to NE 185th Street, and include a new driveway access to 5th Avenue NE.

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Street Stations

No change in property access or local circulation would result with Alternative A1 north of NE Northgate Way to North 117th Street. 1st Avenue NE would be reconstructed with the same access and connections as currently exist, including the trail connection to 3rd Avenue NE along NE 116th Street alignment. The alternative would maintain and restore access to properties along the alignment that would remain, including the sole access to the church at the end of 3rd Avenue NE north of NE 117th Street.

Alternative A1 would include the reconstruction of the NE 130th Street interchange, which is similar to the Preferred Alternative.

No changes in property access or local circulation are expected along 5th Avenue NE south of NE 145th Street with Alternative A1.

NE 145th Street Station

No change in property access or local circulation would be needed with Alternative A1, with Option 1, along 5th Avenue NE near the NE 145th Street Station. There is

some potential for cut-through traffic to access the station via local streets between 5th Avenue NE and 8th Avenue NE.

North of the NE 145th Street Station to NE 175th Street, Alternative A1 is similar to the Preferred Alternative.

NE 185th Street Station

Alternative A1 would reconstruct 5th Avenue NE north of NE 180th Street to maintain access to residences along the new roadway. 5th Avenue NE north of NE 185th Street would be rerouted to a new intersection, and property access would be maintained with Alternative A1. A new local roadway connection would be constructed to 8th Avenue NE from the proposed station. There is some potential for cut-through traffic to access the station via local streets between 8th Avenue NE and 10th Avenue NE, north of NE 185th Street.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Street Stations

The Alternative A3 guideway alignment would require reconstruction of the trail connection between the NE 117th Street overcrossing at 1st Avenue NE and 3rd Avenue NE (along NE 116th Street) and would require a new driveway access to a church from NE 117th Street at 3rd Avenue NE. Access along the Alternative A3 guideway would remain the same as existing from approximately NE 120th Street through the NE 130th Street interchange area and north to NE 145th Street.

NE 145th Street Station

Alternative A3 with Option 2 would relocate the northbound on-ramp to I-5 from 5th Avenue NE. The conceptual design for this alternative indicates that the access along 5th Avenue NE could be revised to right turns only to minimize conflicts with station area or ramp traffic. This revision could affect additional residential parcels that need access to be maintained to 5th Avenue NE.

North of NE 148th Street to NE 158th Street, there would be no change in access or circulation with Alternative A3. Similar to the Preferred Alternative, reconstruction of 2nd Avenue NE from NE 158th Street to NE 161st Street and reconstruction of 1st Avenue NE from NE 170th Street to NE 174th Street would maintain property access and local circulation.

NE 185th Street Station

The Alternative A3 guideway would cross 5th Avenue NE south of NE 185th Street, where property driveways could be affected by limited sight distance (which could be mitigated through design).

Alternative A3 would add two access points at the station area—a driveway to 8th Avenue NE and a fourth leg to the existing intersection of 5th Avenue NE and NE 185th Street. This access would have signal control with the station implementation. The potential for cut-through traffic to access the station is similar to the Preferred Alternative.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations

The Alternative A5 guideway alignment would require reconstruction of the trail connection between the NE 117th Street overcrossing at 1st Avenue NE and 3rd Avenue NE (along NE 116th Street), and also require a new driveway access to the church from NE 117th Street at 3rd Avenue NE.

NE 130th Street Station

Similar to the Preferred Alternative, Alternative A5 would include the reconstruction of the NE 130th Street interchange, and there could be changes in property access and local circulation on 5th Avenue NE. No change in property access or local circulation would be needed along 5th Avenue NE south of NE 148th Street. No change in access or circulation would be required south of NE 155th Street.

NE 155th Street Station

Alternative A5 would replace the 2nd Avenue NE cul-de-sac south of NE 155th Street (and 10 residences) with a park-and-ride garage with two driveways to NE 155th Street. Station access and on-street bus activity under the I-5 bridges may increase potential conflicts near the 1st Avenue NE and NE 155th Street intersection just west of I-5. Station area design would incorporate bus stops, crosswalks, and driveway configurations to accommodate the range of travel modes expected at the station.

There is some potential for cut-through traffic to access the station via local streets between 3rd Avenue NE and 5th Avenue NE north of NE 155th Street.

Similar to the Preferred Alternative, the reconstruction of 2nd Avenue NE from NE 158th Street to NE 161st Street under Alternative A5 would maintain access and local circulation.

NE 185th Street Station

Property access and local circulation with Alternative A5 would be the same as for the Preferred Alternative. Alternative A5 would reconstruct 5th Avenue NE north of NE 180th Street and maintain access to residences along the new roadway. Three new access driveways to 8th Avenue NE would be constructed with the station.

Alternative A5 would need to maintain access to residences along the guideway from NE 189th Street, west of 8th Avenue NE.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations

NE 130th Street Station

Alternative A7 impacts would be the same as for Alternative A3 from Northgate Station to NE 130th Street. At NE 131st Street and 5th Avenue NE (a residential cul-de-sac) and at the North Seattle Church of the Nazarene, Alternative A7 would need to maintain current access with an opening in the raised median opposite the station.

Access or circulation would not be changed from the NE 130th Street Station to NE 155th Street.

NE 155th Street Station

Property access and local circulation with Alternative A7 in the NE 155th Street Station area would be the same as with Alternative A5.

NE 185th Street Station

Property access and local circulation with Alternative A7 in the NE 185th Street Station area would be the same as with Alternative A3.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations

NE 130th Street Station

Same as for Alternative A5, Alternative A10 would affect property access and local circulation from Northgate Station through the NE 130th Street Station area.

NE 145th Street Station

Similar to the Preferred Alternative, Alternative A10 would affect property access and local circulation from the NE 145th Street Station area to NE 180th Street.

NE 185th Street Station

Property access and local circulation with Alternative A10 would be the same as for Alternative A5. Alternative A10 would affect property access and local circulation from NE 180th Street through the NE 185th Street Station area.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations

Same as for Alternative A3, Alternative A11 would affect property access and local circulation from the Northgate Station along the guideway to NE 125th Street.

NE 130th Street Station

Same as for Alternative A7, Alternative A11 would affect property access and local circulation from NE 125th Street through the NE 130th Street station area. Along the guideway from NE 140th Street to NE 158th Street, property access and local circulation would be affected in the same manner as under Alternative A3.

NE 145th Street Station

Property access and local circulation with Alternative A11 in the NE 145th Street Station area would be the same as Alternative A3.

Along the guideway from NE 158th Street to NE 180th Street, property access and local circulation would be affected in the same manner as under the Preferred Alternative.

NE 185th Street Station

Along the guideway from NE 180th Street and through the NE 185th Street Station, property access and local circulation would be affected in the same manner as under Alternative A3.

Segment B: Shoreline to Mountlake Terrace

Preferred Alternative (B2 Modified): East Side to Mountlake Terrace Transit Center to West Side

Mountlake Terrace Transit Center Station

The Preferred Alternative would have no effects on property access and local circulation. Reconstruction of the NE 195th Street pedestrian bridge over I-5 would maintain connections for nonmotorized travel to the NE 195th Street corridor. Property access to the school property south of the Mountlake Terrace Transit Center Station would be maintained with the guideway alignment. One new access driveway would be added to the transit center and station, with a connection to 236th Street SW.

Construction of the guideway under the 228th Street SW overcrossing would maintain traffic and local circulation along 228th Street SW and 230th Street SW. The guideway alignment along the west side of I-5 would maintain property access and not change local circulation through Segment B.

At the 220th Street SW interchange, the Preferred Alternative moves the southbound ramp terminus to the east. This change would reduce the distance between the northbound and southbound ramp intersections at 220th Street SW but is not anticipated to affect property access and local circulation.

Preferred Alternative: Optional 220th Street SW Station (elevated)

220th Street SW Station (elevated)

Property access and local circulation would change for the optional 220th Street SW Station, located south of 220th Street SW, with a new driveway access on 220th Street SW to the park-and-ride and station area. Station access at 220th Street SW would have signalized control.

Alternative B1: East Side to Mountlake Terrace Transit Center to Median

Mountlake Terrace Transit Center Station

Alternative B1 would have no effects on property access and local circulation. Reconstruction of the NE 195th Street pedestrian bridge over I-5 would maintain connections for nonmotorized travel to the NE 195th Street corridor. Property access to the school property south of the Mountlake Terrace Transit Center Station would be maintained with the guideway alignment. One new access driveway would be added to the transit center and station, with a connection to 236th Street SW.

Alternative B2: East Side to Mountlake Terrace Transit Center to West Side

Mountlake Terrace Transit Center Station

Similar to Alternative B1, Alternative B2 would affect property access and local circulation from the Mountlake Terrace Transit Center Station to the south.

Reconstruction of the approach to the 228th Street SW roadway crossing over I-5 would maintain local circulation. Reconstruction of a cul-de-sac on 227th Street SW west of I-5 would maintain the same access as currently exists. The guideway alignment along the west side of I-5 would maintain property access and not change local circulation through Segment B.

Alternative B2A: Optional 220th Street SW Station (elevated)

220th Street SW Station (elevated)

Property access and local circulation for Alternative B2A with a station over 220th Street SW would be affected the same as with the Alternative B2 alignment. The I-5 southbound ramp intersection with 220th Street SW would be relocated eastward to

allow for the station location. Station access would be provided to 219th Street SW with an arterial connection on 64th Avenue West at 220th Street SW. There is some potential for cut-through traffic to access the station via local streets between 66th Avenue West and 64th Avenue West, north of 220th Street SW.

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median

Mountlake Terrace Freeway Station

Alternative B4 would not affect property access or local circulation through the Segment B portion of the project corridor. The guideway alignment within the I-5 median would require reduced shoulder width (to 3 feet) at the south approach to the Mountlake Terrace Freeway Station in the median.

Segment C: Mountlake Terrace to Lynnwood

Preferred Alternative (C3 Modified): Along I-5 to Lynnwood Park-and-Ride

Lynnwood Park-and-Ride Station

The Preferred Alternative would affect property access and local circulation with the reconstruction of the 208th Street SW access roadway along the west side of I-5 for maintaining access to properties north of the Interurban Trail and east of 52nd Avenue West. Property access may be modified with the design but would be maintained with the relocated driveway connections. Property access would be maintained from 204th Street SW and 208th Street SW.

The guideway would cross the extension of 208th Street SW and the Interurban Trail, and would pass above 46th Avenue West. The tail track and crossover would extend above 44th Avenue West and end on the south side of Alderwood Mall Boulevard, just east of 44th Avenue West. The Preferred Alternative would include reconfiguration of the park-and-ride surface lot and construction of a park-and-ride garage at the Lynnwood Transit Center and light rail station.

Alternative C1: 52nd Avenue West to 200th Street SW

200th Street SW Station

Alternative C1 would affect property access and local circulation with the connection to the rail alignment in the median of I-5. This effect would include changes to 10 property driveways along the east side of 52nd Avenue West/Cedar Valley Road where driveway operation may be constrained due to limited sight distance, based on column locations for the elevated guideway. The guideway would cross 208th Street

SW, 206th Street SW, and 204th Street SW, including the Interurban Trail where column locations may restrict sight distance. This alternative would need to maintain full access, as much as possible, for these property driveways.

The guideway would cross an apartment complex west of 48th Avenue West, where site driveway access would be changed and on-site circulation would need to be modified to maintain site access to 200th Street SW.

The guideway would cross 48th Avenue West adjacent to the existing traffic signal. The tail track would be elevated over the 46th Avenue West signal and three driveways to 200th Street SW, where visibility may be limited by the column locations; in addition, driveways could be restricted to right turns only.

Alternative C1 connecting to a rail alignment along the west side of I-5 would affect two additional driveways on 52nd Avenue West with column locations for the elevated guideway.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center

Lynnwood Transit Center Station

Property access and local circulation for Alternative C2 would be affected in the same manner as under Alternative C1 south of 204th Street SW (with five driveways affected). At 204th Street SW, the guideway turns east across the properties where on-site circulation would need to be modified for the remaining buildings and access to Cedar Valley Road. The parking lots for these properties could be redesigned to connect under the guideway.

The Alternative C2 tail track and crossover would extend above the park-and-ride facility, the Interurban Trail, and the southbound on-ramp to I-5. On-site circulation of the park-and-ride would be modified to accommodate the columns.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride

Lynnwood Park-and-Ride Station

Alternative C3 would affect property access and local circulation with the reconstruction of the 208th Street SW access roadway along the west side of I-5 for maintaining access to properties north of the Interurban Trail and east of 52nd Avenue West. Property access may be modified with the design but maintained with the relocated driveway. Property access is from 204th Street SW and 208th Street SW.

The guideway would cross the extension of 208th Street SW, the Interurban Trail, and the HOV direct access ramp on the approach to the Lynnwood Park-and-Ride Station. The tail track and crossover would extend above the Interurban Trail and pedestrian bridge, over the southbound on-ramp to I-5, over 44th Avenue West, and over a retail property development. This alignment would affect on-site access to parking lots that

serve buildings set back from 44th Avenue West. Alternative C3 would include reconfiguration of parking lots and traffic circulation to maintain access and parking circulation for these properties east of 44th Avenue West.

5.5 Nonmotorized Facilities

This section presents the evaluation of 2035 forecasted pedestrian and bicycle trips generated by the project and the potential impact to existing nonmotorized facilities. Key observations and findings are as follows:

- With the No Build Alternative, pedestrian and bicycle activities would have a modest increase due to new developments, new pedestrian and bicycle facilities, and/or a mode shift to walking and bicycling.
- Lynnwood Link Extension would substantially increase the number of pedestrians around stations.
- The highest pedestrian volumes would occur during the PM peak period when trains serve stations every 4 minutes. PM peak period boardings also would generate a high volume of pedestrians arriving to the stations, equivalent to from 27 to 77 percent of the alighting passengers.
- Most pedestrians would use station area facilities to move between the station and the park-and-ride, passenger pick-up/drop-off area, and bus stops.
- Pedestrian movements would function at very high service levels due to wide plaza areas and sidewalks from the stations to the park-and-rides, passenger pick-up/drop-off areas, and bus stops. At the NE 145th Street Station, for all alternatives except the Preferred Alternative pedestrian volumes to and from the station would affect signal operations because the volume of pedestrians would impede westbound vehicles on NE 145th Street turning right onto 5th Avenue NE, resulting in westbound back-ups on NE 145th Street and potentially a longer delay for north-south traffic. This is not expected to occur with the Preferred Alternative however, because it includes the addition of a westbound right turn pocket on NE 145th Street approaching 5th Avenue NE, and has provisions for buses to enter the station rather than drop transferring riders on the east side of 5th Avenue NE; therefore requiring them to cross the street to reach the station.
- The existing sidewalk on 46th Avenue West at the Lynnwood Transit Center Station could become overcrowded with the alternatives. Potential transit-oriented development and/or mitigation could provide a wider sidewalk.
- Station construction often includes reconstruction of adjacent streets, which would include construction of pedestrian and bicycle facilities at or above local jurisdictional standards and ADA accessibility. Sidewalk widths would exceed standards where warranted by pedestrian volumes and LOS.

5.5.1 Pedestrian Facilities

Pedestrian facilities were inventoried within 0.50 mile of the proposed light rail stations. The Lynnwood Link Extension would substantially increase the number of pedestrians in and around the stations. The inventory of pedestrian facilities discussed in Chapter 4 also identified the activity centers that would generate higher volumes of pedestrians between the activity center and the station, including multifamily housing, commercial areas, community centers, and community colleges (see Section 4.5.1).

Pedestrian LOS was analyzed within 300 feet of the station entrances. Pedestrian LOS for sidewalks was analyzed using the methodology from the *Highway Capacity Manual* (Transportation Research Board 2000) and the TCQSM. Pedestrian LOS is a measure of the walking conditions on a sidewalk. LOS A represents ample spacing between pedestrians on a sidewalk for free-flow walking speeds. LOS F represents unavoidable crossings between pedestrians on a sidewalk or path, preventing free-flow walking speed and movement.

The worst condition LOS would occur as trains are unloading during the PM peak hour when trains are full and arriving every 4 minutes. PM peak hour boardings are also expected to be substantial by 2035. The number of pedestrians using sidewalks within 300 feet of the stations was based on an estimate of the number of boarding and alighting transit riders that would walk to a park-and-ride lot, passenger pick-up/drop-off area, bus stops, and pedestrian trips to neighborhoods or other nearby destinations. The Sound Transit Ridership Model provided the number of PM peak hour maximum boardings and alightings as "walk trips" and "bus trips." Boardings and alightings by station for the Preferred Alternative are shown in Tables 5-33 and 5-34.

The walk trips were distributed along walk routes to neighborhoods in the vicinity of the stations. The bus trips at each station represent a walk trip through the station area and then pedestrian movements distributed to the bus stops. Pedestrian trips were generated from the park-and-ride lot based on the number of stalls and an assumption that the park-and-ride empties in 3 hours. The logical walk route was followed from the park-and-ride to the station platform to determine pedestrian volumes for the facilities. Additional trips were generated and distributed to passenger pick-up/drop-off areas based on the 2035 peak-hour passenger pick-up/drop-off forecasts. Additional pedestrian volumes may be generated by those using nearby on-street parking. A summary of the estimated pedestrian volumes during the PM peak hour is presented in Table 5-32 and Table 5-33. Table 5-32 presents the estimated number of alighting passengers at each station and the number of pedestrians generated that transfer to their mode of egress. Table 5-33 summarizes the number of pedestrians boarding a train during the PM peak hour and the estimated number by mode of access. The estimates are presented per train and per PM peak hour.

Table 5-32. 2035 Estimated Pedestrian Trips per Train at Stations—PM Peak Hour Light Rail Alighting to Mode Transfer

Station	Walk[a]	Bicycle[a]	Bus[a]	Park-and-Ride[b]	Pick-up/Drop-off[c]	Total per Train	Total PM Peak Hour
NE 130th Street	8	1	32	2	1	44	660
NE 145th Street	19	1	32	11	1	64	960
NE 155th Street[d]	3	1	1	11	1[e]	17	255
NE 185th Street	8	1	21	11	1	42	630
Mountlake Terrace	11	3	35	20	1	70	1,050
220th Street SW	8	1	3	4	1	17	255
Lynnwood	27	5	187	42	2	263	3,945

Sources:

[a] Sound Transit Ridership Model revised forecast for the Preferred Alternative

[b] Number of parking stalls; park-and-ride empties in 3 hours

[c] 2035 Passenger Pick-up/Drop-off Forecasts: Minimum 1 per train.

[d] NE 155th Street Station was not included in the Preferred Alternative ridership forecast. Numbers reflect earlier forecast.

[e] Less than one per train.

Table 5-33. 2035 Estimated Pedestrian Trips per Train at Stations—PM Peak Hour Light Rail Boarding from Mode of Access

Station	Walk[a]	Bicycle[a]	Bus[a]	Park-and-Ride[b]	Pick-up/Drop-off[c]	Total per Train	Total PM Peak Hour
NE 130th Street	5	1[e]	27	2	1[e]	34	510
NE 145th Street	5	1[e]	24	6	1[e]	37	555
NE 155th Street[d]	3	1	1	2	1[e]	8	120
NE 185th Street	3	1	11	5	1[e]	20	300
Mountlake Terrace	5	1	13	8	1[e]	28	420
220th Street SW	3	1[e]	3	2	1[e]	10	150
Lynnwood	11	3	37	11	1[e]	63	945

Sources:

[a] Sound Transit Ridership Model revised forecast for the Preferred Alternative

[b] Number of parking stalls; park-and-ride empties in 3 hours

[c] 2035 Passenger Pick-up/Drop-off Forecasts: Minimum 1 per train.

[d] NE 155th Street Station was not included in the Preferred Alternative ridership forecast. Numbers reflect earlier forecast.

[e] Less than one per train.

Conceptual station area design concepts, shown in Appendix F of the Final EIS, were the basis for analysis of the Preferred Alternative. Sidewalk widths on street segments were based on the local jurisdiction sidewalk standards for the facility as a minimum and Sound Transit sidewalk standards for transit facilities. Wider sidewalks could be shown on the conceptual plans where pedestrian volumes would

require the additional width. The narrowest walkway width along a pedestrian route was used to evaluate the pedestrian LOS condition. In general, plazas and walking areas surrounding the station would be constructed with wide pedestrian areas. A detailed analysis of pedestrian impacts at the stations is presented below. Pedestrian mobility is discussed in terms of the PM peak period, when the highest volumes are away from the station; however, pedestrian volumes from PM peak hour boarding passengers were also included in the analysis.

Segment A: Seattle to Shoreline

No Build Alternative

Pedestrian facilities in the vicinity of the proposed light rail stations within Segment A are expected to be LOS A in 2035 without the project.

Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Street Stations

Reconstruction of 5th Avenue NE in the vicinity of NE 130th Street, and reconstruction of the NE 130th Street overcrossing would improve the pedestrian facilities to meet current design standards.

NE 145th Street Station (elevated)

Park-and-ride users would access the station from the ground floor of the park-and-ride using crosswalks across the bus access roadway. The passenger pick-up/drop-off area would be along a circulating roadway near the south end of the station. The paratransit load/unload zone would be inside the park-and-ride garage and also use the crosswalks across the bus roadway.

Buses would enter the station at the same driveway as the park-and-ride users and exit at the north end of the site. Buses would circulate in a one-way clockwise direction. The egress is adjacent to the northbound I-5 on-ramp. The Bus bays are along the west side of the park-and-ride garage and adjacent to the station plaza. Light rail passengers transferring to a bus would use elevators/stairs/escalators to reach the plaza level and walk across the plaza to the bus bays. Most light rail passengers would transfer to buses at the plaza bus bays. The highest volume of pedestrians would occur within the station plaza areas; these areas would function at LOS A.

A northbound and southbound bus bay is provided on 5th Avenue NE, south of the park-and-ride and bus egress location. Light rail passengers transferring to a southbound bus on 5th Avenue NE would need to cross the parking garage entrance. This entrance would be designed with a crosswalk and enhanced with variations in pavement materials or pavement markings. Pedestrians would continue along a 10-foot-wide sidewalk within the station and a 10 to 12 foot sidewalk on 5th Avenue

NE, consistent with Sound Transit standards for transit facilities. The pedestrian volume on this sidewalk includes passengers walking from the station to the southbound bus, bus riders alighting and walking to the station, and pedestrians walking to and from neighborhoods to the north. Pedestrian volumes during the PM peak hour would result in an LOS C condition.

Passengers transferring to a northbound bus would walk across the station plaza to the intersection of NE 145th Street and 5th Avenue NE, cross 5th Avenue NE on the north side of NE 145th Street at a signalized crossing, and arrive at the bus stop. Bus platforms would be a minimum of 10 feet wide, which is consistent with King County Metro design guidelines. The pedestrian volume within the crosswalk on the north leg includes light rail passengers walking to the northbound bus platform, bus riders alighting and walking to the station, and pedestrians walking to and from the neighborhoods to the east. Pedestrian volume within the crosswalk on the south leg and on the sidewalk on the east side of 5th Avenue NE would be approximately LOS B. The conceptual design for the Preferred Alternative shows bus stops on NE 145th Street west of 5th Avenue NE to provide for future east-west bus service. King County Metro's service integration plan prepared for this project does not include buses on NE 145th Street. East-west service is provided using the north-south bus bays and NE 155th Street for the east-west movement to avoid the traffic congestion at the intersection of NE 145th Street and 5th Avenue NE. If the westbound bus were in use, passengers transferring to a westbound bus would walk within the station area to the bus stop on NE 145th Street. Riders or any other pedestrians crossing the west leg of NE 145th Street and 5th Avenue NE would use a pedestrian/bicycle pathway under the NE 145th Street bridge. There is no forecast of pedestrian volumes to these stops. Under existing conditions there is no sidewalk on the west leg of the intersection. (Refer to Section 5.4 for analysis of signal operations with a crosswalk on the west leg.) Pedestrians walking to other destinations would use the existing sidewalks beyond the reconstructed segments of NE 145th Street and 5th Avenue NE.

NE 185th Street Station (at-grade)

Park-and-ride users would access the station from the south end of the park-and-ride (located on the west side of I-5) via a pedestrian bridge over I-5 constructed adjacent to and on the north side of the existing NE 185th Street bridge. Pedestrian volumes on the bridge would include passengers leaving the station to access the park-and-ride, some boarding passengers from the park-and-ride, and pedestrians traveling to and from neighborhoods and the Shoreline community facilities. The pedestrian bridge is approximately 12 feet wide at the narrowest point, resulting in an LOS C condition. LOS C is sufficient for normal walking speeds and for bypassing other pedestrians. Movements in the reverse direction can cause minor conflicts.

Pedestrian movement on an 8-foot-wide sidewalk to and from the east, and within the crosswalks, is estimated to operate at LOS B conditions.

Passenger pick-up/drop-off would occur at angled parking spaces located on the east side of the station across from the circulating roadway. Paratransit load/unload would occur adjacent to the plaza, at the south end, very near to the elevators to the platform.

Light rail passengers transferring to a bus would walk across the plaza to the bus platforms along the circulating roadway adjacent to the plaza. Two additional bus bays are located on NE 185th Street. Passengers traveling to and from these bus stops would access the bus platform from the south end of the plaza for westbound buses and cross NE 185th Street to access the eastbound bus platform. The 8-foot-wide sidewalk would function at an LOS B condition. Passengers transferring to an eastbound bus would use the crosswalk at the intersection of the station entrance and 7th Avenue NE. This intersection would also be used by general purpose traffic, buses, paratransit, and for vehicles accessing disabled permit parking. The intersection would experience multiple mode use with potential conflicts with pedestrian movements. Light rail passengers walking to their destinations would use the reconstructed sidewalks that are 8 feet wide, which would meet City of Shoreline design guidelines. These new sidewalks are projected to function at LOS B. Pedestrians walking beyond the reconstructed street segments would use existing sidewalks that are expected to function at LOS A conditions.

Shoreline Stadium Garage—Optional

The Shoreline Stadium garage would be a shared facility, serving as a park-and-ride during daytime hours, and accommodating daytime stadium event parking as well as parking for events on evenings and weekends. Pedestrian movements discussed for the NE 185th Street Park-and-Ride above would continue across the north leg of 5th Avenue NE with the park-and-ride located farther to the west. A standard crosswalk would provide adequate space for pedestrians. Additional pedestrian warning signs would be provided for drivers on NE 185th Street and 5th Avenue NE due to the relatively frequent and high volume of pedestrians across 5th Avenue NE.

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Street Stations

NE 145th Street Station Option 1 (elevated)

Park-and-ride users would access the station at the north end directly from the parking garage. The passenger pick-up/drop-off platform is inside the parking garage, and these users would access the station similarly. The highest volume of pedestrians would occur within the station plaza areas; these areas would function at LOS A.

Light rail passengers transferring to a southbound bus would use the station plaza to access the bus stop. Passengers transferring to a northbound bus would walk across the station plazas to the intersection of NE 145th Street and 5th Avenue NE, cross 5th Avenue NE on the north side of NE 145th Street, and arrive at the bus stop. The sidewalk on 5th Avenue NE would be a minimum of 8 feet wide, which is consistent with City of Shoreline design guidelines. The crosswalk and sidewalk would function at LOS F conditions and would require a 16-foot-wide crosswalk and sidewalk to reach LOS D conditions.

King County Metro's service integration plan prepared for this project does not include buses on NE 145th Street. East-west service is provided using the north-south bus bays and NE 155th Street for the east-west movement to avoid the traffic congestion at the intersection of NE 145th Street and 5th Avenue NE. If the westbound bus were in use, passengers transferring to a westbound bus would walk within the station area to the bus stop on NE 145th Street. Riders transferring to an eastbound bus would cross the west leg of NE 145th Street and 5th Avenue NE. Station area directional signage would direct pedestrians away from the I-5 on-ramps; however, some pedestrians may choose to cross the I-5 northbound on-ramp if they were unfamiliar with the park-and-ride, or if they have destinations north of the station on the west side of 5th Avenue NE. There would be few gaps in the traffic stream for pedestrians to cross the ramp terminal.

Pedestrians walking to other destinations would use the existing sidewalks beyond the reconstructed segments of NE 145th Street and 5th Avenue NE. The freeway flyer stops and the pedestrian paths to NE 145th Street from the flyer stops are assumed to be removed with the project.

NE 185th Street Station Option 1 (at-grade)

Park-and-ride users would leave the NE 185th Street Station at its south end and cross over I-5 using a 12-foot-wide pedestrian walkway on the north side of a reconstructed bridge to access the parking garage on the west side of I-5. The 10-foot-wide sidewalk is estimated to function at LOS C.

Pick-up/drop-off passengers would walk from the station onto the plaza, along the bus access driveway that intersects NE 185th Street opposite 5th Avenue NE, and then cross the driveway to the pick-up/drop-off area on the north side of NE 185th Street. A 10-foot-wide crosswalk would operate at LOS B.

Light rail passengers transferring to a bus would walk across the plaza to the bus platforms located on the east edge of the reconstructed NE 185th Street bridge. Those transferring to eastbound buses would need to cross NE 185th Street on the west side of 5th Avenue NE.

Light rail passengers walking to their destinations would use the reconstructed sidewalks that are at least 6 feet wide and meet City of Shoreline design guidelines. These new sidewalks would function at LOS A. Pedestrians walking beyond the reconstructed street segments would walk on existing sidewalks that are also expected to function at LOS A conditions.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Street Stations

NE 145th Street Station Option 2 (elevated)

With Option 2, park-and-ride users would access the parking garage using the plaza area at the center of the station, as would pedestrians walking to the pick-up/drop-off platform. Passengers transferring to southbound buses on 5th Avenue NE would need to cross the parking garage entrance. This entrance would be designed with a crosswalk and enhanced with variations in pavement materials or pavement markings. Passengers transferring to northbound buses on 5th Avenue NE would follow the same routes as in Alternative A1, Option 1, also resulting in an LOS F condition with a 10-foot-wide crosswalk and 8-foot-wide sidewalk.

In the project design, the freeway flyer stops and the pedestrian paths to NE 145th Street would be removed.

NE 185th Street Station Option 2 (elevated)

Park-and-ride users leaving the station would have to walk across the plaza and cross the park-and-ride and bus access roadway to enter the parking garage. Assuming a 10-foot-wide crosswalk is provided, this crossing would function at LOS B.

Pick-up/drop-off passengers would walk to the south end of the station, along a sidewalk on the north side of NE 185th Street, and cross the bus entrance/exit to reach the pick-up/drop-off platform on the north side of NE 185th Street. These pedestrians would also experience LOS B conditions.

As in Option 1, light rail passengers transferring to a bus would walk across the plaza to the bus platform located on the east edge of the reconstructed NE 185th Street bridge. Those transferring to eastbound buses would need to cross NE 185th Street on the west side of 7th Avenue NE. A 10-foot-wide crosswalk and 8-foot-wide sidewalk would function at LOS B conditions.

Light rail passengers walking to their destinations would use the reconstructed sidewalks and experience LOS A conditions. Pedestrians walking beyond the reconstructed street segments would walk on existing sidewalks and experience LOS A conditions. Note that pedestrians walking from the station to the North City business district would encounter a missing sidewalk segment on NE 180th Street between 9th Avenue NE and 15th Avenue NE.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations

NE 130th Street Station Option 1 (at-grade)

Park-and-ride users would need to walk across 5th Avenue NE in the vicinity of the potential leased park-and-ride lot. Pedestrians would experience LOS A conditions with a 10-foot-wide sidewalk. The crosswalk is an unsignalized crossing. Pedestrian warning signs, flashers, or other safety devices would alert drivers of the midblock crossings. Passengers would access the pick-up/drop-off area adjacent to the station.

Light rail passengers leaving the station to transfer to a westbound bus would walk to the south end of the plaza and along a 10-foot-wide sidewalk to a bus stop on the reconstructed bridge. Light rail passengers transferring to an eastbound bus would cross NE 130th Street and walk along the new sidewalk on the reconstructed bridge to the bus platform. These pedestrians would also experience LOS E conditions. A 12-foot-wide crosswalk and sidewalk would reach LOS D conditions. The City of Seattle sidewalk standard for pedestrian zones in front of a transit station is 10 to 12 feet wide.

Light rail passengers walking to destinations west of the station would use new sidewalks on the reconstructed bridge along NE 130th Street. Traveling east of the station, passengers would walk on reconstructed portions of 5th Avenue NE and Roosevelt Way NE. Sidewalks would be 8 feet wide, which is consistent with City of Seattle design guidelines and function at LOS A. Beyond the reconstructed street segments, pedestrians would walk on the existing sidewalks. North of the station there is a sidewalk on the east side of 5th Avenue NE up to the Jackson Park Golf Course, but not north of that point. The existing 5-foot-wide sidewalk would function at LOS A.

NE 155th Street Station (elevated)

At the NE 155th Street Station, the passenger drop-off/pick-up area is on the south side of NE 155th Street adjacent to the parking garage. Park-and-ride users would walk across from Level 1 of the parking garage to a walkway on the south side of the fire station, and then access the elevated station platform using stairs, escalator, or elevator. Passengers walking to the pick-up/drop-off area would descend from the station at the south end and use a pedestrian walkway along the south and east side of the fire station. The wide plaza would operate at LOS A conditions.

Load and unload zones for buses would be located on both sides of NE 155th Street under the station, with the westbound bus platform approximately 300 feet to the west of the station. Light rail passengers transferring to a bus would take the stairs or an elevator to street level on either side of NE 155th Street to reach the bus zones. Platforms and plazas would operate at LOS A for pedestrian volume.

Passengers walking to their destinations would use reconstructed sidewalk segments that are 6 feet wide, which is consistent with City of Shoreline standards. Beyond the reconstructed street segments pedestrians would use existing sidewalks. These facilities would also operate at LOS A.

NE 185th Street Station Option 3 (at-grade)

With Alternative A5, Option 3 would function the same as Option 2 for pedestrians, except for a heavier volume of pedestrians walking east on NE 185th Street to access the additional park-and-ride spaces that would be located at the Seattle City Light property. Pedestrians accessing this park-and-ride would cross 8th Avenue NE using a 10-foot-wide crosswalk that would function at LOS A (the crosswalk location would be identified in the later design); however, the short stretch of sidewalk between 8th Avenue NE and the additional park-and-ride space is currently 6 feet wide and would operate at LOS C unless widened further.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations

NE 130th Street Station Option 2 (elevated)

With Alternative A7, park-and-ride users would walk to the north end of the NE 130th Street Station to access the surface park-and-ride lot using wide plazas. Passengers would access the passenger pick-up/drop-off area adjacent to the station. These facilities would function at LOS A.

Light rail passengers leaving the station to transfer to a westbound bus would walk to the south end of the plaza and along a 10-foot-wide sidewalk to a bus stop on the reconstructed bridge. Light rail passengers transferring to an eastbound bus would cross NE 130th Street and walk along the new sidewalk on the reconstructed bridge to the bus platform. These pedestrians would also experience LOS E conditions. A 12-foot-wide crosswalk and sidewalk would reach LOS D conditions. The City of Seattle sidewalk standard for pedestrian zones in front of a transit station is 10 to 12 feet wide.

Light rail passengers walking to their destinations would use the reconstructed sidewalk up to the bridge abutment on reconstructed portions of 5th Avenue NE and Roosevelt Way NE. Sidewalks would be a minimum of 8 feet wide, which is consistent with City of Seattle design guidelines. Beyond the reconstructed street segments, pedestrians would walk on the existing sidewalks. Pedestrians would also use the existing sidewalks over the bridge. Across the NE 130th Street bridge north of the station, there is a sidewalk on the east side of 5th Avenue NE that extends only to the golf course. The existing 5-foot-wide sidewalk would function at LOS A.

NE 155th Street Station (elevated)

The pedestrian impacts with Alternative A7 would be the same as with Alternative A5.

NE 185th Street Station (at-grade)

The pedestrian impacts with Alternative A7 would be the same as with Alternative A3.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations

NE 130th Street Station Option 1 (at-grade)

The pedestrian impacts with Alternative A10 would be the same as with Alternative A5.

NE 145th Street Station Option 1 (elevated)

The pedestrian impacts with Alternative A10 would be the same as with Alternative A1, except that 150 more park-and-ride spaces would be provided at the NE 145th Street Station, resulting in more transit riders walking to the park-and-ride lot.

NE 185th Street Station Option 3 (at-grade)

The pedestrian impacts with Alternative A10 would be the same as with Alternative A5.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations

NE 130th Street Station Option 2 (elevated)

The pedestrian impacts with Alternative A11 would be the same as with Alternative A7.

NE 145th Street Station Option 2 (elevated)

The pedestrian impacts with Alternative A11 would be the same as with the Preferred Alternative.

NE 185th Street Station Option 2 (elevated)

The pedestrian impacts with Alternative A10 would be the same as with Alternative A3.

Segment B: Shoreline to Mountlake Terrace

No Build Alternative

Pedestrian facilities in the vicinity of the light rail stations within Segment B are expected to be LOS A in 2035 without the Lynnwood Link Extension.

Preferred Alternative (B2 Modified): East Side to Mountlake Terrace Transit Center to West Side

The NE 195th Street pedestrian/bicycle bridge over I-5 would be reconstructed with all Segment B alternatives. The facility would be constructed to meet or exceed WSDOT and local jurisdiction standards. The current concept design is 14 feet wide.

Mountlake Terrace Transit Center Station (elevated)

Park-and-ride users would walk to access the station from the existing Mountlake Terrace Park-and-Ride (660 spaces) or a reconfigured surface parking lot (approximately 200 spaces). From the existing park-and-ride lot passengers would enter and exit the park-and-ride garage via stairs or elevator to the surface, walk east across an internal circulation roadway using a crosswalk, and access the plaza at the north end of the station. The hourly volume of pedestrians leaving the station and going to the garage, combined with some park-and-ride users accessing the station would result in LOS C conditions with a 12-foot-wide crosswalk. The 10-foot-wide walkway into the garage would result in LOS D conditions.

Pedestrians in the crosswalk would need to be aware of traffic coming to and from the garage driveway to the north and to and from the surface parking lot, including buses using the internal circulation roadway. Drivers leaving the surface lot may have their focus on the vehicles exiting the park-and-ride, attempting to make a left turn between gaps in the exiting traffic stream. Immediately after entering the traffic stream, from a left-hand turn, the driver will be faced with a high volume of pedestrians within the crosswalk.

Passengers from the surface lot would walk through the park-and-ride lot and directly onto the station plaza. The passenger drop-off/pick-up area is adjacent to the plaza on the east side of the station and within the surface parking lot. Paratransit loading/unloading would be from a bay located adjacent to the plaza at the north end near escalators and an elevator.

Light rail passengers transferring to a bus would either walk to bus platforms along the west side of the plaza or to bus platforms on 236th Street SW. To access the bus platforms on 236th Street SW, light rail passengers would use the station platform to access stairs or elevators on either side of 236th Street SW, avoiding a street crossing. These facilities would function at LOS A conditions.

A multi-use pedestrian/bicycle facility is under design along the north side of 236th Street SW and Lakeview Drive, from the west side of the freeway interchange to the Interurban Trail. From the station, pedestrians walking west from the station would walk on the north side of the 236th Street SW bridge over I-5 (the sidewalk is on the north side) until connecting to the planned Lakeview Drive multi-use trail. Pedestrians walking east toward the town center could use the existing sidewalks

along 236th Street SW and 56th Avenue West. Pedestrians could choose to use the trail through Veteran's Memorial Park; however, as a wooded soft trail it is not considered a pedestrian access route to the station. These facilities would all function at LOS A conditions, except for the 5-foot-wide sidewalk on the north side of 236th Street SW across I-5, which is estimated to function at LOS C.

220th Street SW South Station Option (elevated)

Park-and-ride users would walk from the surface lot to the station plaza. The passenger pick-up/drop-off and paratransit areas would be adjacent to the plaza near the north end of the station. Light rail passengers transferring to a bus would use stairs or elevators at the north end of the station and then walk along a pathway to 220th Street SW. Pedestrians going to and from neighborhoods to the southwest would use a walkway at the south end of the station. The walkway would be designed to meet City of Mountlake Terrace standards. During the PM peak hour walkways would function as a LOS A condition.

Alternative B1: East Side to Mountlake Terrace Transit Center to Median

Mountlake Terrace Transit Center Station (elevated)

The pedestrian impacts of Alternative B1 would be similar to the Preferred Alternative.

Alternative B2A Modified: East Side to Mountlake Terrace Transit Center to West Side

Mountlake Terrace Transit Center Station (elevated)

The pedestrian impacts of Alternative B2A would be similar to the Preferred Alternative.

220th Street SW Station North Option (elevated)

Park-and-ride users would walk within the garage to stairs and elevators at the southeast end of the parking garage and access the elevated light rail station at the north end of the platform. The passenger pick-up/drop-off areas would be provided on both sides of 220th Street SW near the bus stops. Pick-up/drop-off could also occur within the parking garage. Light rail passengers transferring to a bus would use stairs or elevators on either sides of 220th Street SW and walk along the sidewalks on 220th Street SW. Pedestrians crossing 220th Street SW would use the light rail station platform or the nearest signalized intersection. The sidewalks would be a minimum of 6 feet wide, which is consistent with the City of Mountlake Terrace design guidelines. The sidewalks would function at LOS A conditions.

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median

Mountlake Terrace Freeway Station (at-grade in median)

Light rail passengers walking to the park-and-ride, passenger pick-up/drop-off area, and bus stops would walk on the existing pedestrian bridge that leads to the parking garage. The passenger pick-up/drop-off area would be within the surface lot on the east side of the garage, just as with the existing transit center. Transfers to buses would be the same as currently exists, along the existing internal roadway and on 236th Street SW. Pedestrian paths would be the same as existing conditions.

An additional pedestrian overcrossing of the I-5 northbound lanes would be provided at the north end of the station to 232nd Street SW. ADA-accessible ramps and elevators would be provided to manage the uphill grade.

Segment C: Mountlake Terrace to Lynnwood

No Build Alternative

Pedestrian facilities in the vicinity of the light rail stations within Segment C are expected to be LOS A or LOS B in 2035 without the project.

Preferred Alternative (C3 Modified): Along I-5 to Lynnwood Park-and-Ride

Park-and-ride users would access the station using stairs or elevators within the parking garage to reach the mezzanine level of the station. From the garage, passengers would use a 20-foot wide pedestrian bridge to the mezzanine level and then use stairs, escalators or elevators to the station plaza. The hourly volume of pedestrians during the PM peak period moving from the station to the garage, as well as pedestrians moving from the garage to the station, would result in LOS D conditions.

The passenger pick-up/drop-off area would be along the northeast edge of the surface parking lot at the south end of the station. Stairs, escalators, or elevators would take light rail passengers to the mezzanine level or station platform. The paratransit load/unload area would be located along the northeast side of this surface parking. This location would provide a short walking distance to the light rail station and bus transit center.

Light rail passengers that transfer to buses would use stairs, escalators, or elevators to access the plaza at the south end of the station and use a crosswalk across the paratransit access roadway. Light rail passengers that access the plaza at the north end of the station could cross 46th Avenue West using a crosswalk. Traffic flow on this section of 46th Avenue West would be limited to buses and carpools; however,

pedestrians would be encouraged via signage to use the south end of the station so that they can cross using the crosswalk across the paratransit access roadway, which would have lower volumes. For purposes of analysis, 75 percent of pedestrians were assumed to use the south end of the station and walk across the plaza to the bus bays and 25 percent were estimated to leave the north end of the station and use the crosswalk to go across 46th Avenue West. The volume of pedestrians is so high that pedestrians could be expected to spread out along the bus bays and traverse the transit center at various locations to arrive at their bus. Pedestrians choosing to use the crosswalks at 46th Avenue West and the transit center driveway would be at LOS F conditions for a 10-foot crosswalk and would also access buses throughout the bus plaza area. Buses and carpools would likely be forced to wait to follow the highest volume of pedestrians.

Pedestrians accessing the station would use existing sidewalks on 48th Avenue West, 46th Avenue West, 200th Street SW, and Alderwood Mall Boulevard. Pedestrians going to and from the southeast would use the existing pedestrian bridge over 44th Avenue West provided by the Interurban Trail and also have access to the parking garage. Pedestrians would walk through the parking garage along a dedicated walkway to the bridge from the parking garage to the station mezzanine. Pedestrians in the vicinity of 200th Street SW/Alderwood Mall Boulevard would walk south along 44th Avenue West and access the plaza. The walkway from the Interurban Trail into the garage would be approximately 12 feet wide, resulting in LOS D conditions. The estimated pedestrian volume on 46th Avenue West would result in LOS D conditions with estimated PM peak pedestrian volume. A 12-foot multi-use path would be provided along the west side of 48th Avenue E for pedestrians accessing the station from the northwest. The extension of the eastbound right turn lane on 200th Street SW would include reconstruction of the sidewalk consistent with City of Lynnwood standards.

Alternative C1: 52nd Avenue West to 200th Street SW

200th Street SW Station (elevated)

Park-and-ride users would walk along either 48th Avenue West or 46th Avenue West to the park-and-ride lots. Pick-up/drop-off passengers would use a platform on the east side of 48th Avenue West, south of the station. Light rail passengers transferring to an eastbound bus would walk from the station platform, down an escalator or stairs, and to the on-street bus stop. Passengers transferring to a westbound bus would cross the east leg of 200th Street SW to the bus stop on the north side of 200th Street SW. Passengers transferring from buses would also continue at the bus bays within the existing transit center through the plaza.

With Alternative C1, park-and-ride users would access lots adjacent to the station and the existing surface lots. Pedestrian access to the surface lots would be through

the station area and transit center or along sidewalks at the perimeter. The highest pedestrian volume, based on a distribution of pedestrians to park-and-ride stalls, would occur at the intersection of 46th Avenue West/48th Avenue West. Pedestrians were assumed to cross the west leg of the intersection to the surface lots, while pedestrians continuing to the east surface lot would cross the south leg of the intersection. In actual use, pedestrians could be expected to walk diagonally across the intersection due to the high volumes of pedestrians.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center

Lynnwood Transit Center Station (elevated)

Park-and-ride users would walk to vertical circulation facilities (stairs, escalators, or elevators) and to the station plazas, and then walk to the south to the parking garage or use the crosswalk across the direct access ramp roadway/46th Avenue West to the existing surface parking lot. The passenger pick-up/drop-off platform would be along the north side of the station plaza along 48th Avenue NE. Light rail passengers that transfer to buses would walk along 48th Avenue West, or between the two parking garage structures to reach the existing bus transit center. The pedestrian LOS would function at LOS C on the two crosswalks between the station area plaza, across 48th Avenue West to the transit center. The concept design shows approximately a 16-foot-wide sidewalk, which would function at LOS C.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride

Lynnwood Transit Center Station (elevated)

Park-and-ride users would take the stairs, escalators, or elevators to the station plaza and then would have two options for walking to the parking garage just west of the direct access ramp. With Option 1, they would walk along a pedestrian path underneath the direct access ramp to the proposed garage; with Option 2, they would walk up the diagonal pathway to the junction of 46th Avenue West and the direct access ramp and cross the ramp roadway at that point to reach the garage. The diagonal pedestrian path in the concept design is approximately 32 feet wide and would function at LOS E. A wider path would result in a higher LOS rating. The crosswalks at the intersection of 46th Avenue West/48th Avenue West would function at LOS E to LOS F across the south leg. This assumes all pedestrians would use the 12-foot-wide crosswalks. In actual use, pedestrians could be expected to walk diagonally across the intersection.

Light rail passengers who transfer to buses would walk across the intersection of 46th Avenue West/direct access ramp to the existing transit center in Option 1. As a worst-case condition, all pedestrians would use the 12-foot-wide crosswalk, resulting in LOS C conditions. However, pedestrians currently cross at various

locations across 46th Avenue West because it has only bus and HOV traffic and no general purpose traffic. In Option 2, the bus transfer facilities would be located immediately adjacent to the station; hence, light rail passengers would simply walk across the plaza to the buses. Passengers walking to the pick-up/drop-off platform in Option 1 would walk across the plaza. Pedestrian movement would also occur from the plaza area to the Interurban Trail across 46th Avenue West using the intersection crosswalk. In Option 2, pick-up/drop-off passengers would walk along the pedestrian path under the direct access ramp to the platform adjacent to the parking garage.

5.5.2 Bicycle Facilities

Bicycle facilities were inventoried within 1 mile of the proposed light rail stations. The project would increase the number of bicycles in the proposed station areas. Activity centers that would generate an increase in bicycle travel to and from the stations were also included in the analysis, including multifamily housing, commercial areas, community centers, and community colleges. Secure and covered bicycle parking and access would be provided at each station.

Segment A: Seattle to Shoreline

The City of Seattle April 2014 *Seattle Bicycle Master Plan* identifies recommended bicycle facilities in northeast Seattle. A bicycle track (or protected bicycle lanes) is identified for the route using 1st Avenue NE and the North 117th Street bridge, on 5th Avenue NE north of NE 130th Street and along NE 130th Street/NE 125th Street.

The City of Shoreline 2011 *Bicycle System Plan*, *City of Shoreline Transportation Master Plan* identifies recommended bicycle facilities north of NE 145th Street. The City has identified NE 145th Street as an arterial needing further study for all modes of transportation. The *Bicycle System Plan* identifies improvements (described below) in the vicinity of the NE 155th Street Station and the NE 185th Street Station. In addition, the planned improvements are intended to complete bicycle facilities to connect the Interurban Trail to the Burke-Gilman Trail in Lake Forest Park.

At each station option in Segment A, there would be 50 covered bicycle parking spaces provided when Lynnwood Link Extension begins operation, with provision for up to 50 additional bicycle parking spaces in the future.

Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Street Stations

Reconstruction of 5th Avenue NE and NE 130th Avenue overcrossing would provide an opportunity to implement protected bike lanes along these reconstructed roadway segments.

NE 145th Street Station (elevated)

A bicycle track would be provided along the frontage of the station, on the west side of 5th Avenue NE, behind the sidewalk. North of NE 145th Street, the City of Shoreline's *Bicycle System Plan* identifies a bicycle lane on 5th Avenue NE; therefore, the reconstructed portion of 5th Avenue NE north of the I-5 on-ramp would be designed to transition to a bicycle lane. Beyond the reconstructed street segments, bicycles would continue to travel in the general purpose lanes. South of NE 145th Street, the City of Seattle *Bicycle Master Plan* shows protected bicycle lanes south to NE 130th Street.

Bicycle parking would be located on the plaza level of the station, and the current concept plan shows three locations at both ends of the plaza.

Bicyclists may choose to use the same route as a vehicle to access the station, or dismount and transition to a pedestrian at the crosswalks, and then access the plaza. The intersections on 5th Avenue NE adjacent to the station are high-volume intersections posing challenges to bicyclists using the same roadway.

Bicyclists approaching the intersection of NE 145th Street and 5th Avenue NE would likely dismount and transition to a pedestrian, walking their bicycle through the crosswalk and onto the plaza. Bicyclists leaving the station would walk their bicycles across the plaza, through the crosswalks, and then mount their bicycles and continue riding in the street. The north leg of this intersection is estimated at an LOS C condition for the PM peak hour of pedestrian volume, which would indicate capacity available for a bicyclist to walk with the bicycle and other pedestrians using the crosswalk.

Bicyclists approaching the station southbound on 5th Avenue NE would enter a bicycle lane near the approach to the I-5 on-ramp, travel with the flow of vehicle traffic through the intersection, and then enter the bicycle track to access the station. This bicycle movement would cross pedestrian movements on the sidewalk; although the volume of pedestrians would be low north of the station. Bicyclists leaving the station to travel north would use the bicycle track, dismount, and use the crosswalk on 5th Avenue NE, and then continue north within the travel lane or shoulder on 5th Avenue NE.

Bicyclists that continue with their bicycles onto the light rail train would either carry their bicycles on the stairs or escalators, or use the elevators. Select rail cars would provide bicycle storage on board.

NE 185th Street Station (at-grade)

Bicycle lanes would be provided along the reconstructed portion of NE 185th Street adjacent to the light rail station; on the existing NE 185th Street bridge that would be reconfigured to provide bicycle lanes; and adjacent to the park-and-ride—all of which would be consistent with the City of Shoreline's *Bicycle System Plan*. Beyond the reconstructed segment, bicycles would travel with general purpose traffic until reaching existing bicycle lanes. The bicycle facility inventory reveals that there would be a gap in the bicycle lane on NE 185th Street between reconstructed 5th Avenue NE on the west side of I-5 and the existing bicycle lane that extends west of 1st Avenue North. Another gap would occur on NE 185th Street east of the reconstructed portion of NE 185th Street and 10th Avenue NE. 10th Avenue NE has an existing 6-foot-wide paved shoulder and is designated as a sharrow lane in the City of Shoreline's *Bicycle System Plan*.

Two segments of 5th Avenue NE (north of NE 185th Street and west of I-5, and east of I-5 and to the south of NE 185th Street) would be reconstructed with bicycle lanes consistent with the City of Shoreline's *Bicycle System Plan*. Beyond the reconstructed street segments of 5th Avenue NE, bicyclists would continue to travel in the general purpose lanes.

Bicycle parking would be located on the plaza level of the station. Bicyclists would enter the station as pedestrians, walking their bicycles, at the southeast corner of the plaza. For bicyclists traveling from the east, westbound on NE 185th Street, riders would travel on the street and then dismount at the southeast corner of the plaza. Bicyclists traveling from the west, eastbound on NE 185th Street, would dismount near 5th Avenue NE and use the crosswalk on the west leg of NE 185th Street to access the southeast corner of the plaza. Alternatively, bicyclists from the City of Shoreline recreation facilities could use the bicycle and pedestrian bridge. The northbound bicyclists from 5th Avenue NE would dismount at NE 185th Street, use the crosswalks across 5th Avenue NE and the west leg of NE 185th Street, and walk onto the plaza in the southeast corner.

Bicyclists that continue with their bicycles onto the light rail train would either carry their bicycles on the stairs or escalators or use the elevators. Select rail cars would provide bicycle storage on board.

Bicyclists leaving the station would similarly walk their bicycles to the southeast corner of the plaza, use the crosswalks as pedestrians, and then mount their bicycles to begin riding on the street.

Optional Shoreline Stadium Garage

Bicyclists would travel within bicycle lanes on NE 185th Street to and from the stadium garage.

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Street Stations

NE 145th Street Station Option 1 (elevated)

With Alternative A1, NE 145th Street would be reconstructed to City of Seattle and/or City of Shoreline standards. The reconstructed portion of 5th Avenue NE south of NE 145th Street would include protected bicycle lanes consistent with the City of Seattle's *Bicycle Master Plan*. North of NE 145th Street, the *Bicycle System Plan* identifies a bicycle lane on 5th Avenue NE; therefore, the reconstructed portion of 5th Avenue NE north of NE 145th Street would also include a bicycle lane. Beyond the reconstructed street segments, bicycles would continue to travel in the general purpose lanes.

NE 185th Street Station Option 1 (at-grade)

The reconstructed portion of NE 185th Street between the west side of the reconstructed 5th Avenue NE west of I-5, including the east side of the reconstructed 5th Avenue NE on the east side of I-5, would have bicycle lanes consistent with the City of Shoreline's *Bicycle System Plan*. Beyond the reconstructed segment, bicycles would travel with general purpose traffic until reaching existing bicycle lanes. The bicycle facility inventory reveals that there would be a gap in the bicycle lane on NE 185th Street between reconstructed 5th Avenue NE on the west side of I-5 and the existing bicycle lane that extends west of 1st Avenue North. Another gap would occur on NE 185th Street east of the reconstructed portion of NE 185th Street between 5th Avenue NE (west of I-5) and 10th Avenue NE. 10th Avenue NE has an existing 6-foot-wide paved shoulder and is designated as a sharrow lane in the City of Shoreline's *Bicycle System Plan*.

Two segments of 5th Avenue NE (north of NE 185th Street and west of I-5, and east of I-5 and to the south of NE 185th Street) would be reconstructed with bicycle lanes consistent with the City of Shoreline's *Bicycle System Plan*. Beyond the reconstructed street segments of 5th Avenue NE, bicycles would continue to travel in the general purpose lanes.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Street Stations

NE 145th Street Station Option 2 (elevated)

The impacts of Option 2 with Alternative A3 would be the same as Option 1 described above for Alternative A1.

NE 185th Street Station Option 2 (elevated)

With Alternative A3, the impacts of Option 2 would be the same as Option 1 with Alternative A1, except that the reconstructed portion of NE 185th Street would end east of I-5, and 5th Avenue NE would not be reconstructed on either the west or east side of I-5; therefore, they would not have bicycle facilities. Bicycles would continue to travel in the general purpose lanes between the east end of the I-5 bridge and 1st Avenue NE to the existing bicycle lanes on NE 185th Street west of 1st Avenue NE.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations

NE 130th Street Station Option 1 (at-grade)

The reconstructed portion of NE 130th Street would include protected bicycle lanes as the design progresses. Beyond the reconstructed segment, bicyclists would continue to travel in general purpose lanes on NE 130th Street west of I-5, and east along NE 130th Street and Roosevelt Way NE to NE 125th Street.

The reconstructed portion of 5th Avenue NE has not yet been designed to include the bicycle track or protected lane that would be consistent with the City of Seattle's *Bicycle Master Plan*. Beyond the reconstructed segment, bicycles would travel with general purpose traffic along curbed segments and on the paved shoulder north of the station area.

NE 155th Street Station (elevated)

The reconstructed portion of NE 155th Street would replace the existing bicycle lanes, consistent with the City of Shoreline's *Bicycle System Plan*. Beyond the reconstructed portion of NE 155th Street to the east of 5th Avenue NE, bicycles would continue to use the general purpose lanes.

NE 185th Street Station Option 3 (at-grade)

The impacts of the NE 185th Street Station Option 3 with Alternative A5 would be the same as Option 2 with Alternative A3.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations

NE 130th Street Station Option 2 (elevated)

The impacts of the NE 130th Street Station Option 2 with Alternative A7 would be the same as Option 1 with Alternative A1, except that the NE 130th Street bridge would not be reconstructed. Bicycles would continue to travel in general purpose lanes over the NE 130th Street bridge to the west.

NE 155th Street Station (elevated)

The impact of the NE 155th Street Station with Alternative A7 would be the same as with Alternative A5.

NE 185th Street Station Option 2 (elevated)

The impact of the NE 185th Street Station with Alternative A7 would be the same as with Alternative A3.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations

NE 130th Street Station Option 1 (at-grade)

The impact of the NE 130th Street Station with Alternative A10 would be the same as with Alternative A5.

NE 145th Street Station Option 1 (elevated)

The impact of the NE 145th Street Station with Alternative A10 would be the same as with Alternative A1.

NE 185th Street Station Option 3 (at-grade)

The impact of the NE 185th Street Station with Alternative A10 would be the same as with Alternative A5.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations

NE 130th Street Station (elevated)

The impact of the NE 130th Street Station with Alternative A11 would be the same as with Alternative A7.

NE 145th Street Station Option 2 (elevated)

The impact of the NE 145th Street Station with Alternative A11 would be the same as the Preferred Alternative.

NE 185th Street Station Option 2 (elevated)

The impact of the NE 185th Street Station with Alternative A11 would be the same as with Alternative A3.

Segment B: Shoreline to Mountlake Terrace

The NE 195th Street pedestrian and bicycle bridge over I-5 would be reconstructed with all Segment B alternatives. The facility would be constructed to meet or exceed WSDOT and local jurisdiction standards. The current concept design is 14 feet wide.

At each station option in Segment B, there would be 50 covered bicycle parking spaces provided when the stations open and space to provide up to 50 additional bicycle parking spaces in the future.

Preferred Alternative: East Side to Mountlake Terrace Transit Center to West Side

Mountlake Terrace Transit Center Station (elevated)

The reconstructed portion of 236th Street SW would include bicycle lanes consistent with the Bike Route Facility Recommendations, Future Bicycle Plan in the City of Mountlake Terrace 2007 *Mountlake Terrace Transportation Master Plan*. Bicyclists approaching the station from the west, traveling east, could travel as a vehicle and use the left-turn lane to enter the station at the main access. Bicyclists could also continue across the I-5 off ramp, disembark at the corner, and walk to the bicycle parking area on the plaza. Bicyclists leaving the station, traveling west, would use the general purpose lanes on the 236th Street bridge over I-5 and then connect to the multi-use trail along Lakeview Drive. The Lakeview Trail, a mixed-use paved trail, is currently under design and will be located on the north side of 236th Street SW west of the I-5 southbound ramp.

Bicyclists approaching the station from the east and traveling west would access the sidewalk at the back of the bus bay, disembark, and walk to the bicycle parking area on the plaza. Bicyclists leaving the station eastbound would enter the bicycle lane in front of the bus bay. East of the reconstructed portion of 236th Street SW bicyclists would continue to ride in the general purpose lanes.

Bicyclists that continue with their bicycles onto the light rail train would either carry their bicycles on the stairs or escalators, or use the elevators. Select rail cars would provide bicycle storage on board.

220th Street SW Station South Option (elevated)

Bicyclists would access the 220th Street SW Station from a path between 220th Street SW and the station, and a path connecting 222nd Street SW and the station. Bicycle parking would be provided on the station plaza.

Alternative B1: East Side to Mountlake Terrace Transit Center to Median

Mountlake Terrace Transit Center Station (elevated)

The reconstructed portion of 236th Street SW would include bicycle lanes consistent with the Bike Route Facility Recommendations, Future Bicycle Plan in the City of Mountlake Terrace 2007 *Mountlake Terrace Transportation Master Plan*. Traveling west from the station, bicyclists would continue to use the general purpose lanes on the 236th Street SW bridge over I-5 and then connect to the multi-use trail along Lakeview Drive. The Lakeview Trail, a mixed-use paved trail, is currently under design and will be located on the north side of 236th Street SW west of the I-5 southbound ramp.

East of the reconstructed portion of 236th Street SW, bicyclists would continue to ride in the general purpose lanes.

Alternative B2A Modified: East Side to Mountlake Terrace Transit Center to West Side

Mountlake Terrace Transit Center Station (elevated)

The impacts to bicycle travel would be similar to the Preferred Alternative.

220th Street SW Station North Option (elevated)

With Alternative B2A, bicyclists would access the 220th Street SW Station parking garage from the driveway entrance at 60th Avenue West, or by using the elevators on either side of 220th Street SW. Bicyclists would then walk their bicycles through the station to the garage. Bicycle enhancements could be designed to facilitate the movement of bicycles from 220th Street SW to the station elevators to avoid the additional travel distance to 60th Avenue West for some bicyclists. There would be no designated bicycle facilities in this station area except at the Interurban Trail, which is located approximately 0.50 mile to the west and north of the station location.

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median

Mountlake Terrace Freeway Station (at-grade)

There would be no effect on bicycles with Alternative B4 because all construction activity would be in the median of I-5. Bicyclists would continue to access the transit center from 236th Street SW, use existing bicycle parking, and then walk to the freeway station.

Segment C: Mountlake Terrace to Lynnwood

At each station option in Segment C, there would be 200 covered bicycle parking spaces provided when the station opens and space to provide up to 200 additional bicycle parking spaces in the future. The multi-use Interurban Trail passes by all station alternatives in this segment, providing bicycle access to the north and south of the stations.

Within 1 mile of the proposed light rail station, the City of Lynnwood planned "Bicycle Skeleton System" in their Comprehensive Plan includes 5-foot-wide bicycle lanes on all arterials except 196th Street SW and 44th Avenue West south of 194th Street SW. In addition, improvements to the Interurban Trail are planned in the vicinity of 200th Street SW and 52nd Avenue West.

Preferred Alternative (C3 Modified): Along I-5 to Lynnwood Park-and-Ride

Bicyclists accessing the station from 48th Avenue West would use the paratransit roadway, dismount at the plaza, park their bicycles, and access the station at the south end. Bicyclists leaving the station toward 48th Avenue West would walk with their bicycles across the crosswalk, then mount their bicycles to travel west on the paratransit roadway. This crosswalk and intersection would have a high volume of pedestrians during the PM peak period.

Bicyclists accessing the station from 46th Avenue West would travel as a vehicle to the crosswalk across 46th Avenue West, dismount, and use the crosswalk across 46th Avenue West. These bicyclists would increase the volume of pedestrians conflicting with the bus and carpool traffic on 46th Avenue West. Bicyclists might prefer to park their bicycles on the plaza on the east side of 46th Avenue West so that when they are leaving the station they can walk their bicycles to the edge of the plaza and then begin riding on 46th Avenue West, which is north of the major pedestrian volume that occurs between the station and the transit center.

Bicyclists accessing the station from 44th Avenue West would travel as a vehicle to a walkway that connects to the Interurban Trail. The path from the Interurban Trail to the park-and-ride garage would be approximately 12 feet wide and would have

mixed pedestrians and bicycles. During periods of high pedestrian volumes bicyclist could be required to dismount prior to entering the garage or dismount at the garage entrance. Bicycle parking would be located near the entrance. Leaving the station, bicyclists would use the Interurban Trail bridge over 44th Avenue West and either access 44th Avenue West to the north traveling in the general purpose lane or access the Interurban Trail.

Bicyclists approaching the station from the south, traveling north on 44th Avenue West, would use the Interurban Trail bridge and then the access the station via the park-and-ride garage or continue north and access the plaza.

Bicyclists that continue with their bicycles onto the light rail train would either carry their bicycles on the stairs or escalators, or use the elevators. Select rail cars would provide bicycle storage on board.

Alternative C1: 52nd Avenue West to 200th Street SW

Alternative C1 would result in reconstruction of portions of the east side of 52nd Avenue West in the vicinity of the on-street portion of the Interurban Trail and on Cedar Valley Road. Reconstruction would include replacement of the existing bicycle lanes. There is a programmed improvement to the Interurban Trail in the vicinity of 208th Street SW and 52nd Avenue West. This constructed improvement would remain in place following construction of the light rail line.

200th Street Station SW Station

The reconstructed segment of 200th Street SW would include bicycle lanes consistent with the City of Lynnwood's Comprehensive Plan. The reconstructed segment extends from approximately 335 feet west of 48th Avenue West to 46th Avenue West on the south side of 200th Street SW. There could be a gap in the bicycle lane route on the south side of 200th Street SW between the west end of the reconstructed portion to the existing bicycle lanes at 50th Avenue West. The reconstruction would not include the north side of 200th Street SW.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center

There is a segment of Alternative C2 that would result in reconstruction of portions of the east side of 52nd Avenue West in the vicinity of the on-street portion of the Interurban Trail. Reconstruction would include replacement of the existing bicycle lanes. There is a programmed improvement to the Interurban Trail in the vicinity of 208th Street SW and 52nd Avenue West. This constructed improvement would remain in place after construction of the light rail line.

Lynnwood Transit Center Station

The tail tracks at the Lynnwood Transit Center Station would be over the Interurban Trail and the ramp to the 44th Street West pedestrian/bicycle bridge. Both facilities would remain in place after construction of Alternative C2.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride

The Alternative C3 light rail line would cross over the Interurban Trail east of 208th Street West and 48th Avenue West. A segment of the light rail line would result in reconstruction of portions of the east side of 52nd Avenue West in the vicinity of the on-street portion of the Interurban Trail. Reconstruction would include replacement of the existing bicycle lanes. There is a programmed improvement to the Interurban Trail in the vicinity of 208th Street SW and 52nd Avenue West. This constructed improvement would remain in place following construction of the light rail line.

Lynnwood Park-and-Ride Station

The tail tracks at the Lynnwood Transit Center Station would be over the Interurban Trail and the ramp to the 44th Street West pedestrian/bicycle bridge. Both facilities would remain in place after construction of Alternative C3.

5.6 Freight Mobility and Access

No changes to freight mobility and access are expected with the No Build Alternative beyond the increases in delay and roadway congestion that could occur over time.

With the Preferred Alternative and other light rail alternatives, freight truck traffic is expected to continue using the designated FGTS and city streets for the movement of freight. In some locations, designated truck routes would travel alongside the at-grade light rail alignment. At these locations, roadway and intersection conditions with the light rail alternatives would be similar to those with the No Build Alternative. Some intersection operations may improve through mitigation for the project alternatives, which could benefit freight movement. Beyond these potential project effects, modifications to the roadway network associated with the project alternatives that could result in changes in freight mobility and access are described for each segment. These modifications are not anticipated to negatively affect truck circulation or change the truck route designations on the regional and local street network.

Key observations and findings related to freight traffic include the following:

- In Segment A, some I-5 access modifications would be made near NE 130th Street with the Preferred Alternative and Alternatives A1, A5, and A10, and at the NE 145th Street Station with Alternatives A3 and A11. However,

these modifications are not expected to result in negative effects on truck circulation.

- In Segment A, NE 145th Street is a truck route serving freight traffic between I-5 and commercial activities to the west and east. Any increased queuing at the I-5 interchange ramps or other NE 145th Street intersections would be mitigated to prevent adverse effects on freight movement.
- The Segment B and C alternatives are not expected to affect truck circulation.

Segment A: Seattle to Shoreline

The Segment A alternatives are not expected to result in negative effects on truck circulation and not expected to affect any freight routes identified by the FGTS or the Cities of Seattle and Shoreline. Some I-5 access modifications would be made near NE 130th Street with the Preferred Alternative and Alternatives A1, A5, and A10, and at the NE 145th Street Station with Alternatives A3 and A11. An interchange justification report (IJR) is required for these ramp modifications with approval from WSDOT and FHWA. All alternatives would extend from the Northgate Station to the north side of NE 185th Street.

Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Street Stations

The Preferred Alternative begins at the Northgate Station and continues north in a mix of elevated and at-grade profiles on the east side of I-5, with an elevated station at NE 145th Street and an at-grade station at NE 185th Street.

Near NE 130th Street, the I-5 northbound off-ramp would be relocated to the south and would be grade-separated from southbound 5th Avenue NE, which would be below the off-ramp. The NE 130th Street bridge over I-5 would be rebuilt and realigned slightly to the south. This access modification may result in slightly improved freight access between I-5 and NE 130th Street.

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Street Stations

Freight mobility and access impacts for Alternative A1 would be similar to the Preferred Alternative.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Street Stations

Alternative A3 is similar to the Preferred Alternative, but would be mostly elevated between the Northgate Station and NE 145th Street. North of NE 145th Street, the

alignment would continue in a mix of elevated and at-grade profiles to an elevated station at NE 185th Street.

At the NE 145th Street Station, the northbound on-ramp to I-5 would be relocated to approximately the north edge of the existing surface park-and-ride lot to accommodate a new parking garage south of the relocated ramp. This would result in a modification to freight access between NE 145th Street/5th Avenue NE and I-5.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Alternative A5 also begins at the Northgate Station and continues north in a mix of elevated and at-grade profiles on the east side of I-5 to an at-grade station at NE 130th Street. North of the NE 130th Street Station, the alignment continues north in a predominantly at-grade profile on the east side of I-5 to an elevated station at NE 155th Street. The alignment then continues north in a predominantly at-grade profile to an at-grade station at NE 185th Street.

Near NE 130th Street, the I-5 northbound off-ramp would be relocated to the south and would be grade-separated from southbound 5th Avenue NE, which would be below the off-ramp. The NE 130th Street bridge over I-5 would be rebuilt and realigned slightly to the south. This access modification may result in slightly improved freight access between I-5 and NE 130th Street.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Alternative A7 is similar to Alternative A5, but with a mostly elevated alignment to NE 145th Street. Elevated stations would be provided at NE 130th Street, NE 155th Street, and NE 185th Street.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations

Similar to Alternative A5, Alternative A10 begins at the Northgate Station and continues north in a mix of elevated and at-grade profiles on the east side of I-5 to an at-grade station at NE 130th Street. North of NE 130th Street, the alignment would continue on the east side of I-5 in a predominantly at-grade profile, with short sections of elevated guideway (similar to Alternative A1). An elevated station would be provided at NE 145th Street and an at-grade station at NE 185th Street.

As with Alternative A5, the I-5 northbound off-ramp near NE 130th Street would be relocated to the south and would be grade-separated from southbound 5th Avenue NE, which would be below the off-ramp. The NE 130th Street bridge over I-5 would be rebuilt and realigned slightly to the south. This access modification may result in slightly improved freight access between I-5 and NE 130th Street.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations

Similar to Alternative A7, Alternative A11 follows the east side of I-5 from the Northgate Station in a mostly elevated alignment to NE 145th Street. Elevated stations would be provided at NE 130th Street, NE 145th Street, and NE 185th Street.

As with Alternative A3, the I-5 northbound on-ramp adjacent to the NE 145th Street Station would be relocated to approximately the northern edge of the existing surface park-and-ride lot to accommodate a new parking garage south of the relocated ramp. This would result in a modification to freight access between NE 145th Street/5th Avenue NE and I-5.

Segment B: Shoreline to Mountlake Terrace

The Segment B alignment alternatives are not expected to affect truck circulation or truck routes identified by the FGTS and the Cities of Shoreline and Mountlake Terrace. All alternatives would extend from the north end of the NE 185th Street Station to approximately 212th Street SW.

Preferred Alternative (B2 Modified): East Side to Mountlake Terrace Transit Center to West Side

The Preferred Alternative extends north from the NE 185th Street Station in a mix of elevated and at-grade profiles on the east side of I-5 to an elevated Mountlake Terrace Transit Center Station at 236th Street SW. North of the Mountlake Terrace Transit Center Station, the alignment continues north on an elevated guideway, crossing over I-5 to the west side. The alignment then continues north in a mix of at-grade and elevated profiles until south of 220th Street SW where it continues north with an elevated profile to approximately 212th Street SW.

Alternative B1: East Side to Mountlake Terrace Transit Center to Median

Alternative B1 is the same as the Preferred Alternative between the NE 185th Street Station and the north side of the elevated Mountlake Terrace Transit Center Station. North of the Mountlake Terrace Transit Center Station, the alignment would continue north on an elevated guideway, cross over the northbound lanes of I-5, and continue north at-grade in the median of I-5 to approximately 212th Street SW.

Alternative B2A: Optional 220th Street SW Station (elevated)

An optional elevated station at 220th Street SW would be provided with Alternative B2A.

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median

Similar to Alternative B1, the Alternative B4 alignment continues north from the NE 185th Street Station in a mix of elevated and at-grade profiles on the east side of I-5 to approximately 239th Street SW. The alignment would then cross over northbound I-5 to an at-grade Mountlake Terrace Freeway Station. North of the Mountlake Terrace Freeway Station, the alignment would continue north at-grade in the I-5 median to approximately 212th Street SW.

Segment C: Mountlake Terrace to Lynnwood

The Segment C alignment alternatives are not expected to affect truck circulation or truck routes identified by the FGTS or the City of Lynnwood. All alternatives would extend from the north end of the NE 185th Street Station to approximately 212th Street SW.

Preferred Alternative (C3 Modified): Along I-5 to Lynnwood Park-and-Ride

The Preferred Alternative alignment continues along I-5 in the median or elevated on the west side of I-5 to approximately 208th Street SW, where the alignment leaves the I-5 right-of-way and turns to the north. The alignment then crosses the Interurban right-of-way and parallels I-5 to the elevated Lynnwood Park-and-Ride Station located on the east side of the existing Lynnwood direct access ramp. The elevated guideway of the Preferred Alternative would require columns that may affect the location and operation of driveways and parking lot circulation where light industrial properties would take truck deliveries. This impact could be mitigated in the design process.

Alternative C1: 52nd Avenue West to 200th Street SW

The Alternative C1 alignment continues northbound either at-grade in the median or elevated on the west side of I-5 and leaves the I-5 right-of-way at approximately 210th Street SW. The alignment then turns to the north and continues in an elevated profile along the east side of 52nd Avenue West, turns to the northeast along the east side of Cedar Valley Road, and then turns east along the south side of 200th Street SW, arriving at the elevated Lynnwood 200th Street SW Station on the east side of 48th Avenue West. The elevated guideway of Alternative C1 would require columns that may affect the location and operation of driveways along the east side of 52nd Avenue West and Cedar Valley Road where light industrial properties would take truck deliveries. This impact could be mitigated in the design process.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center

The Alternative C2 alignment is the same as the Alternative C1 alignment until approximately 204th Street SW, where the elevated alignment turns to the northeast and continues north to the elevated Lynnwood Transit Center Station. The elevated guideway of Alternative C2 would require columns that may affect the location and operation of driveways along the east side of 52nd Avenue West where light industrial properties would take truck deliveries. This impact could be mitigated in the design process.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride

Freight mobility and access impacts for Alternative C3 would be similar to the Preferred Alternative.

5.7 Parking

The Lynnwood Link Extension stations would include new, replacement, and additional park-and-ride capacity. The additional park-and-ride lots are proposed near most stations based on anticipated parking demand. These park-and-ride lots have generally been sized to accommodate the forecasted parking demand. However, there could be some parking spillover at stations if the vehicle demand exceeds park-and-ride capacity, or if users park on the street based on perceived convenience, particularly at the NE 130th Street Station, where limited new parking supply is proposed.

At the NE 145th Street, NE 155th Street, and NE 185th Street stations, there is currently a relatively large amount of unrestricted on-street parking in the vicinity of the stations; however, the potential for spillover parking is anticipated to be low due to the relatively large proposed supply of park-and-ride parking. In station areas that currently lack available on-street parking supply, such as near the Lynnwood, 220th Street SW, and Mountlake Terrace station options, the potential for "hide-and-ride" parking activity (i.e., on-street parking by transit users in neighborhoods surrounding stations) would be limited. In these cases, if spillover parking occurred, it would likely be on privately owned off-street parking facilities.

The amount of parking provided at each station may be further refined in future phases of the project. The available parking analyzed for the EIS is the higher range of expected park-and-ride supply in order to assess the likely highest level of effects. At some station areas, the street reconstruction adjacent to the light rail station would permanently remove on-street parking. Parking impacts and proposed park-and-ride parking spaces for each segment and alternative are described below. As part of this analysis, Sound Transit considered parking supply within 0.25 mile of each proposed station. Refer to Section 4.7, Parking, in Chapter 4 for figures showing the area inventoried for each proposed station.

Key observations and findings related to parking include the following:

- For all segments, park-and-ride capacity has been sized to generally accommodate the forecasted parking demand under typical situations. Some parking spillover could occur at stations if the vehicle demand exceeds park-and-ride capacity, or if users park on the street based on perceived convenience.
- In Segment A, the light rail alternatives would result in a loss of between 69 and 96 on-street parking spaces, and no loss of off-street parking.
- In Segment B, the light rail alternatives would result in a loss of between zero and 11 on-street parking spaces, and no loss of off-street parking.
- In Segment C, the light rail alternatives would result in a loss of between zero and eight off-street parking spaces, and no loss of on-street parking.

Segment A: Seattle to Shoreline

Table 5-34 summarizes the parking impacts along Segment A by alternative for on-street parking and off-street parking. The data in Table 5-34 do not include the existing park-and-ride lots and any off-street parking spaces associated with properties that might be acquired by the project. This loss of this parking is not considered a parking impact because the parking need also has been removed by the project. Parking at the Latvian Evangelical Lutheran Church will be modified but parking supply will be maintained. The Preferred Alternative would result in a loss of 69 parking spaces, while the loss with the remaining alternatives ranges from 73 to 96 spaces.

Table 5-34. Segment A Parking Impacts

	Parking Spaces Removed[a]		
Alternative	**On-Street**	**Off-Street[b]**	**Total**
Preferred Alternative	69	0	69
Preferred Alternative with options	69	0	69
Alternative A1	69	0	69
Alternative A3	73	0	73
Alternative A5	89	0	89
Alternative A7	77	0	77
Alternative A10	96	0	96
Alternative A11	84	0	84

[a] Includes parking spaces removed for column placement where applicable.
[b] Off-street does not include park-and-ride spaces.

Table 5-35 shows the park-and-ride lot spaces removed and proposed new park-and-ride spaces at each station and by alternative.

Table 5-35. Segment A Park-and-Ride Impacts and Proposed New Parking Spaces

Station	Alternative	Total Existing Parking Spaces	Removed Parking Spaces[a]	Proposed New Parking Spaces	Parking Spaces after project	Net Change in Parking Spaces
NE 130th Street Station—Option 1, with park-and-ride	Preferred Alternative with options, A5	46	46	100[b]	100[b]	54
NE 130th Street Station—Option 1, no park-and-ride	A10	46	46	0	0	-46
NE 130th Street Station—Option 2	A7, A11	46	4	100	142	96
NE 145th Street Station—Option 1	A1	68	68	500	500	432
NE 145th Street Station—Option 1	A10	68	68	650	650	582
NE 145th Street Station—Option 2	Preferred Alternative, A3, A11	68	68	500	500	432
NE 155th Street Station	A5, A7	0	0	500	500	500
NE 185th Street Station—Options 1 and 2	Preferred Alternative, A1, A3, A7, A11	0	0	500	500	500
NE 185th Street Station—Option 3	A5, A10	0	0	350	350	350

[a] Includes parking spaces removed for column placement where applicable.

[b] Possible surface parking lot available for lease located adjacent to the station.

Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Stations

Parking Impacts along the Light Rail Alignment

There could be approximately 12 on-street parking spaces removed along the Preferred Alternative light rail alignment.

The NE 133rd/5th Avenue NE Park-and-Ride, with 46 spaces, located to the north of NE 130th Street along 5th Avenue NE, would also be removed with construction of the alignment. The demand for park-and-ride space would shift to the NE 145th Street Station with the Preferred Alternative.

NE 145th Street Station Impacts

At the NE 145th Street Station, 17 on-street parking spaces would be removed along NE 148th Street, relative to the 450 on-street parking spaces within 0.25 mile of the proposed station. The existing North Jackson Park Park-and-Ride lot would be

removed and replaced by a park-and-ride garage with 500 spaces, resulting in 432 additional park-and-ride spaces.

NE 185th Street Station Impacts

At the NE 185th Street Station, approximately 40 on-street parking spaces would be removed along 7th Avenue NE and NE 185th Street, relative to 700 on-street parking spaces within 0.25 mile of the proposed station. A park-and-ride garage with 500 spaces is proposed for the Preferred Alternative and would be located on the west side of I-5 north of NE 185th Street.

Preferred Alternative with Options: At-grade/Elevated with NE 130th, NE 145th and NE 185th Stations

Parking Impacts along the Light Rail Alignment

Parking impacts along the alignment would be the same as with the Preferred Alternative

NE 130th Street Station Option 1

Approximately 11 on-street parking spaces would be removed along 5th Avenue NE relative to 430 on-street parking spaces within 0.25 mile of the proposed NE 130th Street Station Option 1.

The existing NE 133rd/5th Avenue NE Park-and-Ride lot would be removed, resulting in a loss of 46 parking spaces. A park-and-ride lot with up to 100 spaces may be leased from a property located on 5th Avenue NE across the street from the proposed station location, resulting in up to 54 additional park-and-ride spaces. Other nearby leased parking options could also be investigated

NE 145th Street Station Option 1

Parking impacts at the NE 145th Street Station would be the same as with the Preferred Alternative.

NE 185th Street Station Option 1

Parking impacts at the NE 185th Street Station would be the same as with the Preferred Alternative.

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Stations

Parking Impacts along the Light Rail Alignment

Parking impacts along the Alternative A1 alignment would be approximately the same as with the Preferred Alternative.

NE 145th Street Station Option 1

Parking impacts with Alternative A1 at the NE 145th Street Station would be approximately the same as with the Preferred Alternative.

NE 185th Street Station Option 1

Parking impacts with Alternative A1 at the NE 185th Street Station would be approximately the same as with the Preferred Alternative.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Street Stations

Parking Impacts along the Light Rail Alignment

A few parking spaces would be removed at the existing NE 133rd/5th Avenue NE Park-and-Ride lot, located north of NE 130th Street on 5th Avenue NE, due to the column placement for the Alternative A3 elevated guideway.

NE 145th Street Station Option 2

Parking impacts with Alternative A3 would be approximately the same as with the Preferred Alternative.

NE 185th Street Station Option 2

Approximately 56 on-street parking spaces would be removed along 7th Avenue NE, 8th Avenue NE, and NE 185th Street relative to 700 on-street parking spaces within 0.25 mile of the proposed NE 185th Street Station.

A park-and-ride garage with 500 spaces is proposed for Alternative A3 and would be located on 8th Avenue NE.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Parking Impacts along the Light Rail Alignment

Parking impacts along the Alternative A5 alignment would be approximately the same as with the Preferred Alternative.

NE 130th Street Station Option 1

Parking impacts with Alternative A5 would be approximately the same as with the Preferred Alternative with Options.

NE 155th Street Station

Approximately 10 on-street parking spaces would be removed on NE 155th Street relative to 580 on-street parking spaces within 0.25 mile of the proposed station. A park-and-ride garage with 500 spaces would be added at the station to accommodate light rail users.

NE 185th Street Station Option 3

Approximately 56 on-street parking spaces would be removed along 7th Avenue NE, 8th Avenue NE, and NE 185th Street relative to 700 on-street parking spaces within 0.25 mile of the proposed NE 185th Street Station.

Two surface park-and-ride lots are proposed for this station with Alternative A5: one with 158 spaces located at the station and the other with up to 205 spaces located east of 8th Avenue NE.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Parking Impacts along the Light Rail Alignment

Parking impacts along the Alternative A7 alignment would be approximately the same as with Alternative A3.

NE 130th Street Station Option 2

Approximately 11 on-street parking spaces would be removed along 5th Avenue NE relative to 430 on-street parking spaces within 0.25 mile of the proposed NE 130th Street Station.

A new surface park-and-ride lot with 100 spaces would be provided north of the station on 5th Avenue NE with Alternative A7.

NE 155th Street Station

Parking impacts with Alternative A7 would be approximately the same as with Alternative A5.

NE 185th Street Station Option 2

Parking impacts with Alternative A7 would be approximately the same as with Alternative A3.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations

Parking Impacts along the Light Rail Alignment

Parking impacts along the Alternative A10 alignment would be approximately the same as with Alternatives A1 and A5.

NE 130th Street Station Option 1 with no parking

Approximately 11 on-street parking spaces would be removed along 5th Avenue NE relative to 430 on-street parking spaces within 0.25 mile of the proposed NE 130th Street Station Option 1.

The existing NE 133rd/5th Avenue NE Park-and-Ride lot would be removed, resulting in a loss of 46 parking spaces.

NE 145th Street Station Option 1

Parking impacts with Alternative A10 would be similar to the Preferred Alternative, except the existing North Jackson Park Park-and-Ride lot would be removed and replaced by a park-and-ride garage with 650 spaces, resulting in 582 additional park-and-ride spaces.

NE 185th Street Station Option 3

Parking impacts with Alternative A10 would be approximately the same as with Alternative A5.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations

Parking Impacts along the Light Rail Alignment

Parking impacts along the Alternative A11 alignment would be approximately the same as with Alternatives A3 and A7.

NE 130th Street Station Option 2

Parking impacts with Alternative A11 would be approximately the same as with Alternative A7.

NE 145th Street Station Option 2

Parking impacts with Alternative A11 would be approximately the same as with Alternative A3.

NE 185th Street Station Option 2

Parking impacts with Alternative A11 would be approximately the same as with Alternatives A3 and A7.

Segment B: Shoreline to Mountlake Terrace

Table 5-36 summarizes the parking impacts along the Segment B alignment by alternative, not including the existing park-and-ride lots. Approximately 11 on-street parking spaces could be lost with Alternative B2A. This parking loss would primarily be in the vicinity of 220th Street SW. There would be no loss of off-street parking due to the alignments.

Table 5-36. Segment B Parking Impacts

	Parking Spaces Removed		
Alternative	**On-Street**	**Off-Street[a]**	**Total**
Preferred Alternative (B2 Modified)	0	0	0
Preferred Alternative (B2 Modified) with options	0	0	0
Alternative B1	0	0	0
Alternative B2A	11	0	11
Alternative B4	0	0	0

[a] Off-street does not include park-and-ride spaces.

Table 5-37 shows the proposed change in park-and-ride capacity at stations with each alternative. There are no changes to the existing Mountlake Terrace Park-and-Ride lot with Segment B alternatives.

Table 5-37. Segment B Park-and-Ride Impacts and Proposed New Parking Spaces

Station	Alternative	Total Existing Parking Spaces	Removed Parking Spaces	Proposed New Parking Spaces	Parking Spaces after Project	Net Change in Parking Spaces
Mountlake Terrace Transit Center Station	B1, Preferred Alternative, B2A	880	0	0	880	0
Mountlake Terrace Transit Center Station	B1 with options	880	220	500	1160	280
Mountlake Terrace Freeway Station	B4	880	0	0	880	0
220th Street SW Station	Preferred Alternative with Options, B2A	0	0	200	200	200

Preferred Alternative (B2 Modified): East Side to Mountlake Terrace Transit Center to West Side

Mountlake Terrace Transit Center Station

With the Preferred Alternative, there would be no impacts to on-street parking, off-street parking, or to the park-and-ride lot spaces at the Mountlake Terrace Transit Center Station.

Preferred Alternative (B2 Modified) with Options: East Side to Mountlake Terrace Transit Center to West Side

Mountlake Terrace Transit Center Station

Similar to the Preferred Alternative, there would be no impacts to on-street parking, off-street parking, or to the park-and-ride lot spaces at the Mountlake Terrace Transit Center Station.

Optional 220th Street SW Station

There would be no loss of on-street parking with the optional 220th Street SW Station.

Alternative B1: East Side to Mountlake Terrace Transit Center to Median

Mountlake Terrace Transit Center Station

With Alternative B1, there would be no impacts to on-street parking, off-street parking, or to the park-and-ride lot spaces at the Mountlake Terrace Transit Center Station.

Alternative B1 with Options: East Side to Mountlake Terrace Transit Center to Median

Mountlake Terrace Transit Center Station

With Alternative B1 with options, the existing surface parking lot would be converted to a parking garage that could accommodate up to 500 park-and-ride spaces. This would result in a net gain of 280 park-and-ride spaces.

Alternative B2A: Optional 220th Street SW Station (elevated)

Mountlake Terrace Transit Center Station

With Alternative B2A, there would be no impacts to on-street parking, off-street parking, or to the park-and-ride lot spaces at the Mountlake Terrace Transit Center Station.

220th Street SW Station

The 220th Street SW Station park-and-ride lot would require a new driveway along 60th Avenue West. There is existing on-street parking along 60th Avenue West, and approximately four on-street parking spaces would likely be removed to accommodate the driveway. There would be no impacts to off-street parking.

A 200-space surface park-and-ride lot is proposed for the 220th Street SW Station.

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median

Mountlake Terrace Freeway Station

With Alternative B4, there would be no impacts to on-street parking, off-street parking, or to the park-and-ride lot spaces at the Mountlake Terrace Transit Center Station.

Segment C: Mountlake Terrace to Lynnwood

Table 5-38 summarizes the parking impacts along the Segment C alignment by alternative. There are several locations along Segment C where the alignment or light rail station would acquire a building. The parking associated with these buildings was not considered a parking impact because the parking need would be removed. With the Preferred Alternative, 27 off-street parking spaces would be removed.

Table 5-38. Segment C Parking Impacts

	Parking Spaces Removed		
Alternative	**On-Street**	**Off-Street[a]**	**Total**
Preferred Alternative (C3 Modified)	0	27	27
Preferred Alternative (C3 Modified) with options	0	27	27
Alternative C1	0	8	8
Alternative C2	0	4	4
Alternative C3	0	0	0

[a] Off-street does not include park-and-ride spaces.

Table 5-39 shows the proposed change in park-and-ride capacity at stations under each Segment C alternative. There would be approximately 1,900 park-and-ride spaces after construction of the proposed new park-and-ride with each alternative except for the Preferred Alternative with options, that would result in 2,300 park-and-ride spaces after construction of the new park-and-ride facility.

Table 5-39. Segment C Park-and-Ride Impacts and Proposed New Parking Spaces

Station	Alternative	Total Existing Parking Spaces	Removed Parking Spaces[a]	Proposed New Parking Spaces	Parking Spaces after Project	Net Change in Parking Spaces
Lynnwood Transit Center Station – Modified Alternative	Preferred Alternative (C3 Modified)	1,370	1,120	1,650	1,900	530
Lynnwood Transit Center Station – Modified Alternative with Additional Parking	Preferred Alternative with Options	1,370	1,120	2,050	2,300	930
200th Street SW Station	C1	1,370	370	900	1,900	530
Lynnwood Transit Center Station	C2	1,370	670	1,200	1,900	530
Lynnwood Transit Center Station	C3	1,370	1,120	1,650	1,900	530

[a] Includes parking spaces removed for column placement where applicable.

Preferred Alternative (C3 Modified): Along I-5 to Lynnwood Park-and-Ride

Lynnwood Transit Center Station—Modified Alternative

At the Lynnwood Transit Center Station there would be 1,120 parking spaces removed and 1,650 new spaces constructed in a garage, resulting in a 1,900-space park-and-ride facility. This represents a net gain of 530 park-and-ride spaces.

Preferred Alternative (C3 Modified) with Options: Along I-5 to Lynnwood Park-and-Ride

Lynnwood Transit Center Station—Modified Alternative with an Additional 400 Spaces

At the Lynnwood Transit Center Station there would be 1,120 parking spaces removed and 2,050 new spaces constructed in a garage, resulting in a 2,300-space park-and-ride facility. This represents a net gain of 930 park-and-ride spaces.

Alternative C1: 52nd Avenue West to 200th Street SW

200th Street SW Station

At the 200th Street SW Station there would be 370 spaces removed and 900 new spaces constructed, resulting in a 1,900-space park-and-ride facility. The park-and-ride is located south of 200th Street SW between 48th Avenue West and 46th Avenue West.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center

Lynnwood Transit Center Station

At the Lynnwood Transit Center Station there would be 670 spaces removed and 1,200 new spaces constructed, resulting in a 1,900-space park-and-ride facility.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride

Lynnwood Transit Center Station Option 1

With Option 1, at the Lynnwood Transit Center Station there would be 1,170 parking spaces removed and 1,700 new spaces constructed, resulting in a 1,900-space park-and-ride facility.

Lynnwood Transit Center Station Option 2

With Option 2, at the Lynnwood Transit Center Station all of the existing 1,370 parking spaces would be removed and 1,900 new spaces would be constructed, resulting in a 1,900-space park-and-ride facility.

5.8 Safety

Traffic safety impacts associated with the light rail alternatives were assessed qualitatively for each alternative with consideration for what and how travel characteristics would change near existing CALs, and any changes in the transportation network that could result in an increase in the potential conflicts between modes of travel that could affect overall safety.

Guideway and Alignment

The Lynnwood Link Extension light rail would be constructed in the public right-of-way, with some segments at-grade and some elevated. The light rail guideway would be elevated where it would cross public streets and private driveways or property access. Where the guideway is at-grade, there would be no street crossings or the guideway would pass below the street.

The Preferred Alternative and other light rail alternatives would construct an elevated guideway crossing of I-5. The Preferred Alternative and other light rail alternatives would not change the configuration of the I-5 roadway itself, nor would they impact traffic operating conditions on the roadway, so no operating impacts on I-5 related to safety are anticipated. The collision information on I-5 shows that most incidents are congestion-related due to slowing or stopped traffic in lanes or merge and weave actions.

The Preferred Alternative and other light rail alternatives involve structural and visual changes to parts of the I-5 roadside environment, which could affect safety

conditions. New retaining walls, safety barrier, guardrail or columns would be constructed along the roadway. Trains running on guideways along I-5 could in some locations project light into traffic lanes. The amount of increased hazard presented by these changes along I-5 differs by location and depends on factors such as the highway configuration, traffic volumes, speeds, topography, the presence of shoulders or refuge areas, safety barriers or guardrails, and the distance between the lanes and a new structure or barrier. While design measures may help reduce a safety concern, they may not fully remove it. For example, a guardrail in front of a structure may reduce the hazard presented by a new column along the roadway, but guardrails themselves are potential hazards. Such features of the project within the I-5 right-of-way must conform with FHWA's regulatory requirements for managing the right-of-way. The project would undergo a detailed safety analysis and further consideration of hazard minimization measures during final design as part of WSDOT and FHWA review and approval processes for the use of I-5 right-of-way.

The increase in general traffic volumes, transit movements, pedestrians, and bicyclists near stations could increase the risk of traffic conflicts and conflicts between travel modes. The station area design would incorporate elements to reduce conflicts between travel modes.

Interchanges and Intersections

Several alternatives in Segment A would include interchange modifications at the NE 130th Street and NE 145th Street interchanges—two locations with identified CALs. These changes to the interchange ramp configurations would help to address the safety risks at the CALs but could also result in a safety benefit. The reconstruction of the NE 130th Street interchange would include grade-separation for the northbound off-ramp (a former CAL), which would remove the ramp terminus intersection and remove conflicting cross-street traffic, and thereby would improve safety for travelers. The ramp would connect directly to the 5th Avenue NE at NE 130th Street intersection with lane configuration that is comparable to existing. Expected safety benefits would reflect the removal of side-street conflicts and right-angle accidents at the existing ramp.

With a station at NE 145th Street, the intersection of 5th Avenue NE at NE 145th Street (and 5th Avenue NE adjacent to the station) would be reconstructed with features to enhance pedestrian, bicycle, and transit safety through this CAL intersection and the northbound on-ramp intersection would have signal control which would help reduce left-turn accidents at this CAL.

Common to all alternatives, pedestrian and bicycle volumes are expected to increase at intersections near the proposed stations. This increase could result in a greater potential for pedestrian/vehicle, pedestrian/bicycle, or bicycle/vehicle conflicts;

however, much of these impacts can be addressed with careful design of the station areas and right-of-way features.

Key observations and findings related to safety include the following:

- Light rail stations are being considered at or near existing CALs, notably the NE 145th Street Station (northbound off-ramp to 5th Avenue NE, 5th Avenue NE at NE 145th Street, northbound on-ramp from 5th Avenue NE), 200th Street SW Station (200th Street SW at 48th Avenue West and at 46th Avenue West), and the Lynnwood Park-and-Ride and Transit Center Stations (200th Street SW at 48th Avenue West and at 46th Avenue West).
- The Preferred Alternative and Alternatives A1, A5, and A10 would reconstruct the NE 130th Street interchange and could improve safety conditions at the NE 130th Street northbound off-ramp to 5th Avenue NE.
- NE 145th Street Station is in the immediate vicinity of three CALs: northbound off-ramp to 5th Avenue NE, NE 145th Street at 5th Avenue NE, and northbound on-ramp from 5th Avenue NE. The Preferred Alternative would address the CAL at the northbound on-ramp by relocating the ramp, adding access from the park and ride facility and adding signal control to accommodate the high left-turning traffic accessing the ramp. The station design would need to reflect the increase in pedestrian traffic and potential for at-grade conflicts between pedestrians and vehicle movements at the ramps to and from I-5. If a station is selected for NE 145th Street, the station design and design of adjacent streets would need to address the current and expected increase in conflicts between vehicles and between travel modes near the station, as reflected in the existing CALs.
- Lynnwood Park-and-Ride and Transit Center Station locations would both increase traffic through the CALs at 200th Street SW at both 48th Avenue West and 46th Avenue West with increased volumes of pedestrians and bicyclists. Both CALs appear related to congestion along 200th Street SW. Mitigation for this location may need to include refined design for the arterial or modifications to the signal control.

Segment A: Seattle to Shoreline

The Preferred Alternative and Alternatives A1, A5, and A10 would improve safety with the reconstruction of the NE 130th Street interchange, including grade-separation of southbound 5th Avenue NE at the NE 130th Street northbound off-ramp from I-5. This reconfiguration of the off-ramp is expected to improve safety by reducing right-angle accident occurrence at this location.

The Preferred Alternative and Alternatives A3 and A11 would relocate and signalize the NE 145th Street interchange northbound on-ramp to I-5 from 5th Avenue NE, which would affect an identified CAL with predominantly left-turn crashes and would improve safety at this on-ramp with signalized left-turn control at the intersection.

Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Street Stations

With the Preferred Alternative, the guideway would be grade-separated at the new NE 130th Street interchange and the northbound off-ramp. An elevated guideway would cross the NE 145th Street interchange. Emergency access must be maintained to the fire station at NE 155th Street with all Segment A alternatives. This access can be incorporated in the design of the light rail system.

The guideway would result in reconstruction and some relocation of local streets from NE 158th Street to NE 174th Street. Column locations may slightly affect property/driveway access. The project design would ensure adequate sight distance is maintained at intersections and driveways.

NE 145th Street Station

Three CALs were identified near the NE 145th Street Station: 5th Avenue NE at NE 145th Street intersection, I-5 northbound off-ramp to 5th Avenue NE, and I-5 northbound on-ramp from 5th Avenue NE. Operation of the 5th Avenue NE/NE 145th Street intersection and the northbound off-ramp to 5th Avenue NE would not change with Alternative A1.

The Preferred Alternative would relocate the northbound on-ramp to I-5 from 5th Avenue NE, add access from the park and ride facility and add signal control, which would improve safety by reducing left-turning conflicts at the ramp terminus. The design for the station area would consider the increase in potential conflicts involving pedestrians, bicycles, and vehicles.

Two private schools are located within a 0.50 mile radius of the proposed station (Lakeside High School and Lakeside Middle School), both on the west side of I-5. The Evergreen School, located on Meridian Avenue North, and Parkwood Elementary on North 155th Street are just beyond the 0.50 mile radius from the proposed station. Some increase in traffic is expected adjacent to the sidewalks and pedestrian paths that connect from the station to the schools. Increases in traffic could increase potential pedestrian-vehicular conflicts. The net new increase in traffic from the proposed station to streets near these schools would result from the increase in park-and-ride capacity and drop off/pick up activity generated by the station with an origin or destination that passes by the school. This increase in traffic resulting from the project would be in addition to background traffic increases associated with growth and development in the vicinity.

Both 5th Avenue NE and North/NE 145th Streets are designated as T-3 freight facilities. Increased station area traffic on NE 145th Street or 5th Avenue NE is not expected to adversely affect freight movement or safety along these facilities.

NE 185th Street Station

No CAL was identified near the NE 185th Street Station.

With Alternative A1, a fourth leg would be added to the intersection of 5th Avenue NE/7th Avenue NE at NE 185th Street at the station, which would increase the number of conflicting movements at the intersection. This, in turn, could increase the potential for accidents. Careful design could mitigate this increased risk of accidents.

There are two preschools at NE 190th Street, with walk access along 8th Avenue NE near the station. St. Mark Catholic School is located within a 0.50 mile radius from the proposed station. Increases in traffic could increase potential pedestrian-vehicular conflicts. The net new increase in traffic from the proposed station to streets near these schools would result from the increase in drop off/pick up activity generated by the station with an origin or destination that passes by the school. The station is expected to add 35 vehicle trips in the morning peak hour and 120 vehicle trips in the evening peak hour along NE 185th Street arterial adjacent to the station. NE 185th Street is designated as a T-2 freight facility. Increased station area traffic on NE 185th Street is not expected to adversely affect freight movement or safety along this facility.

Preferred Alternative with Options: At-grade/Elevated with NE 130th, NE 145th and NE 185th Street Stations

Safety effects would be the same as for the Preferred Alternative except for the optional NE 130th Street Station as indicated below.

Optional NE 130th Street Station

No CAL was identified near the NE 130th Street Station.

Safety would be improved with the reconstruction of the NE 130th Street interchange and grade-separation at the northbound off-ramp, by removing right-angle conflicts at the ramp terminus.

There are three private schools within 0.50 mile of the proposed NE 130th Street Station (Lakeside Middle School, Seattle Jewish Community School, and St. Matthews School) and two high schools (Ingraham High School and Lakeside High School) just beyond the 0.50 mile radius. Some increase in traffic is expected along the sidewalks that connect from the station to the schools. Increases in traffic could increase potential pedestrian-vehicular conflicts. The net new increase in traffic from the proposed station to streets near these schools would result from the increase in park-and-ride capacity and drop off/pick up generated by the station with an origin or destination that passes by the school. This increase in traffic resulting from the

project would be in addition to background traffic increases from growth and development in the vicinity.

North/NE 130th Street is designated as a T-3 freight facility, and Roosevelt Way NE east of 5th Avenue NE is designated as a T-4 freight facility. Increased station area traffic on NE 130th Street is not expected to adversely affect freight movement or safety along these facilities.

Alternative A1: At-grade/Elevated with NE 145th and NE 185th Street Stations

The safety impacts of Alternative A1 are similar to the Preferred Alternative. The NE 117th Street overpass is reconstructed and would be designed to meet current standards for lane widths, bicycle facilities, and sidewalks, which could improve the safety of the NE 117th Street overcrossing.

NE 145th Street Station

The safety impacts at the NE 145th Street Station would be similar to the Preferred Alternative.

NE 185th Street Station

The safety impacts at the NE 145th Street Station would be similar to the Preferred Alternative.

Alternative A3: Mostly Elevated with NE 145th and NE 185th Street Stations

Traffic safety concerns along the Alternative A3 alignment are similar to those identified for the Preferred Alternative except for the following locations: where the alignment would cross 1st Avenue NE near NE 117th Street, at the curve along 1st Avenue NE, and where the elevated alignment would cross the NE 130th Street ramp and intersection of 5th Avenue NE at NE 130th Street. Column locations for the guideway would be designed to avoid visibility obstructions along the curve.

NE 145th Street Station

Traffic safety issues and impacts with Alternative A3 would be the same as with the Preferred Alternative.

NE 185th Street Station

Traffic safety issues and impacts with Alternative A3 would be the same as with the Preferred Alternative.

Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Traffic safety concerns along the Alternative A5 alignment would be similar to the Preferred Alternative; however, there is a potential sight distance constraint where the alignment would pass under the northbound off-ramp at the NE 130th Street interchange.

NE 130th Street Station

Similar to the Preferred Alternative, safety would be improved with the reconstruction of the NE 130th Street interchange and grade-separation at the northbound off-ramp.

There are three private schools within 0.50 mile of the proposed NE 130th Street station (Lakeside Middle School, Seattle Jewish Community School, and St. Matthews School) and two high schools (Ingraham High School and Lakeside High School) just beyond the 0.50 mile radius. Some increase in traffic is expected along the sidewalks that connect from the station to the schools. Increases in traffic could increase potential pedestrian-vehicular conflicts. The net new increase in traffic from the proposed station to streets near these schools would result from the increase in park-and-ride capacity and drop off/pick up generated by the station with an origin or destination that passes by the school. This increase in traffic resulting from the project would be in addition to background traffic increases from growth and development in the vicinity.

North/NE 130th Street is designated as a T-3 freight facility, and Roosevelt Way NE east of 5th Avenue NE is designated as a T-4 freight facility. Increased station area traffic on NE 130th Street is not expected to adversely affect freight movement or safety along these facilities.

NE 155th Street Station

The NE 155th Street Station has two design options with Alternative A5. The difference is in the location of the paratransit and pick-up/drop-off areas for the station. Both options would locate the bus stops on NE 155th Street near the station.

Option 1A would locate the paratransit function on-street, westbound on NE 155th Street under the station and adjacent to the south elevator. On-street bus stops would be located on NE 155th Street under (eastbound) and just east of the station (westbound). Escalators would be located south of NE 155th Street, which could result in increased numbers of pedestrians crossing NE 155th Street near the station and lead to increased conflicts and risk of pedestrian accidents. The passenger pick-up/drop-off area would be adjacent to the parking garage on the south side of NE

155th Street, with pedestrian access to the station along the east and south sides of the fire station. Combination of transit, drop-off, and pedestrian crossing activity could increase potential conflicts under I-5 and near the 1st Avenue NE/NE 155th Street intersection. The station design would need to carefully coordinate these access modes and traffic circulation.

Option 1B would locate the paratransit and passenger pick-up/drop-off functions off-street, adjacent to the north end of the station, with elevator and escalator access to the north end of the platform. Locating the on-street bus stops under the station would provide station access without crossing NE 155th Street at-grade. The proximity of bus stops to 1st Avenue NE at the NE 155th Street intersection would warrant careful design for station access and circulation.

Parkwood Elementary School and The Evergreen School are located within a 0.50 mile radius of the proposed station. A marked school crossing with overhead "CROSSWALK" signs and flashing beacons is located on North 155th Street at Wallingford Avenue North at Parkwood Elementary. Both Parkwood Elementary and The Evergreen School connect to the proposed station along arterials with sidewalks. Lakeside High School is at NE 145th Street and 1st Avenue NE, near the 0.50 mile radius from the proposed station. 1st Avenue NE would be the most direct connection from Lakeside High School to the proposed station; however, there is no continuous walkway/sidewalk facility on 1st Avenue NE.

NE 155th Street and 5th Avenue NE are designated T-3 freight facilities. Fire Station access is a critical truck activity near the NE 155th Street Station. Increased station area traffic and transit operations are not expected to adversely affect freight safety or operation at these facilities.

No CAL was identified near the NE 155th Street Station. No net change in traffic safety is expected near the NE 155th Street Station.

NE 185th Street Station

Traffic safety issues and impacts with Alternative A5 would be the same as with the Preferred Alternative.

Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Traffic safety concerns along Alternative A7 would be the same as for Alternative A3.

NE 130th Street Station

Alternative A7 would not affect safety in the vicinity of the station.

NE 155th Street Station

Traffic safety issues and impacts would be the same with Alternative A7 as with Alternative A5.

NE 185th Street Station

Traffic safety issues and impacts would be the same with Alternative A7 as with Alternative A1.

Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations

Traffic safety concerns with Alternative A10 would be the same as with Alternative A5 from Northgate to the NE 130th Street Station, the same as Alternative A1 from the NE 130th Street Station to NE 185th Street, and the same as Alternative A5 at the NE 185th Street Station.

NE 130th Street Station

Traffic safety issues and impacts with Alternative A10 would be the same as with Alternatives A1 and A5.

NE 145th Street Station

Traffic safety issues and impacts with Alternative A10 would be the same as with Alternative A1.

NE 185th Street Station

Traffic safety issues and impacts with Alternative A10 would be the same as with Alternative A1.

Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations

Traffic safety concerns with Alternative A11 would be the same as with Alternative A3 from Northgate to the NE 130th Street interchange, the same as Alternative A7 at the NE 130th Street Station, the same as Alternative A3 from the NE 130th Street Station to NE 158th Street, the same as Alternative A1 from NE 158th Street to NE 174th Street, and the same as Alternative A3 near the NE 185th Street Station.

NE 130th Street Station

Traffic safety issues and impacts with Alternative A11 would be the same as with Alternative A7.

NE 145th Street Station

Traffic safety issues and impacts with Alternative A11 would be the same as with Alternative A1.

NE 185th Street Station

Traffic safety issues and impacts with Alternative A11 would be the same as with Alternative A1.

Segment B: Shoreline to Mountlake Terrace

Common to all Segment B alternatives, the light rail guideway would cross I-5 with support columns in the I-5 right-of-way. Many of the columns placed for the guideway would be placed behind existing guardrails or protective barriers. Those columns placed where no protective barrier exists would be designed to current standards for clear zone and protection. Each location would be addressed on a case by case basis in preliminary and final design phases in coordination with WSDOT and FHWA.

Common to all Segment B alternatives, pedestrian and bicycle volumes are expected to increase at intersections near the proposed stations. This increase could result in a greater potential for pedestrian/vehicle, pedestrian/bicycle, or bicycle/vehicle conflicts; however, much of this impact can be addressed with careful design of the station area and right-of-way features.

Preferred Alternative: East Side to Mountlake Terrace Transit Center to West Side

Under the Preferred Alternative, there would be no street crossings along the at-grade alignment. The guideway would pass under the reconstructed pedestrian bridge over I-5. Column locations would be designed to ensure adequate sight distance and visibility within the SR 104 interchange areas.

The alignment would be elevated over 236th Street SW adjacent to the signalized northbound off-ramp. Just north of the Mountlake Terrace Transit Station the guideway would cross to the west side of I-5, passing under 228th Street SW and under 220th Street SW. Light rail operation in the I-5 right-of-way may affect adjacent traffic on I-5 where headlight glare could affect drivers, but this would be mitigated with glare screens or other forms of shielding devices. The elevated guideway would cross 220th Street SW near the southbound ramps and also 212th Street SW.

Mountlake Terrace Transit Center Station

No CAL was identified near the Mountlake Terrace Transit Center.

Private schools (Cedar Park Christian School, The Expedition School, The Cornerstone School, and Snohomish County Christian High School) are located east of 56th Avenue West (within and at the 0.50 mile radius). No change in vehicle traffic is expected along the streets adjacent to these schools due to the Mountlake Terrace Transit Center Station with the Preferred Alternative. Terrace Park Elementary School is located beyond 0.50 mile from the proposed station, and no change in traffic is expected along walk routes to this school due to the Mountlake Terrace Transit Center Station. However, the increase in station area traffic, along with a general increase in all travel modes with the Preferred Alternative, could increase the potential for conflict and accidents.

Both 236th Street SW and 56th Avenue West are T-3 freight facilities. No change in freight safety or operation is expected due to the Mountlake Terrace Transit Center Station because there would be no increase in park-and-ride spaces or expected change in general traffic volumes.

Preferred Alternative with Options: East Side to Mountlake Terrace Transit Center to West Side

Traffic safety issues with the optional 220th Street SW Station would be the same as with the Preferred Alternative except as described below.

Optional 220th Street SW Station (elevated)

Access to the 220th Street SW Station over 200th Street SW would be provided from the 220th Street SW access intersection to the park-and-ride lot, located between the southbound I-5 ramps intersection and 220th Street SW at 64th Avenue West. The station would be located to the south of 220th Street SW. One CAL was identified near the 220th Street SW Station: 220th Street SW at 66th Avenue West. The intersection of 220th Street SW at 66th Avenue West is signalized and could experience an increase in pedestrian, bicycle, and transit traffic, which may increase potential conflicts between travel modes, and could reduce intersection safety.

Passenger pick-up/drop-off, paratransit zone, and bus stops would be located on site within the park-and-ride at the station located between the station and 220th Street SW. Careful site design will be needed to manage transit, passenger pick-up/drop-off, and paratransit activities.

Bicycle access to the station could occur along 220th Street SW, with connection via the on-street bus stops or along 64th Avenue West, similar to the vehicle access to the station.

Transit, pedestrian, and bicyclist concerns would occur with the proposed on-street bus stops on 220th Street SW; however, the concerns would be the same as for any on-street arterial bus stop.

220th Street SW is designated as a T-3 freight facility. No change in freight safety is expected for this facility.

Alternative B1: East Side to Mountlake Terrace Transit Center to Median

Under Alternative B1, there would be no street crossings along the at-grade alignment. The guideway would pass under the reconstructed pedestrian bridge over I-5. Column locations would be designed to ensure adequate sight distance and visibility within the SR 104 interchange areas.

The alignment would be elevated over 236th Street SW adjacent to the signalized northbound off-ramp. In the vicinity of the Mountlake Terrace Transit Station, the guideway would cross I-5 to the median, passing under 228th Street SW and under 220th Street SW without any safety issues. Light rail operation in the median may affect adjacent traffic on I-5 where headlight glare could affect drivers, which would be mitigated with glare screens. The elevated guideway would also cross 212th Street SW.

Mountlake Terrace Transit Center Station

No CAL was identified near the Mountlake Terrace Transit Center.

Private schools (Cedar Park Christian School, The Expedition School, The Cornerstone School, and Snohomish County Christian High School) are located east of 56th Avenue West (within and at the 0.50 mile radius). No change in vehicle traffic is expected along the streets adjacent to these schools due to the Mountlake Terrace Transit Center Station with Alternative B1. Terrace Park Elementary School is located beyond 0.50 mile from the proposed station, and no change in traffic is expected along walk routes to this school due to the Mountlake Terrace Transit Center Station. The increase in station area traffic, along with a general increase in all travel modes with Alternatives B1 and B2, could increase the potential for conflicts and accidents.

Both 236th Street SW and 56th Avenue West are T-3 freight facilities. No change in freight safety or operation is expected due to the Mountlake Terrace Transit Center Station because there would be no increase in park-and-ride spaces or expected change in general traffic volumes.

Alternative B2A: Optional 220th Street SW Station (elevated)

Traffic safety issues with Alternative B2A would be similar to the Preferred Alternative.

220th Street SW Station (elevated)

Access to the 220th Street SW Station over 200th Street SW would be provided from the park-and-ride garage driveway at 219th Street SW. This station option would

require relocation of the southbound I-5 ramp intersection on 220th Street SW to the east.

Passenger pick-up/drop-off, paratransit zone, and bus stops would be on 220th Street SW to the west of the relocated ramp intersection. Connection to the station platform would be via a walkway along 220th Street SW with access to elevators and escalators. Passenger pick-up/drop-off and bus stops would be approximately 200 feet to the west. This location may become an area of potential conflicts and safety concerns because it is adjacent to a major arterial and close to the I-5 ramps. Careful design will be needed to manage transit, passenger pick-up/drop-off, and paratransit activities on this street.

Bicyclists could access the station along 220th Street SW, with a connection via the on-street bus stops or along 64th Avenue West, similar to the vehicle access to the parking garage and station.

Transit, pedestrian, and bicyclist concerns would occur with the proposed on-street bus stops on 220th Street SW; however, the concerns would be the same as for any on-street arterial bus stop.

220th Street SW is designated as a T-3 freight facility. No change in freight safety is expected for this facility.

One CAL was identified near the 220th Street SW Station: 220th Street SW at 66th Avenue West. The intersection of 220th Street SW at 66th Avenue West is signalized and could experience an increase in pedestrian, bicycle, and transit traffic, which may increase potential conflicts between travel modes, and could reduce intersection safety.

Alternative B4: East Side to Mountlake Terrace Freeway Station to Median

The Alternative B4 alignment would cross the northbound on-ramp from SR 104 and the northbound off-ramp to 236th Street SW, where column locations would be designed to ensure adequate sight distance. The alignment would cross to the I-5 median, where the inside shoulders would be reduced 2 feet to 3 feet for approximately 1,500 feet along northbound and southbound I-5. The narrow shoulder could affect safety and reliability of operation along I-5 because there would be no shoulder area for disabled vehicles in this segment of the freeway. The reduced shoulder widths would occur over a relatively short distance and may not adversely affect accident occurrence. Glare screens would be needed to reduce glare impacts on motorists on I-5 from light rail operation in the median.

Mountlake Terrace Freeway Station

No CAL was identified near the Mountlake Terrace Freeway Station. Traffic safety issues and impacts with Alternative B4 would be the same as with Alternative B1.

Segment C: Mountlake Terrace to Lynnwood

Eight CALs were identified near the Lynnwood Transit Center and Park-and-Ride:

- 204th Street SW at 44th Avenue West (between I-5 ramps)
- 200th Street SW at 46th Avenue West
- 200th Street SW at 48th Avenue West
- 196th Street SW at 36th Avenue West
- 196th Street SW at 40th Avenue West
- 196th Street SW at 44th Avenue West
- 196th Street SW at 48th Avenue West
- 196th Street SW at 52nd Avenue West

No changes are proposed to the network or facilities near the CALs on 196th Street SW; thus, no change in safety is expected for these CALs.

No public schools are located within 0.50 mile of the Lynnwood station options.

44th Avenue West is designated as a T-3 freight facility. There is no expected change in safety for freight with any of the Lynnwood stations.

Common to all alternatives, pedestrian and bicycle volumes are expected to increase at intersections near the proposed stations. This increase could result in a greater potential for pedestrian/vehicle, pedestrian/bicycle, or bicycle/vehicle conflicts; however, much of these impacts can be addressed with careful design of the station area and right-of-way features.

Preferred Alternative (C3 Modified): Along I-5 to Lynnwood Park-and-Ride

The elevated guideway for the Preferred Alternative alignment would require attention to column locations to avoid affecting sight distance and visibility at intersections, side streets, and driveways. Visibility is important for safety along curved roadways, where column location could restrict visibility. Locations of concern include the reconstructed 208th Street SW, the Interurban Trail crossing, and 44th Avenue West crossing near the HOV direct access ramps to I-5.

Property access and circulation under the elevated guideway would be affected; however, site circulation and access modifications would be integrated with the

guideway design. The guideway would be elevated through the park-and-ride facility and at the station.

Lynnwood Transit Center Station

The Lynnwood Park-and-Ride Station would increase the focus of pedestrian movement to the west side of 46th Avenue West by providing stairs, escalators, and elevators at the south end of the station. Light rail passengers moving between the transit center and the station would use the station mezzanine to cross the HOV direct access ramp. This station would bring more traffic into the site for passenger pick-up/drop-off at the station, crossing transit vehicle and pedestrian movements at and near the transit center, and thereby increasing the potential for pedestrian and vehicle conflicts.

Two CALs were identified on SW 200th Street near the Lynnwood Park-and-Ride Station where increased pedestrian and bicycle traffic is expected. Reconstruction of the intersections at 200th Street SW may be required with the project, where careful design could help to address this increased potential for conflicts between travel modes.

Preferred Alternative (C3 Modified) with Options: Along I-5 to Lynnwood Park-and-Ride

Safety effects would be similar to those for the Preferred Alternative.

Alternative C1: 52nd Avenue West to 200th Street SW

The elevated guideway along Alternative C1 would require attention to column locations to avoid affecting sight distance and visibility at intersections, side streets, and driveways, similar to the Preferred Alternative. Locations of concern include intersections and site access locations along the elevated guideway alignment to the station.

200th Street SW Station

Traffic safety issues and impacts are expected to stay approximately the same near the 200th Street SW Station with Alternative C1.

The 200th Street SW Station may increase transit activity at the in-lane bus stops on this street adjacent to the station. The main transfer function would occur at the Lynnwood Transit Center, south of the station, with no expected change in safety.

Two CALs were identified near the 200th Street SW Station where increased pedestrian and bicycle traffic is expected. Reconstruction of the intersection at 200th Street SW may be required with the project, where careful design could help to mitigate this increased potential for conflicts between travel modes.

The direct access ramp at 46th Avenue West intersection has all-way stop control and may require signal control with the increase in vehicle, transit, pedestrian, and bicycle traffic through the intersection.

Alternative C2: 52nd Avenue West to Lynnwood Transit Center

Traffic safety impacts would be the same with Alternative C2 as with the Preferred Alternative and along the elevated guideway alignment to 204th Street SW. Visibility is important for safety along curved roadways, where column location could restrict visibility. Property access and circulation under the elevated guideway would be affected; however, site circulation and access modifications would be integrated with the guideway design. Locations of concern include intersections and site access locations along the elevated guideway alignment to the station. The guideway would be elevated through the park-and-ride facility and at the station.

Lynnwood Transit Center Station

An increase is expected in pedestrians crossing from the station to the transit center, and crossing the east-west section of 48th Avenue West, which is a main circulation route within the park-and-ride and transit center facility. Site-specific design features could manage the pedestrian volume and reduce safety risks.

Alternative C3: Along I-5 to Lynnwood Park-and-Ride

Traffic safety impacts with Alternative C3 would be similar to the Preferred Alternative along the elevated guideway alignment. Visibility is important for safety along curved roadways, where column location could restrict visibility. Property access and circulation under the elevated guideway would be affected; however, site circulation and access modifications would be integrated with the guideway design. Locations of concern include the reconstructed 208th Street SW, the Interurban Trail crossing, and 44th Avenue West crossing near the HOV direct access ramps to I-5.

Lynnwood Transit Center Station

The Lynnwood Park-and-Ride Station would increase the focus of pedestrian movement through the intersection of 46th Avenue West at 48th Avenue West and across the access to the HOV direct access ramp. This station would bring more traffic into the site for passenger pick-up/drop-off at the station, crossing transit vehicle and pedestrian movements at and near the transit center, and thereby increasing the potential for pedestrian and vehicle conflicts.

6 CONSTRUCTION IMPACTS

This chapter discusses and compares potential transportation mobility impacts caused by construction of the light rail alternatives. The Lynnwood Link project is expected to be constructed by two contractors, one working on the south half and one working on the north half. Overall construction duration would be approximately two years in any given portion of the corridor. Linear projects such as Lynnwood Link are typically divided into various segments or line sections for construction. Segments include construction of retained cut-and-fill guideway, elevated structures, stations (including park-and-ride, station platforms, transit center, substation and control facilities) and roadway reconstruction. Each construction activity would vary in duration. Construction staging at stations would occur throughout the duration of the project.

The construction approach will be refined during the final design effort to establish the limits and parameters for various construction phases, construction contracts, and active work zones. Construction impacts identified in this chapter are estimated based on the level of design completed to date and the known construction activities. Key observations and findings include the following:

- Sound Transit and WSDOT will work to minimize the duration and impact of lane closures and reductions by (a) maintaining the same number of travel lanes except for short-duration closures that would occur during nights and weekends, (b) establishing detour routes on nearby arterials for nighttime closures, (c) maintaining WSDOT traffic management systems (closed circuit television [CCTV] cameras and monitoring, ramp metering, data stations, and variable message signing), and (d) providing mitigation through supplemental incident response team service and Transportation Demand Management strategies.
- At-grade rail alignment alternatives (Preferred Alternative, A1, A5, and A10) include bridge reconstruction over I-5. The deconstruction of bridge segments over I-5 would require temporary night time or weekend closures of one I-5 direction. Construction techniques to minimize closures will be developed during final design.
- The shoulders on I-5 would be temporarily closed on nights and weekends to develop space for construction activities adjacent to the freeway or in the median. Longer term construction activities could occur adjacent to the freeway shoulders within some area. All modes of travel could experience an increase in congestion and travel times due to the effect of construction activity near the freeway. Construction activity will be planned to minimize the need for closures and reductions in the widths of lanes and shoulders.
- For all street reconstruction, travel lanes on local streets along the guideway would experience periodic daytime closures. Truck access to the guideway construction would be along city arterials leading to streets adjacent to the guideway.

- At the Mountlake Terrace Transit Center Station, the Preferred Alternative and Alternatives B1 and B2A require construction in the median of I-5 adjacent to the existing transit center. This construction activity would require the direct access bus ramps and therefore the freeway station to be closed for approximately 6 to 9 months.
- In Lynnwood, construction of the light rail station options would temporarily reduce park-and-ride spaces; Alternative C1 could result in a loss of approximately 250 parking spaces, Alternative C2 660 spaces, and Alternative C3 560 spaces. It is suggested that during development of the maintenance of traffic (MOT) plans, an evaluation of the number and location of concurrent construction activities be made, and strategies implemented to minimize added construction impacts due to concurrent activities.
- Construction activities and impacts are similar across alternatives.

6.1 General Corridorwide Construction Effects

The project's construction along I-5, which includes crossing over the freeway under all alternatives north of the Mountlake Terrace Transit Center, would involve temporary changes to I-5 roadway operations. It would also introduce features affecting shoulders as well as the roadside environment. These would be temporary nighttime lane closures along I-5 throughout the project for placing safety barriers between I-5 and adjacent construction zones. Shoulders would be closed to provide space for construction activities. Construction traffic management plans would reduce the need for or duration of shoulder closures and lane reductions to minimize the impacts. Where necessary, access points from I-5 would be from on-ramps and off-ramps where adequate acceleration and deceleration for trucks can occur to minimize impacts on general purpose traffic and interchange operations on I-5. Portions of the alignment would have construction access from the local arterials and streets to allow construction work.

All alternatives could have some impacts on traffic operations on I-5 during construction where the guideway crosses the freeway. This would result in nighttime closures in each direction of mainline I-5, with traffic detours during installation of the girders for the guideway bridges. Vertical clearance would be maintained on I-5. Construction access points, closures, and changes in I-5 operations will require approval from FHWA and WSDOT. *Appendix F, Conceptual Plans* in the FEIS provides a graphical summary of construction staging areas and haul routes throughout the project corridor.

A Maintenance of Traffic Plan that addresses all travel modes will be prepared during final design for agency approval. This plan will include detailed design drawings establishing all physical and operating characteristics for staging, access, lane or shoulder closures/transitions, hauling, traffic management, detours, lane modifications, and other construction zones or activities. The plan would incorporate

WSDOT's established guidance for best practices and methods to be applied during construction periods, many of which are focused on reducing congestion impacts and minimizing safety hazards. For example, typical measures include signage, traveler advisories, special lighting for work zones and travel lanes, scheduling work during lower volume travel times, detailed contractor requirements, a variety of traffic and travel demand management strategies, and procedures for any construction directly affecting the active roadway.

The light rail guideway requires crossing I-5 to connect from Northgate on the east side of I-5 to the Lynnwood Transit Center on the west side of I-5. In addition, several alternatives include local street bridge reconstruction over I-5. Nighttime closures of I-5 would be required where the guideway or other bridges cross over I-5 during the placement of structural elements. Reconstruction of bridges over I-5 may require a one-lane closure in each direction on I-5 to provide space in the median for construction of the bridge column.

Several options would require the replacement of local street bridges over I-5. This is a result of the guideway alignment affecting a column or abutment of a bridge. Several options are possible for conducting bridge reconstruction in phases, which would help to accommodate traffic during construction or reduce construction costs by closing a road to expedite efficient construction activity. This project assumes using these phasing methods dependent on the local road traffic volumes and alternative routes. Where bridges are closed during reconstruction, detours would be provided; however, detours could have secondary impacts on general purpose traffic, bus transit, bicyclists, and pedestrians. Strategic phasing or sequencing of overcrossing closures would minimize the cumulative closure impacts; construction phasing will be addressed accordingly in the construction specifications.

All alternatives would affect traffic operations on arterials adjacent to the guideway and stations; as a mitigation measure, the contractor would keep roadways open, but with flagger control or other means. All alternatives may require utility relocations along the alignment and near the stations. Utility relocations may require temporary lane closures and traffic control plans to maintain property access and circulation. Construction activities along the guideway could temporarily reduce or restrict property access and the contractor would need to maintain access during construction Impacts on the movement of trucks carrying freight would be approximately the same as for general purpose traffic. Impacts on general purpose traffic, transit operations, nonmotorized travel, and parking are discussed in more detail below, by segment and station areas.

6.1.1 Truck Volumes and Haul Routes

Peak truck trips are expected to occur during earthwork operations and during concrete delivery for both guideway and station construction. For at-grade construction, 4 to 12 trucks per hour are estimated from each work zone. For

elevated guideway construction, peak truck trips are estimated at 4 to 8 trucks per hour for the concrete delivery. Generally, construction truck traffic to station construction sites would use city streets. Multiple work zones may be used during peak operations that could result in higher total project peak truck trips; however, these trips would generally not overlap with each other on the same local streets.

Parking for construction workers would be provided on construction sites accessible from local streets where possible. Parking could occur on city streets where parking is unrestricted.

Some loss of available parking at park-and-ride lots is expected during construction, such as at the Lynnwood Park-and-Ride lot. Further analysis of park-and-ride spaces removed during phases of construction is addressed by alternative for each station in the remainder of this section. Temporary parking would be provided as needed and where feasible to mitigate the impacts.

6.2 Segment A: Seattle to Shoreline

General Purpose Traffic Impacts

Construction of all Segment A alternative alignments begins with an elevated segment in the southeast quadrant of 1st Avenue NE and I-5 ramps/ North 107th Street. This is the location of a Northgate Mall parking lot that is a construction staging area for the north end of Northgate Link and the beginning of Lynnwood Link. Beginning at this location the alignment shifts over 1st Avenue NE at the I-5 ramps/North 107th Street and continues north within the WSDOT right-of-way. Construction north of here would primarily be conducted from staging space within the WSDOT I-5 right-of-way and city streets between Northgate and NE 145th Street. For construction adjacent to I-5, the contractor would establish barrier and work zone areas. Capacity and travel time reliability could be reduced due to the effect of construction activity a. Potential shoulder reductions and narrowed lanes with some alternatives would reduce the availability of the shoulder refuge for breakdowns or incidents.

The light rail would be elevated from the Northgate Station to NE 117th Street. In the vicinity of 1st Avenue NE and the I-5 off-ramp/on-ramp south of NE Northgate Way, as well as NE Northgate Way and the I-5 on-ramp, construction of the elevated guideway would cause periodic daytime lane closures for approximately 6 months. Full roadway closures would occur at night to install girders and straddle bents. This activity would occur for about 1 year. Construction in the vicinity would occur for about 1 year to prepare construction staging and parking areas, drill shafts, construct columns, construct a detention pond, and reconstruct roadways affected by the project. Local street construction activity could include nighttime closures, intermittent daytime closures, and lane closure in one direction. Locations include

1st Avenue NE (North 113th Street to North 117th Street), NE 117th Street, and 5th Avenue NE, depending on the alternative. Options that include construction of an elevated guideway over vehicular traffic would require nighttime closures of the affected facility (i.e., street, ramps, or I-5). Table 6-1 summarizes the major roadway closures in Segment A.

Table 6-1. Segment A: Roadway Closures and Duration

		Alternative					
Roadway	**Preferred Alternative**	**A1**	**A3**	**A5**	**A7**	**A10**	**A11**
1st Avenue NE	♦	♦	♦	♦	♦	♦	♦
Northbound I-5 off- and on-ramps to/from 1st Avenue NE	♦	♦	♦	♦	♦	♦	♦
NE Northgate Way	♦	♦	♦	♦	♦	♦	♦
Northbound on-ramp from Northgate Way	♦	♦	♦	♦	♦	♦	♦
NE 117th Street	♦	9 to 12 months	♦	♦	♦	♦	♦
I-5 in vicinity of NE 117th Street	♦	Nighttime closure or up to 1 month per direction	---	---	---	---	---
NE 130th Street Station Area							
NE 130th Street Bridge	♦♦ One lane each direction (18 months)	♦♦ One lane each direction (18 months)	♦	♦♦ One lane each direction (18 months)	♦	♦♦ One lane each direction (18 months)	♦
I-5 in vicinity of NE 130th Street	All lanes closed at night to place the girder. All lanes closed one weekend to demolish bridge.	Nighttime or up to 1 month for one lane southbound and 1 month for 1 lane northbound	---	Nighttime or up to 1 month for one lane southbound and 1 month for one lane northbound	---	Nighttime or up to 1 month for one lane southbound and 1 month for one lane northbound	---
5th Avenue NE northbound off-ramp	♦	♦	♦	♦	♦	♦	♦
5th Avenue NE southbound, south of NE 130th Street for braided ramp	12 months	12 months	♦	12 months	♦	12 months	♦

Table 6-1. Segment A: Roadway Closures and Duration

		Alternative					
Roadway	**Preferred Alternative**	**A1**	**A3**	**A5**	**A7**	**A10**	**A11**
NE 145th Street Station Area							
NE 145th Street	♦	♦	♦	♦	♦	♦	♦
5th Avenue NE northbound off-ramp	♦	♦	♦	♦	♦	♦	♦
5th Avenue NE northbound on-ramp	♦	♦	♦	♦	♦	♦	♦
NE 155th Street Station Area							
NE 155th Street	♦	♦	♦	♦	♦	♦	♦
NE 185th Street Station Area							
NE 175th Street	♦	♦	♦	♦	♦	♦	♦
NE 185th Street bridge	One lane closed for 9 to 12 months	9 to 12 months	♦	1 month	♦	1 month	♦
I-5 in vicinity of NE 185th Street	♦	Nighttime or up to 1 month per direction	---	---	---	---	---

♦ = Periodic nighttime and weekend shoulder or lane closures of I-5, I-5 ramps, and periodic street closures.

♦♦ = Nighttime, more frequent; the alternative would result in more frequent nighttime closures than other alternatives.

--- Denotes not affected by alternative.

Construction Staging, Parking, and Truck Access

Construction staging and access would be from a series of locations along Segment A. As shown in Appendix F of the Final EIS. Priority for access would be from 5th Avenue NE or I-5 ramps. Some areas would be accessed from local streets and are identified in the discussion of impacts by alternative below. Local streets used for construction access and parking could experience an increase in truck and employee traffic. In addition to the construction staging at the south end of the project that overlaps with North Link (see Parking Impact below), potential locations for construction staging, parking, and access are summarized below.

- A staging and parking area would be located north of NE Northgate Way between the I-5 on-ramp and 1st Avenue NE. The northbound on-ramp from 1st Avenue NE to I-5 would remain open, but with periodic nighttime closures. Construction access would be from 1st Avenue NE, from NE Northgate Way on the south side, and from the northbound on-ramp on the north side of NE Northgate Way. North of NE Northgate Way, construction access would be from 1st Avenue NE. At NE 117th Street (on the east side of I-5 north of the overcrossing), construction access to the guideway construction would be from the north end of 1st Avenue NE.
- There could be a construction staging and parking area located between I-5 and 5th Avenue NE at NE 123rd Street. Trucks would access the staging area from 5th Avenue NE.
- Construction of the light rail alignment north of NE 130th Street would occur in limited space, and would require intermittent one-lane closures on 5th Avenue NE. Construction staging and parking for the NE 130th Street Bridge would be located at the existing 5th Avenue NE/NE 133rd Street park-and-ride lot.
- At NE 145th Street the bus-only ramps would be used for truck access from I-5 to the construction site. Temporary paving along the guideway would provide access to construction areas on the south side. North of NE 145th Street there is a construction staging and parking area identified immediately north of the NE 149th Street cul-de-sac. Construction access could be from the cul-de-sac or temporary paved area along the guideway.
- In the vicinity of NE 155th Street the guideway could be built first and construction access could occur under the guideway. If not, truck access would be from I-5.

- North of NE 155th Street, the site for a future infiltration facility could be used to develop construction staging and parking. Between NE 159th Street and NE 161st Street, construction staging and parking could occur at the site of the future Ridgecrest Park with parking to be built along with this project. 1st Avenue NE at this location would be closed for 1 year. Temporary paving between the NE 149th Street staging area and NE 155th Street would provide construction access to this segment of the guideway. Some truck access could use local streets including NE 158th Street, NE 159th Street, and NE 161st Street.
- The King County Metro bus bay ramps would be used for construction access from approximately NE 161st Street to NE 165th Street. South of NE 174th Street there is local roadway reconstruction of 1st Avenue NE, which would also be used for construction staging and parking.
- North of NE 175th Street construction access would be from the I-5 northbound ramp. There would be temporary nighttime and one weekend lane closure on the ramps as the guideway is constructed over NE 175th Street. These areas would be used for construction staging and parking. City street access could occur from NE 180th Street, although temporary paving would be used to maximize access from the NE 175th Street I-5 ramps and along the guideway.
- Between NE 180th Street and NE 185th Street, 5th Avenue NE/7th Avenue NE would be reconstructed along with construction of the guideway. This activity would provide space for construction staging, parking, and access.
- In the vicinity of the NE 185th Street Station, the planned infiltration pond and the park-and-ride provide opportunities for phased construction staging and parking areas. Temporary paving would provide access along the guideway construction north of NE 185th Street within Segment A.

Transit Impacts

In Segment A, buses and transit riders traveling northbound on I-5 could be affected by the decrease in capacity and due to construction activity in the freeway right-of-way. For some alternatives and increase in delay would result from the narrower lanes and shoulder widths. Bus schedules could also be less reliable as congestion and delay increase.

For Alternative A1 a 1-month closure of one lane of I-5 in each direction for replacement bridges over I-5, transit could also have increased travel time impacts, although maintaining an HOV lane could reduce these impacts.

Construction of the light rail alignment in the vicinity of multiple arterials used by transit could affect those services as described for each alternative below. Changes to bus stop locations could be identified for maintaining safety during preparation of the Management of Traffic Plan.

Parking Impacts

Impacts to the park-and-ride lots at the stations are described for the station within each alternative in the following sections. Several scenarios are under development to maintain parking supply combined with other strategies to shift demand or encourage transfer to other modes.

A construction staging area will be established on a private surface parking lot at the south end of the project that will be used by both the North Link project and the Lynnwood Link project. The lot is associated with the Northgate Mall and is on the east side of 1st Avenue across from the I-5 ramps (North 107th Street vicinity). An agreement with the property owner will be prepared for the North Link project and extended for the Lynnwood Link project.

Streets reconstructed due to construction of the guideway or stations, that have on-street parking, would be impacted with a temporary loss of parking.

Nonmotorized Impacts

Nonmotorized traffic would not be affected due to construction within the I-5 alignment in Segment A. Impacts from the reconstruction of stations and freeway overcrossings are described by alternative. Nonmotorized traffic would be affected by construction activity on local streets.

6.2.1 Preferred Alternative: At-grade/Elevated with NE 145th and NE 185th Street Stations

The description of construction impacts for the Preferred Alternative begins with a description of general purpose traffic impacts along the alignment that are more specific to the Preferred Alternative including a description of construction staging, transit, parking, and non-motorized impacts. Following that are descriptions of construction impacts associated with the stations.

General Purpose Traffic Impacts

The at-grade/elevated alignment would require reconstruction of the NE 130th Street interchange and 5th Avenue NE, including a braided northbound off-ramp with 5th Avenue NE, to accommodate the light rail under NE 130th Street adjacent to I-5. Construction of the NE 130th Street bridge is proposed as a two-phase construction where half of the new bridge (two lanes wide) is constructed while the existing bridge remains in operation for the first phase. The second phase would demolish the existing bridge and complete the second half of the bridge. This activity would close one lane in each direction on the bridge for approximately 18 months. The current design does not include a center column, which means that the bridge girder would be put in place at night with a full closure of I-5. Demolition of the NE 130th Street bridge would require a weekend full closure of I-5. The

duration of closure also depends on the final design and construction method. For example, demolition of the northbound span could occur one night and the southbound span a second night. However, further investigation of the bridge structure and construction sequencing is required before there is a commitment to this option.

Following construction of the NE 130th Street overcrossing of I-5, construction of the 5th Avenue NE braid could take 1 year and would close southbound traffic on 5th Avenue NE from NE 125th Street to NE 130th Street. Local north-south traffic (all modes) could detour along 8th Avenue NE between NE 125th Street and Roosevelt Way NE. The northbound off-ramp would be kept open throughout construction. There would also be periodic weekend and daytime off-peak closures of 5th Avenue NE.

Diversion and detours to other interchanges (NE 145th Street and Northgate Way interchanges) would be expected for access to I-5 and east-west traffic circulation. Traffic on 5th Avenue NE could divert and detour to 15th Avenue NE east of I-5, and to 1st Avenue NE west of I-5. The light rail guideway and construction staging would displace the existing park-and-ride facility.

Two sections of 1st Avenue NE would be reconstructed for continued local access along the guideway construction—from NE 158th Street to NE 161st Street and from NE 170th Street to NE 174th Street. 1st Avenue NE and NE 170th Street would be configured as temporary dead end residential streets during construction. Property access would be maintained throughout construction, and traffic circulation, although constrained, would be available.

In the vicinity of the NE 185th Street Station, the planned infiltration pond and the park-and-ride provide opportunities for phased construction. The reconstruction of 5th Avenue NE/7th Avenue NE would result in short-term closures. Construction of the pedestrian walkway as an extension of the NE 185th Street bridge would be constructed with temporary nighttime closures of I-5. The NE 185th Street bridge would be reduced to one lane for 9 to 12 months. During final design and the preparation of the Maintenance of Traffic Plan, there could be a decision to close the NE 185th Street bridge to accelerate construction and reduce the time that the bridge capacity is reduced.

Construction phasing would occur such that no more than one overcrossing of I-5 has lane closures at one time throughout Segment A to preserve adequate east-west arterial capacity and non-motorized access across I-5 during construction.

Transit Impacts

With the Preferred Alternative, King County Metro Routes 242 and 243, on 5th Avenue NE north of NE 130th Street, could be affected by an increase in travel time

due to temporary lane closures southbound on 5th Avenue NE. King County Metro subscription bus routes that serve Lakeside High School (986, 987, and 995) would be affected by temporary lane closures and longer-term bridge closures on NE 130th Street. Bus stops on both sides of 5th Avenue NE, north of NE 130th Street, would be maintained or relocated.

Parking Impacts

The NE 133rd/5th Avenue NE Park-and-Ride, with 46 spaces, is approximately 700 feet north of the NE 130th Street Station. This park-and-ride, which is currently underutilized at 25 percent utilization, would be closed during construction and upon completion of the light rail alignment for the at-grade alternatives. Park-and-ride users would need to use other park-and-ride lots or change their mode of access to transit during construction.

Nonmotorized Impacts

The NE 115th Street access to the NE 117th Street overcrossing of I-5 could be closed for about 1 year. Pedestrian and bicycle access would be from 1st Avenue NE.

NE 145th Street Station (elevated)

General Purpose Traffic Impacts

With the Preferred Alternative, the elevated guideway would have columns close to 5th Avenue NE and cross the northbound off-ramp from I-5. NE 145th Street would remain open during construction of the guideway, but the traffic signals may need to be modified at the intersection of NE 145th Street and 5th Avenue NE. Traffic lanes on 5th Avenue NE could be reduced to one lane in each direction during construction of the station and park-and-ride facility.

Transit Impacts

King County Metro Route 242 on 5th Avenue NE, and Routes 373 and 347 on NE 145th Street would be affected by an increase in travel time due to temporary lane closures southbound on 5th Avenue NE and nearby construction activity.

King County Metro Routes 304 and 308 that travel on I-5 to the south of NE 145th Street and then exit at NE 145th Street to travel on NE 145th Street would also be affected by an increase in travel time due to narrow shoulders and lanes on I-5 and then construction activity at NE 145th Street.

The bus stop at the I-5 off-ramp terminal south of NE 145th Street could be maintained or moved to the south on 5th Avenue NE, depending on construction phasing.

Parking Impacts

The North Jackson Park Park-and-Ride, with 68 spaces, is located in the northwest quadrant of the I-5 northbound on-ramp and 5th Avenue NE. This park-and-ride would be closed for construction staging with the Preferred Alternative. This facility is currently well utilized at 96 percent utilization. Temporary replacement parking will be considered during each phase of construction to accommodate these users. Otherwise, park-and-ride users would need to use other park-and-ride lots or change their mode of access to transit during construction.

Nonmotorized Impacts

Pedestrians would be limited to travel on the east side of 5th Avenue NE through the construction activity area. This restriction would avoid pedestrians crossing the high volume of northbound traffic turning left to the I-5 on-ramp. Pedestrians would be directed to a safe crossing location north of the construction activity. Bicyclists would travel in mixed traffic.

NE 185th Street Station Option 1 (at-grade)

General Purpose Traffic Impacts

With the Preferred Alternative construction of the pedestrian bridge on the north side of the NE 185th Street bridge would require temporary nighttime closures of I-5 one direction at a time, with detours to the surface street network. Other alternatives could require construction in the median of I-5 which could require closure of one lane in each direction. This could be either nighttime closures or 24-hour closures for up to 1 month, depending on final design and final construction method.

Construction of the NE 185th Street overcrossing of the light rail guideway (where the guideway crosses under NE 185th Street) would require closing one lane for 9 to 12 months. Flaggers would guide eastbound and westbound traffic flow, one direction at a time. Nighttime construction activity could occur with only one direction open to travel. One direction of traffic could detour to NE 175th Street. Alternatively, NE 185th Street could be closed in both directions for a shorter duration.

5th Avenue NE would be reconstructed north of NE 185th Street in conjunction with the construction of the parking garage west of I-5. Intermittent daytime closures of one lane could be expected. This reconstruction could be completed in advance of the new NE 185th Street bridge over I-5 to allow for west side circulation to continue when the bridge over I-5 is closed. Reconstruction of 7th Avenue NE south of NE 185th Street would also be required for the Preferred Alternative and could be completed in advance of the guideway construction approaching the station from the south. The early relocation of both segments of

7th Avenue NE/5th Avenue NE would allow for local circulation near the NE 185th Street alignment reconstruction.

Transit Impacts

King County Metro Route 348 would use a detour route (potentially NE 175th Street) during the closure of one lane in each direction on NE 185th Street. Existing bus stops on NE 185th Street could be maintained or relocated during construction.

Parking Impacts

There is currently no park-and-ride in the NE 185th Street Station area; therefore, no impacts are expected.

Nonmotorized Impacts

Station construction would require sidewalk closures in the vicinity. Pedestrians would be re-routed as needed to maintain adequate pedestrian access and circulation in the area.

6.2.2 Alternative A1: At-grade/Elevated with NE 145th and NE 185th Street Stations

The discussion of each alternative presents expected impacts of construction where it differs from the Preferred Alternative. Alternatives will be compared to similar alternatives where both differ from the Preferred Alternative.

General Purpose Traffic Impacts

Construction would temporarily close the NE 117th Street crossing over I-5 for 9 to 12 months, depending on the final design and construction method. I-5 would be closed at nighttime for one direction at a time, with detours to the surface street network. The construction work would affect 1st Avenue NE north of Northgate Way and would require a staging area near 1st Avenue NE and NE 117th Street on the west side of I-5. The northbound on-ramp from 1st Avenue NE to I-5 would remain open.

For reconstruction of the NE 130th Street overcrossing a potential 1-month closure of a northbound and southbound I-5 traffic lane due to median construction would adversely affect I-5 operations for general purpose traffic, trucks, and buses. However, further design of the Preferred Alternative has shown that the overcrossing can be constructed with a single span with lane closures limited to periodic night time and weekend closures. One lane would be closed in each direction on the NE 130th Street bridge during construction for approximately 18 months.

Transit Impacts

Impacts would be similar to the Preferred Alternative.

Parking Impacts

Impacts would be similar to the Preferred Alternative.

Nonmotorized Impacts

Pedestrian and bicycle access across I-5 would be limited to NE Northgate Way during the closure of NE 117th Street, approximately 0.33 mile to the south. Advance information would be provided to pedestrians and bicyclists.

NE 145th Street Station Option 1 (elevated)

Impacts would be the same as the Preferred Alternative.

NE 185th Street Station Option 1 (at-grade)

General Purpose Traffic Impacts

Construction of the at-grade center-platform station for Alternative A1 would require reconstruction of the NE 185th Street bridge over I-5, which could be closed for 9 to 12 months, depending on final design and final construction method. I-5 would be closed at nighttime for one direction at a time, with detours to the surface street network. Construction in the median of I-5 could require closure of one lane in each direction. This could be either nighttime closures or 24-hour closures for up to 1 month, depending on final design and final construction method.

Construction impacts with reconstruction of 5th Avenue NE north of NE 185th Street and 7th Avenue NE south of NE 185th Street would be similar to the preferred alternative.

Transit Impacts

King County Metro Route 348, on NE 185th Street, would need to use a detour route (potentially NE 175th Street) during the closure of NE 185th Street. Existing bus stops on NE 185th Street would be maintained or relocated during construction.

Parking Impacts

There is currently no park-and-ride lot at NE 185th Street; therefore, no transit-related parking impacts are expected.

Nonmotorized Impacts

The NE 185th Street bridge could be reconstructed before or after the replacement of the NE 195th Street pedestrian bridge for Alternative A1 so as to maintain east-

west nonmotorized crossings of I-5 in the general vicinity. (Segment B alignment options require replacement of the NE 195th Street pedestrian/bicycle bridge, approximately 0.50 mile to the north.)

Station construction will require sidewalk closures in the vicinity. Pedestrians would be re-routed as needed to maintain adequate pedestrian access and circulation in the area.

6.2.3 Alternative A3: Mostly Elevated with NE 145th and NE 185th Street Stations

Impacts along the guideway would be similar to the Preferred Alternative but without reconstructing the NE 117th Street bridge and NE 130th Street, and avoiding reconstruction of some local streets as well due to the mostly elevated guideway. 1st Avenue NE in the vicinity of NE 175th Street would be realigned and reconstructed resulting in short-term and long-term closures.

NE 145th Street Station

Construction impacts at the NE 145th Street Station with Alternative A3 would be the same as with Alternative A1.

NE 185th Street Station

Construction of the elevated station, parking structure, and bus facility would require site access from NE 185th Street and 8th Avenue NE. NE 185th Street would remain open for one lane of traffic in each direction during construction. Local access for some residential properties could be temporarily affected during construction activities.

Transit and nonmotorized movements would be affected by Alternative A3 construction less than with Alternative A1 because there would be no need to reconstruct NE 185th Street over I-5. Pedestrian and bicycle circulation impacts east of I-5 would be similar to Alternative A1.

6.2.4 Alternative A5: At-grade/Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Construction of the Alternative A5 alignment would be similar to the Preferred Alternative. The NE 130th Street bridge closure with Alternative A5 would have the same impacts as with Alternative A1.

NE 130th Street Station

General Purpose Traffic Impacts

At-grade station construction would require reconstruction of the west half of 5th Avenue NE, north of NE 130th Street, as a cantilever over the proposed station.

This reconstruction would disrupt traffic on 5th Avenue NE because the roadway would likely need to be closed and/or narrowed to one lane during construction.

Transit Impacts

King County Metro Routes 242 and 243, on 5th Avenue NE in the vicinity of the 130th Street Station, would be affected by an increase in travel time due to temporary lane closures southbound on 5th Avenue NE. King County Metro subscription bus routes serving Lakeside High School (986, 987, and 995) travel on NE 130th Street. These buses would be affected by temporary lane closures and longer-term bridge closures on NE 130th Street. Bus stops on both sides of 5th Avenue NE, north of NE 130th Street, would be maintained or relocated.

Parking Impacts

The NE 133rd/5th Avenue NE Park-and-Ride, with 46 spaces, is approximately 700 feet north of the NE 130th Street Station. This park-and-ride, which is currently underutilized at 25 percent utilization, would be closed during Alternative A5 construction and upon completion of the alignment. Park-and-ride users would need to use other vicinity park-and-ride lots or change their mode of access during construction.

Nonmotorized Impacts

The closure of the NE 133rd/5th Avenue NE Park-and-Ride lot could reduce some pedestrian activity. Pedestrians traveling to bus stops in the vicinity of NE 130th Street would need to be informed of a safe crossing location on the east side of 5th Avenue NE in advance of the station area construction. The crossing should take into account the vertical curve, which limits sight distance north of the end of the sidewalk. Bicyclists would travel in mixed traffic.

Closure of the NE 130th Street bridge means that pedestrians and bicyclists would detour to the NE 117th Street crossing of I-5, approximately 1 mile to the south; Northgate Way crossing of I-5, approximately 1.3 miles to the south; or to NE 145th Street, approximately 0.75 mile to the north.

NE 155th Street Station

General Purpose Traffic Impacts

Construction of the NE 155th Street Station and park-and-ride structure would affect NE 155th Street with intermittent lane closures during Alternative A5 construction. Emergency vehicle access and response to and from the adjacent Shoreline Fire Station 65 must be maintained throughout construction.

Transit Impacts

One-lane operations and periodic lane restrictions on NE 155th Street could result in delays for King County Metro Route 330.

Parking Impacts

There is currently no park-and-ride lot at the NE 155th Street Station and therefore no impacts.

Nonmotorized Impacts

Construction of the bus loading/unloading areas adjacent to NE 155th Street could cause long-term closures to pedestrian travel along one side of NE 155th Street, followed by the same closures on the other side of the street. Pedestrians would be directed to travel on one side of NE 155th Street at the nearest intersection. Intermittent lane closures during Alternative A5 construction would also affect the bicycle lane with intermittent closures. Space for construction activity could reduce access to the bicycle lane but would be minimized wherever possible.

NE 185th Street Station

General Purpose Traffic Impacts

With Alternative A5, the at-grade NE 185th Street Station would require cut-and-cover construction of a structure under NE 185th Street at the south approach to the station, which would require closing NE 185th Street for approximately 1 month. Construction of the station, bus facility, and park-and-ride at the station area would affect traffic on NE 185th Street and 8th Avenue NE, but two-way traffic could be maintained on both roadways (after completing the cut-and-cover work for the guideway under NE 185th Street). Reconstruction of 5th Avenue NE south of NE 185th Street must be completed before construction of the guideway approach from the south to maintain local street circulation and access throughout construction. Surface park-and-ride construction under the Seattle City Light power lines would require access to both NE 185th Street and 10th Avenue NE.

Transit Impacts

During Alternative A5 construction, King County Metro Route 348 would be similarly affected as with the Preferred Alternative, except that the closure of NE 185th Street would be of shorter duration (approximately 1 month). Route 348 could use a detour route along NE 175th Street.

Parking Impacts

There is currently no park-and-ride lot at the NE 185th Street Station area and therefore no impacts.

Nonmotorized Impacts

Impacts on nonmotorized movements with Alternative A5 would be the same as with the Preferred Alternative.

6.2.5 Alternative A7: Mostly Elevated with NE 130th, NE 155th, and NE 185th Street Stations

Construction impacts of the Alternative A7 elevated alignment would be the same as with Alternative A3 south of NE 145th Street. Construction impacts of Alternative A7 would be the same as Alternative A5 from NE 145th Street to the north.

NE 130th Street Station

Construction impacts of the NE 130th Street station would be the same as those for Alternative A5.

NE 155th Street Station

Construction impacts at the NE 155th Street Station with Alternative A7 would be the same as with Alternative A5.

NE 185th Street Station

Construction impacts at the NE 185th Street Station with Alternative A7 would be the same as with Alternative A5.

6.2.6 Alternative A10: At-grade/Elevated with NE 130th, NE 145th, and NE 185th Street Stations

The at-grade/elevated alignment for Alternative A10 would have similar impacts on the guideway construction as Alternative A5.

NE 130th Street Station

Construction impacts at the NE 130th Street Station with Alternative A10 would be the same as with Alternative A5.

NE 145th Street Station

Construction impacts at the NE 145th Street Station with Alternative A10 would be the same as with Alternative A1.

NE 185th Street Station

Construction impacts at the NE 185th Street Station with Alternative A10 would be the same as with Alternative A5.

6.2.7 Alternative A11: Mostly Elevated with NE 130th, NE 145th, and NE 185th Street Stations

Construction impacts of the Alternative A11 elevated alignment would be similar to Alternative A3.

NE 130th Street Station

Construction impacts at the NE 130th Street Station with Alternative A11 would be the same as with Alternative A7.

NE 145th Street Station

Construction impacts at the NE 145th Street Station with Alternative A11 would be the same as with Alternative A1.

NE 185th Street Station

Construction impacts at the NE 185th Street Station with Alternative A11 would be the same as with Alternative A3.

6.3 Segment B: Shoreline to Mountlake Terrace

General Purpose Traffic Impacts

The light rail alignment adjacent to the east side of I-5 between NE 195th Street and the I-5/SR 104 interchange northbound off-ramp would be constructed within the WSDOT right-of-way. For some alternatives, shoulders through this section could be reduced and a concrete barrier installed to define the work zone along the freeway. The decrease in width and the duration of shoulder use would be minimized. Construction access to this segment would occur from NE 195th Street and the I-5/SR 104 interchange ramps.

Installation of the bridge girder over I-5 would occur at night with a full closure of I-5. Construction through the SR 104 interchange area would include construction work within the cloverleaf interchange. This activity could have some effect on traffic operations due to the proximity of construction near the interchange ramps. Nighttime closures of ramps would also occur as the guideway construction crosses over the ramps. Other periodic nighttime closures of I-5 could occur for delivery of materials to construction sites.

North of the Mountlake Terrace Station, Segment B alternatives that cross over to the west side of I-5 would involve constructing a multi-foundation support system (straddle bents) that would likely require falsework and cast-in-place construction. Nighttime closures of I-5 would likely be necessary to install the straddle bents and girders and construct the guideway bridges to cross to the median or to the west side of I-5. Other design and construction techniques will be explored through final design. I-5 traffic would be detoured to local streets for these nighttime closures. All Segment B alternatives cross over 212th Street SW, requiring staging and possible lane closures or nighttime full closures on that facility.

The Mountlake Terrace Freeway Station would be affected by all alternatives during construction. The Preferred Alternative and Alternatives B1 and B2A would require construction in the median of I-5 north of the existing Mountlake Terrace Freeway Station. This construction activity would require closure of the direct access bus ramps for 6 to 9 months. The ramp closure with Alternative B1 is required for column construction and placement of the elevated guideway over the ramps. It would also be affected by the retained fill section as the elevated guideway transitions to an at-grade alignment. The bus ramps can possibly be redesigned to allow the transit station to operate while the guideway is under construction. The length of time would be updated with new information as design details are further developed. The bus ramp closure with Alternatives B2A would be 6 to 9 months plus nightly closures for column construction and guideway placement over the I-5 mainline and ramps. The bus ramps would be permanently closed with Alternative B4 because the light rail station would replace the freeway bus stop. Table 6-2 summarizes roadway closures and duration for Segment B. Construction staging and parking would occur within the existing surface lot.

Table 6-2. Segment B: Roadway Closures and Duration

	Alternative			
Roadway/Facility	**Preferred (B2 Modified)**	**B1**	**B2A Modified**	**B4**
I-5 mainline northbound	♦	♦	♦	One lane each direction, 1 month
I-5 mainline southbound	♦	---	♦	One lane each direction, 1 month
NE 195th Street pedestrian/bicycle bridge	6 months	6 months	6 months	6 months
I-5 lane in vicinity of NE 195th Street	Full nighttime closure to place girder	6 months	6 months	6 months
Direct access bus ramps and freeway station	6-9 months + nighttime closures	6-9 months + nighttime closures	6-9 months + nighttime closures	Permanently closed
SR 104/NE 205th Street	♦	♦	♦	♦

Table 6-2. Segment B: Roadway Closures and Duration

	Alternative			
Roadway/Facility	Preferred (B2 Modified)	B1	B2A Modified	B4
236th Street SW	♦	♦	♦	---
228th Street SW	1 month	---	1 month	---
220th Street SW	♦	---	♦	---
212th Street SW	♦	♦	♦	---
60th Avenue West	6-month closure	6-month closure	6-month closure	---

♦= Periodic nighttime and weekend shoulder or lane closures of I-5, I-5 ramps, and periodic street closures.
♦♦= Nighttime, more frequent; the alternative would result in more frequent nighttime closures than other alternatives. Crossing both I-5 northbound and southbound lanes all at once would result in less frequent nighttime closures.
--- Not affected by alternative.

Construction Staging, Parking, and Truck Access

Construction staging and access would be from a series of locations along Segment B. Potential locations for construction staging, parking, and access are summarized below.

- In the vicinity of the NE 195th Street pedestrian/bicycle bridge over I-5, construction staging and parking would occur at each end of the bridge, within the WSDOT right-of-way. Access would be from the city streets ending at the bridge on both sides.
- In the vicinity of the NE 205th Street/SR 104 interchange, construction staging would occur within the spaces at the interchange. Truck access would be from the ramps. The contractor would provide employee shuttles to the construction site.
- Between NE 195th Street and NE 205th Street, temporary paving would provide access along the guideway alignment during construction.
- North of NE 205th Street, a future infiltration pond would provide construction access, and in the vicinity of 236th Street SW a future roadway alignment by the City of Mountlake Terrace could provide additional construction staging. Access would be provided from the I-5 northbound ramp and 236th Street SW.
- At the Mountlake Terrace Transit Center Station, construction staging would use the existing surface parking lot, resulting in a temporary loss of 205 parking spaces during construction.
- At the Mountlake Terrace Transit Center Station, construction vehicle and employee access would be from 236th Street SW.
- Where the guideway crosses I-5, construction staging would be provided on both sides of I-5. On the east side a temporary roadway would be constructed and access would be from the transit center. This roadway would expand the footprint of the construction for the guideway by about 20 feet on both sides due to the challenges of construction within the slope.

- On the west side, a future infiltration pond site would be used for construction staging. Access would be provided from the I-5 shoulder due to the lack of streets near the west side of I-5 and the slope going up to the west. Potential access from 232nd Street SW could be considered during final design.
- In the vicinity of 220th Street SW, station construction staging would be within the station area and within the interchange area. For the 220th Street Station North Side Option 60th Avenue West would be fully closed for approximately 6 months to accommodate construction staging, parking, and access. Adequate access to the properties west of 60th Avenue West is available and would be preserved. This staging area would serve the guideway construction to the north.
- Construction staging and parking would occur where 58th Avenue West ends at the I-5 right-of-way. This area would have multiple construction activities in addition to guideway construction, such as providing high rail vehicle access, raising power transmission lines, installing a signal/communications bungalow, and constructing a guideway crossover. Additional staging and construction parking would occur at the future detention pond site within the triangular area at 212th Street SW and I-5. Construction access would be from 212th Street SW and along the guideway.

Transit Impacts

Buses and transit riders traveling northbound on I-5 could be affected by the decrease in capacity and increase in delay that would be caused by the narrower lanes and shoulder width where the light rail alignment is adjacent to I-5 on the east side (south of the Mountlake Terrace Transit Center). Buses using the direct access ramps at the Mountlake Terrace freeway station would be rerouted onto local streets during closure of the ramps.

Parking Impacts

Currently, on-street parking is not available along Segment B alignments; therefore, there would be no on-street parking impacts.

Nonmotorized Impacts

The NE 195th Street pedestrian/bicycle bridge would be closed for approximately 6 months. The reconstruction of the NE 185th Street overcrossing, approximately 0.50 mile south of the NE 195th Street pedestrian bridge in Segment B, could be completed before or after the closure of the NE 195th Street bridge to maintain nonmotorized access across I-5.

6.3.1 Preferred Alternative (B2 Modified): Mountlake Terrace Transit Center Station

General Purpose Traffic Impacts

General purpose traffic would be somewhat affected by construction activity on 236th Street SW to and from the south and the station. There would be periodic nighttime and weekend closures of I-5, I-5 lanes, and I-5 ramps. There would also be night time or weekend street closures of 236th Street SW, and 228th Street SW on the west side of I-5, for construction of the guideway over the roadway. There could be periodic lane closures on 236th Street SW for moderate reconstruction activities adjacent to the station.

Construction of the guideway in retained cut or fill sections could require work space and staging in the WSDOT I-5 right-of-way, along the southbound lanes. There could be reduced shoulders for southbound I-5. The width and duration would be minimized or eliminated. This will be determined through final design and preparation of the WSDOT Maintenance of Traffic Plan. Reconstructing the roadway could close 228th Street SW for 1 month.

Transit Impacts

Construction of the Preferred Alternative would require closure of the freeway station and freeway bus ramps for approximately 6 to 9 months. A plan for rerouting buses could include buses that are rerouted to the park-and-ride or remain on I-5, and skip the Mountlake Terrace Freeway Station for buses with few riders accessing the Freeway Station.

Parking Impacts

Construction of the Mountlake Terrace Transit Center Station would require closing the surface park-and-ride lot that contains approximately 205 spaces; the parking garage would remain open throughout construction. Bus circulation may be constrained but not restricted during construction. Provision of temporary replacement parking nearby would be investigated. There is a surface lot in the southwest corner of the site with 20 spaces that could also be closed during construction.

Nonmotorized Impacts

Construction would disrupt pedestrian and bicycle travel during construction activities adjacent to 236th Street SW. Pedestrian and bicycle circulation would be affected with the short-term closure of 228th Street SW.

220th Street SW Station South Option (elevated)

The Preferred Alternative could be constructed with a station south of 220th Street. Construction site access for the station could be from 222nd Street SW, 220th Street SW and the southbound on-ramp. Construction staging and employee parking would occur on-site. The guideway would be elevated at the station and over 220th Street SW. During construction, transit on 220th Street SW could experience some delay and bus stops could be temporarily relocated. Pedestrian and bicycle travel along 220th Street SW would be maintained during construction.

6.3.2 Alternative B1: Mountlake Terrace Transit Center Station

General Purpose Traffic Impacts

Access to the Mountlake Terrace Transit Center would be disrupted in the short term during Alternative B1 construction, with short-term impacts on general purpose traffic, transit, and nonmotorized travel.

Transit Impacts

As indicated above, there would be approximately a 6 to 9 month closure of the freeway bus ramps to the existing Mountlake Terrace Freeway Station for construction of the alignment in the median on the north side of the Freeway Station. Buses could be rerouted to the Mountlake Terrace Park-and-Ride to drop off and pick up passengers, resulting in additional travel time. Buses with few users of the freeway stop could remain on I-5 and skip the existing Mountlake Terrace Bus Freeway Station.

Parking Impacts

Construction of the Mountlake Terrace Transit Center Station would require closing the surface park-and-ride lot that contains approximately 205 spaces; the parking garage would remain open throughout construction. Bus circulation could be constrained but not restricted during Alternative B1 construction. Provision of temporary replacement parking nearby will be investigated.

Nonmotorized Impacts

Construction of the bus loading/unloading areas on 236th Street SW would interrupt pedestrian and bicycle travel. Construction phasing could ensure that one sidewalk is open on one or the other side of the street at all times.

There is no sidewalk on the south side of the 236th Street SW bridge. Pedestrians would be directed to cross at the signalized intersection of 236th Street SW and the transit center entrance so that they can use the sidewalk on the north side of the bridge.

6.3.3 Alternative B2A (Modified): Mountlake Terrace Transit Center Station with 220th Street SW Station North Option

General Purpose Traffic Impacts

General purpose traffic would be affected by Alternative B2A the same as with the Preferred Alternative at the Mountlake Terrace Transit Center Station.

Transit Impacts

Construction of Alternative B2A would require closure of the freeway station and freeway bus ramps for 6 to 9 months, the same as for the Preferred Alternative. A plan for rerouting buses could include buses that are rerouted to the park-and-ride or remain on I-5, and skip the Mountlake Terrace Freeway, the same as for the Proffered Alternative.

Parking Impacts

Impacts to the surface park-and-ride would be similar to the Preferred Alternative.

Nonmotorized Impacts

Construction would disrupt pedestrian and bicycle travel, similar to the Preferred Alternative.

220th Street SW Station North (elevated)

The southbound ramps would be relocated to the east before construction of the 220th Street SW Station and guideway begins so that the ramp traffic can proceed uninterrupted. Construction site access for the station could be from the old ramps. Construction site access for the park-and-ride garage would be from 60th Avenue West. 60th Avenue West would be fully closed for approximately 6 months to accommodate construction staging, parking, and access. Adequate access to the properties west of 60th Avenue West is available and would be preserved. The guideway would be elevated at the station and over 220th Street SW. During construction, transit could experience some delay and bus stops could be temporarily relocated. Pedestrian and bicycle travel on 220th Street SW and the freeway overcrossing would be maintained during construction.

6.3.4 Alternative B4: Mountlake Terrace Freeway Station

General Purpose Traffic Impacts

The Mountlake Terrace Freeway Station would require work space within the I-5 median by reducing inside shoulder width for both northbound and southbound I-5. Construction of the guideway crossing I-5 to the median would require the closure

of one lane on I-5 in each direction for 1 month to provide space for installing the columns for the guideway bridge. Nighttime closures of I-5 would require detours onto surface streets for northbound freeway traffic. North of the freeway transit station, impacts with Alternative B4 would be similar to Alternative B1.

Transit Impacts

The bus ramps would be permanently closed with Alternative B4 because the light rail station would replace the freeway bus stop. Construction activities would be adjacent to the HOV lane and would therefore affect capacity and travel speed for vehicles and buses using the lane.

Parking Impacts

Impacts to the surface park-and-ride would be similar to the Preferred Alternative.

Nonmotorized Impacts

Nonmotorized travel would not be affected by the construction of the freeway station.

6.4 Segment C: Mountlake Terrace to Lynnwood

Two scenarios exist for all Segment C alternatives in terms of how they connect with Segment B alternatives. If connecting with the Preferred Alternative or Alternative B2A, the guideway in Segment C would be located on the west side of I-5. If connecting with Alternative B1 or B4, the guideway in Segment C would be located in the median of I-5. The elevated guideway along I-5 could require shoulder and lane width reductions to provide the work zone. When in the median, crossing the southbound lanes of I-5 would involve constructing straddle bents, which would require nighttime closures of southbound I-5 traffic to install girders for the guideway bridge. Nighttime closures on I-5 would require detours onto surface streets. Nighttime closures would also be necessary where the guideway crosses over local streets and the Interurban Trail. Table 6-3 summarizes the roadway closures and duration in Segment C.

Table 6-3. Segment C: Roadway Closures and Duration

	Alternative			
Roadway	Preferred Alternative (C3 Modified)	C1	C2	C3
I-5 mainline southbound[a]	♦	♦	♦	♦
52nd Avenue West	♦	♦	♦	♦
208th Street SW	♦	♦	♦	♦
204th Street SW	♦	♦	♦	♦

Table 6-3. Segment C: Roadway Closures and Duration

Roadway	Alternative			
	Preferred Alternative (C3 Modified)	C1	C2	C3
200th Street SW, west of 48th Avenue West to 44th Avenue West	♦	♦	----	♦
Interurban Trail	? and detour	? and detour	? and detour	? and detour
48th Avenue West	♦	♦	♦	♦
46th Avenue West	♦	♦	♦	♦
44th Avenue West	♦	♦	♦	♦
I-5 HOV Direct Access Ramps	♦	♦	♦	♦
I-5 southbound on-ramp at 44th Avenue West	♦	----		----

[a] These nighttime closures would occur for connecting to Segment B I-5 median alignments only.

♦ = Periodic nighttime, weekend, and shoulder or lane closures of I-5, I-5 ramps, and periodic street closures.
--- Not affected by alternative.

General Purpose Traffic Impacts

Construction of the elevated guideway over 52nd Avenue West would require nighttime closures of this roadway. The elevated guideway west of I-5 approaching the Lynnwood Park-and-Ride would cross over 208th Street SW and private properties, which would require construction easements. The project would include reconstruction of 208th Street SW and possibly some access roads. The alignment would cross the Interurban Trail at its intersection with 208th Street SW. Trail and roadway access would be maintained.

The guideway would then cross the 46th Avenue West direct access ramps to I-5. Nighttime closures would be needed to complete the guideway across the ramp facility. The guideway/tail track would extend east of 44th Avenue West, and construction would require nighttime closures of 44th Avenue West to install the guideway structure. Reconstruction of 48th Avenue West would result in partial roadway closures days and nights, as well as lane closures. Detours for north-south traffic could include 52nd Avenue West. A detour for the I-5 ramp traffic may include using 204th Street SW east of 44th Avenue West to connect to the 196th Street SW interchange.

The guideway would require reconstructing 208th Street SW at the east end, where it functions as a minor road providing access to industrial properties and a substation. Nighttime closures would be required to construct the guideway over 208th Street SW.

Traffic access to the transit center and parking garage would be maintained during construction of the Lynnwood Park-and-Ride Station.

The tail track east of the light rail station would be constructed over 44th Avenue West and the Interurban Trail. The construction would result in temporary lane closures and some nighttime full closures. Construction activity over the Interurban Trail would require the same detour as discussed above.

Construction Staging, Parking, and Truck Access

For the segment from 52nd Avenue NE to the Interurban Trail, construction staging and parking could occur within a large area designated for a future PUD substation and along the guideway. Construction access would occur from 52nd Avenue West and 208th Avenue West. The area proposed for future school district development on the north side of the Interurban Trail would also accommodate construction staging and parking.

Construction for the median alignment would occur within the median with access also occurring from 52nd Avenue West and using 208th Street SW and 48th Street SW.

At the Lynnwood Transit Center, construction staging and parking would occur within the site with each phase of construction. Sound Transit would establish parameters for construction phasing and the contractor would develop a detailed construction phasing plan. Construction access would occur from city streets that are used to access the park-and-ride.

In the vicinity of the Lynnwood Transit Center Station, construction staging and parking would occur within the site. Construction vehicle access would occur from city streets and the HOV ramps.

Transit Impacts

Fifteen bus routes (12 Community Transit, 3 Sound Transit) travel to and from the Lynnwood Transit Center via I-5 using the direct access ramps. Constructing the guideway over the ramps would temporarily close the direct access ramps on nights and weekends. Community Transit routes operate from 6:00 am to 7:00 pm, and Sound Transit routes operate from 4:30 am to 12:15 am.

52nd Avenue West would be closed temporarily while the light rail is constructed in the I-5 median over this roadway. Community Transit Route 130 travels on 52nd Avenue West to 200th Street SW; this route does not operate past 10:00 pm.

The construction of the tail track beyond the station would extend over 44th Avenue West on which Community Transit Route 112 travels. The construction over this roadway would cause temporary lane closures and some nighttime full closures. Community Transit Route 112 does not operate past 10:00 pm.

Parking Impacts

There is currently no on-street parking on streets that would be affected by the Segment C alternative alignments; therefore, no on-street parking impacts are expected during construction of the alternative alignments. Impacts to park-and-ride facilities and private surface parking are described for each station alternative below.

Nonmotorized Impacts

Light rail would be constructed across the Interurban Trail in two locations: approximately 500 feet east of where the alignment leaves I-5, and over the Interurban Trail bridge at 44th Avenue West. The Interurban Trail would be closed during Alternative C3 construction. Detour planning could use streets such as Alderwood Mall Boulevard/200th Street SW to Cedar Valley Road, where there are bicycle lanes and sidewalks. Pedestrian and bicycle routes through the park-and-ride could be considered that connect to the Scriber Creek Trail. However, use of this latter option could require significant safety improvements.

6.4.1 Preferred Alternative (C3 Modified): Along I-5 to Lynnwood Park-and-Ride Station

General Purpose Traffic Impacts

Construction of the elevated guideway over 52nd Avenue West would require nighttime closures of this roadway. The elevated guideway west of I-5 approaching the Lynnwood Park-and-Ride would cross over 208th Street SW and private properties, which would require access during construction. The project would include reconstruction of 208th Street SW and possibly some access roads. The guideway would cross the Interurban Trail at its intersection with 208th Street SW. Trail and roadway access would be maintained.

The guideway would then cross the 46th Avenue West direct access ramps to I-5. Nighttime closures would be needed to complete the guideway across the ramp facility. The guideway/tail track would extend east of 44th Avenue West, and construction would require nighttime closures of 44th Avenue West to install the guideway structure. Detours for north-south traffic could include 52nd Avenue West. A detour for the I-5 ramp traffic could use 204th Street SW east of 44th Avenue West to connect to the 196th Street SW interchange.

The guideway would require reconstructing 208th Street SW at the east end, where it functions as a minor road providing access to industrial properties and a substation. Nighttime closures would be required to construct the guideway over 208th Street SW.

Traffic access to the transit center and parking garage would be maintained during construction of the Lynnwood Transit Center Station.

The tail track east of the light rail station would be constructed over 44th Avenue West and the Interurban Trail. The construction would result in temporary lane closures and some nighttime full closures.

Transit Impacts

Fifteen bus routes (12 Community Transit, 3 Sound Transit) travel to and from the Lynnwood Transit Center via I-5 using the direct access ramps. Constructing the guideway over the ramps would temporarily close the direct access ramps on nights and weekends. Community Transit routes operate from 6:00 am to 7:00 pm, and Sound Transit routes operate from 4:30 am to 12:15 am.

52nd Avenue West would be closed temporarily while the light rail is constructed in the I-5 median over this roadway. Community Transit Route 130 travels on 52nd Avenue West to 200th Street SW; this route does not operate past 10:00 pm.

The construction of the tail track beyond the station would extend over 44th Avenue West on which Community Transit Route 112 travels. The construction over this roadway would cause temporary lane closures and some nighttime full closures. Community Transit Route 112 does not operate past 10:00 pm.

Parking Impacts

Construction of the parking garage could result in a loss of up to 560 park-and-ride stalls during construction. Replacement parking would be provided through construction phasing of other surface parking lots and temporary parking could be provided within the project site on parcels acquired for the construction project. Sound Transit would prepare a parking technical memorandum to plan for temporary parking replacement during construction phases.

Park-and-ride users could also change their mode of access to the park-and-ride or use other park-and-rides, such as Swamp Creek or Mountlake Terrace. The extension of the eastbound right turn lane on South 200th Street, between 44th Avenue N and 48th Avenue North, would result in displacing parking along the north edge of the commercial parking area (refer to Section (5-7). Temporary replacement, restriping, and/or partial compensation could be provided to meet the existing demand for parking. Temporary parking during construction could be provided on nearby parcels acquired by Sound Transit for construction.

Nonmotorized Impacts

Light rail would be constructed across the Interurban Trail in two locations: approximately 500 feet east of where the alignment leaves I-5, and over the Interurban Trail bridge at 44th Avenue West. The Interurban Trail would be closed during Alternative C3 construction. Detour planning could use streets such as Alderwood Mall Boulevard/200th Street SW to Cedar Valley Road, where there are

bicycle lanes and sidewalks. Pedestrian and bicycle routes through the park-and-ride could be considered that connect to the Scriber Creek Trail. However, use of this latter option could require significant safety improvements.

6.4.2 Alternative C1: 52nd Avenue West to 200th Street SW Station

General Purpose Traffic Impacts

Alternative C1 construction activity on the east side of 52nd Avenue West could affect traffic operations with possible lane reductions to add space for installation of the column foundations and caps. The three-lane roadway could be reduced to two lanes to provide the space for construction, maintaining one lane of travel in each direction. Driveways to properties would also be closed for construction of the elevated guideway; however, access would be maintained throughout construction, which may require access through the construction site or neighboring properties.

Construction of the station adjacent to 200th Street SW could require nighttime closures and intermittent one-lane closures on the south side of the street. Most of the construction activity would occur south of the street. Construction of the guideway where it is adjacent to 200th Street SW, west of 48th Avenue West, could require nighttime closures of 48th Avenue West.

Transit Impacts

Community Transit Route 130 travels on 52nd Avenue West to 200th Street SW. This route does not operate past 10:00 pm and would therefore not be affected during nighttime closures after 10:00 pm.

Construction of the station on the south side of 200th Street SW could cause an increase in traffic congestion and delays to Community Transit Routes 115, 116, 130, 201, and 202.

Parking Impacts

Approximately 200 to 250 parking stalls would be displaced along the north side of the existing transit center during construction of the parking garage. The existing park-and-ride is 100 percent utilized. Temporary replacement parking in the vicinity would be investigated along with construction phasing. Otherwise, park-and-ride users would be required to change their mode of access to the park-and-ride or use other park-and-rides, such as the Swamp Creek or Mountlake Terrace.

Construction of the alignment and station would result in displacing parking along the north edge of the commercial parking area (refer to Section (5-7). Temporary replacement, restriping, and/or partial compensation could be provided to meet the

existing demand for parking. Temporary parking during construction could be provided on nearby parcels acquired by Sound Transit for construction.

Nonmotorized Impacts

The Interurban Trail is an on-street facility adjacent to 52nd Avenue West between 208th Street SW and the power line segments. Pedestrians and bicyclists using the trail in this section would need to detour to other surface streets, such as 54th Avenue West and 206th Street SW, during Alternative C1 construction.

Sidewalks could be closed along the east side of 52nd Avenue West and the south side of 200th Street SW during construction. Pedestrians could use the sidewalk on the opposite side of the street, and bicycles could either use the traffic lane or detour to the Interurban Trail.

6.4.3 Alternative C2: 52nd Avenue West to Lynnwood Transit Center

General Purpose Traffic Impacts

Construction impacts with Alternative C2 on the east side of 52th Avenue West would be the same as with Alternative C1. Access to and through the Lynnwood Park-and-Ride would be maintained throughout construction of the transit center station and parking garage.

Transit Impacts

46th Avenue West, which carries the I-5 bus routes to the direct access ramps, would be closed in the short term for guideway construction. Fifteen bus routes (12 Community Transit, 3 Sound Transit) travel between the Lynnwood Transit Center and I-5 using the direct access ramps. 46th Avenue West would be temporarily closed for construction of the guideway during nights and weekends. Community Transit routes operate from 6:00 am to 7:00 pm, and Sound Transit routes operate from 4:30 am to 12:15 am.

Parking Impacts

Construction of the parking garage would result in a loss of approximately 660 parking spaces during construction. Temporary replacement parking in the vicinity would be investigated along with construction phasing. Otherwise, park-and-ride users would be required to change their mode of access to the park-and-ride or use other park-and-rides, such as Swamp Creek or Mountlake Terrace. Alternatively, leasing parking spaces from nearby local private lots may also be considered.

Nonmotorized Impacts

Nonmotorized impacts would be the same as Alternative C1, except for the addition of Scriber Creek Trail closures.

6.4.4 Alternative C3: 52nd Avenue West to Lynnwood Transit Center

General Purpose Traffic Impacts

Construction impacts with Alternative C3 would be similar to the Preferred Alternative.

Transit Impacts

Construction impacts with Alternative C3 would be similar to the Preferred Alternative.

Parking Impacts

Approximately 1,100 stalls could be impacted during construction of the station and associated park-and-ride garage in both Options 1 and 2 of Alternative C3. Construction phasing, temporary parking lots and early construction of the approximately 1,600-stall parking garage could reduce this impact.

Option 1 would use the existing transit center, while Option 2 would rebuild the transit center adjacent to the light rail station. The new transit center in Option 2 would be built before the existing transit center is removed to maintain transit connections at this location.

Nonmotorized Impacts

Construction impacts with Alternative C3 would be similar to the Preferred Alternative.

7 INDIRECT IMPACTS

This chapter discusses potential indirect transportation mobility impacts that would be caused by the Lynnwood Link Extension. Key observations and findings include the following:

- The Lynnwood Link Extension could help facilitate potential increases in residential and employment uses around project stations.
- These potential increases in land use density around stations could lead to changes in regional and local travel patterns because trips to and from these areas may increase for all modes, affecting transit, freeway and local traffic volumes, parking demand, and nonmotorized users.
- The light rail extension could also affect ridership on other transit service in the project corridor, particularly parallel bus rapid transit service in the SR 99 corridor, where longer distance trips could decrease as some riders shift to light rail, and shorter trips could increase as more riders use other transit service to access light rail.
- Other changes in transit service in the corridor in response to the light rail extension that are not yet planned or anticipated could also result in shifts in ridership. These could include the potential for Community Transit, Sound Transit, and King County Metro to redeploy and/or reinvest bus service that is replaced by light rail service. Also, ridership on Sounder North commuter rail service could be affected by the light rail extension.

7.1 Regional Context and Travel Patterns

The completion of the Lynnwood Link Extension would provide fast and reliable light rail service. Light rail service could help to facilitate potential increases in residential and employment uses around project stations. However, the potential for increased land use development is expected to be low to moderate for all stations, except for the Lynnwood Transit Center Station, based on the station area development potential ratings included in Chapter 4, Section 4.2, Land Use, of the Lynnwood Link Extension Draft EIS. However, these potential increases in land use development, regardless of level, could lead to corresponding changes in regional travel patterns as trips to and from these areas potentially increase for all modes.

7.2 Transit

The Lynnwood Link Extension could affect ridership levels on parallel transit service, particularly bus rapid transit service in the SR 99 corridor. Ridership on the RapidRide E Line could decrease as riders making longer commute trips shift to the light rail network. However, ridership could increase on the *Swift* bus rapid transit line when the route is extended south and east to terminate at the NE 185th Street Station, and more riders use *Swift* to access light rail.

In addition to the planned changes to local and commuter bus service assumed for the light rail alternatives in forecast year 2035, King County Metro and Community Transit could make additional changes in response to the project. These could include the potential for Community Transit, Sound Transit, and King County Metro to redeploy and/or reinvest in bus service that is replaced by light rail service. Such changes are dependent on transit funding and would result in a net benefit for transit riders. Also, ridership on the Sounder North commuter rail service could be affected if some riders choose to shift from commuter rail to the Lynnwood Link Extension.

7.3 Freeway Operations

As discussed in Section 7.1, the potential for increased land use development around light rail stations in the project corridor could lead to an increase in trips to and from these stations. While the potentially higher-density residential and commercial development could generate additional light rail trips, it could also increase general purpose traffic to and from these station areas. This increase in traffic could cause additional impacts on freeway mainline and ramp operations.

7.4 Arterials and Local Streets

The potential for increased land use development around light rail stations in the corridor could lead to increases in automobile and bus trips to and from these station areas. This increase in traffic could cause additional impacts on the arterials and local streets. Conversely, increased development along the light rail corridor could also result in shifts from automobile trips to other travel modes such as transit, bicycle, and pedestrian trips.

7.5 Nonmotorized Facilities

A potential increase in higher-density residential and commercial development and the associated potential for increased light rail ridership would generate additional pedestrian and bicycle trips to the stations. These trips could be added to older streets that have narrower sidewalks and lack ADA accessibility, but could also accelerate improvements to these facilities as local jurisdictions observe the increase in usage.

7.6 Parking

The potential for increased land use development around station areas in the corridor could lead to a potential increase in the demand for parking in these areas as well. This could take the form of increased demand for on-street parking for street-level retail businesses, as well as for off-street parking for both residential and commercial uses. In addition, the demand for park-and-ride spaces in areas more than 0.25 mile from the light rail stations could increase because some riders could

park along feeder bus routes and then take the bus to the light rail station. Additionally, a loss in park-and-ride demand could occur in other parallel corridors, particularly the SR 99 corridor, where park-and-ride facilities such as the Shoreline Park-and-Ride and Aurora Village Transit Center could experience lower demand as riders shift to light rail.

7.7 Safety

No indirect effects on traffic safety are anticipated as a result of the Lynnwood Link Extension.

8 CUMULATIVE IMPACTS

This chapter discusses potential cumulative transportation mobility impacts that would be caused by the Lynnwood Link Extension. The analysis of the No Build Alternative and the light rail alternatives is inherently cumulative because it is based on regional forecasts that assume future funded projects and future growth in population and employment in designated growth centers, which are consistent with adopted land use plans. However, there could be differences in effects based on the details of other individual transportation or development projects, and the actual rate and timing of population or employment growth in a given community. Key observations and findings include the following:

- Land use changes, future population and employment growth, or future transportation projects that are not assumed as part of the No Build Alternative and light rail alternatives in forecast year 2035 could potentially influence travel patterns to, from, and within the Lynnwood Link Extension corridor. These potential changes or projects could affect traffic operations on freeways, arterials, and local streets.
- Future extensions of the regional mass transit network that currently are not funded would improve transit accessibility for communities in the Lynnwood Link Extension corridor. In addition, new bus rapid transit, such as a route serving 196th Street SW, would provide increased connectivity for the Lynnwood area.
- Potential projects involving new managed or tolled lanes on I-5 or new direct access facilities to managed lanes could alter freeway and interchange operations.
- Construction of other projects could increase cumulative short-term impacts such as increased congestion, truck trips, and detours if these projects are constructed at the same time as the Lynnwood Link Extension.
- Future developments, local transportation projects, or trails improvements could add more pedestrian and bicycle trips to the street network surrounding the light rail stations.
- Future developments could generate increased parking demand within the corridor, but increases in regional transit connectivity could help offset parking demand.
- Transportation infrastructure improvements to current standards could result in improved traffic safety along roadways surrounding future light rail stations.

8.1 Regional Context and Travel Patterns

In addition to the land use changes that could occur as a result of this project (indirect and secondary impacts), additional unanticipated land use changes

throughout the region could influence the nature of travel patterns within and through the Lynnwood Link Extension corridor. For example, to the north, changes in employment levels at Boeing could cause an increase or decrease in traffic volumes and transit demand in the corridor.

Additional future transportation projects in the region that were not assumed as part of the No Build Alternative and light rail alternatives in 2035 could also potentially influence travel patterns to, from, and within the Lynnwood Link Extension corridor. As discussed in Sections 8.2 and 8.3 below, future extensions of the mass transit network and changes to the operation of I-5 would provide enhanced regional connectivity within and through the project corridor.

8.2 Transit

Future extensions of the regional mass transit network are depicted in Sound Transit's Long-Range Vision, and include an extension north from Lynnwood to Everett. If voters approve funding for construction of additional extensions, transit accessibility for the communities in the Lynnwood Link Extension corridor would be increased through connections to additional regional destinations. Moreover, Community Transit has studied the feasibility of new bus rapid transit corridors in its service area, including a potential new line serving 196th Street SW. This new transit service, which is not currently funded, would combine with the Lynnwood Link Extension to provide increased connectivity for the Lynnwood area.

8.3 Freeway Operations

In addition to the Lynnwood Link Extension, the implementation of other projects that is not reflected in this transportation analysis could affect freeway operations. The current WSDOT I-5 Express Lanes study could result in new managed or tolled lanes in the I-5 corridor, providing more efficient person throughput and reduced freeway congestion in the corridor, including at freeway interchanges near light rail stations. Other projects that could affect freeway operations include any changes to interchanges, such as the introduction of new direct access facilities to future managed lanes.

8.4 Arterials and Local Streets

The cumulative analysis of future transportation impacts in Chapter 5 was based on the results of traffic and ridership modeling that incorporated past, funded, and approved future actions, as well as projected growth that would generate development in the region.

In a separate project, Sound Transit is evaluating potential sites for a Link Operations and Maintenance Satellite Facility. One of the sites under consideration is located north of I-5 and east of 52nd Avenue West/Cedar Valley Road in Lynnwood;

however, the transportation effects of this maintenance facility would be limited. The light rail trains would enter and leave the station via a dedicated light rail guideway. While employees, service vehicles, and shipments would arrive using local streets, the traffic would not be likely to change conditions because the maintenance facility would occupy an area that is already largely developed with office and light industrial uses, and trips related to the displaced facilities would no longer occur. There would be no notable difference in the transportation effects of this maintenance facility related to any Segment C alternative—all of which have stations and park-and-ride facilities that would largely be accessed using different streets than 52nd Avenue West, which is the street access point for the facility.

The Edmonds School District owns the property being considered for this maintenance facility and they have a master plan to develop the site for a support services center. This facility will include administrative functions and an operations base with storage, maintenance, and fueling for the Edmonds' school bus fleet. If developed, the school district services center could increase traffic volumes along 52nd Avenue West, including during the morning peak period and in afternoons when the school buses are deployed. However, this added volume would not notably change the traffic impacts or mitigation measures of the Lynnwood Link Extension project, which are largely focused on access points to the Lynnwood park-and-ride and station.

Sound Transit has started construction of the Northgate Link Extension which would extend rail from the University of Washington to Northgate. While this project is scheduled to be completed and in operation prior to completion of the Lynnwood Link Extension, some construction periods will likely overlap. To address this, maintenance of traffic plans between the two projects will be coordinated. Additionally, King County is planning to construct high density transit oriented development adjacent to the planned Northgate light rail station. This development may be under construction at the same time as Lynnwood Link Extension, potentially creating additional construction related impacts to the area. Construction of this development will need to be coordinated with construction activities related to the light rail projects in order to minimize overall impacts.

Other unfunded regional and local transportation projects and development projects could result in additional effects on traffic operations and local circulation near the proposed stations. New development projects may increase vehicle trips around stations and change travel patterns on local streets, which could contribute to cumulative traffic delays on roadways within the Lynnwood Link Extension corridor. On the other hand, future transit and roadway capacity projects could improve person throughput, traffic flow, and circulation on local streets along the corridor and reduce the impacts of proposed light rail stations on local traffic operations.

Also, if the implementation of these projects overlaps, construction activities could have cumulative short-term impacts.

8.5 Nonmotorized Facilities

Future unfunded projects or accelerated growth could add more pedestrian and bicycle trips to the street network surrounding the light rail stations. These projects would also improve nonmotorized facilities associated with the project.

8.6 Parking

Similar to the previous discussion of regional travel patterns, parking within the corridor could also be affected by land use and transportation infrastructure changes that are not reflected in this analysis. In particular, transportation projects that would increase roadway throughput capacity could increase parking demand within the corridor. Conversely, increases in regional transit connectivity could decrease parking demand as travelers shift their modes of travel.

8.7 Safety

The cumulative effects of future development and transportation improvements could improve traffic safety along roadways surrounding the proposed light rail stations.

9 POTENTIAL MITIGATION MEASURES

This chapter discusses potential mitigation measures for transportation mobility impacts caused by the Lynnwood Link Extension. It also describes measures that Sound Transit proposes to take but which require agreement of other parties. For instance, Sound Transit has identified certain intersection improvements, traffic management, safety, or parking strategies to mitigate project-related impacts, but it does not have the sole authority to make those improvements when the facilities are owned and managed by others. Others may also have alternative plans or projects to address project future conditions with or without the project. In these cases, Sound Transit will coordinate with these other agencies or jurisdictions to further define and implement improvements to mitigate these project's impacts.

Key observations and findings include the following:

- Regional Travel—No mitigation is required to maintain regional travel.
- Transit—The transit integration plans developed by King County Metro and Community Transit would provide coordinated bus service with the light rail system. No additional transit mitigation is required.
- Freeway—No mitigation would be necessary along the I-5 mainline. However, for one alternative, A10, mitigation would be required at local intersections near the NE 145th Street proposed light rail station to prevent traffic-related effects at the I-5 southbound off-ramp.
- Arterials and Local Street Operations—For impacts on arterials and local streets, mitigation would be required at intersections located near proposed light rail stations that would degrade below LOS standards and/or are expected to noticeably worsen compared to the No Build Alternative. In particular, intersection and/or arterial improvements would be needed near light rail stations in Segments A and C. Sound Transit has identified potential measures to improve conditions to meet LOS standards where No Build conditions would otherwise meet standards. Sound Transit would provide these improvements or other improvements as agreed to by the local jurisdiction. In lieu of the mitigation proposed, Sound Transit could instead contribute to a local jurisdiction's project to improve intersection performance where the No Build Alternative would already be below standards, as agreed to with local jurisdictions. The intersection mitigation measures or funding contribution would likely mitigate arterial segments operating below standards for the local jurisdiction in which the impact occurs. Measures to address cut-through traffic impacts include signage, traffic calming measures, or other cut-through restrictions, and would be determined in conjunction with local jurisdictions.
- Property Access and Circulation—In areas where property access and local circulation would be modified by the project, Sound Transit would work with local jurisdictions to develop plans to maintain safe and effective access and

circulation. In areas near modified interchanges, FHWA and WSDOT would also be consulted.

- Nonmotorized Facilities—The Lynnwood Link Extension alternatives would have no impact on non-motorized facilities; therefore, no mitigation would be required.
- Freight Mobility and Access—The Lynnwood Link Extension would not require mitigation during operation to improve freight mobility and access because truck routes would be maintained and mobility would be maintained or improved with the project.
- Parking—Mitigation may be required where there are potential impacts on parking around stations. The potential exists for hide-and-ride activities near stations, and the best procedures for mitigating such activities would be specific to each station area.
- Safety—To address potential safety concerns related to the placement of project structures in the I-5 right-of-way, Sound Transit will coordinate with FHWA and WSDOT during final design and related design approval processes.
- Construction—All potential mitigation measures would comply with local regulations governing construction traffic control and construction truck routing. Sound Transit would finalize detailed construction mitigation plans in close coordination with local jurisdictions, WSDOT, King County Metro, Community Transit, and other affected agencies and organizations.

9.1 Regional Travel

Mitigation for regional travel would not be required because highways and arterials are not expected to experience adverse changes in operations. The v/c ratios and mode share would generally remain similar to the No Build Alternative or improve with the Lynnwood Link Extension.

9.2 Transit

Mitigation for transit service would not be required for the Lynnwood Link Extension because the project would improve the regional transit system and, by freeing up existing bus service resources, may allow King County Metro's and Community Transit's integration plans to provide coordinated bus service with the light rail system. To mitigate the temporary loss of park-and-ride spaces, Sound Transit would coordinate with local jurisdictions, transit providers, FHWA, and WSDOT to develop and implement plans for replacement parking and alternative access measures.

9.3 Freeway

No mitigation improvements would be necessary along the I-5 mainline. The Preferred Alternative and other light rail alternatives would have similar peak hour volumes and freeway operations along the I-5 mainline and ramps as the No Build Alternative. With the proposed mitigation measures to the arterial street system near the 145th Street interchange, described in Section 9.4 for Alternative A10, the operations of I-5 would be similar to conditions under the No Build Alternative. All other light rail alternatives would not cause impacts on the I-5 mainline or ramps.

9.4 Traffic Operations

For impacts on arterials and local streets, mitigation is potentially required at intersections where the intersection LOS with the light rail alternatives, compared with the No Build Alternative, would degrade to levels that do not meet the LOS jurisdiction standards. For locations that would operate below LOS standards with the No Build Alternative in forecast year 2035, improvements were assumed to be needed if the light rail alternatives result in substantial increases in delays compared with the No Build Alternative. Potential mitigation measures for improvements at intersections in each segment based on these criteria are described below.

These intersection improvements would improve the AM and PM peak hour intersection delay to meet LOS standards, or to achieve the same level of service or better for intersections that would be below standards with the No Build Alternative.

Sound Transit would provide these improvements or other improvements as agreed to by the local jurisdiction. In lieu of constructing the improvements proposed, Sound Transit could instead contribute to a local jurisdiction's project to improve intersection performance where the No Build Alternative would already be below standards, as agreed to with local jurisdictions.

There is some potential for increased cut-through traffic in neighborhoods to access the light rail stations via local streets. To reduce this potential impact, Sound Transit could work with local jurisdictions to consider measures such as signage, access or turn restrictions, or other traffic control measures. Final mitigation for all traffic impacts, including the potential for intersection degradation and cut-through traffic impacts, would be determined in conjunction with local jurisdictions.

Segment A Intersections

In Segment A, several intersections in Seattle and Shoreline could potentially require improvements to adjust for additional trips and changes in travel patterns to and from the proposed light rail stations. Tables 9-1 and 9-2 summarize the potential improvements Sound Transit proposes to bring intersection operations to acceptable levels. Intersection LOS results without the potential mitigation improvements are summarized in Tables 5-25 and 5-26.

Table 9-1. Forecast Year 2035 PM Peak Hour Intersection LOS with Potential Mitigation Improvements—Segment A

		Alternative									
Nearest Station/ Intersection	**LOS Standard**	**No Build**	**Preferred Alternative**	**Preferred Alternative with Options**	**A1**	**A3**	**A5**	**A7**	**A10**	**A11**	**Potential Improvements**
NE 145th/NE 155th Street Station											
NE 145th Street and 1st Avenue NE	E	D	D	D[a]	D[a]	D[a]	*	*	D[a]	D[a]	
NE 145th Street and 5th Avenue NE	E	D	D	D	D	D	*	*	D	D	A1, A3, A10, A11.—add a westbound right-turn lane and overlap phase
North 155th Street and Meridian Avenue North	D	D	*	*	*	*	C	C	*	*	A5, A7 - Add left-turn pockets to the northbound and southbound approaches
North 155th Street and 1st Avenue NE	D	F	*	*	*	*	C	C	*	*	A5, A7 - Add a right-turn pocket to the northbound approach
NE 155th Street and 8th Avenue NE	D	E	*	*	*	*	C	C	*	*	A5, A7 - Add a two-way left-turn lane or refuge area on NE 155th Street
NE 165th Street and 5th Avenue NE	D	F	*	*	*	*	B	B	*	*	A5, A7 - Add a second northbound through lane

Table 9-1. Forecast Year 2035 PM Peak Hour Intersection LOS with Potential Mitigation Improvements—Segment A

Nearest Station/ Intersection	LOS Standard	Alternative									Potential Improvements
		No Build	Preferred Alternative	Preferred Alternative with Options	A1	A3	A5	A7	A10	A11	
NE 185th Street Station											
North 185th Street and Meridian Avenue North	D	D	D	D	D	D	D	D	D	D	All Alternatives - Add protected-permissive phasing to the northbound and southbound left turns
NE 185th Street and 2nd Avenue NE	D	C	C	C	C	C	C	C	C	C	All Alternatives - Add a two-way left-turn lane or refuge area on NE 185th Street
NE 185th Street and 7th Avenue NE	D	D	A	A	C	C	C	C	C	C	A5, A10 –add a two-way left-turn lane or refuge area on NE 185th Street
NE 185th Street and 8th Avenue NE	D	C	C	C	C	C	D	C	D	C	A3, A7, A11—add a two-way left-turn lane or refuge area on NE 185th Street

Notes:

[a] Intersection operations are improved based on mitigation at nearby or adjacent intersections. Mitigation is not proposed at this individual intersection.

* No mitigation required.

Table 9-2. Forecast Year 2035 AM Peak Hour Intersection LOS with Potential Mitigation Improvements—Segment A

Nearest Station/ Intersection	LOS Standard	Alternative									Potential Improvements
		No Build	Preferred	Preferred with Options	A1	A3	A5	A7	A10	A11	
NE 145th/NE 155th Street Station											
5th Avenue NE and I-5 Northbound Off-Ramp	D	D	D[a]	D[a]	D[a]	D[a]	*	*	D[a]	D[a]	
North 155th Street and Meridian Avenue North	D	D	*	*	*	*	C	C	*	*	A5, A7 - Add left-turn pockets to the northbound and southbound approaches
NE 185th Street Station											
North 185th Street and Meridian Avenue North	D	D	D	D	D	D	D	D	D	D	All Alternatives - Add protected-permissive phasing to the northbound and southbound left turns

[a] Intersection operations are improved based on mitigation at nearby or adjacent intersections. Mitigation is not proposed at this individual intersection.

* No mitigation required.

Segment B Intersections

In Segment B, no intersections in Mountlake Terrace would require improvements to adjust for additional trips and changes in travel patterns to and from the proposed stations.

Segment C Intersections

In Segment C, four intersections in Lynnwood could potentially require improvements to adjust for additional trips and changes in travel patterns to and from the proposed light rail stations. Tables 9-3 and 9-4 summarize the potential improvements Sound Transit proposes to bring intersection operations to acceptable levels in the PM and AM peak hours, respectively. Intersection LOS results for Segment C without the potential mitigation improvements are summarized in Tables 5-29 and 5-30.

Table 9-3. Forecast Year 2035 PM Peak Hour Intersection LOS with Potential Mitigation Improvements—Segment C

		Alternative						
Nearest Station/ Intersection	**LOS Standard**	**No Build**	**Preferred**	**Preferred + Option**	**C1**	**C2**	**C3**	**Potential Improvements**
Lynnwood Station								
200th Street SW and 50th Avenue West	D	D	C[a]	D	C	C	C	Preferred Alternative + Options, C1, C2, C3—Add overlap phase to northbound right-turn movement
200th Street SW and 48th Avenue West	D	D	D	D	D	D	D	Preferred Alternative, Preferred Alternative + Options—Add an eastbound right turn pocket. Preferred Alternative + Options—Add a southbound right-turn pocket
52nd Avenue West and 204th Street SW	E	E	A	A	A	A	A	All Alternatives - Change traffic control from two-way stop control to signal or roundabout

[a] Intersection operations are improved based on mitigation at nearby or adjacent intersections. Mitigation is not proposed at this individual intersection.

Table 9-4. Forecast Year 2035 AM Peak Hour Intersection LOS with Potential Mitigation Improvements—Segment C

Nearest Station / Intersection	LOS Standard	Alternative						Potential Improvements
		No Build	Preferred	Preferred with Option	C1	C2	C3	
Lynnwood Station								
200th Street SW and 44th Avenue West	E	E	E	D	D	D	D	Preferred Alternative + Options, C1, C2, C3 – Add a second northbound left-turn lane and extend the eastbound right-turn pocket back to the P&R driveway
200th Street SW and 50th Avenue West	D	C	C[a]	C	C	C	C	Preferred Alternative + Options, C1, C2, C3—Add overlap phase to northbound right-turn movement
200th Street SW and 48th Avenue West	D	C	D	D	D	D	D	Preferred Alternative, Preferred Alternative + Options – Add an eastbound right-turn pocket. Preferred Alternative + Options – Add a southbound right-turn pocket

[a] Intersection operations are improved based on mitigation at nearby or adjacent intersections. Mitigation is not proposed at this individual intersections.

9.5 Property Access and Local Circulation

In areas where property access and local circulation would be modified by the project, Sound Transit would work with local jurisdictions to develop and implement plans to maintain safe and effective access and circulation. In areas near modified interchanges, FHWA and WSDOT would also be involved.

To discourage cut-through traffic that may occur on residential streets in station areas, Sound Transit would work with local jurisdictions to define and implement appropriate neighborhood traffic controls.

9.6 Nonmotorized Facilities

The Lynnwood Link Extension alternatives would have no impact on non-motorized facilities; therefore, no mitigation would be required.

9.7 Freight Mobility and Access

The Lynnwood Link Extension would not require mitigation during operation to improve freight mobility and access because truck routes would be maintained and mobility would be maintained or improved with the project.

9.8 Parking

Where the project would remove off-street private parking spaces, Sound Transit would work with property owners to provide compensation or replacement parking.

To discourage transit patrons from parking outside of designated park-and-ride facilities, Sound Transit would work with local jurisdictions to evaluate and, if necessary, implement hide-and-ride mitigation. With this approach, Sound Transit would inventory on-street parking around each station before and after the start of light rail revenue service, and would then work with the local jurisdictions to determine where mitigation measures would be needed. Potential parking control measures include parking meters, restricted parking signage, passenger and truck load zones, and residential parking zone programs.

Sound Transit would be responsible for the cost of installing signage or other parking controls for 1 year after the light rail extension begins operation. The local jurisdictions would be responsible for monitoring, enforcing and maintaining the parking controls.

9.9 Safety

To address potential safety concerns related to the placement of project structures in the I-5 right-of-way, Sound Transit will coordinate with FHWA and WSDOT during final design and would secure highway-related design approvals before construction.

9.10 Construction

9.10.1 Transit

Construction would affect the existing 5th Avenue NE/NE 133rd, North Jackson Park, Mountlake Terrace Transit Center, and Lynnwood Transit Center Park-and-Ride lots. Mitigation measures would include the following, as appropriate, or other measures developed in coordination with transit agencies:

- Service increases or other measures to encourage transit trips that do not require automobile access.
- Redirect transit riders who use these locations to nearby park-and-ride lots.
- Develop temporary parking for transit riders to use during construction.
- Use construction phasing strategies to build new park-and-ride spaces and temporary parking spaces before the loss of existing spaces.
- Lease parking lots and/or new parking areas near the closed park-and-ride lots.

During construction, transit service mitigation measures for partial closures of the Mountlake Terrace Transit Center and Lynnwood Transit Center. Transit service mitigation would include the following, as appropriate, or other measures developed in coordination with transit agencies and local jurisdictions:

- Relocate transit stops to adjacent streets.
- Provide a temporary transit center at a nearby off-street location.
- Revise transit services (including temporary service between Mountlake Terrace and destinations in King County due to temporary closure of the Mountlake Terrace Freeway station).

Transit service mitigation measures for partial or full closures would include rerouting of buses, where appropriate, to maintain transit service. Sound Transit would coordinate with King County Metro, Community Transit, and private transit service providers to minimize construction impacts and disruptions to bus facilities and services. Sound Transit will coordinate with these providers to inform passengers about changes with measures such as signage at existing transit stops and using website information, rider information systems, emails, and agency mailing lists.

9.10.2 Freeway Operations and Safety

As part of the WSDOT and FHWA approval process for construction within I-5 right-of-way and to minimize safety and operational impacts during construction, Sound Transit would collaborate with WSDOT and FHWA to develop and implement the project's Maintenance of Traffic plan. Sound Transit would coordinate construction with incident management, construction staging, and traffic control in places where the light rail construction would affect freeway traffic or involve changes to the roadside environment. Sound Transit would also coordinate with WSDOT to disseminate construction closure information to the public as needed.

9.10.3 Arterials and Local Streets

The adverse transportation impacts that would occur during construction include temporary lane or roadway closures during peak hours, temporary increases in truck traffic, and temporary loss of parking in some construction staging areas. Sound Transit would develop and implement detailed construction mitigation plans in close coordination with local jurisdictions and WSDOT during the final design and permitting phases of the project. Sound Transit would:

- Develop the Maintenance of Traffic plan to conform to the *Manual on Uniform Traffic Control Devices* and jurisdictional agency requirements for all traffic control.
- Use lighted or reflective signage to direct drivers to truck haul routes to ensure visibility during nighttime work hours.
- Use temporary reflective truck prohibition signs on streets with a high likelihood of cut-through truck traffic.
- Communicate public information about construction activities through tools such as print, radio, posted signs, Web sites, email and direct communication with other agencies and affected parties; ongoing communications would update interested parties regarding street of freeway lane closures, detours, hours of construction, business access, and parking impacts.
- Coordinate access closures with affected businesses and residents. The contractor will be required to perform this task in coordination with Sound Transit staff. If access closures are required, property access to residences and businesses would be maintained to the extent possible. If access to the property cannot be maintained, the specific construction activity would be reviewed to determine if it could occur during non-business hours, or if the parking spaces and users of this access (for example, deliveries) could be provided at an alternative location.
- Require the contractor to provide parking areas for construction workers, where necessary, which could be the responsibility of the contractor. This may include providing remote parking with shuttle service to and from the construction site if sufficient on-site parking cannot be provided.
- Post advance notice signs prior to construction in areas where surface construction activities would affect access to surrounding businesses.
- Schedule traffic lane closures and high volumes of construction truck traffic during off-peak hours to minimize delays during periods of higher traffic volumes as much as possible.
- Evaluate and limit concurrent construction to minimize construction impacts in developing the Maintenance of Traffic plan.
- Cover potholes and open trenches, where possible, and use protective barriers to protect drivers from trenches remaining open.

- Provide temporary parking to mitigate loss due to construction staging or work activities, as appropriate.

9.10.4 Parking

In locations where Sound Transit would remove off-street private parking spaces, Sound Transit would work with property owners to provide compensation or replacement parking.

9.10.5 Nonmotorized Facilities

Sound Transit would minimize potential impacts on pedestrian and bicycle facilities by providing detour routes within and through construction areas. Sound Transit would also notify the public of these changes. Multi-use trails that might be affected by construction would generally be kept open. Detours would be provided when trails are closed, unless they are closed for short durations or in areas where a detour option is not feasible. Closures or restrictions to I-5 crossings would be sequenced to maintain travel across I-5 at the next nearest crossing.

9.10.6 Freight Mobility and Access

To minimize impacts due to delays and restricted access for business deliveries on arterials and local streets, Sound Transit would work with local jurisdictions to develop and implement construction traffic control plans. The agency also would coordinate with affected businesses before and during the construction period to maintain business access as much as possible.

For construction associated with I-5, Sound Transit would coordinate with freight stakeholder groups by providing construction information to WSDOT for use in the state's freight notification system. Sound Transit would provide information in a format acceptable to WSDOT.

9.10.7 Cumulative Construction Impacts

To mitigate cumulative impacts of potentially overlapping construction periods in the Northgate area, Sound Transit would coordinate the construction activities of the Northgate Link Extension and Lynnwood Link Extension projects, and would also coordinate with the King County Metro transit-oriented development project.

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APPENDIX A

Transportation Technical Analysis Methodology

Introduction

This technical analysis methodology memorandum describes the methods that will be used to analyze the impacts on transportation for the Lynnwood Link Extension Project Environmental Impact Statement (EIS). The transportation section of the EIS identifies and evaluates the short- and long-term impacts of project alternatives on the following:

- Regional transit system, including ridership and mode share;
- Regional traffic, including vehicle miles of travel, vehicle hours of travel, and vehicle hours of delay;
- Project corridor traffic;
- Road-based transit service;
- Intersection level of service;
- Freeway level of service;
- Property access and local traffic circulation;
- Parking near stations and at park-and-ride lots;
- Bicycle and pedestrian circulation;
- Freight movement within the corridor including trucking and freight rail;
- Construction impacts; and
- Safety.

In addition to the impacts analysis related to the topics listed above, the memorandum also describes the transportation analysis that will be conducted to:

- Describe cumulative transportation effects; and
- Develop data for use by other disciplines, including air quality, noise, energy, and environmental justice.

These methods are being provided for review and comment by participating and cooperating agencies for the Lynnwood Link Extension Project EIS. The review of methods at the start of the EIS process is consistent with the National Environmental Policy Act (NEPA) environmental review procedures established by Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), codified as 23 United States Code (USC) §139. Sound Transit and the Federal Transit Administration (FTA) initiated the EIS process for the project in September 2011, and they invited potential cooperating and participating agencies to take part in the EIS process.

Lynnwood Link Extension Project Area

The proposed Lynnwood Link Extension Project would begin at Northgate in north Seattle and end at the Lynnwood Transit Center, and would be about 8.5 miles long, as shown in Figure A-1. The transportation corridor it serves is bounded by Puget Sound to the west and Lake Washington to the east, and is within the cities of Seattle and Shoreline in King County, and Mountlake Terrace and Lynnwood in Snohomish County. The corridor generally follows Interstate 5 (I-5), the major north-south route through Washington, and serves a large commuter market that travels toward Seattle or north to Everett, where many of the region's jobs are located.

The Lynnwood Link Extension project alternatives would extend light rail from the planned north terminus of the North Link light rail system at Northgate, and extend north along I-5 to Lynnwood. A separate preface for this methodology memorandum describes the range of alternatives being analyzed in the EIS.

Figure A-1. Study Area for Transportation Analysis

Guiding Regulations, Plans, and/or Policies

The transportation analysis will guided by the following laws and regulations:

- NEPA
- State Environmental Policy Act (SEPA)
- SAFETEA-LU, Public Law 109-59
- Code of Federal Regulations (CFR) 23 Part 450 (implementing USC 23 Section 111, which requires the U.S. Secretary of Transportation to approve access revisions to the Interstate System)
- CFR 23 Part 771 (Environmental Impact and Related Procedures)
- Washington State Growth Management Act (Revised Code of Washington [RCW] 36,70A.070)

In addition to the laws and regulations identified above, analysis of local transportation impacts will be guided by the policy direction established in the numerous plans or policy documents adopted within the project corridor. These include, but are not limited to:

- Sound Transit 2 (ST2), approved November 4, 2008
- Strategic Plan for Public Transportation 2011–2021 (King County Department of Transportation Metro Transit Division, 2011)
- 2012–2017 Transit Development Plan (Community Transit, November 15, 2011 Draft)
- Community Transit Long-Range Transit Plan (Community Transit, February 4, 2011)
- Washington Transportation Plan 2007–2026 (Washington State Department of Transportation [WSDOT], November 14, 2006)
- WSDOT Design Manual
- WSDOT Development Service Manual (M.3007.00)
- Puget Sound Regional Council (PSRC) Transportation 2040: Toward a Sustainable Transportation System
- Comprehensive and/or Transportation Plans for the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood, as well as King County and Snohomish County
- 6-Year Capital Improvement Program for the Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood, as well as King County and Snohomish County

Agency Coordination

The transportation planning and analysis process will involve local jurisdictions, state agencies, federal agencies, transit agencies, PSRC, and other interested parties.

NEPA Lead Agency

FTA will be the lead agency for development of the EIS in accordance with NEPA regulations.

Cooperating and Participating Agencies

For the development of the transportation technical report, Sound Transit staff and consultants will meet with and/or provide opportunity for coordination with staff planners and engineers from the cooperating and participating agencies for this project:

- WSDOT
- Federal Highway Administration (FHWA)
- PSRC
- Community Transit
- King County
- City of Lynnwood
- City of Mountlake Terrace
- City of Shoreline
- City of Seattle
- Snohomish County
- King County

Data Needs and Sources

A variety of data will be collected and assembled to analyze the transportation-related effects of project alternatives. These data sets will include the following:

- Existing peak-hour turning-movement counts at the intersections identified below under "Intersections to be Studied." These counts will be collected from the local and state agencies (Cities of Seattle, Shoreline, Mountlake Terrace, and Lynnwood; and WSDOT) for the PM peak hour for all locations, and for the AM peak hour for selected locations where AM peak hour operations is determined to be as, or more critical, than PM peak hour operations. For I-5, volume data from WSDOT's loop counters will be used to generate existing mainline and ramp volumes. New counts will be taken for a 2-hour period during the PM peak hour, if year 2010 or more recent turning-movement counts are not available from the agencies listed above.

The new counts will include automobiles; trucks classified by light, medium, and heavy types; buses; pedestrians; and bicyclists. AM peak hour turning-movement counts will also be collected where AM peak hour volumes are the highest or the existing/future traffic issues are considered critical during the AM time period (i.e., if an intersection provides access to a regional facility). These locations will be chosen based on area knowledge, a comparison of available AM versus PM peak hour traffic volumes, and/or if identified by Sound Transit, and local or state agency staff. All peak-hour turning-movement counts will be factored to a common base analysis year (2012) based on available historical data trends.

- Daily traffic counts in the study area, as available from local jurisdictions. These counts will be factored to a common base analysis year (2012).
- Physical characteristics of the existing street system, including functional use, lane geometry, traffic signal timing and phasing patterns, and other parameters necessary to conduct traffic operations analysis (such as the proximity of bus stops, speed limits, presence of on-street parking, etc.). Where available, these data will be obtained from local agencies (such as paint line sketches developed by the City of Seattle) and will be field checked as appropriate.
- On- and off-street parking supply and peak weekday parking utilization survey data will be collected within a 0.25-mile walking distance of each station and for all at-grade or elevated alignments that are within the road right-of-way. Data will be obtained from the Cities of Lynnwood, Mountlake Terrace, Shoreline, and Seattle, and augmented by field visits where appropriate.
- Park-and-ride supply and demand data will be collected at either proposed stations or locations within a 0.25-mile walking distance of each station. Existing park-and-ride information and utilization rates will be collected from King County Metro, Community Transit, and WSDOT, where available, and supplemented by field visits as appropriate.
- Pedestrian volumes will be collected in areas with high pedestrian activity (including station areas, activity centers, and major nonmotorized facilities), and where existing counts have been conducted by local jurisdictions. The data collection effort will be limited to the intersections identified below under "Intersections to be Studied." Pedestrian and bicycle volume data will also be collected for major nonmotorized facilities near proposed station areas.
- Existing and planned pedestrian and bicycle facilities within an approximate 0.50-mile of each station area (1.0 mile for bicycle facilities) will be inventoried by either field visits or available information from agencies (such as geographic information system [GIS] data). This inventory will include identification of school walk routes and any barriers to pedestrian or bicycle travel within each station area. The general sidewalk condition immediately surrounding station areas will be qualitatively assessed.

- Existing transit route information along the proposed build alternatives will be obtained from local transit agencies and compiled. This task will include information on selected routes that serve the project corridor. The bus route information will include service areas, hours of service (including schedule/frequency), reliability, and passenger load. Passenger load information will be collected at selected screenline locations. Transit reliability information will be collected for selected routes that serve the project corridor.
- Accident data for the most recent 3-year period will be obtained for the study area intersections (signalized and unsignalized) and on I-5 between the 44th Avenue West and NE Northgate Way interchanges. Accident data for roadway segments (between intersections) will be collected only where at-grade or elevated light rail alternatives are running within or immediately adjacent to a roadway. Existing truck corridors/routes and any truck weight or height restrictions will be identified; truck volume data for the I-5 corridor also will be collected.
- Local, regional, and state agency Six-Year Transportation Improvement Plans/Capital Improvement Programs or Transportation Facilities Plans, as well as other planned improvements in proximity to a light rail alignment or station area will be reviewed and summarized. This effort will include identification of all "committed" improvements assumed for the No Build Alternative.

Study Area and Area of Effect

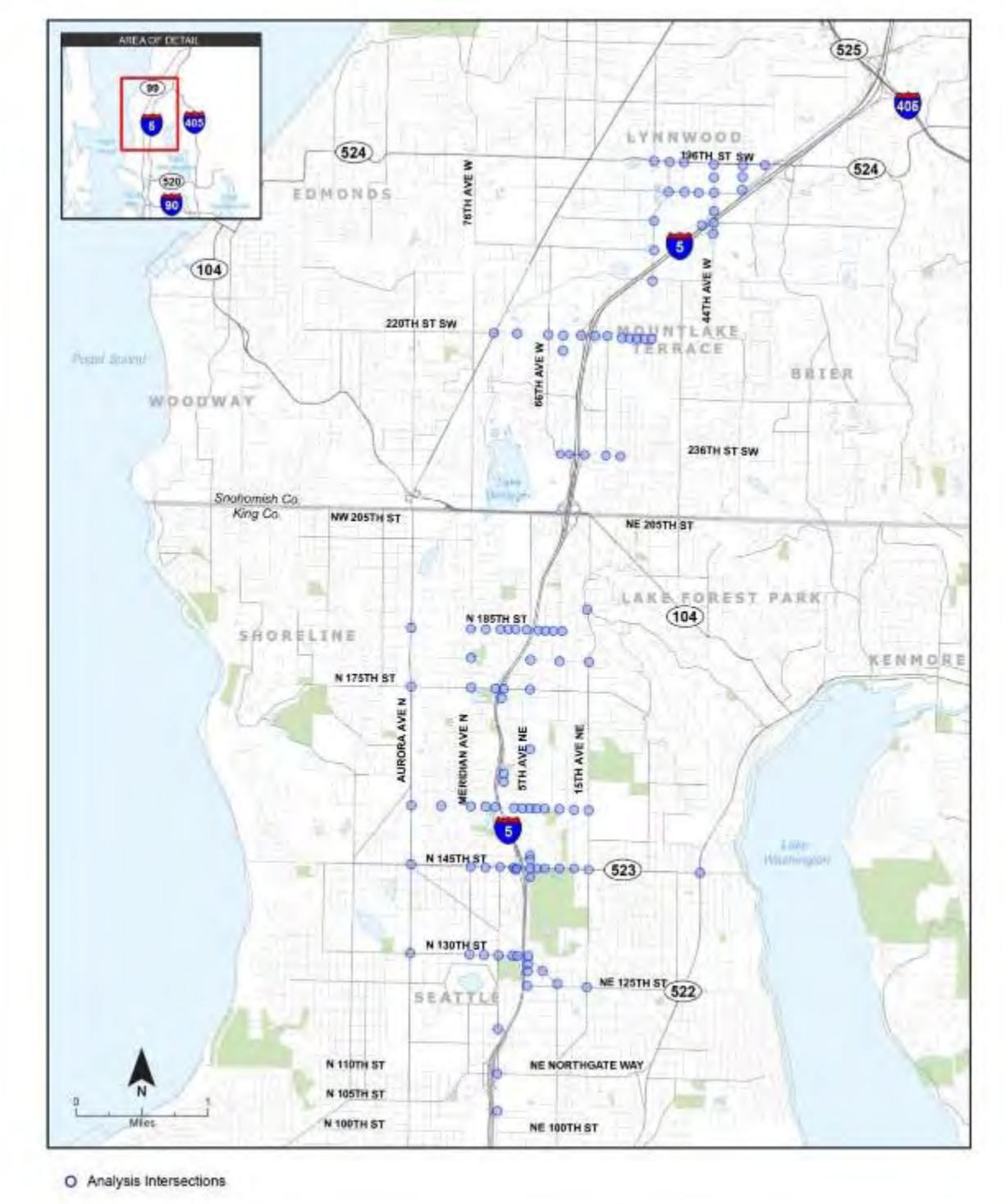
Geographic Coverage

The transportation analysis will include evaluation measures that consider systemwide as well as more localized impacts. Analysis of systemwide traffic impacts will address the effects of project alternatives on travel movements within the light rail corridor study area. Figure A-1 shows the study area within the context of the Puget Sound region. The arterial and local street analysis will focus on locations assumed to be most likely affected by the light rail alternatives. The intersections that will be analyzed are those directly affected, such as by a change in channelization or signal control, as well as those indirectly affected by changes in volume due to trips accessing the system. These latter locations will include intersections surrounding transit stations with proposed increases in park-and-ride lot capacity and passenger pick-up and drop-off activity.

Intersections to be Studied

A preliminary list of intersection locations has been identified for analysis based on the components of the I-5 alignment alternative identified in the Phase 1 Alternatives Analysis. This list, provided below by jurisdiction and station area, will be reviewed and modified as necessary with Sound Transit and local jurisdiction staff, as appropriate, to reflect the final selection of alternatives to be evaluated in the EIS.

Final confirmation of intersections to be studied will be documented in a separate memorandum. Figure A-2 shows the locations of these intersections.



Source: North Corridor transit Project Transportation Analysis Methodology Report

Figure A-2. Analysis Intersections

City of Lynnwood (20 intersections)

Lynnwood Transit Center Station

- 200th Street SW/50th Avenue West
- 200th Street SW/48th Avenue West
- 200th Street SW/46th Avenue West
- 200th Street SW/44th Avenue West
- 204th Street SW/52nd Avenue West
- 208th Street SW/52nd Avenue West
- 212th Street SW/52nd Avenue SW
- I-5 Direct Access/46th Avenue NE on and off HOV ramp
- I-5 Southbound on-ramp/44th Avenue West
- 204th Street SW/44th Avenue West
- I-5 Northbound off-ramp/44th Avenue West
- Alderwood Mall Boulevard/40th Avenue West
- 196th Street SW/52nd Avenue West
- 196th Street SW/50th Avenue West
- 196th Street SW/48th Avenue West
- 196th Street SW/44th Avenue West
- 196th Street SW/40th Avenue West
- 196th Street SW/36th Avenue West
- 198th Street SW/44th Avenue West (future analysis only)
- 198th Street SW/40th Avenue West (future analysis only)

City of Mountlake Terrace (18 intersections)

220th Street Station SW

- 222nd Street SW/64th Avenue West
- 220th Street SW/State Route (SR) 99
- 220th Street SW/70th Avenue West
- 220th Street SW/66th Avenue West
- 220th Street SW /64th Avenue West
- 220th Street SW/I-5 southbound ramps
- 220th Street SW/I-5 northbound ramps
- 220th Street SW/58th Avenue West
- 220th Street SW/56th Avenue West
- 220th Street SW/55th Avenue West

- 220th Street SW/54th Avenue West
- 220th Street SW/53rd Avenue West
- 220th Street SW/52nd Avenue West

Mountlake Terrace Station

- 236th Street SW (Lakeview Drive)/64th Avenue West
- 236th Street SW (Lakeview Drive)/I-5 southbound on-ramp
- 236th Street SW/I-5 northbound off-ramp/Mountlake Terrace Park-and-Ride driveway
- 236th Street SW/58th Avenue West
- 236th Street SW/56th Avenue West

City of Shoreline (38 intersections)

NE 185th Street Station

- North 185th Street/Aurora Avenue North
- NE 185th Street/Meridian Avenue North
- NE 185th Street/Corliss Avenue North
- NE 185th Street/1st Avenue NE
- NE 185th Street/2nd Avenue NE
- NE 185th Street/3rd Avenue NE
- NE 185th Street/5th Avenue NE
- NE 185th Street/7th Avenue NE
- NE 185th Street/8th Avenue NE
- NE 185th Street/9th Avenue NE
- NE 185th Street/10th Avenue NE
- NE Perkins Way/15th Avenue NE
- North 180th Street/Meridian Avenue North
- NE 180th Street/5th Avenue NE
- NE 180th Street/10th Avenue NE
- NE 180th Street/15th Avenue NE
- North 175th Street/Aurora Avenue North
- North 175th Street/Meridian Avenue North
- NE 175th Street/southbound I-5 ramps
- NE 175th Street/northbound I-5 ramps
- NE 175th Street/5th Avenue NE
- NE 174th St/1st Avenue NE

NE 155th Street Station

- North 155th Street/Aurora Avenue North
- North 155th Street/Ashworth Avenue North
- North 155th Street/Meridian Avenue North
- North 155th Street/Corliss Avenue North
- NE 155th Street/1st Avenue NE
- NE 155th Street/3rd Avenue NE
- NE 155th Street/4th Avenue NE
- NE 155th Street/5th Avenue NE
- NE 155th Street/6th Avenue NE
- NE 155th Street/8th Avenue NE
- NE 155th Street/10th Avenue NE
- NE 155th Street/12th Avenue NE
- NE 155th Street/15th Avenue NE
- NE 161st Avenue/1st Avenue NE
- NE 165th Street and 5th Avenue NE
- NE 159th Avenue NE/1st Avenue NE

The following intersections, counted under the City of Seattle, will be evaluated for both the NE 155th Street Station and NE 145th Street Station:

- North 145th Street (SR 523)/Meridian Avenue North
- NE 145th Street (SR 523)/1st Avenue NE
- NE 145th Street (SR 523)/5th Avenue NE
- NE 145th Street (SR 523)/15th Avenue NE

City of Seattle (33 intersections)

NE 145th Street Station

- North 145th Street (SR 523)/Aurora Avenue North
- NE 145th Street (SR 523)/Meridian Avenue North
- NE 145th Street (SR 523)/Corliss Avenue North
- NE 145th Street (SR 523)/1st Avenue NE
- NE 145th Street (SR 523)/3rd Avenue NE
- NE 145th Street (SR 523)/4th Avenue NE
- NE 145th Street (SR 523)/I-5 Southbound Ramps
- NE 145th Street (SR 523)/5th Avenue NE
- 5th Avenue NE/I-5 northbound off-ramp

- 5th Avenue NE/I-5 northbound transit only off-ramp/I-5 northbound on-ramp
- 5th Avenue NE/North Jackson Park-and-Ride driveway
- NE 145th Street (SR 523)/6th Avenue NE
- NE 145th Street (SR 523)/8th Avenue NE
- NE 145th Street (SR 523)/10th Avenue NE
- NE 145th Street (SR 523)/12th Avenue NE
- NE 145th Street (SR 523)/15th Avenue NE
- NE 145th Street (SR 523)/Bothell Way NE

NE 130th Street Station

- NE 130th Street/Aurora Avenue North
- NE 130th Street/Meridian Avenue North
- NE 130th Street/Corliss Avenue North
- NE 130th Street/1st Avenue NE
- NE 130th Street/3rd Avenue NE
- NE 130th Street/I-5 southbound on-ramp
- NE 130th Street/5th Avenue NE/Roosevelt Way NE
- 5th Avenue NE/I-5 northbound off-ramp
- 5th Avenue NE/NE 127th Street
- 5th Avenue NE/NE 125th Street
- Roosevelt Way NE/10th Avenue NE
- NE 127th Street/8th Avenue NE/Roosevelt Way NE
- NE 125th Street/15th Avenue NE

Northgate Station Area

- North Northgate Way/1st Avenue NE
- 1st Avenue NE/I-5 Express on- and off-ramps
- 1st Avenue NE/North 117th Street

Approach for Finalizing List of Intersections to be Studied

The existing conditions at all study area intersections identified above will be evaluated using traffic data collected at the outset of the project. Additionally, the design year 2035 PM peak hour analysis for the No Build Alternative will be developed for the same study area intersections. For the light rail alternatives, a screening process will be applied to each of the study area intersections, using threshold values, to pinpoint conditions that could result in a change in the level of service (LOS) at the intersection. Additional intersections or revision of the study area will be reviewed once design year 2035 forecasts have been developed. At that

time, it will be determined where changes in vehicle and/or pedestrian/bicycle volume demand and patterns occur within the build alternative to warrant a change in the study area limits. No further analysis beyond the no-build conditions will be conducted at study area intersections where changes in traffic volumes or other conditions in the build alternatives are expected to be below the threshold values identified in Table A-1.

The methodology is to conduct the light rail alternatives intersection analysis for only the worst-case traffic impact condition. Any light rail alignment that has direct (physical) geometry impacts on an intersection will also be analyzed.

Table A-1. Intersection Analysis Screening Process

Parameter	Threshold Value	Description
Critical Volumes	5%	Forecasts indicate that a critical volume comparison between a light rail alternative and the No Build Alternative would exceed the threshold value.
Change in Intersection Geometry	Changes in the number of lanes in any approach	Changes in intersection geometry resulting in the addition or deletion of a lane in any approach would change the capacity of the intersection and could affect LOS.
Change in Intersection Control	Traffic signal installation	The addition of a traffic control device such as a signal would affect the capacity for some traffic movements, and could change the overall LOS.
Crosswalk Lengths Across Major Streets	Increased crossing distance	Green traffic signal time for side streets would be extended and pedestrian clearances would be longer.
Intersection LOS	If the intersection operates with a delay value within 10% of the agency's LOS threshold	Locations meeting the threshold criterion with the No Build Alternative would likely require further analysis. For example, if an intersection operates at LOS E (75 seconds) in No Build and the LOS threshold is LOS E (80 seconds), the intersection is then included in the light rail analysis.

Individual Roadway Segments to be Studied

For the EIS, segments of I-5 between the 196th Street SW ramps in Lynnwood and the vicinity of NE Northgate Way in Seattle may be analyzed if the geometry of the mainline or interchanges in the segment have changed due to the project, or if the project is estimated to add substantial traffic volumes to the mainline and/or interchanges. For any locations determined to be affected, the analysis will include the I-5 mainline and merge/diverge areas adjacent to the affected interchanges. Potential locations of analysis could include segments upstream and downstream of the following interchanges:

- 196th Street SW (Exit 181B)
- SR 524 Cedar Way Spur/44th Avenue West (Exit 181A)
- 220th Street SW (Exit 179)
- 236th Street SW (Exit 178)

- SR 104/NE 205th Street (Exit 177)
- NE 175th Street (Exit 176)
- Metro North Operating Base (Exit 175B)
- SR 523/NE 145th Street (Exit 175)
- NE 130th Street/Roosevelt Way NE (Exit 174)
- NE Northgate Way (Exit 173)

In Shoreline, the following arterials will be evaluated for volume-to-capacity (v/c) ratios to ensure consistency with city concurrency standards. The following arterial segments have been identified for v/c analysis:

- NE 155th Street—Aurora Avenue N to 15th Avenue NE
- NE 185th Street—Aurora Avenue N to 10th Avenue NE
- 5th Avenue NE/7th Avenue NE—NE 145th Street to NE 185th Street
- Meridian Avenue North—North 145th Street to North 185th Street
- 15th Avenue NE—NE 145th Street to NE 185th Street
- NE 175th Street—Aurora Avenue North to 5th Avenue NE

Affected Environment

The affected environment for transportation includes all components of the transportation system within the affected area. These components include traffic-related operations and performance on all roadway facilities; transit, both road-based and rail; freight; bicycles; and pedestrians. The anticipated effect on parking facilities will also be assessed. Particular focus for these modes will be on transportation facilities in the vicinity of proposed transit stations and park-and-ride lots because these will be the primary site-specific traffic attractors and generators. However, effects on the regional transportation system will also be considered. Measures for assessing impacts on these transportation elements, discussed in the following sections, will be both quantitative and qualitative and will be displayed both graphically and in a tabular format as appropriate. Primary issues of concern include impacts on overall mobility for these various modes (e.g., travel times, speeds, and accessibility) as well as reliability and safety. These issues need to be assessed for the construction stages of the proposed project as well as for when the project is fully operational.

Environmental Impacts Analysis

This section discusses the potential impacts of the No Build Alternative and the light rail alternatives (including all alignment options and station locations). It also describes the methodology used to determine direct and indirect (long term/operational and construction) as well as cumulative impacts on transportation.

Direct Impacts

Transportation Analysis Years

Based on the project's schedule and available traffic forecasting data, the transportation analysis will focus on three distinct periods:

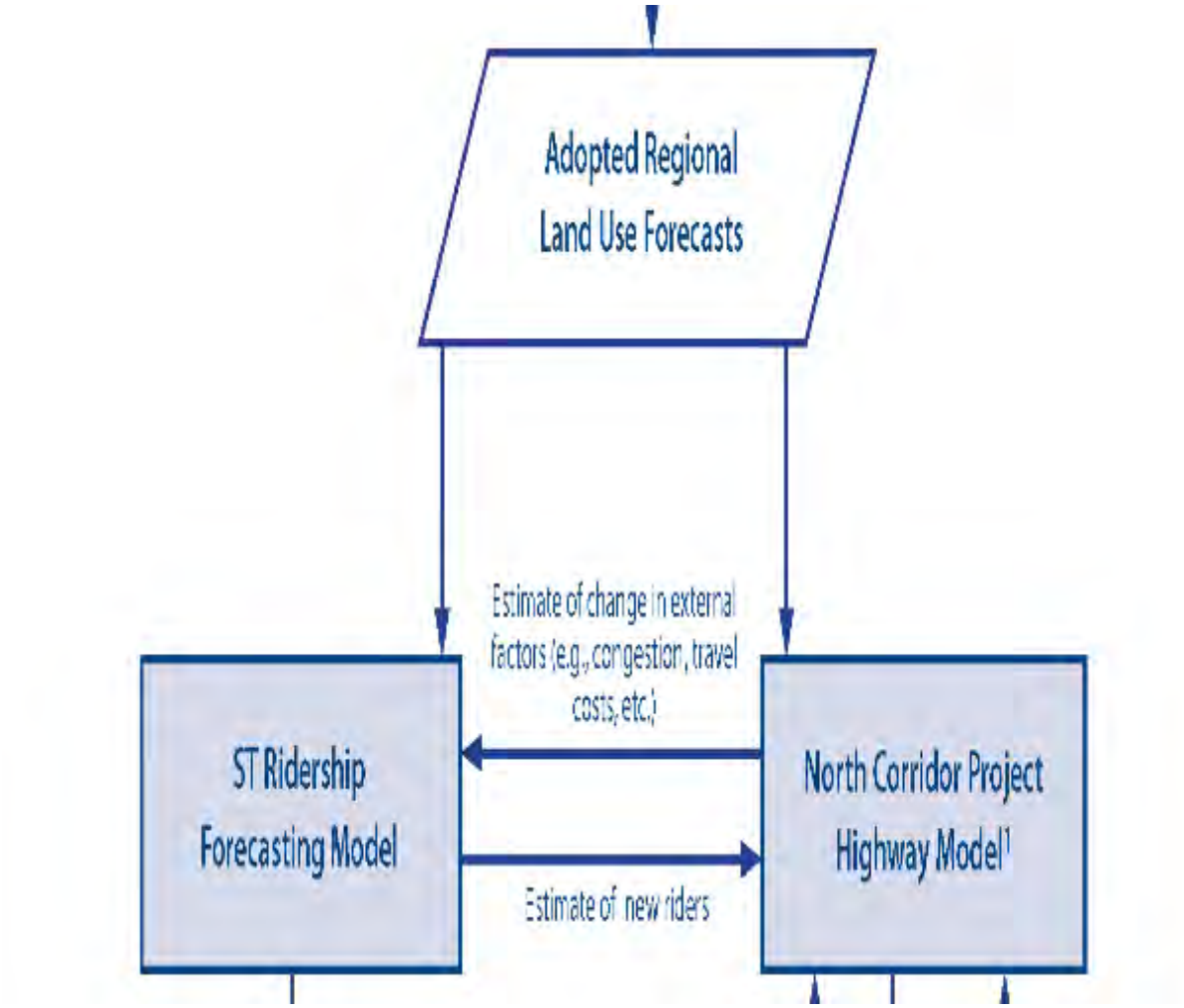
- Existing Year—2012.
- Design Year—2035. This is the proposed design analysis year. This design year needs to be confirmed based on further coordination with local agencies, FTA, WSDOT, FHWA, and others.
- Construction Period. If construction impacts are determined to need more than a qualitative assessment for any particular location, the existing year 2012 volumes will be used for assessing construction impacts on transportation, or extrapolated to the year of construction.

Analysis Tools

This section describes the tools that will be used to conduct the transportation analysis for the EIS.

Travel Demand Forecasting

The transportation team will use two regional travel demand models to support assessment of future conditions, including development of transit ridership forecasts and future roadway traffic volumes. The Sound Transit Ridership Model will be used to produce ridership forecasts, while the PSRC Regional Model: WSDOT Project Version will be used to calculate growth in vehicular traffic volumes to support traffic operations analysis, as well as data required for a variety of environmental analyses. Figure A-3 illustrates the relationship between the demand models.



[1] The NCTP Highway Model is based on the version of the PSRC regional model used for major WSDOT project (e.g., SR 520 FEIS), with additional network refinements.

Source: North Corridor transit Project Transportation Analysis Methodology Report

Figure A-3. Ridership and Highway Demand Models Relationship

Sound Transit Ridership Model

The current version of the Sound Transit Ridership Model was developed using analytical ridership forecasting procedures developed over two decades of incremental methods applications. During this period, the methods have been subjected to substantial external review, including two independent Expert Review Panels, and two cycles of review by the FTA over the course of New Starts grant applications for Link light rail projects. For more detailed information about the Sound Transit Ridership Model, see the *North Corridor Transit Project Transit Ridership Forecasting Technical Report* (December 2010).

One of the key tasks for the transportation team will be to update the Sound Transit model, in conjunction with Sound Transit and FTA, to reflect the latest information available. The updated model will be 2011-based, using new surveys and counts data

within the general incremental modeling framework. The updated Sound Transit model will be used to produce ridership forecasts for use in the EIS and in support of the New Starts application of the Lynnwood Link Extension project to FTA for entry into Preliminary Engineering.

PSRC Regional Model

The PSRC Regional Model: WSDOT Project Version was developed for the SR 520 EIS, I-405 expansion, and WSDOT Express Lanes Pre-Design Studies (including I-5 HOT-lane assessment). As part of this task, the PSRC model will be refined to reflect necessary network modification specific to the project corridor, as well as the latest PSRC land use forecasts. Transit ridership forecast results from the Sound Transit Ridership Model are incorporated into the PSRC model to reflect effects from changes in transit ridership on traffic levels at the screenline and/or regional systemwide level. Traffic forecast results from the PSRC model form the basis upon which traffic impacts of the project are assessed. Growth rates derived from the PSRC model output will be applied to observed traffic volume counts to develop estimated peak-hour and daily traffic forecasts for detailed traffic operations analysis. The model will also be used to provide required input for other environmental disciplines including air quality modeling, noise analysis, greenhouse gas assessment, environmental justice analysis, and community equity evaluation.

Traffic Operations Analysis

VISSIM

The transportation team will assess freeway traffic operations at specific locations where the build alternative(s) are expected to affect freeway operations. An analysis would be conducted using a traffic simulation model developed in the VISSIM modeling environment (version 5.0 or later). The VISSIM model can include mainline freeway segments, ramps, and ramp terminal intersections, as well as selected adjacent arterial intersections and street segments where appropriate. The model replicates traffic flow by simulating discrete vehicle movements to produce estimates of travel speeds and traffic density, which can be used to assess highway LOS consistent with the *Highway Capacity Manual* (HCM) definitions.

Synchro/SimTraffic

The transportation team will assess intersection traffic operations for key locations on the arterial network using models developed with Trafficware Corporation's Synchro software (version 7.0 or later). Synchro is a traffic modeling program designed for analysis of intersection traffic operations and the optimization of traffic signal timings. Synchro reports average vehicle delay, allowing calculation of LOS

consistent with HCM definitions. Synchro also estimates average and maximum queue lengths.

Other Tools

Other tools that may be used include Highway Capacity Software (HCS), which may also be used as necessary to estimate LOS impacts for both arterial and freeway traffic operations at isolated locations where use of Synchro or Vissim is not warranted, generalized LOS calculations based on v/c ratios by facility and/or screenline, and a spreadsheet-based sketch-planning method[17] for estimating park-and-ride lot demand to supplement forecasts from the Sound Transit Ridership Model. Additionally, mode of access tools including GIS-based determination of 15-minute walk, bicycle, and automobile "access sheds" will be used to refine the mode of access estimates.

Assessment Methods and Analysis Thresholds

Transportation System

Regional Transit

Evaluation Criteria

The following evaluation criteria will be considered for assessing effects of the project on regional transit for the proposed design year of 2035:

- Project corridor ridership—Daily boardings (inbound boardings and outbound alightings) by alternative and study year will be produced for the project, defined as Lynnwood to Northgate. For the No Build Alternative, corridor daily bus ridership will be estimated for the bus routes that are assumed to be truncated and/or otherwise replaced by the light rail alternative(s).
- Mode share—Change in systemwide mode split between transit and automobile by alternative and study year.
- Transit quality of service—This will be measured by assessing changes in transit service frequency, hours of service, passenger load, and effects on transfers. The analysis will reflect anticipated changes in bus service by King County Metro, Community Transit, and Sound Transit.
- Transit user benefit—This will be measured in annual minutes of weighted transit travel time saved, consistent with FTA New Starts methodology.

[17] Spillar, Robert J. 1997. Park-and-Ride Planning and Design Guidelines. 1995 William Barclay Parsons Fellowship Monograph #11. Parsons Brinckerhoff, New York, NY.

Evaluation Approach

As described earlier, the Sound Transit Ridership Model will be used to produce data related to changes in regional transit associated with the study alternatives. After the model is updated to reflect the most recent regional travel data, the model will be coded to reflect the build scenarios and then run to produce summary data tables. Daily ridership data for the study area will be provided by direct outputs from the ridership model. Outputs from the combined modeling system (which includes both the ridership model and the PSRC model) will include mode-split information and transit travel times.

Transit travel reliability will be qualitatively assessed for specific trips based on the proportion of the travel route for which transit has exclusive right-of-way versus when it uses right-of-way shared with other vehicles (e.g., exclusive rail line versus roadway lanes shared with either high-occupancy vehicle [HOV] or general purpose traffic), taking into account the projected levels of congestion on the shared facilities.

Specific trips for which transit travel times and reliability will be assessed will be identified in coordination with Sound Transit staff and/or cooperating agency staff. Possible trips may include the following routes, which incorporate the peak directions for both AM and PM peak periods, as well as the reverse peak direction for the PM peak period:

- AM Peak Period – Peak Direction (southbound) Trips
  From Lynnwood and Shoreline to:
  - Northgate
  - University of Washington
  - Capitol Hill
  - Downtown Seattle
  - Sea-Tac Airport
  - Bellevue
- PM Peak Period – Peak Direction (northbound) Trips
  To Lynnwood and Shoreline from:
  - Northgate
  - University of Washington
  - Capitol Hill
  - Downtown Seattle
  - Sea-Tac Airport
  - Bellevue

- PM Peak Period – Reverse Peak Direction (southbound) Trips

  From Lynnwood and Shoreline to:

  - Northgate
  - University of Washington
  - Capitol Hill
  - Downtown Seattle
  - Sea-Tac Airport
  - Bellevue

Regional Traffic

Evaluation Criteria

As described earlier, output from the PSRC Regional Model: WSDOT Project Version will be the key data source for this analysis. The following types of data will be produced for design year 2035 to gauge the effect of the study alternatives on regional or systemwide traffic characteristics:

- Vehicle Miles of Travel (VMT)—Total average daily vehicle miles traveled on the regional highway system.
- Vehicle Hours of Travel (VHT)—Total average daily vehicle hours traveled on the regional highway system.
- Vehicle Hours of Delay (VHD)—Total average daily vehicle hours of delay on the regional highway system, which indicates the total level of congestion on the highway system.

Evaluation Approach

Information from the PSRC model will be used to generate the No Build Alternative and light rail alternative(s) VMT/VHT/VHD data. The PSRC model will be run in an iterative process with the Sound Transit Ridership Model, with highway traffic volumes reflecting changes in transit ridership and the ridership model reflecting changes in highway travel times. Matrices of vehicle trips and travel time per trip will be used to quantify estimated VHT, and matrices of vehicle trips and hours of delay per trip will be used to quantify the impact of project alternatives on VHD.

Surface Streets and Freeways

The methodology proposed for the surface street and freeway analysis is intended to be applied as consistently as possible throughout the corridor. The surface street system focuses on intersection operations and safety analysis while the freeway analysis will include measures such as density, travel time, and person-throughput.

Impacts on property access/circulation, parking, nonmotorized facilities, freight movement, construction, and safety will be addressed. The methodologies proposed to analyze the surface street system and freeway impacts are described in this section.

Corridor Traffic

Evaluation Criteria

Criteria used to evaluate effects at the broader corridor level will be based on a screenline-level analysis, which will include assessing the projected change in the following for proposed design year 2035:

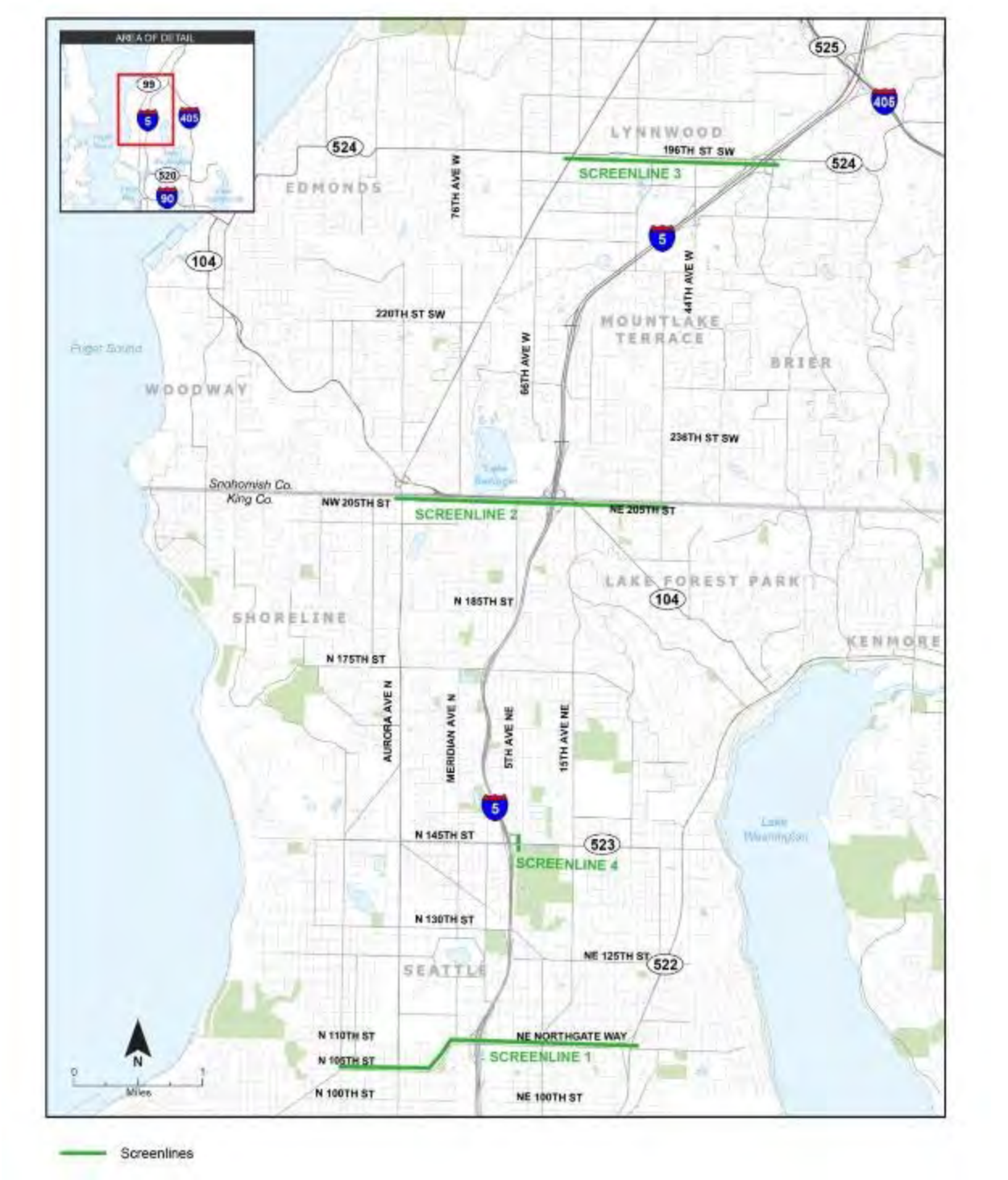
- Screenline peak hour and daily vehicle volumes;
- Screenline vehicle v/c ratios (converted to a generalized LOS); and
- Plots of congestion over time (for existing conditions only).

Evaluation Approach

The analysis of traffic impacts in various segments of the corridor will involve comparing projected traffic volumes on the highway and local street system at selected screenlines for each alternative. Screenlines are imaginary lines drawn across one or more roadways to compare aggregate changes in traffic volumes and person-moving capacities, etc. across all the facilities crossed by the line. A map and table will be used to present daily vehicle trips, AM peak hour trips, and PM peak hour trips at the four identified screenline locations.

The preliminary screenlines, shown in Figure A-4, are:

- Screenline 1—north of North Northgate Way/NE 110th Street
- Screenline 2—south of North 205th Street
- Screenline 3—south of 196th Street SW
- Screenline 4—on NE 145th Street east of 5th Avenue NE



Source: North Corridor transit Project Transportation Analysis Methodology Report

Figure A-4. Analysis Screenlines

The screenline comparisons will provide a snapshot of traffic operations along each corridor. Information from the PSRC and Sound Transit models that will be presented for each screenline will include AM peak hour, PM peak hour, and daily values.

In addition to the screenline totals, the v/c ratios may also be shown separately by key arterials and highways.

Local and Sub-Regional Bus Service

This section describes the analyses that will evaluate projected changes to local and sub-regional (e.g., *Swift*, *RapidRide*) bus service that would be affected by the study alternatives.

Evaluation Criteria

The following evaluation criteria will be considered for changes in local and sub-regional bus service for design year 2035:

- Ridership—Daily and peak period boardings by alternative and study year will be produced for selected local and sub-regional bus routes.
- Transit quality of service—This will be measured by assessing changes in transit service frequency, hours of service, passenger load, and effects on transfers consistent with the *Transit Capacity and Quality of Service Manual* standards and guidelines.

Evaluation Approach

The transportation team will assess the expected effects on existing local and sub-regional bus service using both qualitative and quantitative information. Expected changes in transit routing under the build alternatives will be identified and compared to routing under baseline conditions. The comparison will focus on changes in coverage area (including consideration of walk and bicycle distance to bus stops) and potential effects on speed and reliability (based on traffic operations results and/or other traffic analysis data). Traffic analysis results will be used to gauge potential travel time effects on routes operating on I-5. Modeled changes in ridership will be reported as well.

Intersection Operations (including Station Area/Park-and-Ride Traffic Analysis)

Evaluation Criteria

Effects on intersection operations will be evaluated based on the calculated design year 2035 peak hour intersection LOS. LOS measures the quality of traffic operations at an intersection in terms of both operational conditions and their perception by motorists. As described in Table A-2, LOS ratings range from A to F. LOS A represents the best operation and LOS F the poorest operation.

Table A-2. Level of Service Definitions for Signalized and Unsignalized Intersections

LOS	Average Control Delay (seconds per vehicle)		Traffic Flow Characteristics
	Signalized Intersection	Unsignalized Intersection	
A	≤ 10	≤ 10	Virtually free flow; completely unimpeded.
B	> 10 and ≤ 20	> 10 and ≤ 15	Stable flow with slight delays; less freedom to maneuver.
C	> 20 and ≤ 35	> 15 and ≤ 25	Stable flow with delays; less freedom to maneuver.
D	> 35 and ≤ 55	> 25 and ≤ 35	High density but stable flow.
E	> 55 and ≤ 80	> 35 and ≤ 50	Operating conditions at or near capacity; unstable flow.
F	> 80	> 50	Forced flow; breakdown conditions.

Source: *2010 Highway Capacity Manual,* Transportation Research Board.

Agency Thresholds

As part of each agency's comprehensive planning efforts, agency transportation goals and LOS standards are developed. While each agency accepts different levels of congestion, a delay-based intersection LOS analysis has been preliminarily accepted by each agency. Delay is expressed in terms of average delay per vehicle, in seconds, experienced due to the intersection operations. LOS definitions for signalized and unsignalized intersections are included in Table 2. Overall, if a given intersection's operations are better than the LOS standard for each agency with the light rail alternative, then that intersection is considered to meet the agency's standard and does not require mitigation. In situations where the intersection operates worse than the agency's LOS standard without the light rail alternative, then mitigation is only required if the intersection delay and/or LOS degrades further with the build alternative. Further definition of this approach and the LOS standard(s) for each agency is summarized in Table A-2a and described below.

Table A-2a. LOS Standards for Affected Agencies

Agency	LOS Standard
Washington State Department of Transportation	LOS D for highways of statewide significance (HSS) LOS E/mitigated for regionally significant state highways (non-HSS)
City of Lynnwood	LOS E for City Center arterials LOS D for non-City Center arterials LOS C for local streets
City of Mountlake Terrace	LOS D for signalized intersections with the following exceptions (LOS E): • 212th Street SW • 244th Street SW • 220th Street SW between SR 99 and I-5 LOS E for unsignalized intersections

Table A-2a. LOS Standards for Affected Agencies

Agency	LOS Standard
City of Shoreline	LOS D for signalized intersections
	LOS D for unsignalized intersecting arterials
	Volume-to-capacity ratio of 0.90 or lower for principal and minor arterials
City of Seattle	LOS D (goal)

Washington State Department of Transportation

For state highways of statewide significance (HSS), such as I-5 and portions of SR 99 (King County) and SR 104 (NE 205th Street), the operating threshold in urban areas is LOS D. For regionally significant state highways (non-HSS), such as SR 99 (in Snohomish County), SR 524, SR 104 (Ballinger Way NE), and SR 523 (North/NE 145th Street), the operating threshold is LOS E/mitigated, meaning that congestion should be mitigated when the PM peak hour LOS falls below LOS E (i.e., LOS F).

City of Lynnwood

The operating threshold for signalized intersections is LOS E for City Center arterials and LOS D for non-City Center arterials. The operating threshold for local streets is LOS C. Only signalized intersections are considered as part of the Lynnwood Transportation Concurrency system. LOS failures at unsignalized intersections are separately addressed under the SEPA review of new developments.

City of Mountlake Terrace

Signalized intersection operations within Mountlake Terrace are to meet LOS D at a minimum, with exceptions along the following corridors, for which a minimum LOS E is acceptable: 212th Street SW, 244th Street SW, and 220th Street SW between SR 99 and I-5. The operating threshold for unsignalized intersections is LOS E.

City of Shoreline

To assess intersection operations, the operating threshold is LOS D for signalized intersections on arterial streets and at unsignalized intersecting arterials in Shoreline. The v/c ratio on one leg of an intersection may exceed 0.90 when the intersection operates at LOS D or better. For principal and minor arterials, a v/c ratio of 0.90 or lower is considered acceptable.

City of Seattle

The City of Seattle's goal is to maintain intersection operations at LOS D or better. However, within the Seattle metropolitan area, arterial LOS standards are defined based on the PM peak hour directional v/c ratio at designated screenlines. For the

City of Seattle's concurrency management system, v/c ratios are averaged across a series of parallel arterials to determine if the LOS threshold has been exceeded. At the northern city limit, where there are limited or no options to increase capacity and/or where growth is expected, a v/c ratio of up to 1.2 (LOS F) is considered to be acceptable (at a v/c ratio of 1.20 or greater, significant traffic congestion and vehicle queuing at intersections would be expected). When the calculated LOS for a screenline approaches the LOS standards, strategies would be pursued to reduce vehicular travel demand and/or increase the operating capacity across the screenline.

Evaluation Approach

Trip Generation

Information on transit station trip generation for 2035 will be developed from the Sound Transit model and will be assigned to various modes of travel based on data from the *2008 BART Station Profile Study* (BART and Corey, Canapary & Galanis Research 2008), and recent data collected from the Tukwila park-and-ride station. The BART study is a mode of access and egress survey of BART rail users in the San Francisco Bay area. This survey characterized the different modes people choose to access and depart from the stations such as walking, bicycling, driving alone, driving with others, being dropped off, using a transit transfer, or other modes. This information is presented by each station type, which is based on the type of station facilities provided and the surrounding land uses.

The vehicle and pedestrian trips associated with the light rail station ridership forecasts for the highest ridership full length alternative will be used for evaluating station area effects. Exceptions will be made at locations where there are substantial differences between alternatives (e.g., one has a park-and-ride, and one does not); in these cases, two different scenarios may be evaluated at affected locations. For park-and-ride stations, the analysis will assume that the park-and-ride lot is full for the purposes of providing a conservatively high estimate of automobile trips to and from each station. The automobile traffic volumes will be added to the future No Build Alternative automobile traffic volumes as the basis to analyze the light rail alternatives. This approach yields a conservatively high forecast of automobile trips for the light rail alternatives because it does not reflect the shift to transit as people replace their vehicle trip and use light rail. Trips will be assigned to the pedestrian and vehicular networks around the station locations based on existing and anticipated future traffic circulation patterns.

Level of Service Analysis

Synchro (version 7.0) software will be used to determine the projected 2035 AM and PM peak hour LOS at signalized and unsignalized intersections identified above, under "Intersections to be Studied." The HCM report from the Synchro software

will be used to summarize average intersection delay, LOS, and critical queue lengths. The signalized intersections LOS will be defined in terms of average intersection delay. Delay is dependent on two factors: (1) the capacity of the intersection as defined by the number of lanes, lane widths, pedestrian volumes, and other features; and (2) signal timing. Capacity, delay, and LOS are calculated for each traffic movement or group of traffic movements at an intersection. The weighted average delay across all traffic movements determines the overall LOS for a signalized intersection.

The LOS at an unsignalized intersection is also defined in terms of delay, but only for the approach that is stop-controlled, which is typically the minor street. For unsignalized intersections that are stop-controlled on each approach, the average intersection delay is reported. LOS definitions for signalized and unsignalized intersections are provided in Table 2.

Default values for the analysis will be developed for intersections where actual values are not available. These will include assumptions with respect to saturation flow rates, geometry, traffic, and signalization conditions. Table A-3 provides preliminary assumptions for existing input values where data have not been collected. For future input values, also listed in Table 3, assumptions are also typically made in terms of how traffic patterns change and traffic signals operate.

Table A-3. Default Synchro Parameters and Assumptions

Arterial Intersection Parameters	Condition	
	Existing Year 2012	**Design Year 2035**
Peak Hour Factor	From count and by each approach, default provided 0.90	Use 0.95 for all intersections except where existing Peak Hour Factor (PHF) is greater than 0.95 or less than 0.70. Use existing PHF in cases where the PHF is greater than 0.95. If existing PHF is less than 0.70, then increase factor by 0.20.
Conflicting Cyclists and Pedestrians per Hour	From traffic count, otherwise assume 10 pedestrians/cyclists in both AM and PM periods	For the No Build Alternative, apply growth rate from adjacent street to existing volumes. For the light rail alternatives, add the number of pedestrians based on the station ridership and mode of access forecasts.
Area Type	"Other" for all areas	Same as existing
Ideal Saturation Flow (for all movements)	1,900 vehicles per hour	Same as existing
Lane Utilization	Default software assumptions unless data/ engineering judgment suggests otherwise	Same as existing
Lane Width	From field sheets, agency in-house Synchro files or paint Line drawings (i.e., WSDOT)	Same as existing, unless improvements proposed, then use agency standards/plans.

Table A-3. Default Synchro Parameters and Assumptions

Arterial Intersection Parameters	Condition	
	Existing Year 2012	Design Year 2035
Percent Heavy Vehicles	From count, otherwise 2%	Same as existing
Percent Grade[a]	From as-built drawings, agency in-house Synchro file, or field sheets	Same as existing
Parking Maneuvers per Hour	Based on parking regulations. For less than 15-minute parking, assume 4 maneuvers per hour; otherwise, assume 1 maneuver per hour, unless data/information gathered or provided from agencies suggest otherwise.	Same as existing. For new parking, assume existing assumptions for maneuvers based on parking durations.
Bus Blockages	Headway information provided by transit agencies	Use future service assumptions developed by Community Transit, King County Metro, and Sound Transit as part of the Transit Service Integration Plan.
Intersection Signal Phasing and Coordination	From agency signal phasing sheets or their existing analysis files	Same as existing. For timing adjustments: Left turns, if permissive in existing, will be examined for a protected phase based on LOS, access/geometry, safety, and agency guidance. For build: Any left-turn conflict with at-grade light rail will include a separate lane and have protected phasing. Left turns will be restricted (or protected with a gate or similar treatment) at unsignalized intersections. For elevated light rail, mid-block left turns will be restricted.
Intersection Signal Timing Optimization Limits	Not applicable	Between 60 to 120 seconds
Minimum Green Time	Not applicable	Based on pedestrian times (minimum of 4 seconds walk time and 4 feet per second for flashing don't walk [FDW] clearance). If no crosswalk: 10 seconds
Yellow and All Red Time	Not applicable	New signals: (Y) = 4 seconds and (R) = 1 second
Right Turn on Red	Allow	Same as existing
Right Turn Overlaps	Signal timing plans	Identify if used
50th and 95th Percentile Vehicle Queues	Based on 25 feet per vehicle	Same as existing

[a] Percent grade assumed for at-grade intersections only.

Note: Delay-based LOS results will be reported from Synchro's HCM Reports.

Freeway and Ramp Operations

Evaluation Criteria

Locations where freeway access will be modified will be identified. Where appropriate, selected freeway segments at those locations will be analyzed where freeway traffic operations are anticipated to be affected by the proposed interchange modifications. For those segments, the Transportation Technical Report will describe and analyze the following types of data related to freeway traffic operations for design year 2035:

- AM and PM peak hour LOS for selected freeway mainline segments and ramps. Notable areas of congestion will be noted and described.
- AM and PM peak hour travel times will be reported for selected freeway segments (e.g., Lynnwood Transit Center to Northgate Transit Center).
- AM and PM peak hour travel speeds for selected freeway segments.

LOS is a measure that characterizes the operating conditions, as perceived by a driver or facility user, of a highway, street, or other transportation facility. Although LOS is a qualitative measure, it is based on quantitative measures, such as traffic density, average speed, or average vehicle delay depending on the facility type and function. A range of six LOS designations, ranging from A to F, is defined in the HCM for limited access facilities. LOS A represents ideal, uncongested operating conditions, while LOS F designates extremely congested, breakdown conditions. LOS B through LOS D designate intermediate operating conditions, while LOS E denotes congested conditions at the point of maximum service rate. LOS for either freeway segments or multi-lane highway segments is derived from traffic density and classified according to the ranges shown in Table A-4. Note that intersection LOS at ramp termini will also be categorized using intersection-based LOS measurements.

Table A-4. Level of Service Designations for Freeways or Multi-lane Highways

LOS (Freeway/Highway Segments)	Density Range (pcpmpl)
A	0–11
B	> 11–18
C	> 18–26
D	> 26–35
E	> 35–45
F	> 45

pcpmpl = passenger car equivalents per mile per lane.

Source: Transportation Research Board Highway Capacity Manual (2000).

Evaluation Approach

VISSIM traffic micro-simulation software will be used to assess design year 2035 AM and PM peak hour freeway operations for specific locations where the build alternatives are expected to affect freeway operations. The network coding within the VISSIM software will be built based on as-built plan sheets or aerial photographs. Any design changes associated with the light rail alternatives will be coded into the network to satisfy the design requirements of the state and will be consistent with the latest WSDOT Design Manual. Table A-5 identifies some of VISSIM's additional inputs and assumptions that will be incorporated into the analysis. VISSIM outputs will produce mainline and ramp junction LOS and selected travel times and speeds.

Table A-5. VISSIM Freeway Parameter Methods and Assumptions

Freeway Parameter	Existing Year 2012	Design Year 2035
Deceleration Lane Length	From as-built drawings or aerial photographs	Same as existing or from design plans
Acceleration Lane Length	From as-built drawings or aerial photographs	Same as existing or from design plans
Grade	From as-built drawings, if not, assume 0%	Same as existing
Superelevation[a]	Assume 0%	Same as existing
Pavement Type	Assume dry concrete	Assume dry concrete
Desired Free-Flow Speed	60 mph	Same as existing
Car Following Sensitivity Factor (CFSF)	Variable	Same as existing
Truck %	From traffic data	Same as existing
Carpool/HOV %	From field data	From demand modeling information
Mainline and Ramp Link Traffic Volumes	From traffic data	Estimated using growth rates from highway demand model
Lane Distribution (for entering links)	Assume even distribution over all entering lanes	Assume even distribution over all entering lanes
Vehicle Type Specifications	Assume default vehicle type specifications	Same as existing
Warning Sign Distance (for on-ramps)	From as-built drawings, variable depending on freeway conditions and geometry	Same as existing
Warning Sign Distance (for off-ramps)	From as-built drawings, variable depending on freeway conditions and geometry	Same as existing
Ramp Metering	Will be coded as fixed-time	Will be coded as fixed-time
VISSIM Output *(pcphpl = per car; per hour; per lane)*	Segment density (in terms of pcphpl) and corridor travel time	Segment density (in terms of pcphpl) and corridor travel time
Number of Simulations	Results will be taken as an average of up to five simulations	Same as existing

[a] Driver behavior parameters and lane change distances are key inputs and will be used as a calibration technique to match field conditions.

Property Access and Local Circulation

This area of evaluation will assess local area traffic impacts including access to properties. The focus will be on impacts during both construction and full build out of the project.

Evaluation Criteria

The evaluation criteria will include any physical change in access to properties.

Evaluation Approach

In addition to the analysis of intersection LOS and delay impacts, traffic impacts on local circulation will be assessed qualitatively. This assessment will include such factors as:

- Effect of potential street closures on localized traffic movement
- Potential for neighborhood traffic intrusion associated with either light rail stations or trackway
- Loss of left-turn access to and from driveways for at-grade and elevated light rail alternatives
- Changes in property access

Parking

Parking supply varies throughout the project corridor. Large supplies of free private parking are available in Lynnwood, Mountlake Terrace, Shoreline, and Northgate. Demand for parking spaces varies depending upon location throughout the corridor, with relatively high demand at existing park-and-ride facilities in Lynnwood, Mountlake Terrace, Shoreline, and Northgate; moderate demand at business districts and activity centers in Lynnwood, Mountlake Terrace, Shoreline, and Northgate; and relatively low on-street demand in residential neighborhoods surrounding the I-5 corridor.

Evaluation Criteria

Analysis of the impacts of light rail on existing on-street and off-street public parking will focus on the loss or reconfiguration of existing on-street and off-street parking supply due to light rail station and trackway development.

Evaluation Approach

The evaluation of parking impacts will include an inventory of parking supply and utilization in locations where parking is anticipated to be affected by the project; in addition, changes to the parking supply and utilization due to the project will be assessed.

Inventory of Parking Supply and Utilization

The analysis of light rail impacts on existing patterns of on-street parking supply and demand will generally be limited to one block on either side of the proposed light rail alignments. A parking inventory and utilization survey will be conducted for all potential rail alignments that are within the road right-of-way.

At station areas, parking inventory and utilization surveys will be conducted within 0.25 mile of each station. Within this area, an inventory of existing on-street and off-street parking spaces will be developed. Inventory data will be stratified by type of parking (i.e., time-limited parking, free parking, loading zone, private, etc.) and location (i.e., block face, business name, or other distinguishing feature). Where available, data from local agencies will be used to initiate the inventories near the station locations. The analysis will focus on locations that may be specifically affected by light rail alignments, including both available parking and internal site circulation. Where data are not available from local agencies, data will be collected through field surveys. Data will include a space occupancy count by block face or lot taken once during weekday mid-morning or mid-afternoon hours. This time period represents typical conditions for parking demand.

Assessment of Parking Impacts

The assessment of parking loss will be based on review of the inventory of parking supply and demand coupled with an evaluation of the conceptual drawings for each build alternative. These concepts should identify specific locations where changes would be made to the existing parking supply. Comparison between existing demand and the supply remaining after construction of each light rail alternative will form the basis for identification of parking loss associated with each alternative. This comparison will also address the potential significance of that loss in relation to parking utilization and will facilitate the identification of possible mitigation strategies. The loss of existing parking spaces will be stratified by both location and type.

Park-and-ride lot demand will be estimated at an aggregate level for the project corridor area and then allocated to individual stations based on an assessment of the GIS-based calculated 15-minute automobile "access shed" (an access shed of 25 minutes will be used for Lynnwood Transit Center Station because it will be the terminus of the line). This estimate will be combined with an assessment of the physical and policy-related potential for parking at a given location. The estimated park-and-ride demand will then be compared to the proposed supply to determine the potential for spillover parking impacts on the surrounding area. Park-and-ride demand will be forecasted for day of opening and horizon year conditions. A combination of approaches will be used including results from the Sound Transit Ridership Model and an empirically based sketch-planning park-and-ride demand

estimation technique developed using data from the Puget Sound region[18]. Results from each of these methods will be reviewed by the transportation team and Sound Transit and a final range of park-and-ride demand estimates will be determined.

Nonmotorized Facilities and Modes

The light rail alternatives will be qualitatively assessed regarding existing and future pedestrian and bicycle facilities. Specific issues to be discussed and assessed include the following:

- Pedestrian access and circulation in the vicinity of the proposed station in relation to the forecasted ridership.
- Direct (physical) effects on pedestrian and bicycle facilities along the alignment of each alternative.
- Barriers to nonmotorized (pedestrian and bicycle) traffic movement introduced by the light rail alternative.
- Intersection crossing issues associated with station layout and connections to major pedestrian routes and destinations.
- Missing sidewalk sections for city arterials within 0.50 mile of proposed station locations.
- Impacts on recommended school walk routes.
- Existing and funded regional bicycle paths, routes, and deficiencies within 1.0 mile of proposed station locations, and a general quantification of how major multi-use trails/paths are used (i.e., by commuters or recreational users).

A pedestrian LOS analysis will also be conducted for sidewalks at intersections within one block or approximately 300 feet of each proposed station entrance (the study area may exceed one block or 300 feet from the station depending on the location of transfer points or nearby pedestrian generators). The *Transit Capacity and Quality of Service Manual* and HCM methodology for determining sidewalk LOS will be used for this analysis. This methodology produces a score that indicates the pedestrian's perception of the travel experience, and is based on the average pedestrian space and average flow rate. Additional factors such as station layout, adjacent land uses, connections to nearby pedestrian routes and destinations, and potential queue locations will be considered and qualitatively discussed as part of the sidewalk analysis.

[18] Spillar, Robert J. 1997. Park-and-Ride Planning and Design Guidelines. 1995 William Barclay Parsons Fellowship Monograph #11. Parsons Brinckerhoff, New York, NY.

Freight

Evaluation Criteria

Evaluation criteria may include the following:

- Change in congestion levels and/or travel speeds along major freight facilities
- Physical impacts on truck loading zones or access to local businesses

Evaluation Approach

Impacts of the light rail alternatives on freight movements will be qualitatively assessed. This assessment will focus on truck movement and truck routing impacts because freight rail corridors do not exist in the study area. The assessment of truck issues will focus on impacts on major truck routes (including I-5) and truck service areas, access to truck depots or intermodal yards, and loss of on-street loading zones and/or modifications of truck access to local businesses.

Construction

Evaluation Criteria

Two primary sources of construction impacts on local traffic will be considered from a generally qualitative standpoint:

- Impacts on traffic operations, property access, and parking supply related to potential road, sidewalk, bicycle, or other transportation facility closures during construction
- Impacts of construction-related traffic on traffic operations

Evaluation Approach

The assessment of construction-related traffic impacts will focus primarily on I-5 mainline and ramps, principal and minor arterials, or on streets that could be significantly affected by construction of one or more of the light rail alternatives. For the purposes of impact assessment, the construction stage considered to be most disruptive to traffic operations in the corridor will be the one analyzed in the most detail. The transportation team will identify this stage in coordination with Sound Transit staff and staff from local jurisdictions as appropriate.

Construction traffic analysis will consider the following:

- Identification of changes in roadway capacity including potential lane closure requirements, parking restrictions, pedestrian or bicycle facility impacts, alignment shifts, areas of construction activity adjacent to travel lanes, or other reductions to capacity due to transit facility construction activity;
- Impacts on transit and emergency services

- Impacts on school transportation services during construction
- Impacts of construction-related activity on on-street parking supply
- Identification of potential construction staging areas, including access and impact on roadway operations
- Identification of potential construction access and truck routes and the impact of construction-related traffic on these routes
- Assessment of potential for neighborhood traffic intrusion related to road closure and options for traffic detour
- Estimation of construction truck traffic
- Identification of areas that would require construction coordination between Sound Transit and other governmental agencies
- Development of mitigation measures

The analysis will be summarized in a tabular format to identify the following:

- Impact location(s)
- Street characteristics
- Type of construction activity including likely duration of impact (short term versus long term)
- Level of construction traffic (characterized as high, moderate, or low). High truck traffic is associated with major fill, excavation, and concrete work such as with tunneling. Moderate truck traffic generally refers to activities not associated with major fill or excavation work. Low truck traffic occurs when none of the construction activities associated with moderate or high truck traffic occurs.
- Full or partial road closures
- Availability of detour routes
- Potential for detoured traffic to affect a residential neighborhood. (This is characterized as high, medium, or low and is related to both potential for road closure and options for traffic detour.)
- Loss of on-street parking. (This may be characterized as "yes" for parking loss and "no" for no parking loss. Additionally, there may be some temporary loss of off-street parking due to the location and operation of construction staging, as well as construction worker parking.)
- General comments highlighting key issues for each location related to construction traffic activity that do not fall into one of the above categories. This may include the following:
  a. Identify capacity issues, impact on parking/access
  b. Identify construction routes and staging areas

Safety

Potential effects of the project on safety will be assessed qualitatively for all modes within the study area including general traffic, transit, freight, bicycle, and pedestrian modes.

Evaluation Criteria

Evaluation criteria could include the following:

- Effect on general purpose traffic safety
- Effect on transit operations safety
- Effect on freight travel safety
- Effect on nonmotorized travel safety

Evaluation Approach

A safety (accident/crash) analysis will be used to assess accidents currently occurring within the project limits in terms of the following:

- Type
- Cause
- Frequency

Accident data from the latest 3 years will be compiled and summarized to identify any current safety deficiencies. Unique accident patterns (e.g., high frequency of a specific pattern) will be noted. The accident data will be collected for any directly affected local intersections, roadways, and I-5 mainline and ramps. An intersection and roadway safety analysis will be conducted only where the light rail alternatives are proposed to be either at-grade in semi-exclusive right-of-way, elevated within or immediately adjacent to the road right-of-way, or results in a physical change to a roadway. Along the local streets, a qualitative discussion of how the project may affect accident type and frequency will be developed and presented.

No accident analysis or safety conclusions for alternatives proposed to operate outside the roadway right-of-way (exclusive right-of-way) will be conducted other than where (if) the alternative physically changes the geometry of a roadway facility (e.g., park-and-ride entrances).

Safety effects on freight and road-based transit travel will be assessed based on projected changes in traffic volumes and/or modal conflicts along key routes. Safety effects on bicycle and pedestrian travel will be assessed based on change in conflicts with motorized modes, as well as change in facilities provided for their travel. This assessment will include consideration of children walking and bicycling to school and drop-off, pick-up, and school bus zones.

Development of Detailed Traffic Volumes by Analysis Scenario

In many instances, the methodology for analyzing a particular measure is the same across all time periods, analysis years, and given alternative. However, in the development of detailed traffic volumes for use in traffic impact assessments, some differences exist between different types of analysis scenarios. This section describes the differences in methodology that will be employed depending on the scenario to be analyzed.

Existing Conditions

Peak hour freeway, arterial roadway, and intersection-turning movement volumes will be compiled from traffic volume counts. These will form the basis upon which traffic volumes for other analysis scenarios will be developed.

Future Baseline (No Build)

For future baseline conditions, growth rates produced by the PSRC Regional Model will be applied to existing traffic volumes to develop future forecasted arterial and freeway traffic volumes.

Light Rail Alternative(s) and Construction Scenario(s)

Similar to the future baseline conditions, traffic volumes for the light rail alternatives will be developed based on proportionate change in volumes from the regional model between the future baseline volumes and the alternative in question. Note that the regional model will reflect the effects of transit ridership derived from the Sound Transit Ridership Model. Changes in traffic volumes will generally be assessed at an aggregate level (e.g., screenlines) and as implied by system measures such as VMT. For localized impacts such as in the vicinity of park-and-ride lots, the No Build Alternative volumes will be used as a base, with additional volumes added to reflect traffic anticipated to be generated by the given facility.

The effect of selected construction scenarios on traffic operations will be evaluated in a qualitative manner, although some analysis at spot locations may be conducted using volumes for the opening year of the No Build Alternative.

Indirect Effects

Indirect effects are those project effects that occur later in time or some distance from the project. Typical indirect effects are those associated with changes in land use development patterns, typically consistent with adopted plans and zoning, and associated with changes in transportation accessibility over time. These effects are described in the land use and specific resource reports, but the potential changes in transportation access that could lead to these effects will be discussed qualitatively in the Transportation Technical Report.

Cumulative Effects

The analysis of future traffic and transit impacts of the project will be cumulatively assessed based on the results of traffic modeling and ridership modeling that incorporates past, funded, and approved future actions, as well as projected growth that would result from development in the region.

The assessment of additional cumulative transportation effects will include qualitative evaluation and discussion of past, present, and reasonably foreseeable future actions that could interact with the project alternatives, and that were not included in the traffic modeling. These may include, but are not limited to, consideration of effects from actions such as the following:

- Extension of light rail from Lynnwood to Everett
- Highway/lane management, such as from the implementation of tolls on state and/or local facilities, that could further alter travel behavior in the corridor
- Construction activities from other transportation projects that could affect or be influenced by the project construction activities
- Local developments and public infrastructure projects that could contribute to cumulative traffic delays on local arterial streets over the construction period

Transportation Data Developed for Use by Other Disciplines

Air Quality Effect Analysis Data

To support the air quality effect analysis, the following types of data will be produced for the study alternatives:

- AM and PM peak hour traffic volumes, speeds, and vehicular class for all roadway intersections that will be affected by changes in travel and traffic patterns caused by study alternatives.
- Daily VMT estimates by speeds for two areas: Lynnwood Link Extension study area and the regional system. These estimates will be provided in a tabular format for mobile source and greenhouse gas analyses.
- Level of service at affected intersections.
- The above information will be provided for existing conditions and the design year (2035), and the design year information will be extrapolated to 2040 for air quality conformity analyses.

Noise Effect Analysis Data

To support the noise effect analysis, the following types of data will be produced by the transportation team:

- AM and PM peak hour Synchro model files and general systemwide vehicle classification information.
- Maximum AM and PM peak hour free-flow volumes. These will be estimated by calculating 80 percent of the roadway capacity as indicated in the PSRC Regional Model. This will be for all links associated with the intersections analyzed in the Synchro traffic simulation analysis.
- The above information will be provided for existing conditions and the design year (2035).

Energy Effect Analysis Data

Energy effects will be calculated for operational and construction phases of the project. To determine operational energy effects, the following types of data for year 2035 will be produced by the transportation team:

- Daily regional VMT and VHT
- Daily light rail transit/bus rapid transit and/or HOV VMT

Environmental Justice and Social Impact Analysis Data

To support the environmental justice and social impact analysis, a variety of data will be produced by the transportation team, including the following:

- Estimated travel sheds as determined by using the travel demand model to identify transportation analysis zones relevant to environmental justice and social impact analysis
- Estimated travel times to selected destinations (e.g., Seattle central business district, Capitol Hill, First Hill, University of Washington) for use in the analysis of access to employment centers, education, and medical services for environmental justice populations
- Analysis of temporary or permanent impacts on Americans with Disabilities Act (ADA) parking or designated parking at social services, as well as percentage of parking spaces temporarily or permanently lost in designated commercial shopping districts
- Change in level of service on corridor roadways

Mitigation Measures

Project Design Measures and Best Management Practices

As long-term impacts are identified and mitigation options developed, these options will be forwarded to Sound Transit staff and the design team for engineering design/refinement and development of approximate cost estimates. The analysis of mitigation options will be coordinated with the relevant local/state jurisdictions to

identify strategies that may be under consideration to address other regional transportation challenges, but which could benefit the light rail project.

Mitigation

Direct Impacts

Potential mitigation measures will be described to address potential transportation impacts associated with the build alternatives.

- Local Traffic Impacts: Based on the 2035 traffic analysis, opportunities for mitigation of long-term impacts will be identified for the intersections that do not meet the established LOS standards previously discussed. These measures might include operational changes such as signal phasing, timing, or physical modification such as added travel or turning lanes. For intersections that do not meet the established LOS standards in the no build condition, the build alternatives are only obligated to bring the operating conditions back to the no build condition. Determining if an intersection meets the agency LOS standards will be based on the conditions at each individual intersection.
- Parking: Areas for potential parking mitigation will be identified by considering the potential for hide-and-ride parking activity in the neighborhoods surrounding transit stations. Areas with a high potential for hide-and-ride activity will be identified with potential mitigation strategies to reduce the likelihood of this activity.
- Construction: Mitigation measures aimed at addressing the construction traffic impacts identified above will be developed and reviewed. As appropriate, this will include a review of measures proposed and/or used for Initial Segment, Airport, and University Link light rail construction. Mitigation measures identified to address local construction traffic impacts will also be reviewed for their relevancy in addressing regional and/or corridor level construction traffic issues.
- Potential improvements will also be identified to mitigate light rail project impacts on nonmotorized facilities, freight, and access restrictions to businesses.

Cumulative Effects

Sound Transit will coordinate with proponents of reasonably foreseeable future projects that are likely to be under construction at the same time as the Lynnwood Link Extension, as necessary, to minimize the potential cumulative impacts of overlapping construction periods and project operation.

Summary of Technical Activity by Analysis Year

Table A-6 shows the technical activities to be undertaken for each of the analysis years identified.

Table A-6. Summary of Technical Activities by Analysis Year

Activity	Existing (2012)	Design Year (2035)	Construction Period[a]
Regional traffic forecast measures	X	X	
Ridership forecasts		X	
Corridor traffic	X	X	X
Road-based transit	X	X	X
Intersection operations	X	X	X
Freeway and ramp operations	X	X	X
Property access and circulation	X	X	X
Parking demand	X	X	X
Nonmotorized modes	X	X	X
Freight	X	X	X
Construction impacts			X
Indirect effects		X	
Cumulative effects		X	
Transportation data for other disciplines:			
Air quality	X	X[b]	X
Noise	X	X	
Energy	X	X	
Environmental justice and social impact	X	X	

[a] Construction period analysis will be qualitative.

[b] Year 2035 forecasts will be extrapolated to year 2040 for conformity analyses.

Documentation

For this resource, the following documentation will be developed:

- EIS section
- Transportation Technical Report

TRANSPORTATION TECHNICAL ANALYSIS METHODOLOGY: ADDENDUM FOR THE FINAL EIS

Introduction

A few refinements are being made to the Lynnwood Link Extension Project Transportation Technical Analysis Methodology as developed for the Draft Environmental Impact Statement (EIS). This memorandum describes the refined methods that will be used to analyze the impacts on transportation for the Lynnwood Link Extension Project Final FEIS. Elements within the following sections of the previous methodology report are being refined and are described in this memo:

- Intersections to be Studied
- Approach for Finalizing the List of Intersections to be Studied
- Individual Roadway Segments to be Studied
- Traffic Operations Analysis
- Intersection level of service Analysis
- Freeway and Ramp Operations
- Construction Evaluation Approach

Methodology Refinements

The ***Intersections to be Studies*** section in the methodology report provides a preliminary list of intersections to be analyzed. The following intersections will be studied in addition to those included in the original methodology report in order to include all I-5 ramp terminal intersections within the study area:

- 196th Street SW/Poplar Way
- I-5 Northbound ramps/Poplar Way
- I-5 Northbound ramps/SR 104
- I-5 Southbound ramps/SR 104

The methodology described in the ***Approach for Finalizing List of Intersections to be Studied*** section of the methodology report will be updated to include the criteria that all intersections with I-5 ramps will need to be analyzed for the build alternatives. Table 1 below is an updated table.

Table 1. Intersection Analysis Screening Process

Parameter	Threshold Value	Description
Critical Volumes	5%	Forecasts indicate that a critical volume comparison between a build option and the No Build Alternative would exceed the threshold value.
Change in Intersection Geometry	Changes in the number of lanes in any approach	Changes in intersection geometry resulting in the addition or deletion of a lane in any approach would change the capacity of the intersection and could affect LOS.
Change in Intersection Control	Traffic signal installation	The addition of a traffic control device such as a signal would affect the capacity for some traffic movements, and could change the overall LOS.
Crosswalk Lengths Across Major Streets	Increased crossing distance	Green traffic signal time for side streets would be extended and pedestrian clearances would be longer.
Intersection LOS	If the intersection operates with a delay value within 10% of the agency's LOS threshold	Locations meeting the threshold criterion with the No Build Alternative would likely require further analysis. For example, if an intersection operates at LOS E (75 seconds) in no build and the LOS threshold is LOS E (80 seconds), the intersection is then included in the build analysis.
Intersections with I-5 Ramps	Intersection is an I-5 ramp terminus intersection	For the segments of I-5 within the project area, all intersections with I-5 ramp termini will be analyzed for Baseline and Build conditions.

The ***Individual Roadway Segments to be Studied*** section in the methodology report previously stated that segments of I-5 between the 196th Street SW ramps in Lynnwood and the vicinity of NE Northgate Way in Seattle may be analyzed if the geometry of the mainline or interchanges in the

segment have changed due to the project, or if the project is estimated to add substantial traffic volumes to the mainline and/or interchanges. The methodology is being refined to analyze the entire length of I-5 between the 196th Street SW ramps in Lynnwood and the vicinity of NE Northgate Way in Seattle.

In the ***Traffic Operations Analysis*** section, the methodology previously stated that VISSIM will be used to assess freeway traffic operations at specific locations where the build alternative(s) are expected to affect freeway operations. The refined methodology will use VISSIM to analyze the entire I-5 corridor within the study area including ramp termini intersections. In addition, intersections adjacent to the Lynnwood Transit Center Station and 145th Street Station will be analyzed using VISSIM to better reflect congested operations.

In the ***Level of Service Analysis*** section, the methodology previously stated that Synchro will be used determine AM and PM peak hour LOS at signalized and unsignalized intersections. The methodology is being updated to use VISSIM to report intersection delay and LOS where VISSIM is being used at ramp termini intersections and the Lynnwood Transit Center and 145th Street Station areas.

The ***Freeway and Ramp Operations*** methodology previously listed several measures of effectiveness including LOS, travel times, and speeds. Vehicle throughput will be included as a measure as needed in order to assess the freeway operations.

In the ***Construction Evaluation Approach*** section the methodology previously stated that the assessment of construction-related traffic impacts will focus primarily on I-5 mainline and ramps, principal and minor arterials, or on streets that could be significantly affected by construction of one or more of the build alternatives. For the purposes of impact assessment, the construction stage considered to be most disruptive to traffic operations in the corridor will be the one analyzed in the most detail. The transportation team will identify this stage in coordination with Sound Transit staff and staff from local jurisdictions as appropriate. The updated methodology for the FEIS will include a traffic analysis along I-5 for the AM and PM peak hours for the most disruptive construction stage that will be analyzed using VISSIM and will report expected effects on travel speeds.

APPENDIX B

Future Transportation Improvement Assumptions for the No Build Alternative

Key highway and transit projects included in the Lynnwood Link Extension project are same as those assumed in the SR 520 Final EIS model. These are listed below.

Highway Network

- SR 520—West Lake Sammamish Parkway to SR 202
- SR 520—Floating bridge replacement and associated improvements
- I-90—R8A: Phases I, II, and III
- SR 99—Alaskan Way Viaduct Seawall Replacement Program
- I-405—South Bellevue Widening Project
- I-405—NE 8th Street to SR 520 Braided Ramps
- SR 519—Intermodal Project: Phase 2
- SR 518—SeaTac Airport to I-5/I-405 Interchange: third eastbound lane

Transit Network

- The transit definition reflects transit services in Seattle, North King County, East King County, and South Snohomish County that affect the travel demand across Lake Washington.
- The Downtown Seattle Transit Tunnel (DSTT) will be used exclusively by light rail—buses will no longer utilize the DSTT.
- Transit priority on 3rd Avenue in downtown Seattle includes mid-day operations, in addition to the existing priority during morning and evening peak periods.
- Sound Transit (ST) Central Link light rail will operate from Lynnwood to Redondo/Star Lake.
- ST East Link light rail will operate between Lynnwood and Overlake Transit Center (OTC) during peak hours and between Northgate and OTC during off-peak periods.
- ST East Link light rail will include a tunnel alignment through downtown Bellevue.
- ST Sounder Commuter Rail service will operate south to Lakewood.
- First Hill Streetcar will use the two-way Broadway alternative.
- *RapidRide* bus service will operate along five bus rapid transit (BRT) corridors identified in King County's *Transit Now* measure.

Local Street Network

The following local street improvements were also included in the 2035 No Build Alternative for traffic operations analysis. These projects were included in each city's transportation improvement program and/or identified by each jurisdiction to be included in the 2035 No Build Alternative roadway network.

City of Shoreline

- Aurora Corridor Improvement Project

City of Mountlake Terrace

- 212th Street SW and 48th Avenue West - install a signal and reconfigure northbound leg to a right turn lane and a left turn lane
- 220th Street SW and 58th Avenue West - install a signal or one-lane roundabout
- 230th Street SW and 56th Avenue West - install a one-lane roundabout or all-way stop control
- 236th Street SW and 56th Avenue West - reconfigure intersection so that left turn lanes become left/through lanes. Restrict parking access in peak direction to allow for two receiving lanes during peak (westbound in AM, eastbound in PM)
- Gateway Boulevard - complete from 244th Street SW to 236th Street SW with pedestrian facilities and bicycle accommodations
- 236th Street SW and Gateway Boulevard - install a signal
- 236th Street between I-5 and 56th Avenue West - coordinate signals at 236th Street SW and northbound I-5 ramp, 236th Street SW and Gateway Boulevard, 236th Street SW and 58th Avenue W, 236th Street SW and 56th Avenue West
- 244th Street SW and 48th Avenue West - add an eastbound left turn lane
- 244th Street SW and Cedar Way - add turn lane and reconfigure intersection
- 220th Street SW and SR 99 - install a westbound right turn pocket

City of Lynnwood

New/Expanded Roads:

- 204th Street SW from 68th Ave West to SR 99
- 36th Avenue W from Maple Road to SR 99
- Poplar Extension Bridge
- Maple Road Extension
- 33rd Avenue West Extension
- 52nd Avenue West from 168th Street SW to 176th Street SW

- Beech Road Extension
- 200th Street SW from 64th Avenue W to 48th Avenue West – widen from 3 to 5 lanes

Intersection Improvements:

- Scriber Lake Road and 196th Street SW Traffic Signal Reconstruction
- 52nd Avenue W and 176th Street SW Roundabout/Traffic Signal
- Sears Driveway and Alderwood Mall Parkway Traffic Signal/Turn Lane
- 28th Avenue W and Alderwood Mall Boulevard Traffic Signal
- 48th Avenue W and 188th Street SW Roundabout/Traffic Signal
- 66th Avenue and 212th Street Traffic Signal
- 196th Street SW and Alderwood Mall Parkway Traffic Signal/Turn Lane
- 198th Street SW and 44th Avenue West Traffic Signal

City Center Improvements:

- 196th Street SW from 37th Avenue West to 48th Avenue W – Add BAT lanes
- 42nd Avenue W from 200th Street SW to 194th Street SW
- 44th Avenue W from I-5 to 194th Street SW – widen roadway
- 194th Street SW from 33rd Avenue West to 40th Avenue West
- 200th Street SW from 40th Avenue West to 48th Avenue West – widen from 3 to 5 lanes
- Right-in, right-out stop control at all new City Center streets bounded by 44th, 40th, 196th and 200th.

APPENDIX C

Detailed LOS Analysis Reports and Arterial Roadway Volumes

Station/Intersection

Segment A	Intersection Control	LOS Standard	LOS/Delay	No Build	Preferred Alternative	Preferred Alternative + Option	A1	A3	A5	A7	A10	A11
130th Street Station												
N 130th Street and Aurora Avenue N	Signal	D	LOS	D	D	D	D	*	D	D	D	D
		WSDOT HSS	Delay	51	52	52	52	*	52	52	52	52
N 130th Street and Meridian Avenue N	Signal	D	LOS	B	B	B	B	*	B	B	B	B
		CoS	Delay	14	14	15	14	*	15	15	14	15
N 130th Street and 1st Avenue NE	Signal	D	LOS	C	C	C	C	*	C	C	C	C
			Delay	26	28	27	28	*	27	27	28	27
NE 130th Street and I-5 Southbound On-Ramp	TWSC	D	LOS	A	A	A	A	*	A	A	A	A
			Delay	7	5	6	5	*	6	7	5	7
5th Avenue NE and Park-and-Ride Driveway (north)	TWSC	D	LOS	*	*	*	*	*	*	A	*	A
			Delay	*	*	*	*	*	*	3	*	3
5th Avenue NE and Park-and-Ride Driveway (south)	TWSC	D	LOS	*	*	*	*	*	*	A	*	A
			Delay	*	*	*	*	*	*	4	*	4
5th Avenue NE and Park-and-Ride Driveway (church)	TWSC	D	LOS	*	*	A	*	*	A	*	*	*
			Delay	*	*	6	*	*	6	*	*	*
NE 130th Street and 5th Avenue NE	Signal	D	LOS	C	C	C	C	*	C	C	C	C
			Delay	29	30	31	30	*	31	29	30	29
5th Avenue NE and I-5 Northbound Off-Ramp	TWSC	D	LOS	E	*	*	*	*	*	E	*	E
			Delay	40	*	*	*	*	*	43	*	43
NE 125th Street and 15th Avenue NE	Signal	D	LOS	D	D	D	D	*	D	D	D	D
		CoS	Delay	42	43	44	43	*	44	44	43	44
145th Street Station												
N 145th Street and Aurora Avenue N	Signal	D	LOS	D	D	D	D	D	*	*	D	D
		WSDOT HSS	Delay	51	52	52	52	52	*	*	52	52
N 145th Street and Meridian Avenue N	Signal	E	LOS	E	E	E	E	E	*	*	E	E
		WSDOT non HSS	Delay	57	56	56	56	56	*	*	56	56
N 145th Street and I-5 Southbound Ramps	Signal	D	LOS	F	E	F	F	F	*	*	F	F
			Delay	82	77	93	94	91	*	*	93	95
5th Avenue NE and Park-and-Ride Driveway	TWSC	D	LOS	A	B	B	B	B	*	*	B	B
			Delay	8	13	12	11	11	*	*	11	13
5th Avenue NE and I-5 Northbound On-Ramp	Signal	D	LOS	B	C	A	C	A	*	*	C	A
			Delay	11	22	9	20	9	*	*	20	9
NE 145th Street and 5th Avenue NE	Signal	E	LOS	F	F	F	F	F	*	*	F	F
			Delay	111	97	120	122	123	*	*	120	123
5th Avenue NE and I-5 Northbound Off-Ramp	TWSC	D	LOS	D	D	D	E	E	*	*	D	D
			Delay	30	31	32	36	36	*	*	33	31
NE 145th Street and 15th Avenue NE	Signal	E	LOS	D	D	D	D	D	*	*	D	D
		WSDOT non HSS	Delay	45	47	48	47	47	*	*	47	47
155th Street Station												
N 155th Street and Aurora Avenue N	Signal	D	LOS	D	*	*	*	*	D	D	*	*
		WSDOT HSS	Delay	45	*	*	*	*	43	43	*	*
N 155th Street and Meridian Avenue N	Signal	D	LOS	D	*	*	*	*	E	E	*	*
		Shorline	Delay	52	*	*	*	*	64	64	*	*
NE 155th Street and 5th Avenue NE	Signal	D	LOS	B	*	*	*	*	B	B	*	*
		Shorline	Delay	11	*	*	*	*	13	13	*	*
NE 155th Street and 15th Avenue NE	Signal	D	LOS	B	*	*	*	*	C	C	*	*
		Shorline	Delay	19	*	*	*	*	21	21	*	*
185th Street Station												
N 185th Street and Aurora Avenue N	Signal	D	LOS	F	F	F	F	F	F	F	F	F
		WSDOT HSS	Delay	98	94	94	94	94	94	94	94	94
N 185th Street and Meridian Avenue N	Signal	D	LOS	D	E	E	E	E	E	E	E	E
		Shorline	Delay	51	63	63	63	63	60	63	60	63
NE 185th Street and 10th Avenue NE	Signal	D	LOS	A	B	B	B	B	B	B	B	B
		Shorline	Delay	9	11	11	11	11	11	11	11	11
N 175th Street and I-5 Southbound Ramps	Signal	D	LOS	D	D	D	D	D	D	D	D	D
		WSDOT HSS	Delay	47	47	47	47	47	47	47	47	47
NE 175th Street and I-5 Northbound Ramps	Signal	D	LOS	D	D	D	D	D	D	D	D	D
		WSDOT HSS	Delay	49	49	49	49	49	49	49	49	49

Segment B	Intersection Control	LOS Standard	LOS/Delay	No Build	Preferred Alternative	Preferred Alternative + Option	B1	B2A	B4
Mountlake Terrace Station									
236th Street SW and I-5 Southbound CD On-Ramp	TWSC	D	LOS	A	B	B	B	B	B
		WSDOT HSS	Delay	9	11	11	11	11	11
236th Street SW and I-5 Northbound Off-Ramp/Park-and-Ride Driveway	Signal	D	LOS	C	C	D	C	C	C
		WSDOT HSS	Delay	26	32	45	32	32	33
236th Street SW and Transit Center Driveway (out)	Signal	E	LOS	*	D	D	D	D	*
		MLT unsig	Delay	*	31	34	31	31	*
236th Street SW and 56th Avenue W	Signal	D	LOS	D	D	D	D	D	D
		MLT sig	Delay	37	41	46	41	41	40
220th Street Station									
220th Street SW and SR 99	Signal	E	LOS	E	*	E	*	E	*
		WSDOT non HSS	Delay	60	*	60	*	60	*
220th Street SW and I-5 Southbound Ramps	Signal	D	LOS	B	*	C	*	C	*
		WSDOT HSS	Delay	17	*	20	*	20	*
220th Street SW and I-5 Northbound Ramps	Signal	D	LOS	C	*	C	*	C	*
		WSDOT HSS	Delay	32	*	31	*	31	*

Segment C	Intersection Control	LOS Standard	LOS/Delay	No Build	Preferred Alternative	Preferred Alternative +	C1	C2	C3
Lynnwood Station									
196th Street SW and 50th Avenue W	Signal	E	LOS	B	B	B	B	B	B
			Delay	13	15	14	14	14	14
196th Street SW and 44th Avenue W	Signal	E	LOS	D	D	D	D	D	D
			Delay	38	39	54	39	39	39
196th Street SW and 36th Avenue West	Signal	D	LOS	C	C	C	C	C	C
			Delay	23	23	23	23	23	23
200th Street SW and 50th Avenue W	Signal	D	LOS	C	F	C	C	C	C
			Delay	27	124	31	31	31	31
200th Street SW and 48th Avenue W	Signal	D	LOS	C	E	D	D	D	D
			Delay	22	64	43	40	40	40
200th Street SW and 46th Avenue W	Signal	E	LOS	B	D	D	D	D	D
			Delay	17	42	52	54	54	54
200th Street SW and 44th Avenue W	Signal	E	LOS	E	E	F	F	F	F
			Delay	55	65	141	93	93	93
44th Avenue West and I-5 Southbound On-ramp	TWSC	D	LOS	B	A	A	A	A	A
			Delay	11	9	9	9	9	9
44th Avenue West and I-5 Northbound Off-ramp	Signal	D	LOS	B	B	C	C	C	C
			Delay	16	19	22	32	32	32

145th Station Area AM peak hour 2035 Volumes

145th Station Area AM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	*2035 Preferred Alternative - Project Generated Trips*	*2035 Preferred Build - Percent Increase Over No build*
5th Ave NE at I-5 northbound off-ramp				
Northbound	285	305	*20*	*7%*
through	*285*	*305*	*20*	*7%*
Southbound	295	315	*20*	*7%*
through	*295*	*315*	*20*	*7%*
Eastbound	780	780	*0*	*0%*
left	*780*	*780*	*0*	*0%*
5th Ave NE at NE 145th Street				
Northbound	1065	1100	*35*	*3%*
left	*360*	*360*	*0*	*0%*
through	*295*	*330*	*35*	*12%*
right	*410*	*410*	*0*	*0%*
Southbound	660	720	*60*	*9%*
left	*40*	*65*	*25*	*63%*
through	*225*	*235*	*10*	*4%*
right	*395*	*420*	*25*	*6%*
Eastbound	1040	1115	*75*	*7%*
left	*335*	*405*	*70*	*21%*
through	*635*	*635*	*0*	*0%*
right	*70*	*75*	*5*	*7%*
Westbound	1120	1155	*35*	*3%*
left	*0*	*5*	*5*	
through	*840*	*840*	*0*	*0%*
right	*280*	*310*	*30*	*11%*
5th Ave NE at I-5 northbound on-ramp				
Northbound	910	900	*-10*	*-1%*
left	*640*	*640*	*0*	*0%*
through	*270*	*260*	*-10*	*-4%*
Southbound	700	790	*90*	*13%*
through	*655*	*745*	*90*	*14%*
right	*45*	*45*	*0*	*0%*
Eastbound	5	80	*75*	*1500%*
left	*0*	*20*	*20*	
right	*5*	*60*	*55*	*1100%*

145th Station Area AM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	*2035 Preferred Alternative - Project Generated Trips*	*2035 Preferred Build - Percent Increase Over No build*
5th Ave NE at PNR driveway				
Northbound	270	1045	*775*	*287%*
left	*15*	*145*	*130*	*867%*
through	*255*	*900*	*645*	*253%*
Southbound	710	805	*95*	*13%*
through	*695*	*720*	*25*	*4%*
right	*15*	*85*	*70*	*467%*
Eastbound	10	0	*-10*	*-100%*
left	*5*	*0*	*-5*	*-100%*
right	*5*	*0*	*-5*	*-100%*
I-5 sb ramps at NE 145th Street				
Southbound	725	725	*0*	*0%*
left	*355*	*355*	*0*	*0%*
right	*370*	*370*	*0*	*0%*
Eastbound	1610	1685	*75*	*5%*
through	*685*	*760*	*75*	*11%*
right	*925*	*925*	*0*	*0%*
Westbound	1595	1605	*10*	*1%*
left	*765*	*765*	*0*	*0%*
through	*830*	*840*	*10*	*1%*
Meridian Ave N at NE 145th Street				
Northbound	85	95	*10*	*12%*
left	*5*	*5*	*0*	*0%*
through	*50*	*50*	*0*	*0%*
right	*30*	*40*	*10*	*33%*
Southbound	525	525	*0*	*0%*
left	*270*	*270*	*0*	*0%*
through	*200*	*200*	*0*	*0%*
right	*55*	*55*	*0*	*0%*
Eastbound	1110	1160	*50*	*5%*
left	*20*	*20*	*0*	*0%*
through	*1080*	*1120*	*40*	*4%*
right	*10*	*20*	*10*	*100%*
Westbound	800	820	*20*	*3%*
left	*30*	*35*	*5*	*17%*
through	*745*	*760*	*15*	*2%*
right	*25*	*25*	*0*	*0%*

145th Station Area AM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	*2035 Preferred Alternative - Project Generated Trips*	*2035 Preferred Build - Percent Increase Over No build*
SR99 at NE 145th Street				
Northbound	600	605	*5*	*1%*
left	*40*	*40*	*0*	*0%*
through	*380*	*380*	*0*	*0%*
right	*180*	*185*	*5*	*3%*
Southbound	1825	1835	*10*	*1%*
left	*305*	*315*	*10*	*3%*
through	*1445*	*1445*	*0*	*0%*
right	*75*	*75*	*0*	*0%*
Eastbound	625	650	*25*	*4%*
left	*55*	*55*	*0*	*0%*
through	*510*	*535*	*25*	*5%*
right	*60*	*60*	*0*	*0%*
Westbound	665	685	*20*	*3%*
left	*230*	*235*	*5*	*2%*
through	*310*	*320*	*10*	*3%*
right	*125*	*130*	*5*	*4%*
15th Ave N at NE 145th Street				
Northbound	395	405	*10*	*3%*
left	*105*	*110*	*5*	*5%*
through	*220*	*225*	*5*	*2%*
right	*70*	*70*	*0*	*0%*
Southbound	900	905	*5*	*1%*
left	*110*	*110*	*0*	*0%*
through	*690*	*695*	*5*	*1%*
right	*100*	*100*	*0*	*0%*
Eastbound	965	990	*25*	*3%*
left	*160*	*160*	*0*	*0%*
through	*695*	*710*	*15*	*2%*
right	*110*	*120*	*10*	*9%*
Westbound	1150	1170	*20*	*2%*
left	*190*	*190*	*0*	*0%*
through	*910*	*930*	*20*	*2%*
right	*50*	*50*	*0*	*0%*

145th Station Area PM peak hour 2035 Volumes

145th Station Area PM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	2035 Preferred Alternative - Project Generated Trips	2035 Preferred Build - Percent Increase Over No build
5th Ave NE at I-5 northbound off-ramp				
Northbound	570	580	*10*	*2%*
through	*570*	*580*	*10*	*2%*
Southbound	220	250	*30*	*14%*
through	*220*	*250*	*30*	*14%*
Eastbound	1045	1045	*0*	*0%*
left	*1045*	*1045*	*0*	*0%*
5th Ave NE at NE 145th Street				
Northbound	1615	1625	*10*	*1%*
left	*380*	*380*	*0*	*0%*
through	*660*	*670*	*10*	*2%*
right	*575*	*575*	*0*	*0%*
Southbound	230	330	*100*	*43%*
left	*40*	*65*	*25*	*63%*
through	*70*	*100*	*30*	*43%*
right	*120*	*165*	*45*	*38%*
Eastbound	1415	1440	*25*	*2%*
left	*460*	*485*	*25*	*5%*
through	*810*	*810*	*0*	*0%*
right	*145*	*145*	*0*	*0%*
Westbound	1115	1140	*25*	*2%*
left	*5*	*5*	*0*	*0%*
through	*755*	*755*	*0*	*0%*
right	*355*	*380*	*25*	*7%*
5th Ave NE at I-5 northbound on-ramp				
Northbound	1475	1470	*-5*	*0%*
left	*660*	*660*	*0*	*0%*
through	*815*	*810*	*-5*	*-1%*
Southbound	225	235	*10*	*4%*
through	*215*	*225*	*10*	*5%*
right	*10*	*10*	*0*	*0%*
Eastbound	10	225	*215*	*2150%*
left	*0*	*100*	*100*	
right	*10*	*125*	*115*	*1150%*

145th Station Area PM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	2035 Preferred Alternative - Project Generated Trips	2035 Preferred Build - Percent Increase Over No build
5th Ave NE at PNR driveway				
Northbound	815	1535	*720*	*88%*
left	*15*	*65*	*50*	*333%*
through	*800*	*1470*	*670*	*84%*
Southbound	205	350	*145*	*71%*
through	*200*	*330*	*130*	*65%*
right	*5*	*20*	*15*	*300%*
Eastbound	45	0	*-45*	*-100%*
left	*20*	*0*	*-20*	*-100%*
right	*25*	*0*	*-25*	*-100%*
I-5 sb ramps at NE 145th Street				
Southbound	975	975	*0*	*0%*
left	*475*	*475*	*0*	*0%*
right	*500*	*500*	*0*	*0%*
Eastbound	1205	1235	*30*	*2%*
through	*935*	*965*	*30*	*3%*
right	*270*	*270*	*0*	*0%*
Westbound	1250	1300	*50*	*4%*
left	*450*	*450*	*0*	*0%*
through	*800*	*850*	*50*	*6%*
Meridian Ave N at NE 145th Street				
Northbound	310	315	*5*	*2%*
left	*20*	*20*	*0*	*0%*
through	*255*	*255*	*0*	*0%*
right	*35*	*40*	*5*	*14%*
Southbound	240	240	*0*	*0%*
left	*55*	*55*	*0*	*0%*
through	*125*	*125*	*0*	*0%*
right	*60*	*60*	*0*	*0%*
Eastbound	985	1000	*15*	*2%*
left	*30*	*30*	*0*	*0%*
through	*935*	*950*	*15*	*2%*
right	*20*	*20*	*0*	*0%*
Westbound	1120	1180	*60*	*5%*
left	*40*	*45*	*5*	*13%*
through	*1060*	*1115*	*55*	*5%*
right	*20*	*20*	*0*	*0%*

145th Station Area PM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	2035 Preferred Alternative - Project Generated Trips	2035 Preferred Build - Percent Increase Over No build
SR99 at NE 145th Street				
Northbound	1770	1775	*5*	*0%*
left	*75*	*75*	*0*	*0%*
through	*1390*	*1390*	*0*	*0%*
right	*305*	*310*	*5*	*2%*
Southbound	1330	1335	*5*	*0%*
left	*215*	*220*	*5*	*2%*
through	*1020*	*1020*	*0*	*0%*
right	*95*	*95*	*0*	*0%*
Eastbound	655	665	*10*	*2%*
left	*150*	*150*	*0*	*0%*
through	*410*	*420*	*10*	*2%*
right	*95*	*95*	*0*	*0%*
Westbound	1035	1090	*55*	*5%*
left	*195*	*200*	*5*	*3%*
through	*605*	*640*	*35*	*6%*
right	*235*	*250*	*15*	*6%*
15th Ave N at NE 145th Street				
Northbound	1060	1070	*10*	*1%*
left	*175*	*180*	*5*	*3%*
through	*755*	*760*	*5*	*1%*
right	*130*	*130*	*0*	*0%*
Southbound	620	630	*10*	*2%*
left	*150*	*150*	*0*	*0%*
through	*365*	*370*	*5*	*1%*
right	*105*	*110*	*5*	*5%*
Eastbound	1460	1490	*30*	*2%*
left	*180*	*185*	*5*	*3%*
through	*1080*	*1100*	*20*	*2%*
right	*200*	*205*	*5*	*3%*
Westbound	1065	1085	*20*	*2%*
left	*105*	*105*	*0*	*0%*
through	*810*	*830*	*20*	*2%*
right	*150*	*150*	*0*	*0%*

145th Station Area PM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	2035 Preferred Alternative - Project Generated Trips	2035 Preferred Build - Percent Increase Over No build
Lake City Way NE at NE 145th Street				
Northbound	2010	2015	5	0%
left	*145*	*150*	*5*	*3%*
through	*1845*	*1845*	*0*	*0%*
right	*20*	*20*	*0*	*0%*
Southbound	1890	1895	5	0%
left	*60*	*60*	*0*	*0%*
through	*1270*	*1270*	*0*	*0%*
right	*560*	*565*	*5*	*1%*
Eastbound	1190	1205	15	1%
left	*935*	*945*	*10*	*1%*
through	*90*	*90*	*0*	*0%*
right	*165*	*170*	*5*	*3%*
Westbound	260	265	5	2%
left	*50*	*50*	*0*	*0%*
through	*80*	*85*	*5*	*6%*
right	*130*	*130*	*0*	*0%*
1th Ave N at NE 145th Street				
Northbound	510	515	5	1%
left	*75*	*75*	*0*	*0%*
through	*255*	*255*	*0*	*0%*
right	*180*	*185*	*5*	*3%*
Southbound	130	135	5	4%
left	*35*	*40*	*5*	*14%*
through	*80*	*80*	*0*	*0%*
right	*15*	*15*	*0*	*0%*
Eastbound	1010	1035	25	2%
left	*0*	*0*	*0*	*0%*
through	*985*	*1010*	*25*	*3%*
right	*25*	*25*	*0*	*0%*
Westbound	1305	1375	70	5%
left	*145*	*155*	*10*	*7%*
through	*1120*	*1180*	*60*	*5%*
right	*40*	*40*	*0*	*0%*

185th Station Area AM peak hour 2035 Volumes

185th Station Area AM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	*2035 Preferred Alternative - Project Generated Trips*	*2035 Preferred Build - Percent Increase Over No build*
SR99 at NE 185th Street				
Northbound	730	750	*20*	*3%*
left	*325*	*325*	*0*	*0%*
through	*365*	*365*	*0*	*0%*
right	*40*	*60*	*20*	*50%*
Southbound	1555	1570	*15*	*1%*
left	*45*	*60*	*15*	*33%*
through	*1410*	*1410*	*0*	*0%*
right	*100*	*100*	*0*	*0%*
Eastbound	880	915	*35*	*4%*
left	*75*	*75*	*0*	*0%*
through	*310*	*345*	*35*	*11%*
right	*495*	*495*	*0*	*0%*
Westbound	360	390	*30*	*8%*
left	*140*	*145*	*5*	*4%*
through	*170*	*185*	*15*	*9%*
right	*50*	*60*	*10*	*20%*
South eastbound Firlands Way	285	310	*25*	*9%*
right	*5*	*5*	*0*	*0%*
Meridian Ave N at NE 185th Street				
Northbound	280	305	*25*	*9%*
left	*65*	*65*	*0*	*0%*
through	*160*	*160*	*0*	*0%*
right	*55*	*80*	*25*	*45%*
Southbound	765	775	*10*	*1%*
left	*65*	*75*	*10*	*15%*
through	*670*	*670*	*0*	*0%*
right	*30*	*30*	*0*	*0%*
Eastbound	465	535	*70*	*15%*
left	*30*	*30*	*0*	*0%*
through	*195*	*265*	*70*	*36%*
right	*240*	*240*	*0*	*0%*
Westbound	510	560	*50*	*10%*
left	*180*	*190*	*10*	*6%*
through	*280*	*310*	*30*	*11%*
right	*50*	*60*	*10*	*20%*

185th Station Area AM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	*2035 Preferred Alternative - Project Generated Trips*	*2035 Preferred Build - Percent Increase Over No build*
10th Ave NE at NE 185th Street				
Northbound	150	180	*30*	*20%*
left	*105*	*135*	*30*	*29%*
through	*40*	*40*	*0*	*0%*
right	*5*	*5*	*0*	*0%*
Southbound	245	265	*20*	*8%*
left	*10*	*10*	*0*	*0%*
through	*85*	*85*	*0*	*0%*
right	*150*	*170*	*20*	*13%*
Eastbound	250	280	*30*	*12%*
left	*65*	*75*	*10*	*15%*
through	*30*	*30*	*0*	*0%*
right	*155*	*175*	*20*	*13%*
Westbound	25	30	*5*	*20%*
left	*10*	*10*	*0*	*0%*
through	*10*	*15*	*5*	*50%*
right	*5*	*5*	*0*	*0%*

185th Station Area PM peak hour 2035 Volumes

185th Station Area PM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	*2035 Preferred Alternative - Project Generated Trips*	*2035 Preferred Build - Percent Increase Over No build*
SR99 at NE 185th Street				
Northbound	1945	1950	*5*	*0%*
left	*565*	*565*	*0*	*0%*
through	*1335*	*1335*	*0*	*0%*
right	*45*	*50*	*5*	*11%*
Southbound	1160	1170	*10*	*1%*
left	*75*	*85*	*10*	*13%*
through	*950*	*950*	*0*	*0%*
right	*135*	*135*	*0*	*0%*
Eastbound	895	905	*10*	*1%*
left	*215*	*215*	*0*	*0%*
through	*350*	*360*	*10*	*3%*
right	*330*	*330*	*0*	*0%*
Westbound	605	670	*65*	*11%*
left	*180*	*200*	*20*	*11%*
through	*285*	*310*	*25*	*9%*
right	*140*	*160*	*20*	*14%*
South eastbound Firlands Way	925	935	*10*	*1%*
right	*20*	*20*	*0*	*0%*
Meridian Ave NE at NE 185th Street				
Northbound	905	915	*10*	*1%*
left	*175*	*175*	*0*	*0%*
through	*625*	*625*	*0*	*0%*
right	*105*	*115*	*10*	*10%*
Southbound	420	430	*10*	*2%*
left	*110*	*120*	*10*	*9%*
through	*270*	*270*	*0*	*0%*
right	*40*	*40*	*0*	*0%*
Eastbound	500	525	*25*	*5%*
left	*85*	*85*	*0*	*0%*
through	*315*	*340*	*25*	*8%*
right	*100*	*100*	*0*	*0%*
Westbound	515	625	*110*	*21%*
left	*135*	*165*	*30*	*22%*
through	*325*	*390*	*65*	*20%*
right	*55*	*70*	*15*	*27%*

185th Station Area PM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	*2035 Preferred Alternative - Project Generated Trips*	*2035 Preferred Build - Percent Increase Over No build*
Corliss Ave NE at NE 185th Street				
Northbound	25	25	*0*	*0%*
left	*10*	*10*	*0*	*0%*
through	*5*	*5*	*0*	*0%*
right	*10*	*10*	*0*	*0%*
Southbound	15	15	*0*	*0%*
left	*5*	*5*	*0*	*0%*
through	*5*	*5*	*0*	*0%*
right	*5*	*5*	*0*	*0%*
Eastbound	525	565	*40*	*8%*
left	*5*	*5*	*0*	*0%*
through	*500*	*540*	*40*	*8%*
right	*20*	*20*	*0*	*0%*
Westbound	570	675	*105*	*18%*
left	*10*	*10*	*0*	*0%*
through	*555*	*660*	*105*	*19%*
right	*5*	*5*	*0*	*0%*
1st Ave NE at NE 185th Street				
Northbound	25	25	*0*	*0%*
left	*5*	*5*	*0*	*0%*
through	*15*	*15*	*0*	*0%*
right	*5*	*5*	*0*	*0%*
Southbound	210	215	*5*	*2%*
left	*75*	*80*	*5*	*7%*
through	*15*	*15*	*0*	*0%*
right	*120*	*120*	*0*	*0%*
Eastbound	580	630	*50*	*9%*
left	*170*	*170*	*0*	*0%*
through	*400*	*450*	*50*	*13%*
right	*10*	*10*	*0*	*0%*
Westbound	525	660	*135*	*26%*
left	*10*	*15*	*5*	*50%*
through	*385*	*490*	*105*	*27%*
right	*130*	*155*	*25*	*19%*

185th Station Area PM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	*2035 Preferred Alternative - Project Generated Trips*	*2035 Preferred Build - Percent Increase Over No build*
2nd Ave NE at NE 185th Street				
Northbound	20	20	*0*	*0%*
left	*5*	*5*	*0*	*0%*
through	*5*	*5*	*0*	*0%*
right	*10*	*10*	*0*	*0%*
Southbound	70	75	*5*	*7%*
left	*30*	*35*	*5*	*17%*
through	*0*	*0*	*0*	*0%*
right	*40*	*40*	*0*	*0%*
Eastbound	470	525	*55*	*12%*
left	*25*	*25*	*0*	*0%*
through	*430*	*485*	*55*	*13%*
right	*15*	*15*	*0*	*0%*
Westbound	550	705	*155*	*28%*
left	*10*	*15*	*5*	*50%*
through	*505*	*645*	*140*	*28%*
right	*35*	*45*	*10*	*29%*
3rd Ave NE at NE 185th Street				
Northbound	20	25	*5*	*25%*
left	*5*	*5*	*0*	*0%*
through	*5*	*5*	*0*	*0%*
right	*10*	*15*	*5*	*50%*
Southbound	15	15	*0*	*0%*
left	*5*	*5*	*0*	*0%*
through	*5*	*5*	*0*	*0%*
right	*5*	*5*	*0*	*0%*
Eastbound	485	545	*60*	*12%*
left	*5*	*5*	*0*	*0%*
through	*470*	*530*	*60*	*13%*
right	*10*	*10*	*0*	*0%*
Westbound	555	690	*135*	*24%*
left	*10*	*15*	*5*	*50%*
through	*540*	*670*	*130*	*24%*
right	*5*	*5*	*0*	*0%*

185th Station Area PM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	*2035 Preferred Alternative - Project Generated Trips*	*2035 Preferred Build - Percent Increase Over No build*
5th Ave NE at NE 185th Street				
Southbound	90	255	*165*	*183%*
left	*30*	*85*	*55*	*183%*
right	*60*	*170*	*110*	*183%*
Eastbound	495	555	*60*	*12%*
left	*70*	*90*	*20*	*29%*
through	*425*	*465*	*40*	*9%*
Westbound	560	625	*65*	*12%*
through	*500*	*540*	*40*	*8%*
right	*60*	*85*	*25*	*42%*
7th Ave NE at NE 185th Street				
Northbound	290	305	*15*	*5%*
left	*180*	*190*	*10*	*6%*
right	*110*	*115*	*5*	*5%*
Southbound	10	55	*45*	*450%*
left	*5*	*10*	*5*	
through	*0*	*5*	*5*	
right	*5*	*40*	*35*	*700%*
Eastbound	465	560	*95*	*20%*
left	*5*	*5*	*0*	*0%*
through	*360*	*440*	*80*	*22%*
right	*100*	*115*	*15*	*15%*
Westbound	380	430	*50*	*13%*
left	*20*	*20*	*0*	*0%*
through	*355*	*405*	*50*	*14%*
right	*5*	*5*	*0*	*0%*
8th Ave NE at NE 185th Street				
Northbound	40	40	*0*	*0%*
left	*25*	*25*	*0*	*0%*
through	*5*	*5*	*0*	*0%*
right	*10*	*10*	*0*	*0%*
Southbound	35	35	*0*	*0%*
left	*5*	*5*	*0*	*0%*
through	*5*	*5*	*0*	*0%*
right	*25*	*25*	*0*	*0%*
Eastbound	445	545	*100*	*22%*
left	*20*	*70*	*50*	*250%*
through	*405*	*455*	*50*	*12%*
right	*20*	*20*	*0*	*0%*
Westbound	365	385	*20*	*5%*
left	*5*	*5*	*0*	*0%*
through	*355*	*370*	*15*	*4%*
right	*5*	*10*	*5*	*100%*

185th Station Area PM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	*2035 Preferred Alternative - Project Generated Trips*	*2035 Preferred Build - Percent Increase Over No build*
9th Ave NE at NE 185th Street				
Northbound	10	10	*0*	*0%*
left	*5*	*5*	*0*	*0%*
right	*5*	*5*	*0*	*0%*
Eastbound	435	485	*50*	*11%*
through	*430*	*480*	*50*	*12%*
right	*5*	*5*	*0*	*0%*
Westbound	365	390	*25*	*7%*
left	*5*	*5*	*0*	*0%*
through	*360*	*385*	*25*	*7%*
10th Ave NE at NE 185th Street				
Northbound	355	370	*15*	*4%*
left	*230*	*245*	*15*	*7%*
through	*120*	*120*	*0*	*0%*
right	*5*	*5*	*0*	*0%*
Southbound	195	205	*10*	*5%*
left	*5*	*5*	*0*	*0%*
through	*70*	*70*	*0*	*0%*
right	*120*	*130*	*10*	*8%*
Eastbound	430	480	*50*	*12%*
left	*190*	*210*	*20*	*11%*
through	*20*	*20*	*0*	*0%*
right	*220*	*250*	*30*	*14%*
Westbound	20	20	*0*	*0%*
left	*5*	*5*	*0*	*0%*
through	*10*	*10*	*0*	*0%*
right	*5*	*5*	*0*	*0%*
Meridian Ave NE at NE 175th Street				
Northbound	890	895	*5*	*1%*
left	*95*	*95*	*0*	*0%*
through	*530*	*535*	*5*	*1%*
right	*265*	*265*	*0*	*0%*
Southbound	525	530	*5*	*1%*
left	*230*	*230*	*0*	*0%*
through	*255*	*260*	*5*	*2%*
right	*40*	*40*	*0*	*0%*
Eastbound	1005	1005	*0*	*0%*
left	*75*	*75*	*0*	*0%*
through	*860*	*860*	*0*	*0%*
right	*70*	*70*	*0*	*0%*
Westbound	1372	1373	*1*	*0%*
left	*170*	*170*	*0*	*0%*
through	*862*	*863*	*1*	*0%*
right	*340*	*340*	*0*	*0%*

220th Station Area AM peak hour 2035 Volumes

220th Station Area AM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	*2035 Preferred Alternative - Project Generated Trips*	*2035 Preferred Build - Percent Increase Over No build*
SR99 at 220th SW Street				
Northbound	930	940	*10*	*1%*
left	*95*	*95*	*0*	*0%*
through	*700*	*705*	*5*	*1%*
right	*135*	*140*	*5*	*4%*
Southbound	1600	1610	*10*	*1%*
left	*200*	*205*	*5*	*3%*
through	*1275*	*1280*	*5*	*0%*
right	*125*	*125*	*0*	*0%*
Eastbound	685	700	*15*	*2%*
left	*95*	*95*	*0*	*0%*
through	*545*	*560*	*15*	*3%*
right	*45*	*45*	*0*	*0%*
Westbound	865	885	*20*	*2%*
left	*200*	*205*	*5*	*3%*
through	*470*	*485*	*15*	*3%*
right	*195*	*195*	*0*	*0%*
220th P&R DR at 220th SW Street				
Northbound	*na*	30	*na*	*na*
left	*na*	*15*	*na*	*na*
through	*na*	*15*	*na*	*na*
Eastbound	*na*	1430	*na*	*na*
through	*na*	*1390*	*na*	*na*
right	*na*	*40*	*na*	*na*
Westbound	*na*	1505	*na*	*na*
left	*na*	*50*	*na*	*na*
through	*na*	*1455*	*na*	*na*
I-5 SB Ramps at 220th SW Street				
Southbound	775	805	*30*	*4%*
left	*250*	*250*	*0*	*0%*
through	*5*	*5*	*0*	*0%*
right	*520*	*550*	*30*	*6%*
Eastbound	1385	1405	*20*	*1%*
through	*810*	*825*	*15*	*2%*
right	*575*	*580*	*5*	*1%*
Westbound	1110	1140	*30*	*3%*
left	*185*	*185*	*0*	*0%*
through	*925*	*955*	*30*	*3%*
I-5 NB Ramps at 220th SW Street				
Northbound	750	760	*10*	*1%*
left	*675*	*685*	*10*	*1%*
right	*75*	*75*	*0*	*0%*
Eastbound	1060	1075	*15*	*1%*
left	*665*	*670*	*5*	*1%*
through	*395*	*405*	*10*	*3%*
Westbound	680	705	*25*	*4%*
through	*435*	*460*	*25*	*6%*
right	*245*	*245*	*0*	*0%*

220th Station Area PM peak hour 2035 Volumes

220th Station Area PM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 with station - Intersection Volumes	*2035 with station - Project Generated Trips*	*2035 with station - Percent Increase Over No build*
SR99 at 220th SW Street				
Northbound	1855	1910	*55*	*3%*
left	*190*	*195*	*5*	*3%*
through	*1540*	*1585*	*45*	*3%*
right	*125*	*130*	*5*	*4%*
Southbound	1625	1630	*5*	*0%*
left	*230*	*230*	*0*	*0%*
through	*1265*	*1270*	*5*	*0%*
right	*130*	*130*	*0*	*0%*
Eastbound	785	800	*15*	*2%*
left	*130*	*130*	*0*	*0%*
through	*590*	*605*	*15*	*3%*
right	*65*	*65*	*0*	*0%*
Westbound	1060	1075	*15*	*1%*
left	*265*	*270*	*5*	*2%*
through	*585*	*595*	*10*	*2%*
right	*210*	*210*	*0*	*0%*
70th Ave W at 220th SW Street				
Northbound	145	145	*0*	*0%*
left	*55*	*55*	*0*	*0%*
through	*15*	*15*	*0*	*0%*
right	*75*	*75*	*0*	*0%*
Southbound	375	375	*0*	*0%*
left	*240*	*240*	*0*	*0%*
through	*20*	*20*	*0*	*0%*
right	*115*	*115*	*0*	*0%*
Eastbound	890	905	*15*	*2%*
left	*5*	*5*	*0*	*0%*
through	*865*	*880*	*15*	*2%*
right	*20*	*20*	*0*	*0%*
Westbound	1060	1085	*25*	*2%*
left	*25*	*30*	*5*	*20%*
through	*995*	*1015*	*20*	*2%*
right	*40*	*40*	*0*	*0%*
66th Ave W at 220th SW Street				
Northbound	375	375	*0*	*0%*
left	*105*	*105*	*0*	*0%*
through	*195*	*195*	*0*	*0%*
right	*75*	*75*	*0*	*0%*
Southbound	1005	1010	*5*	*0%*
left	*600*	*605*	*5*	*1%*
through	*330*	*330*	*0*	*0%*
right	*75*	*75*	*0*	*0%*
Eastbound	1175	1190	*15*	*1%*
left	*100*	*100*	*0*	*0%*
through	*985*	*1000*	*15*	*2%*
right	*90*	*90*	*0*	*0%*
Westbound	1310	1340	*30*	*2%*
left	*100*	*100*	*0*	*0%*
through	*880*	*905*	*25*	*3%*
right	*330*	*335*	*5*	*2%*

220th Station Area PM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 with station - Intersection Volumes	*2035 with station - Project Generated Trips*	*2035 with station - Percent Increase Over No build*
64th Ave W at 220th SW Street				
Northbound	155	155	*0*	*0%*
left	*25*	*25*	*0*	*0%*
through	*35*	*35*	*0*	*0%*
right	*95*	*95*	*0*	*0%*
Southbound	325	325	*0*	*0%*
left	*225*	*225*	*0*	*0%*
through	*55*	*55*	*0*	*0%*
right	*45*	*45*	*0*	*0%*
Eastbound	1605	1625	*20*	*1%*
left	*30*	*30*	*0*	*0%*
through	*1535*	*1555*	*20*	*1%*
right	*40*	*40*	*0*	*0%*
Westbound	1620	1660	*40*	*2%*
left	*175*	*180*	*5*	*3%*
through	*1365*	*1400*	*35*	*3%*
right	*80*	*80*	*0*	*0%*
220th P&R DR at 220th SW Street				
Northbound	na	85	*na*	*na*
left	*na*	*40*	*na*	*na*
through	*na*	*45*	*na*	*na*
Eastbound	na	1780	*na*	*na*
through	*na*	*1765*	*na*	*na*
right	*na*	*15*	*na*	*na*
Westbound	na	1480	*na*	*na*
left	*na*	*15*	*na*	*na*
through	*na*	*1465*	*na*	*na*
I-5 SB Ramps at 220th SW Street				
Southbound	1030	1040	*10*	*1%*
left	*325*	*325*	*0*	*0%*
right	*705*	*715*	*10*	*1%*
Eastbound	1725	1780	*55*	*3%*
through	*1370*	*1415*	*45*	*3%*
right	*355*	*365*	*10*	*3%*
Westbound	700	710	*10*	*1%*
left	*95*	*95*	*0*	*0%*
through	*605*	*615*	*10*	*2%*
I-5 NB Ramps at 220th SW Street				
Northbound	495	495	*0*	*0%*
left	*380*	*380*	*0*	*0%*
right	*115*	*115*	*0*	*0%*
Eastbound	1695	1740	*45*	*3%*
left	*1155*	*1180*	*25*	*2%*
through	*540*	*560*	*20*	*4%*
Westbound	635	640	*5*	*1%*
through	*320*	*325*	*5*	*2%*
right	*315*	*315*	*0*	*0%*

220th Station Area PM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 with station - Intersection Volumes	*2035 with station - Project Generated Trips*	*2035 with station - Percent Increase Over No build*
58th Ave W at 220th SW Street				
Northbound	140	140	*0*	*0%*
left	*100*	*100*	*0*	*0%*
through	*5*	*5*	*0*	*0%*
right	*35*	*35*	*0*	*0%*
Southbound	45	45	*0*	*0%*
left	*20*	*20*	*0*	*0%*
through	*5*	*5*	*0*	*0%*
right	*20*	*20*	*0*	*0%*
Eastbound	860	880	*20*	*2%*
left	*30*	*30*	*0*	*0%*
through	*725*	*745*	*20*	*3%*
right	*105*	*105*	*0*	*0%*
Westbound	600	605	*5*	*1%*
left	*40*	*40*	*0*	*0%*
through	*545*	*550*	*5*	*1%*
right	*15*	*15*	*0*	*0%*
56th Ave W at 220th SW Street				
Northbound	680	680	*0*	*0%*
left	*330*	*330*	*0*	*0%*
through	*35*	*35*	*0*	*0%*
right	*315*	*315*	*0*	*0%*
Southbound	35	35	*0*	*0%*
left	*5*	*5*	*0*	*0%*
through	*20*	*20*	*0*	*0%*
right	*10*	*10*	*0*	*0%*
Eastbound	540	560	*20*	*4%*
left	*20*	*20*	*0*	*0%*
through	*270*	*275*	*5*	*2%*
right	*250*	*265*	*15*	*6%*
Westbound	415	415	*0*	*0%*
left	*205*	*205*	*0*	*0%*
through	*205*	*205*	*0*	*0%*
right	*5*	*5*	*0*	*0%*
54th Ave W at 220th SW Street				
Northbound	20	20	*0*	*0%*
left	*10*	*10*	*0*	*0%*
through	*5*	*5*	*0*	*0%*
right	*5*	*5*	*0*	*0%*
Southbound	20	20	*0*	*0%*
left	*5*	*5*	*0*	*0%*
through	*5*	*5*	*0*	*0%*
right	*10*	*10*	*0*	*0%*
Eastbound	560	565	*5*	*1%*
left	*15*	*15*	*0*	*0%*
through	*525*	*530*	*5*	*1%*
right	*20*	*20*	*0*	*0%*
Westbound	360	360	*0*	*0%*
left	*10*	*10*	*0*	*0%*
through	*345*	*345*	*0*	*0%*
right	*5*	*5*	*0*	*0%*

220th Station Area PM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 with station - Intersection Volumes	*2035 with station - Project Generated Trips*	*2035 with station - Percent Increase Over No build*
52th Ave W at 220th SW Street				
Northbound	215	215	*0*	*0%*
left	*80*	*80*	*0*	*0%*
through	*135*	*135*	*0*	*0%*
Southbound	465	470	*5*	*1%*
through	*125*	*130*	*5*	*4%*
right	*340*	*340*	*0*	*0%*
Eastbound	460	465	*5*	*1%*
left	*340*	*345*	*5*	*1%*
right	*120*	*120*	*0*	*0%*
Westbound	15	15	*0*	*0%*
left	*5*	*5*	*0*	*0%*
through	*5*	*5*	*0*	*0%*
right	*5*	*5*	*0*	*0%*

Lynnwood Station Area AM peak hour 2035 Volumes

Lynnwood Station Area AM peak hour 2035 Volumes

Intersection/Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
I-5 northbound ramps at 44th Ave W			
Northbound	435	695	720
through	*365*	*625*	*650*
right	*70*	*70*	*70*
Southbound	585	895	920
left	*35*	*65*	*70*
through	*550*	*830*	*850*
Eastbound	530	585	595
left	*420*	*475*	*485*
through	*30*	*30*	*30*
right	*80*	*80*	*80*
I-5 southbound on-ramp at 44th Ave W			
Northbound	1265	1700	1745
left	*300*	*300*	*300*
through	*965*	*1400*	*1445*
Southbound	1020	1355	1390
through	*580*	*890*	*915*
right	*440*	*465*	*475*
200th St SW at 44th Ave W			
Northbound	965	1400	1445
left	*305*	*415*	*460*
through	*485*	*730*	*730*
right	*175*	*255*	*255*
Southbound	810	1070	1100
left	*25*	*30*	*30*
through	*605*	*815*	*815*
right	*180*	*225*	*255*
Eastbound	355	440	520
left	*70*	*85*	*100*
through	*120*	*135*	*165*
right	*165*	*220*	*255*
Westbound	630	760	810
left	*250*	*320*	*320*
through	*370*	*430*	*480*
right	*10*	*10*	*10*
200th St SW at 46th Ave W			
Northbound	200	200	210
left	*90*	*95*	*110*
through	*0*	*0*	*0*
right	*105*	*105*	*100*
Southbound	10	10	10
left	*5*	*5*	*5*
through	*0*	*0*	*0*
right	*5*	*5*	*5*
Eastbound	300	385	440
left	*0*	*0*	*0*
through	*250*	*330*	*415*
right	*50*	*55*	*25*
Westbound	855	1070	1195
left	*225*	*235*	*120*
through	*625*	*830*	*1070*

Lynnwood Station Area AM peak hour 2035 Volumes

Intersection/Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
right	*5*	*5*	*5*
200th St SW at 48th Ave W			
Northbound	120	135	350
left	*45*	*50*	*150*
through	*50*	*55*	*85*
right	*25*	*30*	*115*
Southbound	265	375	475
left	*55*	*75*	*75*
through	*145*	*215*	*315*
right	*65*	*85*	*85*
Eastbound	390	470	565
left	*30*	*40*	*40*
through	*250*	*315*	*285*
right	*110*	*115*	*240*
Westbound	620	830	1085
left	*80*	*85*	*360*
through	*515*	*710*	*665*
right	*25*	*35*	*60*
200th St SW at 50th Ave W			
Northbound	175	245	275
left	*15*	*25*	*25*
through	*40*	*60*	*60*
right	*120*	*160*	*190*
Southbound	315	450	455
left	*25*	*30*	*35*
through	*215*	*320*	*320*
right	*75*	*100*	*100*
Eastbound	290	360	420
left	*25*	*35*	*35*
through	*250*	*300*	*360*
right	*15*	*25*	*25*
Westbound	775	975	1030
left	*285*	*380*	*400*
through	*470*	*570*	*605*
right	*20*	*25*	*25*

Lynnwood Station Area AM peak hour 2035 Volumes

Intersection/Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
196th St SW at 44th Ave W			
Northbound	440	620	635
left	*145*	*200*	*200*
through	*190*	*275*	*285*
right	*105*	*145*	*150*
Southbound	450	630	650
left	*75*	*95*	*95*
through	*340*	*490*	*510*
right	*35*	*45*	*45*
Eastbound	615	795	825
left	*45*	*60*	*60*
through	*460*	*555*	*585*
right	*110*	*180*	*180*
Westbound	1165	1445	1485
left	*240*	*325*	*335*
through	*885*	*1070*	*1100*
right	*40*	*50*	*50*
196th St SW at 50th Ave W			
Northbound	105	150	150
left	*50*	*75*	*75*
right	*55*	*75*	*75*
Eastbound	755	940	975
through	*665*	*810*	*840*
right	*90*	*130*	*135*
Westbound	1195	1485	1500
left	*200*	*275*	*275*
through	*995*	*1210*	*1225*
196th St SW at 36th Ave W			
Southbound	325	445	455
left	*120*	*180*	*180*
through	*130*	*145*	*150*
right	*75*	*115*	*125*
Eastbound	745	950	990
left	*70*	*100*	*110*
through	*640*	*815*	*830*
right	*35*	*35*	*50*
Westbound	1710	2050	2090
left	*260*	*260*	*260*
through	*1310*	*1585*	*1625*
right	*140*	*205*	*205*
196th St SW at Poplar Way			
Northbound	190	280	285
left	*130*	*150*	*155*
right	*60*	*130*	*130*
Eastbound	1155	1410	1420
through	*435*	*435*	*445*
right	*720*	*975*	*975*
Westbound	750	1035	1070
through	*750*	*1035*	*1070*
I-5 Northbound off-ramp at Poplar Way			
Northbound	465	630	635

Lynnwood Station Area AM peak hour 2035 Volumes

Intersection/Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
left	*355*	*385*	*385*
through	*40*	*95*	*100*
right	*70*	*150*	*150*
Southbound	720	975	975
left	*15*	*35*	*35*
through	*205*	*340*	*340*
right	*500*	*600*	*600*
Eastbound	490	540	540
left	*145*	*175*	*175*
through	*310*	*330*	*330*
right	*35*	*35*	*35*
Westbound	160	200	200
left	*135*	*170*	*170*
through	*20*	*20*	*20*
right	*5*	*10*	*10*

Lynnwood Station Area PM peak hour 2035 Volumes

Lynnwood Station Area PM peak hour 2035 Volumes

Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
I-5 northbound ramps at 44th Ave W			
Northbound	780	1130	1145
through	*620*	*955*	*970*
right	*160*	*175*	*175*
Southbound	930	1325	1360
left	*210*	*280*	*285*
through	*720*	*1045*	*1075*
Eastbound	1040	1085	1090
left	*770*	*815*	*820*
through	*155*	*155*	*155*
right	*115*	*115*	*115*
I-5 southbound on-ramp at 44th Ave W			
Northbound	1610	2045	2070
left	*200*	*200*	*200*
through	*1410*	*1845*	*1870*
Southbound	1450	1885	1930
through	*880*	*1270*	*1305*
right	*570*	*615*	*625*
200th St SW at 44th Ave W			
Northbound	1410	1845	1870
left	*270*	*350*	*375*
through	*820*	*1085*	*1085*
right	*320*	*410*	*410*
Southbound	910	1185	1195
left	*70*	*85*	*85*
through	*735*	*975*	*975*
right	*105*	*125*	*135*
Eastbound	950	1150	1265
left	*220*	*265*	*290*
through	*410*	*475*	*520*
right	*320*	*410*	*455*
Westbound	745	900	930
left	*395*	*500*	*500*
through	*290*	*330*	*360*
right	*60*	*70*	*70*

Lynnwood Station Area PM peak hour 2035 Volumes

Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
200th St SW at 46th Ave W			
Northbound	500	530	360
left	*155*	*165*	*125*
through	*5*	*5*	*5*
right	*340*	*360*	*230*
Southbound	15	20	20
left	*10*	*15*	*15*
through	*0*	*0*	*0*
right	*5*	*5*	*5*
Eastbound	650	830	1075
left	*5*	*5*	*5*
through	*600*	*775*	*1020*
right	*45*	*50*	*50*
Westbound	645	805	870
left	*115*	*120*	*75*
through	*525*	*675*	*785*
right	*5*	*10*	*10*
200th St SW at 48th Ave W			
Northbound	300	320	880
left	*125*	*130*	*355*
through	*150*	*160*	*250*
right	*25*	*30*	*275*
Southbound	230	300	355
left	*70*	*90*	*90*
through	*50*	*70*	*125*
right	*110*	*140*	*140*
Eastbound	715	870	940
left	*95*	*120*	*120*
through	*550*	*660*	*670*
right	*70*	*90*	*150*
Westbound	685	845	925
left	*20*	*25*	*215*
through	*550*	*670*	*550*
right	*115*	*150*	*160*
200th St SW at 50th Ave W			
Northbound	400	525	540
left	*40*	*55*	*55*
through	*120*	*165*	*165*
right	*240*	*305*	*320*
Southbound	180	235	240
left	*35*	*40*	*45*
through	*95*	*130*	*130*
right	*50*	*65*	*65*
Eastbound	490	590	630
left	*40*	*50*	*50*
through	*430*	*515*	*555*
right	*20*	*25*	*25*
Westbound	710	860	970
left	*150*	*190*	*215*
through	*510*	*610*	*690*
right	*50*	*60*	*65*

Lynnwood Station Area PM peak hour 2035 Volumes

Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
196th St SW at 44th Ave W			
Northbound	1125	1460	1485
left	*240*	*305*	*305*
through	*630*	*830*	*845*
right	*255*	*325*	*335*
Southbound	725	955	960
left	*165*	*205*	*205*
through	*505*	*680*	*685*
right	*55*	*70*	*70*
Eastbound	1210	1460	1485
left	*105*	*130*	*130*
through	*930*	*1110*	*1135*
right	*175*	*220*	*220*
Westbound	1200	1440	1470
left	*245*	*310*	*315*
through	*855*	*1005*	*1030*
right	*100*	*125*	*125*
196th St SW at 50th Ave W			
Northbound	240	310	315
left	*30*	*40*	*45*
right	*210*	*270*	*270*
Eastbound	1285	1555	1585
through	*1230*	*1480*	*1505*
right	*55*	*75*	*80*
Westbound	1185	1435	1475
left	*90*	*115*	*115*
through	*1095*	*1320*	*1360*
196th St SW at 36th Ave W			
Southbound	735	945	955
left	*325*	*445*	*445*
through	*260*	*295*	*300*
right	*150*	*205*	*210*
Eastbound	1630	1985	2020
left	*215*	*280*	*285*
through	*1345*	*1635*	*1665*
right	*70*	*70*	*70*
Westbound	2150	2515	2545
left	*400*	*410*	*410*
through	*1420*	*1665*	*1695*
right	*330*	*440*	*440*
196th St SW at Poplar Way			
Northbound	315	420	420
left	*275*	*325*	*325*
right	*40*	*95*	*95*
Eastbound	2280	2745	2775
through	*1000*	*1135*	*1155*
right	*1280*	*1610*	*1620*
Westbound	795	1015	1045
through	*795*	*1015*	*1045*

Lynnwood Station Area PM peak hour 2035 Volumes

Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
I-5 Northbound off-ramp at Poplar Way			
Northbound	635	805	805
left	*325*	*325*	*325*
through	*110*	*160*	*160*
right	*200*	*320*	*320*
Southbound	1280	1610	1620
left	*15*	*105*	*105*
through	*310*	*480*	*490*
right	*955*	*1025*	*1025*
Eastbound	740	775	775
left	*185*	*185*	*185*
through	*545*	*580*	*580*
right	*10*	*10*	*10*
Westbound	195	250	250
left	*155*	*155*	*155*
through	*20*	*20*	*20*
right	*20*	*75*	*75*
196th St SW at 48th Ave W			
Northbound	405	525	625
left	*105*	*130*	*160*
through	*225*	*300*	*355*
right	*75*	*95*	*110*
Southbound	240	310	340
left	*60*	*75*	*75*
through	*110*	*145*	*175*
right	*70*	*90*	*90*
Eastbound	1355	1640	1665
left	*160*	*200*	*200*
through	*1155*	*1390*	*1400*
right	*40*	*50*	*65*
Westbound	1080	1305	1330
left	*95*	*120*	*135*
through	*960*	*1155*	*1165*
right	*25*	*30*	*30*

Lynnwood Station Area PM peak hour 2035 Volumes

Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
196th St SW at 40th Ave W			
Northbound	325	420	435
left	*40*	*55*	*55*
through	*65*	*90*	*95*
right	*220*	*275*	*285*
Southbound	290	375	375
left	*200*	*250*	*250*
through	*60*	*85*	*85*
right	*30*	*40*	*40*
Eastbound	1300	1585	1620
left	*40*	*55*	*65*
through	*1210*	*1460*	*1485*
right	*50*	*70*	*70*
Westbound	1390	1675	1710
left	*155*	*190*	*195*
through	*1150*	*1380*	*1410*
right	*85*	*105*	*105*
200th St SW at 40th Ave W			
Southbound	280	365	370
left	*45*	*65*	*65*
right	*235*	*300*	*305*
Eastbound	820	995	1040
left	*235*	*300*	*310*
through	*585*	*695*	*730*
Westbound	530	640	665
through	*470*	*555*	*580*
right	*60*	*85*	*85*
204th St SW at 44th Ave W			
Northbound	1390	1770	1790
through	*1390*	*1770*	*1790*
Southbound	880	1270	1305
through	*880*	*1270*	*1305*
Westbound	270	330	330
left	*50*	*50*	*50*
right	*220*	*280*	*280*
198th St SW at 44th Ave W			
Northbound	1115	1450	1475
through	*1095*	*1425*	*1450*
right	*20*	*25*	*25*
Southbound	925	1210	1220
left	*20*	*25*	*25*
through	*905*	*1185*	*1195*
Westbound	10	10	10
right	*10*	*10*	*10*

MLT Station Area AM peak hour 2035 Volumes

MLT Station Area AM peak hour 2035 Volumes

Intersection/Approaches	2035 No Build - Intersection Volumes	2035 Preferred Alternative - Intersection Volumes	*2035 Preferred Alternative - Project Generated Trips*	*2035 Preferred Build - Percent Increase Over No build*
I-5 SB CDR at 236th SW Street				
Eastbound	440	460	*20*	*5%*
through	*240*	*260*	*20*	*8%*
right	*200*	*200*	*0*	*0%*
Westbound	755	785	*30*	*4%*
left	*565*	*575*	*10*	*2%*
through	*190*	*210*	*20*	*11%*
I-5 NB OFF/ P&R at 236th SW Street				
Northbound	180	190	*10*	*6%*
left	*50*	*50*	*0*	*0%*
through	*40*	*50*	*10*	*25%*
right	*90*	*90*	*0*	*0%*
Southbound	85	145	*60*	*71%*
left	*30*	*60*	*30*	*100%*
right	*55*	*85*	*30*	*55%*
Eastbound	235	255	*20*	*9%*
left	*120*	*140*	*20*	*17%*
through	*115*	*115*	*0*	*0%*
Westbound	905	945	*40*	*4%*
through	*660*	*660*	*0*	*0%*
right	*245*	*285*	*40*	*16%*
56th Ave W at 236th SW Street				
Northbound	290	290	*0*	*0%*
left	*95*	*95*	*0*	*0%*
through	*175*	*175*	*0*	*0%*
right	*20*	*20*	*0*	*0%*
Southbound	420	430	*10*	*2%*
left	*70*	*70*	*0*	*0%*
through	*240*	*240*	*0*	*0%*
right	*110*	*120*	*10*	*9%*
Eastbound	240	280	*40*	*17%*
left	*45*	*60*	*15*	*33%*
through	*150*	*170*	*20*	*13%*
right	*45*	*50*	*5*	*11%*
Westbound	875	890	*15*	*2%*
left	*100*	*100*	*0*	*0%*
through	*675*	*690*	*15*	*2%*
right	*100*	*100*	*0*	*0%*

MLT Station Area PM peak hour 2035 Volumes

Lynnwood Station Area PM peak hour 2035 Volumes

Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
I-5 northbound ramps at 44th Ave W			
Northbound	780	1130	1145
through	*620*	*955*	*970*
right	*160*	*175*	*175*
Southbound	930	1325	1360
left	*210*	*280*	*285*
through	*720*	*1045*	*1075*
Eastbound	1040	1085	1090
left	*770*	*815*	*820*
through	*155*	*155*	*155*
right	*115*	*115*	*115*
I-5 southbound on-ramp at 44th Ave W			
Northbound	1610	2045	2070
left	*200*	*200*	*200*
through	*1410*	*1845*	*1870*
Southbound	1450	1885	1930
through	*880*	*1270*	*1305*
right	*570*	*615*	*625*
200th St SW at 44th Ave W			
Northbound	1410	1845	1870
left	*270*	*350*	*375*
through	*820*	*1085*	*1085*
right	*320*	*410*	*410*
Southbound	910	1185	1195
left	*70*	*85*	*85*
through	*735*	*975*	*975*
right	*105*	*125*	*135*
Eastbound	950	1150	1265
left	*220*	*265*	*290*
through	*410*	*475*	*520*
right	*320*	*410*	*455*
Westbound	745	900	930
left	*395*	*500*	*500*
through	*290*	*330*	*360*
right	*60*	*70*	*70*

Lynnwood Station Area PM peak hour 2035 Volumes

Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
200th St SW at 46th Ave W			
Northbound	500	530	360
left	*155*	*165*	*125*
through	*5*	*5*	*5*
right	*340*	*360*	*230*
Southbound	15	20	20
left	*10*	*15*	*15*
through	*0*	*0*	*0*
right	*5*	*5*	*5*
Eastbound	650	830	1075
left	*5*	*5*	*5*
through	*600*	*775*	*1020*
right	*45*	*50*	*50*
Westbound	645	805	870
left	*115*	*120*	*75*
through	*525*	*675*	*785*
right	*5*	*10*	*10*
200th St SW at 48th Ave W			
Northbound	300	320	880
left	*125*	*130*	*355*
through	*150*	*160*	*250*
right	*25*	*30*	*275*
Southbound	230	300	355
left	*70*	*90*	*90*
through	*50*	*70*	*125*
right	*110*	*140*	*140*
Eastbound	715	870	940
left	*95*	*120*	*120*
through	*550*	*660*	*670*
right	*70*	*90*	*150*
Westbound	685	845	925
left	*20*	*25*	*215*
through	*550*	*670*	*550*
right	*115*	*150*	*160*
200th St SW at 50th Ave W			
Northbound	400	525	540
left	*40*	*55*	*55*
through	*120*	*165*	*165*
right	*240*	*305*	*320*
Southbound	180	235	240
left	*35*	*40*	*45*
through	*95*	*130*	*130*
right	*50*	*65*	*65*
Eastbound	490	590	630
left	*40*	*50*	*50*
through	*430*	*515*	*555*
right	*20*	*25*	*25*
Westbound	710	860	970
left	*150*	*190*	*215*
through	*510*	*610*	*690*
right	*50*	*60*	*65*

Lynnwood Station Area PM peak hour 2035 Volumes

Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
196th St SW at 44th Ave W			
Northbound	1125	1460	1485
left	*240*	*305*	*305*
through	*630*	*830*	*845*
right	*255*	*325*	*335*
Southbound	725	955	960
left	*165*	*205*	*205*
through	*505*	*680*	*685*
right	*55*	*70*	*70*
Eastbound	1210	1460	1485
left	*105*	*130*	*130*
through	*930*	*1110*	*1135*
right	*175*	*220*	*220*
Westbound	1200	1440	1470
left	*245*	*310*	*315*
through	*855*	*1005*	*1030*
right	*100*	*125*	*125*
196th St SW at 50th Ave W			
Northbound	240	310	315
left	*30*	*40*	*45*
right	*210*	*270*	*270*
Eastbound	1285	1555	1585
through	*1230*	*1480*	*1505*
right	*55*	*75*	*80*
Westbound	1185	1435	1475
left	*90*	*115*	*115*
through	*1095*	*1320*	*1360*
196th St SW at 36th Ave W			
Southbound	735	945	955
left	*325*	*445*	*445*
through	*260*	*295*	*300*
right	*150*	*205*	*210*
Eastbound	1630	1985	2020
left	*215*	*280*	*285*
through	*1345*	*1635*	*1665*
right	*70*	*70*	*70*
Westbound	2150	2515	2545
left	*400*	*410*	*410*
through	*1420*	*1665*	*1695*
right	*330*	*440*	*440*
196th St SW at Poplar Way			
Northbound	315	420	420
left	*275*	*325*	*325*
right	*40*	*95*	*95*
Eastbound	2280	2745	2775
through	*1000*	*1135*	*1155*
right	*1280*	*1610*	*1620*
Westbound	795	1015	1045
through	*795*	*1015*	*1045*

Lynnwood Station Area PM peak hour 2035 Volumes

Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
I-5 Northbound off-ramp at Poplar Way			
Northbound	635	805	805
left	*325*	*325*	*325*
through	*110*	*160*	*160*
right	*200*	*320*	*320*
Southbound	1280	1610	1620
left	*15*	*105*	*105*
through	*310*	*480*	*490*
right	*955*	*1025*	*1025*
Eastbound	740	775	775
left	*185*	*185*	*185*
through	*545*	*580*	*580*
right	*10*	*10*	*10*
Westbound	195	250	250
left	*155*	*155*	*155*
through	*20*	*20*	*20*
right	*20*	*75*	*75*
196th St SW at 48th Ave W			
Northbound	405	525	625
left	*105*	*130*	*160*
through	*225*	*300*	*355*
right	*75*	*95*	*110*
Southbound	240	310	340
left	*60*	*75*	*75*
through	*110*	*145*	*175*
right	*70*	*90*	*90*
Eastbound	1355	1640	1665
left	*160*	*200*	*200*
through	*1155*	*1390*	*1400*
right	*40*	*50*	*65*
Westbound	1080	1305	1330
left	*95*	*120*	*135*
through	*960*	*1155*	*1165*
right	*25*	*30*	*30*

Lynnwood Station Area PM peak hour 2035 Volumes

Approaches	2012 Existing - Intersection Volumes	2035 No Build - Intersection Volumes	2035 Build - Intersection Volumes
196th St SW at 40th Ave W			
Northbound	325	420	435
left	*40*	*55*	*55*
through	*65*	*90*	*95*
right	*220*	*275*	*285*
Southbound	290	375	375
left	*200*	*250*	*250*
through	*60*	*85*	*85*
right	*30*	*40*	*40*
Eastbound	1300	1585	1620
left	*40*	*55*	*65*
through	*1210*	*1460*	*1485*
right	*50*	*70*	*70*
Westbound	1390	1675	1710
left	*155*	*190*	*195*
through	*1150*	*1380*	*1410*
right	*85*	*105*	*105*
200th St SW at 40th Ave W			
Southbound	280	365	370
left	*45*	*65*	*65*
right	*235*	*300*	*305*
Eastbound	820	995	1040
left	*235*	*300*	*310*
through	*585*	*695*	*730*
Westbound	530	640	665
through	*470*	*555*	*580*
right	*60*	*85*	*85*
204th St SW at 44th Ave W			
Northbound	1390	1770	1790
through	*1390*	*1770*	*1790*
Southbound	880	1270	1305
through	*880*	*1270*	*1305*
Westbound	270	330	330
left	*50*	*50*	*50*
right	*220*	*280*	*280*
198th St SW at 44th Ave W			
Northbound	1115	1450	1475
through	*1095*	*1425*	*1450*
right	*20*	*25*	*25*
Southbound	925	1210	1220
left	*20*	*25*	*25*
through	*905*	*1185*	*1195*
Westbound	10	10	10
right	*10*	*10*	*10*

APPENDIX D

I-5 Collision Data

I-5 Mainline Collision Type Summary, 2010-2013 MP 172-182 10.3 miles

	Northbound I-5		Southbound I-5	
Collision Type	**Frequency**	**Percent**	**Frequency**	**Percent**
Rear-End	623	61%	1169	72%
Sideswipe	200	20%	217	13%
Fixed Object - Bridge Rail, Concrete Barrier	70	7%	85	5%
Fixed Object - Guard Rail, Crash Cushion	33	3%	37	2%
Fixed Object - Ditch, Wall	14	1%	16	1%
Fixed Object - Pole, Street Light, Sign Post, Control Gate	15	1%	16	1%
Same Direction - all others	47	5%	46	3%
Fixed Object - other	7	1%	13	1%
Parked Vehicle	5	0%	3	0%
Vehicle overturned	6	1%	12	1%
Pedestrian	1	0%	1	0%
Opposite direction	3	0%	2	0%
	1024		1617	

Roadway Surface Conditions
I-5 Mainline Accidents, 2010-2013

	Northbound I-5	Southbound I-5
Dry	761	1003
Wet	223	578
Ice	9	14
Snow/Slush	21	16
Standing Water	7	6
Other	2	
Unknown	1	
	1024	1617

Lighting Conditions
I-5 Mainline Accidents, 2010-2013

	Northbound I-5	Southbound I-5
Dark - No Street Lights	69	64
Dark - Street Lights Off	14	3
Dark- Street Lights On	206	281
Dawn	4	52
Daylight	690	1182
Dusk	35	26
Unknown	6	9
	1024	1617

Accident Time of Day
I-5 Mainline, 2010-2013

Hour	Northbound I-5	Southbound I-5
Midnight	6	12
1:00 AM	7	4
2:00 AM	16	6
3:00 AM	11	7
4:00 AM	6	13
5:00 AM	10	22
6:00 AM	14	126
7:00 AM	21	145
8:00 AM	19	156
9:00 AM	18	119
10:00 AM	17	59
11:00 AM	20	44
Noon	40	82
1:00 PM	36	104
2:00 PM	71	110
3:00 PM	139	124
4:00 PM	178	123
5:00 PM	168	134
6:00 PM	117	105
7:00 PM	32	33
8:00 PM	14	26
9:00 PM	22	24
10:00 PM	27	23
11:00 PM	15	16
	1024	1617

Table
I-5 Mainline Accidents (2010 through 2013)
Sound Transit Lynnwood Link Project

	Milepoint												
Northbound Mainline	Beginning	End	Segment Length	ADT	Total Crashes	Fatal Crashes	Injury Crashes	Fatalities	Injuries	Total Crash Rate, per MVM	Fatality Rate, per 100 MVM	Injury Rate, per MVM	Injury Crash Rate, per MVM
N 92nd St Bridge to NB Off ramp to Northgate	171.89	172.49	0.60	87210	25	0	7	0	8	0.33	0	0.10	0.09
NB off ramp to Northgate to NB off ramp to 130th St	172.49	173.66	1.17	102560	108	0	30	0	48	0.62	0	0.27	0.17
NB Off ramp to 130th IC to NB off ramp to 145th IC	173.66	174.33	0.67	90990	91	0	31	0	57	1.02	0	0.64	0.35
NB off ramp to 145th IC to NB off ramp to Metro Base	174.33	175.45	1.12	90330	153	0	54	0	94	1.04	0	0.64	0.37
NB off ramp to Metro Base to NB off ramp to 175th IC	175.45	176.04	0.59	89930	78	0	26	0	35	1.01	0	0.45	0.34
NB off ramp to 175th IC to NB off ramp to SR 104	176.04	177.52	1.48	86530	132	1	46	1	66	0.71	0.53	0.35	0.25
NB off ramp to SR 104 to NB off ramp to 236th IC	177.52	178.09	0.57	72080	66	0	28	0	34	1.10	0	0.57	0.47
NB off ramp to 236th IC to NB HOV off ramp to Transit Station	178.09	178.34	0.25	83290	28	0	9	0	13	0.92	0	0.43	0.30
NB HOV off ramp to Transit Station to NB off ramp to 220th IC	178.34	179.1	0.76	83290	58	0	17	0	26	0.63	0	0.28	0.18
NB off ramp to 220th IC to NB off ramp to 44th Ave W IC	179.1	180.52	1.42	92700	124	0	42	0	53	0.65	0	0.28	0.22
NB off ramp to 44th Ave W IC to NB off ramp to 196th/SR 524	180.52	181.32	0.80	89990	84	0	23	0	35	0.80	0	0.33	0.22
NB off ramp to 196th/SR 524 to NB off ramp to I-405/SR 525	181.32	182.2	0.88	94450	77	0	22	0	35	0.63	0	0.29	0.18
			10.31	**88613**	**1024**	**1**	**335**	**1**	**504**	0.77	0.07	0.38	0.25

	Milepoint												
Southbound Mainline	Beginning	End	Segment Length	ADT	Total Crashes	Fatal Crashes	Injury Crashes	Fatalities	Injuries	Total Crash Rate, per MVM	Fatality Rate, per 100 MVM	Injury Rate, per MVM	Injury Crash Rate, per MVM
N 92nd St Bridge to SB on ramp at Northgate IC	171.89	172.54	0.65	89130	95	0	34	0	59	1.12	0	0.70	0.40
SB on ramp from Northgate IC to SB on ramp from 130th IC	172.54	173.67	1.13	97400	444	0	138	0	211	2.76	0	1.31	0.86
SB on ramp from 130th IC to SB on ramp from 145th IC	173.67	174.39	0.72	89380	177	0	56	0	82	1.88	0	0.87	0.60
SB on ramp from 145th IC to SB on ramp from Metro Base	174.39	175.44	1.05	83410	193	0	57	0	100	1.51	0	0.78	0.45
SB on ramp from Metro Base to SB on ramp from 175th IC	175.44	176.02	0.58	83150	27	0	7	0	9	0.38	0	0.13	0.10
SB on ramp from 175th IC to SB on ramp from SR 104 IC	176.02	177.64	1.62	81990	105	1	21	1	29	0.54	0.52	0.15	0.11
SB on ramp from SR 104 to SB off ramp to SR 104 IC	177.64	178.29	0.65	66780	103	0	32	0	43	1.63	0	0.68	0.50
SB off ramp to SR 104 to SB on ramp from 220th IC	178.29	179.45	1.16	82470	96	1	30	1	38	0.69	0.72	0.27	0.21
SB on ramp from 220th IC to SB on ramp from 44th Ave W IC	179.45	180.63	1.18	87590	191	0	62	0	83	1.27	0	0.55	0.41
SB on ramp from 44th Ave W IC to SB on ramp from 196th/SR 524 IC	180.63	181.07	0.44	87240	76	0	18	0	25	1.36	0	0.45	0.32
SB on ramp from 196th/SR 524 to SB off ramp to 196th/SR 524	181.07	182.2	1.13	68500	110	0	38	0	55	0.97	0	0.49	0.34
			10.31	**83367**	**1617**	**2**	**493**	**2**	**734**	1.29	0.16	0.58	0.39

Notes:
Total and Injury Rates are expressed per million vehicle miles (MVM)
Fatality Crash Rates are expressed per 100 MVM

Summary Ramps Table
2010-2013 Data for I-5 Ramps, MP 172-182

													Crash Type						
Northbound Ramps	Exit Number	Segment Length	ADT	Total Crashes	Fatal Crashes	Injury Crashes	Fatalities	Injuries	Total Crash Rate, per MVM	Fatality Rate, per 100 MVM	Injury Rate, per MVM	Injury Crash Rate, per MVM	Rearend	Sideswipe	Fixed Object	Left-turn	Right Angle	Vehicle Overturned	Pedestrian or Bicycle
Express Lanes Off ramp to NE 103rd Street	173	0.54	4240	26	0	10	0	16	7.78	0	4.79	2.99	X	X		X			
Off ramp to 1st Ave NE at NE 107th Street		0.3	14910	29	0	10	0	16	4.44	0	2.45	1.53	X	X					
On ramp from 1st Ave NE at NE 107th Street		0.36	10640	19	0	3	0	4	3.40	0	0.72	0.54	X	X					
On ramp from Northgate Way at 1st Ave NE		0.22	2650	9	0	3	0	3	10.57	0	3.52	3.52	X	X					
Off ramp to 5th Ave NE (130th)	174	0.23	8100	18	0	7	0	9	6.62	0	3.31	2.57	X				X		
Off ramp to 5th Ave NE (145th)	175	0.22	11940	22	0	7	0	11	5.74	0	2.87	1.83	X				X		
On ramp from 5th Ave NE		0.32	10680	23	0	11	0	20	4.61	0	4.01	2.20	X	X		X			
Off ramp to NE 175th Street	176	0.37	14490	14	0	7	0	7	1.79	0	0.89	0.89	X	X					
On ramp from NE 175th Street		0.12	8640	5	0	3	0	5	3.30	0	3.30	1.98	X	X					
Off ramp to SR 104	177	0.35	11630	6	0	1	0	1	1.01	0	0.17	0.17			X				
C-D Roadway		1.13	21120	47	0	15	0	19	1.35	0	0.55	0.43	X	X	X				
EB to NB Loop On-Ramp		0.19	8070	6	0	4	0	4	2.68	0	1.79	1.79			X				
NB to WB Loop Off-Ramp		0.12	7550	3	0	0	0	0	2.27	0	0.00	0.00			X				
On ramp from SR 104		0.18	5500	6	0	1	0	1	4.15	0	0.69	0.69	X		X				
Off ramp to 236th	178	0.34	4650	5	0	0	0	0	2.17	0	0.00	0.00	X		X				
Off ramp to 220th SW	179	0.32	8550	2	0	1	0	4	0.50	0	1.00	0.25	X						
On ramp from 220th SW		0.18	15110	12	0	3	0	4	3.02	0	1.01	0.76	X	X					
Off ramp to 44th Ave W	181A	0.44	12540	18	0	2	0	3	2.23	0	0.37	0.25	X	X					
Off ramp to Poplar Way/196th	181B	0.37	7680	7	0	3	0	3	1.69	0	0.72	0.72	X		X	X	X		
Poplar Way Loop On Ramp		0.28	17280	16	0	1	0	2	2.26	0	0.28	0.14	X	X	X				
On ramp from 196th/SR 524		0.1	5810	7	0	1	0	1	8.25	0	1.18	1.18	X						

													Crash Type						
Southbound Ramps	Exit Number	Segment Length	ADT	Total Crashes	Fatal Crashes	Injury Crashes	Fatalities	Injuries	Total Crash Rate, per MVM	Fatality Rate, per 100 MVM	Injury Rate, per MVM	Injury Crash Rate, per MVM	Rearend	Sideswipe	Fixed Object	Left-turn	Right Angle	Vehicle Overturned	Pedestrian or Bicycle
On ramp from CD and Corliss	173	0.52	12580	27	0	9	0	11	2.83	0	1.15	0.94	X	X	X	X	X		
Off ramp (loop) to EB Northgate Way		0.18	6140	21	0	7	0	9	13.01	0	5.58	4.34	X	X	X				
Off ramp to Northgate Way and CD		0.2	14530	36	0	10	0	13	8.49	0	3.06	2.36	X	X	X	X			X
On ramp from NE 130th Street	174	0.32	7630	7	0	2	0	3	1.96	0	0.84	0.56	X		X				
On ramp from NE 145th Street	175	0.44	10940	5	0	1	0	1	0.71	0	0.14	0.14	X	X	X				
Off ramp to NE 145th Street		0.21	12190	21	0	7	0	9	5.62	0	2.41	1.87	X	X					
On ramp from NE 175th Street	176	0.4	9250	3	0	0	0	0	0.56	0	0.00	0.00	X						
Off ramp to NE 175th Street		0.25	6670	9	0	1	0	1	3.70	0	0.41	0.41	X		X				
On ramp from SR 104 and 236th	177	0.59	12720	36	0	12	0	13	3.29	0	1.19	1.10	X	X	X			X	
Off ramp to SR 104		0.68	13860	9	0	1	0	1	0.65	0	0.07	0.07			X				
On ramp from 220th Street SW	179	0.45	8550	9	0	2	0	2	1.60	0	0.36	0.36	X						
Off ramp to 220th Street SW		0.22	12610	23	0	5	0	5	5.68	0	1.23	1.23	X		X				
On ramp from 44th Ave W	181A	0.73	11700	11	0	4	0	5	0.88	0	0.40	0.32	X	X					